

# Europe and Central Asia Economic Update, Spring 2021 **Data, Digitalization, and Governance**

Michael Lokshin

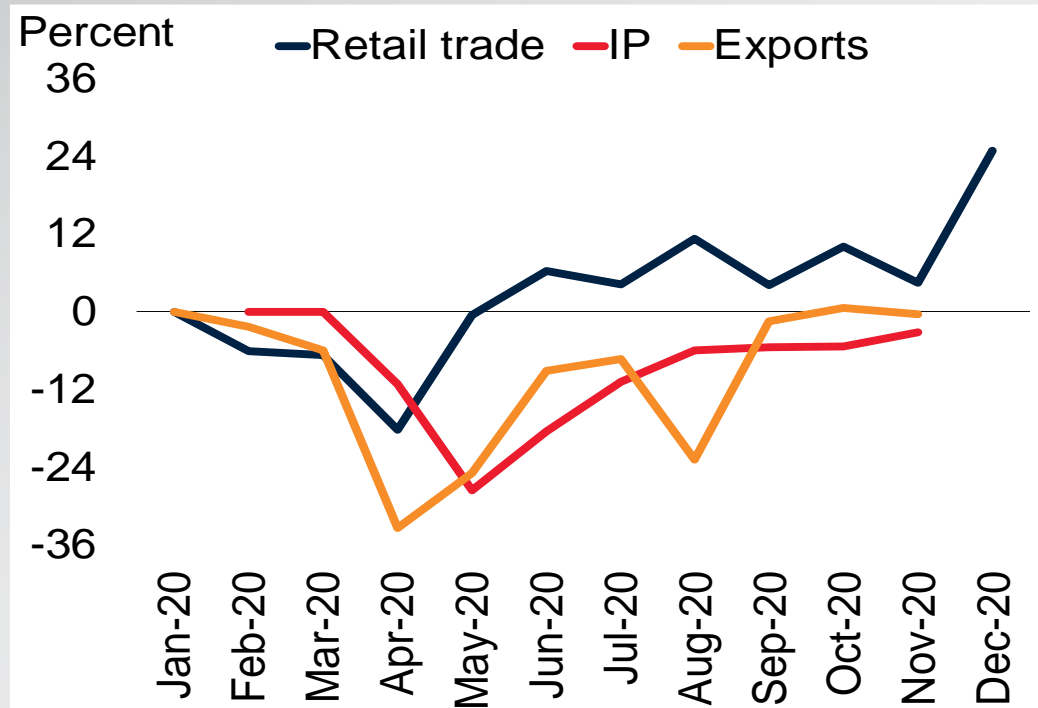
Lead Economist, ECACE



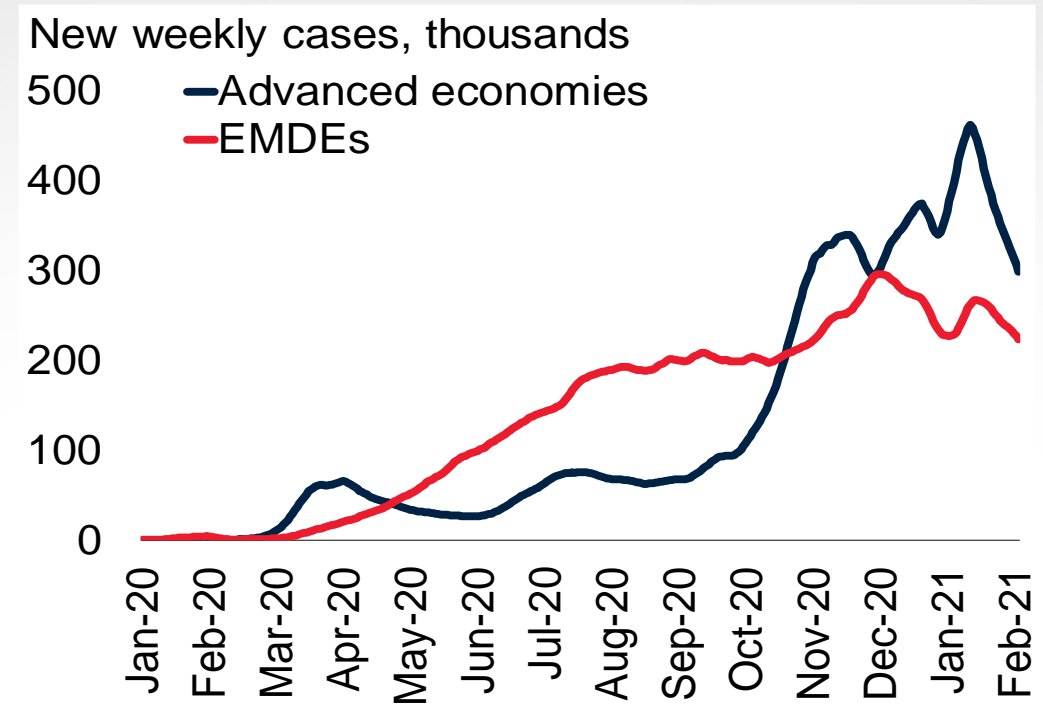
# Economic Outlook

## *Rebounding Activity Despite Continuing Pandemic*

### Economic Activity in the Euro Area



### Evolution of the pandemic



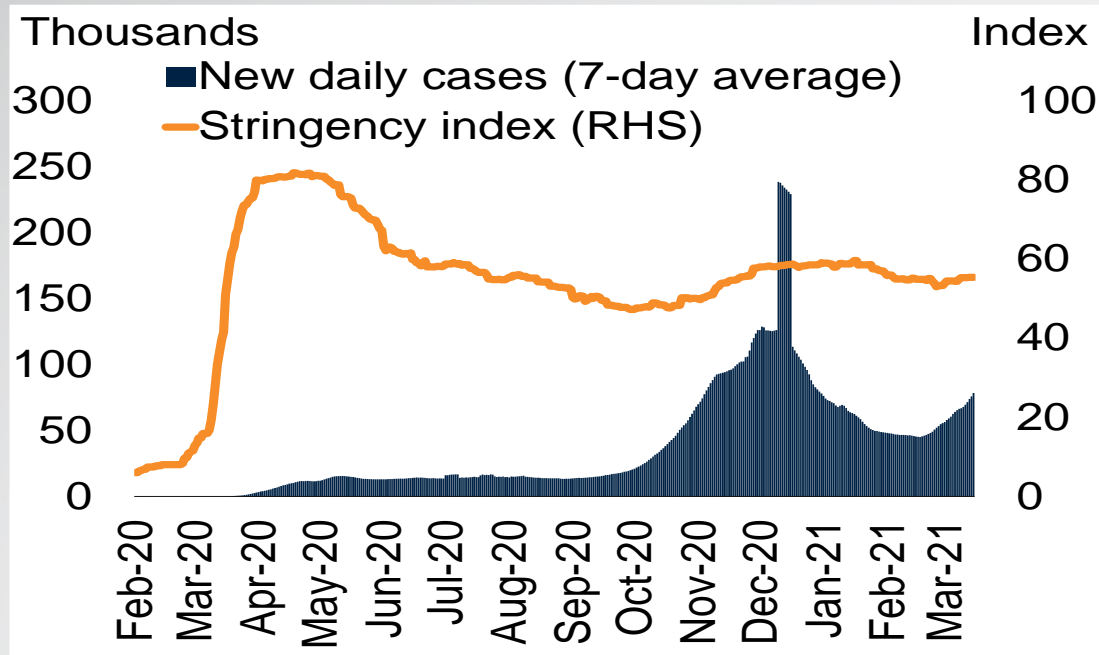
Sources: European Commission, World Trade Organization; Our World in Data; World Bank.

Left panel. IP = industrial production. Figure shows percentage changes since January 2020. Last observation is December 2020 for the retail trade and November 2020 for the other indicators. Right Panel. Figure shows seven-day moving average of the daily new COVID-19 cases. Last observation is February 4, 2021. Sample consists of 36 advanced economies and 149 EMDEs.

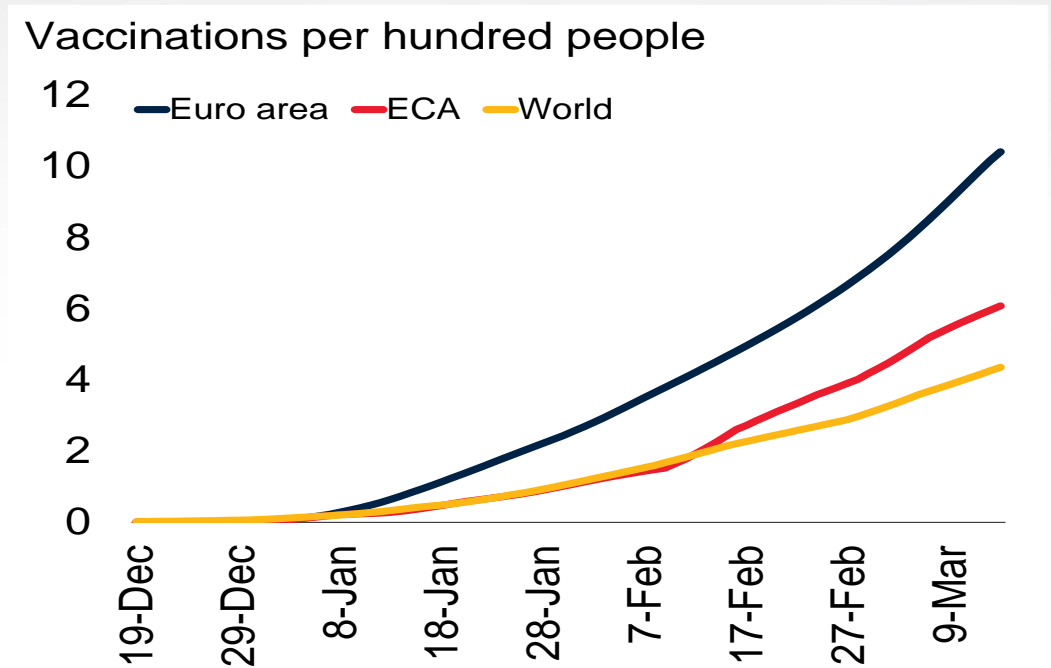
# COVID-19 in ECA

## Daily New Cases Increase Again; Vaccinations Underway

**Daily confirmed new COVID-19 cases and mitigation measures in ECA**  
(Thousands of cases) (Index)



**Number of COVID-19 vaccine doses administered**  
(Per hundred people)



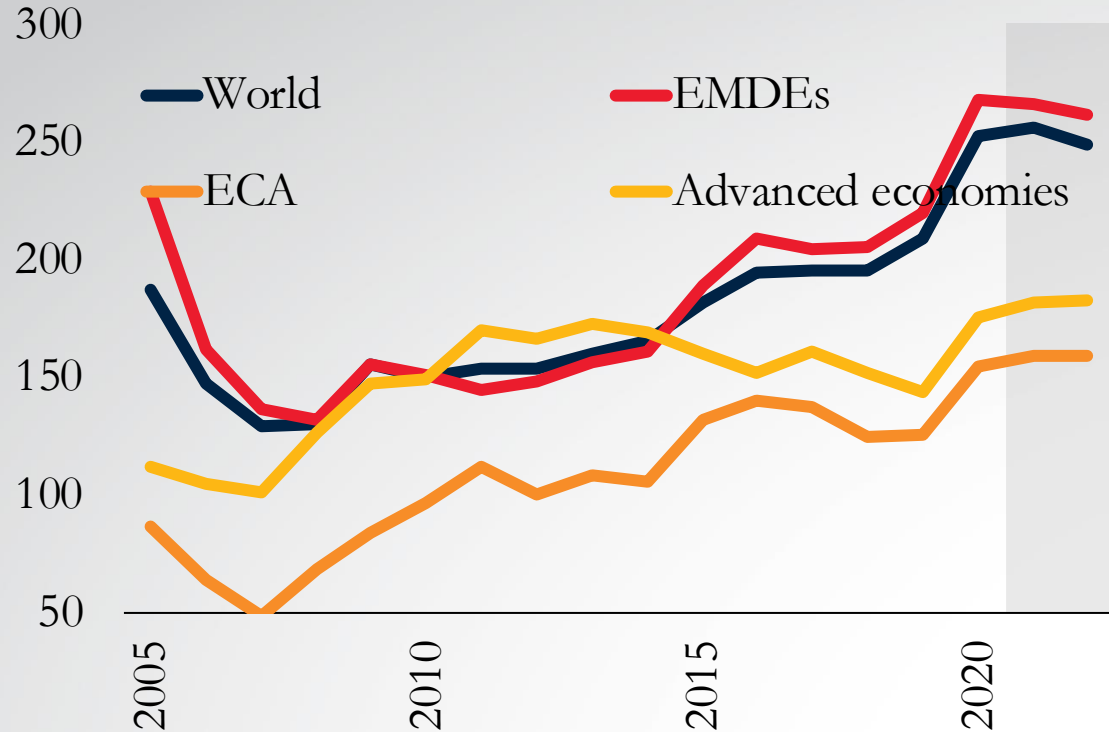
Source: Our World in Data, World Bank.

