



REPUBLIC OF LATVIA

SELECTED ISSUES

September 2018

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Approved By
European Department

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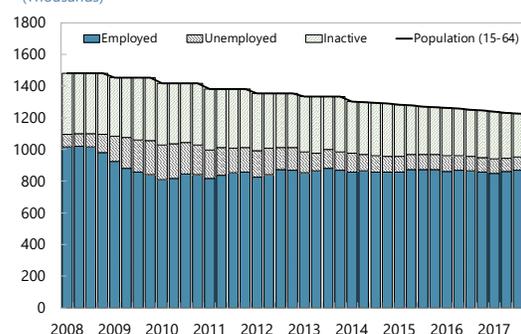
LATVIA'S LABOR MARKET CHALLENGES¹

Latvia's labor market has been buffeted by extreme economic swings since the country joined the European Union in 2004. In the boom period leading up to the global financial crisis, the economy experienced widespread labor shortages and soaring wage growth. The bursting of the bubble led to a deep recession, high unemployment, and a sharp contraction in wages. With the economy now in its eighth year of recovery, Latvia is once again experiencing a tightening labor market—a situation exacerbated by unfavorable demographic trends. Latvia's future prosperity will depend critically on whether it is able to address its labor market challenges.

A. An Overview of Labor Market Developments

1. Labor market constraints pose serious challenges to Latvia's long-term growth. Since the global financial crisis, the level of employment in Latvia has hovered at just under 900,000 people. Although the number of unemployed and inactive people has fallen by nearly two-thirds and one-third, respectively, from their crisis peaks, employment growth has been flat, constrained by a shrinking supply of labor. Should this trend continue, future economic growth will depend on raising productivity and investment—an outcome that appears far from certain given modest labor productivity gains and anemic credit growth over the past decade.

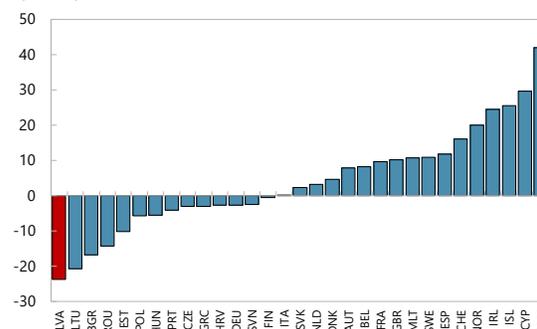
Working-Age (15-64) Population and Components
(Thousands)



Source: Eurostat.

2. The shrinking supply of labor can be attributed to two factors: emigration and negative natural population growth. Since joining the EU, Latvia has seen nearly a fifth of its population leave to work in more affluent EU countries—mainly the U.K., Ireland, and Germany. Emigration spiked during the crisis and remains high today, involving all age groups, especially the youth. Latvia's fertility rate, although higher than the EU average and trending upward since 2011, remains below the rate of 2.1 necessary to keep the population size constant in the absence of migration. Together, emigration and negative natural population growth have resulted in a 24 percent decline in Latvia's working-age population since 2000—more than in any other EU country. The 15–24 cohort has shrunk by almost half.

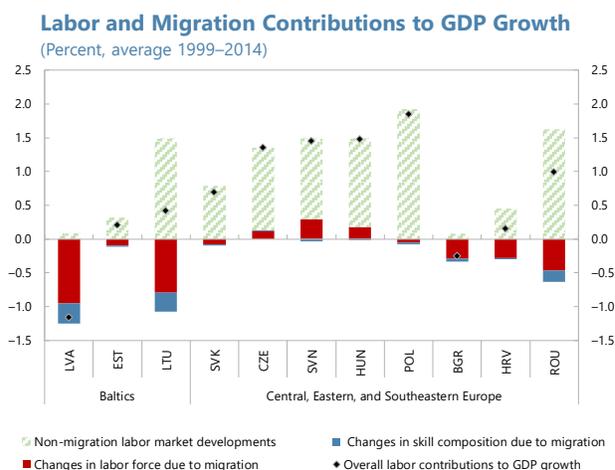
Change in Working-Age (15-64) Population, 2000-2017
(Percent)



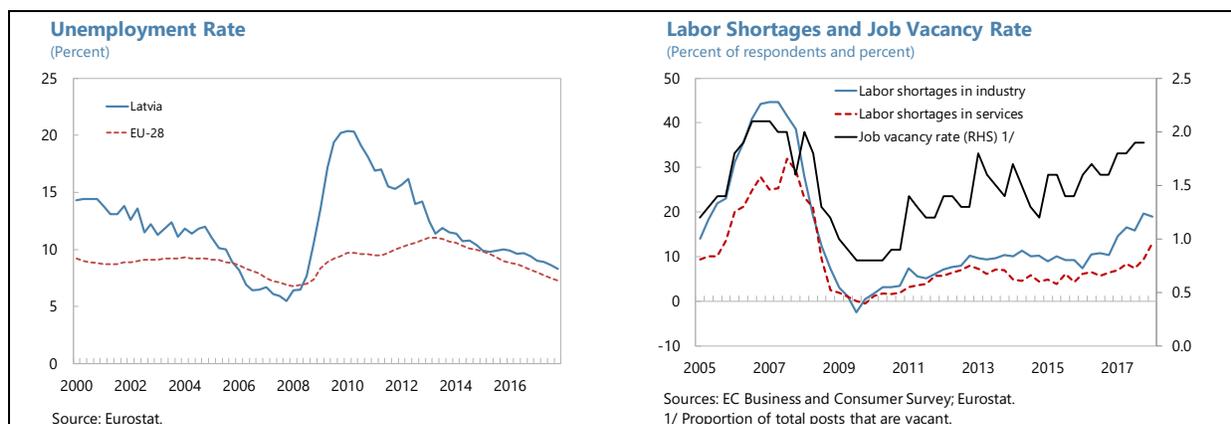
Source: Eurostat.

¹ Prepared by Andrew Jewell.

3. Emigration has had a dampening effect on growth. In addition to reducing the size of the labor force, emigration has drained the country of skilled labor. Young people frequently choose to study abroad—many of whom do not return—or they leave Latvia after graduation. IMF staff estimate that the loss of labor due to outward migration, combined with a worsening composition of skills, shaved off more than 1 percent from annual growth rates between 1999 and 2014.² Few emigrants return to Latvia, with over three quarters citing the inability to find a decent job and concerns about the adequacy of Latvia’s social safety net.³



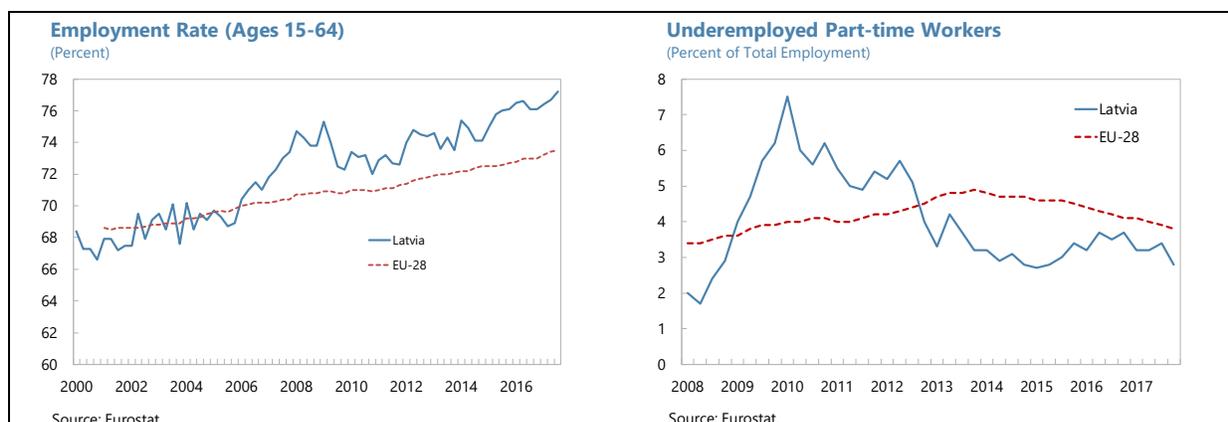
4. A range of indicators point to a labor market with less and less slack, reflecting both demographic forces and an economy in its eighth year of expansion. The unemployment rate has fallen steadily since 2010. At 8.3 percent, it is now well below its historical average and likely close to the natural rate of unemployment.⁴ More and more businesses are reporting labor shortages, albeit not to the extent seen in the run-up to the crisis. The job vacancy rate, on the other hand, is approaching its pre-crisis peak, with vacancy rates especially high in public administration, information and technology, construction, and manufacturing. Despite stagnant employment growth, the employment rate has reached historically high levels due to the shrinking population and now stands well above the EU average. Measures of underemployment confirm that the labor market is tightening. For example, the ratio of underemployed part-time workers to total employment, at 3.1 percent, is approaching pre-crisis levels.



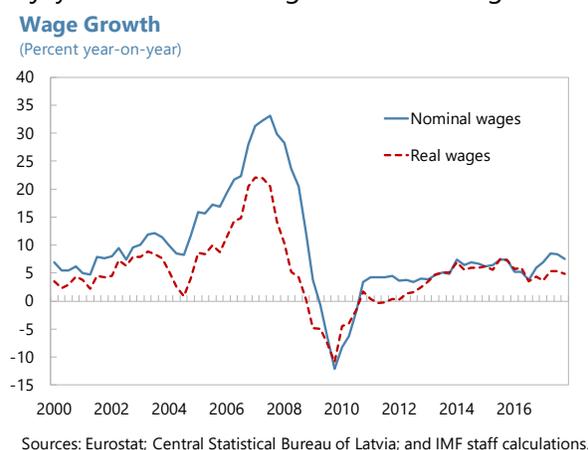
² See Atoyan et al., 2016. Skill shortage (or excess) is defined as the difference between the demand for a skill—the share of skill *i* in employment—and supply of that skill—the share of skill *i* in working-age population.

³ See Hazans, M., 2015.

⁴ The Bank of Latvia estimates a natural unemployment rate of about 10 percent, based on the Beveridge Curve Model, which suggests that the unemployment rate may have even declined below its natural rate.



5. Wage growth has picked up in recent years. Between 2000 and 2007, nominal wages grew by 14.1 percent per year on average as Latvia enjoyed some of the highest economic growth rates in Europe. The ensuing global financial crisis resulted in unprecedented wage adjustment. With Latvia experiencing one of the worst output losses in the world and with unemployment soaring, average wages declined by 10.5 percent in nominal terms in less than two years. Wage growth resumed in 2011 as the economy began to recover, albeit at a more modest pace compared to the pre-crisis years. More recently, wage growth has accelerated, driven by tightening domestic and foreign labor market conditions.⁵



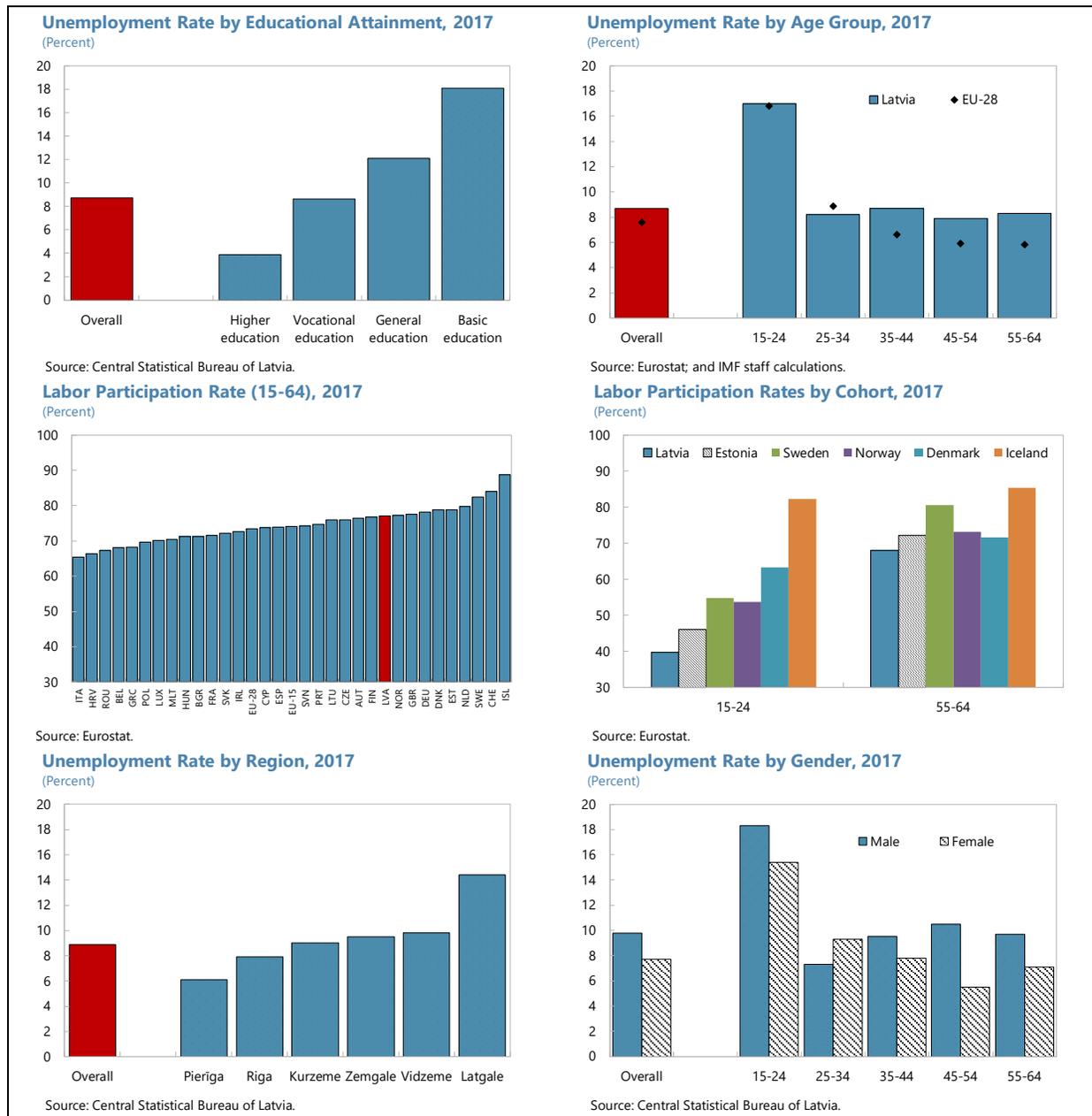
B. Labor Market Structure

6. Latvia's labor market is fragmented, both demographically and geographically. Labor market outcomes vary significantly depending on several factors:

- **Educational attainment.** Those with a basic education are more than four times as likely to be unemployed than those with a higher education—a much larger dispersion than the EU average and indicative of the demand for skilled labor.
- **Age.** Youth unemployment is double the rate of other age groups—a common phenomenon in Europe. The unemployment rate of older workers (55–64) is in line with the overall unemployment rate but is the fourth highest in the EU. Labor participation rates tell a similar story. Although the overall participation rate is at a historical high, it is lower than in Estonia and many Nordic countries, which have more active 15–24 and 55–64 cohorts.

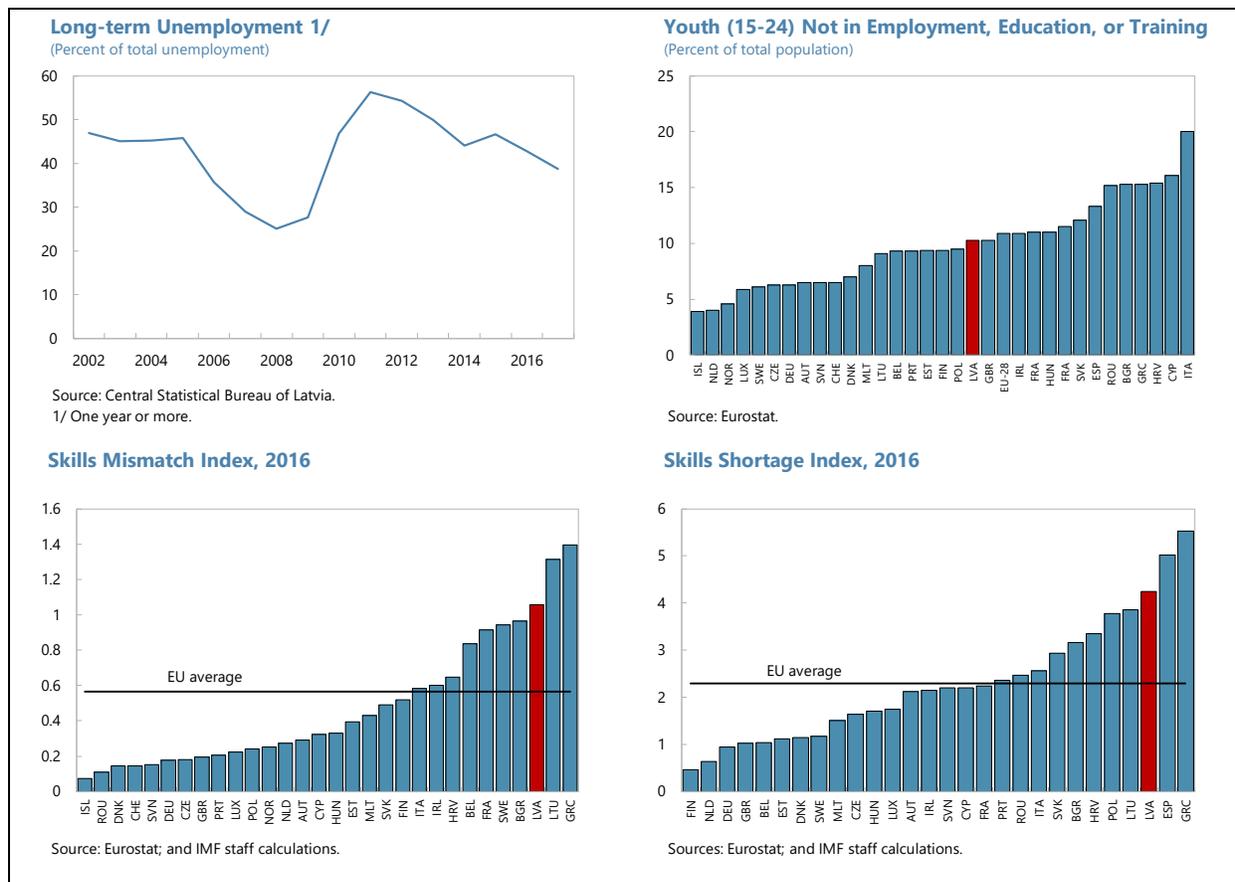
⁵ See International Monetary Fund, 2018a.

