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ALLOCATIVE EFFICIENCY IN THE EURO AREA

THEMATIC DISCUSSIONS ON GROWTH AND JOBS

Note for the Eurogroup

Why is allocative efficiency important in EMU?

Reviving productivity growth is a key challenge in the EU and particularly the euro area. Boosting productivity can be achieved in two ways: either it requires that one becomes better in a certain economic activity, or that one expands the more productive activities and correspondingly shrinks the less productive ones. The latter mechanism is referred to as an improvement in allocative efficiency, meaning an increase in aggregate productivity achieved through a more efficient allocation of productive resources across economic activities. Achieving and maintaining high allocative efficiency is particularly relevant at this point of the economic cycle to make sure that the recovery is durable and that growth is inclusive.

Achieving a more efficient resource allocation is a multi-dimensional policy challenge. Resource allocation refers both to capital and to labour, and improving it requires the right policy mix. Structural reforms in product markets that remove competition-impeding regulations, improve access to finance and reduce the costs of firm entry and exit facilitate the (re)allocation of capital. Policies that improve the quality of governance and increase the efficiency of the public sector reduce the costs of doing business and increase the return to innovation. Furthermore, policies that reduce the adjustment costs faced by workers in labour market transitions, including through upskilling or reskilling, but also through better initial human capital acquisition, facilitate the (re)allocation of labour to high-productivity jobs.

An ability to reallocate resources reflects the readiness of the economy to reap the benefits of structural change. The process of structural change materialises through the reallocation of resources. With regard to the (re)allocation of labour in particular, it materialises through the reallocation of workers, not only across jobs but also across occupations and sectors. The shift of workers away from less-productive activities enhances a country's productivity performance. It is of paramount importance to facilitate and accompany these labour market transitions towards higher-productivity employment opportunities so as to reap the full benefits from the ongoing process of structural change, such as the digital transformation, automation, and the emergence of artificial intelligence as well as the transition to a low-carbon economy and the increased trade integration.¹

An efficient allocation of resources enhances economic resilience and is thus particularly relevant for the euro area. Economies where there is the ability to smoothly (re)allocate resources across firms and sectors react more promptly to shocks and are able to recover more quickly from an economic downturn. Structural reforms that reduce the barriers to capital and labour (re)allocation enhance the resilience of the economy and reduce the economic and social costs of economic shocks.

Productivity-boosting labour market transitions also support the rebalancing process in the euro area. For example, Portugal experienced a deterioration in allocative efficiency in

¹ The role of structural change in achieving real convergence is underpinned in McMillan and Rodrik (2011), "Globalization, structural change, and productivity growth", chapter 2 in "Making Globalization Socially Sustainable", WTO-ILO joint publication: developing economies that succeeded in reallocating workers away from low-productivity activities converged to incomes per capita of advanced economies.

the pre-crisis period, but this deterioration was reversed over 2008-2014. The improvement in the efficiency of labour allocation was an important channel of productivity growth in the recent period in Portugal. It was the main channel of productivity growth in countries such as Cyprus and Ireland.²

Improvements in allocative efficiency of labour require modern and efficient welfare systems that facilitate labour market transitions and bring about higher living standards. Better framework conditions and skill sets aligned with labour market needs help workers and entrepreneurs seize new job and business opportunities swiftly. Output growth in high- productivity activities is supportive of higher real wages and stronger domestic demand. Appropriate policies need to accompany labour market transitions to ensure that they are inclusive. Adequate, effective and people-centred welfare systems are needed for creating an enabling environment in which workers and entrepreneurs are encouraged to continuously invest in upskilling or, if necessary, reskilling, to keep pace with technological progress.

Improving allocative efficiency: a multi-dimensional policy challenge

Low allocative efficiency indicates the existence of barriers to resource reallocation. Such barriers can be manifold ranging from efficiency challenges in the public sector to the quality of the business environment and to the labour market and social welfare frameworks. As regards the latter, barriers include notably regulations that make job transitions too costly, lacking/ineffective accompanying measures that facilitate job transitions to inadequate education/training systems that do not equip workers with skills required in the changing economic conditions. Gaps in social protection coverage as well as the inability to transfer entitlements between jobs may further increase the cost of professional mobility.