Left Panel. Figure shows 7-day moving average of new cases by date of case reporting. Sample includes 23 ECA economies. “Stringency” refers to daily number of measures of the following policy actions: School closings, workplace closings, cancellation of public events and public transport, restrictions to gatherings, restrictions to international and domestic travel, and stay-at-home requirements. Last observation is March 21st, 2021. Right Panel. Figure shows unweighted regional average of countries, percentage of population who received at least one vaccine dose. Last observation is March 9, 2021.

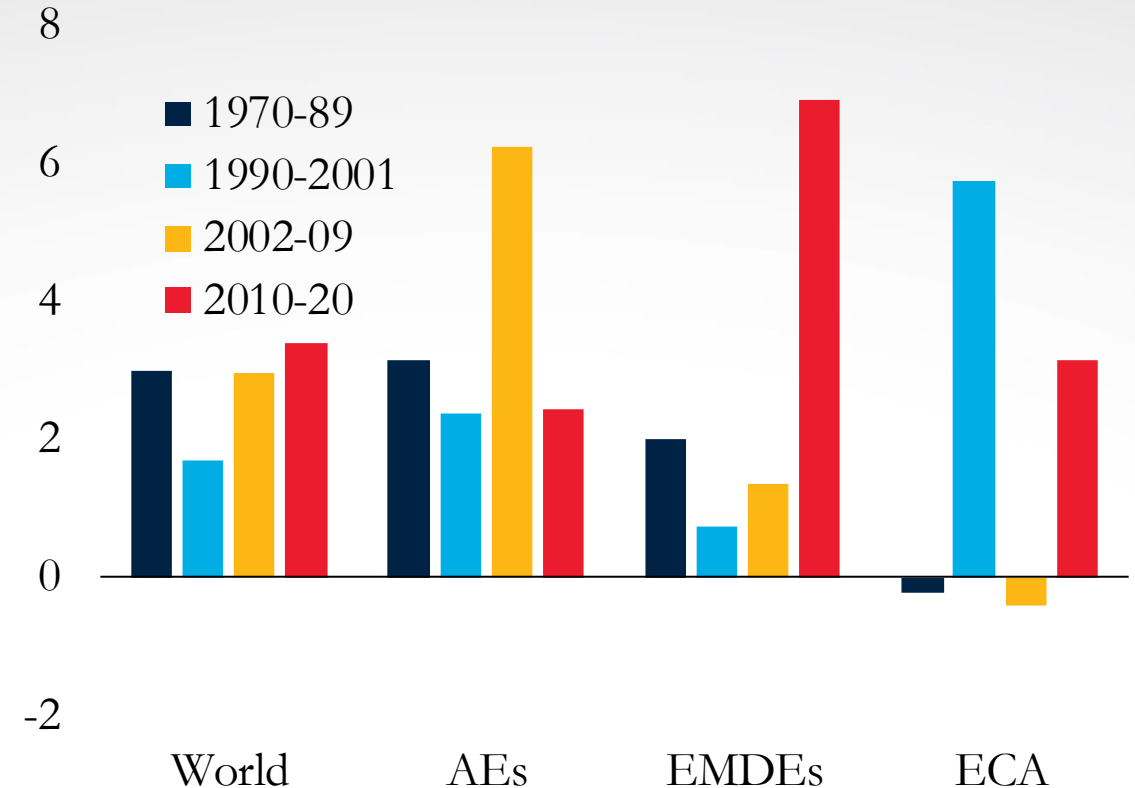
# Concerns about Deficit Financing

*Government debt has been increasing rapidly, including in ECA*

**Government debt**  
*(Percent of government revenue)*



**Average annual change in total debt**  
*(Percentage points of GDP)*



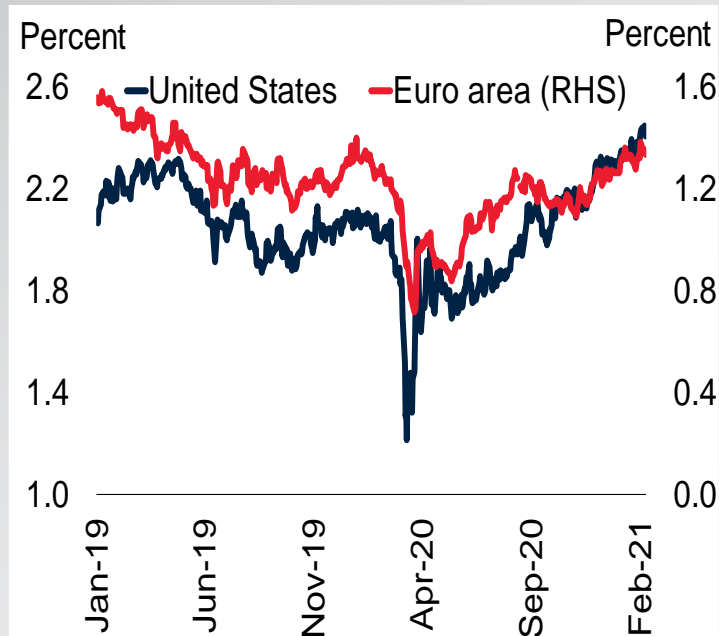
Sources: Bank for International Settlements; International Monetary Fund; World Bank.

Left Panel. Aggregates are calculated using current GDP in U.S. dollars as a weight, based on data for up to 182 countries, including up to 145 EMDEs. Shaded area refers to forecasts for 2021-22; data for 2020 are estimates. Right Panel. Average annual change calculated as changes in total debt-to-GDP ratios over the denoted periods, divided by the number of years in each of them. Total debt is defined as a sum of government and private debt. Aggregates are calculated using current GDP in U.S. dollars as a weight. Total debt in 2020 is obtained under the assumption that it changes at the same pace as government debt in respective country groups.

