

# Estonia's digital future: how to go from e-government to e-business?

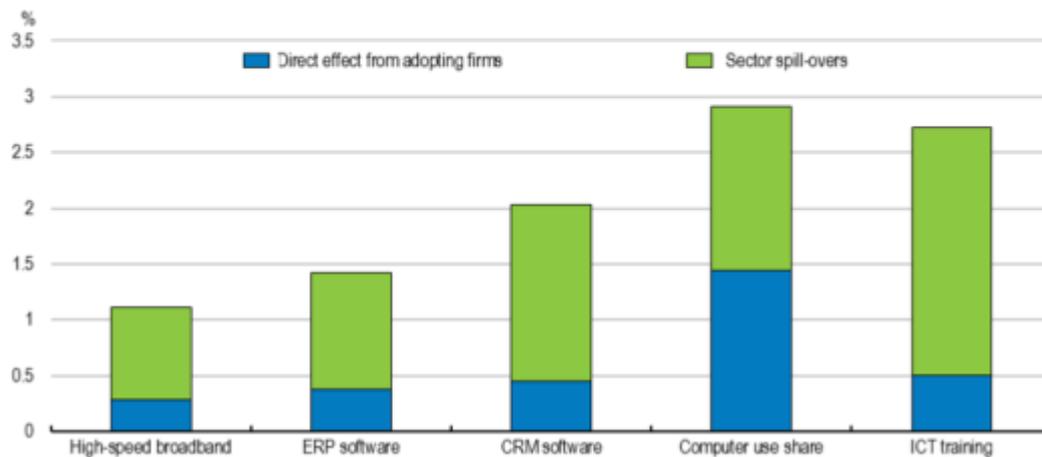
by Margit Molnar and Jon Pareliussen, Estonia Desk, Economics Department

Estonia ranks already among the top countries in e-government. Citizens can do basically anything online except for a very few things like getting married or divorced and selling or buying real estate. The X-road, the secure communication protocol underlying e-government services, was built on the same principles as the block chain, even before the word block chain was invented.

However, despite a number of successful unicorns, digitalisation, is yet to be fully embraced by the business sector, which uses fewer robots, back-office functions and customer-oriented services than in other countries. Automation with proven digital technologies can bring about considerable efficiency gains. Since the technology frontier is shifting constantly, Estonia should seize the opportunity to leapfrog and invest in digital infrastructure. The benefits could be significant. New OECD research shows that the potential to boost productivity by intensifying digitalisation in the private sector is considerable (Figure 1). An Estonian firm increasing the share of employees using computers for work purposes by 10 percentage points could for example see 1.5 percentage points higher annual productivity growth and create positive externalities of a similar magnitude to other firms in the sector.

**Figure 1. Boosting digital diffusion is a way to catch up with productivity growth at the frontier**

Percentage points annual productivity growth premium associated with a 10 percentage points higher digital adoption at the sector level



Source: Pareliussen and Mosiashvili (2020).

Such a boost to productivity would come at the right time given the sluggish recovery of productivity growth following the Global Financial Crisis, in Estonia and many other OECD countries. Several factors hinder digital adoption at the enterprise level, including the lack of awareness, small scale, lack of the necessary skills that could be complementary to technologies, lack of access to high-quality infrastructure and to financing. The 2020 Economic Survey of Estonia highlights the following policy priorities:

- To raise awareness, success stories should be better advertised and access to digital diagnostics, a government-co-sponsored exercise should be streamlined to help firms determine their needs.
- To address the issue of small scale of most Estonian firms, the government could support industrial associations in providing platforms and smart digital solutions in areas such as joint marketing, supplier interactions and customer support.
- To acquire the necessary skills, the drive to strengthen teachers' performance in teaching digital skills should be

reinforced and cooperation between the public sector, labour unions and employers to boost vocational education and training and continuous learning enhanced. In the same vein, implementing a programme to increase the use of high-performing managerial and organisational practices with a strong element of network-building to disseminate good practice and mutual learning could underpin skill use and innovations.

- To enhance access to high-quality infrastructure, better coverage of ultra-fast broadband should be provided at an affordable cost, including subsidising last-mile rollout for smaller enterprises.
- To improve access to financing, alternative sources should be promoted.

#### **Sources:**

OECD (2019), [Economic Survey of Estonia](#). OECD Publishing, Paris.