A holistic approach to evaluating allocative efficiency helps to target structural reforms with the highest expected impact on aggregate productivity. The analysis of the contribution of allocative efficiency to productivity helps to identify the main barriers to productivity growth:

- weak performance linked to low firm-level productivity in a specific sector may signal the need for policies targeting innovation and technology diffusion;
- weak performance linked to low intra-sectoral allocative efficiency points to the need for policies targeting improved resource allocation within the sectors of the economy, for example through the removal of barriers to entry and growth of highly productive firms as well as exit of less productive ones;
- weak performance linked to low inter-sectoral or macro-level allocative efficiency calls for policies that facilitate transitions to high-productivity economic activities, for example through active labour market policies that target upskilling and retraining.

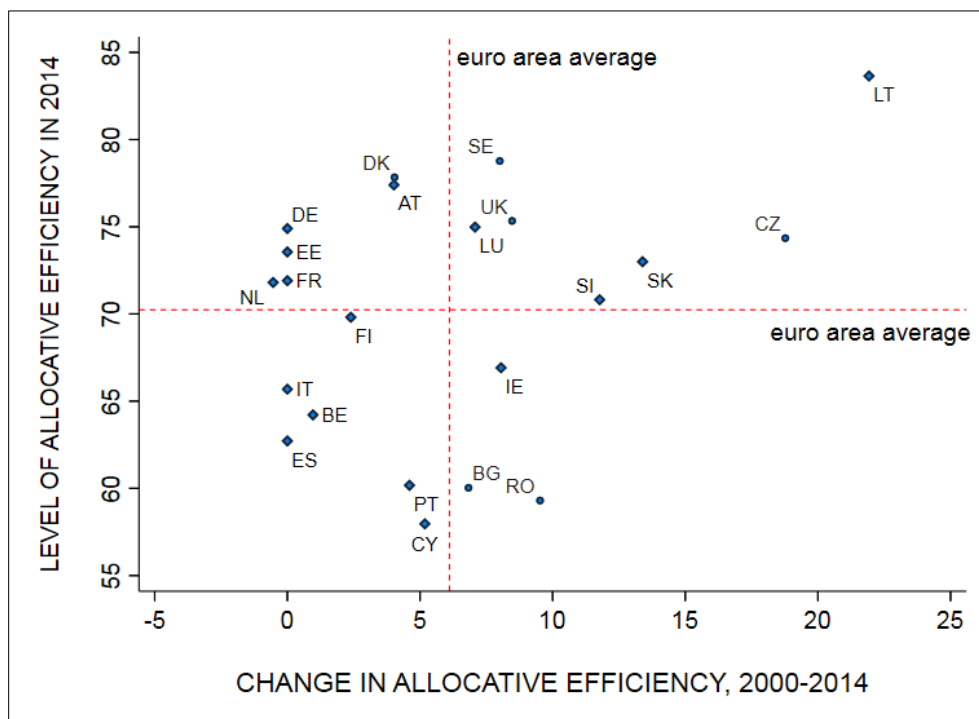
² This result is obtained by decomposing the growth in aggregate labour productivity in the respective contributions of growth in sectoral productivity and of changes in the efficiency of the inter-sectoral allocation of labour.

The prioritization of policies also requires a forward-looking perspective on disruptive technological change. Rapid technological developments will modify the set of tasks performed in any given occupation while also shifting employment opportunities across occupations and sectors. The current pace of the digital transformation makes the policy challenge of facilitating labour market transitions particularly salient.³

Allocative efficiency: where do euro area countries stand?