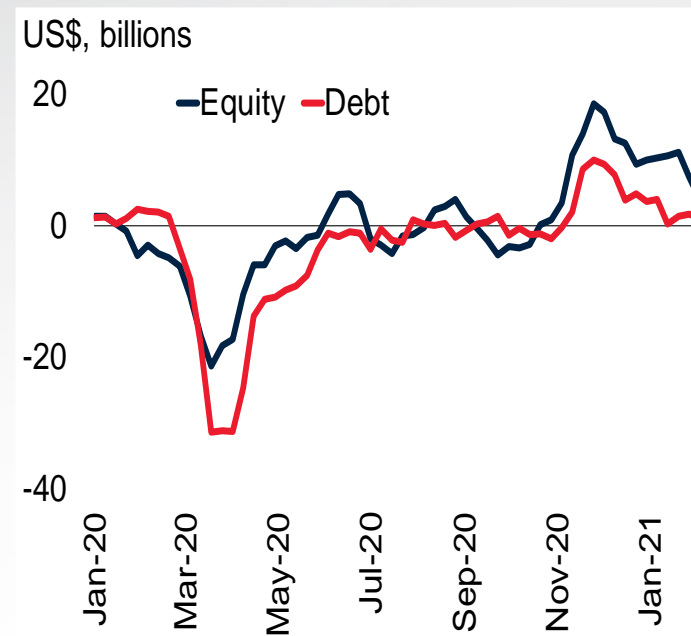
# Financial Concerns

*Overall benign with the support of central banks, but fragilities remain*

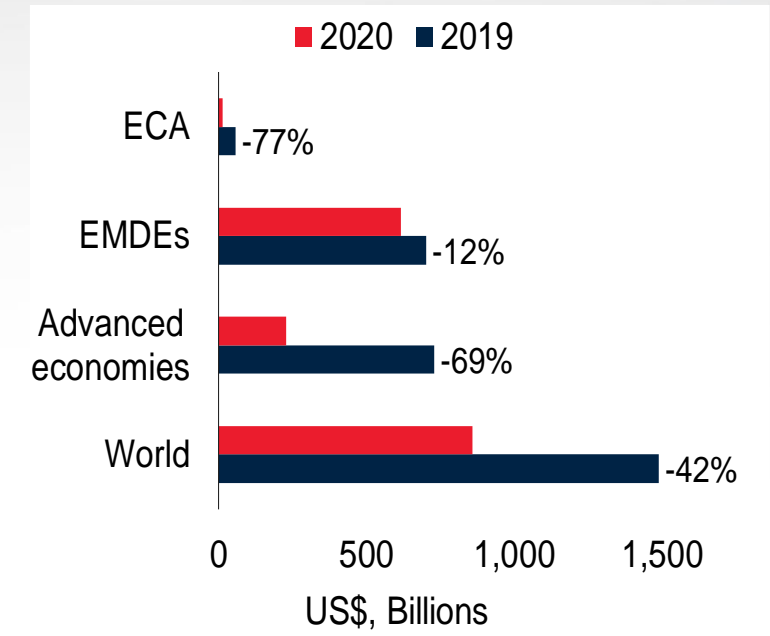
### Inflation Pressures



### EMDE Portfolio flows



### FDI inflows by region, 2019 and 2020



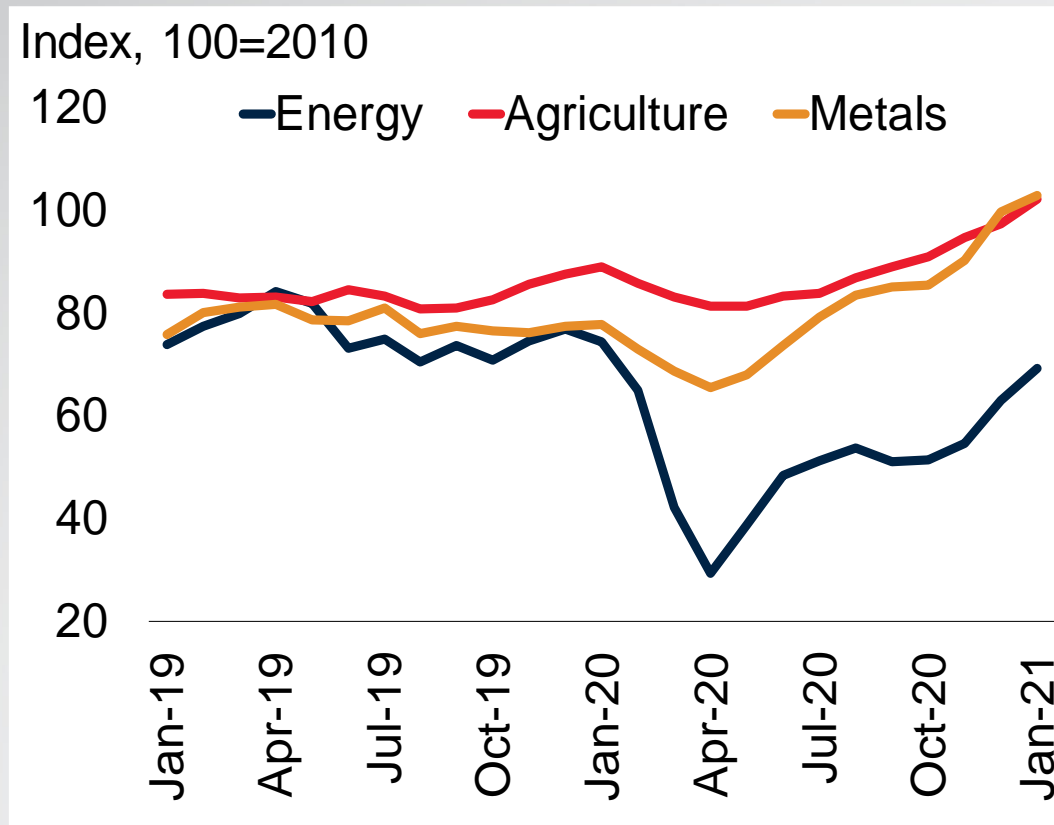
Sources: European Central Bank, International Monetary Fund; World Bank.

Left Panel. Figure shows seven-year inflation swap rates for the euro area, and the United States. Last observation is February 10, 2021. Middle Panel. EMDE portfolio flows, last observation is February 5, 2021. Right Panel. Foreign direct investment flows in 2019 and 2020 in billions of US dollars.

# Commodity Prices

## *Most Commodity Prices Rebounded in the second half of 2020*

Nominal commodity prices (Index, 100=2014)



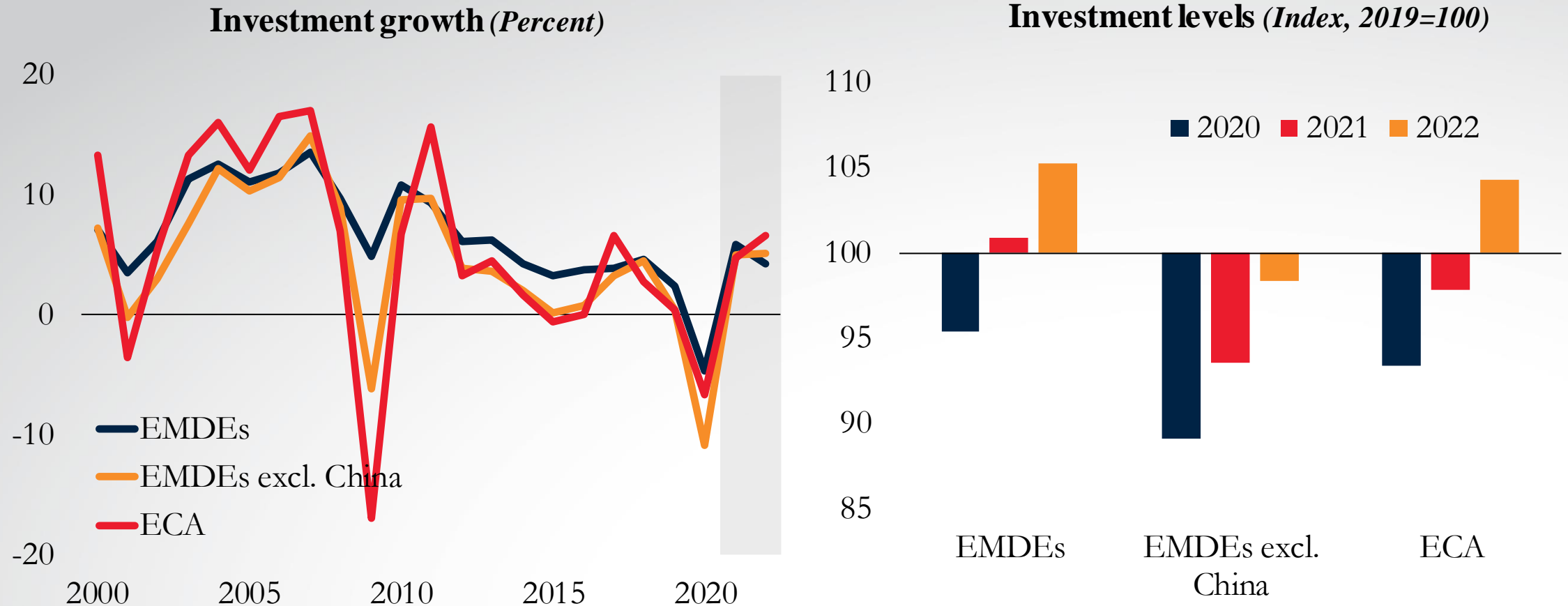
- However, the pickup in energy prices lagged the broader recovery in commodity prices due to the prolonged impact of the pandemic on global demand
- Nevertheless, energy prices experienced a robust rebound in early 2021. Brent crude rose above \$60/bbl in February for the first time in a year.
- Metals and agriculture prices have been surging in large part due to robust demand from China.

Sources: Bloomberg, World Bank.

Dots in shared area refer to price forecasts in 2020 and 2021. Last observation is 2020Q2, which includes data through April 2020.

# Weakness in Investment Continues

*Investment Growth Collapsed after Persistent Decline Prior to COVID-19*



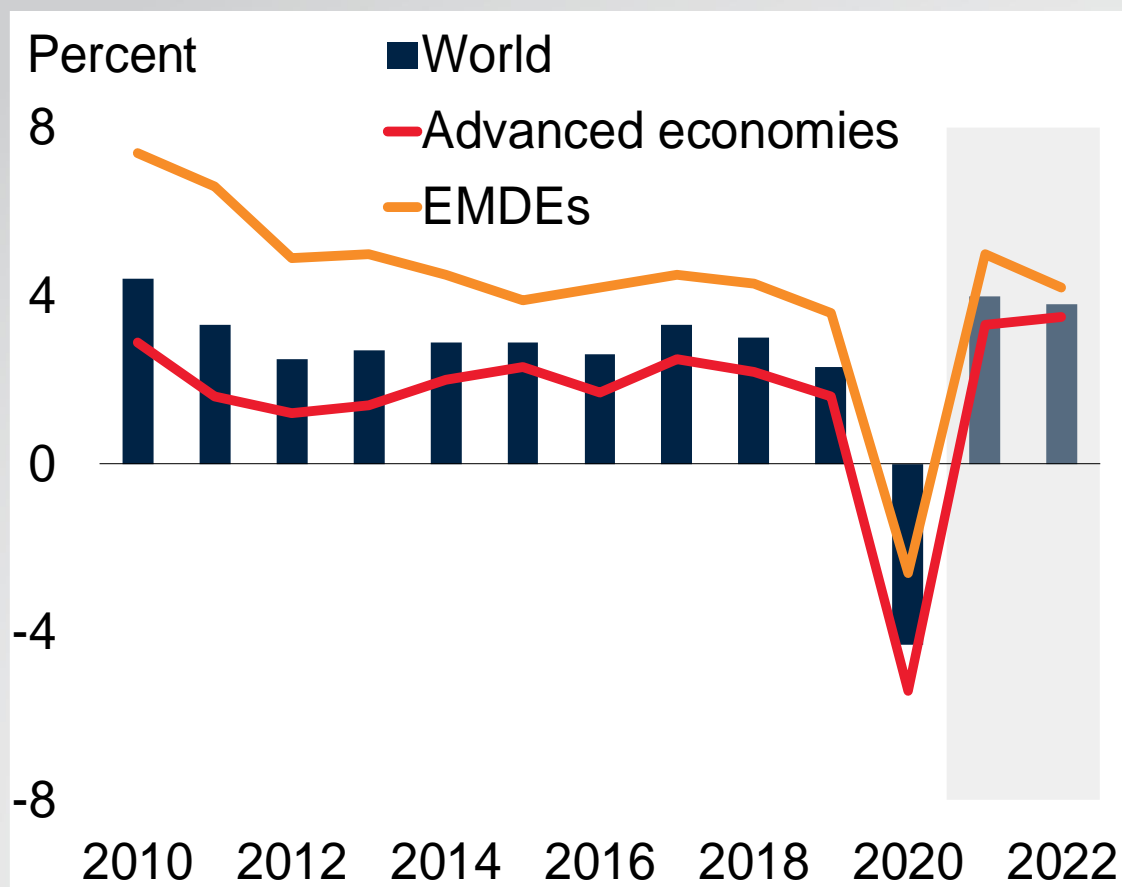
Sources: Haver Analytics; World Bank.

Note: Annual investment growth rates for 2020 are estimates and for 2021-22 are forecasts (shaded areas). Investment refers to gross fixed capital formation. Aggregate growth is calculated with real investment at 2010 prices and market exchange rates as weights.

# Global Outlook

## *Growth will Rebound but Recovery is Subdued*

Annual GDP growth (Percent)



After 4.3% global contraction in 2020, there is expected to be around 4% rebound in 2021 and 2022 (*but global GDP/cap will remain over 4% lower than pre-pandemic projections even in 2022*)

However, recovery is subject to downside risks and can be much lower due to

- Intensifying pandemic due to variants or delayed vaccine deployment
- Limited policy space to respond to shocks and support recovery
- Much greater output contractions in major economies
- Weaker external demand from major economies
- Renewed global oil demand weakness
- High debt; wide-spread defaults; financial crises

# ECA Outlook

After the contraction in 2020, growth will rebound in 2021-22 as the effects of the pandemic gradually wane and the recovery in trade and investment continues. However per capita GDP is still expected to remain almost 3% below pre-pandemic trends by 2022.

## Real GDP growth (percent)

				Percentage point change from January 2021		
	2020e	2021f	2022f	2020e	2021f	2022f
<b>EMDE ECA</b>	<b>-2.0</b>	<b>3.6</b>	<b>3.8</b>	<b>0.9</b>	<b>0.3</b>	<b>-0.1</b>
EMDE ECA excl. Turkey	-3.2	3.2	3.6	0.8	0.3	0.1
Central Europe and Baltic States	-3.6	3.6	4.1	0.7	0.0	-0.1
Western Balkans	-3.6	4.4	3.7	0.9	0.9	0.0
Eastern Europe	-3.3	1.9	2.7	1.1	0.6	0.2
South Caucasus	-5.2	3.1	4.2	0.5	0.6	-0.6
Central Asia	-1.5	3.7	4.1	0.2	0.7	0.3
Russia	-3.1	2.9	3.2	0.9	0.3	0.2
Turkey	1.8	5.0	4.5	1.3	0.5	-0.5
Poland	-2.7	3.3	4.2	0.7	-0.2	-0.1

# Risks to ECA Outlook

- A resurgence in the pandemic, delayed vaccine deployment, the need to introduce further restrictive measures due to persistently high cases
- Sharper than expected contraction to ECA's largest trading partner—the Euro Area—as well as weaker than expected growth in large economies
- Fiscal constraints to further support, sudden reassessment of investor sentiment given increases in government debt, reduced foreign exchange reserves
- COVID crisis turning into banking crisis—corporate defaults, increases in NPLs, banking sector troubles, credit crunch
- Escalation of geopolitical tensions and social unrest
- Longer term, lasting damage of the pandemic on consumer and investor confidence; consumption behavior, investment; human capital; women's empowerment and labor force participation

# Long-Term Challenges and Priorities

From our Regional Strategy:

- Boosting Human Capital and Reversing COVID-19 Damage
- Strengthening Institutions and Improving **Governance**
- Enabling Markets and Fostering Competition
- Facilitating Green Transition and Recovery

# Why Focus on Governance?

Good governance, understood as a rule-abiding institutional environment with effective governments and a civil society that makes them accountable, is fundamentally associated with better development outcomes.