Pareliusson, J. and N. Mosiashvili (2020), “Digital technology adoption, productivity gains in adopting firms and sectoral spill-overs – Firm-level evidence from Estonia”, OECD Economics Department Working Papers, OECD Publishing, Paris, forthcoming.

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# Getting the most out of Fintech in Estonia

By Caroline Klein, Estonia Desk, OECD Economics Department and Olena Havrylchyk, Professor of Economics at the University of Paris 1 Panthéon Sorbonne

Pioneers of the Estonian Fintech need a fair level playing field. Estonia, at the forefront of alternative finance should seize the moment to set framework conditions right.

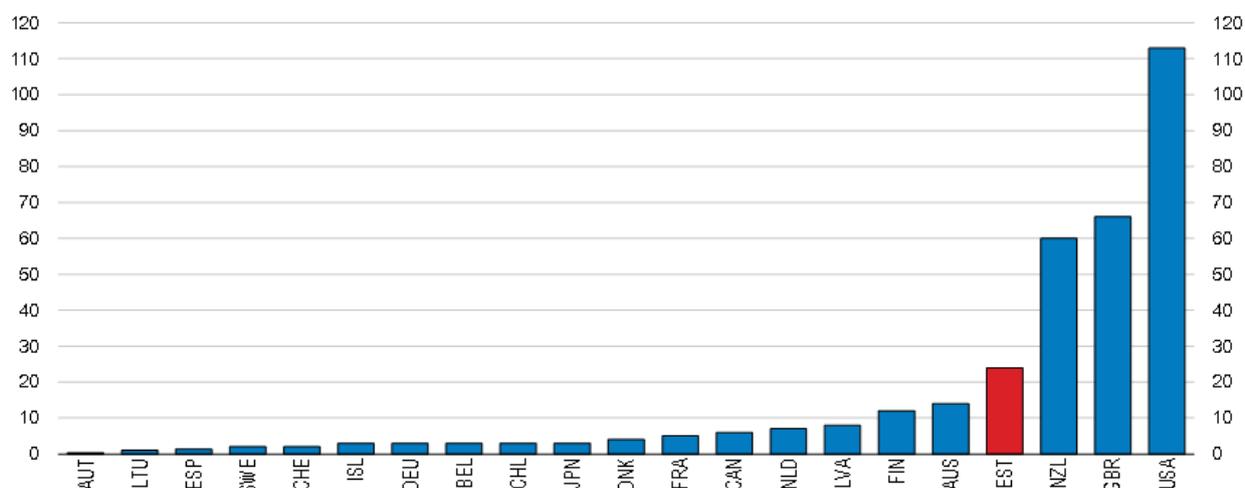
Estonia is a frontrunner in alternative finance and a host to some of the most innovative Fintech start-ups in the OECD – i.e. start-ups using technology and technology-facilitated new business models in the provision of financial services. Some Fintech companies based or born in Estonia have a world-wide reach. These include one of the largest European peer-to-peer lending platforms for unsecured consumer loans, the first worldwide secondary market for venture capital and a platform that allows individuals and small businesses to transfer money between international accounts at much lower cost than traditional banks.

For some, Fintech will revolutionize the traditional banking industry as we know it today, but for the moment, the platforms finance mostly risky projects. At one end of the platform, there are retail investors who choose whom they would like to finance. On the other end, there are SMEs and start-ups that do not go to banks, often because they cannot provide standard guarantees. The platforms generate profits from the origination and servicing fees that they charge to funders and fundraisers. The investors bear all investment risks, providing a natural ‘bail-in’ mechanism. Equity crowdfunding platforms can complement angel- and venture-capital, by allowing individuals to invest in start-ups and buy shares which are not listed on the regulated stock market.

For the moment the scale of finance channelled through Fintech platforms remains limited (Figure 1) and peer-to-peer lending to SMEs lags far behind consumer lending. The [2017 Economic Survey of Estonia](#) stresses that a sustainable development of this ‘alternative finance’ requires a creation of a level playing field between the traditional and the alternative sources of credit in terms of access to information, regulation, and taxation.

**Figure 1. Estonia is a frontrunner in alternative finance but amounts are low**

Volumes, in euros per capita, 2015



Note: Alternative finance includes peer-to-peer lending, equity crowdfunding, donation and reward crowdfunding, as well as balance sheet lending.

