UKRAINE SYSTEMATIC COUNTRY DIAGNOSTIC | 2021 UPDATE

Pathways to Resilience, Sustainability and Inclusion

WORLD BANK GROUP

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Ukraine Systematic Country Diagnostic | 2021 Update

Pathways to Resilience, Sustainability and Inclusion

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Abbreviations

B40	Bottom 40 percent of the income distribution
CCU	Constitutional Court of Ukraine
DCFTA	Deep and Comprehensive Free Trade Area
ECA	Europe and Central Asia
EMDE	Emerging Market and Developing Economies
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GMI	Guaranteed Minimum Income
GPP	Green procurement policies
GVC	Global Value Chains
HACC	High Anti-Corruption Court
HLCS	Household Living Conditions Survey
HUS	Housing and Utility Subsidies
IDP	Internally Displaced Persons
IMF	International Monetary Fund
MICS	Multiple Indicator Cluster Surveys
NACP	national Agency of Corruption Prevention
NPL	Non-Performing Loans
OBI	Open Budget Index
PEFA	Public Expenditure and Financial Assessment
PFM	Public Financial Management
PPP	Public-Private Partnerships
SAPO	Specialized Anti-Corruption Prosecutor's Office
SCD	Systematic Country Diagnostic
SOBs	State-owned Banks
SOE	State-owned Enterprises
SSSU	State Statistics Service of Ukraine
T60	Top 60 percent of the income distribution
TVET	Technical and Vocational Education and Training
VAT	Value-Added Tax
W&S	Water and Sanitation
WB	World Bank

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A. Introduction

In the seven years since the Euromaidan protests, Ukraine has enacted wide-ranging institutional, political, economic and social reforms aimed at strengthening public accountability and institutions to check the influence of powerful oligarchs, increasing the role of market forces in the economy and shifting its economic orientation towards Europe. Much has been accomplished e.g., with respect to establishing new agencies for fighting corruption, macro-fiscal and financial sector reforms, and trade and energy tariff reforms. The legislative foundation for reforms in key areas (e.g., land, privatization, concessions, governance of state-owned enterprises, health and banks) has also been laid. Moreover, these reforms—difficult in the best of times—have been implemented against a backdrop of continued tensions and human, material and territorial losses in the East, and contrary to populist pressures (notably vis-a-vis energy tariff and pension reforms). Gradually, the economy has begun to grow again, following the deep contraction in 2014–15, and poverty and economic vulnerability have begun falling back towards pre-crisis levels.

But the reform agenda remains unfinished, institutional gains look fragile, and the state footprint remains large. Reform implementation has been slow, selective and/or incomplete in key areas including anti-corruption, banking, health, energy and land markets. Meaningful progress has yet to be made on judicial reforms, while decentralization has only partially been accomplished. Privatization has yet to be delivered, so that the state remains a major producer of goods and services in the economy via state-owned enterprises (SOEs), which could be used for rent-seeking. The slow advancement of structural reforms partly reflects their inherent complexity and the need to build ownership, which has taken time. That said, vested interests remain deeply entrenched across the breadth of the state, and continue to exert influence on economic and political governance through parliament, courts and policymakers as reflected in the continued poor showing in World Bank Governance Indicators (Figure 1). State capture, wide-spread corruption, a judicial system that is widely distrusted, and untransparent government functioning remain a threat to hard-won reform achievements, a hurdle to reforms still pending, and a drag on private investment and growth.

Stronger growth has yet to be unleashed, economic vulnerability remains high and inequalities in opportunity and access persist. The weak recovery since 2015 reflects both lower potential growth, as well as the severity of the 2014/5 economic crisis. Although poverty has declined relative to its peak during the crisis, it remains higher than in the pre-crisis period—in 2019, 23 percent of the population lived below the national poverty line (the actual Subsistence Minimum[1]), versus 8 percent in 2013. Increasingly, households in the bottom 40 percent of the income distribution ("B40") derive their income from social transfers rather than labor. Lacking jobs at home, an estimated 9mn Ukrainians (of an active labor force of 20mn) work abroad for some part of the year,[2] in turn exacerbating negative population dynamics. The exodus reflects broader challenges related to *inequalities of opportunity*—visible in stark disparities

1 This amounted to UAH3,661 per adult per month in 2019, which translates to US$14.5 per day in 2011 Purchasing Power Parities (PPP).
2 https://112.international/article/labor-loss-how-neighboring-countries-attract-ukrainian-workers-40324.html

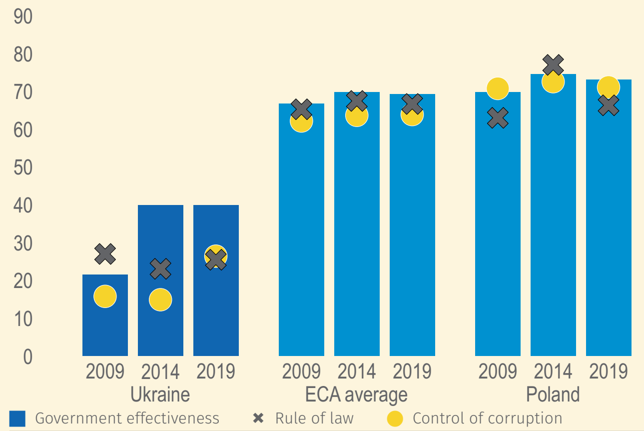
in access to the most basic of public services in rural areas and for the lowest income deciles—and *inequalities in access to productive assets/capital*. The latter is visible in low levels of firm entry, job creation and contestability in product and factor markets due to the presence of informal cartels or SOEs that benefit from preferential treatment on credit, tax, trade and business regulations.[3] It is also apparent in agriculture, where some 4mn small farmers farming a third of Ukraine's highly fertile agricultural land have been unable to undertake productivity-enhancing investments because of insecure land tenure, lack of access to credit, and high input costs (e.g., due to abuse of market power in fertilizer markets).

Standards of living have diverged from peer countries: it will take Ukraine some 50 years just to attain current levels of per capita income in Poland if the slow pace of growth continues. Since Independence there has been only one episode of sustained growth (2000–08, driven by external forces rather than structural reforms, and which was associated with the buildup of macroeconomic vulnerabilities), with poverty (based on upper middle-income poverty line of US$5.5 a day) decreasing substantially during that period from 44 percent in 2002 to 7 percent in 2008. Trend growth has come down sharply since then and become more volatile because of repeated crises. As a result, GDP per capita in 2020 was lower than in 2008. The lack of sustained, strong growth has resulted in a stark divergence in living standards with Eastern European peers: at Independence, Ukraine's real per capita income was higher than Poland's; by 2020, it had fallen to less than a third of Poland's and was among the lowest in Europe (Figure 2). What is more, if the recent slow pace of growth of 3 percent continues, it will take

3 World Bank (2018a). Reducing Market Distortions for a More Prosperous Ukraine. Washington, D.C.: World Bank Group.

Figure 1: Worldwide Governance Indicators

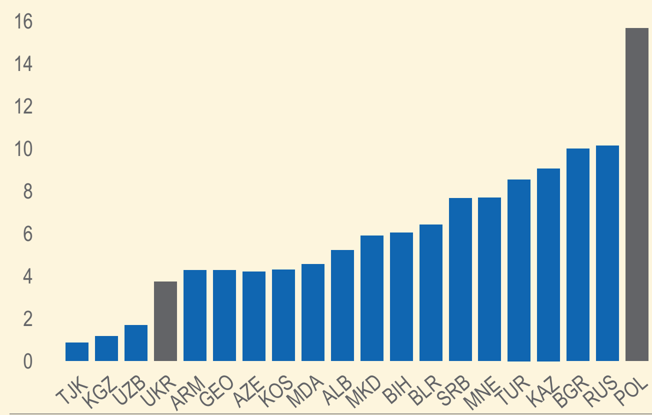
Rankings (1 is lowest, 100 is highest)



Source: WDI.

Figure 2: GDP per capita, ECA region

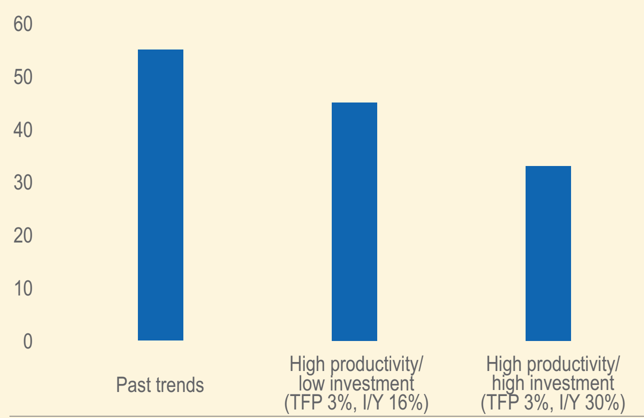
US$ in thousands, 2020



Source: WDI.

Figure 3: Number of years to converge with current incomes per capita in Poland

Various scenarios



Source: World Bank Growth Study, 2019.

55 years to converge with *current* incomes per capita in Poland (Figure 3).[4,5]

The COVID-19 pandemic has further complicated the challenge of poverty reduction and shared prosperity; uncertainty about the pace of recovery remains high. The coronavirus (COVID-19) pandemic has exposed structural frailties in countries such as Ukraine that are characterized by weaker healthcare systems, less favorable conditions to sustain containment of the virus, larger informal economies and limited fiscal/policy space for support. Ukraine's economy shrank by 4 percent in 2020 and, by June 2021 some 50,000 deaths had been reported (although these are likely to be under-estimates). The pandemic has disrupted livelihoods and jobs: While official 2020 poverty data have not yet been published, World Bank simulations suggest that the share of people living below the actual Subsistence Minimum could have increased by three percentage points in 2020.[6] Prospects for recovery, meanwhile, are dependent on the speed with which COVID-19 vaccines can be deployed (even as new variants emerge), and the ability of domestic policies to contain the pandemic until then. The longer this takes, the greater the risks of an uneven recovery, the more depleted policy buffers (as they are used up to cushion the impact of repeated lockdowns, or because of revenue declines), the greater the chances of longer term economic "scarring"—arising e.g. from the loss of human capital due to disruptions to the provision of education, loss of on-the-job training and long-term deskilling impacts for older or lower-skilled workers who have lost their jobs—and the greater the potential for these to worsen existing inequities.

