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REPUBLIC OF ESTONIA

SELECTED ISSUES

July 2021

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June 30, 2021

Approved by
European Department

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CONTENTS

RISKS OF LABOR MARKET SCARRING IN ESTONIA[1]

Estonia navigated the COVID-19 crisis with a smaller drop in GDP per capita growth but a larger increase in the unemployment rate than the EU average. The employment support measures—which helped contain the effects of COVID-19—were flexibly deployed and first expired in June 2020, before being reintroduced during the second wave in March 2021. Accordingly, the channel of adjustment has shifted from hour per employment to employment since 2020Q2. The pass-through from the decline in output to compensation of employees was limited in aggregate but heterogeneous across sectors. Employment loss was salient in some sectors, including accommodation and food services. From the social perspective, young cohorts and less educated suffered most, raising the concern of expanding inequality and scarring risks. Wage support and social safety nets helped mitigate the distributional impact. Retention policies targeted to vulnerable groups should be maintained to ease the unemployment dynamics until recovery is entrenched. As the economy recovers, more active use of reallocation policies is warranted.

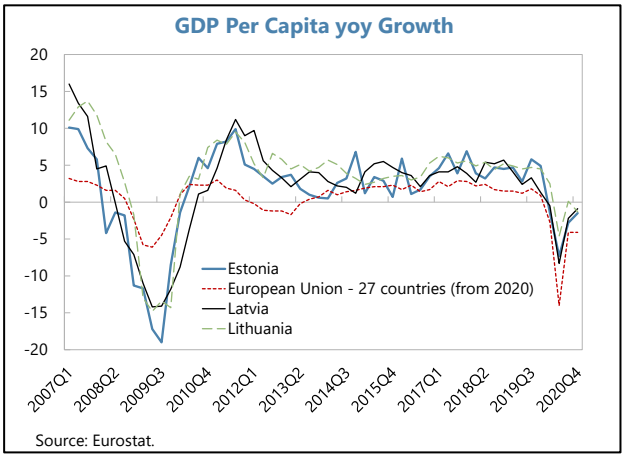
A. Introduction

1. The COVID-19 crisis poses risks of scarring to the labor market. In general, job finding is lower and job separation is higher in recessions than in expansions. Switches in occupations are more frequent after unemployment spells and inflict earnings penalties. Studies of past recessions suggest that COVID-19 shock requires worker reallocation, and the impact of the pandemic is heavier for youth and the lower-skilled as discussed in IMF (2021).

2. This paper attempts to identify some of the most vulnerable groups and discusses policies to mitigate the risks of scarring. To understand the impact of the COVID-19 crisis on Estonia's labor market, we study how Estonia's labor market adjusted from the aggregate, sectoral, and social perspectives. The impact will also be assessed in comparison with both the Global Financial Crisis (GFC) and other Baltic and EU countries.

B. Aggregate Behavior

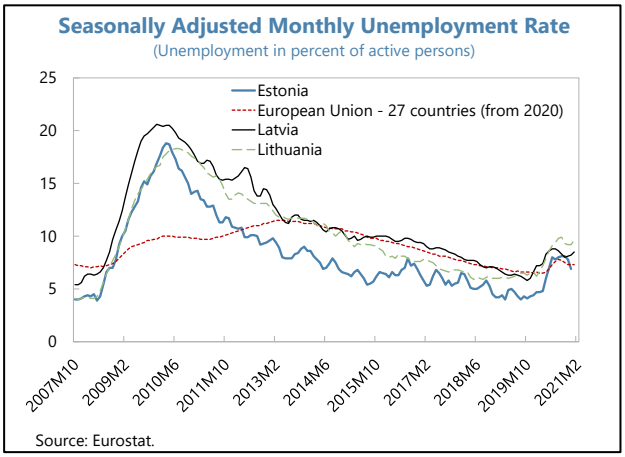
3. GDP per capita dropped less in Estonia than in the EU average. During the bottom in 2020Q2, GDP per capita growth compared to the same period of the previous year was -7.3 percent in Estonia. This was milder than the EU average (-14 percent) in 2020Q2 and during the GFC (-17.2 percent). The smaller drop could reflect the stronger initial condition, as the growth was higher and



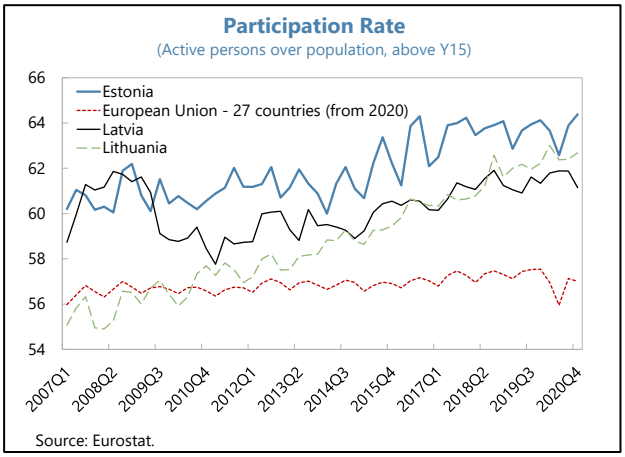
[1] Rafaela Jarin, Fuda Jiang, and Shituo Sun provided excellent formatting and research assistance. The underlying analysis is a part of a broader European Department project on labor markets during the pandemic, expected to be published as a departmental paper in 2021.

fiscal space was ample when entering the crisis. It could also reflect the less stringent containment measures and the strong institutional framework that enabled the deployment of broad policy responses.

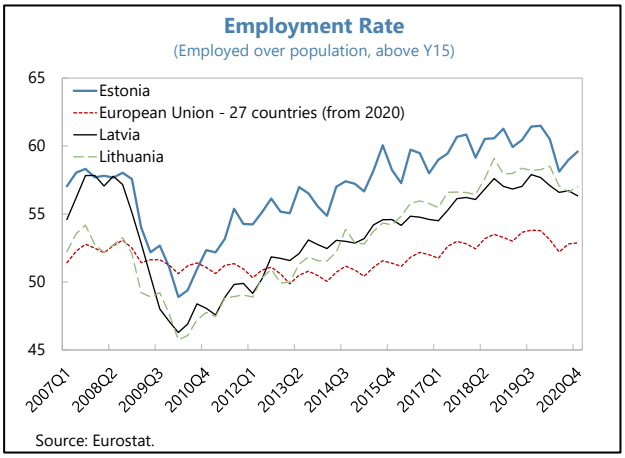
4. The unemployment rate, however, increased more than the EU average. The seasonally and calendar-adjusted monthly unemployment rate in Estonia increased from 4 in March to 8 percent in June 2020. In contrast, the unemployment rate in the EU average increased from 6.5 to 7.6 percent during the same period. Although the unemployment rate in Estonia was lower than at the peak of the GFC (19 percent), the increase in the percentage was nearly four times larger than the EU average.



5. The unemployment rate jumped in 2020Q2 despite the drop in participation. Estonia's participation rate, defined by the active persons over population above 15 years old, dropped from 63.7 in 2020Q1 to 62.6 percent in Q2. If the unemployed exit the labor market by stopping the job search, the unemployment rate should have declined. The unemployment rate, however, increased in 2020Q2, so the situation was more severe than suggested by unemployment data alone.