Source: Cambridge Centre for Alternative Finance.

To build confidence in these new financing forms, a necessary condition to their development, consumer protection of Fintech users should be reinforced. The Estonian authorities should introduce licencing and transparency requirements and require the platforms to have resolution plans in place to ensure that repayments continue to be collected in case of bankruptcy. By establishing a well-designed credit information-sharing scheme covering all borrowers (firms and individuals) it could help to move the industry forward, by facilitating the use of big data and algorithms to screen and monitor borrowers. Finally, the level playing field should be established also when it

comes to taxes. Taxation of investment via Fintech platforms should be harmonised with that of bond and equity securities, by allowing investors to deduct their losses from their income tax base.

## References

OECD (2017), [\*OECD Economic Survey of Estonia\*](#), OECD Publishing, Paris.

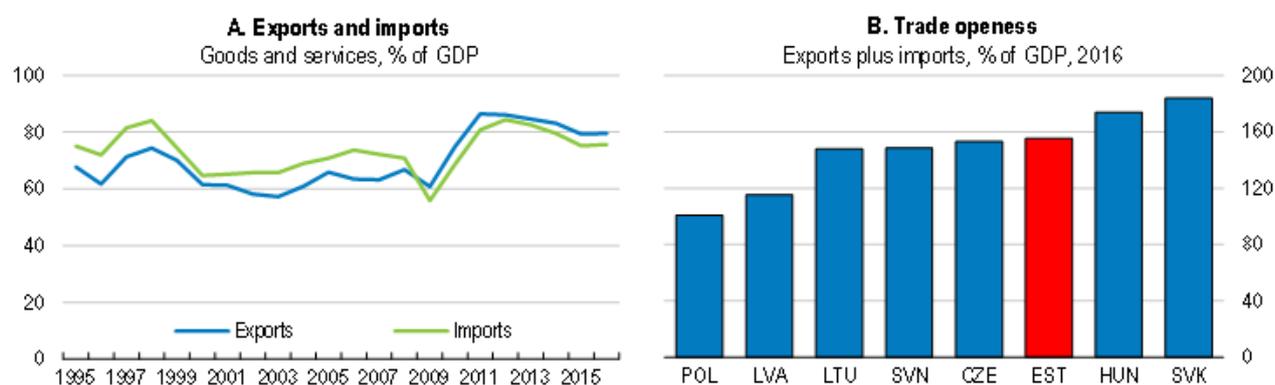
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# As Estonian exporters lead the way, policy needs to adapt

by Zuzana Smidova, Estonia Desk, OECD Economics Department

International trade plays an important role in the Estonian economy (Figure 1). Around a half of the private sector employment is sustained by foreign demand, twice as much as the OECD average. By another measure, over 40% of the value added created in the economy is linked directly or indirectly to exports, largely in the services sector. Yet, value added per worker produced in Estonia and consumed abroad remains low, even if comparable to its EU peers.

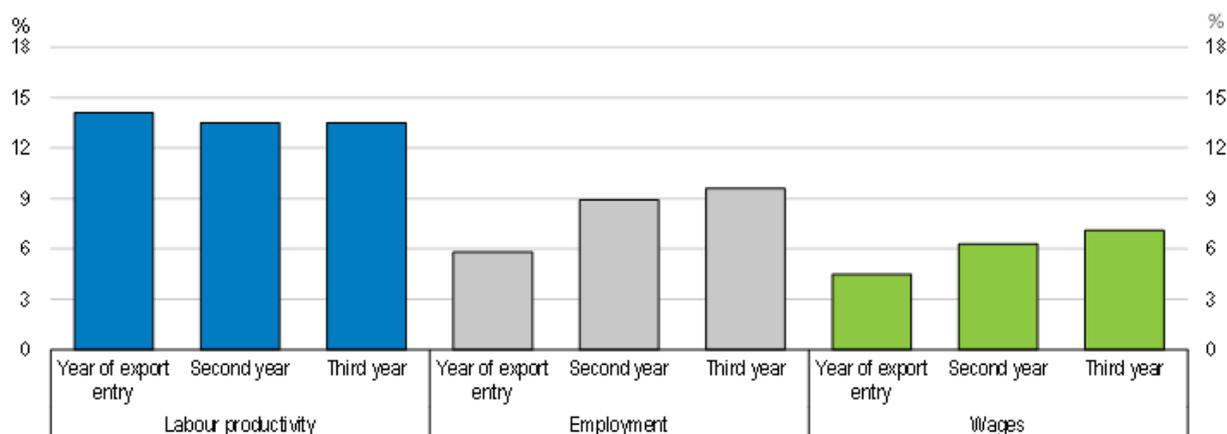
Figure 1. Estonia displays high trade intensity



Source: OECD Economic Outlook 101 Database.