Climate change and technological innovation pose new risks over the medium term, but also offer opportunities to embrace a more sustainable, resilient, and inclusive recovery. The most consequential global development is climate change, and Ukraine faces risks from not adapting key sectors such as agriculture to changing conditions; but mitigation also matters given its highly energy-intensive economy and legacy industries, as well as global policy efforts to decarbonize that could undermine its international competitiveness. The world is also in the midst of a digital transformation that is disrupting production, trading and consumption patterns, which, by changing the very nature of work, poses risks to the most vulnerable and low-skilled workers everywhere. The process has been further accelerated by COVID-19, and will require governments, firms and workers to adapt. That said, these secular trends also represent opportunities for more sustainable and resilient growth going forward. Both green growth and digital policies can help to open up new sectors and thus create jobs. Digitalization also offers a fast-track to transparency and accountability in the public sector and an opportunity to increase financial inclusion through digital financial services.

The SCD Update reviews progress on key reforms and outcomes in recent years and examines whether the constraints and priorities identified in the 2017 SCD are still relevant today. At the time of writing the 2017 SCD, the economy had just begun to stabilize following the acute political, security and economic shocks in 2014–15, but prospects remained weak in light of longstanding structural bottlenecks and governance challenges. It identified three root constraints to inclusive growth and shared prosperity (Table 1): conflict and external shocks; corruption and state capture; and demography and geography. And, it pointed to four pathways towards sustainable recovery: safeguarding macroeconomic stability; boosting private sector productivity; providing more effective services and

4 World Bank Growth Study (2019a). Ukraine Growth Study: Faster, Lasting and Kinder.

5 Ukraine is benchmarked against a number of comparator countries or country groups (as relevant) in the *Update*. These include regional and economic peers (on the basis of per capita incomes) in the ECA region, other comparator groups such as upper and lower middle-income countries, and aspirational peers such as Poland, Germany or other major emerging market and developing economies (EMDEs) such as Indonesia and Malaysia.

6 World Bank (2021a). Poverty Note. Forthcoming.

Table 1: 2017 SCD and 2021 Update: Key constraints and pathways

	2017 SCD			**2021 Update**		
Key Constraints	Corruption & State Capture			Weak Institution, Corruption & State Capture		
	Conflict & External Shocks		Demography & Geography	Vulnerablity to External & Climate Risks		Supply Constraints
Critical Pathways	Better Governance & Anti-Corruption			Stronger Institutions, Rule of Law & Reduced Footprint of the State		
	Macro-economic Stability	Private Sector Productivity	Effective Services & Targeted Assistance	Macro Resilience & Support to Long-Term GreenGrowth	Private Sector Productivity & Investment in an Inclusive & Environmentally Sustainable Manner	Social Resilience: Investing in Protecting the Poor
	Sustainable Recovery and Shared Prosperity			***Inclusive, Resilient and Sustainable Growth***		

targeted assistance to the population; and building institutions of better governance and anti-corruption.

The 2021 Update is prepared against a backdrop of continued weak growth, dragged even lower by the COVID-19 shock, and uncertain prospects for recovery given the pandemic and waning reform appetite. The *Update* adopts the same methodology for prioritizing the reform pathways. While it does not undertake new analysis, it incorporates new analytical evidence that has been collected or is close to completion.[7] Coupled with extensive consultations across World Bank teams, this validates the use of the same broad framework as the 2017 Diagnostic, albeit with some adjustments and nuances to constraints and pathways, for instance, to emphasize weakness of institutions alongside corruption and state capture, to stress the need for growth not only to be higher and more stable but also to be greener and environmentally sustainable, or to highlight extremely weak investment and productivity that, alongside demographic pressures, impede Ukraine from taking advantage of its natural resource endowments or proximity to EU markets (its geography) and that underpin the economy's low potential growth rate. The *Update* also takes into account emerging challenges and opportunities that will shift the future trajectory of Ukraine's economy. In particular, climate mitigation and adaptation investments and policies adopted *now* will matter critically for whether Ukraine is set on a low-emissions, resilient and sustainable economic path or not.

Stronger institutions and rule of law remain critical priorities; but the Update also emphasizes adjusting the role of the state to provide the necessary conditions for growth, as well as the salience of sustainability, resilience and inclusion in building a strong recovery from the COVID-19 shock. Going forward, success in overcoming deeply embedded corruption will require broad, comprehensive efforts to strengthen institutions and rules-based governance, alongside reforms that shift the role of the state from directly

7 That said, it is important to note that some knowledge gaps do remain, particularly related to labor markets (See Annex A)

participating in the economy towards providing the conditions for the private sector to flourish. In addition, there is an opportunity to "build back better" following the COVID-19 shock given new risks and opportunities from climate change, digitalization and deepening trade and economic ties with the EU. In line with this, the *Update* adjusts priorities to shift focus away from "firefighting" towards consolidation and deepening of reforms, and from restoring growth towards enhancing the quality of future growth (less volatile, greener, inclusive and job-creating) and greater resilience (institutional, environmental, economic, social). In line with this, the *Update* frames the root constraints and pathways more broadly, as shown in (Table 2).

Pathway 1 *shifts focus from building new institutions towards strengthening and reinforcing existing ones, and rolling back the footprint of the state to increase space for market-driven activities and private sector participation* (Table 2). These priorities speak to the weakness of (rather than lack of) institutions in Ukraine, and the "appropriate" role of the state in the economy. The Pathway prioritizes protecting hard-won anti-corruption reforms of recent years, judicial reforms to anchor rule of law and strengthening institutional accountability and transparency *throughout* the public sector, including through deeper decentralization and human resource management reforms. It argues for reducing the imprint of the state through SOE restructuring and privatization, to increase the role of market forces and level the playing field, and over the long term to support the reallocation of factors of production (tied up in stagnant SOEs) towards more productive, market-driven sectors of the economy. It also prioritizes further digitalization and e-government reforms—to reduce the scope for discretion by an inefficient/corrupt bureaucracy acting in support of vested interests, and to support access to economic opportunity and critical public services for firms and households alike. As with the 2017 Diagnostic, these priorities are further reinforced through reforms that strengthen institutions and adjust the role of the state in the remaining pathways.

Pathway 2 *shifts focus on policies that support macroeconomic resilience and greener, stronger growth over the long term.* The pathway argues for prudent macro-fiscal policies that increase fiscal resilience and dampen volatility in growth (in turn providing signals of macroeconomic stability needed to attract long-term investment and FDI). It also supports a reduction in the role of the state in the allocation of credit to the wider economy through governance and other banking reforms that support the eventual privatization of state-owned banks. While fiscal and macro imbalances have been reduced significantly since the 2017 Diagnostic, fiscal risks remain and are rising. Therefore, the *Update* argues for tax and expenditure reforms to rebuild fiscal buffers, more efficient allocation and effective management of scarce public resources to anchor fiscal sustainability over the medium term and to support better outcomes in health, education and public investment (all levers of long-term growth) and strengthening of risk management (including from a range of contingent fiscal liabilities) to reduce macro-fiscal vulnerabilities. To support Ukraine's transition to a low carbon economy—in essence to support "greener" growth in the future—it prioritizes the decarbonization of the energy sector[8] and subsidy reform, alongside adoption of green procurement policies. On the financial sector side, the pathway emphasizes continued reforms to reduce non-performing loans (NPLs) in the banking sector to increase credit provision to firms in the economy, strengthen supervision of non-banking financial institutions to prevent fraud, deepen capital markets and facilitate financial sector diversification. Over the longer term, the deepening of financial markets will also support the private financing of the coming energy transition.

8 The country is working on a strategy for decarbonization, including a hydrogen strategy supported by several development partners.

Table 2: Original and revised priorities

2017 SCD: Key Pathways (4) and Priorities (16)	2021 SCD Update: Key Pathways (4) and Priorities (10)
Pathway 1: Better Governance & Anti-Corruption • PFM • Anti-corruption and judicial reform • Public administration reform • Citizen engagement	*Pathway 1:* Stronger Institutions, Rule of Law and Reduced Footprint of the State • Protect anti-corruption architecture, strengthen judicial system, accountability and transparency at sub-national level • Reduce economic footprint of the state through SOE privatization, e-Government and digital reforms
Pathway 2: Macroeconomic stability • Manage fiscal risks to reduce deficit and public debt • Tax reform to broaden tax base and strengthen administration • Pension reforms • Strengthen the financial sector	*Pathway 2:* Macro Resilience and Support to Long-Term Green Growth • Strengthen fiscal sustainability and resilience through expenditure, tax, and fiscal risk and PFM reforms • Enhance governance and regulatory framework of SOBs, privatize SOBs, strengthen non-bank financial supervision and reduce NPLs • Support decarbonization and climate transition through tax, subsidy and green procurement policies
Pathway 3: Private Sector Productivity • Strengthen PIM and expand infrastructure (energy and transport) • Create level playing field in private sector (deregulation, competition policy, SOE reform) • Land reform • Trade facilitation	*Pathway 3:* Lift Private Sector Productivity and Investment in an Inclusive and Environmentally Sustainable Manner Institutional reforms to • Strenghten trade and digital connectivity and competition • Complete agricultural land reforms, and Improve regulatory & governance frameworks, financial sustainbiility and increase role of market forces in energy, water and transport sectors • Support climate transition, adaptation and mitigation to climate change in energy, agricultural, transport and water
Pathway 4: Effective Services and Targeted Assistance • Provide more effective health and education services (skills development) • Improve delivery mechanisms at sub-national level • Enhance targeting and efficiency of social assistance programs • Provide targeted support to conflict affected people	*Pathway 4:* Social Resilience and Inclusion: Investing in and Protecting People • Create access to economic opportunity through investments in skills, health and education, and close gaps in access to basic public services • Strengthen safety nets, support to lagging regions/ communities including to people affected by conflict

Pathway 3 *Supporting a strong, dynamic private sector driven recovery, albeit with an eye to the coming climate transition, is central to the recovery from the COVID-19 shock—accordingly Pathway 3 retains its focus on lifting productivity and investment in the economy through governance, transparency and contestability reforms that enable the private sector to flourish, while being mindful of environmental sustainability and inclusion.* It supports the completion of agricultural land reforms, which are expected to be a major sector for investment and job creation going forward, alongside a deepening of ongoing institutional and regulatory reforms in energy markets, greater connectivity and trade (physical and digital). More broadly, it encourages the growth of, and investment by, private enterprises that are able

to operate on a level playing field in critical sectors of the economy, and that are more productive than SOEs or connected firms. The pathway recognizes the immense opportunities unfolding for bolstering climate resilience, adaptation and decarbonization as regulatory frameworks are strengthened, structural reforms implemented, and infrastructure bottlenecks are eased. To the extent that these reforms open up new markets or expand contestability and entry of firms in existing ones, they: (i) open new sources of growth, foster a stronger recovery from the COVID-19 shock and bolster inclusion; and (ii) they carry the potential of making the coming economic adjustment due to the climate transition or other reforms (e.g., privatization) less painful for workers. It is worth emphasizing that climate policies can also serve as another lever for eroding the influence of vested interests in key sectors. Overall, the priorities in Pathway 3 shore up long-term *economic* resilience, especially if they are rooted in investments in innovation and/or modernization of aging and/or carbon-intensive infrastructure (in energy, agriculture, and transport), the adoption of climate smart practices (in agriculture), creation of effective green financing mechanisms, in the context of currently underdeveloped capital markets, to support sustainable solutions) and *environmental* resilience through adaptation and mitigation of climate impacts (in agriculture, energy, water and transport).