6. The decline in the employment rate, which accounts for both unemployment and participation, declined sizably. The employment rate, defined by the employed persons over population above 15 years old, dropped from 60.5 in 2020Q1 to 58.1 in Q2. Compared to the EU average, which declined from 53.1 to 52.2 during the same period, Estonia's employment rate decline was 1.5 percentage points higher, raising concerns about scarring risks. A mitigating development, however, is that Estonia's employment rate recovered faster than the EU average in 2020Q4.



C. Sectoral Analysis

7. To understand the aggregate behavior of the labor market from the sectoral perspective, the output is decomposed by sector and different types of labor inputs. The growth of gross value-added (GVA) per capita is decomposed into sectoral contributions from the growth of productivity per hours worked, the growth of hours worked per employment, the change in sectoral labor share, and the growth of employment rate.

$$\frac{V_t}{Pop_t}-\frac{V_{t-k}}{Pop_{t-k}}=\sum_s\Bigg\{\underbrace{\omega_{s,VH}\left(\frac{V_{s,t}}{H_{s,t}}-\frac{V_{s,t-k}}{H_{s,t-k}}\right)}_{productivity\ per\ hour}+\underbrace{\omega_{s,HN}\left(\frac{H_{s,t}}{N_{s,t}}-\frac{H_{s,t-k}}{N_{s,t-k}}\right)}_{hour\ per\ employment}$$
$$+\underbrace{\omega_{VN}\left(\frac{V_{s,t-k}}{N_{s,t-k}}-\frac{V_{t-k}}{N_{t-k}}\right)\left(\frac{N_{s,t}}{N_t}-\frac{N_{s,t-k}}{N_{t-k}}\right)}_{structural\ change}+\underbrace{\omega_{NPop}\left(\frac{N_{s,t}}{Pop_t}-\frac{N_{s,t-k}}{Pop_{t-k}}\right)}_{employment}\Bigg\},$$

where $V_{s,t}$ is GVA, $H_{s,t}$ is the hours worked, $N_{s,t}$ is the number of workers in sector s at time t, V_t is the sum of sectoral GVA over all sectors, and Pop_t is the population at time t. The weights $(\omega_{s,VH},\omega_{s,HN},\omega_{VN},\omega_{NPop})$ are time-dependent, but the subscript is dropped for clarity.

$$\omega_{VN}=\frac{1}{2}\left(\frac{N_t}{Pop_t}+\frac{N_{t-k}}{Pop_{t-k}}\right),\qquad \omega_{NPop}=\frac{1}{2}\left(\frac{V_t}{N_t}+\frac{V_{t-k}}{N_{t-k}}\right)$$
$$\omega_{s,VH}=\frac{\omega_{VN}}{2}\frac{N_{s,t}}{N_t}\left(\frac{H_{s,t}}{N_{s,t}}+\frac{H_{s,t-k}}{N_{s,t-k}}\right),\qquad \omega_{s,HN}=\frac{\omega_{VN}}{2}\frac{N_{s,t}}{N_t}\left(\frac{V_{s,t}}{H_{s,t}}+\frac{V_{s,t-k}}{H_{s,t-k}}\right).$$

The decomposition extends McMillan et. al. (2014) to include hours worked per employment and employment. Each term can be interpreted as the marginal contribution of the component ceteris paribus. Note that the sign and the interpretation of the structural change term differ depending on whether a sector's productivity is higher than the aggregate productivity. If the productivity per worker of sector s is higher than the aggregate

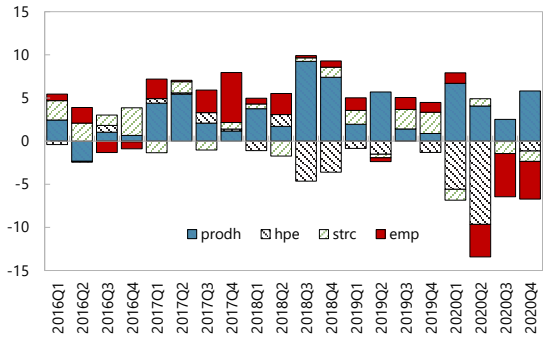
$$\frac{V_{s,t-k}}{N_{s,t-k}}>\frac{V_{t-k}}{N_{t-k}},$$

an increase in the labor share of sector s leads to a positive structural change. If the inequality is reversed, an increase in the labor share of sector s leads to a negative structural change. Intuitively, the labor share matters since, if the highest productivity sector absorbs the entire labor force, the productivity of the whole economy rises to the same level as the sector with the highest productivity.

Figure 1. Decomposition of GVA Growth by Labor Input and Sector

Employment adjusted in Estonia from 2020Q2….

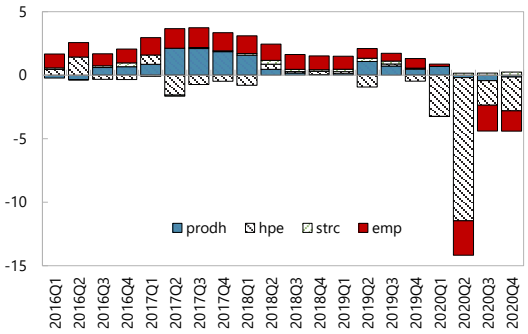
EE: Quarterly Time Series of GVA/pop yoy Growth



Note: VA is 2015 chain-linked volumes.
Source: Eurostat.

Reduction of hours was the main channel in EU countries…

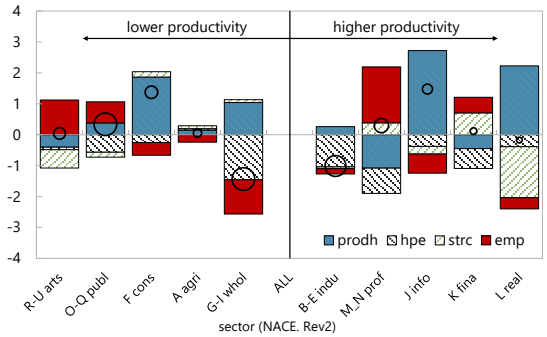
EU27: Quarterly Time Series of GVA/pop yoy Growth



Note: VA is 2015 chain-linked volumes.
Source: Eurostat.

In 2020Q1, G-I whol sector already exhibited a sign of slowdown….

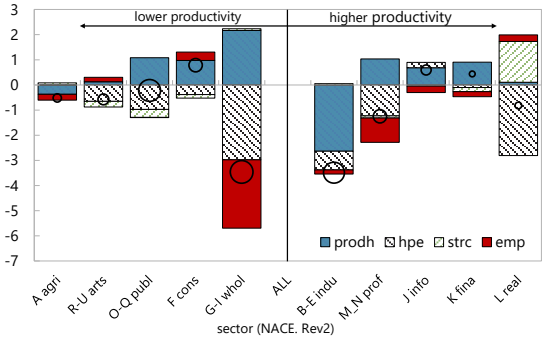
EE: Decomp of GVA/pop Growth, 2019 Q1 to 2020 Q1



Note: VA is 2015 chain-linked volumes. Size of the bubble represents share in population.
Source: Eurostat.