International trade and foreign direct investment can serve as a ladder for climbing up the value added chain as they are major channels of technology diffusion and productivity growth. Exporters display higher productivity and innovation than companies oriented on the domestic market, and this is true in Estonia too, as new research shows (Benkovski et al, 2017, *forthcoming*) (Figure 2). Exporters are faced with tough global competition and have to meet international standards.

Figure 2. Businesses that start exporting perform better



Note: This figure describes the transition of average labour productivity, employment and wages of export entrants (the treated) and matched non-exporters (controls) before and after the export entry. The horizontal axis indicates the time after export entry. 0 corresponds to the year of entry.

Source: Benkovskis et al (2017), Export and productivity in global value chains: evidence from Latvian and Estonian firms, *OECD Economics department working paper*, forthcoming.

To increase export potential and value-added drawn from trade, innovative capacity and transfer of knowledge from highly productive firms to the rest of the economy need to improve. For the moment, innovation of the typical Estonian firms is

limited as spending on business R&D is low. In this vein, nurturing cooperation between the researchers and business is crucial, as highlighted in the new [Economic Survey of Estonia](#) (OECD, 2017). The new industrial policy green paper, initiated by the business community and focused on digitalisation of traditional industries is welcome. It has the potential to improve the productivity and innovation capacities of these sectors. Furthermore, policy efforts should concentrate on strengthening adult education and allowing for immigration of talents, since shortage of skilled labour is starting to show as a major obstacle for further business growth and investment. This can also help with improving the innovative capacities.

By giving access to a wider variety of goods and services at cheaper prices, international trade raises well-being and consumers' purchasing power. It also means fast transmission of global shocks, requiring a robust social safety net and adjustment policies. To ensure that all benefit from opportunities created by globalisation, the Estonian policymakers should focus on two policy areas. Firstly, those who can work need to have the right skills and incentives to participate in the labour market. Secondly, those who are out of the labour market should be supported by an effective and adequate social safety net, conducive to upskilling and maintaining work incentives. This means for instance increasing the level of subsistence of benefits and relaxing eligibility conditions for unemployment benefits, not least to improve participation in active labour market measures.

## **References:**

Beņkovskis, K., Masso, J., Tkasevs, O., Vahter, P., Yashiro, N. (2017), "Export and productivity in Global Value Chain: Evidences from Latvian and Estonian firms" OECD Economics Department Working Paper, OECD Publishing, Paris, *forthcoming*