Pathway 4 *emphasizes social resilience and inclusion through investing in and protecting people.* Investments in skills, education and health, alongside better targeted safety nets and more equitable access to critical public services, will cushion workers from short-term shocks, and help to address exclusion of the poor and most vulnerable households and communities. It will also enable them to meet the needs of an increasingly complex economy and take advantage of opportunities provided by the transition to a low carbon economy and growing economic and trade ties with Europe. They are, thus, central to inclusive growth. Within health and education, significant allocation inefficiencies need to be addressed (e.g vis-a-vis oversized hospital networks), while financing reforms (in hospital care and higher education) are needed to shift incentives to strengthen service delivery. Further institutional and governance reforms are needed to strengthen education delivery within a decentralized setting; in the health sector, further strengthening of primary care, modernization and optimization of specialized care, improved implementation of public private partnerships (PPPs), and reduction of extremely high out-of-pocket costs for people are needed to improve long-term health outcomes, reduce the financial impact of health shocks on the most vulnerable and increase investment in the sector. Finally, digital skills and investments will also be key to maximizing the impacts of ongoing health and education reforms, and to equip the workforce with skills needed in a modernizing economy.

Finally, it is important to take stock of how best to move reforms forward in a politically complex environment with large risks of reform backtracking. As discussed below, Ukraine has made substantial progress, and is continuing do so, on structural reforms. Some reforms that have been enacted hold the potential to be deeply transformational with major social, fiscal and/or growth impacts, if fully completed and properly implemented. These include health sector reforms, the lifting of the moratorium on land markets and related progress to strengthen transparency in land records and management. Other areas of solid progress (setbacks notwithstanding) include deep and comprehensive reforms of the banking sector, which has led to the resolution and closure of some 100 banks, the de-monopolization of Naftogaz, the largest SOE; and the creation of a whole new anti-corruption architecture. But there is still a long way to go. The very success of some reforms (e.g. on the anti-corruption front) has generated pushback from vested interests. Several others are unfinished (e.g., judicial, decentralization, privatization and corporate governance of SOEs, land and resolution of non-performing loans in the banking sector), and implementation remains a major challenge. Given this situation, the *Update* advocates (as was the case with the 2017 Diagnostic) a strategy of:

a. tackling institutional and governance weaknesses (in Pathway 1) as well as in the remaining pathways;

b. doubling down in conjunction with other international partners on safeguarding reform progress to date (e.g. with respect to anti-corruption institutions);

c. utilizing new levers that have shown initial successes, to reinforce accountability and transparency while improving citizen services (e.g., via e-government and digital reforms while making decentralization more effective).

To implement this strategy, the importance of sustained engagement by a coalition of development partners, civil society, and reformers within government in pressing ahead with reforms cannot be understated.

B. Where does Ukraine stand today?

1. *Sub-par growth, a continued heavy footprint of the state and pronounced social and economic disparities*

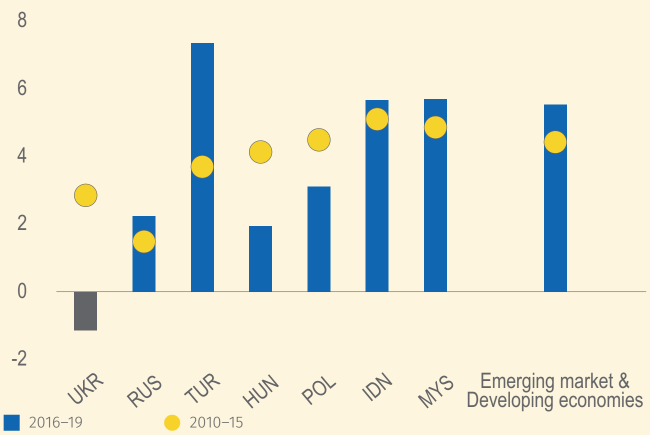
Impressive progress has been made in recent years on structural reforms that had previously been long neglected. These have included the establishment of four new institutions since 2015 to combat corruption, and a streamlining of the business environment. Various fiscal (pension, tax, energy subsidies), public administration, fiscal transparency and public financial management reforms have been undertaken, with improving outcomes reflected e.g. in Ukraine's higher ranking in the Open Budget Index, narrowing of the fiscal deficit and decline in public debt, and declining levels of VAT evasion and fraud. Structural health financing reforms have begun, prioritizing preventative care and output-based financing. Reforms of the opaque gas market and of Naftogaz can be viewed as an important success vis-a-vis anti-corruption efforts. The sector was a major source of rents for elites and exerted a major fiscal burden due to losses; its large quasi-fiscal deficit (5.5 percent of GDP in 2015) has been eliminated with Naftogaz contributing 1 percent of GDP to state coffers in 2019 thanks to tariff, governance and other reforms. Bold reforms on banking, meanwhile, have helped to consolidate the sector alongside stricter anti-money-laundering rules and strengthened financial oversight, NPL and bank resolution frameworks, and the central bank has transitioned to a credible inflation targeting framework. The implementation of the free trade area with the EU in 2017 has not only liberalized access to EU markets, but it has also triggered wider regulatory reform to support convergence with EU legislation and standards. This should enable Ukraine to export more easily not just to the EU, but also to the rest of the world. In 2021, landmark land reform has occurred, representing key first steps for increasing the role of market forces and raising investment and productivity in agriculture; in addition, the Government has moved away from market interventions designed to manage prices, trade barriers have been systematically lowered and low tariff rates codified through membership in the WTO and terms laid out in the Deep and Comprehensive Free Trade Area agreement with the EU. In mid-2021, Ukraine also passed important legislation preparing the stage for far-reaching judicial reforms.

Despite this progress, growth remains low and the growth model unsustainable. While reforms have restored macro-financial stability, GDP growth has struggled to lift above 3 percent. Broadly, the growth model remains unsustainable, underpinned by domestic consumption, and an economic/export structure still too heavily dependent on commodities and low value-added products (Figures 4 and 5). Coupled with continued heavy reliance on short-term foreign savings and foreign remittances, and against a backdrop of continued large fiscal and external financing needs this has left Ukraine vulnerable to shocks.

Investment is extremely low, below even that of Sub-Saharan Africa (Figure 6), crowded out by pro-cyclical fiscal policies in the past (that have also contributed to volatility in growth), and more recently by bank deleveraging and limited sources of non-bank financing. With government spending skewed towards rigid current expenditures—public sector wages, social payments, pensions, and debt service account for roughly two-thirds of overall spending—

Figure 4: Average annual GDP growth rate

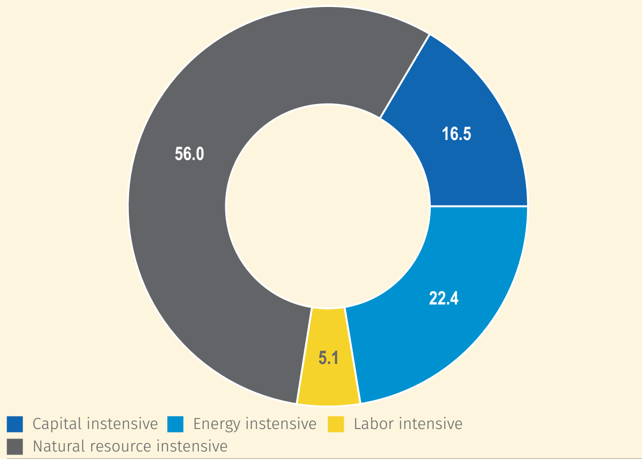
2010–19



Source: World Bank.

Figure 5: Export structure

2017



Source: World Bank Growth Study, 2019.

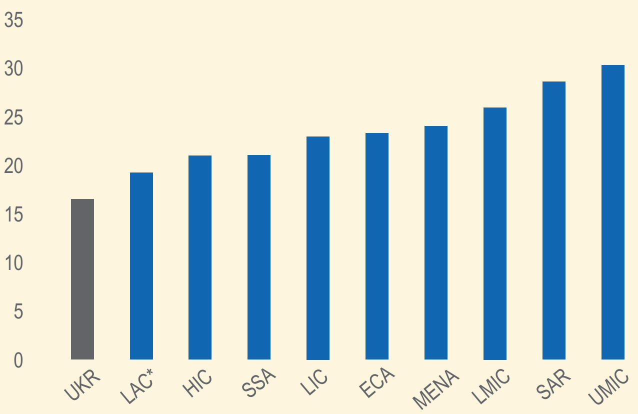
critical public investment needs are underfunded. The pattern is repeated with SOEs. The largest four SOEs in Ukraine are major contributors to the budget[9] and large inflows (via dividends and taxes) to state budgets constrain their ability to upgrade and modernize critical public infrastructure. At 22.8 percent of GDP in 2019, bank credit to the private sector was half that in Poland and Germany and in actuality, even lower given that half the loan stock is impaired (although fully provisioned). Credit to the private sector has stagnated following the 2014–16 crisis with banks preferring to lend only to high-quality borrowers, and most companies relying on internal cash flow to finance investment.[10] Non-bank financial institutions remain underdeveloped, with a poor regulatory framework and weak institutions,[11] despite being critical for a dynamic private sector. Deeper challenges are related to availability of collateral, legal hurdles to speedy resolution of impaired loans, failing rule of law and contract enforcement, and a difficult business environment due to continued systemic corruption.

