Productivity is a crucial factor for ensuring prosperity. In Europe, however, productivity gains have systematically slowed in recent years. As a result of the corona pandemic, this development could prove to be particularly problematic. If the aim in the coming months is to put Europe back on a stable growth path, economic policy measures must therefore always also aim to increase productivity. This paper proposes nine points for a new productivity strategy in Europe.

Europe has a productivity problem. In recent years, productivity growth in many European economies has systematically slowed down and regional differences have widened. The slowdown is connected to decreasing competitiveness, fewer prospects for growth and shrinking opportunities for redistribution. Moreover, diverging changes in productivity within the EU endanger the economic and, ultimately, political stability of the common economic and monetary area. As a result of the current crisis situation, the productivity problem, which up to now has been of subordinate importance in politics, could pose particular challenges for economic policy. Economic policy measures must have a stimulating effect on the business cycle and at the same time always aim to increase productivity.

What policies and instruments can reverse the trend and increase long-term productivity in Europe? This paper proposes nine points for a new productivity strategy in Europe. The main pillars of this strategy are: a substantially stronger innovation policy, the targeted promotion of technology diffusion and comprehensive, sustainable investments in the future.
Weak productivity in Europe: decreasing future prospects

High productivity generally reflects good future economic and social prospects in advanced economies. This is because there is a close relationship between productivity and competitiveness, and because productivity growth and economic growth are directly tied to each other, which in turn can create the scope for redistribution. In the then EU-28, growth in labour productivity has been slowing steadily in recent decades (see Figure 1). In a recent analysis, the European Commission even speaks of a European “productivity gap”.2

1 This paper reflects the personal opinion of the authors only. The authors would like to thank Erik Klär, Florian Ranft, Paul Jürgensen and Katharina Gnath for their valuable comments.

An international comparison shows that this slowdown has been a phenomenon seen in many advanced economies since the early 1970s (see Table 1). Productivity growth has been similarly slow, particularly in the large European national economies.

**Decreasing competitiveness:** A slowdown in productivity growth in Europe goes hand-in-hand with a loss of competitiveness. In the long term, European global market shares and foreign demand may decline. This is a particular problem for export-based economies such as Germany. A loss of competitiveness can also put pressure on the given wage levels reached: Instead of focusing on measures to increase productivity, structural adjustments to increase international competitiveness often focus on lowering wages. This in turn weakens the domestic growth of the economy and can entail high social costs and structural reforms that are politically difficult to implement.

**Decreasing scope for redistribution:** Many European countries face major demographic challenges. Older cohorts with a rising but relatively low labour force participation rate account for an increasing percentage of the population. The share of the economically active population relative to the economically inactive population is thus decreasing. The main question here is how a high level of prosperity and welfare spending can be guaranteed and financed in these circumstances. If there are no productivity gains, there will be increasing pressure on how consumption should be allocated across society. Although it could also be supported through deficit financing, this would be at odds with the EU’s fiscal rules. In this situation, productivity growth creates the necessary budgetary space for redistribution.

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**TABLE 1: International correlation of changes in labour productivity, 1971 – 2018**

<table>
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<tr>
<th></th>
<th>Germany</th>
<th>France</th>
<th>Italy</th>
<th>Spain</th>
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<td>-0.01</td>
<td>0.35</td>
<td>0.17</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Annual data, percent change; labour productivity: Real GDP per hour worked. Source: OECD, authors’ own calculations.

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Differences in productivity threaten the EU’s stability

Differences in regional productivity levels: The latest data for the then EU-28 show that in 2016 each hour worked created an additional production value of around EUR 35. However, this average obscures enormous regional heterogeneity within the EU. At the level of medium-sized regions and cities with 800,000 to 3 million inhabitants (NUTS-2 level), the highest additional production value of around EUR 76 per hour worked was achieved in the Luxembourg region. This is more than double the EU average. When the same labour input is assumed, the Southern Bulgarian region of Yuzhen Tsentralen only generates an additional production value of around EUR 4, about one-seventh of the average. There is also a striking divergence between Eastern and Southern Europe on the one hand, and Western and Northern Europe on the other. While

![FIGURE 2: Convergence / Divergence of regional labour productivity in the EU-28 (NUTS-2)](image)

Source: Eurostat, Authors’ own calculations, Italy 2007–16, not included: France, Netherlands, Poland, Lithuania.