- **Region.** Unemployment is higher in the peripheral regions, especially in Latgale in the East, where the rate is twice as high as in Riga and the surrounding Pierīga region. Riga accounts for one-third of the country's population but two-thirds of job vacancies.
- **Gender.** In contrast to the pattern seen in most of Europe, men in Latvia are more likely to be unemployed than women, but women suffer from a gender pay gap even when controlling for age, education level, and other characteristics.



7. Unemployment is largely structural, reflecting severe skills mismatches.

Notwithstanding a 12 percentage point decline from its crisis peak, the headline unemployment rate remains high. Nearly 40 percent of unemployed have been jobless for at least a year even as job vacancies and labor shortages have grown. Although this share has declined since 2011, it remains well above pre-crisis levels, leaving many workers vulnerable to skills depreciation. Older workers educated in the Soviet era have struggled to adapt their skills to changing labor market demands, while younger and more skilled workers are more likely to leave the country.⁶ The result is an economy that suffers from skills mismatches and skills shortages that are among the most severe in the EU.⁷

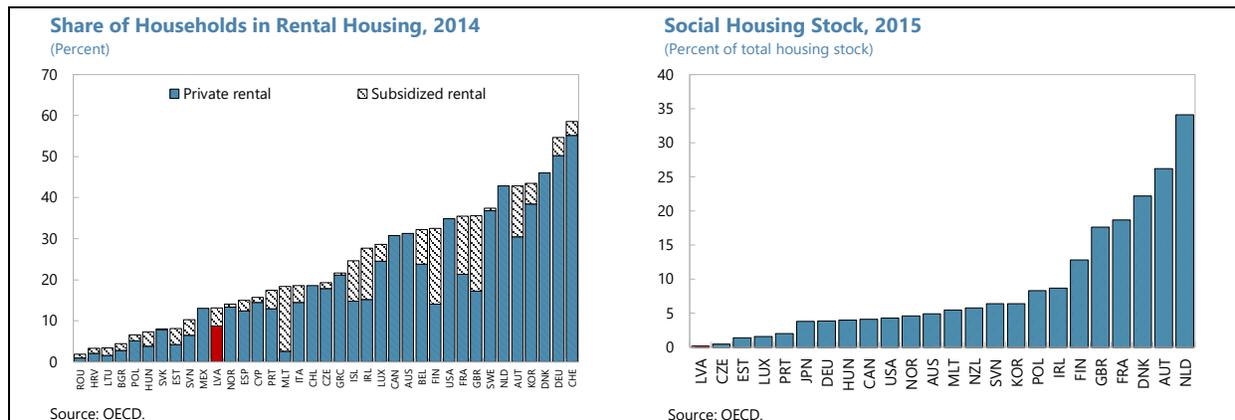


8. Lack of affordable housing represents an obstacle to labor mobility. In Riga and other urban areas with good employment opportunities, affordable housing is scarce, reducing labor mobility, contributing to labor shortages, and keeping unemployment high in rural areas with fewer

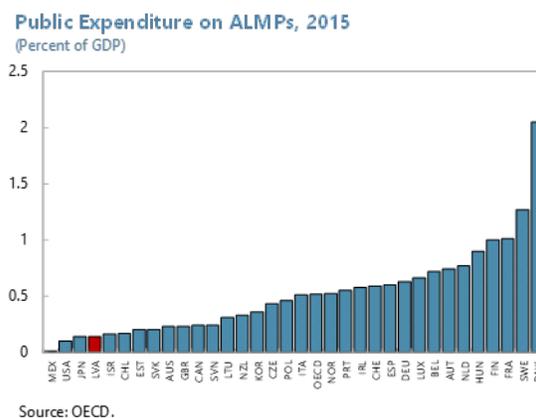
⁶ See OECD, 2013. Between 2000–10, emigrants with a tertiary education represented a quarter of all emigrants from Latvia. More recent data also show that the population aged 15–54 is three times more likely to emigrate than the population aged 55–64. See Central Statistical Bureau, 2017, *Statistical Yearbook of Latvia*.

⁷ See IMF, 2018b. The skills mismatch and skills shortages indexes shown in the figures are constructed based on a framework presented by Estevao and Tsouta, 2011.

jobs. Rental dispute resolution mechanisms are time-consuming and costly, discouraging homeowners from renting their homes, and there is little investment in new rental housing. The situation is exacerbated by the fact that government spending on social housing is among the lowest in the OECD, with social housing representing only 0.4 percent of the total housing stock compared to an EU average of 8 percent.⁸ A more developed rental market would benefit those who seek employment in urban areas but do not have the means to purchase a home.



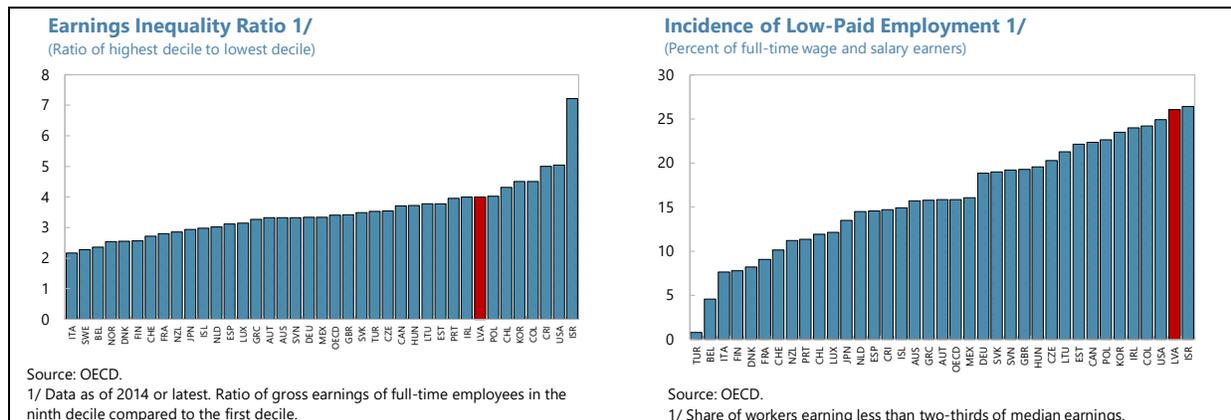
9. Participation in active labor market policies (ALMPs) and lifelong learning is low. Latvia has improved the effectiveness of ALMPs by collaborating with social partners to design programs that respond to labor market demands and by better profiling job seekers to match them with the most suitable programs. But participation in ALMPs is low, and spending on ALMPs is minimal by international standards. Fiscal consolidation during the crisis resulted in substantial cuts in ALMP spending, especially on employment services (e.g., career counseling and job placement). The vocational education and training (VET) system, meanwhile, is transitioning from a highly centralized model to a more flexible one that seeks to promote collaboration between employers and schools. VET curricula have been revised in consultation with employers, and the provision of VET services has been consolidated by reducing the number of VET schools and creating modernized, regional VET hubs. While these reforms are encouraging, the participation rate in formal training and re-training programs (i.e., lifelong learning) among people aged 25-64 is just 7.5 percent—one of the lowest rates in Europe. Furthermore, the government estimates that only 27 percent of practical training in vocational education takes place in companies rather than in schools.



⁸ See European Commission, 2018.

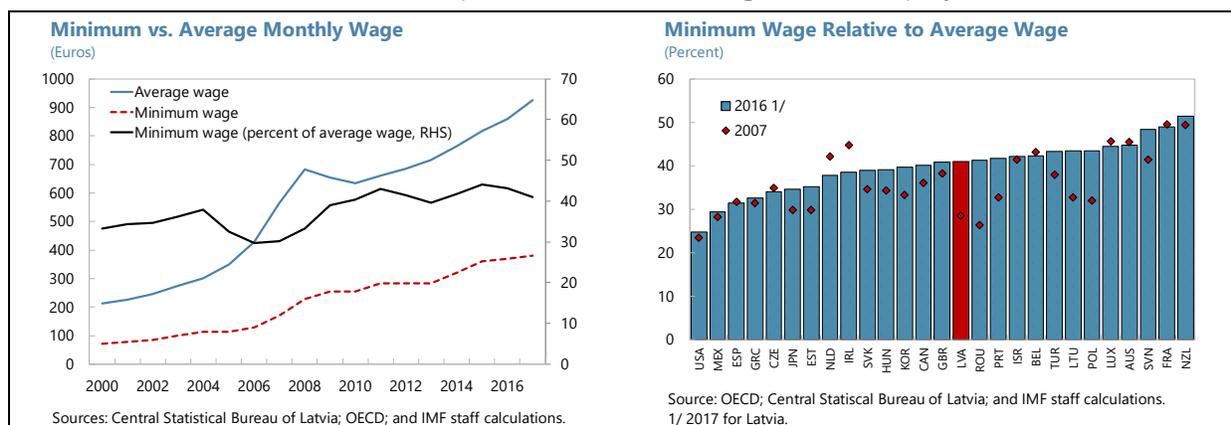
12. At the same time, decentralized wage setting has contributed to high wage inequality.

The combination of low unionization and weak collective bargaining coverage has weakened the bargaining power of workers—particularly those with low skills. This, in turn, has exacerbated wage inequality, which is the second highest among OECD European countries. Low-paid employment is highly prevalent, with a quarter of workers earning less than two-thirds of median earnings.¹⁰



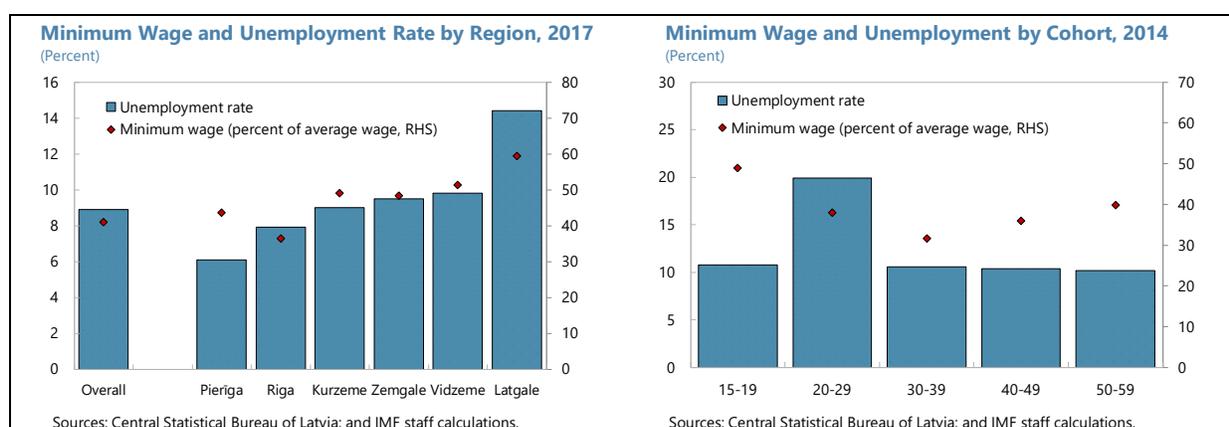
13. High wage inequality exists despite successive increases in the minimum wage.

Latvia has a unified statutory minimum wage, with no differentiation by region or group of workers. The minimum wage level—reviewed annually by a tripartite council comprising the government, the employers’ confederation, and the country’s single trade union—has been raised nearly every year since 2000 and has more than doubled in nominal terms since 2007, from €170 to €430 per month. Increases in the minimum wage have been motivated in part by a desire to boost tax revenues (a higher wage floor reduces envelope wages and increases official income subject to taxation). Given the significant downward adjustment for other wage earners triggered by the crisis, the minimum wage has increased relative to the average wage. The persistence of high wage inequality despite gains in the minimum wage reflects the high incidence of informal employment, earnings premia for skilled workers, and low incomes for pensioners and the long-term unemployed.



¹⁰ Given the prevalence of envelope wages, wage inequality and the incidence of low-paid employment might be less than reflected in official statistics.

14. A unified minimum wage risks pricing some workers out of formal employment. At 41 percent of the average wage, Latvia's minimum wage is arguably on the high side.¹¹ Moreover, a uniform minimum wage is not well suited to a fragmented labor market with large wage disparities across regions and groups of workers. A generous minimum wage that applies across the board can prevent first-time entrants and other low-productivity workers from finding jobs in the formal sector and can contribute to high structural unemployment. This is particularly true in rural areas where average wages are lower and the incidence of minimum wage is higher. There is also evidence that Latvia's minimum wage is hindering the development of apprenticeships, since employers are obligated to pay apprentices the same statutory minimum wage as for all other employees. In 2016, Latvia adjusted the minimum wage-setting framework by introducing the obligation to take into account more extensive analytical data, such as an analysis of economic and social conditions and the impact of the minimum wage on low-skilled workers.



D. Other Impediments to Higher Employment

15. The labor tax wedge for low-wage earners is high, which further encourages informality. At 42 percent in 2017, the tax wedge for workers earning two-thirds the average wage was among the highest in the EU and OECD.¹² A high labor tax wedge makes it more difficult for low-skilled workers to find formal employment and creates incentives for envelope wages. The comprehensive tax reform enacted earlier this year partially addressed this issue by introducing a more progressive personal income tax (PIT) schedule, with a lower PIT rate and income tax allowances for low-income individuals. The authorities estimate the post-reform tax wedge to be 39 percent—a welcome decline but still much higher than the 32 percent average in OECD

¹¹ Rutkowski (2003) concludes that, as a rule of thumb, the minimum wage should not exceed 40 percent of the average wage in developing economies, with the threshold lower when unemployment is high and concentrated among the young and low-skilled. A joint ILO, OECD, IMF, and World Bank report concludes that a minimum wage of 30–40 percent of the median wage would strike a suitable balance (G20, 2012). This roughly corresponds to a range of 25–35 percent for the minimum-to-average wage ratio.

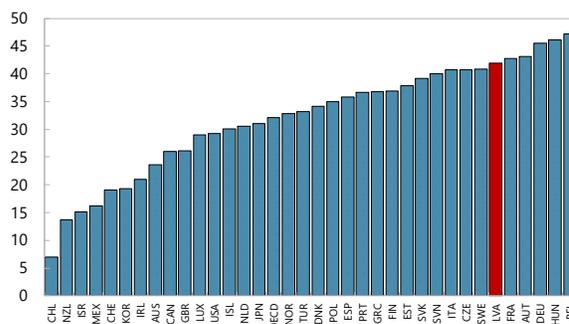
¹² The tax wedge is defined as income tax on gross wage earnings plus the employee's and the employer's social security contributions, expressed as a percentage of the total labor costs of the earner.

countries. Moreover, PIT reductions are not effective at alleviating the tax burden of the lowest wage earners, who typically pay little or no income tax. Nonetheless, a further reduction in the tax wedge—e.g. by reducing social security contributions—needs to be considered carefully in view of the fiscal costs and potential impact on future social benefits of the most vulnerable.

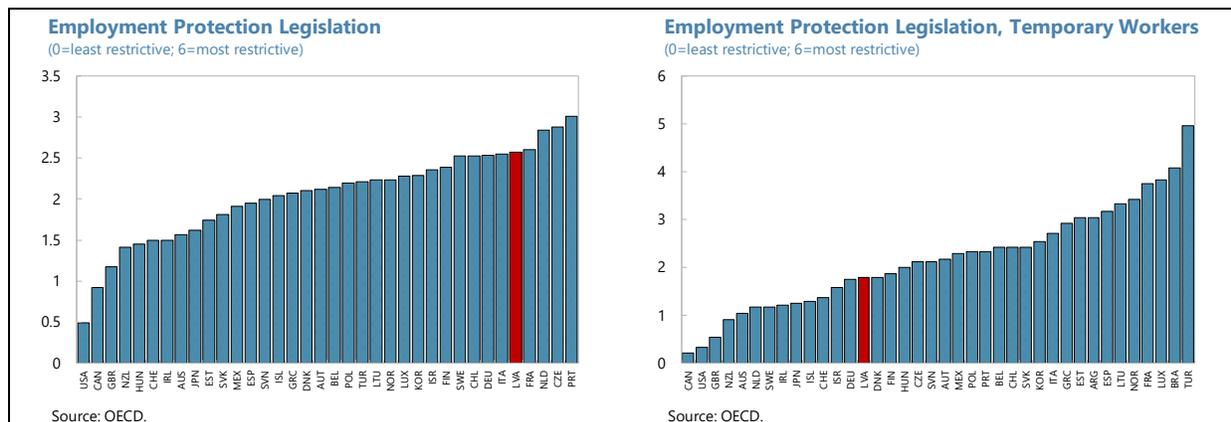
16. Employment protection legislation (EPL)

is relatively restrictive. EPL refers to the procedures and costs associated with hiring and dismissing workers. Theory suggests that overly restrictive EPL reduces both job creation and job destruction and may slow productivity growth by raising labor adjustment costs for firms. Easing EPL can enhance the relative job prospects of underrepresented groups, such as low-skilled youth, but can have an unpredictable impact on aggregate employment since it increases incentives both to hire and dismiss workers.¹³ Latvia’s EPL is among the most stringent in the OECD. Although EPL for temporary employment is much less strict, the share of temporary contracts in total employment is small (2.6 percent compared to an average of 12.2 percent in the EU). While the EPL framework has not prevented rapid labor market adjustments, flexibility of the labor market is due not to flexible rules but rather to non-compliance with the rules.¹⁴ Recent reforms have aimed to increase de jure flexibility, including by extending the period over which temporary contracts can be renewed from 3 to 5 years.