The state and the "old economy," typified by the more than 3,500 SOEs in Ukraine, leave a large imprint. Ukraine's public sector, as measured by government spending which reached 47 percent of GDP in 2020, is already very large. Yet, its economic footprint is even larger considering that the state plays a major role in producing goods and services that could otherwise be produced by the private sector. As of 2019, there were 3,682 centrally owned SOEs with total assets exceeding 40 percent of GDP.[12] The majority are inactive or loss-making, and thus recipients of state aid in the form of recapitalization and loans from state-owned banks (SOBs).[13] Large SOEs are a source of considerable fiscal risk, particularly when economic shocks or poor governance lead to a reduction in the taxes, dividends and other receipts from SOEs or require an increase in subvention, loans, or equity injection. SOE oversight

9 Four SOEs (Naftogaz, Ukrzaliznitsya, Energoatom and Ukrposhta) make up 80 percent of all SOE assets, close to 90 percent of SOE employment, and two-thirds of revenues in 2019. Dividends, taxes and levies paid by Naftogaz alone represented almost 13 percent of Ukraine's state budget in 2020.
10 National Bank of Ukraine (2020a). Financial Stability Report, June 2020.
11 World Bank Group (2021e) Country Private Sector Diagnostic.
12 See World Bank (2021f). Public Financial Review, forthcoming. IMF (2016). Ukraine – Technical Assistance Report: Reforming Management and Oversight of State Assets.
13 https://ces.org.ua/en/are-the-state-owned-enterprises-less-profitable-than-the-private-ones/

Figure 6: Gross fixed capital formation

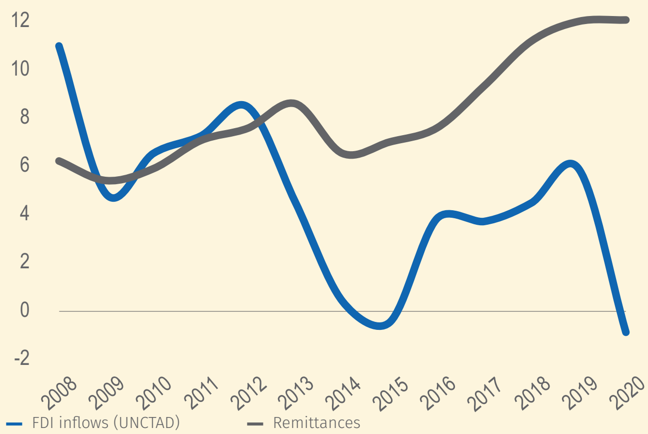
Percent of GDP, 2010–19



Source: WDI.
Note: *Excluding high income country. HIC=high income countries; LIC=low income countries; LMIC=low-middle income countries; UMIC=upper-middle income countries.

Figure 7: FDI and remittance inflows

US$ bn



Source: World Bank , Haver, UNCTAD..

lacks a coherent institutional framework and is dispersed among numerous agencies, leading to low transparency, poor financial management and weak governance, and making SOEs a source of rent-seeking by vested interests. In recent years, despite significant efforts, only nine SOEs[14] and four state-owned banks have appointed supervisory boards under the new corporate governance guidelines. SOE ownership and oversight remains dispersed among 96 ministries and agencies, complicating further reform implementation. Meanwhile, their presence in sectors as varied as agriculture, machine building, and hotels indicates that the state is directly intervening in areas that go beyond the traditional network industries. In the banking sector, following the clean-up of banks, the four SOBs now account for 55 percent of banking assets and hold the bulk of Government securities in the banking system.

Many people lack formal employment—or any job at all; a significant skills-job mismatch exists. Albeit improving, economic growth since 2016 has been insufficient to absorb workers released by the old economy and new entrants to the labor force, reflected in high structural unemployment of around 8 percent over the past decade. After peaking at 9.5 percent in 2017, unemployment began to inch down in 2019 (to 8.5 percent) only to reverse course due to COVID-19. The shadow economy is large (estimated at 30–50 percent of GDP), with one-third of the private sector workforce believed to work in the informal sector, lacking basic work protections and access to social security.[15] Many young Ukrainians have opted to emigrate: up to 9 mn (of a 20.2 mn total active labor force) are reported to work abroad for some part of the year. Unsurprisingly, Ukraine receives more by way of remittances than FDI (Figure 7). Unemployment statistics tells only part of the story: Ukraine's labor force participation (66.5 percent in 2020) is low in regional perspective (Europe and Central Asia (ECA) average of 71.5 percent) and some 30 percent of high-school graduates are not in education, employment, or training.[16] Meanwhile, some 40 percent of graduates work in lower-level jobs that do not require university-level education,

14 Those include Nafotgas, Boryspil Airport, Ukrpost, Ukrenergo, Ukrzaliznytsia, Ukhydroenergo, Gas Transport Systems, Sea Ports, and Ukraina Printhous. See World Bank(2021e).
15 EU-ILO, 2018. Undeclared Work in Ukraine: Nature, Scope and Measures to Tackle It.
16 ILO. https://www.ilo.org/budapest/what-we-do/projects/WCMS_617840/lang--en/index.htm

and nearly half of those who are unemployed hold a tertiary degree. With firms reporting skill shortages, these trends point to significant challenges with education quality.[17]

Population ageing and emigration have led to a decrease in Ukraine's labor force and this trend is projected to continue, even under the most optimistic of assumptions.[18] Negative demographics are compounded by persistently low rates of economic activity. Labor force participation rates decreased to a low of 62 percent in 2017 following the crisis.[19] Although they have partially recovered, they remain below 2010 levels (Figure 8). Participation and employment rates are particularly low for women, older workers, and among working-age adults from lower-income households. Survey data suggest that the recovery in employment rates since 2017 was driven by better-off workers, with employment rates among households in the B40, where older household heads are overrepresented, stagnating at a low level. While there is no clear evidence on what underpins this, several factors have likely played a role, including the anemic recovery (which has "pushed" workers to seek jobs overseas); higher reservation wages due to remittance inflows, and rapid growth in minimum wages that has likely reduced demand for the low-skilled. What is clear though, is that growth in labor incomes has lagged for the B40 and their share of labor in total household income further decreased (Figure 9), versus households in the top 60 percent of the distribution ("T60"), whose employment rates and labor shares increased.

Internationally comparable data indicate a large drop in poverty over the past two decades; national poverty lines suggest however that one in five people still live below the national actual Subsistence Minimum. Poverty in Ukraine, a lower middle-income country, is low even in comparison with upper middle-income countries in ECA but has barely decreased since 2010 (Figures 10 and 11). In 2019, 2.5 percent of the Ukrainian population lived below the upper middle-income poverty line of US$5.5 per person per day in PPP terms.[20] The relatively low poverty rate reflects exceptionally strong poverty reduction between 2002–10, when poverty declined from 43.5 percent to 5.3 percent—an annual reduction of 4.8 percentage points—though driven by favorable external conditions and unsustainable pro-cyclical fiscal policies. Gains since 2010 have been smaller, with the poverty rate declining marginally from 5.6 percent in 2010 to 2.5 percent in 2019. These trends are also reflected in national actual Subsistence Minimum poverty line, which show poverty falling from 81 percent in 2002 to 23 percent in 2019[21].

Past progress on shared prosperity has been driven by unsustainable policies; the growing reliance of the poor on social transfers is a major source of concern and points to the need for a new model of poverty reduction. Data show a high responsiveness of household living standards to economic growth: between 2002–18, a one percent change in GDP per capita was associated with a 1.6 percent change in mean household consumption per capita, with a higher pass-through from growth to household consumption for lower-income households (Figure 12 and Figure 13)[22]. This strong record appears to be driven by favorable external factors (rising or high

17 World Bank (2019b). Review of the Education Sector in Ukraine.

18 Kupets, (2014). Labor Market Challenges of an Aging and Shrinking Population in Ukraine.

19 A key reason for the low labor force participation and employment rates is the low level of economic activity among older workers, whose skills were built for a different economic system and are obsolete in today's economy. Once older workers lose their jobs, the probability of re-employment is low (Kupets, 2014).

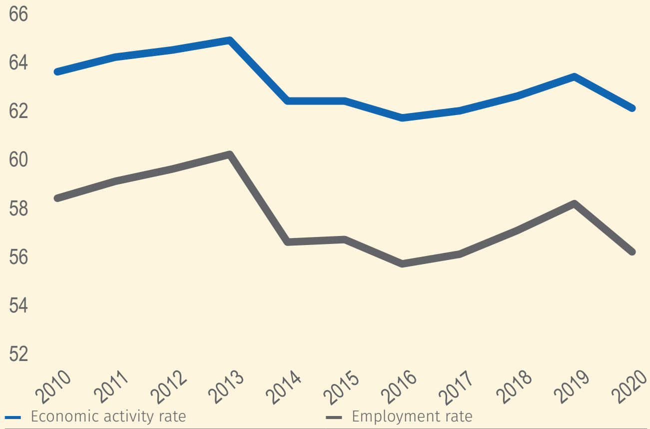
20 Based on the lower middle-income poverty line (US$3.2 per person per day), poverty amounted to 0.4 percent in 2018).

21 The actual Subsistence Minimum is one of the national poverty lines used in Ukraine. It differs from the statutory Subsistence Minimum in that the actual SM is systemically updated for inflation and thus has constant purchasing power. In contrast, the statutory SM is set by policy and does not have a constant real value (and cannot be used for comparisons over time).

22 The growth elasticity of poverty did not substantially differ between the high-growth period (2002–08) and the low growth period (2009–18).

Figure 8: Labor force participation and employment

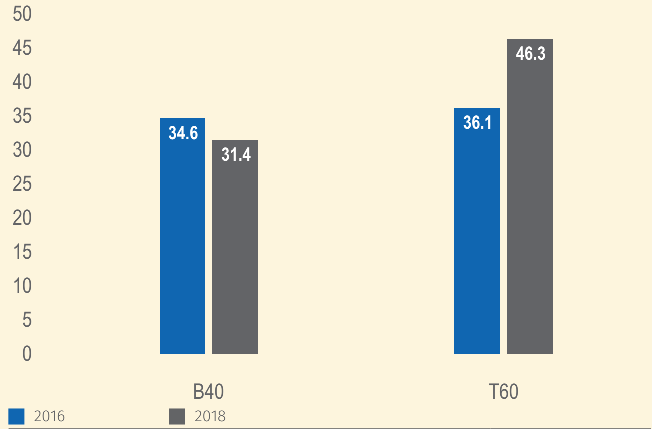
Percent



Source: SSSU, 2010–2020.