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5 The fact that by far the highest labour productivity is seen in regions with a high degree of specialisation in the financial services sector allows for a general criticism of macroeconomic productivity considerations. See Jacob Assa (2016) The Financialization of GDP: Implications for Economic Theory and Policy. Routledge, London.
While the 64 regions with below-average productivity include 42 Eastern European and 12 Southern European regions, the 24 regions with the highest levels of productivity are exclusively regions from the western or northern EU area.

Diverging productivity levels: In addition to considering current differences, it is also worth looking at the changes in regional labour productivity in recent years (see Figure 2). This shows that the majority of Southern European regions with low labour productivity have not managed to catch up economically, with many even falling further behind. At the same time, many Eastern European regions succeeded in significantly increasing their initially low labour productivity. A very divergent picture emerges for the Northern and Central European regions, with the majority having labour productivity above the EU average in 2007. In particular, service centres and centres of industrial production in Denmark, Ireland and Germany – so-called “superstar regions” – have been able to significantly increase their labour productivity. This contrasts with a large number of UK regions where labour productivity was well above the EU average in 2007, but has fallen sharply since then. Similarly, in Sweden and in isolated cases in Finland, Germany, Belgium and Italy, some regions with initially high labour productivity have not been able to keep pace with the EU average.

What is productivity?

Labour productivity. Labour productivity is the ratio of labour input to production, measured, for example, as gross domestic product (GDP). It is affected by several factors, including labour intensity, capital resources (goods and knowledge), production technology, efficiency of organisations and regulation. The metric labour can be measured both by the number of people employed (productivity per capita) and by the number for the volume of work done (hours worked by people employed, productivity per hour). To a certain extent, measurements based on employment figures reflect the structure of the labour market. It is necessary in particular to differentiate between whether full-time or part-time employees are taken into account. An indicator that takes into account the hours worked provides a more accurate picture of the actual labour input.

Technological progress. A holistic approach, which takes into account the efficiency of the interaction of all factors involved in production, distinguishes between the productivity of the primary production factor labour, the capital input per unit of labour (capital intensity) and a residual metric that explains the growth of an economy not caused by an increase in the labour input or capital input, the so-called total factor productivity (TFP). An intuitive term for the latter is technological progress.

This paper focuses on labour productivity in Europe.

Divergence in productivity endangers the necessary convergence in Europe: A divergence in productivity presents additional difficulties for a common economic and monetary union. On the one hand, it runs counter to the EU’s objective of ensuring convergence of living standards across the Union. On the other hand, it represents a long-term risk to political stability if economic convergence is not ensured in a sustainable manner and there is insufficient common policy coordination.

After all, a common economic area runs the long-term risk of becoming politically unstable if economic convergence is not ensured in a sustainable manner and there is insufficient common policy coordination.

6 Plausible explanatory approaches for the increasing concentration are, for example, the successful management of the structural change from an industrial to a service economy, the geographical proximity to successful regions, the percent-age of the population with university degrees and the age of the population. See Christian Odendahl, John Springford, Scott Johnson and Jamie Murray (2019) The big European sort? The diverging fortunes of Europe’s regions. Centre for European Reform; Don J. Webber, Min Hua Jen and Eoin O’Leary (2019) European regional productivity: does country affiliation matter? In: International Review of Applied Economics, 33(4), pp. 523-541.


conditions. On the other hand, a common monetary policy cannot counteract differing productivity developments in the euro area with regionally different interest rates. If the objective of a convergence of living standards is to be maintained, diverging productivity developments thus increase the need for fiscal transfers. Otherwise, adjustments must be made, primarily through labour mobility – with correspondingly high social costs. Productivity differences may also ratchet up the pressure on the overarching objectives of EU cohesion policy, such as reducing regional disparities and promoting balanced territorial development. After all, a common economic area runs the long-term risk of becoming politically unstable if economic convergence is not ensured in a sustainable manner and there is insufficient common policy coordination.

What does weak productivity mean for European policy?