Labor Tax Wedge, 2017 1/
(Percent of total labor compensation)



Source: OECD.
1/ For single workers earning 67 percent of the average wage.



E. Policy Options

17. Latvia’s tightening labor market calls for reforms that make the most of the country’s human resources.

Reforms should aim to tackle barriers to employment, encourage more labor market participation, help Latvia’s citizens build new skills, and stem the decline in the working-age population. Options include:

¹³ See International Monetary Fund, 2016b.

¹⁴ See Zasova (2011) and Krasnopjorovs (2013).

- **Continue to reform vocational education and training and encourage lifelong learning.** Improving links with employers by expanding workplace-based learning and formal apprenticeships would make Latvia's VET system more effective. Promoting lifelong learning would help workers adapt their skills to the demands of a rapidly changing economy and could boost labor participation rates among older workers. A more skilled and productive labor force would support higher wages, helping to alleviate wage inequality and discourage emigration.
- **Increase participation in active labor market policies.** Implementing effective ALMPs is difficult but not impossible. Resources should be directed to programs that have proven to be most effective based on regular, data-driven evaluations. Spending on programs without a proven track record should be discontinued. In addition, Latvia should move away from spending on direct job creation programs and instead improve the accessibility of unemployment benefits. Higher participation in effective ALMPs could help address skills mismatches and reduce long-term unemployment.
- **Introduce differentiated minimum wages to alleviate adverse side effects.** Latvia could consider introducing a lower minimum wage for apprentices (as in France, Germany, and Portugal) and for the young (e.g., UK and Netherlands). Another option is to differentiate minimum wages by region, as is common in emerging and high-income economies (e.g., Mexico, Canada, Japan, and the United States).
- **Facilitate labor market mobility.** A more developed rental housing market would help address the lack of affordable housing in high-activity urban areas. Reforms should aim to liberalize the market and improve legal certainty for landlords and tenants. To encourage homeowners to offer housing for rent, landlords should be allowed to evict tenants who fail to pay their rent without having to go through costly and lengthy court procedures. Separately, providing subsidies to defray the cost of relocating could also facilitate labor market mobility.¹⁵
- **Reduce employment protection.** Although some employment protection is desirable, too much protection hampers the reallocation process and is likely to decrease productivity growth. The effect of employment protection on the probability of being hired is particularly strong for those workers whose productivity is uncertain, such as new entrants and the long-term unemployed.¹⁶ The current system of dual employment protection—where high employment protection on permanent contracts coexists with lighter regulation on temporary contracts—should be avoided.
- **Promote inward labor migration.** Since 2000, Latvia has received about 7,000 immigrants per year on average—a low rate by OECD standards relative to overall population size and less than a third the size of emigration flows. Foreign workers are not actively targeted, and international students who complete their studies in Latvia cannot easily integrate the Latvian labor market. Greater inward labor migration would ease skills shortages and facilitate knowledge transfers. One option is to start by relaxing immigration restrictions for sectors that are sensitive to the business cycle and are currently experiencing shortages (e.g., the construction sector). Latvia could also do more to try to entice its sizable diaspora, especially Latvian graduates abroad, to return to their country of origin.

¹⁵ The government has introduced a mobility allowance for unemployed workers who accept a job or training opportunity at least 15 kilometers from their residence.

¹⁶ See Blanchard et al., 2013.

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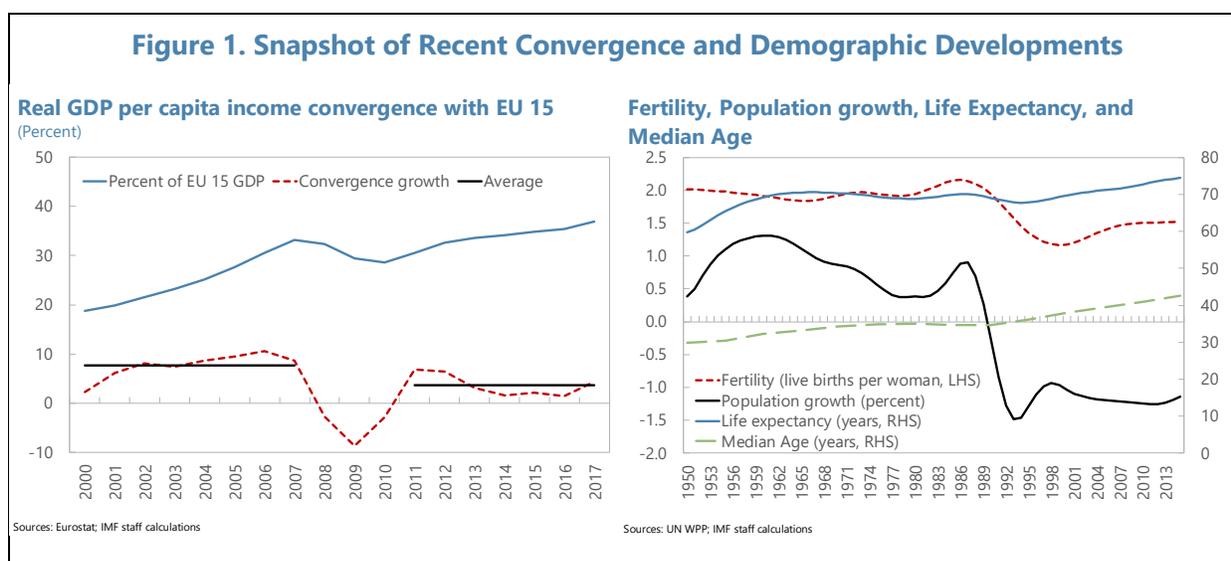
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DEMOGRAPHIC HEADWINDS TO CONVERGENCE^{1,2}

Latvia's rapid per-capita income convergence rates with Western Europe have on average more than halved in the years after the Global Financial Crisis (GFC) compared to pre-crisis levels. At the same time, Latvia's population and labor force have been shrinking and aging rapidly. Although the challenges of the ongoing demographic transition will be felt gradually over many years, postponing policy action now could result in much larger required policy adjustments in the future.

A. Background

1. Latvia's per capita income convergence with Western Europe has slowed, as demographic trends have turned unfavorable. While the income gap with the EU-15 decreased by 7.7 percent annually in 2000–07, it has been closing at an average rate of 3.7 percent since 2011. Since the GFC outburst, Latvia's population has been shrinking and aging rapidly as fertility rates dropped and life expectancy increased. Persistent emigration has exacerbated this trend, as younger cohorts are more likely to emigrate than older ones. As Latvia is still some distance away from the per capita income levels of advanced Europe, demographic headwinds pose the risk that the country may grow old before becoming rich.



2. Demographic headwinds can affect economic outcomes through various channels. Fewer workers produce less output, which, if not offset by more capital or higher productivity, will lead to lower potential output. If shrinking and aging coincide, a higher dependency ratio can translate into lower per capita GDP.³ Aging may also affect labor productivity due to depreciating

¹ Prepared by Andreas Tudyka.

² This SIP is based on the cross-country project "Demographic Headwinds to Convergence in Eastern Europe."

³ Several studies document a negative impact of a higher dependency ratio on per capita GDP growth in different parts of the world, e.g. Persson (2002) for the US; Bloom, Canning and Malaney (2000) for East Asia; Aiyar and Mody (2013) for India.

skills and physical capabilities as workers become older (Aiyar et al, 2016). In addition, population aging will create challenges for government finances as fewer workers will provide social security contributions for old-age pensions, health, and long-term care. Demographics also affect external balances and capital accumulation through aggregate investment-saving balances as, for example, a relative shift in the population structure toward older people leads to higher share of consumers relative to savers.

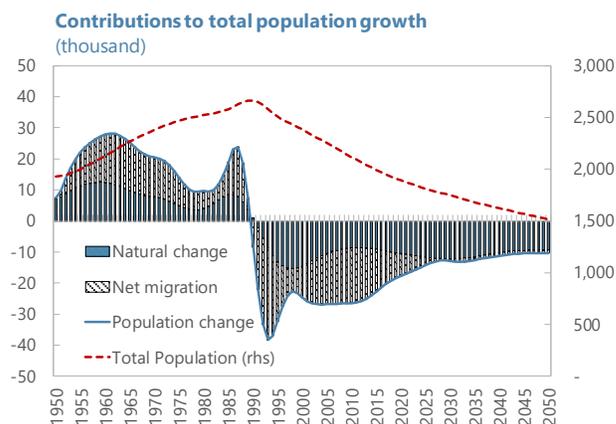
3. Against this backdrop, this SIP examines the implications of projected demographic changes for Latvia and presents policy options to address some of the resulting challenges.

Using population projections from the UN’s World Population Prospects (WPP) and labor market statistics from the International Labour Organization (ILO), the SIP examines how projected changes in the size and structure of the labor force could impact productivity and growth, and ultimately income levels. The results underscore the key role of policies aimed at boosting the productivity of workers, increasing labor force participation rates (LFPRs), opening the market for immigrant labor, and spurring innovation.

B. Demographic Trends and Implications for Convergence

4. The total population has been on a declining path since the beginning of the 1990s, a trend which is projected to continue. Since

Latvia regained independence in 1990, the country has lost about ¼ of its population, of which about 60 percent was attributable to emigration. Going forward, emigration is projected to continue, albeit at a diminishing rate until about 2027. Coupled with a negative contribution from natural population change (births and deaths), Latvia’s population is projected to decline to about 1.5 million in 2050 from currently just below 2 million under the UN WPP’s medium fertility scenario, which is equivalent to an average annual decline of ¾ percent.

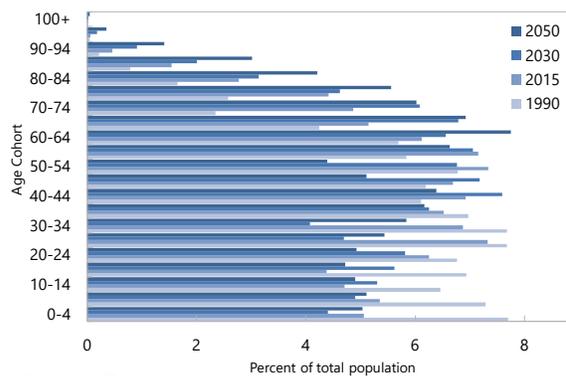


Sources: United Nations World Population Prospects 2017; Staff Calculations

5. At the same time, the population has aged, which is reflected in a rapidly increasing old-age dependency ratio. While the median age

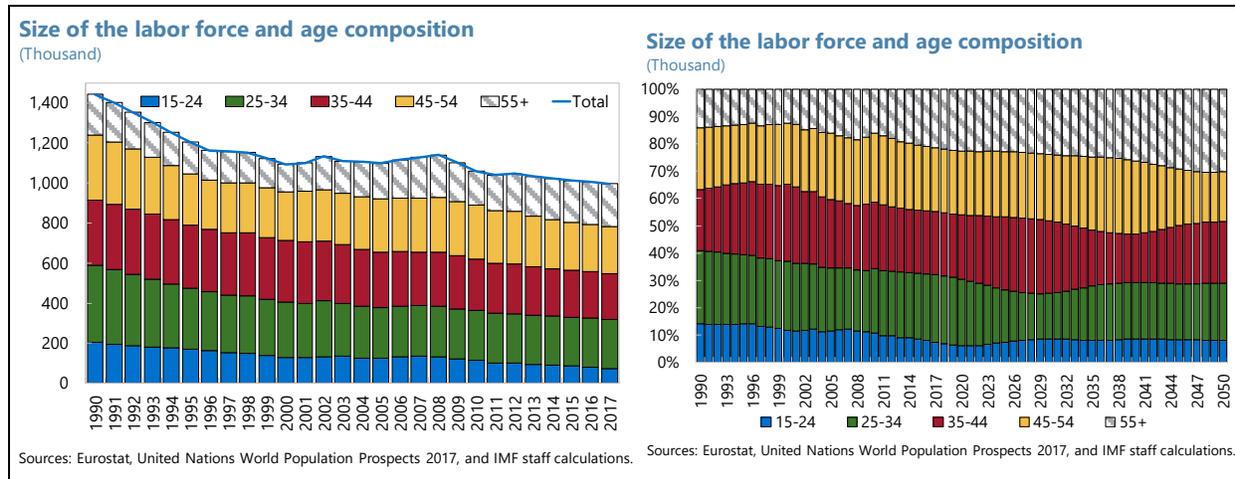
in 1990 was about 35 years, it was 43 in 2015 and is projected to increase to 46 years by 2050. Similarly, the old-age dependency ratio, i.e. the ratio of the population aged 65+ to the population aged 15–64, was 18 percent in 1990, 29 percent in 2015, and is projected to increase to 48 percent by 2050.

Population Distribution by Age Cohort

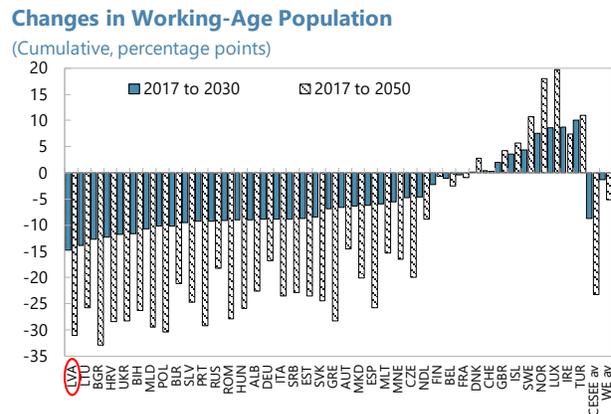


Source: UN WPP.

6. Similarly, the labor force has been shrinking and getting older. While the labor force in 1990 was about 1.4 million, it decreased to about one million in 2015 and is projected to decline to about 800 thousand in 2050. At the same time, a significant aging of the labor force took place. The share of old-age workers, defined as workers aged 55 years or older, was about 14 percent in 1990, increased to about 20 percent in 2015, and is projected to reach 30 percent in 2050. The share of prime-age workers (45–54 years), which is generally considered as being the most productive, increased by about 1.3 percentage points over the same horizon. The share of the youngest cohorts has been declining from about 14 percent in 1990 to 9 percent in 2015—a reflection of the population bulge passing through to older cohorts.



7. Unfavorable demographics are particularly pronounced for Latvia, which may result in a stronger slowing of income convergence compared to other countries. In a cross-country comparison with Central, Eastern, and South-Eastern Europe (CESEE) and Western Europe (WE), Latvia’s projected working-age population has the least favorable dynamics until 2030. In particular, by 2030 the projected decline in Latvia’s working-age population is about 6 percentage points greater than the CESEE average, and about



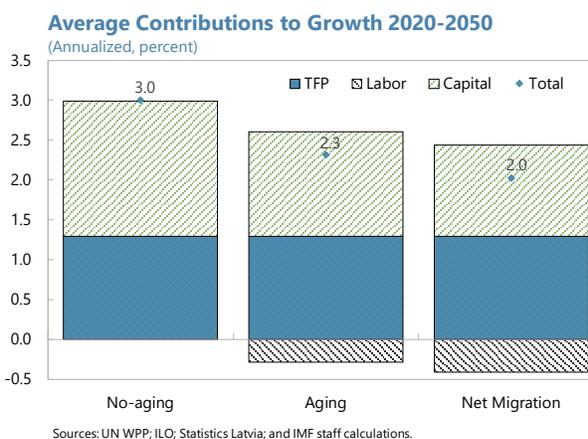
13 percentage points greater than the WE average. By 2050, these differences are projected to increase to 8 and 26 percentage points respectively. The accelerated reduction in employable labor will, all else equal, translate into a significantly reduced productive capacity of the economy. Consequently, absent any policy measures, closure of the income gap with Western Europe may become progressively elusive.

C. Growth Implications of Demographic Trends

8. Using a production function approach can help understand the strength of the transmission channels through which demographics affect growth. We employ a growth accounting framework based on Amaglobeli and Shi (2016), which decomposes aggregate labor into age and gender-specific cohorts, with cohort-specific labor force participation and employment rates.⁴ Using this framework, we estimate the impact of different demographic scenarios on growth, and compare the outcome of a hypothetical “no-aging” scenario, in which the population size and age structure remain constant, to that of (i) an aging scenario, where labor changes according to demographic projections from the UN WPP’s medium-fertility variant, excluding the impact of net migration; and (ii) a net migration scenario, which includes the impact of both aging and net migration. To isolate the impact of demographics from possible policy-induced outcomes, the net-migration scenario is calculated under the assumptions of (i) unchanged total factor productivity (TFP) growth (based on historical average growth); (ii) unchanged age- and gender-specific labor force participation and employment rates; and (iii) a constant capital-to-effective-labor ratio.