Figure 9: The share of labor in household income

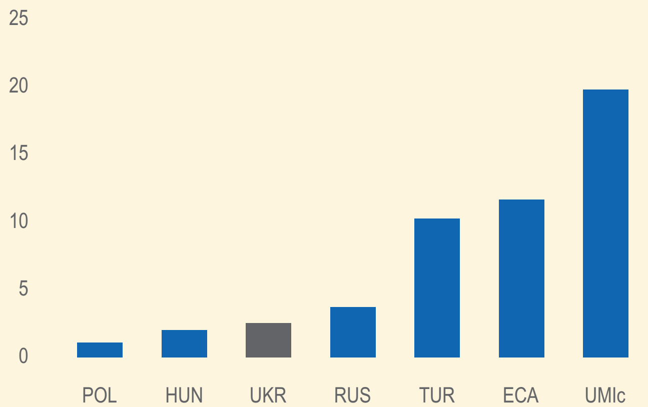
Labor income share, percent



Source: World Bank, Haver, UNCTAD.

Figure 10: Poverty rate, Ukraine vs selected comparators

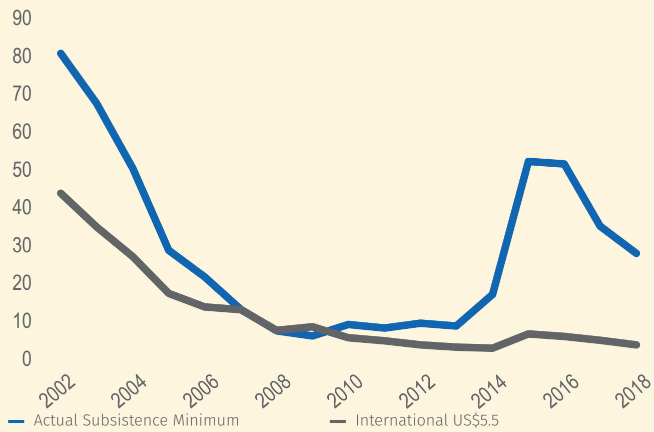
Based on upper middle-income poverty line of US$5.5 per person per day; 2019 or latest available



Source: WDI.

Figure 11: Poverty rate, Ukraine

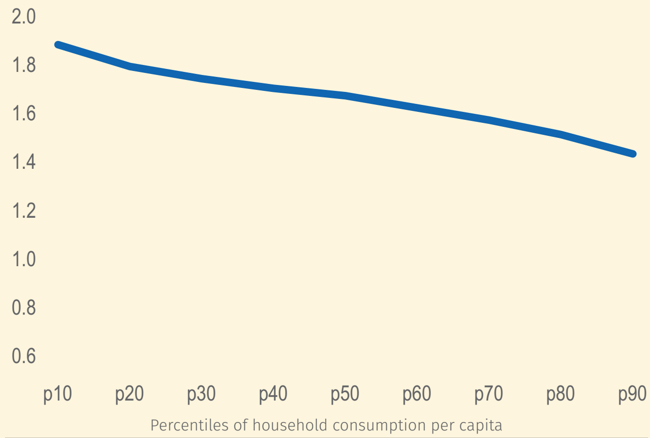
Labor income share, percent



Source: World Bank, Haver, UNCTAD.

Figure 12: Household consumption and GDP growth

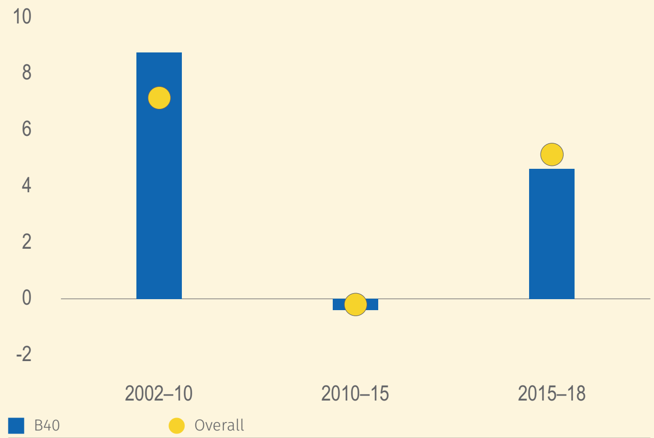
Elasticity between GDP growth and household consumption per capita, 2012–18



Source: HLCS, 2002–2018. WB staff calculations.

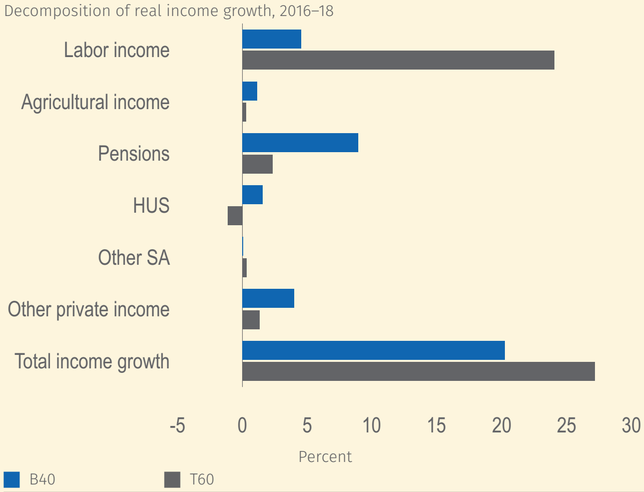
Figure 13: Consumption growth of the B40

Average annual household consumption growth, percent



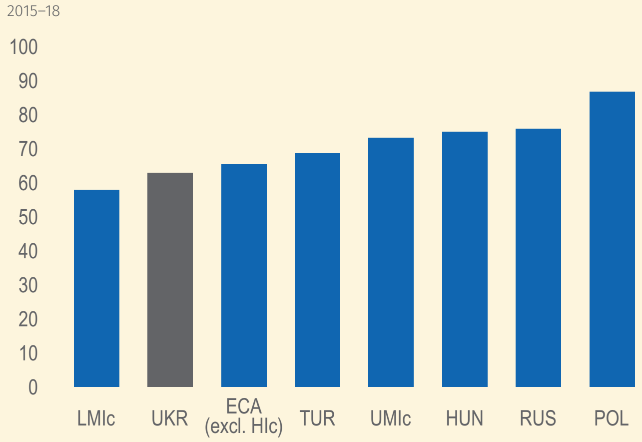
Source: HLCS, World Bank Staff calculations.

Figure 14: Sources of income growth for the B40 and T60



Source: HLCS, World Bank Staff calculations.

Figure 15: Access to an account at a financial institution, B40



Source: World Bank. WDI database.

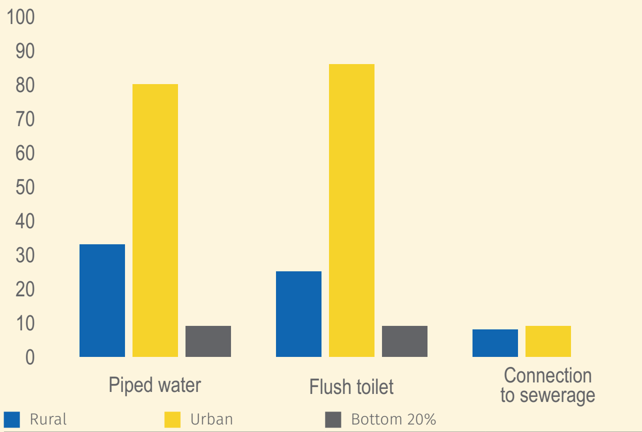
global commodity prices) that benefited workers in agriculture and industry,[23] and relaxation of fiscal discipline and expansionary wage and social assistance policies during the 2000s. These forces, in turn, laid the seeds for subsequent crises, when terms of trade deteriorated and macro imbalances rose to unsustainable levels. Since 2016, there has been robust growth in consumption of the B40 (4.6 percent per year, slightly trailing average consumption growth of 5.1 percent). However, this has been underpinned by social transfers: their weight in total incomes was already rising in the pre-crisis period and has increased further since. As Figure 14 shows, between 2016–18, pensions accounted for nearly half of total income growth for the B40, while labor income accounted for less than a quarter. In contrast, 90 percent of real income growth for the T60 was driven by higher labor incomes. The growing weight of transfers in the livelihoods of poorer groups raises concerns about the sustainability of these patterns amidst uncertain growth prospects and continued fiscal pressures, and points to the need for activation measures and broad-based and inclusive job creation led by the private sector to underpin sustainable income growth for the B40.

Extremely large disparities in access to basic services point to significant inequalities in opportunity. Disparities are also visible by gender, location, and across the income distribution. For instance, female labor force participation rates and average wages are lower than those of male workers;[24] with men experiencing lower life expectancy in part because of greater susceptibility to non-communicable diseases (NCDs), women are also overrepresented among older households, and among the land-owning rural population. Meanwhile, disparities documented for the B40 are extremely large, with too few having access to the most basic of services. Nearly half are unbanked (Figure 15), while 9 mn people—mostly in rural areas or the bottom 20 percent of the population—lack access to piped water. Only 8 percent of the population in

23 Agriculture and industry together accounted for nearly 38 percent of total employment in 2012. EU-ILO (2018) shows that agriculture moreover continues to account for the bulk of informal sector workers (57% in 2016).

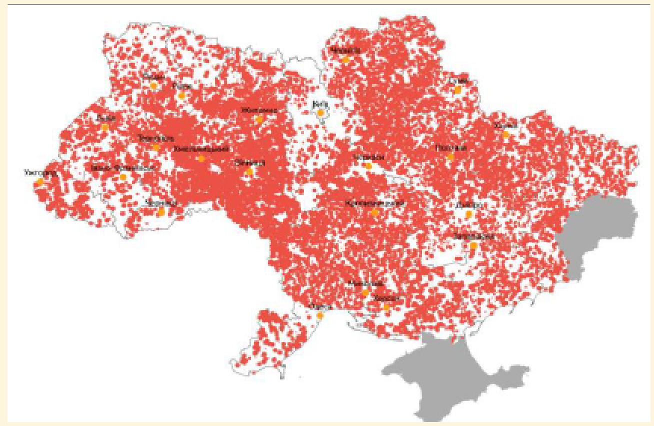
24 Women's labor force participation stands at 47 percent (vs. 63 percent for males) and 46 percent of businesses are owned by women. Gender pay gap is significant at over 23 percent. Women also tend to spend twice as much time on unpaid domestic work, and even more on childcare.

Figure 16: Access to water and sanitation services, for B20, rural and urban households



Source: Data for piped water from State Statistical Service from 2016; remaining data from MICS (2012).