In 2020Q2, the main channel was the reduction of hours per employment ….

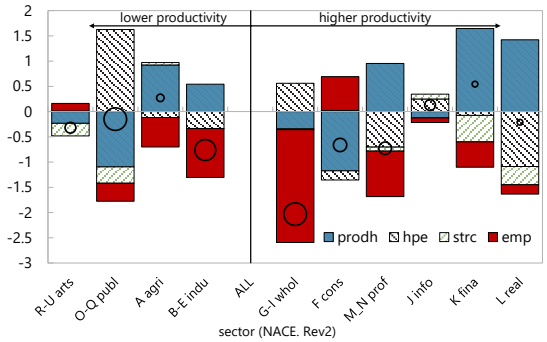
EE: Decomp of GVA/pop Growth, 2019 Q2 to 2020 Q2



Note: VA is 2015 chain-linked volumes. Size of the bubble represents share in population.
Source: Eurostat.

In 2020Q3, the main channel shifted to employment…

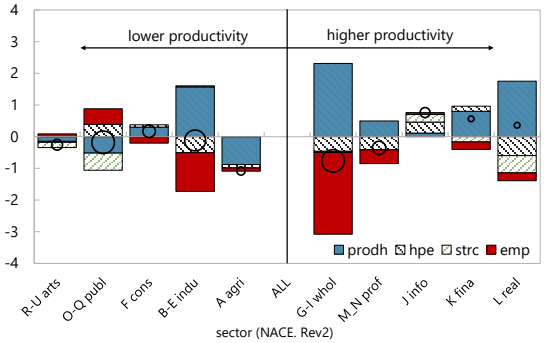
EE: Decomp of GVA/pop Growth, 2019 Q3 to 2020 Q3



Note: VA is 2015 chain-linked volumes. Size of the bubble represents share in population.
Source: Eurostat.

In 2020Q4, reduction of employment and increase in hourly productivity can be observed….

EE: Decomp of GVA/pop Growth, 2019 Q4 to 2020 Q4



Note: VA is 2015 chain-linked volumes. Size of the bubble represents share in population.
Source: Eurostat.

8. Overall, the contribution of employment to GVA per capita growth in 2020 was bigger than the EU average. Three points are worth mentioning. First, in 2020H1, both Estonia and EU 27 countries average adjusted by reducing hours worked per employment, but the employment loss was already substantial in 2020Q2. Second, in 2020H2, as opposed to the average of EU countries, the drop in GVA per capita growth in Estonia was mainly driven by lower employment. Third, the hourly productivity in Estonia increased in all quarters in 2020. This could reflect compositional effects, where the disproportionate lay-offs of low-productivity workers lead to an increase in average productivity even if individual worker's productivity remains unchanged. Another possible explanation for the observed uptick in productivity could be that workers got used to the new environment and became more productive.

9. The sectoral decomposition of GVA by labor inputs highlights a heterogeneous impact. In 2020Q1, the wholesale and retail trade, transport, accommodation and food services (labeled G-I whol sector as detailed in Annex), already exhibited signs of a slowdown. In 2020Q2, many sectors reduced hours per employment, and the G-I whol and M_N prof sectors showed employment loss. In 2020H2, after the expiration of the state of emergency and the associated support measures, most sectors' adjustment was through reduced employment. Although the productivity of the G-I whol sector increased in 2020Q2, a significant part is likely to be compositional effects. The increase in hourly productivity toward the end-2020 could reflect worker's learning and adaptation to the new environment as well as the compositional effects. Although the contribution from structural change is small due to the short-term nature of the analysis, 2020H2 recorded negative numbers since employment declined in high productivity sectors.

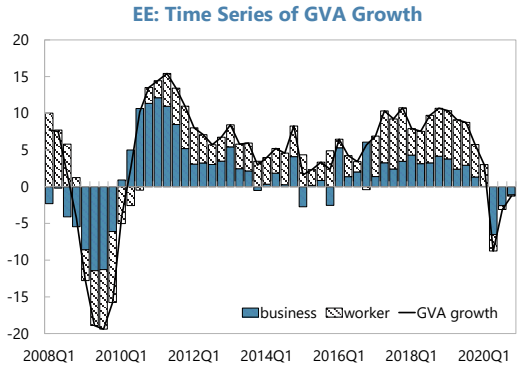
10. While the sectoral decomposition describes the production from the input side, the output side is also of interest. To see how the decline in output translated into the worker's income, the growth of GVA is decomposed into the contribution from the growth of compensation of employees and the rest, which consists mostly of corporate profits (including the self-employed). For simplicity, income not attributed to workers is labeled as business:

$$V_t - V_{t-k} = \sum_s \left\{ \underbrace{V_{s,t} - W_{s,t} - \left(V_{s,t-k} - W_{s,t-k}\right)}_{business} + \underbrace{W_{s,t} - W_{s,t-k}}_{worker} \right\},$$

where $V_{s,t}$ is GVA and $W_{s,t}$ is the compensation of employees for sector s at time t. Intuitively, the decomposition shows whether the shock, represented by the change in GVA on the left-hand side, is absorbed by businesses or workers. Note that wage subsidies received by firms experiencing difficulties are accounted for in the GVA since GVA includes subsidies on production. Wage subsidies are used to pay workers, so they are also part of the compensation of employees.

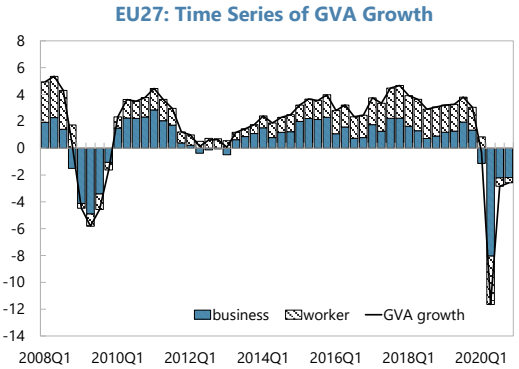
Figure 2. Decomposition of GVA by Sector and Income Recipients

Most shocks were absorbed by businesses in Estonia, unlike the GFC ….



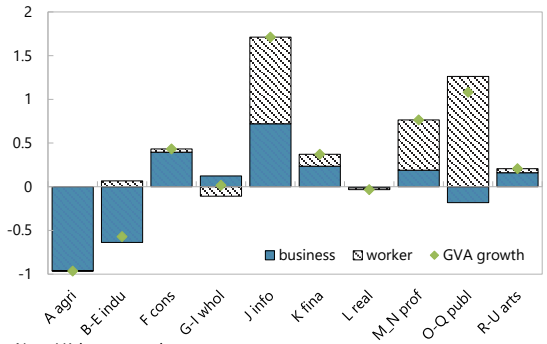
Note: VA is current price.
Source: Eurostat.

Most shocks have been absorbed by businesses in EU countries both in COVID-19 and GFC….