9. Demographic shifts could decrease average long-run growth by 1–2 percentage points in 2020–50.

Under the assumptions outlined above, the hypothetical no-aging scenario projects average long-term growth at 3 percent in 2020–50, of which capital contributes about 1.7 percentage points.⁵ Allowing for the projected natural population change (i.e. births and deaths), but abstracting from migration, lowers long-term growth by about 0.7 percentage points as the projected natural decline in labor imposes a drag on growth. The net-migration projection, which includes full population dynamics, projects average growth at 2 percent in 2020–50 due to continued, but diminishing, outward migration.⁶ Consequently, absent any policy changes, demographic shifts can potentially turn into strong headwinds for Latvia in the coming decades.

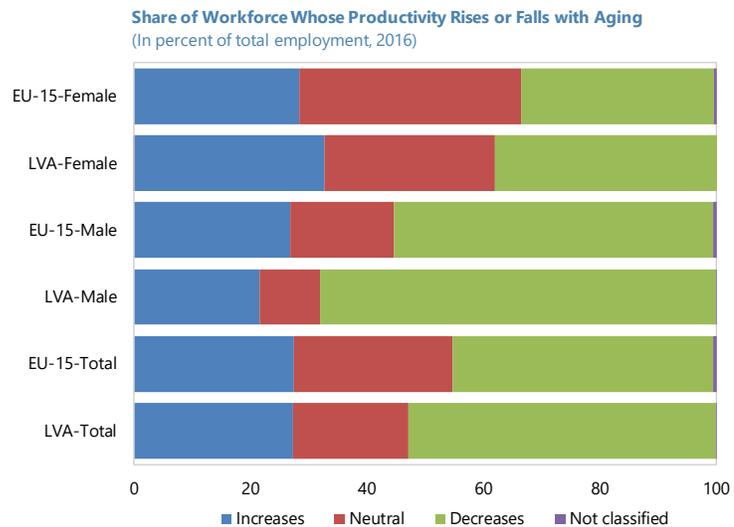


⁴ We follow a standard Cobb-Douglas production function specification with constant returns to scale, where output per worker (y_{it}) is given by: $y_{it} = k_{it}^{\alpha} (A_{it} h_{it})^{1-\alpha}$, where k_{it} is capital per worker, A_{it} is total factor productivity, h_{it} is human capital per worker, and α is the share of capital in output. All series are taken from the Penn World Table 9.0. Moreover, we decompose aggregate employment as $L_t = \sum_{j=1}^J N_t^j LFP_t^j E_t^j w_t^j$, where N_t^j is the population in age-gender cohort j in year t , LFP_t^j is cohort-specific labor force participation, E_t^j is the cohort-specific employment rate, and w_t^j is a weight factor to adjust for the difference between the number of employees and the effective units of labor supplied. $1 - \alpha$ is obtained as the share of the wage bill in GDP and the capital stock is estimated using the perpetual inventory method. Abstracting from policy changes, TFP is assumed to grow at its post-recession trend, and capital accumulation is assumed to follow the balanced-growth condition $1 + g_t^K = (1 + g_t^{TFP})^{1/1-\alpha} * (1 + g_t^L)$.

⁵ The projections assume a balanced growth path in that capital adjusts to maintain a constant capital-output ratio.

⁶ The difference between the net-migration and aging scenarios is only 0.3 percentage points as emigration is projected to slow significantly after 2027.

10. An aging workforce can impose an additional drag on growth through lower productivity. An age-related deterioration in physical and mental capabilities and depreciation of knowledge may adversely impact aggregate labor productivity if the share of older workers in the workforce increases. Older workers may also find it more difficult to adapt if job requirements change over time (OECD, 1998). For example, the increased use of information technologies might place older workers at a disadvantage (Dixon, 2003). However, older workers may have more work experience, with potentially positive effects on productivity (Disney, 1996). The combination of these factors has been found to result in a strong increase in productivity until workers are in their 40s and a decline toward the end of their working lives (Feyrer, 2007). The impact of aging may also differ across occupations, as the productivity of manual workers (manufacturing, construction) might decline faster with age, while for doctors, lawyers and managers, it might increase with experience (Veen, 2008). Applying this taxonomy, Latvia has a higher share than the EU-15 average of employed persons—especially male—in professions associated with declining productivity of older workers.



Note: Category productivity “increases” with age comprises managers and professionals; category “neutral” comprises clerical support workers and services and sales workers; category “decreases” comprises technicians, skilled agricultural workers, forestry and fishery workers, craft and related trades workers, plant and machine operators and assemblers, elementary occupations, and armed forces occupations.
Sources: International Labour Organization; Veen 2008; and IMF staff calculations.

11. We empirically estimate the impact of the growing share of older workers on labor productivity and TFP growth. Using a two-step approach described in Aiyar et al. (2016) and Adler et al. (2017), we first estimate the effect of workforce aging on labor productivity and then decompose the impact on labor productivity into factor accumulation and TFP by employing the panel regression specification:

$$\Delta \log TFP_{it} = \alpha_i + \gamma_t + \beta w55_{it} + \delta yadr_{it} + \phi oadr_{it} + \varepsilon_{it}$$

Where TFP_{it} denotes TFP, α_i is a country fixed effect, γ_t is a time fixed effect, $oadr$ is the old-age dependency ratio, and $yadr$ is the young age dependency ratio. Old-age workers are defined as workers 55 years or older. The above equation is initially estimated using fixed-effects ordinary least squares. To address the potential endogeneity of the share of older workers, we also use a panel-

fixed-effects two stage least squares estimation (2SLS) with the 10-year lagged share of the population aged 45–54 as an instrument.⁷

12. The results show that an aging labor force can significantly slow TFP and GDP growth.

We estimate the above 2SLS specification using a panel dataset of 167 countries over the period 1990–2015. A 1 percentage point increase in the share of older workers in the labor force is associated with a statistically significant decrease in TFP growth of about 0.8 percentage points per year (Table 1).⁸ Using the average projected increase in the share of older workers under the net-migration scenario, and relaxing the assumption of constant TFP growth in the production function growth projections, this translates into lower GDP growth of about 1.1 percentage points on average in 2020–50, which is almost half as high as under the net-migration scenario.⁹

Table 1. Latvia: The Effect of Workforce Composition on Output per Worker and its Channels

Dependent Variables	(1) $\Delta \ln(YL)$	(2) $\frac{\alpha}{1-\alpha} \Delta \ln(KY)$	(3) $\Delta \ln(HC)$	(4) $\Delta \ln(TFP)$
Workforce share 55+	-1.006*** (-4.297)	0.333*** (3.514)	-0.0152 (-0.470)	-0.779*** (-3.312)
Old-age dependency ratio	0.413 (1.248)	-0.258** (-1.993)	-0.0196 (-0.526)	0.236 (0.744)
Young-age dependency ratio	0.115** (2.432)	-0.0468** (-2.400)	-0.00620 (-0.503)	0.0597 (0.958)
Country fixed effects	✓	✓	✓	✓
Year fixed effects	✓	✓	✓	✓
Number of observations	4,150	4,152	3,585	2,883
Number of countries	167	167	144	116

Source: IMF staff calculation.

⁷ Experienced individuals may supply more labor in response to wage augmenting technological innovations. At the same time, higher income arising from faster aggregate productivity growth may induce older workers to leave the labor force. Hence, the direction of the possible endogeneity bias is unclear (Adler et al 2017).

⁸ This coefficient reflects the historical relationship between workforce aging and TFP growth and does therefore preclude any behavioral shifts that may occur in the future. For example, one may consider that the definition of “older workers” has changed over time and will continue to do so. As such, calculating the impact on GDP growth using the current definition of “older workers” may lead to inflated estimates as longer and healthier life spans lead to workers continuing to be productive even at higher ages. Accounting for this upward shift in the definition of “older workers” is very difficult however, as the speed of the shift, as well as the coefficient quantifying the strength of the relationship are difficult to predict.

⁹ This exercise can also be conducted in a backward-looking fashion. Accordingly, workforce aging has reduced TFP growth by about 0.2 percentage points per year from 1990 to 2017 on average.

13. The results do not provide strong support for an offsetting effect through higher capital accumulation. An aging workforce may encourage firms to shift production toward more capital-intensive technologies to complement the gradually less-productive workers. The first step in the empirical strategy outlined above allows to estimate the impact of aging on factor accumulation. Overall, the results show that physical capital does have a statistically significant impact on the real growth of output per worker, but its economic significance is small compared to the role of TFP. In particular, allowing the capital-output ratio to grow as a function of the older worker share according to the regression coefficient in Table 1 would have an impact on the factor-share-adjusted capital output ratio of about ¼ percentage point on average in 2020–50. This translates into higher GDP growth of about 0.1 percentage points compared to the TFP scenario. In addition, the dependency ratios have a statistically significant impact in the opposite direction making the magnitude of the overall impact even less strong.

14. Demographic shifts can impact growth through several additional channels.

Demographic changes affect aggregate savings and investment decisions and therefore current account (CA) balances (IMF, 2016a). For example, theory predicts a higher old-age dependency ratio (DR) to have a negative effect on the CA, reflecting a higher share of consumers relative to savers. Similarly, population growth, if mainly driven by birth rates, should exert a negative impact on the CA by increasing the share of the non-saving youth. If driven by growth in the working-age

population, higher population growth may also affect the CA negatively through increased investment to stabilize the capital-labor ratio. However, higher-old age dependency ratios may trigger disinvestment

Potential Impact Channels of Demographic Shifts				
	Saving	Investment	Current Account	Interest Rates
Population Growth	↓	↑	↓	Largely Exogenous
Old-Age Dependency	↓	↓	Ambiguous	Largely Exogenous
Aging Speed	↑	↓	↑	Largely Exogenous

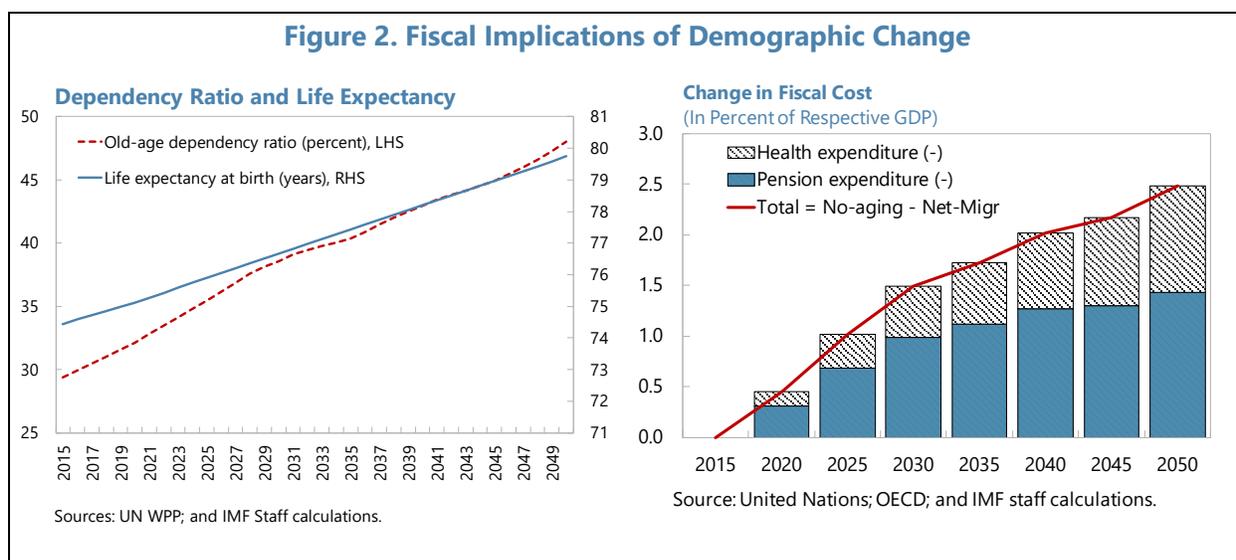
Source: International Monetary Fund (IMF), 2016. Methodological Note on EBA-Lite, EBS/16/8, February (Washington)

by increasing the capital-labor ratio making its overall impact ambiguous. Aging speed (the expected change in old-age dependency in 20 years as a proxy for the future old age dependency ratio) may exert a positive effect on saving and the current account, driven by a higher life expectancy and the resulting need for higher lifetime savings. As many effects work in opposite directions and interact with each other, net effects are not clear cut in open economies. The savings-investment balance also determines interest rates. However, having an open capital account and being a euro area member, Latvia's interest rates are largely determined by regional and global savings and investment dynamics.¹⁰

15. The projected population rebalancing will impose fiscal costs, which could become a drag on growth. Spending on health and long-term care is set to rise as the old-age dependency ratio is projected to increase from about 29 percent in 2015 to 48 percent in 2050, and life expectancy is projected to increase from about 74 to 80 years. Spending on old-age pensions on the

¹⁰ In the extreme case of perfect capital mobility, arbitrage in financial markets should equalize interest rates across borders, and demographic factors of each country should not have an impact on domestic interest rates.

other hand is projected to decrease over time, resulting in falling replacement rates, which is a direct consequence of the mechanics of Latvia's notional defined contribution system assuming unchanged policies.¹¹ Using long-term pension and health spending projections from Clements et al. (2014; 2015), Figure 2 shows the difference in the fiscal balance between the net-migration and no-aging scenarios. The fiscal deficit is projected to be about 2.5 percentage points higher under the net-migration scenario than under the no-aging scenario by 2050. Assuming that public investment decreases by an equal amount to offset the additional deficit, would result in lower average growth of 0.2 percentage points in 2020–50. This estimate does not include possible second-round effects, which could potentially arise from lower productivity-supporting investment.



D. Labor Market Policies and Per-Capita Income Implications

16. We gauge the effectiveness of policies aimed at increasing LFPs to offset the negative effects of demographic changes on workforce size and age structure. We examine 4 policy scenarios, which are calibrated based on historical experiences of other EU countries and compare the outcome to the net-migration scenario based on the UN WPP's medium fertility scenario:

¹¹ In an NDC system, contributions over an unchanged length of working period will have to cover consumption over longer retirement period as life expectancy increases. At the time of retirement, an annuity is calculated by dividing the individual's account value by a divisor reflecting life expectancy at the date of retirement. An increase in life expectancy therefore reduces the annual benefit such that the net present value of total expected pension benefits is nearly invariant to changes in the cohort's remaining life expectancy and the individual's retirement age. Overall, this would lead to continuously falling replacement rates, which seems unrealistic given the resulting impact on old-age poverty.

- i. **Policy scenario 1** assumes the LFPR for women aged 25–45 years to increase to the maximum level of the corresponding age-gender cohort observed in the EU at a constant annual increase of 1.3 percentage points.¹²
- ii. **Policy scenario 2** assumes an increase in the LFPR of men and women in age cohorts 55–69 of 0.9 percentage points per year until the EU maximum for countries with a retirement age of 65 is reached.¹³
- iii. **Policy scenario 3** assumes that the statutory retirement age for men and women increases to 67 by 2030, which triggers a coincident increase in the LFPR for age cohorts 55–69 to the average of EU countries that already have a legislated retirement age of 67. Subsequently, LFPRs are projected to increase with ILO projections.¹⁴
- iv. **Policy scenario 4** is a hybrid scenario combining scenarios 1–3. It assumes (i) an average annual increase in the LFPR for women aged 25–45 years of 1.3 percentage points until the EU maximum level is reached, (ii) the LFPR for age cohorts 55–69 and older to reach the maximum level of EU countries that already have a legislated retirement age of 67 by 2030, after which LFPRs are projected to increase with ILO projections.¹⁵

17. A combination of policies yields the strongest effect on the workforce size offsetting about one third of the negative growth effect induced by demographic shifts. Increasing female labor force participation of younger cohorts has a limited effect under scenario 1, as female LFP is already comparatively high, and thus the maximum level observed in the EU is reached quickly (Figure 3). Scenario 3 outperforms scenario 2 by 2 percentage points in the long run. Overall, the combined policies under scenario 4 are most effective in slowing the labor force decline by about 6 percentage points by 2030 and about 7 percentage points by 2050 compared to the net-migration scenario. Under the combined scenario, long-run growth is projected to be 2.3 percent in 2020–50 and thus about 0.3 percentage points higher than under the net-migration scenario.

**Cumulative Labor Force Decline
(In percent, 2015=100)**

	2030	2050
Baseline	-15	-28
Scenario 1	-13	-27
Scenario 2	-13	-27
Scenario 3	-13	-25
Scenario 4	-9	-21

¹² The calibration is based on the average annual increase of Spain, which was the best performer in the EU in 1995–2016.

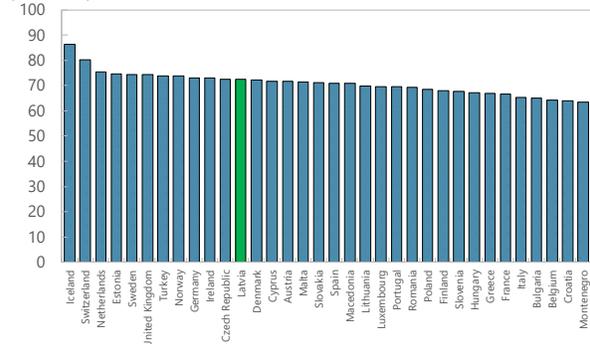
¹³ The calibration is based on the average speed of increase in senior participation rates for EU countries which did not change the statutory retirement age in 2000–16.

¹⁴ For age cohorts 55–59 and 65–69 no increase is projected, as the current LFPR is already above the EU average of countries with a retirement age of 67.

¹⁵ For female age cohorts 55–59 and 65–69 no increase is projected as the current LFPR is already above the EU average of countries with a retirement age of 67. speed of increase in senior participation rates for a subsample of countries with unchanged statutory retirement age in 2000–16. The average rate of increase is 0.9.