Figure 17: Settlement without fibreoptic connectivity, 2020



Source: World Bank (2020b).
Note: Unconnected settlements are marked in Red; the size of the circle for each settlement is proportionate to its population.

rural areas has a connection to sewerage, and for the bottom 20 percent, access is negligible (Figure 16).[25] Broadband coverage is extremely uneven, especially in rural and remote areas (Figure 17), contributing to a digital divide and undermining public service delivery following COVID-19, for instance with respect to remote learning during COVID-19 related lockdowns. In the conflict-affected eastern regions, difficulties in accessing public services have exacerbated the humanitarian crisis—an estimated 1.3 mn lack access to safe water and sanitation (W&S) and 600,000 lack access to healthcare services,[26] especially those in rural areas because major service centers are located in the non-government controlled areas.[27] With no universities left in Luhansk regions and only a few in Donetsk region, young people are leaving for other cities for education such as Kharkiv and Kyiv. Few ultimately return. At the same time, the Eastern regions face a heavy fiscal and economic burden from some 800,000 internally displaced persons (IDPs), 60 percent of whom are pensioners and 15 percent children, especially with regard to housing and other basic services; however local authorities have no scope for investment or upkeep of the crumbling infrastructure and housing stock due to revenue declines. Meanwhile, on a per capita basis, transfers for social assistance programs and utility subsidies are at the regional median for Luhansk and well below for Donetsk (including for education, health, and targeted transfers).[28]

25 Note that while spatial disparities in access to basic services are large, those in incomes are relatively low. In 2019, nine percent of total income inequality in Ukraine was due to disparities in average incomes across regions, and four percent due to disparities across rural and urban areas.
26 UNOCHA (2018). *Humanitarian Response Plan Ukraine, January–December 2019*.
27 World Bank (2020) *Eastern Ukraine: Reconnect, Recover, Revitalize* (3R) Project Document.
28 World Bank (2021b). The Economics of Winning Hearts and Minds. Forthcoming.

2. *Institutional reforms: shallow roots hampered by weak commitment*

Ukraine has made important progress on reforms in recent years, but many are either incomplete, or not had sufficient time to fully bear results. Given deeply-embedded corruption and state capture in Ukraine, the 2017 SCD viewed building institutions of better governance and anticorruption as critical to the success of reforms *across the board*. Since then, although legislative foundations for structural reforms that limit room for rent-seeking and four new formal institutions for fighting corruption have been established, progress has been mixed. Key reforms have not had a chance to be completed so that underlying challenges remain unaddressed (e.g., in land, gas and electricity markets).

An unreformed judiciary is now actively impeding broader reforms. An independent judiciary is at the core of rule of law, and fundamental in a market economy to protect property rights, ensure efficient allocation of resources, and facilitate business on equal terms. It thus creates the enabling environment for increased private sector investment and for allowing citizens and businesses to unlock their economic potential. Various surveys confirm continued high levels of dissatisfaction and distrust (Figure 18) with the judiciary named as a largest obstacle to foreign investment.[29] The High Anti-Corruption Court (HACC) was set up to by-pass the ineffective and/or corrupt judiciary for high level corruption cases. However, the latter—in particular, judicial management institutions composed mostly of judges from the Yanukovich period (2010–14) and the Constitutional Court of Ukraine (CCU) in particular—continue to undermine the functioning of the anti-corruption architecture and impede reforms, including of the judiciary itself.

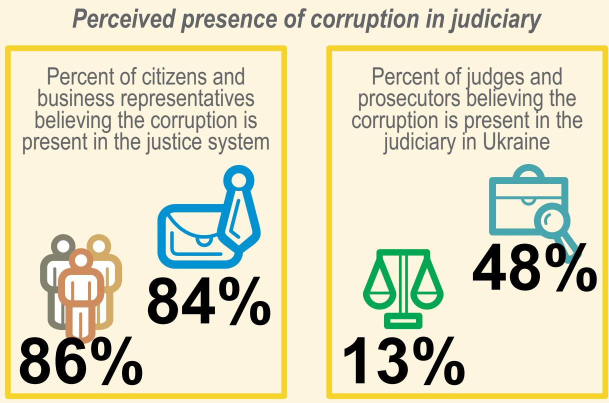
Pushback from vested interests has been visible. Starting in the summer of 2020, CCU rulings have undercut the anticorruption institutions created in recent years and undermined the past four years of anti-corruption reforms by decriminalizing the submission of false asset declarations and effectively removing the National Agency for Corruption Prevention's (NACP) authority to use the electronic asset declaration system to identify and prevent or punish corruption by public officials and the judiciary (since reversed with the adoption of the revised Corruption Prevention Law in late 2020). This has led to many ongoing anti-corruption investigations and prosecutions being abruptly ended and has undermined the credibility, functioning and independence of all four key anti-corruption agencies (NABU, NACP and SAPO and HACC). Other structural reforms (deposit guarantees in the banking sector and the 2017 health reforms) are also under challenge at the CCU. Changes in leadership at key institutions (SAPO, the central bank, and the Prosecutor General office) and the departure of independent board members at major SOEs (including Naftogaz) raise concerns about the broader commitment to reforms. More recently legislation reforming the judicial management bodies was adopted, which lays the ground for comprehensive judicial reforms later. Nevertheless, judicial reform is still in the early stages and timely implementation of recent laws adopted will be critical.

Decentralization has only been partly accomplished; large-scale privatization has not yet begun. Decentralization was a key priority in the 2017 SCD to strengthen local self-government, accountability for and effective delivery of services, and to undercut the centralized system of influence that was a legacy from the Soviet era. Substantive changes have been introduced, including the voluntary amalgamation of the lowest territorial units *hromadas*, and some degree of fiscal decentralization,[30] mainly related to education and healthcare. While this partial decentralization is

29 Dragon Capital (2020). Foreign Investor Survey 2020.

30 Fiscal devolution has been reflected in the Budget Code of Ukraine and in the State Budget: the share of inter-budgetary transfers in local budgets revenues decreased from about 53 percent in 2018 to 33 percent in 2020 and 2021; share of local taxes increased from 3 percent in 2014 to about 16 percent in 2020.

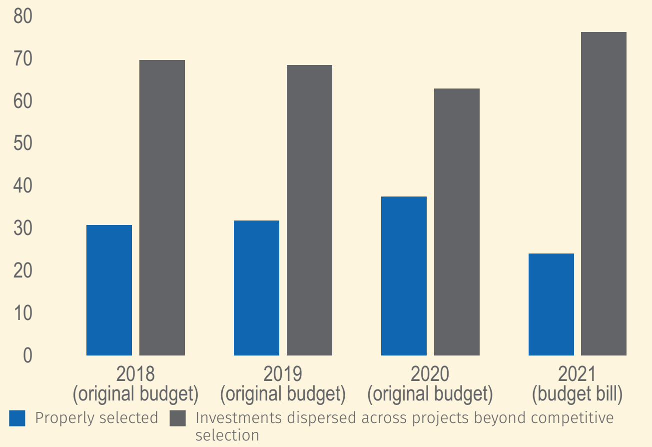
Figure 18: Judicial corruption



Source: World Bank Regional Justice Surveys. Ukraine (2020) forthcoming.

Figure 19: Public investments included in the central government budget

Percent of total public investments including intergovernmental transfers



Source: Official web-portal of the Parliament of Ukraine (Legislation of Ukraine), World Bank calculations.

considered successful, there remain pending reforms to strengthen institutional capacity, clarify the scope, structure, oversight, and powers of local and municipal authorities, focusing on strengthening citizen engagement and participatory mechanisms. The 2019 PEFA Assessment shows that the administrative decentralization and subsequent increase of local financial sources is yet to be complemented by measures for improved accountability of local authorities. Ukraine's demographics—with eastern regions facing population declines, while larger western cities attract population inflows– have further complicated the challenge of local service delivery. Meanwhile, large-scale privatization has not begun, despite legislative and administrative measures to aid the process (e.g., a shortening of the list of companies for which privatization is prohibited, and streamlining of privatization legislation).

Deregulation appears to have benefited larger firms more; progress on the implementation of the critical EU Association Agreement has been slow. Deregulation reforms have led to a substantial improvement in Ukraine's ranking in the World Bank's *Doing Business Survey* from 112 in 2014 to 64th among 190 countries in 2019. There has been a broad-based improvement in all sub-categories, save insolvency process, which puts creditors through a lengthy and expensive ordeal to recover any of their funds, and which has impaired banks' ability to resolve NPLs. Furthermore, although Ukraine committed to accept EU technical standards beginning 2019—this would open Ukrainian markets to broader contestability—these have not yet come into force so that firms continue to face limited competition.[31] Since the 2017 SCD some de-monopolization has occurred—notably in gas and agricultural land markets—but most sectors remain dominated by formal and informal nationwide and local monopolies or cartels.

Public administration reforms are underway but are progressing slowly. These aim to establish an efficient and accountable public administration, ensure sustainable development of the country and provide

31 In effect, Ukraine maintains the old Soviet standards, and since Russian products are by and large sanctioned or otherwise not available, Ukrainian companies often face only one—Ukrainian—supplier. See https://www.atlanticcouncil.org/in-depth-research-reports/report/ukrainian-business-leaders-advocated-better-economic-policy-and-rule-of-law-a-report-card/

high-quality public services. Key areas of focus are: strengthened strategic public policy development and coordination; improved accountability of public administration bodies and public finance management; digitalization of public services; modernization of civil service and introduction of merit-based human resource management that will help address high levels of nepotism and patronage through incentive mechanisms and performance management systems to keep talent in public service.[32] Although reforms are progressing, their pace is slow due to inflexible legacy practices and rigid institutional structures and functions that make inter-governmental coordination difficult and resistant to change.

Budget transparency has improved, but citizen engagement remains limited, and weaknesses remain in the management of public investments. Reflecting greater transparency of public finances, Ukraine climbed 17 positions since 2015 in the Open Budget Index (OBI), ranking 26th in 2019 out of 117 countries. The government has also begun to publish citizen budgets and fiscal risk statements. Nevertheless, as per the OBI citizens engagement remains weak due to low public participation in the budget process, especially at formulation and execution. The 2019 PEFA Assessment also shows that legislative procedures for budget scrutiny do not stipulate mechanisms for public consultations, especially at the national level. Weaknesses in the management of public investments, assets and liabilities remain significant and additional challenges to the stability of the public financial management (PFM) system have arisen due to the COVID-19 pandemic (especially in relation to gaps in cash and liquidity management). Public investment is limited (on a consolidated basis, and including SOE investments, this amounted to 5.2 percent of GDP in 2019 versus 38 percent for current expenditures), and its efficiency is weak due to gaps in public investment management processes. State budget investments including intergovernmental transfers are dispersed across medium- and small-sized projects. Due to an incoherent legal framework, spending for projects not competitively selected in 2018–20 was more than double that of competitively selected investments (Figure 19). At the local level, there are no clearly established rules and procedures, resulting in mostly ad-hoc and politically driven decisions.