OECD (2017), [OECD Economic Surveys: Estonia 2017](#), OECD

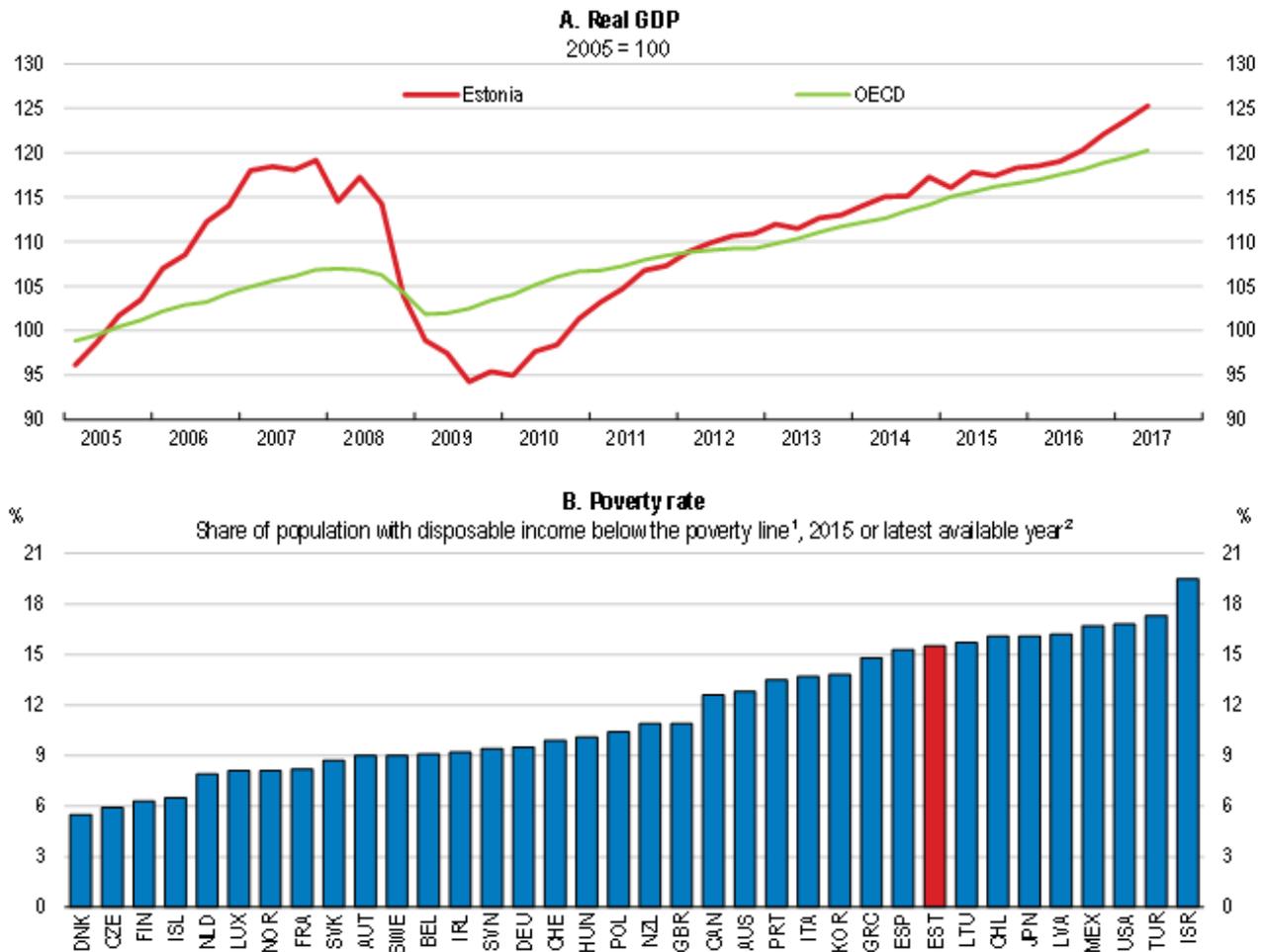
# **Estonia: Using fiscal space for a more inclusive growth**

By Pierre Beynet, Head of Division, OECD Economics Department

Estonian growth is picking up again strongly in 2017 and the level of activity has finally surpassed its pre-crisis level, almost 10 years after the outset of the financial crisis (Figure 1, panel A). However, poverty remains among the highest in the OECD (Figure 1, Panel B).

To make growth more inclusive, the [2017 OECD economic survey](#) argues that Estonia should make its tax and benefits policies more redistributive, but also use more actively its large fiscal space by allowing a small fiscal deficit in the longer term (OECD, 2017).