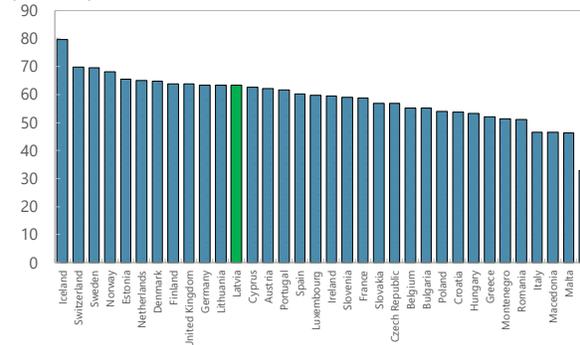
Figure 3. Labor Force Participation Rates Across Countries and Policy Implications

Labor Force Participation (15-74), 2015, Male
(Percent)



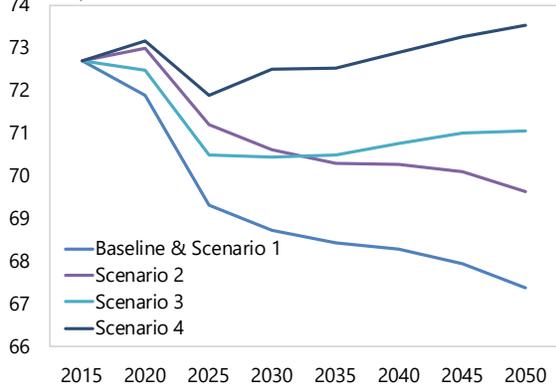
Sources: Eurostat; IMF Staff Calculations

Labor Force Participation (15-74), 2015, Female
(Percent)



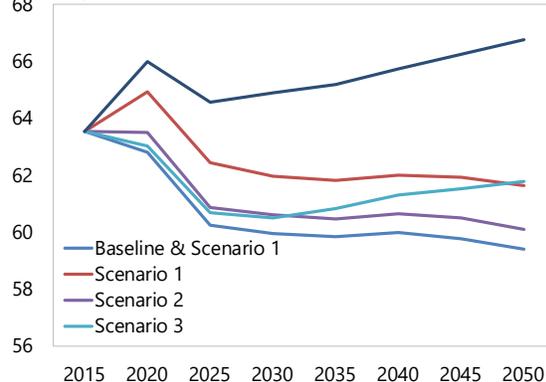
Sources: Eurostat; IMF Staff Calculations

Labor Force Participation, Male
(In percent)



Sources: Statistics Latvia; and IMF staff calculations.

Labor Force Participation, Female
(In percent)

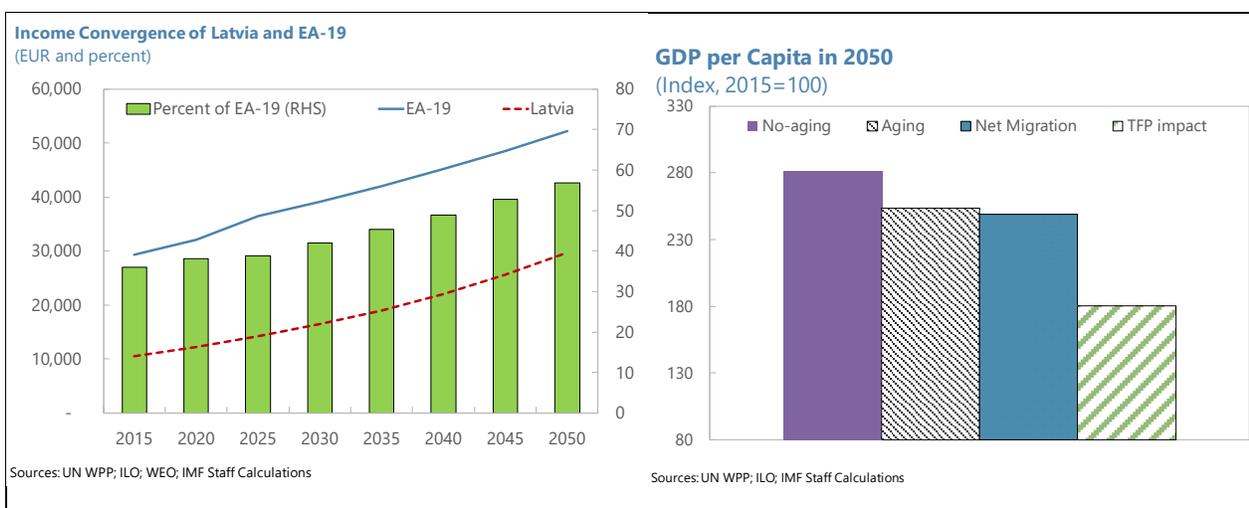


Sources: Statistics Latvia; and IMF staff calculations.

18. Latvia is currently on a path to income convergence with Western Europe, but per-capita GDP levels may turn out lower as demographic headwinds are taking hold. Under the no-aging scenario, per-capita income is projected to reach almost 60 percent of the EA-19 average by 2050. Equivalently, this means that, under the no-aging scenario, Latvia’s real per-capita income level is projected to be about 2.8 times higher in 2050 than in 2015. As Latvia’s population declines and ages faster than Western Europe’s, this likely presents an upper bound absent any policies. As such, adding the projected natural population change as well as net migration to the underlying population dynamics would result in an income, which is about 2.5 times higher by 2050. Including the productivity-restraining effect of workforce aging would yield a per-capita income, which is about 1.8 times higher by 2050. Consequently, swift implementation of policies, which aim at arresting the labor force decline and increasing productivity will be paramount to counter these effects.

E. Policy Options

19. Policies to curb shrinkage of the labor force should aim at slowing the population decline and increasing participation rates. Better utilizing the remaining workforce through an increase in labor force participation among certain groups could be achieved by increasing the retirement age, for example by linking it to life expectancy. Providing more flexible work arrangements, including increased part-time work, both for workers transitioning into retirement and parents of young children can enable longer working lives for an aging workforce. ALMPs and training should be aimed at reducing skills mismatches and increasing the share of workers whose productivity increases with age. Slowing or reversing emigration could be achieved by creating a more attractive environment (e.g. through improving governance) that encourages potential emigrants to stay, as could engaging with the diaspora and promoting return migration (Atoyán et al, 2016).



20. Structural reforms can support TFP growth. Addressing structural and institutional obstacles that prevent the efficient use of available technologies, or lead to inefficient allocation of resources, will be key to reaching this goal. The largest efficiency gains are likely to come from improving the quality of institutions (such as protection of property rights, upgrading legal systems including insolvency and judicial reforms), and increasing access to financial services (especially for small, but productive firms) (IMF, 2016b; IMF, 2016c). Furthermore, reducing the regulatory burden and red tape (OECD, 2017) for businesses and further improving corporate governance of state-owned enterprises would foster competition and efficient resource allocation, as would greater technology diffusion. Fiscal structural reforms, aimed at improving efficiency in the tax system, can also boost firm-level productivity by reducing resource misallocation (IMF 2017b). Structural reforms in the areas of R&D and education would also help boost productivity and reduce costs.

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ADDRESSING PUBLIC EXPENDITURE CHALLENGES¹

A. Introduction

1. **Latvia has achieved significant fiscal consolidation since the crisis, but demographic challenges and needed structural reforms are likely to cause spending pressures in the future.**

Latvia has a relatively low public expenditure ratio, and the budget has a large share of non-discretionary spending (about 2/3 of total spending), leaving little room for spending flexibility. At the same time, a low revenue-to-GDP ratio limits the fiscal space for priority spending. With still relatively high poverty and inequality levels, aging infrastructure, and adverse demographic trends, spending pressures are likely to increase. Going forward, the tax revenue ratio is expected to decline as a result of the recently implemented tax reform and a decline in EU investment funds. Unless additional permanent sources of revenue are found, the authorities will face difficult expenditure policy decisions.

2. This paper reviews Latvia's public expenditure efficiency with a view to identify areas where saving can be achieved by reducing efficiency gaps. By benchmarking Latvia's public spending levels and composition against relevant country peers, the objective is to provide a first approximation of the areas where spending efficiency or spending rationalization could be made without affecting the delivery of public services. While efficiency gaps are assessed sector by sector, policy conclusions focus on broad expenditure policy recommendations rather than sector-specific recommendations, which would require a detailed expenditure review that is out of the scope of this analysis.

3. Given the limited resource envelope, options for a more growth friendly and equity enhancing revenue and expenditure policy mix are also discussed. In particular, we assess the economic impact of the new tax reform, and assess different budget financing options to absorb its cost. We also assess the scope and impact of reallocating resources towards growth-friendly expenditures.

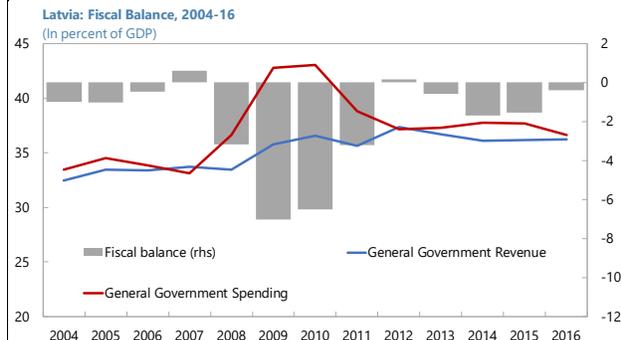
B. Public Expenditure by Economic Classification: Overall Trends

4. Government expenditure in Latvia is relatively low compared to peer countries. At 38 percent of GDP in 2017, Latvia's total expenditure ratio is well below the EU average of 45.8 percent. As in other countries, current spending accounts for about 90 percent of total expenditures. In Latvia, this is reflected primarily in expenditures on the wage bill, social benefits, and goods and services. While the spending on the wage bill and goods and services is broadly in line with the EU average (10 percent of GDP and 6 percent of GDP, respectively), spending on social benefits, at about 12 percent of GDP, is significantly below the EU average of 21 percent of GDP. Capital spending accounts for about 10 percent of total public expenditures, much higher than the average spending in EU countries (5.8 percent).

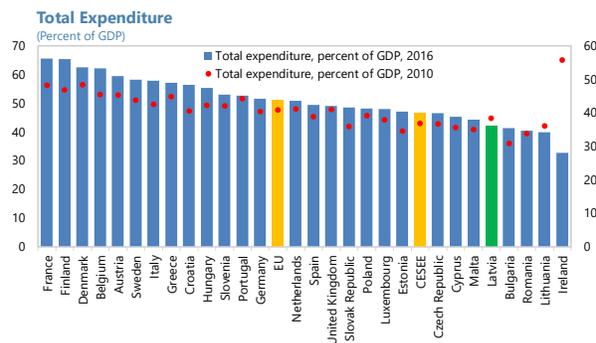
¹ Prepared by Karina Garcia (EUR). GIMF simulations done by Michal Andrle (RES).

Figure 1. Government Spending Trends

Significant fiscal consolidation has been achieved since the crisis.

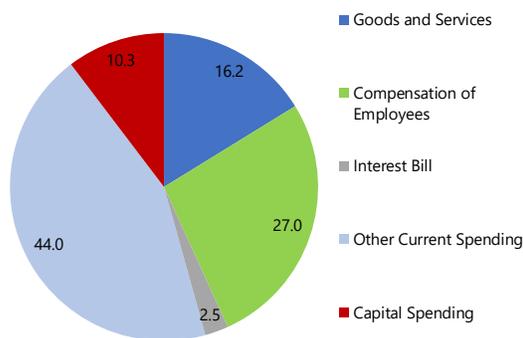


Latvia has maintained one of the lowest expenditure to GDP ratios in the EU.



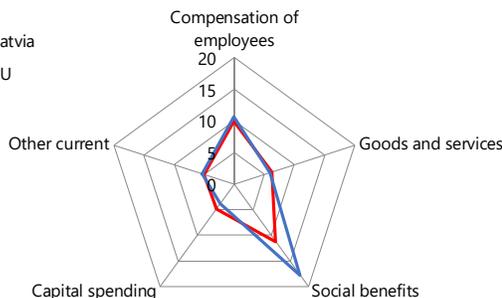
Public expenditures have a large non-discretionary component, leaving little room for spending flexibility.

Latvia: Economic Classification, 2017
(In percent of total)



Social benefit spending lags substantially the average in the EU.

Public Spending Latvia - EU average, 2016
(Share of GDP)



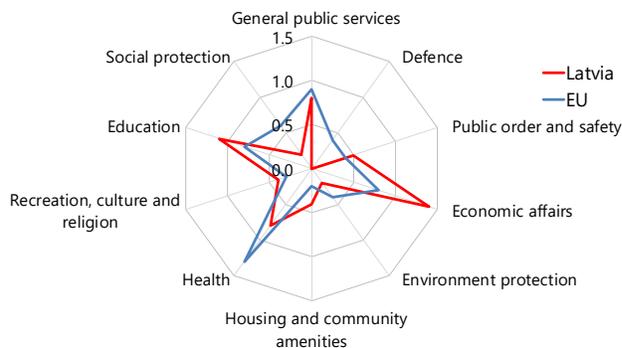
Source: IMF FAD Expenditure Assessment Tool (EAT), World Economic Outlook. Coverage refers to general government as per World Economic Outlook metadata.

Goods and Services

5. The level of spending on goods and services is in line with the EU average, but Latvia's spending priorities are very different.

The largest share of goods and services is spent on economic affairs and education (24 percent and 19 percent of total goods and services expenditures, respectively), significantly exceeding the EU average of 13 percent. In contrast, only 3 percent is devoted to social protection vs. an EU average of 10 percent. The share of spending on goods and services in the health sector (14 percent) is substantially below the EU average of 21 percent.

Goods and Services, 2016



Sources: Eurostat and IMF staff calculations.

Wage Bill

6. Government wage spending has increased in recent years, reflecting mainly an increase in public employment. About 27 percent of general government spending in Latvia goes to the wage bill, which is above the EU average (22 percent) and the average of advanced economies (24.5 percent). Public employment as a share of the active working population (about 17 percent) is significantly above the average of other advanced economies (11.6 percent) and is the highest among EU countries (Figure 2).² The sectoral composition of the wage bill suggests that there is significant scope for efficiency gains from downsizing and reallocation of public sector employment. The largest share of the wage bill (3.4 percent of GDP) goes to public employees in education, which is above the EU average (2.9 percent of GDP). In contrast, Latvia devotes a small share of the wage bill to health and social protection.

	Compensation of employees (share of GDP, 2016)	
	Latvia	EU
Total expenditure	10.2	10.0
General public services	1.2	1.3
Defence	0.5	0.6
Public order and safety	1.4	1.2
Economic affairs	0.7	0.6
Environment protection	0.2	0.1
Housing and community amenities	0.2	0.1
Health	1.4	1.9
Recreation, culture and religion	0.6	0.3
Education	3.4	2.9
Social protection	0.5	0.9

Source: Haver and staff calculations.

7. There is a relatively large negative public-private wage premium, especially for skilled labor. Despite recent increases in public sector wages by more than 5 percent on average over the last three years, they remain 9 percentage points lower than wages in the private sector once skills and educational attainment are taken into account.³ This gap could represent an obstacle for retaining and attracting the most qualified staff in the public sector, especially in areas requiring highly specialized skills.

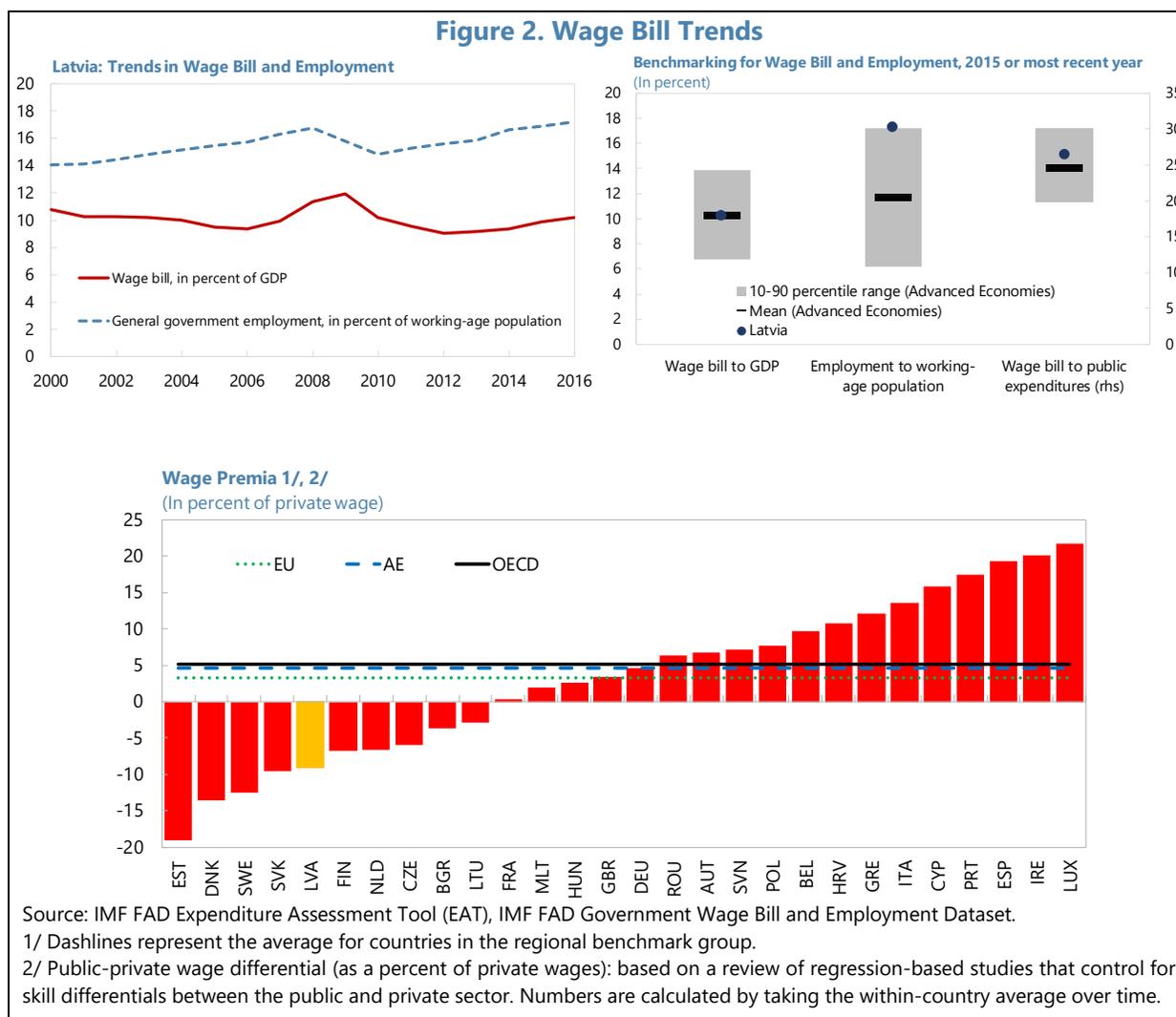
8. The ongoing public administration reform seeks to address these challenges, but needs to be more ambitious. Flexibility to adjust the level and composition of public employment is needed to ensure effective delivery of public services and to help ease the existing labor market tightness. In this spirit, the authorities envision a reduction in employment of about 6 percent by 2020, combined with further wage increases and transitioning to performance-related remuneration. However, since the reform covers only employees in the central administration (accounting for less than half of employees in the public sector), it would have a very small impact on the high public employment ratio. The savings may not be sufficient to reduce the wage premium in a budget neutral way, which could add more pressure to public expenditure and could spill over to overall wages in the economy, exacerbating rather than easing labor market pressures.⁴ The scope of the public administration reform thus needs to be expanded to include the broader general government.