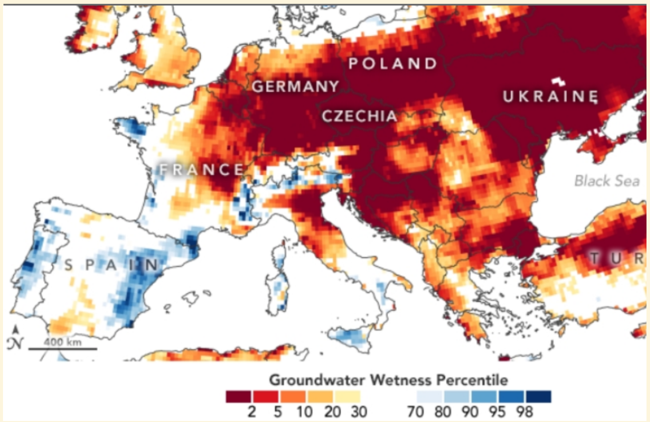
3. New risks, but also opportunities

Climate change poses threats to long-term prosperity and growth in Ukraine; the associated displacement of jobs requires supporting workers to adapt to new opportunities as well as shoring up safety nets to ensure a "just transition," but this will be costly. Climate change and related factors, such as air pollution, poor water and land management, declining surface water quality, and high energy intensity pose significant threats to development. At the same time, climate resilient development could improve prospects for economic growth. Ukraine regularly experiences water stress (Figure 20) and this is expected to worsen in the coming decades, threatening already scarce freshwater resources in the south-east. In agriculture, current efforts to improve productivity (e.g., through land reforms) will be to no avail if climate mitigation and adaptation policies are neglected: changing weather patterns already contribute to significant volatility in crop yields and, in the future, harvest losses of as much as 40 to 60 percent are anticipated.[33] Flood risks are also high: the annual average population affected

32 Major reform steps, currently under implementation by the National Civil Service Agency, cover increased transparency and efficiency in access to information supporting policy decision making by ministries and agencies, as well as improving their institutional capacity for effective and efficient delivery of government policies and programs.

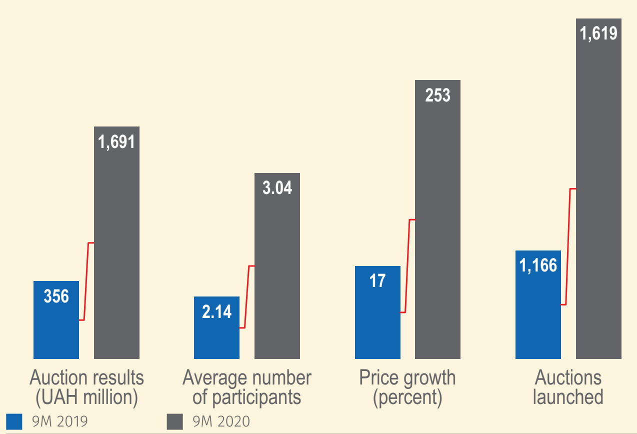
33 World Bank (2021e) Ukraine Country Private Sector Diagnostic: Building Markets in Ukraine.

Figure 20: Satellite image of drought in river basins and groundwater aquifers, June 2020



Source: Gravity Recovery and Climate Experiment Follow On (GRACE-FO). https://earthobservatory.nasa.gov/images/146888/signs-of-drought-in-european-groundwater

Figure 21: Small scale privatization outcomes using Prozorro



Source: State Property Fund Unit.

by flooding in Ukraine is about 600,000 and the annual average GDP loss about $1 bn.[34] In the future, the largest losses are expected to be felt in industrialized and populated regions. Alongside adaptation, mitigation policies will also be critical to reduce the extremely high carbon intensity of the economy: currently, Ukraine is ranked fifth globally for energy intensity, is one of Europe's largest energy users (due to its inefficient and outdated energy infrastructure, historically low energy prices and high industrial and agricultural energy demands). Ukraine's 2017 nationally determined contribution (NDC) mitigation targets were criticized as "critically insufficient."[35] The Government has since announced its intention to update its NDC target to between 58 to 64 percent reduction below 1990 levels by 2030. This target while a significant improvement from its previous target, still falls short of the ambition level needed to achieve a 1.5°C compatible goal. In the absence of mitigation policies, and given that up to one-fifth of exports to the EU are considered carbon-intensive[36] and Ukraine could suffer a loss in international competitiveness relative to "greener" producers. On the other hand, mitigation policies will also carry substantial co-benefits in terms of reduced pollution, health benefits, preservation of biodiversity and natural capital, and thus help to foster longer term development. Financing the energy transition—including upgrading energy and transport infrastructure, incentivizing energy efficiency and cleaner energy, and helping specific communities adapt to climate change (e.g from coal phase-out) and workers in general to—will also be costly and will require both public and private investments. To meet EU objectives, substantial investments in municipal, industrial, and building sector energy efficiency will be needed, enabled by the right regulatory and Public Private Partnership (PPP) framework.

Technological advances are causing fundamental shifts in global production, trade and the very "nature of work." In manufacturing, distance to customers is shortening as digital, scale neutral and 3D technologies are enabling firms to build and deliver customized high value-added products closer to final markets.

34 World Bank GFDRR Assessment.
35 https://climateactiontracker.org/countries/ukraine/fair-share/
36 Saha and Zachmann (2020).

These relocation and reshoring trends are expected to be further reinforced by COVID-19[37] as businesses and policy makers shift emphasis from economic efficiency to resilience and flexibility. In addition, global services trade continues to rapidly expand, with digitalization facilitating service globalization. This tele-migration of work is also expected to accelerate post-COVID-19. Together these shifts imply a growing global premium on innovation, and non-routine cognitive and technical skills. The digital transformation also implies potential opportunities for new jobs and entry points for new firms through increasing connectivity to new markets and supporting inclusion through service delivery (particularly to remote or rural areas. e.g., through telemedicine).

Ukraine has embarked on digital transformation, but more needs to be done.[38] Ukraine is making significant progress in areas like access to ICT resources, connectivity, and strategic and regulatory frameworks, reflected in its improved ranking (up 13 places to 69 in 2020 versus 2018) in the UN e-government Development Index. Major achievements include e-procurement (Prozorro) launched in 2016 which increased transparency in government revenues, reduced corruption in public procurement and kickstarted small-scale privatization[39] (Figure 21). A shift to electronic VAT administration in 2015 has also delivered substantial fiscal savings and reduced VAT fraud. More recently, the government has embarked on the digitalization of public administration services for businesses (Diia). However, one major challenge is that broadband penetration—the backbone for transformational digital reforms—is low in Ukraine at just 32 percent for households, and a deep digital divide exists between rural and urban centers. In addition, the G2G (Government to Government) dimension of e-government, covering systemic areas such as data management (including defining the roles and mandates of involved institutions, development of data standards, shared services, and capacity development for e-services) has also been neglected. More broadly, the institutional framework for sectoral digital regulation is weak. And, as adoption of digital technologies increases, cyber risks are also rising with the regulatory framework for dealing with cyber risks viewed as inadequate.

Deepening trade ties with the EU, reshoring and digital trends could further accelerate Ukraine's economic orientation towards the West. Ukraine's economic geography has been changing in recent decades reflected in the secular decline of the traditional industrial heartland in the east and the rise of more modern sectors in the center and the west, a shift that has been further accelerated by recent conflict. In parallel, regional demography has also changed, reflected in low fertility rates and net migratory outflows in Eastern and Central Ukraine, and large positive in-migration into oblasts already hosting the largest urban populations, such as Kharkiv, Odessa, Lviv and the City of Kyiv, that increasingly trade with the EU neighbors in the west. These trends will continue with the Deep and Comprehensive Free Trade Area (DCFTA) agreement, which opens stable and predictable preferential access to the largest market in the world, with over 500 mn consumers, to Ukrainian businesses. Investments in connective infrastructure could help Ukraine leverage its proximity to EU markets (including increased opportunities for exporting more complex products through near shoring and reconfiguration of global value chains in the aftermath of COVID-19[40]) and further accelerate these shifts.

37 UNCTAD (2020).
38 World Bank (2019c). Ukraine: Analysis of e-government reform options and implementation plan.
39 Pursuant to the law of Ukraine "On Privatization of State and Municipal Property," which entered into force in March 2018, state and municipal property worth up to UAH 250mn is being privatized through the Prozorro platform.
40 World Bank (2021e). Country Private Sector Diagnostic. Creating Markets in Ukraine.

C. What is holding back growth and prosperity in Ukraine?

Ukraine's anemic growth performance, low investment and, in turn, limited progress on job creation and shared prosperity, are the result of several factors; these can be mostly traced back to weak institutions and state capture. The 2017 SCD identified three key constraints to Ukraine's longer-term prosperity and development, namely corruption and state capture, conflict and external shocks, and geography and demography. These constraints remain relevant today, but each has been re-framed more broadly given developments since 2017—for instance, to emphasize weakness of institutions alongside state capture (Table 3). Recent analytical work also points to the low supply potential of the economy related to not just severe demographic headwinds, but also to lagging productivity, low investment, and infrastructure bottlenecks that prevent Ukraine from taking advantage of its natural resource endowments or proximity to large EU markets to the west. But it is worth noting that these too are symptomatic of wider institutional and state capture challenges, that for instance have led to the channeling of bank credit in the past to connected firms rather than the most productive firms in the economy, or fiscal indiscipline that has contributed to boom bust cycles and crowded out private investment or market regulations that favored a few connected firms versus the rest of the private sector. The third constraint relates to conflict and external shocks and has been similarly broadened, given Ukraine's vulnerability to a greater range of external shocks, both slow-moving (climate change, conflict) and those with the potential to disrupt the economy rapidly (e.g COVID-19, shifts in global financing conditions as well as global demand shocks).