**Figure 1. Activity is back to pre-crisis level but poverty remains high**



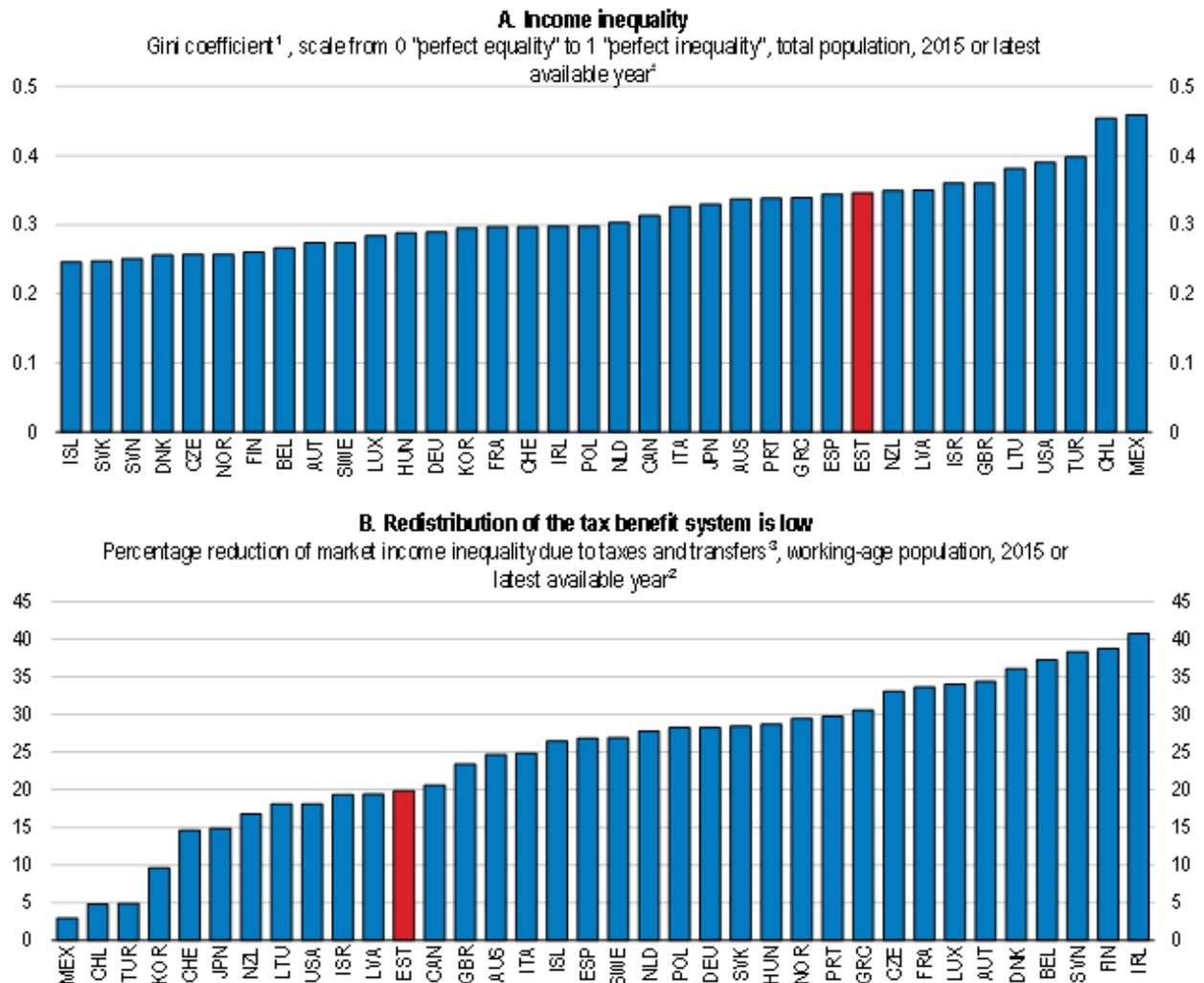
1. The poverty threshold is 50% of median disposable income.

2. Latest available data refer to 2015 for Chile, Finland, Israel, Korea, Mexico, the Netherlands, the United Kingdom, and the United States; to 2012 for Japan; and to 2014 for all other countries.

Source: OECD Economic Outlook 101 database (updated with information available on 1 September 2017); OECD Income Distribution database (IDD).

Market income inequality is high (Figure 2, Panels A), but the redistributive effects of the Estonian tax and benefit system is low (Figure 2, Panel B). It leaves a considerable proportion of the population at risk of poverty, notably the unemployed, disabled and low-educated. The old-aged are also more at risk of poverty, in particular because of the relatively low level of pensions.

**Figure 2. The tax and benefit system does not reduce much inequality**



1. Gini coefficient of disposable income.

2. Latest available data refer to 2015 for Chile, Finland, Israel, Korea, Mexico, the Netherlands, the United Kingdom, and the United States; to 2012 for Japan; and to 2014 for all other countries.

3. Redistribution is defined as the difference between market income and disposable income inequality (inequality measured using the Gini coefficient), expressed as a percentage of market income inequality. Market incomes are net of taxes in Hungary, Mexico and Turkey.

Source: OECD Income Distribution database (IDD).