It is particularly important in ECA region since historically governments play an important role – Government expenditures/gdp, employment share

Government's role is also likely to increase in ECA as societies in the region are aging and risk-averse, two features which increase demand for government intervention.

This is also particularly true at this point since COVID-19 has shown the important role that governments and their interaction with citizens play in modern societies.

Strengthening state capacity and improving citizen trust and engagement should, then, be a key priority for governments across ECA.

# Data and Digitalization for improved governance

Among the several ways in which governance can be improved, harnessing the “data revolution” and broad digitalization emerge as promising strategies.

Digital technology offers the potential to increase efficiency, transparency, responsiveness, and citizen trust, directly impacting government quality.

The decline in the cost of producing, analyzing and aggregating data opens the possibility to adopt and adapt data systems within government management and organizational models.

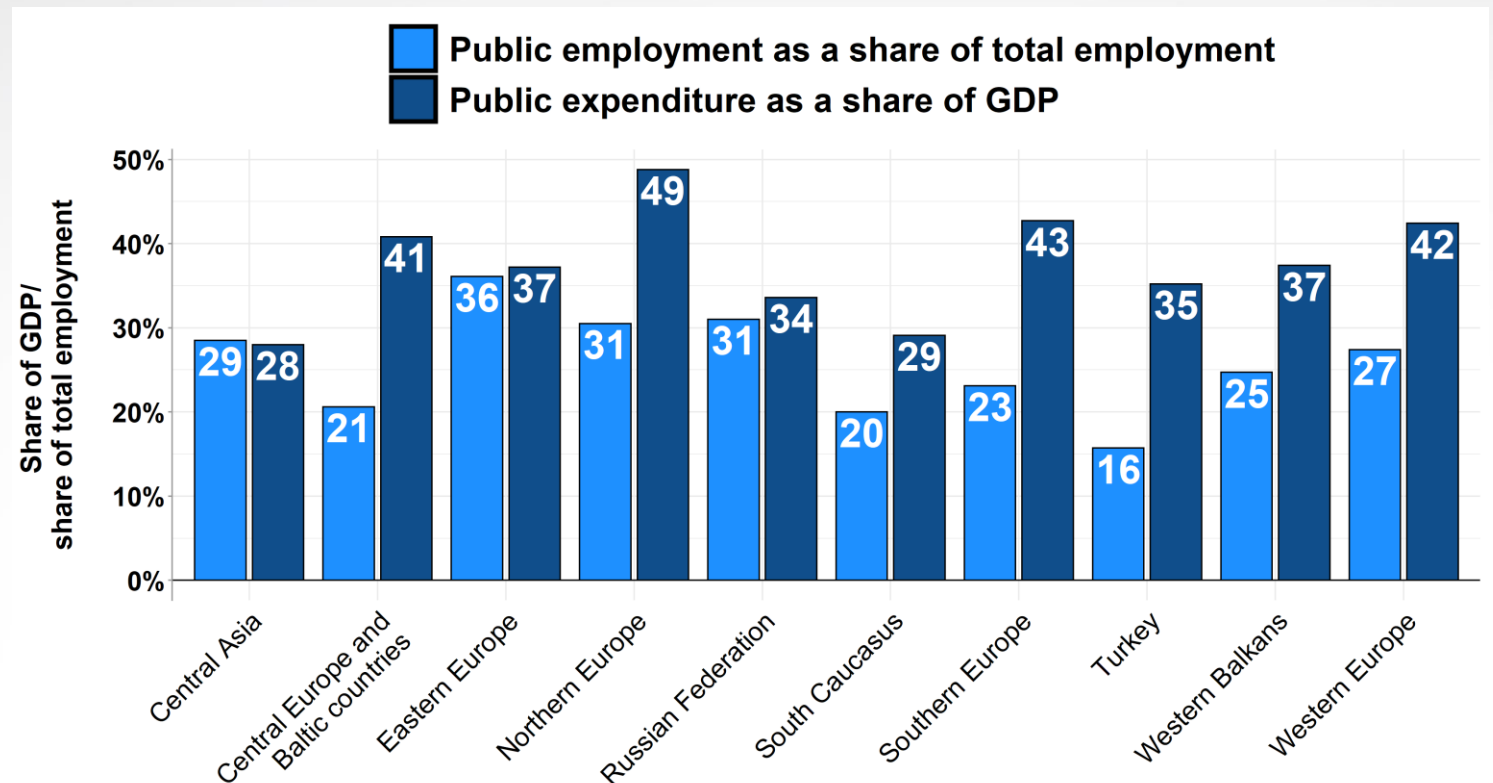
Digitalization and the data revolution also create an opportunity for civil society organizations and individual citizens to engage with and improve government accountability.

# This ECA Economic Update

- I. Illustrates the current role of public sector and state of governance in the region
  - The size and composition of government and public employment
  - The overall quality of governance and trends
- II. Presents the opportunities that data and digitalization provide for improving state capacity, and assesses where ECA countries stand in this regard.
- III. Discusses how a better relationship between government and civil society can develop thanks to data and digitalization, and related challenges
- IV. Provides policy recommendations on the way forward in capitalizing digitalization and the data revolution for improving governance in ECA

# I. Government in ECA

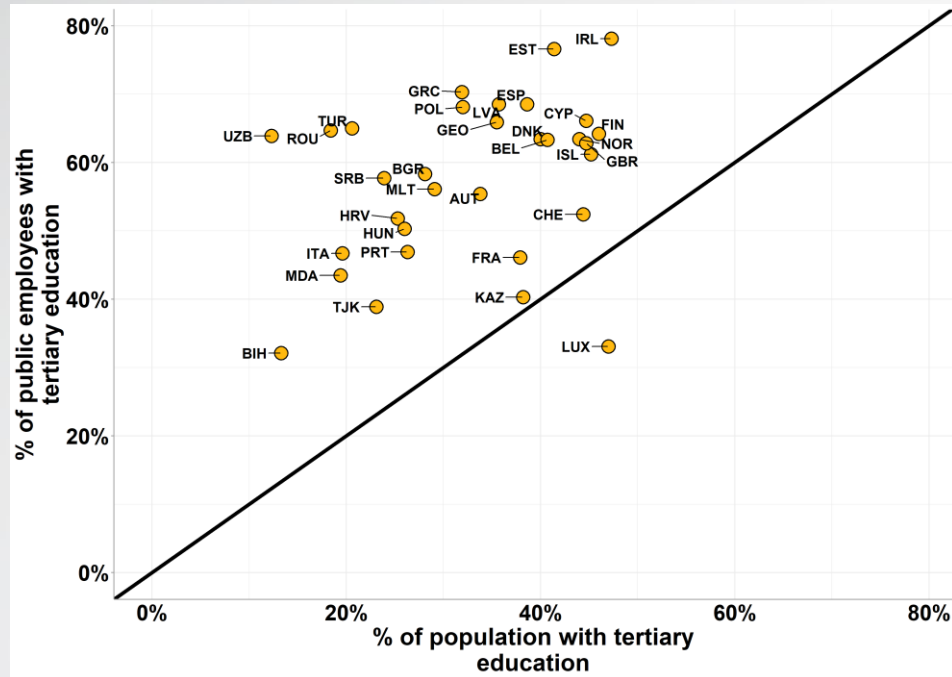
- In the ECA region, government expenditures make up 39 percent of the GDP, relative to 33 percent worldwide. This is partly expected as richer countries usually have bigger governments and as many countries are still transitioning to market-based economies.
- The public sector in ECA employs 86 million people or 25.3 percent of total employment, significantly exceeding the global average of 16 percent.



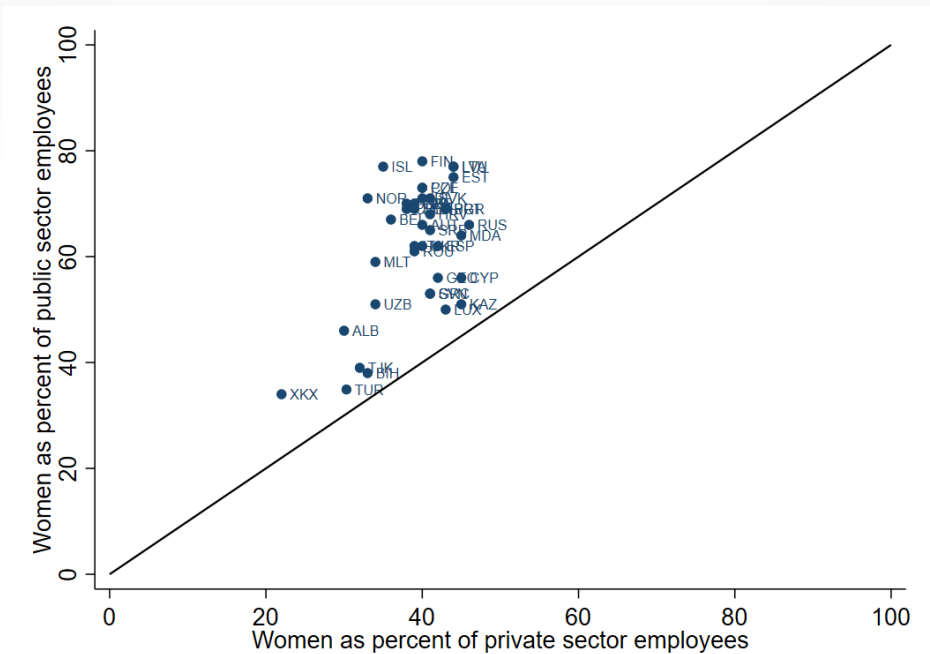
# Public employment in ECA

- The public sector also employs more tertiary-educated individuals and more women than the rest of the economy