² Throughout this document, advanced economies refer to the income group classification according to WEO.

³ This estimate is based on official figures of average wages, which do not correct for the impact of the shadow economy on wage estimates. If accounted for, the wage premium could be larger. For the methodology to estimate the wage premium, see IMF (2016a).

⁴ Evidence suggest that increases in public sector wages, besides the associated deterioration in fiscal balances, can spill over to overall wages. See IMF (2016a).

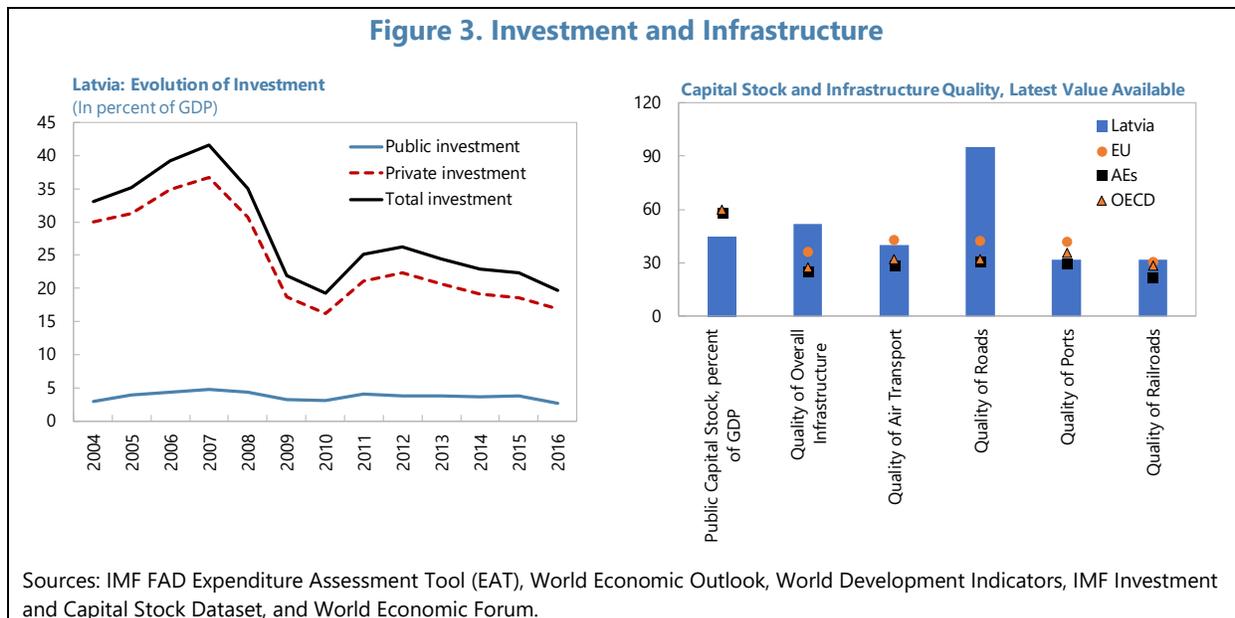
Figure 2. Wage Bill Trends



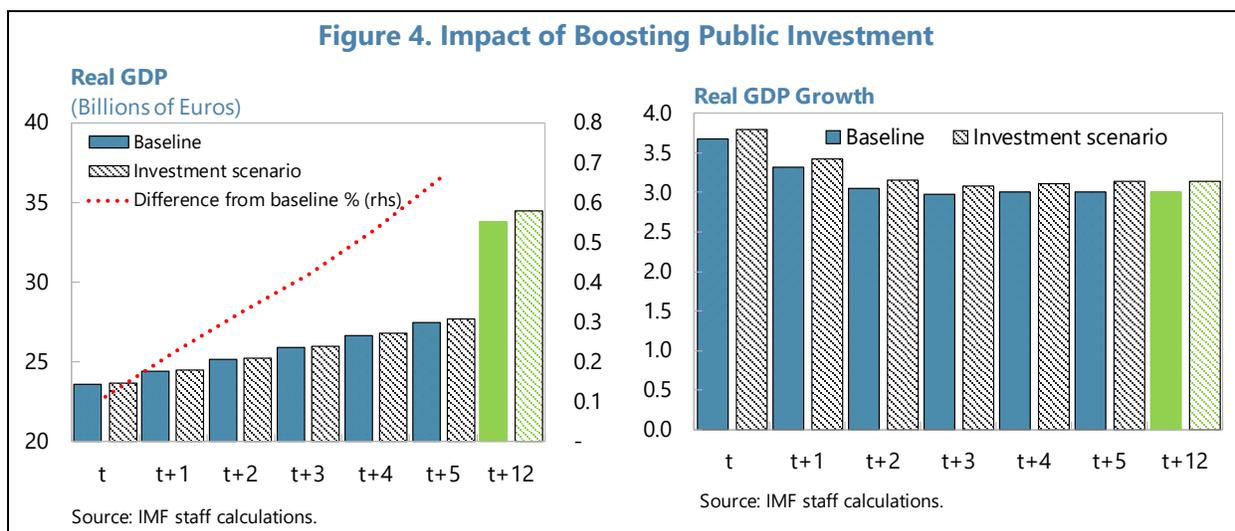
Public Investment

9. Public investment in Latvia is in line with the average of EU countries; however, investment needs are much larger. Capital spending as a share of GDP is close to the EU average and has remained broadly constant for several years. However, while the capital stock has increased in recent years thanks to significant absorption of EU funds, Latvia has a relatively low capital-output ratio and public capital stock per capita compared to advanced economies.⁵ Furthermore, while the quality of infrastructure has improved, it still lags behind peer countries. The latest WEF survey-based quality of infrastructure index suggests that Latvia’s infrastructure quality is below that of advanced economies and the EU average. Only the quality of ports is on par with advanced economies. Other infrastructure areas are still in need of improvement. In particular, the quality of roads is significantly below that of advanced economies and the EU average (Figure 3).

⁵ Capital stock data is taken from AMECO database, which has some measurement shortcomings with regard to capital stocks in Latvia. Therefore, the purpose of this comparison is to assess relative investment needs in Latvia to those in wealthier EU countries, rather than providing a point estimate of capital stock levels.



10. Catching up with advanced economies will require more capital investment. Structural policies that increase public investment could have a significant impact on GDP growth over the medium term by increasing the public capital stock and potentially inducing private investment, all of which could in turn increase the productivity of the economy as a whole.⁶ Increasing public investment will become even more pressing as EU investment funds level off. Staff simulations suggest that a permanent increase in capital expenditure of 0.5 percent of GDP per year, financed by a reduction in government consumption, could increase real GDP by about 0.7 percent above baseline projections and real GDP growth by about 0.2 percent per annum over the medium term (Figure 4).⁷

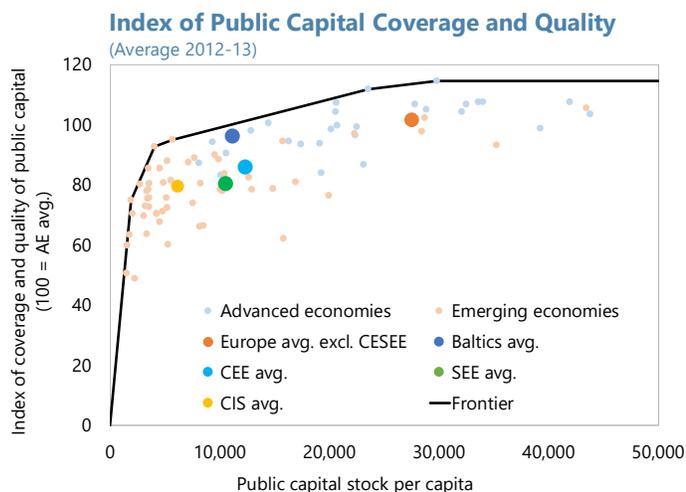


⁶ For a specific discussion of structural policy priorities in Latvia see IMF Country Report No. 17/195.

⁷ This scenario simulates a permanent increase in public investment, financed through a reduction in government consumption. It is based on output elasticity to public investment of 0.2 percent, which is consistent with Bom and Ligthart (2014).

11. There is some limited scope to increase efficiency gains and ensure the highest return on public investment. Empirical studies have shown that the precise economic impact of public investment depends, in large part, on the efficiency of public spending. For example, using an efficiency frontier analysis, a recent IMF study assessed the efficiency of public investment in European countries by comparing the quality of infrastructure and access to public services with invested resources in each country.⁸

The results revealed that Latvia—along with Lithuania and Estonia—is slightly below the public investment efficiency frontier among countries with the same level of public capital stock per capita. The identified efficiency gaps relate to the process of project appraisal and management of PPPs, including disclosure of fiscal risks from PPPs in budget documents. While these efficiency gaps are small, boosting public investment should go hand in hand with policies that close the gaps to ensure that Latvia achieves quality along the efficiency frontier.

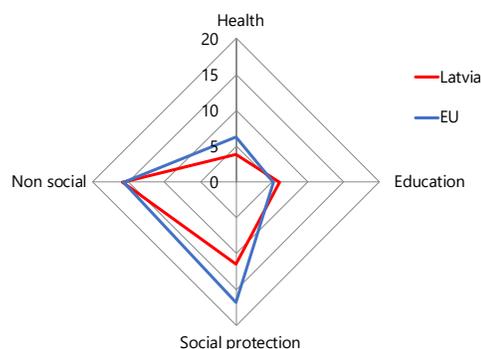


Source: IMF (2016b), CESEE REI Fall 2016. Effective Government for Stronger Growth: Improving the efficiency of public investment and tax administration in CESEE.

C. Public Expenditure Functional Classification: Spending vs. Objectives

12. A close look at the functional classification of public spending sheds light on its effectiveness in improving inequality and poverty outcomes. This assessment focuses on the functional classification areas that have the largest potential to improve inequality and poverty outcomes: social protection, education and health. For instance, some studies find that public spending on education and health, when efficiently implemented, can directly reduce market income inequality and have the potential to promote growth (IMF, 2017). Other studies show a strong link between higher public social spending and lower income inequality and aggregate poverty levels (IMF, 2018). Recent spending

Public expenditure, functional classification, 2016 (In percent of GDP)



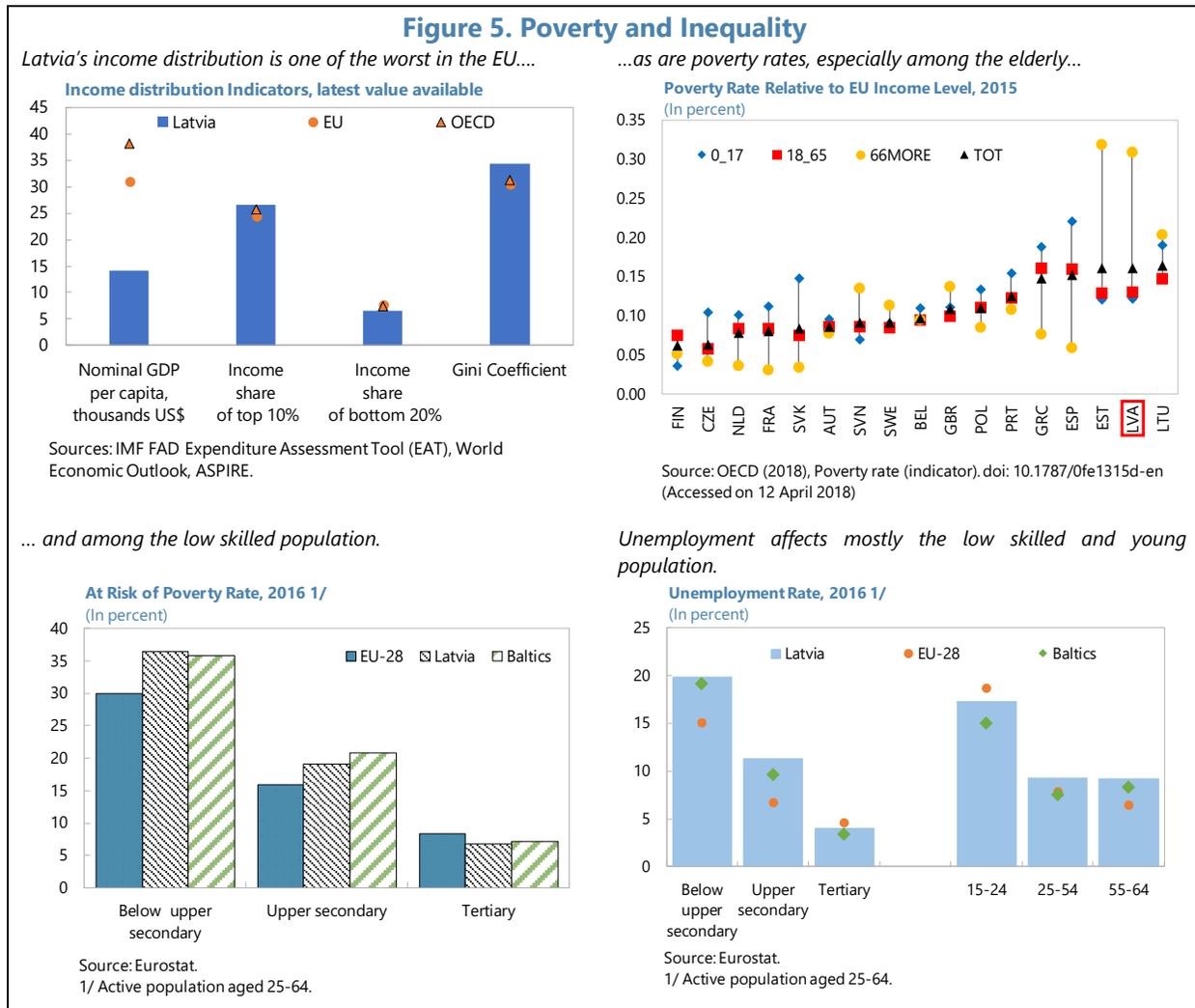
Note: Non-social spending = total spending - education - health - social protection. Sources: Eurostat and IMF staff calculations.

⁸ The efficiency frontier shows the level of infrastructure quality at a given capital stock per capita. The closer a country is to the efficiency frontier, the more efficient its public investment. Countries with the highest level of infrastructure coverage and quality. Countries with the highest efficiency scores for a given level of public capital stock and income per capita are assigned the efficiency score of 1 and form the *efficiency frontier*, while other countries are assigned a score of between 0 and 1, based on their proximity to the frontier. See IMF (2016b)

trends in Latvia indicate that public spending on education has been slightly above the EU average, but Latvia lags well behind the EU average on health and social protection spending. Furthermore, aside from the level of spending, the efficiency of spending, as measured by the quality of services provided, lags peer countries.

Social Protection

13. Poverty and inequality levels in Latvia are among the highest in the EU and among OECD countries. Latvia’s per capita GDP of €14,000 is significantly below the EU and OECD averages of around €30,000 and €40,000, respectively. Latvia’s poverty rate is one of the highest in the EU and OECD across all age groups, especially among the elderly and those with lower education levels. And while unemployment has been declining, it still affects disproportionality more the low-skilled and young population. Income distribution also compares unfavorably to peer countries. Latvia’s Gini coefficient is several points above the average in the EU and OECD countries, and the income share of the richest 10 percent of the population is slightly higher than the EU and OECD averages (Figure 5).



14. At the same time, Latvia's social protection spending is well below the EU average.

Latvia spends about 12 percent of GDP on social protection, which is significantly below the EU average of 19 percent. The breakdown of social protection spending also shows that spending is well below the EU average in all categories. Areas related to social exclusion, housing programs, and unemployment benefits are the most underfunded.