There are large differences across Member States in macro-level allocative efficiency, suggesting a substantial untapped potential to improve economic performance. The important spread in performance across the euro area in the efficiency of resource allocation in the market economy, i.e. excluding the public sector, underpins that improvement in the efficiency of labour allocation can boost the productivity performance significantly, and all the more so in countries currently characterised by relatively low allocative efficiency.⁴

Graph: Macro-level allocative efficiency in 2014 and total change over 2000-2014



Reading the graph: The indicator of macro-level allocative efficiency is equal to the ratio of the aggregate labour productivity to the unweighted average of sectoral labour productivity. For ease of interpretation, the level of the indicator is plotted in % (y-axis) and the change in the indicator is plotted in percentage points (x-axis). The x-axis shows the total change in allocative efficiency over 2000-2014 in each country, with the mean change equalling 6 pp. The y-axis shows the level of allocative efficiency in 2014, with the mean value at 70, meaning that in the average country aggregate productivity

³ See for example the lecture by the Nobel Prize laureate, Professor C.A. Pissarides: "Work in the Age of Robots", 6th Linday Meeting on Economic Sciences (2017). See also European Commission (2018), Employment and Social Developments in Europe 2018, available at: <http://ec.europa.eu/social/main.jsp?langId=en&catId=89&newsId=9150>.

⁴ A conservative estimate of the aggregate labour productivity gain that a relatively weak performer could obtain by reaching the efficiency of labour allocation at the median equals +14%.

is 70% of what it would have been if labour had been equally allocated across sectors. The sample includes EU Member States (euro area countries are depicted as diamonds, while non-euro area ones as dots). Croatia, Hungary, Malta, and Poland were not included due to data limitations. Greece and Latvia could not be included at this stage because their results are sensitive to a sudden significant shift in the macro-level allocative efficiency indicator that requires further analysis.

Allocative efficiency has improved in a large part of the euro area and some countries have already been reaping some of the benefits. Improvements in macro-level allocative efficiency have contributed to real convergence in the euro area. For example, (hourly) labour productivity increased by 75% over 2000-2014 in Slovenia, with improved macro-level allocative efficiency contributing about 2/3 of the total increase. As shown in the graph above, the efficiency of the inter-sectoral labour allocation further improved in countries such as Austria, reinforcing an initially strong performance. In Belgium, France, Germany and the Netherlands the main channel of productivity growth was sectoral productivity while the efficiency of the labour allocation is best described as stable.⁵

The strongest performers have relatively less employment in the least productive sectors and low dispersion in sectoral productivity. This finding underpins that an efficient allocation of productive resources does not require a highly specialised economy. Rather, higher allocative efficiency is achieved through policies that shift labour out of the least productive sectors and bring about productivity catch-up of the lagging sectors. Going forward, there are still margins for achieving higher productivity growth through an improved efficiency of resource allocation in most countries of the euro area.

Implications for policy

Policies that equip the workforce with the right set of skills reduce the adjustment costs of labour market transitions and are likely to result in higher allocative efficiency. The strongest and most robust determinant of macro-level allocative efficiency is the human capital endowment of the country.⁶ At the same time, several Member States have already taken actions to adjust skill sets to evolving labour market needs. For example, Luxembourg has put in place the Digital Skills Bridge, a policy initiative that seeks to upskill workers to maintain their employability in occupations reshaped by digitalisation. Denmark has set up a Disruption Council which by the end of 2018 will deliver to the government its report on the key measures to make sure that growth is inclusive and that individuals are equipped with the right skills to reap the benefits of technological change.