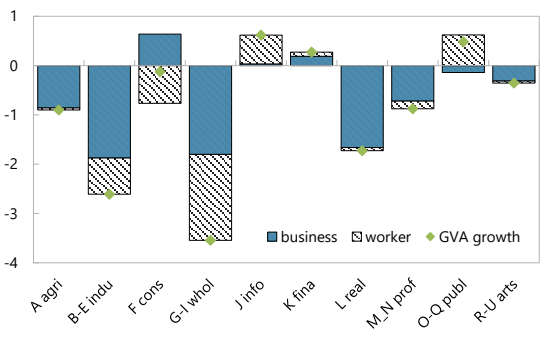
Note: VA is current price.
Source: Eurostat.

In 2020Q1, the compensation of employees was under upward pressure….



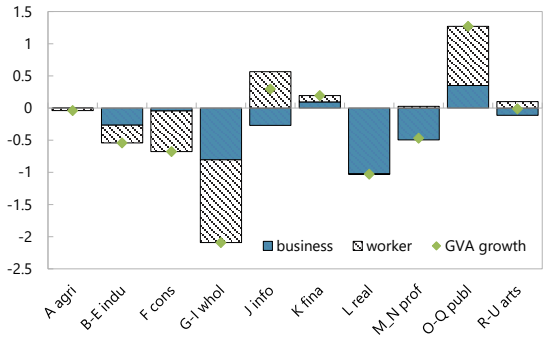
Note: VA is current price.
Source: Eurostat.

In 2020Q2, the situation reversed except for the J info and O-Q publ sectors….



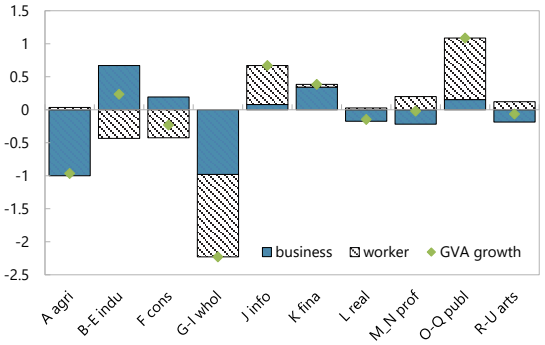
Note: VA is current price.
Source: Eurostat.

In 2020Q3, most shocks in G-I whol sector were absorbed by workers…



Note: VA is current price.
Source: Eurostat.

In 2020Q4, the contrast between J info, O-Q publ, and G-I whol remains….



Note: VA is current price.
Source: Eurostat.

11. The pass-through from output decline to compensation of employees was mild in aggregate but varied across sectors. The pre-COVID-19 growth of GVA was mostly driven by the compensation of employees. This trend shifted during the crisis, with most of the shock absorbed by businesses. During the biggest decline in 2020Q2, businesses absorbed nearly 75 percent of the shock. The smaller contribution from the decline in the compensation of employees in 2020 contrasts the GFC, reflecting potential cushioning effects of the wage subsidy and other support measures. The sectoral decomposition, however, shows heterogeneity in the impact. For example, more than half of the shock was absorbed by workers after 2020Q2 in the G-I whol sector. In contrast, the J info and O–Q publ sector, which includes health services, exhibited strong growth in the compensation of employees even when businesses recorded negative growth. Thus, the COVID-19 not only reduced employment in the hospitality sectors but also may highlight the labor supply shortage of workers with ICT skills and in the health services.

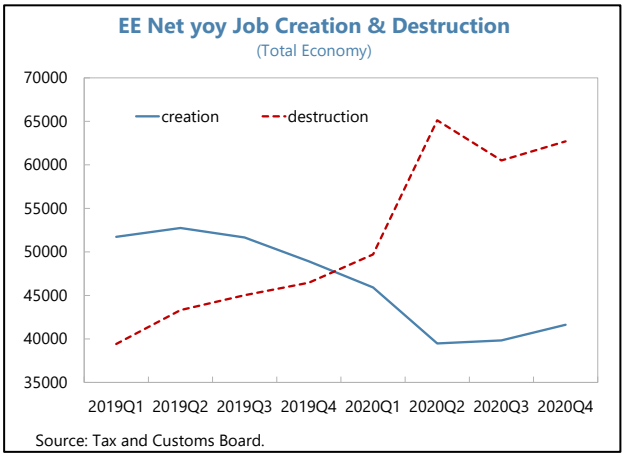
12. The sectoral analysis can be further complemented by the micro-data that illustrates the job creation and destruction within each sector. Using quarterly employment data from Estonia's Tax and Customs Board, job creation and destruction can be defined by the sum of the increase and decrease in employment across all firms:

$$job\ creation = \sum_i \max\{E_{i,t} - E_{i,t-k}, 0\},$$

$$job\ destruction = \sum_i -\min\{E_{i,t} - E_{i,t-k}, 0\}.$$

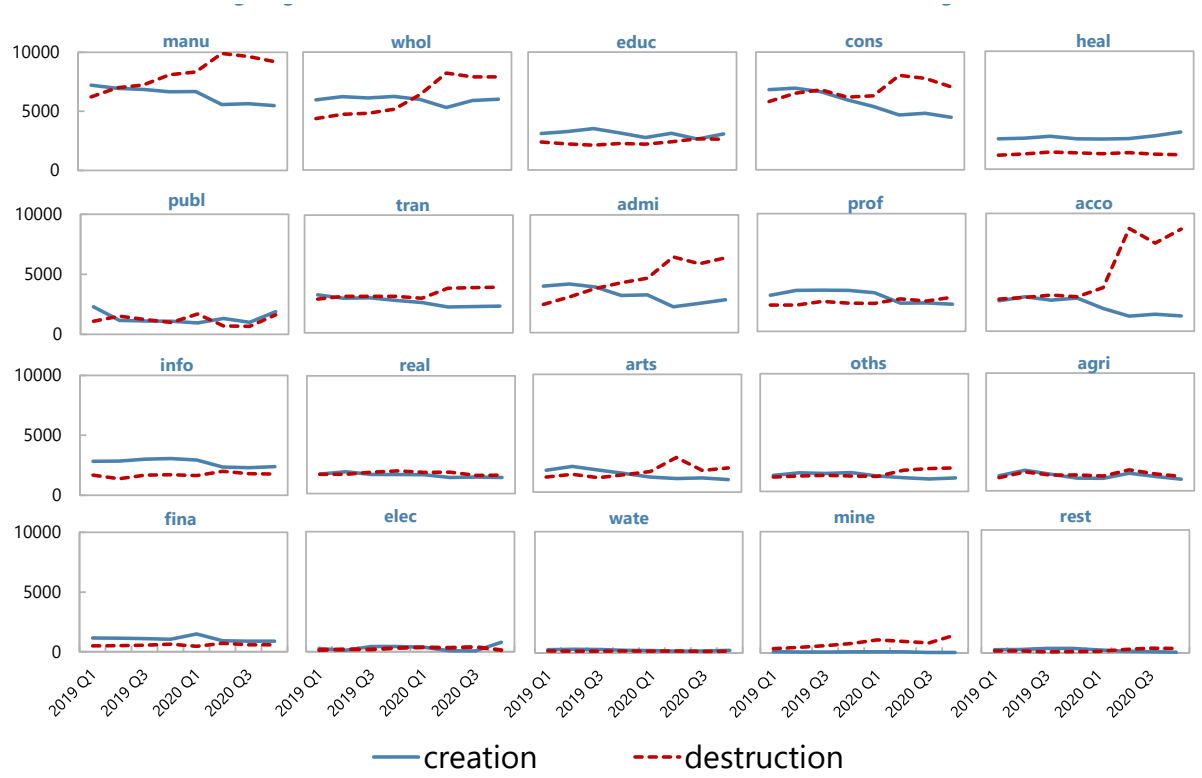
where $E_{i,t}$ is the number of employees for firm i at time t. One caveat is that the sectoral data and micro-data do not share the same methodologies, so the implications may not be fully consistent. For example, Eurostat uses full-time employee approach, while Estonia Tax and Customs Board does not.