Roughly speaking, the debate on the changes in productivity found in advanced economies is divided into two main explanatory models. According to Robert Gordon, the growth rates between 1870 and 1970 were historically unique and cannot be repeated. Key innovations that gave a major boost to productivity in many areas of the economy and society (e.g. electric lighting or commercial aviation) have been exhausted. By contrast, innovation economists such as Erik Brynjolfsson and Andrew McAfee argue that the current weak productivity development is a reflection of the transition from a production-based to an idea-based economy.

Supply-side approaches to explaining Europe’s weak productivity focus on increasing hostility towards innovation and inefficient market structures. This takes the form of a rise in market concentration (“winner takes all”), among other developments. Technology leaders push potential competitors out of the market, which reduces the broad use of innovation potential. If, by contrast, one assumes that larger companies tend to be more productive in part because they use increasing returns due to economies of scale, they achieve efficiency gains through product diversification and benefit from easier access to international trade and cheaper financing, then a decentralised market structure could also explain the weak productivity at the present time.

The increase in so-called “zombie companies” is also frequently cited as an explanation. Particularly in the low-interest rate environment, less productive companies keep themselves in the market solely with the help of cheap refinancing. The gap between a few highly innovative “frontier firms” and a large number of less productive companies, so-called “laggard firms”, is becoming larger and larger.

An opposing view can be found in explanations that tend to view aggregate demand as the core of the productivity problem. At the heart of these explanations is a lack of basic innovation due to weak investment activity. Private sector investment is often the focus of attention because it accounts for a high share of the total volume. Only if companies invest sufficiently in their capital stock and human capital, will there be technological progress – one of the main conditions for higher overall gains in productivity.

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Political economist Mariana Mazzucato argues that the basic innovations that are critical for long-term growth cycles can only be made possible through the interplay of government research, new infrastructure, entrepreneurial activity, skilled labour and societal demand.\(^{15}\) Investments in research and development, infrastructure, education and training play a major role here. In the debate on the drivers of changes in productivity, the role of public-sector investment is becoming increasingly important.

Current empirical studies show that public-sector investment actually provides the necessary additional stimulus for private-sector investment ("stimulus function").\(^{16}\) Private investment, especially by companies, requires not only capital but also infrastructure, well-trained professionals and modern knowledge. In addition, a long-term public sector investment policy acts as a signal for a long-term increase in the demand for goods and services allocated to investment activities ("signal function"). Private sector actors adapt to such a policy and increase their capacities, which in turn requires investment.\(^{17}\)

The close relationship between productivity growth, economic growth and the sustainability of social systems, as well as the direct link to the stability of the European common Economic Union, require a new approach to European productivity policy. The various explanations for weak productivity mentioned above, especially those concerning aggregate demand, can be used as important starting points to derive a progressive productivity strategy for Europe. Such a strategy should be based on three central pillars: Strengthening European innovation policy; promoting technology explicitly geared to the complementarity of man and machine; and a comprehensive and sustainable investment policy.

### Innovation, technology, investment: A 9-point plan for more productivity in Europe

#### Strengthening European innovation policy

Innovation is a necessary condition to achieve sustainable productivity growth for Europe’s technologically advanced economies. To succeed in this, it is necessary to have targeted measures for creating innovation-friendly market structures in the EU and more intensive coordination between Member States. Building on the current composition of divergent innovation policies laid out by Nicholas Bloom et al.,\(^{18}\) European policy – and above all the European Commission – should pay more attention to the following levers and instruments for technological innovation:


1. **Support for research and development (R&D):** Public sector R&D spending has medium-term effects on innovation. In its “Europe 2020” strategy, the Commission included the requirement that private and public sector investment in R&D should be three per cent of GDP in 2020. This target will be clearly not be achieved. The new European Commission must therefore work towards the strongest possible commitment from the Member States to define and pursue national targets for public R&D expenditures. At the same time, R&D funding under the European Cohesion Policy, which in recent years has mainly benefited the already highly innovative regions, should be targeted at regions in Member States with low R&D rates. In addition, the Commission should assume a stronger coordinating role for mission-based R&D investment. The European Innovation Council, which will be fully operational in 2021, could play an important role here.