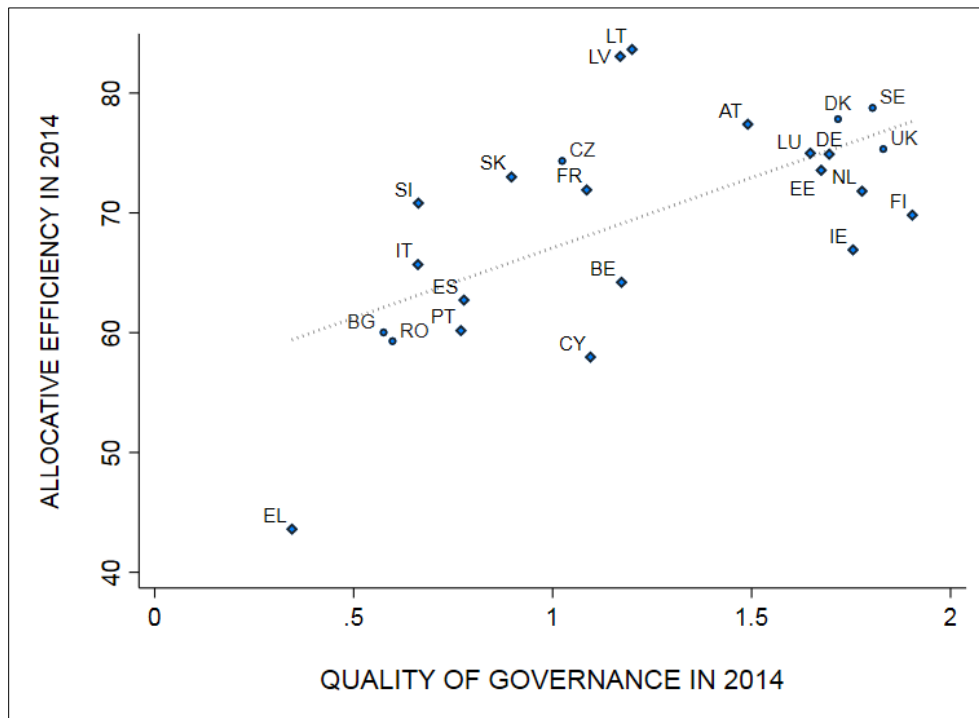
Policies designed to improve the efficiency of the public sector and the quality of the business environment also have the potential to increase allocative efficiency. Institutional characteristics that help to achieve higher allocative efficiency are the quality of governance, the efficiency of the public sector, and the quality of the business environment.

⁵ This result is obtained by decomposing the growth in aggregate labour productivity in the respective contributions of growth in sectoral productivity and of changes in the efficiency of the inter-sectoral allocation of labour.

⁶ About one third of the variation in the efficiency of labour allocation across countries is attributable to cross-country variation in the accumulation of human capital. This linkage between the index of human capital and allocative efficiency is robust to taking into account other dimensions in which countries differ, such as the level of technological development and the quality of institutions. It is likely that not only the level of human capital, but also the extent of skill dispersion and skill mismatch contribute to explain the relatively high costs of labour market transitions in a subset of EU Member States.

As shown in the graph below, strong performance in macro-level allocative efficiency is linked to the quality of governance. Indeed, competition-impeding regulation and high administrative costs associated to launching or closing down a business tend to reduce the ability and willingness of entrepreneurs and workers to seize the evolving opportunities.

Graph: Macro-level allocative efficiency and the quality of governance in 2014



Reading the graph: The y-axis shows the macro-level allocative efficiency in 2014 in each country. The x-axis shows the indicator of the quality of governance in 2014, as reported in the database of Worldwide Governance Indicators (WGI). This research dataset on the quality of governance is published by Daniel Kaufmann and Aart Kraay and is widely used in academic work. The dataset contains several indicators of the quality of governance. The indicator of regulatory quality is used here. This composite indicator is built on the basis of business and household surveys, and it captures multiple aspects of the quality of governance: competition policy, regulatory burden, ease of doing business. An index of 1.5-2 indicates high quality of governance. The upward sloping line indicates that higher quality of governance is associated to higher allocative efficiency. The sample includes all EU Member States (euro area countries are depicted as diamonds and non-euro area ones as dots) for which information on allocative efficiency and on the quality of governance is available in 2014.

A modern welfare state and reforms that ensure efficient and inclusive social policies support the process of change. Delivering on the promise of inclusive growth requires a high-performance safety net that helps individuals maintain a decent living standard while transitioning to a new job or occupation. A modernised welfare system that effectively protects the individual, rather than the job, in particular through the portability of entitlements, is needed to build confidence in the future and to encourage workers and entrepreneurs to take on the risk of geographic and professional mobility. Adequate income support together with active labour market policies are also key to support successful labour market transitions. More generally, well-designed tax and benefits systems are essential to bring about an efficient allocation of resources. Social partners also have a crucial role to play in accompanying the process of structural change in the labour markets.

Questions for discussion:

-Which structural reforms related to product markets, taxation, welfare systems and public administration would you see as particularly relevant to improve allocative efficiency in your country and ensure it is socially inclusive?

-Which barriers to labour reallocation do you see as most relevant in your country? Can you identify/share any relevant best practice enhancing allocative efficiency in your country?

-Would you agree that a closer monitoring of allocative efficiency could help to prioritise the reform agenda?