13. During the COVID-19 crisis, more jobs were destructed, and fewer jobs were created. Pre-COVID-19 trends of declining job creation and increasing job destruction were accelerated by the COVID-19 crisis. From 2020Q1 to 2020Q2, job destruction increased by nearly 15,000 and job creation decreased by around 5,000. Job destruction decelerated in 2020Q3 in line with less stringent health restrictions and resumed in 2020Q4 as the health situation worsened. Job creation gradually recovered in 2020H2.



14. The sectoral analysis of job creation and destruction shows that a small number of sectors drive the aggregate behavior. The aggregate pattern of job destruction mirrors the behavior of hospitality and high-touch sectors, including accommodation and food services, administrative support, wholesale and retail trade, and arts and entertainment.[2] The increase in job destruction in 2020Q2 is also driven by the manufacturing, construction, and transportation sectors, although those sectors exhibited a less clear decline in job destruction in 2020Q3.

Figure 3. EE Net yoy Job Creation and Destruction by Sector



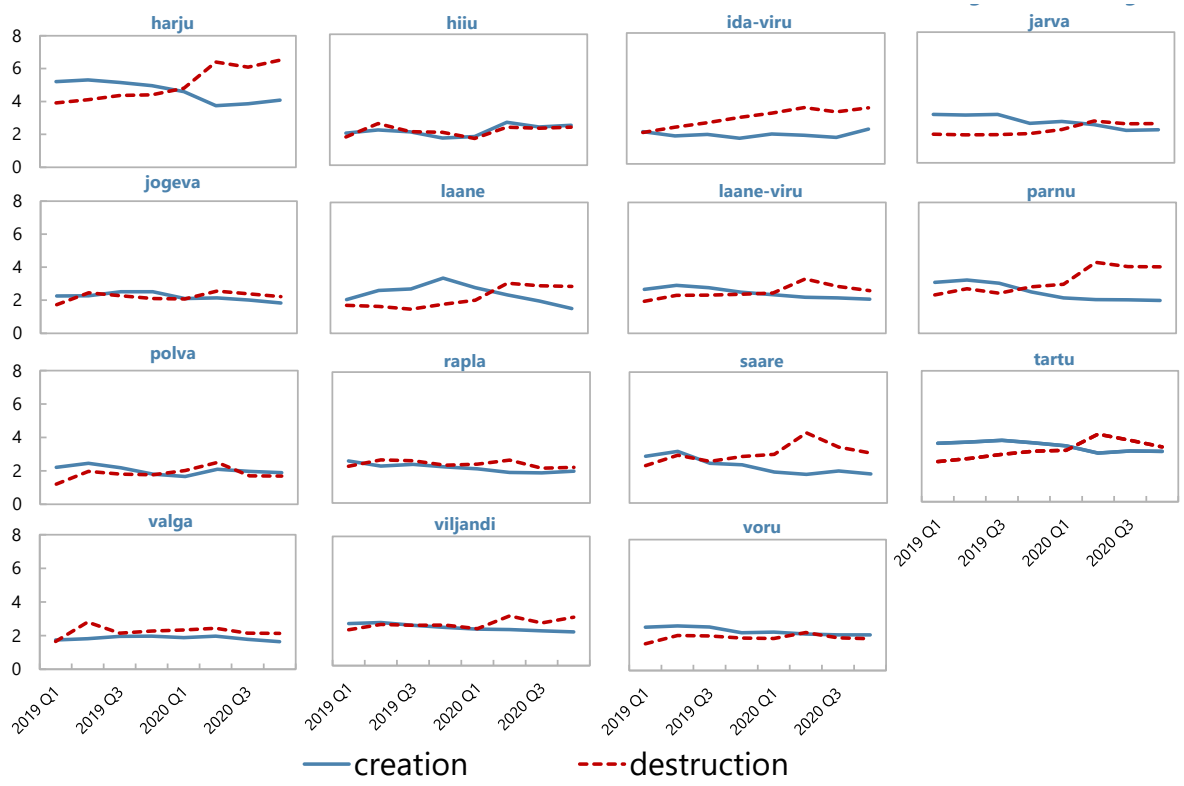
Source: Tax and Customs Board

15. The sectoral analysis also shows that not all sectors had more job destruction than creation, although the difference only partially compensates for job loss in impacted sectors. The health services and ICT sectors have steadily recorded higher job creation than destruction before and during the COVID-19 crisis. The magnitude, however, is not big enough to absorb all the lost jobs in other sectors. Re-entry is also constrained by the specialized skills required by the sectors with net job creation. Thus, to mitigate the risk of scarring in the labor market, recovery in affected sectors is needed.

[2] See Annex for Estonian Classification of Economic Activities. (EMTAK)

16. Harju county, where the capital city Tallinn is located, recorded the highest job destruction. Counties with prominent tourism and service sectors recorded the highest job destruction (Harju, Parnu, and Saare). The significant job destruction in the Ida-Viru counties may reflect not only the epidemiological situations but also the pre-crisis trend related to the shrinking oil-shale industry.

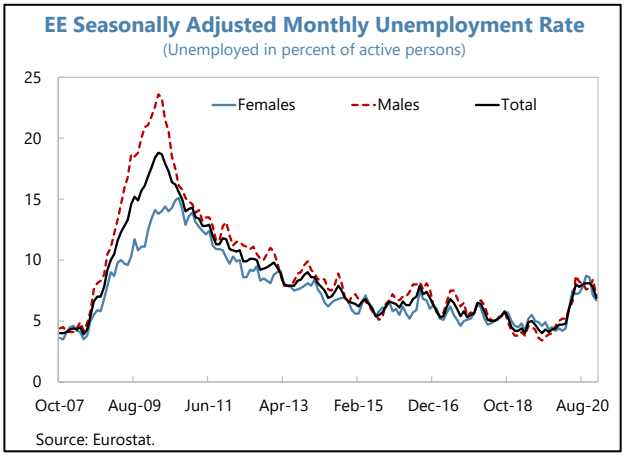
Figure 4. Job Creation and Destruction Per Population by County