Table 1. Latvia: Breakdown of Social Spending GDP Share, 2016

		Latvia	EU
Pension	Old Age	7.20	10.20
	Disability	1.40	2.00
	Survivors	0.20	1.30
	Pension	8.80	13.50
Non pension Social Insurance	Sickness / Health Care	3.60	8.00
	Unemployment	0.40	1.30
	Non pension Social Insurance	4.00	9.30
Social Assistance	Family / Children	1.20	1.70
	Social Exclusion	0.40	0.90
	Housing	0.10	0.50
	Social Assistance	1.70	3.10

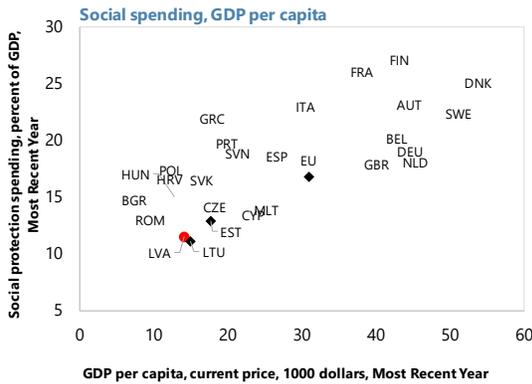
Source: Eurostat

15. The adequacy of existing social assistance programs is modest, dampening their poverty-reducing impact. Social assistance spending relies primarily on universal programs, with only about 1 percent of total social assistance spending devoted to means-tested programs, much lower than the EU average of 9 percent. The coverage ratio of social assistance programs is somewhat in line with the EU average, but is much lower than the OECD average. In addition, benefit incidence of social programs (i.e. the share of total social protection transfers received by the poorest 20 percent of households) is about 20 percent, significantly lower than the average in EU and OECD countries.⁹ Recent reforms to the pension system helped improve its adequacy and fiscal sustainability. However, low and declining aggregate replacement rates suggest that challenges to address pension adequacy for future retirees remain to be tackled in the medium term. Furthermore, operating costs of private pension managers are among the highest in OECD countries, affecting future returns from the second pillar pension scheme (Figure 6).

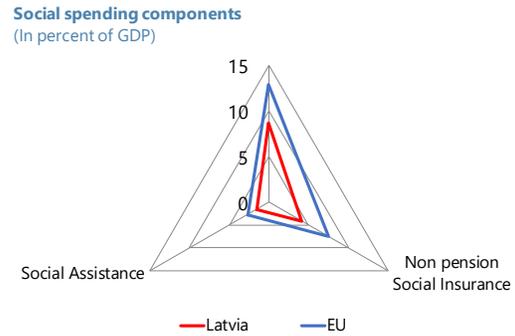
⁹ The data is obtained from the ASPIRE project, which classifies social assistance into the following categories: unconditional cash transfers, cash transfers, social pension, food and in-kind transfers, school feeding, public works, fee waivers, and other social assistance.

Figure 6. Social Protection Expenditure

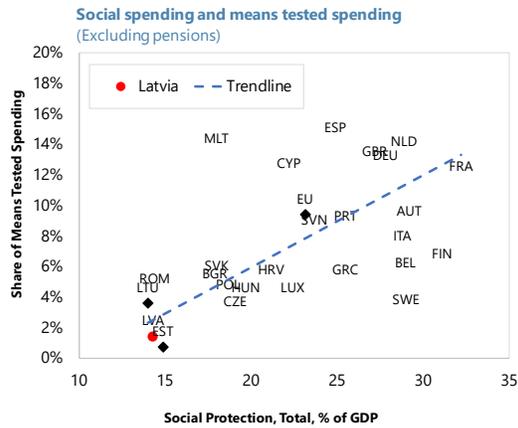
Social spending per capita is one of the lowest in the EU....



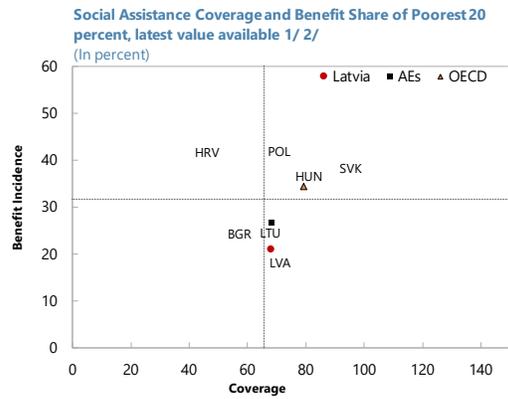
...with most spending devoted to pensions.



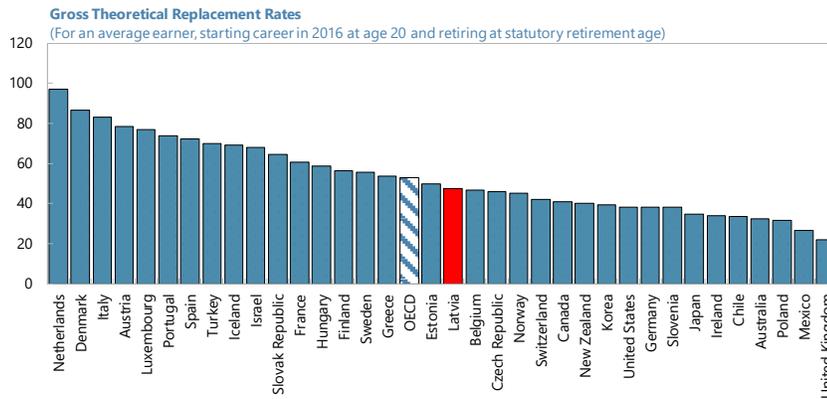
The share of means-tested programs in total social assistance is the lowest in the EU...



...and so is the coverage and incidence of current social programs.



1/ Dashed lines are EU averages.
2/ Coverage is (number of individuals in the quintile who live in a household where at least one member receives the transfer)/(number of individuals in that quintile). Benefit incidence is equal to (sum of all transfers received by all individuals in the quintile)/(sum of all transfers received by all individuals in the population).



Source: OECD reviews Pension Systems: Latvia.2018

16. The impact of fiscal redistribution is low. Taxes and social benefits in Latvia have very low redistributive impact compared to other EU countries.¹⁰ Most of the fiscal redistribution effort (about 60 percent) is achieved through public pension benefits, significantly higher than the EU average (about 50 percent). The low redistribution impact of fiscal policy is also reflected in the relatively small difference between market income Gini (inequality before any government taxes and transfers) and disposable income Gini in Latvia compared to other EU countries. At the same time, the redistribution impact of social spending has potential: estimates indicate that a 1 percent increase in social spending could have a positive impact on the reduction of the Gini coefficient, even above the average impact in EU countries of 0.9 percent. (Figure 7)

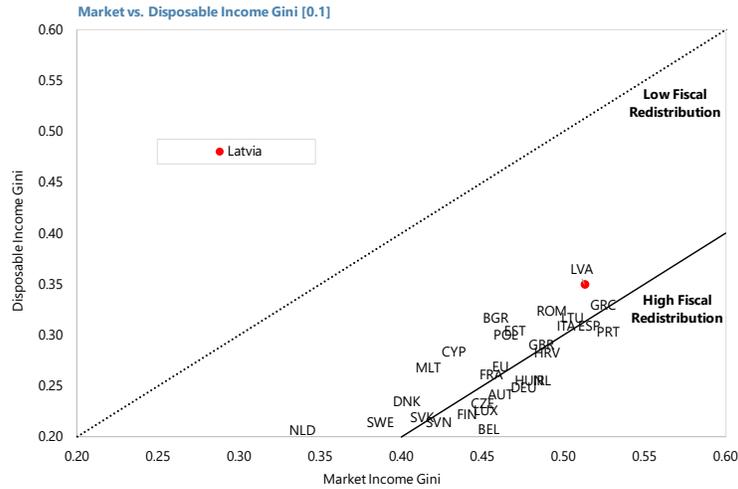
17. There is significant scope for improvement in the adequacy and targeting of social programs. Measures introduced in the tax reform package should help improve the redistributive impact of fiscal policies, including through the gradual increase in basic allowances for the low-wage earners and families and the introduction of progressivity in the PIT. Going forward, the coverage and adequacy of existing programs could be improved by introducing uniform standards across Latvia's municipalities that would allow completing the guaranteed minimum income reform.¹¹ Efficiency gains can be achieved by redesigning existing programs and linking eligibility requirements to socio-economic indicators. Disincentives to work typically associated with these programs can be effectively addressed by using appropriate in-work benefits and reallocating resources to active labor market policies. Progress in addressing shortfalls of future pensions can be achieved by introducing measures that facilitate employment for old age groups and measures to reduce the high operating cost of private pension funds managing the pension system's second pillar.

¹⁰ Reduction in inequality is calculated as the difference between the Gini coefficient for market income and the Gini coefficient for disposable income.

¹¹ The reform aims to address shortcomings of the narrow eligibility requirement and the poor adequacy of the program. It aims to: increase the minimum income level to 40 percent of the median disposable income, and set a minimum budget of goods and services for different types of households depending on the territorial dimension.

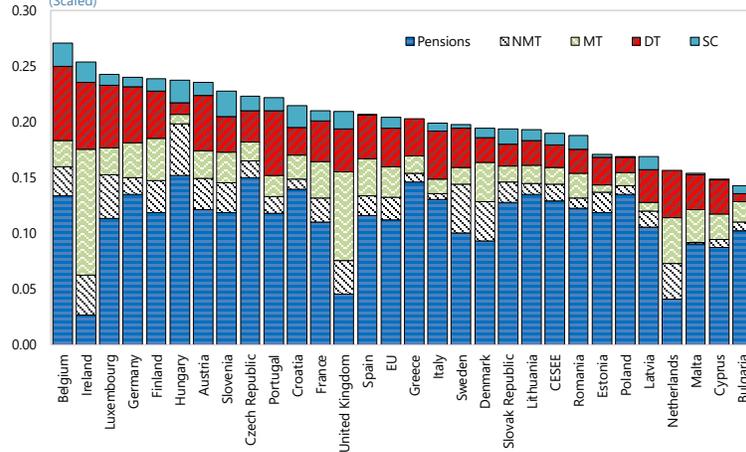
Figure 7. Fiscal Redistribution

The impact of fiscal redistribution is the lowest in the EU.



Most of the redistribution effort is achieved through pensions.

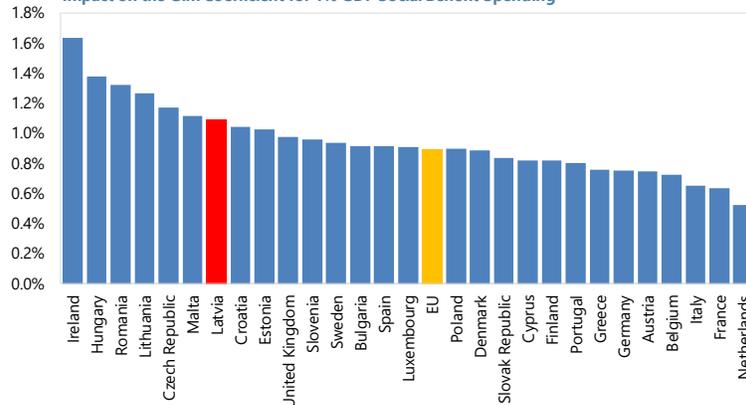
Taxation and Spending: Contributions to the Reduction in the Gini Coefficient (Scaled)



Note: SC = Social Contributions; DT=Direct Taxes; MT=Means -tested social spending; NMT=Non-means-tested social spending.
Sources: Euromod and IMF staff calculations.

The redistributive impact of an increase in social spending is high.

Impact on the Gini Coefficient for 1% GDP Social Benefit Spending

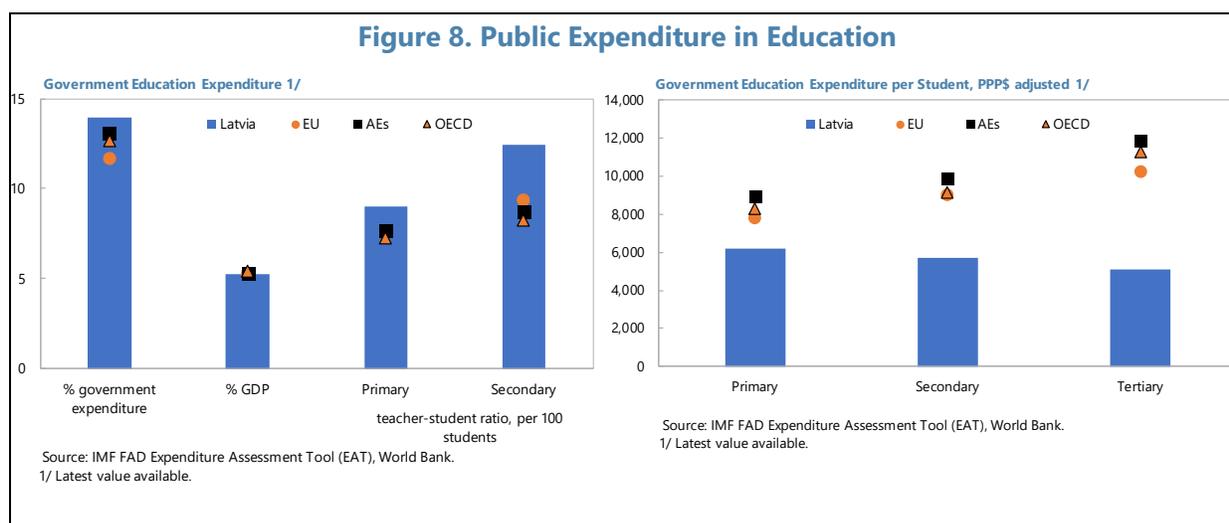


Sources: IMF FAD Expenditure Assessment Tool (EAT) and World Economic Outlook.

Sources: IMF FAD Expenditure Assessment Tool (EAT); Eurostat; Euromod; World Economic Outlook; and IMF staff calculations.

Education

18. Public education spending in Latvia is relatively high. At 14.7 percent of total public expenditure, Latvia's education spending is above the average of EU, OECD, and advanced economies. Spending per student has increased significantly in recent years, but adjusting for income levels, it is still significantly lower than the average of peer countries. Teacher student ratios in both primary and secondary schools stand well above the EU and OECD averages, reflecting the decline in school age population in Latvia (Figure 8). Teachers' salaries are the lowest in absolute terms among OECD countries. However, compared to similarly educated workers in the country, teachers are relatively better paid than in other OECD countries.¹²

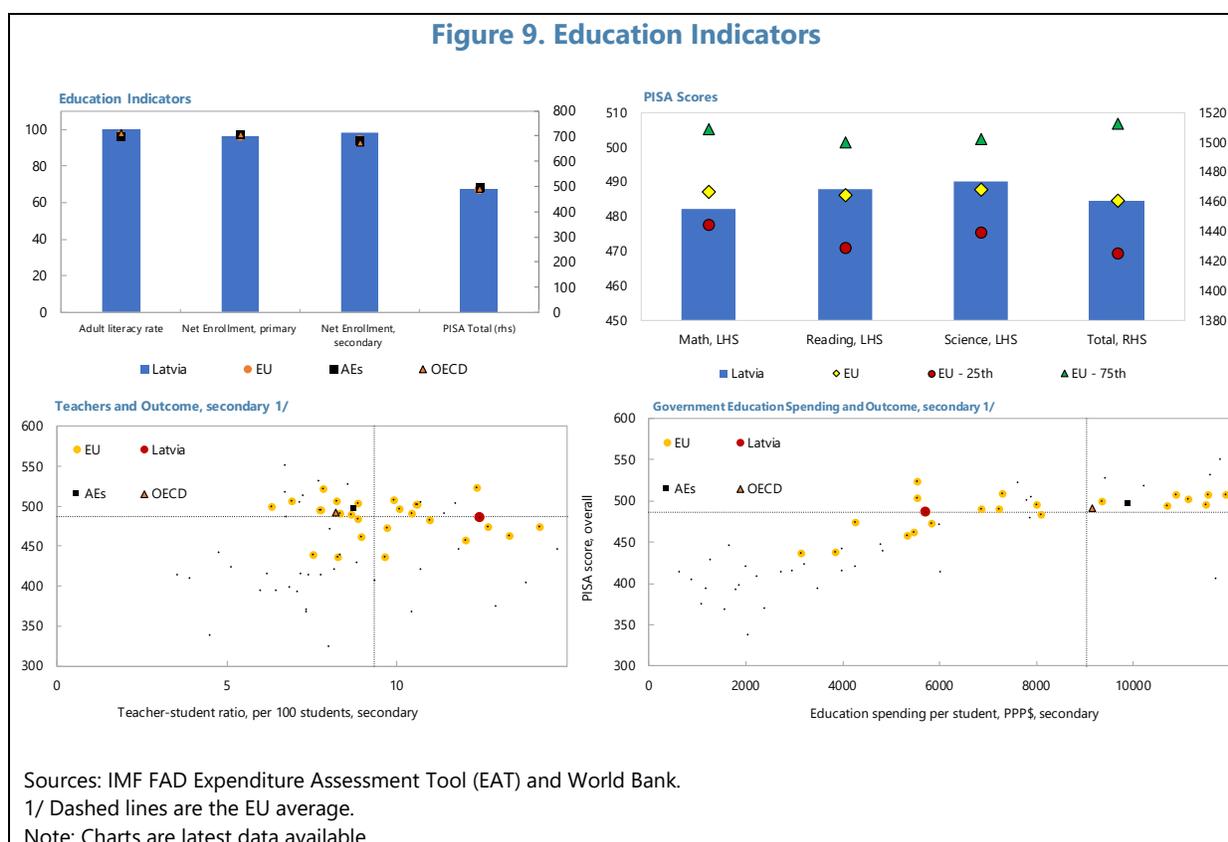


19. Latvia's educational outcomes are comparable to those of peer countries, but challenges remain. Latvia has achieved progress in improving education indicators. As of 2016, net enrollment rates in Latvia are in line with peer country averages and the most recent PISA scores are just at the EU average and slightly below the OECD average.¹³ However, an efficiency frontier analysis suggests better education outcomes can be achieved by reducing spending inefficiencies, in particular by reducing the high teacher-student ratios. For instance, more than half of EU countries have achieved similar or higher PISA scores with significantly lower teacher-student ratios. Countries with similar per student spending have also achieved better PISA scores than Latvia (Figure 9).¹⁴

¹² See OECD (2017b).