Tertiary educated individuals, public sector vs. general population



Women as % of employees, public sector vs. private sector

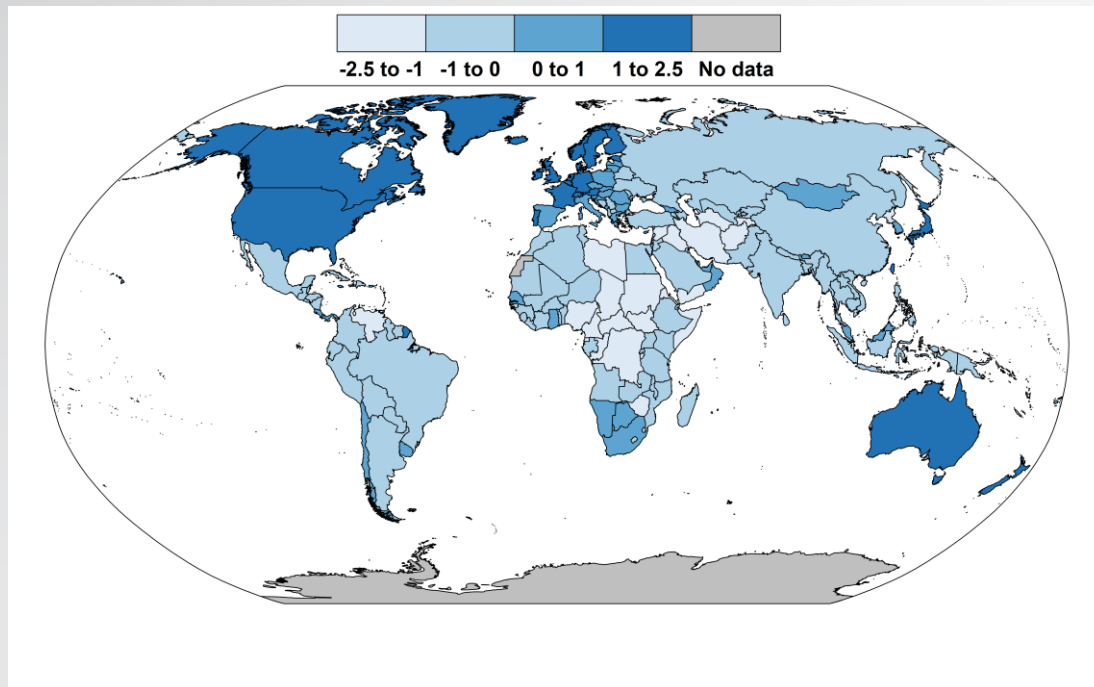


# And governments are not likely to retreat soon...

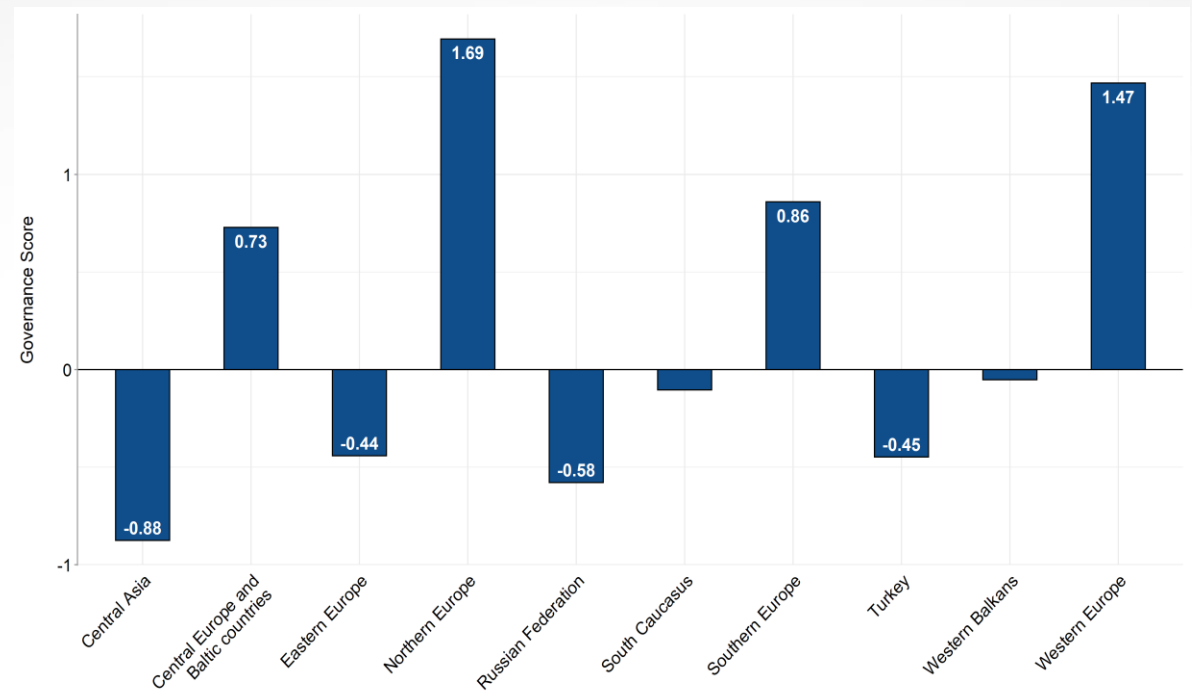
- The aging population of ECA requires the expansion of public services such as healthcare, disability, and long-term care. These services are more labor-intensive and expensive compared to other government-provided services. As a result, the state tends to be larger.
- The support for state ownership is growing. The share of the population in advanced economies who favor the expansion of public ownership increased from 27 to 33 percent in the last years; about 45 percent of citizens in the transition countries support the expansion of the public property.
- This is partly due to rising inequality and the increased demand for redistribution, since globalization and technological change has been reducing job security and incomes for the most vulnerable.
- The COVID-19 crisis, as with many previous major crises, also increased people's risk aversion and re-enforced the existing citizens' desire for the state to socialize the individual risks.
- Countries are already witnessing significant increases in government's role in public health systems, education, social protection etc. as they deal with the pandemic

# Quality of governance varies across the region

- ECA is a region with the greatest disparity in quality of governance according to WGI –there is significant sub-regional variability.



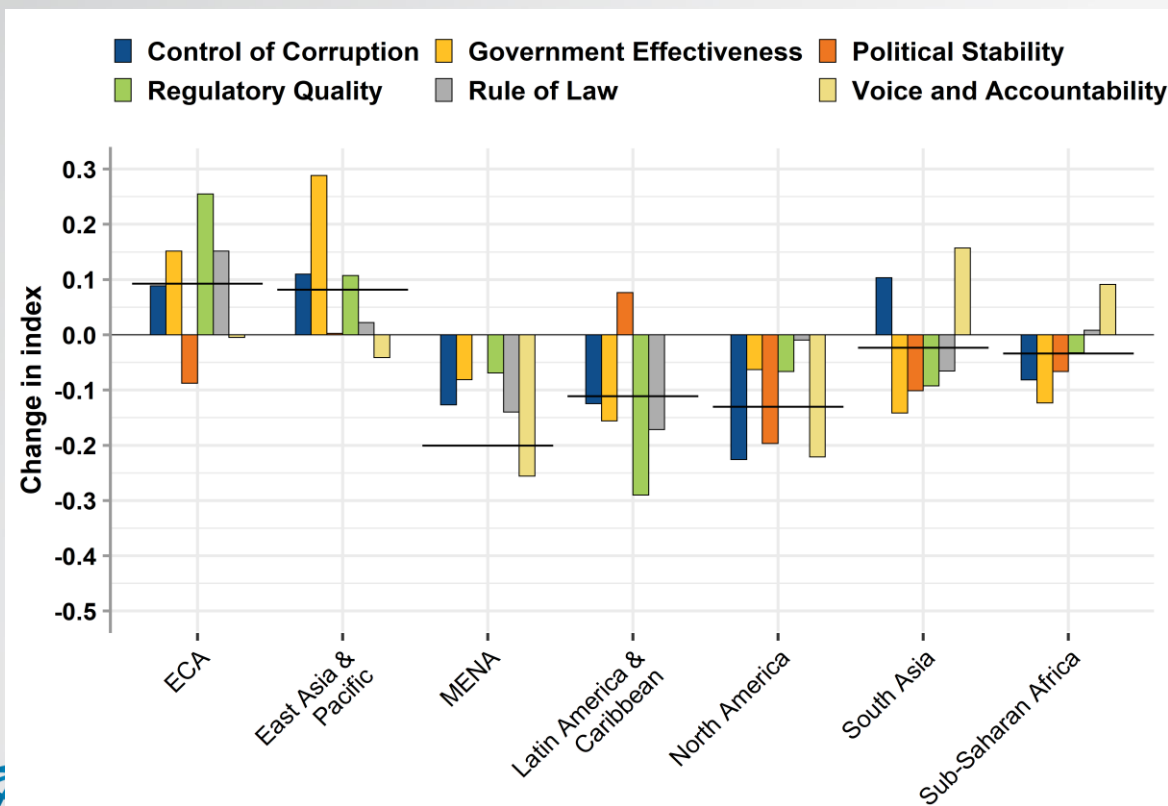
Average governance score by subregion



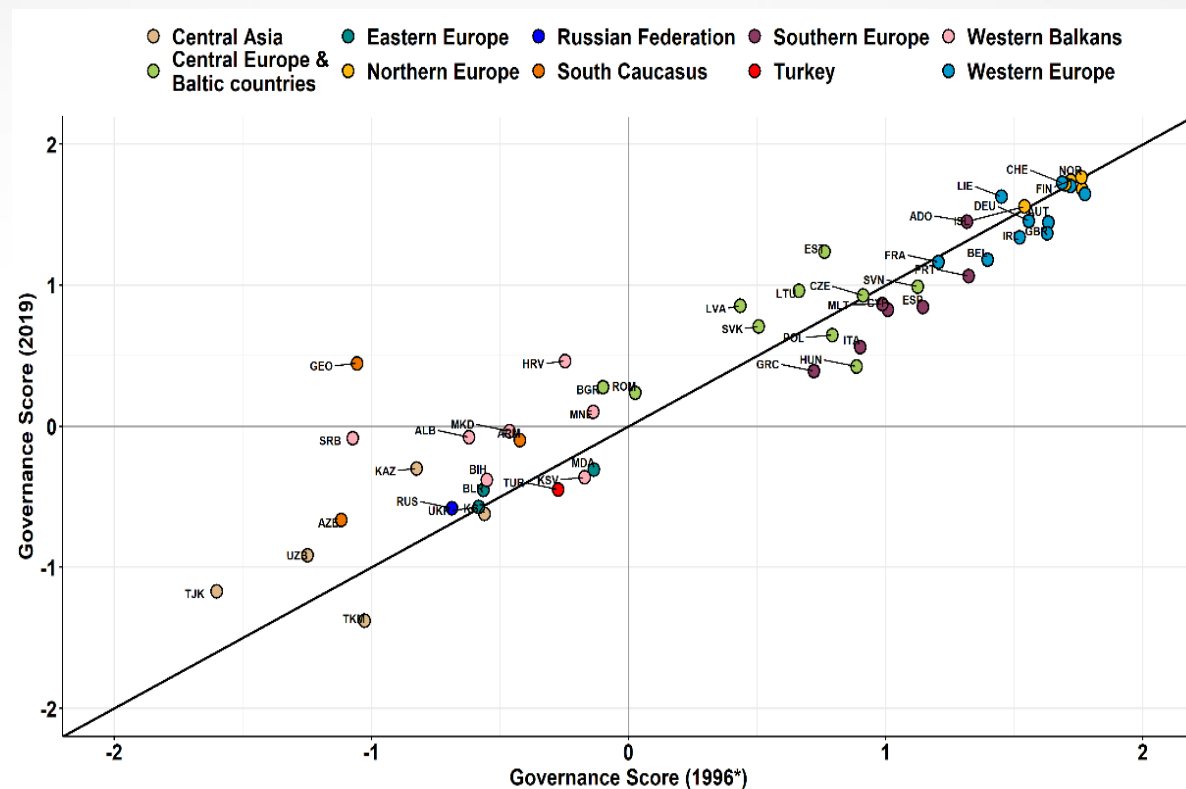
# Looking at governance over time reveals encouraging patterns

- In the last two decades the average quality of governance in ECA has improved – particularly among the originally lowest performing countries

Change in governance 1996-2019 by WGI subcomponents and region



Governance score by country, 1996 and 2019



## II. Data and digitalization for state capacity

- *Data Revolution*: accelerating decline in cost of producing and analyzing data and the rise in available personnel who are trained in analytical methods. Its impact hinges on the adoption and use of *data systems* – which is the active collection and use of relevant information
- Data revolution is closely linked with *digital transformation* which entails:
  - *Digitization*: the conversion of information from analog to digital formats.
  - *Digitalization*: the adoption of digitized data and tools.
  - *GovTech*: the application of technology to government practices
- Resulting in *Empiricism* in the public sector, which is the application of the empirical method – starting out with data, creating models representing these data and using them to reach conclusions about the present and predictions about the future to improve decisionmaking.