2. **Strengthening human capital:** Long-term effects on innovation can result from better access to technological research as well as enabling young people to come into contact with innovation ecosystems. There are big differences between EU countries and regions. The Commission’s aim should be to organise a greater exchange of good practice for modernising education on the secondary and tertiary level. This must be the subject of the Digital Education Action Plan that the European Commission intends to publish in the middle of the year. At the same time, positive innovation effects could be achieved in the short term through the immigration of skilled labour. To this end, it is necessary to eliminate the barriers to granting a European “Blue Card” and empower less innovative regions to increase their attractiveness for highly qualified immigrants.

3. **Open markets:** Finally, open markets have a major positive impact on innovation since the costs of innovation can be refinanced more easily through a larger market. For the EU, this mainly relates to the integration of digital services markets. The free flow of data within the economic area plays a central role here. The Commission must enforce the European legal framework on the free flow of data, while preventing it from causing regional productivity divergence to increase. One of the first important steps here is the EU Commission’s data strategy, which contains sector-specific European data areas and a general governance framework.

4. **Entrepreneurial investment in human capital:** Similar to investment in R&D, tax incentives for entrepreneurial investment in human capital could provide stronger motivation for the systematic development of human capital, especially for low-skilled workers, and thus promote the diffusion of innovations that do not achieve productivity gains mainly through job losses. The Commission should take up the Anglo-Saxon discussion on human capital tax credits, for exam-
5. Diffusion of organisational innovations: Erik Brynjolfsson and Andrew McAfee argue that basic innovations only translate into productivity gains when the necessary, sometimes protracted implementation steps are taken at the organisational level. There are great differences between countries, industries and company sizes when it comes to the speed and quality of implementing innovations and modern management practices. While the diffusion of organisational innovations to a wide range of companies is part of the economic policy instruments in some EU states, the government hardly plays any role here in other countries. The Commission’s strategy for small and medium-sized companies (SMEs), published in March 2020, lists a number of measures, such as Digital Innovation Hubs, which aim at the adoption of innovative practices by SMEs across Europe. In addition, the Commission would be responsible for promoting, within the Member States, the diffusion of the approaches adopted by the leading countries here.

A European investment agenda for higher productivity

Investment is the bedrock for the emergence of basic innovations and their use across various sectors, making it a prerequisite for sustainable productivity gains. This is why the impact of weak investment activity in many European economies following the financial crisis is all the more devastating. Therefore, a central component of a promising productivity strategy is a comprehensive investment policy integrating both the national and European levels.

Therefore, a central component of a promising productivity strategy is a comprehensive investment policy integrating both the national and European levels.

6. Modernisation of the capital stock: The productive capital stock of European economies should be fundamentally preserved and modernised. All companies benefit from functioning business-related infrastructure, regardless of their current position in productivity distribution. Public transport and network infrastructure as well as regional infrastructure are affected by this in particular. Such a focus on maintaining and modernising infrastructure, especially in rural areas, also contributes to reducing regional disparities in productivity over the long term, while at the same time protecting local welfare services in the EU.

7. Combining public and private investment: A combination of targeted public sector investment and incentives for private-sector investment activity is the starting point for a sustainable increase in productivity. It is possible to use empirical findings on key investments that can stimulate "investment chains". Targeted and institutionalised spending reviews are an effective tool for identifying and prioritising such productive key investments. This applies in particular to the necessary restructuring of the European national economies in the areas of energy production and mobility as well as digitisation and urbanisation. In these areas, long-term planning security for companies and employees must be underpinned by concrete regulatory requirements, targeted national and European support programs, the provision of venture capital for growth phases and state support for R&D.
8. **Solid financing of future investments:** Concrete investment projects aimed at increasing productivity must be matched by concrete financing instruments and commitments. Following a phase of stabilisation and consolidation of public-sector finances as a result of the eurozone crisis, many European countries must now substantially increase their investments in the future. At the same time, the foreseeable prolonged period of low interest rates entails a fiscal policy environment in which government borrowing to create future assets and sustainable growth potential appears compatible with existing national and European budgetary rules. Instruments such as state funds, companies and other forms of investment for the implementation of key investment projects also offer domestic investment opportunities in European Member States with current-account surpluses, as these tend to be subject to lower risk than short-term investments outside Europe. At the European level, for example, the European Investment Fund (EIF), which specialises in supporting SMEs, could be developed into a European Future Fund to address key investment needs. After all, today’s financing must always be viewed in relation to tomorrow’s profits. Tom Krebs and Martin Scheffel show that government investment can sometimes bring high fiscal returns and also increase the fairness of distribution. These investments are therefore still worthwhile even at significantly higher interest rates than the current ones.