¹³ See OECD (2017).

¹⁴ The "efficiency frontier" analysis was done using FAD's Data Envelopment Analysis (DAE) and compares Latvia's relative efficiency both against the efficiency frontier and other countries.



20. Measures to improve the education system are ongoing. The authorities have rolled out a new competence-based curriculum to help improve outcomes in lagging subjects and have taken steps to improve vocational education and training with the aim to reduce labor skills mismatches. They have also introduced a new teacher remuneration model aiming to improve transparency and attract more qualified staff. These reforms have the potential to further increase the quality of education in Latvia and, more broadly, address skill mismatches in the labor market. Further steps require streamlining staff in institutions where teacher-student ratios are high and reallocating resources to further improve existing programs. Consideration should also be given to realigning budget expenditures with Latvia's demographic developments.

Health

21. Healthcare spending in Latvia is low by many metrics. Latvia allocates around 10 percent of public spending to healthcare, compared to an average of about 15 percent in the EU and OECD countries. As a share of GDP and GDP per capita, public healthcare spending is also one of the lowest among EU, OECD, and advanced countries. At the same time, households' out-of-pocket spending, at about 40 percent of total healthcare spending, is substantially higher than in peer countries (Figure 10).

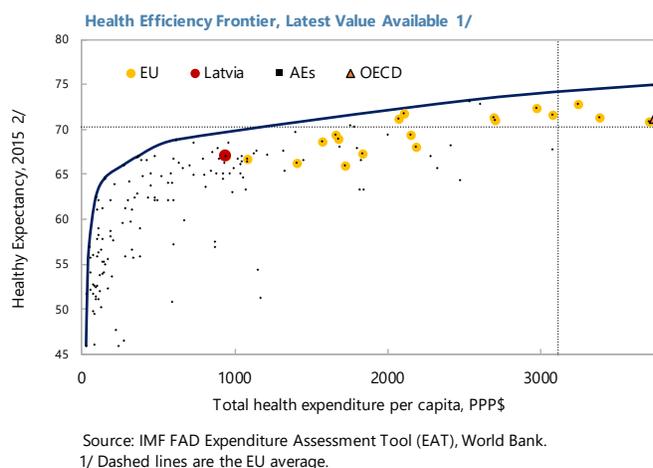
22. Low healthcare funding and efficiency gaps have resulted in poor quality of services. The public healthcare system in Latvia suffers from many shortcomings, most notably a shortage of labor, with the number of doctors and nurses below that of peer countries. At the same time, the number of primary health care units is well above the EU average, thus exacerbating the shortage of

specialized staff to work in these clinics and contributing to the relatively poor outcomes compared to other countries. In addition, given the large out-of-pocket costs, Latvia has the second largest share of low-income households that report foregoing medical treatment. As a result, Latvia's health profile lags that of peer countries in some important areas. For example, the number of maternal deaths, smoking related deaths, and heart and circulatory system diseases are still significantly above the EU average. Latvia also has one of the lowest healthy life expectancy (HALE) at birth in the EU—about 67 years, compared to 70 years in the EU.¹⁵ Not surprisingly, the self-perception of health in Latvia is poorer than the EU average across all income levels, especially among the population in the lowest-income brackets (Figure 10).

23. The authorities have undertaken a comprehensive healthcare reform. It aims to: i) reduce the key shortcomings in the healthcare system (quality and accessibility) and improve its cost-effectiveness;¹⁶ ii) improve the efficiency of the health system administration; and iii) reform the financing of healthcare services by moving away from the provision of public universal healthcare. The latter separates the provision of public health services in two “baskets”: a full basket of services available to persons paying social security contributions and to those considered as vulnerable population (children and pensioners), and a “minimum basket,” which provides for a reduced set of health care services for those who do not pay social security contributions. An option to access the full basket is allowed upon paying social security contributions.

24. The reform entails a significant increase in healthcare spending. The implementation of the reform is estimated to cost about 0.9 percent of GDP during 2018-19, for which the European Commission has granted budget flexibility to Latvia. Additional long-term funding has been secured through a 1 percent increase in social security contributions. This will be used primarily for an increase in the remuneration of health care workers, aiming to address the shortage of labor in the healthcare sector.

25. The health care reform is timely, but success in improving the quality and availability of healthcare services will depend on how efficiently the resources are used. Latvia's distance to the “efficiency frontier”—measured in healthy life expectancy—is not significantly large given the current level of healthcare spending.¹⁷ Still, there is some loss in HALE of approximately 4 years, suggesting that there is scope for better allocation of healthcare



¹⁵ Healthy life expectancy (HALE) is a measure of health expectancy that applies disability weights to health states to compute the equivalent number of years of life expected to be lived in full health.

¹⁶ The authorities commissioned a study to evaluate the economic return of specific indicators and identify key reform objectives. Results of this study and specific measures are summarized in the [2018 Stability Plan](#).

¹⁷ This should be interpreted carefully as the efficiency frontier analysis assesses the efficiency of total expenditure, and thus a more granular approach would need to be taken to assess the efficiency of public spending separately.

spending. For instance, efficiency gains can be achieved by reducing information gaps about healthcare quality.¹⁸ Better and more granular information about service delivery and patient outcomes will help identify key deficiencies in the system and areas where resources should be reallocated, thereby improving the efficiency and quality of healthcare services. At the same time, the new financing law for healthcare could have a negative impact in long term HALE if the share of population eligible only for basic coverage are unable to buy into the full package. Given the already high out pocket costs, this would make improving basic healthcare services all the more important.

Figure 10. Health Sector

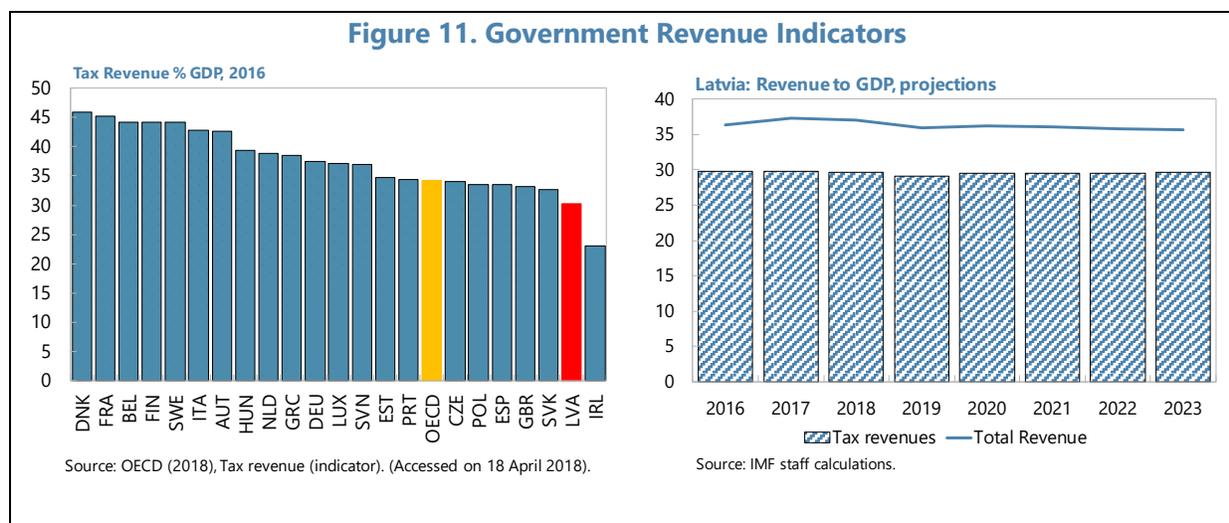


Sources: IMF FAD Expenditure Assessment Tool (EAT); World Bank; World Health Organization; OECD (2017); OECD Health Statistics (database); and Eurostat.

¹⁸ See OECD (2017a) and OECD (2017c).

D. Towards an Inclusive and Growth-Enhancing Policy Mix

26. Latvia's low tax revenue ratio limits the government's scope to meet its vast spending needs. The ratio of tax revenue to GDP in Latvia is well below the OECD average, and one of the lowest in the EU. Under current policies, total revenues are expected to decline, reflecting the limited scope to increase tax revenues and the expected decline in EU investment funds (Figure 11). Fiscal costs associated with the implementation of the recent tax and healthcare reforms have also put pressure on the budget and absorbed existing fiscal space.



27. The recent tax reform limits the scope for raising the revenue ratio. While the reform is likely to have a positive impact on future growth, the largest gains are not likely to be seen in the short term, and its cost entails a permanent dent on tax revenues. The reform introduces measures to reduce the large share of informality in the economy, which, if successful, could help increase tax revenues, but their impact is hard to estimate and will likely take some time to materialize.

28. With limited revenue sources, public spending should focus on growth-friendly spending and reducing efficiency gaps. Investing in health, education, and social protection can help increase human capital and labor productivity, while investing in physical capital can have a large impact on future growth. As Latvia is close to the efficiency frontier in many areas, gains from improving spending efficiency may be limited, but can be obtained through some focused reforms:

- a. *Reducing government employment:* Savings can be achieved by reducing the size of government employment, particularly in the education sector through streamlining institutions with high teacher-student ratios. To increase the impact of the ongoing civil service reform, its scope could be expanded to include staff beyond the central government. This would also allow for more flexibility in reducing the public-private wage gap without increasing the government wage bill. More generally, this reform could also help ease the tightness in the labor market.

- b. *Improving the targeting of social protection*: public resources can be more effectively used by relying on means-tested programs, linking eligibility requirements of existing programs to income levels.
- c. *Improving the efficiency of healthcare spending*: efforts should focus on improving the provision of primary care, enhancing information systems to better identify the investment needs in the healthcare system, and reducing the high out-of-pocket costs, which disproportionately affect low income households.
- d. *Increasing public investment*: boosting public investment is needed to improve productivity and boost growth over the medium term, especially as EU funds gradually level off. While efficiency gains on public investment seem small, further improvements can be achieved by strengthening the project approval and management of PPPs.

29. The authorities should also seek to expand tax revenues sources. An effective way to increase tax revenue is making use of less distortionary taxes, such as property taxes. Additional revenues can be achieved by updating cadastral values to align them with market values, and ensuring that property tax rebates and deferrals are only used by low-income households. There is also scope to raise additional revenues by reducing inefficiencies in the VAT system by simplifying the VAT rate structure and strengthening VAT compliance.

Appendix I. Modeling the Impact of Permanent Fiscal Reforms

1. The economic impact of the tax reform package and alternative expenditure policies are analyzed using the IMF's Global Integrated Monetary and Fiscal model (GIMF).¹ GIMF is a general equilibrium model that can help policymakers assess the economic implication of different fiscal and monetary policies. The model has been calibrated to represent Latvia's characteristics by using historical data and staff projections.

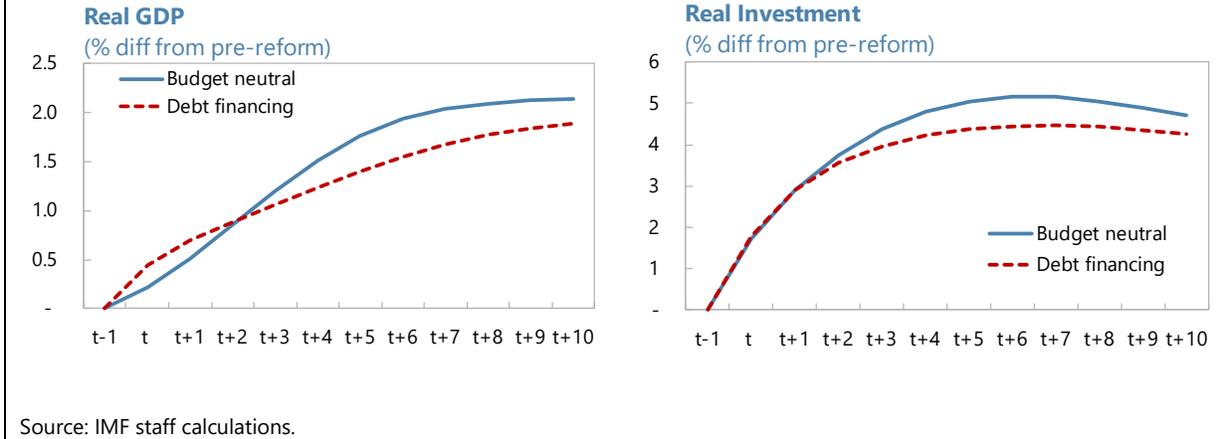
2. The impact of the tax reform is assessed under two financing scenarios. The first scenario, reflecting staff's current baseline and authorities' assumptions, assumes the tax reform is partly financed by an increase in excise duties, thus having a negative impact on the fiscal balance, which is debt creating. We also simulate an alternative budget neutral scenario that fully covers the cost of the fiscal reform, where we assume an increase in excises together with an increase in lumpsum taxes (as a proxy for an increase in property taxes). While the tax reform also includes important administrative reforms, which should have a positive impact on tax revenues, these simulations focus only the most direct reforms: the change to the PIT and CIT, which are treated as permanent fiscal measures. A Latvia-specific reform scenario is calibrated using the authorities' estimates of the change in the effective PIT rates post reform. The CIT reform is calibrated to simulate similar behavioral dynamics as observed in Estonia, given the uncertainty in estimating behavioral dynamics.

Impact of the Tax Reform: Baseline Scenario

3. The tax reform is likely to have a positive permanent impact on the economy, though its magnitude largely depends on the potential behavioral response. The reform will have a positive effect on net incomes of individuals and firms, thereby supporting an increase in consumption and investment. Over the medium term, the combined PIT and CIT reforms result in a higher real GDP by almost 1.5 percent, compared to a pre-reform scenario. A key assumption in this scenario is that firms' tax relief gradually translates into productive investment. Furthermore, over the medium to long term, automatic fiscal stabilizers are assumed to cover the fiscal cost of the reform not financed by an increase in excises (this is modeled as a decline in government lump-sum transfers). Financing of the reform is a key factor in estimating its impact. Clearly, deficit financing of the reform will have a large positive upfront impact on growth, which will dissipate quickly. Over the long term, implementing the tax reform without resorting to debt financing would still deliver a larger benefit (Figure A.1).

¹ GIMF is a multi-region, forward-looking, DSGE model developed by the IMF's Research Department. Its main macroeconomic properties are illustrated in IMF Working Paper [No. 13/55](#).

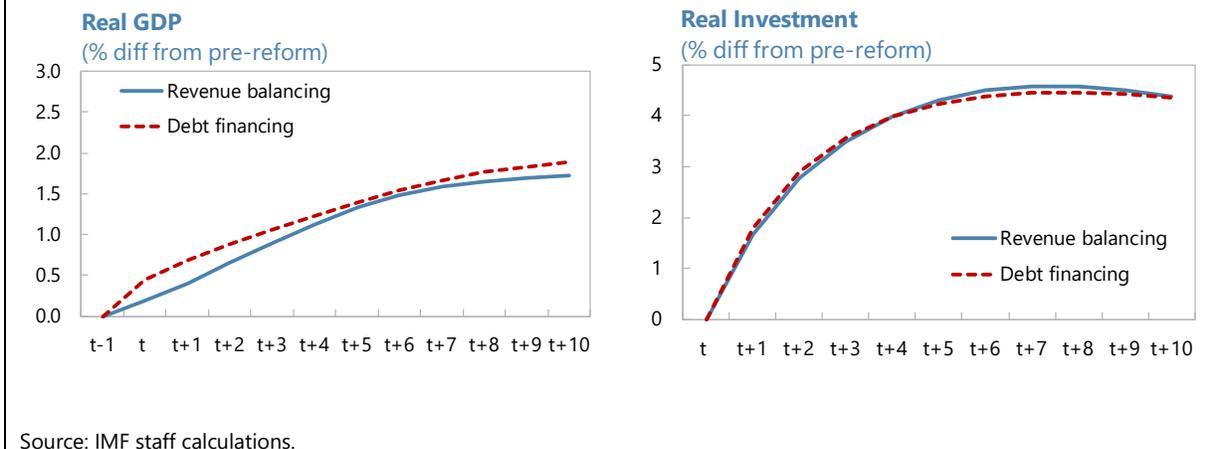
Figure A.1. Tax Reform Scenario



Impact of the Tax Reform: Revenue Balancing Scenario

4. Absent further reforms, the tax reform will permanently dent tax revenues. After the introduction of the progressive system, with lower rates for lower income brackets, PIT revenues as a share of GDP are projected to be permanently lower than the pre-reform baseline by up to 1 percent of GDP on average. CIT revenues could have an even larger initial impact—by about half for the first two years of implementation (similar to the pattern observed in Estonia), but could gradually increase over time converging to below pre-reform levels as firms normalize dividend payments. An alternative policy option to achieving a budget neutral reform, would be to absorb the remaining cost of the tax reform through a tax increase, for example by raising property taxes. While the impact on real GDP and investment will not significantly differ from a debt financing scenario, under this scenario the impact on government finances is much lower, thus providing room for social spending and a longer, stable source of revenues, thereby partly offsetting the revenue shortfall from the tax reform (Figure A.2).

Figure A.2. Financing Scenarios for the Tax Reform



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