# Digitalization of government operations

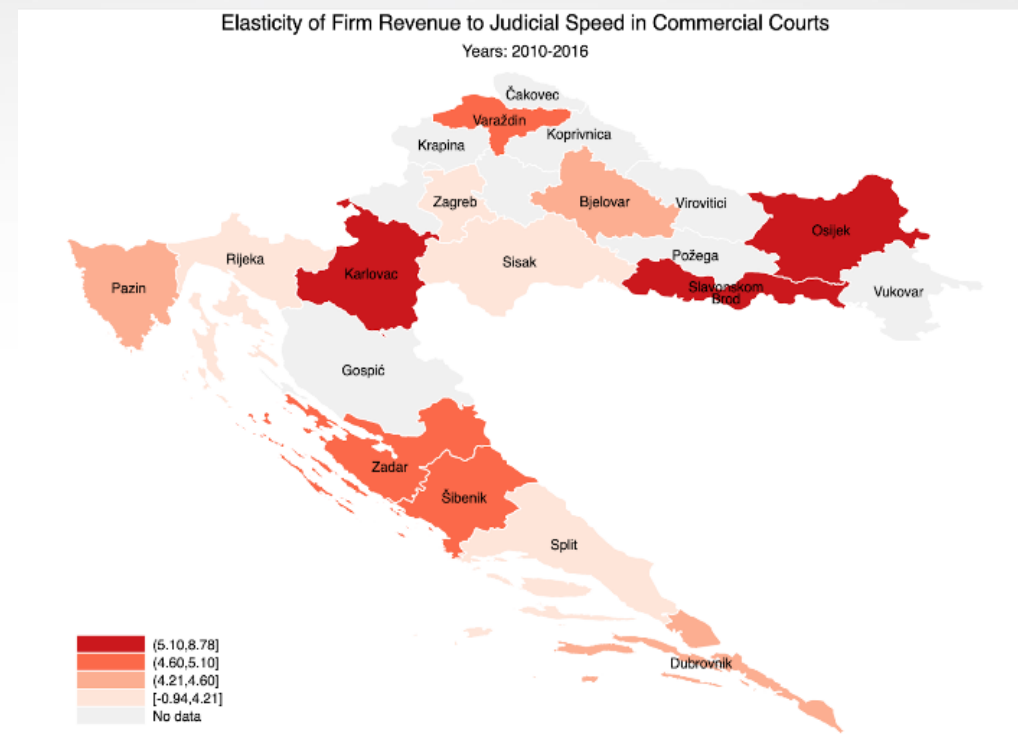
- Can improve state capacity by making systems more simple, transparent and, thus, more efficient.
- According to cross-country evidence by Kochanova et al. (2020), the introduction of e-filing of taxes and e-procurement improves the capacity of governments to raise and spend fiscal resources through
  - Lowering tax compliance costs
  - Improving tax collection
  - Improving public procurement competitiveness
  - Reducing corruption
- These results are particularly strong for ECA countries, which have a higher level of development and internet penetration.

# Data and digitalization for state capacity – country examples

- Tajikistan – introduction of e-filing of taxes reduced compliance costs and made tax payments more equitable by reducing bribes (Okunogbe and Pouliquen, 2018)
- Albania – introduction of more agile electronic services: time needed to register a vehicle went down from 5.3 days in 2016 to 30 minutes in 2020 and the process to request a health card from 5 days in 2016 to just a few minutes (World Bank, 2020).
- Estonia – overall digitalization of government services and the establishment of X-Road, a data exchange layer that enables exchange between information systems, allows an estimated savings of the equivalent of 820 years of working time by eliminating the need for in-person interactions (Government of Estonia, 2017).

# Digitalization of justice: the case of Croatia

- In 2010, the Ministry of Justice in Croatia launched an Integrated Case Management System (ICMS) to electronically record and track the progress of all court cases.
- The World Bank's Data and Evidence for Justice Reform (DEJURE) program leveraged the power of this rich, case-level database to evaluate the impact that the speed of justice can have on the financial outcomes of firms.
- The analysis revealed that backlogged cases (i.e., cases that have been pending for 3 years or longer) can significantly impact firms' revenues, providing strong economic justification for improving judicial speed and efficiency.



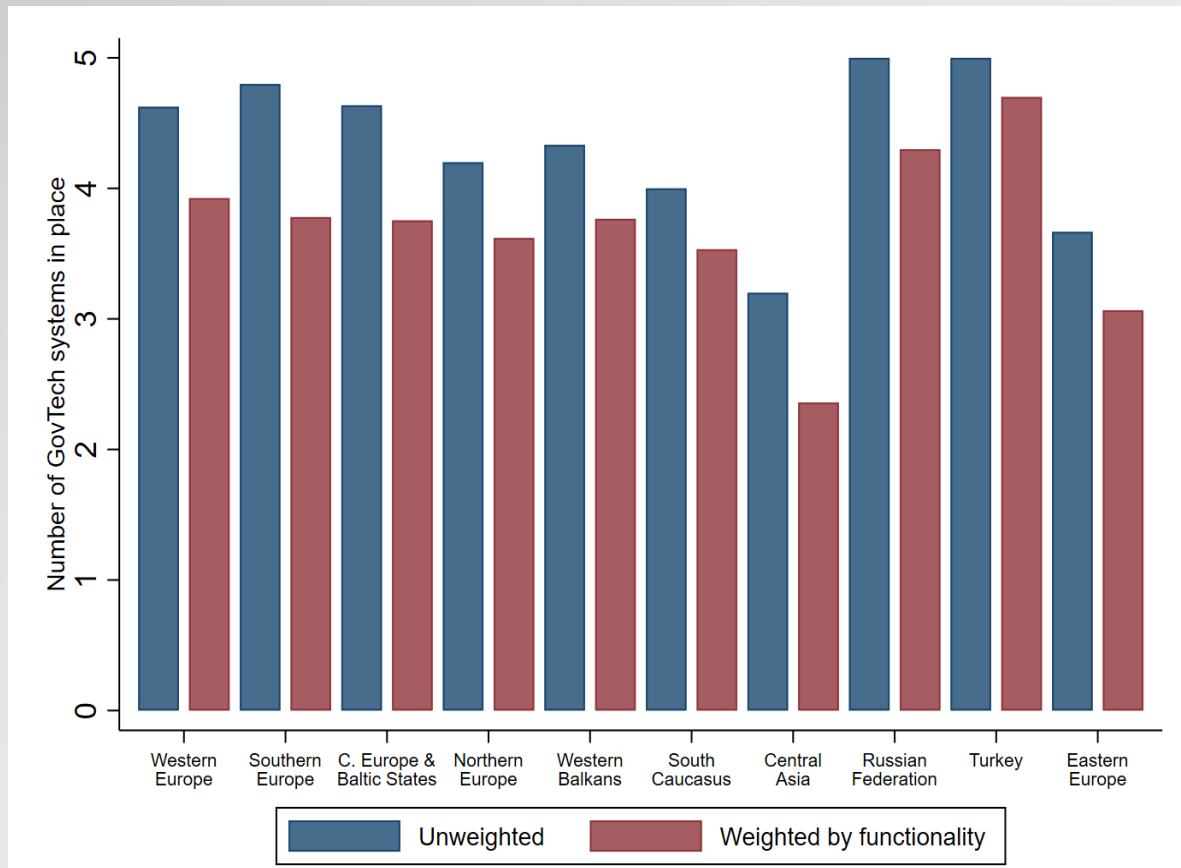
Source: DEJURE (2019)

# Assessing digitalization of government operations

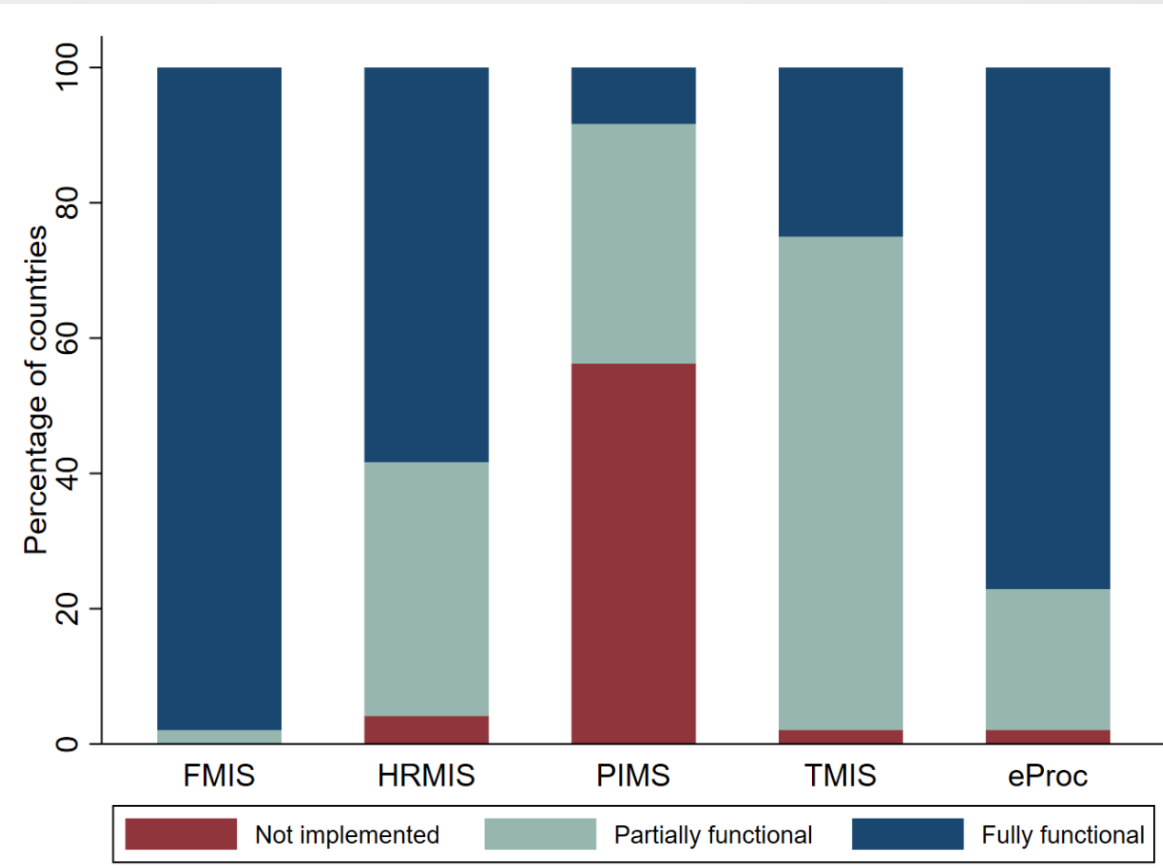
- Indicator of government digitalization: number of government systems have transitioned to an electronic format, by which all transactions can be done digitally.
- Focus on 5 government systems:
  - Human Resources Management Information System (HRMIS)
  - Public Investment Management System (PIMS)
  - Tax Management Information System (TMIS)
  - Financial Management Information System (FMIS)
  - Procurement system