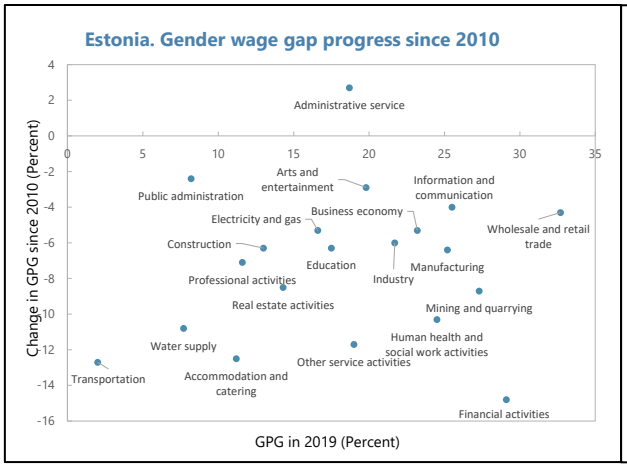
Sources: Tax and Customs Board

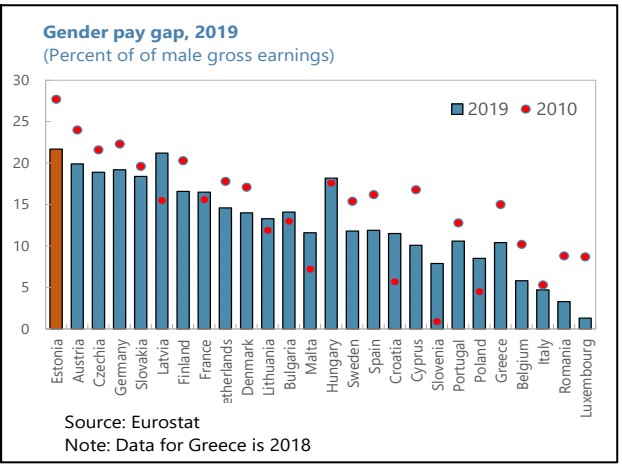
D. Social Groups

17. From the gender perspective, male and female unemployment increased at different timing, but the difference is not large. Female unemployment increased faster initially in 2020Q2, while male unemployment increased in 2020Q3. There is, however, no significant difference between males and females in aggregate. This contrasts with the GFC when the male unemployment rate increased more than the



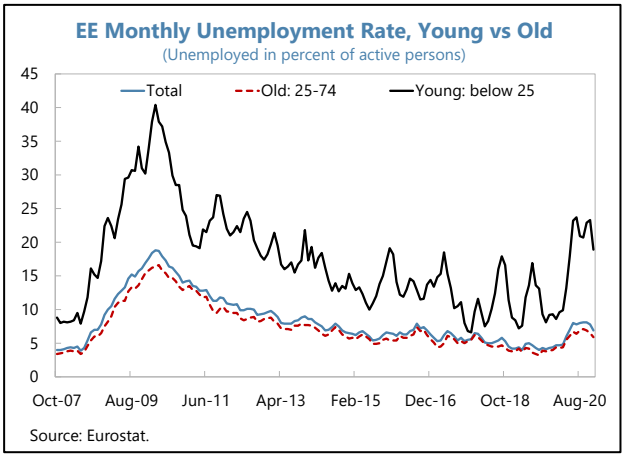
female. Regarding the long-term trend, the gender pay gap has declined in all sectors, although it remains among the highest in the EU.





Source: Eurostat
Note: Data for Greece is 2018

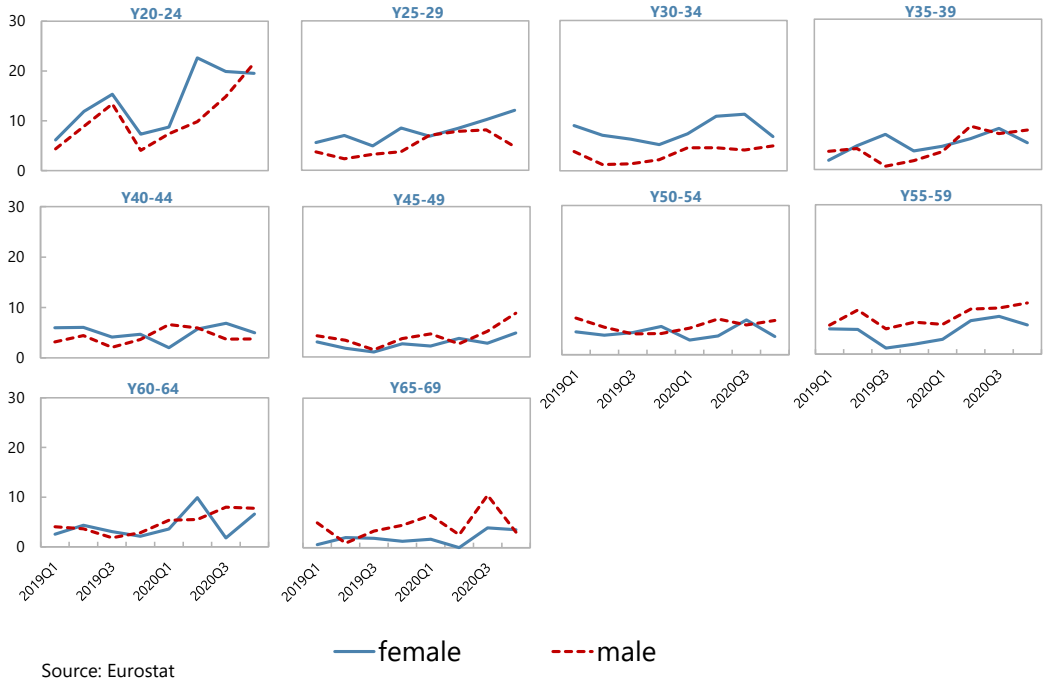
18. From the age perspective, younger cohorts were impacted disproportionately. The unemployment rate for workers younger than 25 years old is more volatile due to the smaller population, higher on average historically, and increased more during the COVID-19 crisis as was the case in GFC. This raises the concern of scarring since studies show that, if young people lose jobs in their early careers, the impact tends to last long (e.g. Mroz and Savage, 2006)



Source: Eurostat.

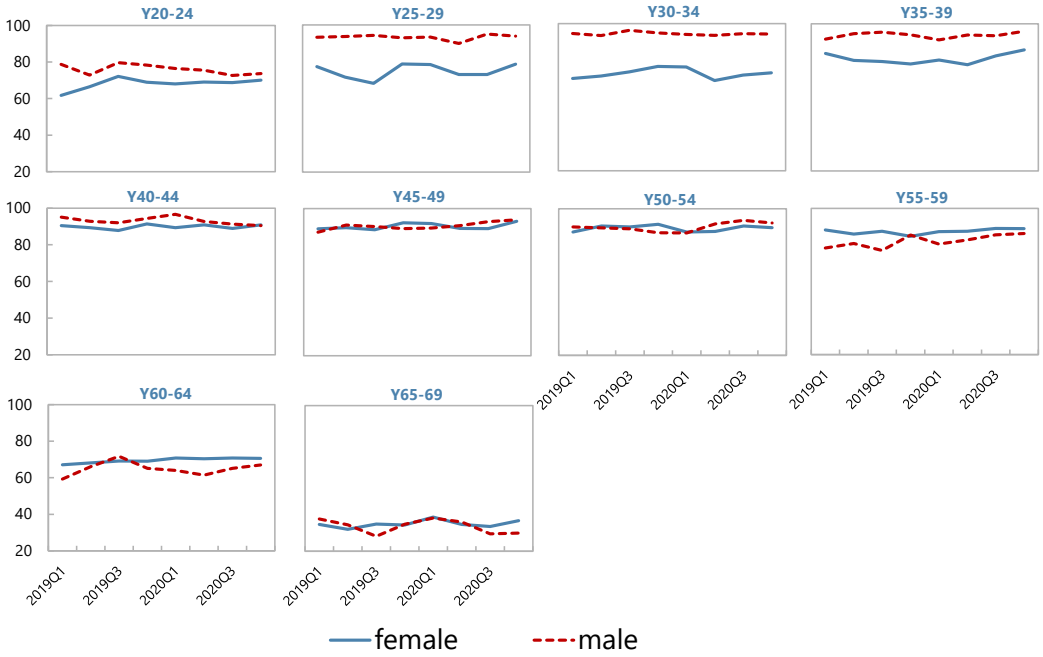
19. A more granular gender-age cut of the data shows that some gender differences exist for a subset of the age groups. Throughout 2020, female unemployment was higher for the 30–35 years old group, while male unemployment was higher for older age groups, 55–59 and 65–69 years old. The participation rate also declined for female 30–34 years old and male 65–60 years old groups.