9. **European investment stabilisation:** European stabilisation instruments are needed to counter a reduction in government investment and programs for promoting investment during an economic downturn, as is foreseeable in the wake of the Corona pandemic. One of the first sensible approaches is, for example, the temporary modulation of co-financing approaches for important investments in employment and growth, as provided for in the new BICC (budgetary instrument for convergence and competitiveness) for euro countries, if a Member State finds itself in a phase of economic weakness. Another step in the right direction is tying specific investment projects to individual structural reforms aimed at raising productivity, as laid out in the BICC. The BICC’s currently planned volume alone is likely to have only a minor impact on macroeconomic stabilisation. Other possible steps to create financial leeway for investment during crises would be, for example, a common reinsurance system for unemployment benefits or a European recovery fund.

**Summary**

Europe has had a productivity problem for some time. Productivity growth has been declining over the last few years. Now, as a result of the current economic crisis, this subliminal development could prove to be especially problematic. It poses particular challenges for economic policy, because already before the corona pandemic a comprehensive European productivity strategy was urgently needed to ensure competitiveness, growth and convergence of living standards within the EU in the long term. Therefore, a European productivity strategy must always be considered when formulating the medium-term economic policy responses to this crisis. The experience gained from the management of the financial crisis shows that an excessively short-term crisis policy that does not sufficiently address the structural economic policy problems of European economies increases the risk of secular stagnation in Europe. As a first step in economic policy, necessary national and European emergency measures are currently being implemented, which, in particular, are aimed at providing state cover for individual risks and expanding the scope for financial policy actions. If, in a second step, measures are taken to stabilise economic activity in Europe, these measures must always also aim to increase productivity in all regions of Europe – they must have a transformative effect. This requires a
The experience gained from the management of the financial crisis shows that an excessively short-term crisis policy that does not sufficiently address the structural economic policy problems of European economies increases the risk of secular stagnation in Europe.

stronger and better coordinated promotion of innovation, a more targeted dissemination of technologies and a more comprehensive and sustainable investment policy in the European Union.

Concrete starting points for a European productivity strategy can be found in the current debate on digital transformation and a “Green New Deal”, but also in the initiative for “European public goods”. In the medium term, the country-specific recommendations within the framework of the European Semester or the debate on deepening the economic and monetary union also provide further levers. The German Council Presidency in the second half of 2020 offers a good framework for initiating the urgently needed steps towards a European productivity strategy.

The Authors

Dr Max Neufeind is Policy Advisor at the German Federal Ministry of Finance, previously he worked at the Federal Ministry for Labour and Social Affairs. He has been a Policy Fellow at Das Progressive Zentrum since 2013.

Dr Christoph Priesmeier is Policy Advisor at the German Federal Ministry of Finance, previously he worked in the General Economics department at Deutsche Bundesbank.
About the project

This Policy Paper is part of the project "Inclusive Growth for Europe" by the Bertelsmann Stiftung and Progressives Zentrum. Within three European Policy Labs, experts from civil society, academia, economics and politics discussed European public policy issues in three content fields: stabilising the euro zone, European minimum standards and convergence as well as growth and productivity.

Projektteam

Dr Katharina Gnath, Senior Project Manager, Programme "Future of Europe", Bertelsmann Stiftung
Natascha Hainbach, Junior Project Manager; Programm "Future of Europe", Bertelsmann Stiftung
Paul Jürgensen, Project Manager, Programmbereich "Future of Democracy", Das Progressive Zentrum e. V.
Dr Maria Skóra, Leiterin, Head of Programme "Internationaler Dialogue", Das Progressive Zentrum e. V.

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Bertelsmann Stiftung
Carl-Bertelsmann-Straße 256
33311 Gütersloh
Tel. +49 5241 81-81183
www.bertelsmann-stiftung.de

Das Progressive Zentrum e. V.
Werftstraße 3
10557 Berlin
Tel. +49 30 39 40 55 45
www.progressiveszentrum.org/

Responsible according to press law
Prof Christian Kastrop,
Dominic Schwickert

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Dietlind Ehlers
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