# Implementation and functionality of GovTech systems vary across systems

Implementation of GovTech systems by subregion

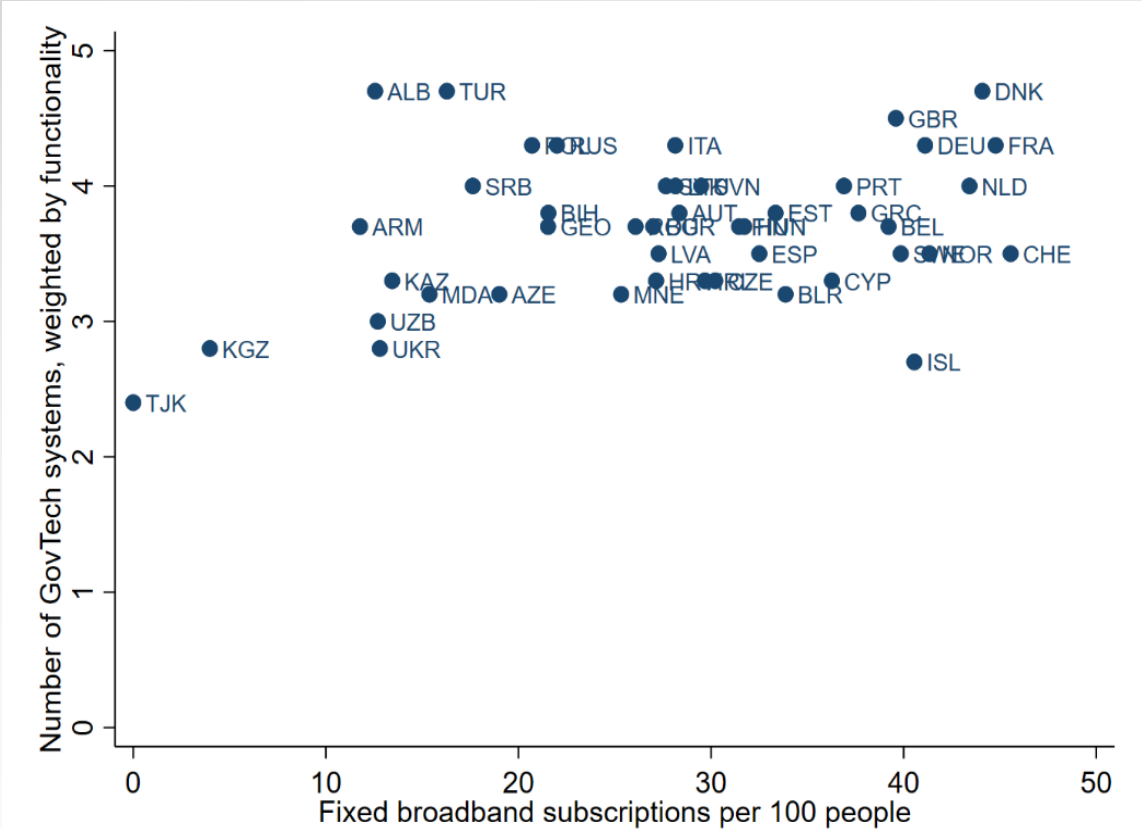


Degree of functionality of GovTech systems in ECA



# Broadband Access and Digitalization of Government

Implementation of GovTech systems and broadband access



- Improving broadband access should be a priority for lagging countries for meaningful digital connectivity

# Data analytics for state capacity

- Information is a critical design feature of the public sector, but most public sector entities were designed around information aggregation through a hierarchy.
- This structure confined information to an internal and tacit nature (Rogger and Somani, 2018); and discouraged officials from interacting with new methods of data production and analysis.
- Recent advancements in data and digitalization offer to fundamentally transform how public sector personnel acquire, interact with, and apply information to organizational decisions.
- Wider access to and engagement with information, in turn, can provide meaningful scope to optimize public sector management and productivity

# Data analytics for state capacity -examples

- In 2014, the Polish Labour Office implemented automated, data-driven decision-making to determine eligibility for unemployment assistance, offering opportunities to minimize bias and reduce margins of inefficiency and error.
- A project in Skopje, North Macedonia uses data from detectors in the road, air quality sensors and traffic monitoring cameras to automate traffic lights; reducing travel time in the city by up to 20%.

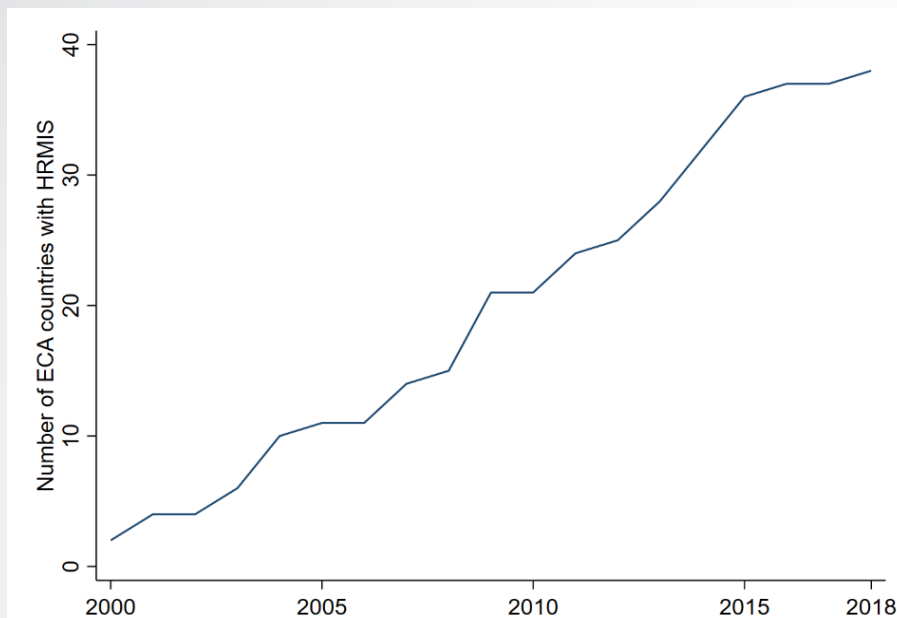
# Constraints to better use of data in the public administration

- As natural monopolies, governments face little competitive market pressure to encourage information sharing (Moore and Hartley, 2008). This generates “information silos”.
- Much work gets done in teams and there are free-riding concerns. If a team member undertakes the costly effort to learn and organize information for a project, other team members may have little incentive to do so.
- Bureaucratic conservatism: mission-oriented public officials, while very productive in “business-as-usual” contexts, may be resistant to use new information or adopt new practices because they have a pre-defined set of missions or beliefs.
- In order to ground the public sector in empiricism and inform policymaking with evidence, governments must strengthen their personnel’s capacity to undertake and manage empirical work. Human Resources Management is a key factor in this process.

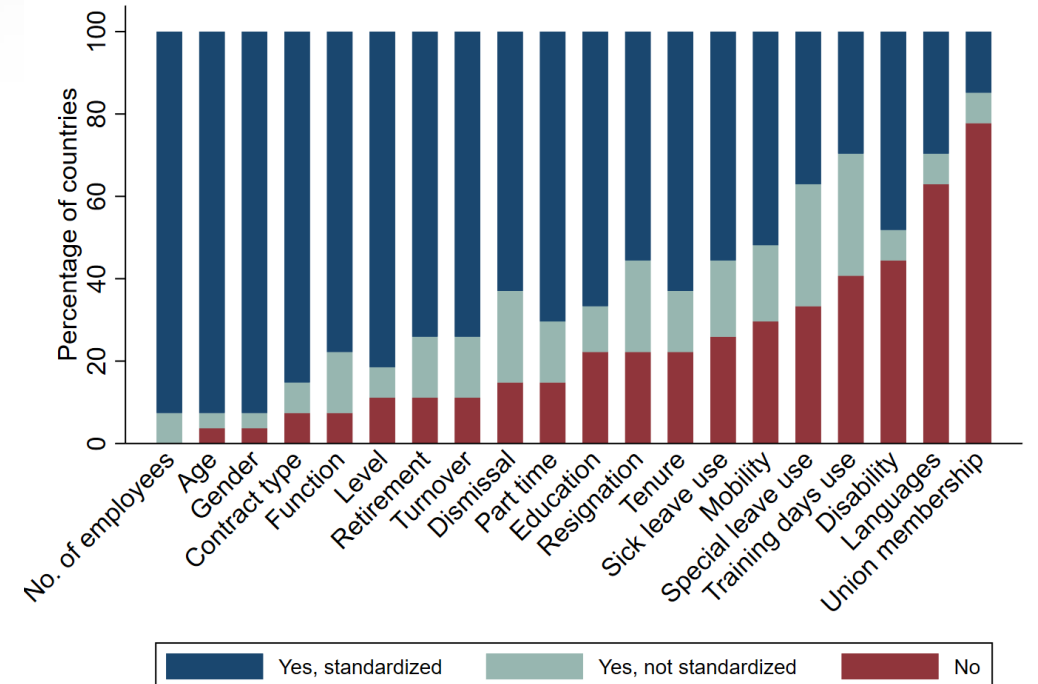
# Harnessing HRM data

- Over the past thirty years, ECA governments have accelerated the adoption Human Resource Information Systems (HRMIS).
- However, these systems collect basic characteristics of staff and do not provide diagnostic information that might help the public service be more effective. Accordingly, most ECA countries do not use civil service personnel data in these systems to inform strategic human resource management (HRM) policies

Adoption of HRMIS in ECA over time



Information collected by HRMIS in ECA

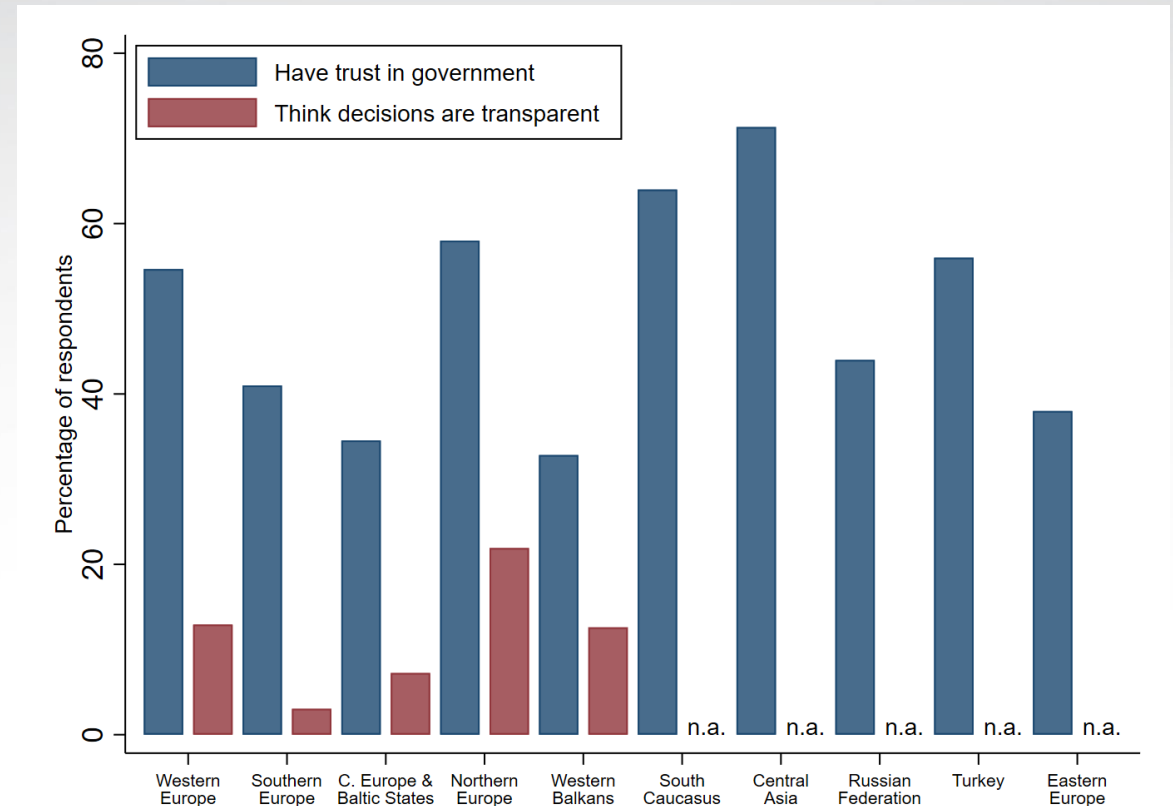


# III. Data for collaborative governance with civil society

- Many citizens in ECA mistrust the government and view political decisions as not very transparent.
- Capitalizing on the data revolution and digitalization can help build strong linkages between governments and citizens by reducing the information firewall.
- One of the most promising mechanisms for this is Open Government Data (OGD), which reduces the transaction costs of gathering, analyzing, and disseminating public sector data, and allows for a more comprehensive understanding of the quality of public governance as whole.
- Today, ECA's public sector collects and produces large amounts of data but lacks the incentive structures to disseminate this data and help civil society overcome public inaction to use it

# Transparency, trust and legitimacy

- In 29 out of 49 countries in the region, the percentage of citizens that have confidence in their national government is below 50%.
- For countries where we have data, 54% of respondents of the European Social Survey (2018) noted that the decisions in their country's politics not transparent, while only 12% noted that they are very transparent.