Figure 5. EE Quarterly Unemployment Rate by Age and Gender



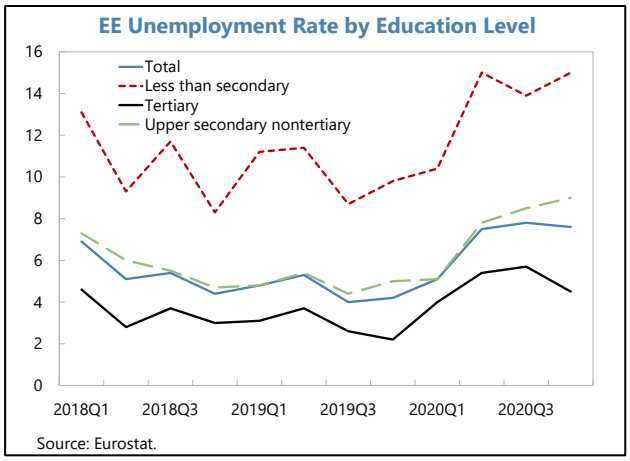
Source: Eurostat

Figure 6. EE Quarterly Participation Rate by Age and Gender



Source: Eurostat

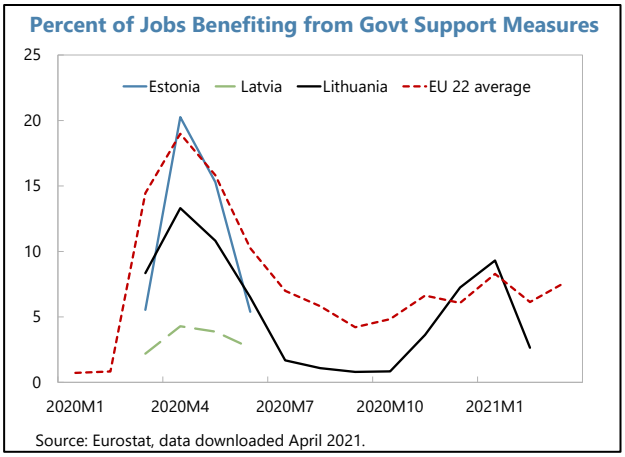
20. From the skills perspective, lower-skilled workers suffered most, and the higher-skilled recovered faster. Although the unemployment rate increased for all the groups in 2020Q2, the group with the lowest educational attainment exhibited the largest increase. The group with the highest educational attainment exhibited a decline in unemployment in 2020Q4. This behavior also raises the concern of scarring risks related to a slower recovery (and associated lower pay) of the group with low educational attainment, which could expand inequality.



E. Policies to Mitigate Labor Market Scarring Risks

21. Estonia's wage support scheme—designed to protect jobs—was flexibly deployed in 2020 and re-launched in 2021. The scheme helped maintain jobs and incomes and mitigated the situation of companies that were the most affected by the COVID-19 crisis. Support to workers and employers also helped limit large-scale redundancies, which are often associated with subsequent complex recruitment and costly training. Initially approved to cover March–May 2020, the wage compensation scheme was extended to end-June 2020 under more conservative qualification criteria.[3] The duration of time over which the qualifying employer must keep employees was also increased from one to three months. The wage support scheme exhibited a high uptake. In the wake of the second wave, the wage scheme was further deployed and made more targeted to the regional epicenters of the outbreak at end-2020. The worsening of the second wave in February 2021 prompted the government to re-introduce the wage support scheme as part of the March 2021 supplementary budget, and it was used until end-May 2021.

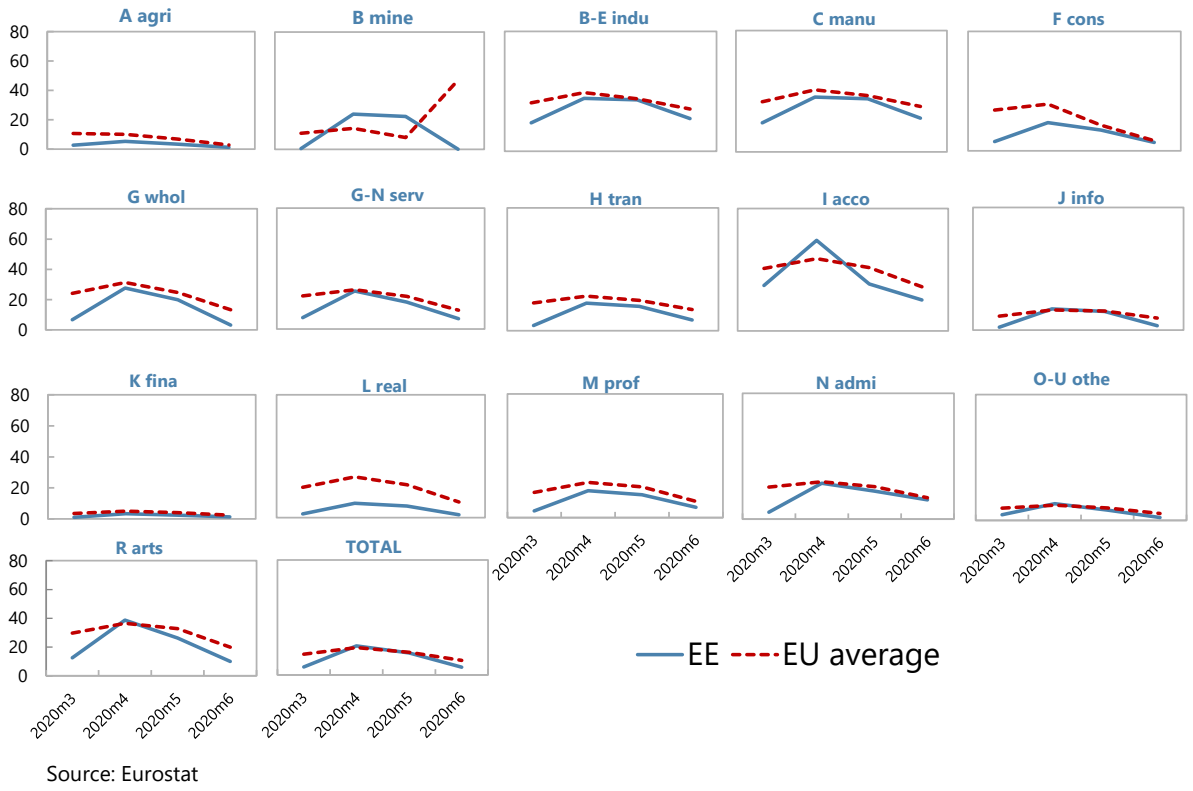
22. The use of government measures to support employment was associated with adjustment through the number of hours per worker. The government employment measures supported more jobs during April 2020 than other EU countries. The jobs benefiting from the government employment support measures reached 20 percent of the total in April 2020, higher than other Baltic