The government is already working on important redistributive measures. For instance, the planned increase in the personal income tax allowance, which is steeper at lower wage levels, will improve the progressivity to the tax system from 2018. However, the lowest income earners will not benefit from this measure since they are exempt from the personal income tax. Besides, the level of spending allocated to protection of the most vulnerable is low: around 31% of total public spending in 2014 went on social spending, some 9 percentage points less than the EU average. The targeting of social programmes is

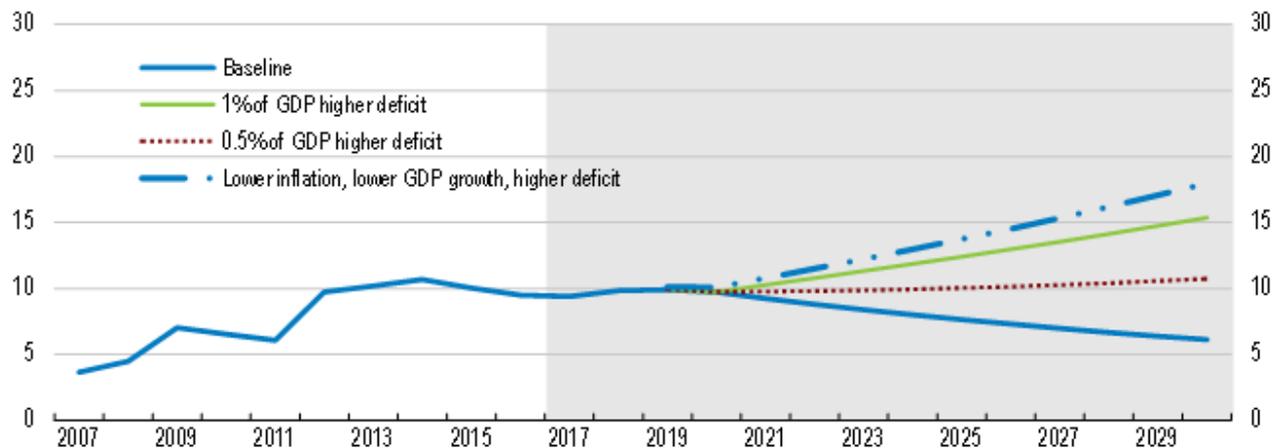
also poor, with means-tested measures accounting for a low share in total social spending.

Fiscal room is available for further measures to make growth more inclusive. Estonia has the lowest gross public debt relative to GDP in the OECD (Maastricht debt is at around 10%) and a structural budget surplus since 2009. Fiscal policy has been tight over past years, despite economic slack. The government plans a small structural deficit in 2018, 2019 and 2020, which is welcome, but the current fiscal rule imposes a return to a balanced budget in structural terms from 2021.

Beyond 2020, financing growth-enhancing measures could require revising the fiscal rule. Maintaining a small structural deficit for an extended period would not undermine the long-term sustainability of public finances. For instance, a persistent deficit of 0.5% of GDP would result in Maastricht debt reaching less than 11% of GDP in 2030 (Figure 3). In the same vein, increasing the deficit by 1% of GDP would still maintain a prudent debt level, even if coupled with 1 percentage point lower inflation and GDP growth (Figure 3).

**Figure 3. A large fiscal space could be used to make growth more inclusive**

Illustrative public debt paths, General government debt, Maastricht definition, as a percentage of GDP<sup>1</sup>



1. The baseline consists of projections for the Economic Outlook No. 101 until 2018. Thereafter, assumptions are: real GDP growth progressively closing the output gap and from 2020 growing by 2.5% in line with OECD estimates for long-term potential growth; a budget balanced in structural terms from 2021 as set out in the national reform programme; inflation declining progressively to 2% by 2030 and an average effective interest rate converging to 3% by 2030. The "0.5% of GDP higher deficit" scenario assumes a structural deficit maintained at 0.5% of GDP from 2021. The "1% of GDP higher deficit" scenario assumes a structural deficit increasing to 1% of GDP from 2021. The "lower inflation, lower GDP growth and higher deficit" scenario assumes lower inflation and real GDP growth by 1 percentage point per year, both from 2019 with structural deficit increased by 1% of GDP from 2021.

Source: OECD Economic Outlook 101 database; calculations based on OECD (2017), OECD Economic Outlook: Statistics and Projections (database), June.

## References

OECD (2017), [OECD Economic Survey of Estonia](#), OECD Publishing, Paris.