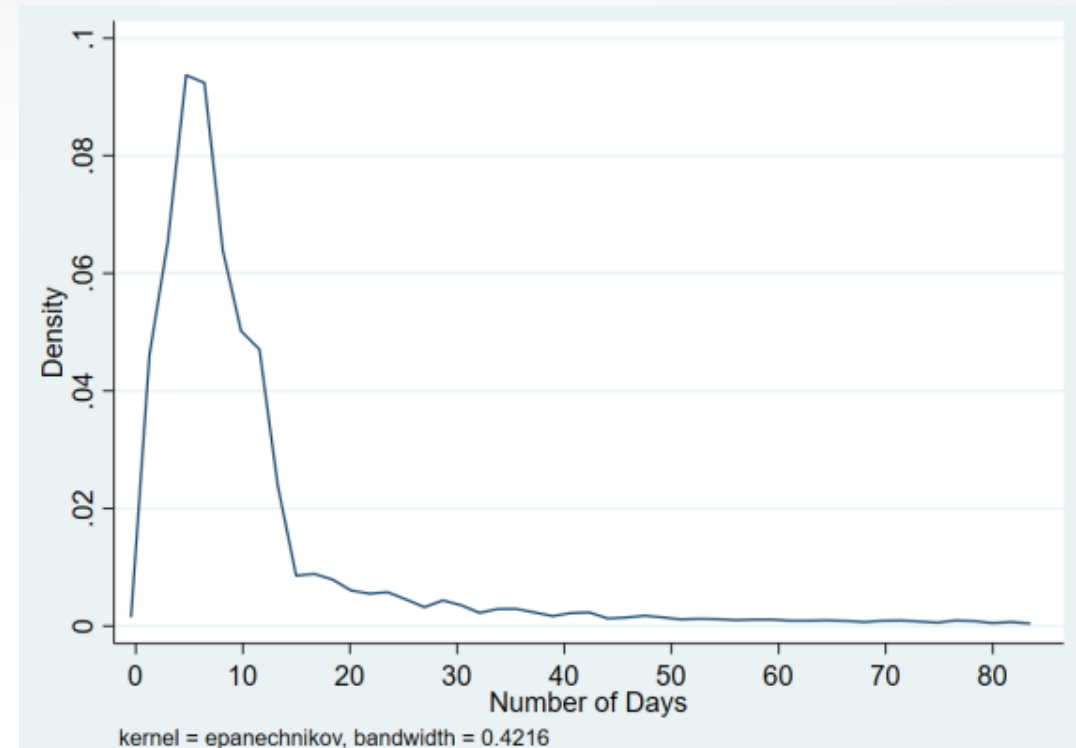


Digital civic engagement is a way to improve this. Grievance redress mechanisms can help build trust.

# Digital public engagement: the case of pothole management in Moscow

- New ICT technologies offer the opportunity for citizens to engage directly with the government and improve the quality of public services – and the governments can also politically benefit, as Gorgulu et al. (2020) show.
- In 2011, the city government of Moscow created an app which allows citizens to post complaints about potholes in roads.
- This app sends the complaint to the relevant authority. Complaints are resolved on average in 5 days.
- In neighborhoods where, for geophysical reasons, there were more pothole complaints, the incumbent mayor obtained a larger majority in the elections.
- The app allowed the local government to show responsiveness to citizens' needs.

Distribution of the response time to pothole complaints

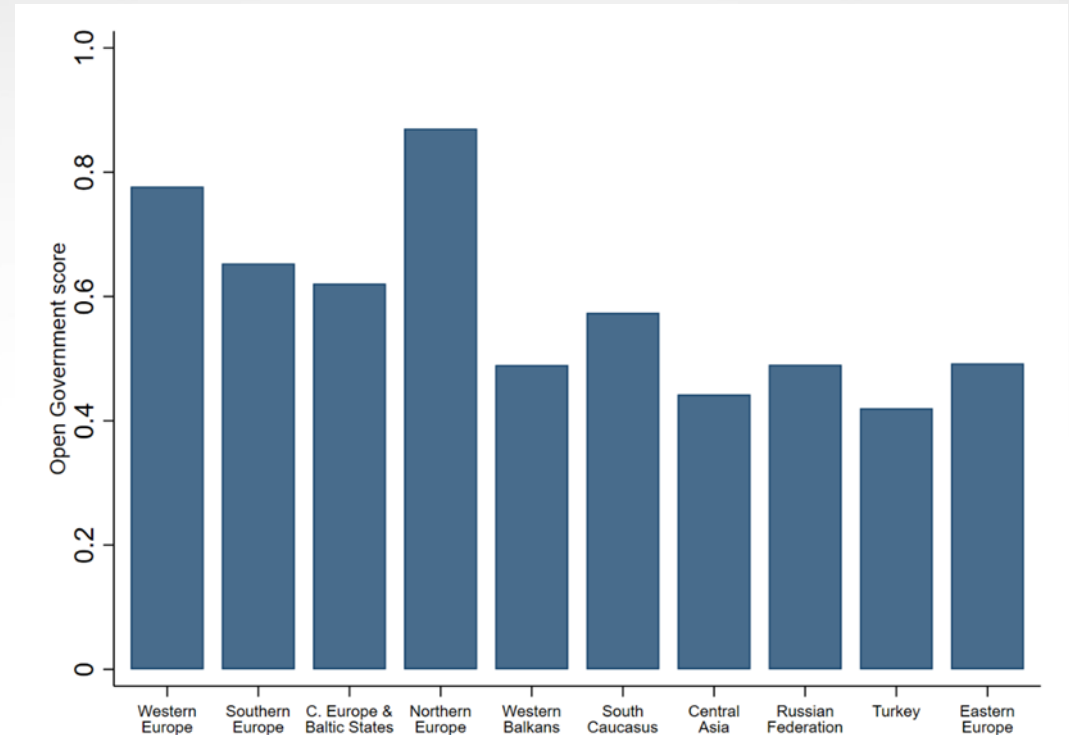


Source: Gorgulu et al. (2020)

# Open Government Data

- Open Government Data (OGD) is an initiative that calls for the release of government data (information produced or commissioned by public bodies) so it can be freely used, re-used, and distributed by anyone
- Access to information can increase citizens' awareness of government activity and improve accountability and foster trust.
- OGD can foster collaborative innovation to address social challenges and enables civil society to generate new insights for governments for how to improve its performance.

WJP Open Government index, 2019



# Constraints in the data processing value chain

- Limited impact evaluations of OGD policies make it difficult to evaluate its outputs and outcomes. Since the initiatives are recent, it may also be too early to see long-term impact
- Governments may be hesitant to publish data because information is power and the quality of data may be perceived as low by the public; risk of political backlash.
- Collective action problem of civil society: focus on single issues and not on broader government accountability; lack of technical capacity and/or motivation in low accountability environments to analyze the data. (among the most important)
- High digital connectivity in ECA facilitates OGD dissemination, and the use of social media can overcome the collective action problem of civil society to hold governments accountable—but social media also is rife with misinformation and false news.

# IV. Policy recommendations

- **Diagnosing the current state of the public administration.**
  - Governments should, first of all, measure the level of data use and technological advancement in the public administration. This can be done with diagnostic surveys and administrative data (HRMIS).
  - Additionally, governments should assess the environment in which the public administration operates in terms of regulations, laws and provisions for data use. Many countries need progress in these areas.
- **Staffing and team-building for data and digitalization in government:**
  - To overcome the classical constraints of public administration, governments must implement incentive structures for teams and individuals that encourage empiricism and the adoption and adaptation of data systems within the civil service.
  - Public administrations in ECA need to recruit staff with new technological skills and build capacity in order to address the skills gap among civil servants. Specific programs designed to attract and retain individuals with digital skills should be implemented – examples in Australia and UK are worth replicating.
  - Evidence from the literature on civil service management indicates that when organizational culture needs to be changed, individual-focused training has much better results than team-focused training (Azulai et al., 2020).

# Policy recommendations (cont'd)

- **Creating an enabling environment for reform:**
  - To expand the impact of the data revolution, central governments must build mechanisms for inter-sectoral coordination of decentralized data systems across institutions.
  - Governments should develop a national strategy to help bringing together stakeholders across ministries and agencies to define the government's vision, shared needs, potential gaps, and strategic goals. Examples of the Data Strategy by US and German governments are useful.
  - High-level coordination of e-government activities: 21 out of 50 ECA countries don't have a government coordination authority for data use, and less than half of ECA countries (only 20 out of 50) have a GovTech institution supporting interoperability and interconnectivity between government agencies .
  - Where still lagging, digitalization of government must expand.

# Policy recommendations (Cont'd)

- **Societies must develop institutions and a public space for citizens to hold governments accountable over their broad approach to using data.**
  - Holding government accountable to broad determinants of productivity requires an organization with sufficiently broad scope – like the GAO in the US, IFS in the UK or IPSE Studies in The Netherlands. Countries should promote the creation of these institutions that conduct research on the efficiency of government.
  - Fostering the broader development of civil society organizations, particularly in countries where the public arena is devoid of them, is in itself a necessary starting point for the accountability of government action along any dimension.
  - Governments should broaden access to government information and data and incentivize use by citizens
  - have also to be mindful of the potential backlashes of misrepresentations of official data but should not resort to censorship or the blockage of information. Rather, promote fact checking and similar strategies to provide truthful information and enrich the quality of public debate.
- **Societies and governments must promote direct feedback between citizens and government.**
  - Promote citizens' participation in area where citizens have superior local knowledge than public officials, such as the management of their neighborhood.
  - Set up a centralized website where individuals can directly address the government with concerns or provide feedback on service delivery. Currently, only 28 out of 50 countries in the region have this kind of web portal.
  - Where still lagging, access to broadband internet should be expanded.



# Thank you!

**Europe and Central Asia Chief Economist web page:**

<http://www.worldbank.org/en/region/eca/brief/office-of-the-chief-economist-europe-and-central-asia>

**ECA Economic Update:**

<http://www.worldbank.org/en/region/eca/publication/europe-and-central-asia-economic-update>