[3] The turnover decline condition was revised up from the initial 30 to 50 percent decline. In addition, the employer was required to have reduced the staff or workload of workers by one-half (versus initially 30 percent). The maximum compensation and replacement rate were reduced, respectively from EUR 1,000 to EUR 800 and from 70 to 50 percent.

countries and the average of 22 EU countries. By helping employers keep workers on their payroll, the wage support scheme helped support an adjustment through the number of hours worked. The proportion of jobs benefiting from the wage support declined in May and June 2020, in line with an increase in the unemployment rate and the expiration of the wage subsidies. The labor market started to adjust through the employment channel in 2020H2 as discussed previously. In the EU average, where wage support measure remained active in 2020H2, the adjustment through the number of hours worked continued and played a greater role.

Figure 7. EE Percent of Jobs Benefiting from Government Support Measures



Source: Eurostat

23. The wage support scheme reached the hardest-hit sectors and helped mitigate the distributional effects. In April 2020, the number of jobs benefiting from government support measures in the accommodation and food services sector reached nearly 80 percent of the total. The proportion in the arts and entertainment sector was nearly 40 percent. The sectors that were hit relatively less, including financial services, recorded a lower number. In this sense, the policy measures that were intended to temporarily save the jobs and protect the most affected groups were relatively successful and well-targeted. Furthermore, Koppel and Laurimae (2021) found that the wage subsidy helped: (i) retain 65,000 jobs that would have otherwise been lost due to COVID-19; (ii) mitigated the impact of the pandemic on relative poverty, with the poverty rate of the population only increasing by 0.3 percentage points (ppts) compared to a 4 ppts increase in

the counterfactual;[4] and (iii) reduced inequality compared to their baseline, as lower-income workers benefited the most from wage subsidies.

24. The support measures should increasingly target identified vulnerable groups and should continue to be used until the pandemic abates markedly. As discussed in IMF (2021), job retention measures should be prioritized to help (i) avoid socially costly unemployment spells and dampen the effects on vulnerable groups; and (ii) mitigate deeper and more protracted employment deterioration from the pandemic.[5] Labor market policies should be guided by careful monitoring of the pandemic (including the rollout of vaccines) and judgment of the economy's ability to weather a reduction in support. Policies could be designed to further target the most affected worker groups—for example, increasing wage subsidies for youth or lower-skilled workers—to reduce the unequal impact of the shock. Social protection should remain easily accessible to vulnerable groups until job prospects are restored. The government should also advance the agenda to enhance the eligibility and flexibility of social safety nets, including the coverage and cyclicality-dependency of the unemployment benefits.

25. Going forward, work reallocation policies are needed as the economy recovers. From the previous analysis, the risks of labor market scarring might be sizable. The expected shift to a more digital and greener economy also calls for policies promoting the cross-sectoral reallocation of workers. Policies should facilitate job creation and shift to targeted measures to support the re-entry of groups most affected while limiting unproductive matches. As OECD (2021) reports, the Estonian active labor market policy (ALMP) system responds well to labor market needs and changes in needs, but there is still scope for improvement, including the outreach and training measures for the lower-skilled. The shortage of skilled labor, reported in EIB (2020), calls for further training and reallocation policies. The government could further strengthen investments in human capital to boost productivity to make switching occupations easier. Other reallocation policies, including hiring incentives, can also be used where cost-effective.

[4] The poverty rate remained highest in the accommodation and food service sector, where relative poverty increased by 0.7 percentage points compared to the situation without COVID-19.

[5] Examples of retention policies across Europe include the Kurzarbeit scheme in Germany and the Expediente de Regulación Temporal de Empleo program in Spain, or revisions to increase eligibility for wage subsidies of the Cassa Integrazione Guadagni program in Italy.

F. Conclusion

26. This paper has analyzed how Estonia's labor market adjusted during the COVID-19 crisis in 2020, the vulnerable groups, and the policies that could help mitigate the risks of scarring. The analysis can be summarized in the following five bullet points.

- Estonia navigated the crisis with a smaller drop in GDP per capita but a larger increase in the unemployment rate than the EU average.
- The channel of adjustment has shifted from hours per worker to employment since 2020Q2, but the pass-through from the decline in output to compensation was limited, although it was heterogeneous across sectors.
- Employment loss was salient in some sectors, including accommodation and food services. From the social perspective, young cohorts and less educated suffered most, raising the concerns of expanding the inequality and scarring risks.
- Wage support and social safety nets helped mitigate the distributional impact. Retention policies targeted to vulnerable groups should be maintained to ease the unemployment dynamics until recovery is entrenched.
- As the economy recovers, more active use of reallocation policies would facilitate reallocation.

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Annex I. Labels

NACE sector label

nace_r2	nace_r2_label	sector_label
A	Agriculture, forestry and fishing	A agri
B-E	Industry (except construction)	B-E indu
F	Construction	F cons
G-I	Wholesale and retail trade, transport, accommodation and food service activities	G-I whol
J	Information and communication	J info
K	Financial and insurance activities	K fina
L	Real estate activities	L real
M_N	Professional, scientific and technical activities; administrative and support service activities	M_N prof
O-Q	Public administration, defence, education, human health and social work activities	O-Q publ
R-U	Arts, entertainment and recreation; other service activities; activities of household and extra-territorial organizations and bodies	R-U arts
TOTAL	Total - all NACE activities	ALL

Estonia Classification of Economic Activities (EMTAK)

sector_label	sector
acco	Accommodation and food service activities
admi	Administrative and support service activities
agri	Agriculture, forestry, and fishing
arts	Arts, entertainment, and recreation
cons	Construction
educ	Education
elec	Electricity, gas, steam, and air conditioning supply
exte	Activities of extraterritorial organizations and bodies
fina	Financial and insurance activities
heal	Human health and social work activities
hous	Activities of households as employers; undifferentiated goods and services producing activities for households for own
info	Information and communication
manu	Manufacturing
mine	Mining and quarrying
oths	Other service activities
prof	Professional, scientific and technical activities
publ	Public administration and defence; compulsory social security
real	Real estate activities
tran	Transportation and storage
wate	Water supply; sewerage, waste management and remediation activities
whol	Wholesale and retail trade; repair of motor vehicles and motorcycles