1. Weak institutions, corruption and state capture

Most of Ukraine's poor growth, investment and social outcomes are the result of weak institutions and state capture by vested interests. In Ukraine, vested interests have opposed the establishment of a rules-based system, through the deliberate weakening or hollowing-out of institutions meant to uphold such a rules-based system. This has in turn facilitated the creation and maintenance of an economy built around the redistribution of rents. As a result, oligarchs have been able to tap into rich sources of corruption, including in the energy sector, public procurement, state assets and tax administration and through SOEs. The widespread consensus among firms and households that corruption is remarkably high (Figure 22) is also reflected in Ukraine's lowly ranking at 117 (out of 180 countries in 2020) in Transparency International's annual Corruption Perceptions Index, barely improved since 2014.

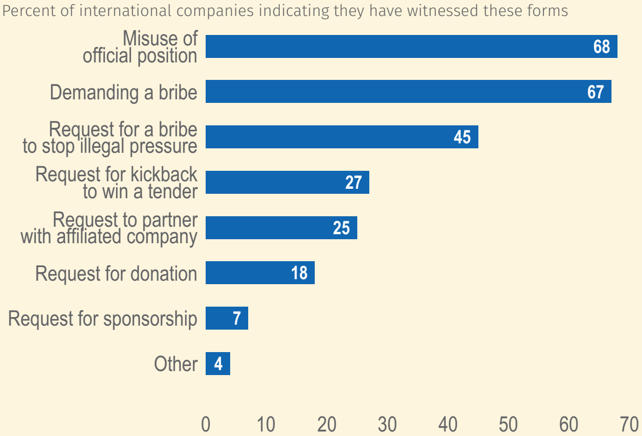
Weak institutions, dysfunctional rule of law and rent-seeking significantly impact the business environment. Weak institutions, including courts, remain susceptible to political influence and pressure from powerful private citizens and politically connected firms, and cannot operate consistently beyond one political cycle. Judicial reform has been late to start and has been a bottleneck for other critical reforms. This has undermined commitments to property rights and created legal uncertainty. Contracts, for instance, are weakly enforced by Ukraine's courts—the total value of non-enforced judicial decisions was equivalent to 18 percent of Ukraine's GDP in 2016, with the State

Table 3: Key constraints in the 2017 SCD and the 2021 SCD Update

2017 SCD		2021 SCD Update	
Corruption and state capture	*Demography and Geography* • Shrinking population • Resource endownment • Proximity to Russia/EU *Conflict and External Trade* Vulnerability to • Conflict • External demand/TOT shocks	*Weak institutions, corruption and state capture*	*Supply Constraints* • Shrinking population • Low investment/FDI • Weak productivity *Vulnerability to External Shocks and Climate Risks* Vulnerability to • External demand/TOT shocks • Financing shocks • Global health/climate change shocks • Continued conflict

Figure 22: Forms of corruption

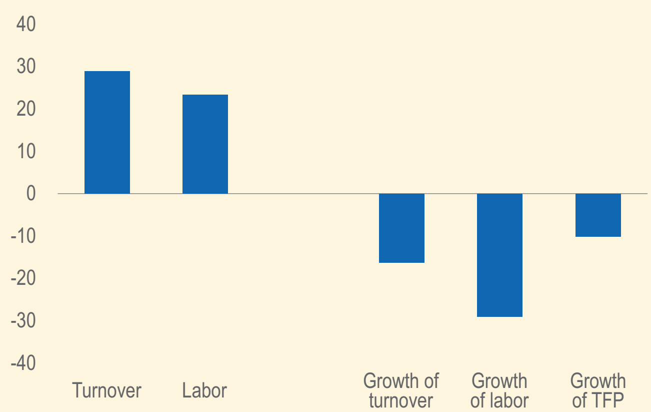
Percent of international companies indicating they have witnessed these forms



Source: American Chamber of Commerce, Ukraine. Survey of 147 companies in 2017.

Figure 23: Politically vs non-politically connected firms

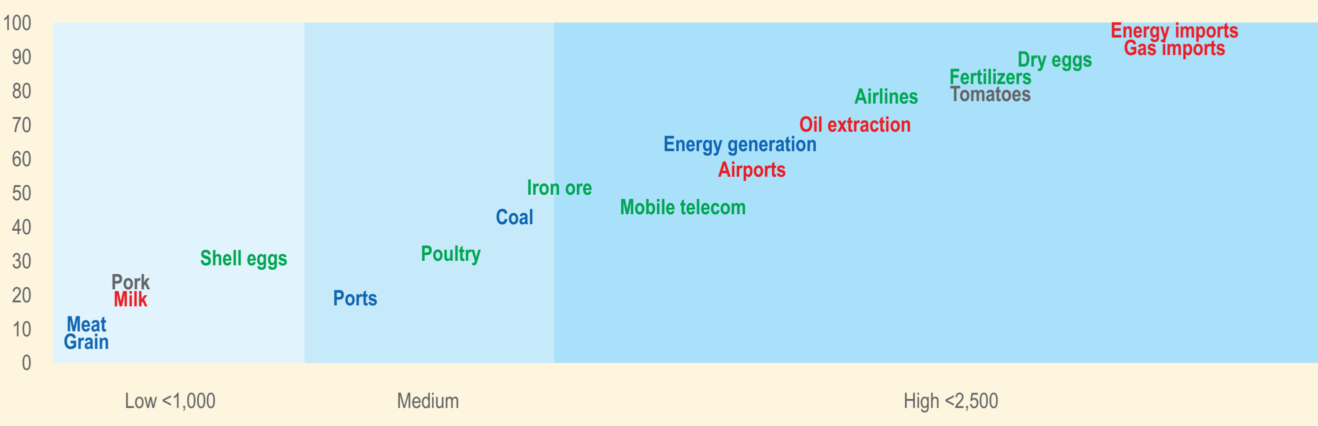
Percent point difference



Source: Balabushko et.al. (2018).

Figure 24: Market concentration in key sectors with SOE and oligarch participation

Market share of largest player, percent



Source: World Bank (2018a).

Enforcement Service (SES) recovering just 2 percent of the value of claims. The enforcement of property rights hinges on connections with top officials, or international guarantees such as bilateral investment treaties. While such arrangements—which are costly—might work for large enterprises and for large transactions, they are prohibitively costly for small firms, and hence, undermine growth and investment.[41]

Market concentration is high and contestability low, negatively impacting productivity and innovation. Small and medium-sized enterprises play a limited role in Ukraine's economy, and larger firms and business groups dominate most sectors—suggesting that competitive, market-driven processes of entrepreneurship, innovation, and productivity growth are not functioning properly. Firm entry and exit dynamics reveal a persistent lack of contestability: even markets where competition would typically be viable tend to be dominated by a single SOE or a few large firms/informal cartels (Figure 23), often with political connections, which reduces competitive pressure and exacerbates the risk of anticompetitive practices. Analysis of rent-seeking and crony capitalism in Ukraine shows that between ½–2 percent of firms are politically connected; however, they control over 20 percent of total turnover and over 25 percent of the assets of all Ukrainian companies.[42] They are also less productive and grow more slowly than non-politically connected firms, undermining economy-wide job creation (Figure 24). Ukraine's weak conditions for competition are also reflected in higher operational risks that firms perceive in relation to vested interests and cronyism, anticompetitive practices, and discrimination against foreign firms.

Overregulation and capture of SOE dominated network industries continue to be key ways by which vested interests maintain control over the economy (Figure 24). The selective enforcement of deliberately onerous rules and norms is a key instrument of rent-seeking in economies with high levels of corruption. In Ukraine, the impacts are visible in the form of extortion under the threat of enforcement and collusion between officials and businesses or citizens to circumvent these norms.[43] Regulations also help entrench incumbents (by preventing entry and contestability), increases the misallocation of resources, prevents growth, and contributes to high levels of informality. In Ukraine, these impacts are further exacerbated by significant state intervention in markets where private sector participation and competition are typically viable (such as energy generation, manufacturing, some types of transport services, and agriculture), with state intervention being the largest contributor to product market regulatory restrictiveness.[44]

The anemic competition environment in upstream sectors increases input costs and weakens service quality, undermining efficiency across the economy. SOEs and politically connected firms are especially prevalent in productivity-enabling services (e.g., utilities, transportation, and logistics) and sectors that supply industrial inputs (e.g., cement, steel, fertilizers, and oil products), and competitive distortions in these markets negatively affect overall domestic production and export competitiveness.[45]

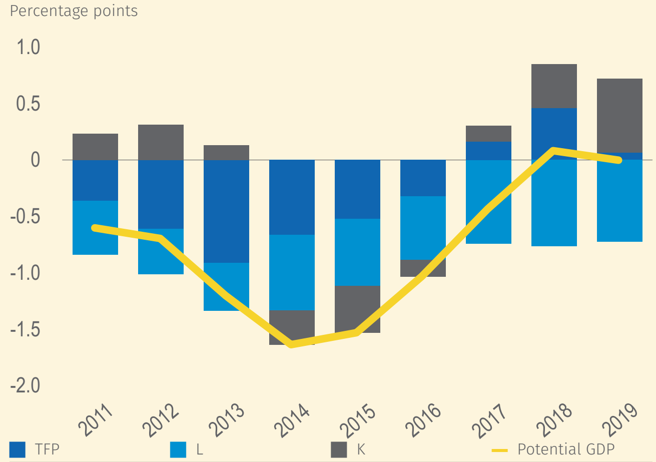
41 World Bank Group (2019a). *Ukraine Growth Study Final Document. Faster, Lasting and Kinder.*
42 See World Bank (2018a) and Balabushko et al. (2019).
43 Lough and Dubrovisky (2019): Are Ukraine's Anti-Corruption Reforms Working?
44 World Bank Group (2019a). *Ukraine Growth Study Final Document. Faster, Lasting and Kinder.*
45 World Bank (2018a). Reducing Market Distortions for a More Prosperous Ukraine.

2. Low supply potential coupled with deep sectoral and infrastructure bottlenecks

The structural foundations for growth in Ukraine are weak. Ukraine faces significant demographic headwinds: the population has shrunk by 15 percent since 1999, and the youth population by nearly 25 percent. The 2017 SCD argued that this puts a premium on lifting investment and productivity to compensate for the drag from demographics. However, the 2019 Growth Study points to challenges related to extremely weak investment and productivity *per se* that are structurally lower than would be expected in a country with similar levels of income per capita, and because of which potential growth is close to zero (Figure 25). Low potential growth also matters from a short-term cyclical perspective, as any acceleration in growth cannot be sustained without leading to macro imbalances, vulnerabilities, and overheating/ inflationary pressures visible most recently in 2017 and 2018. This suggests that any recovery from the COVID-19 crisis—however modest—could rapidly run into supply-side constraints.

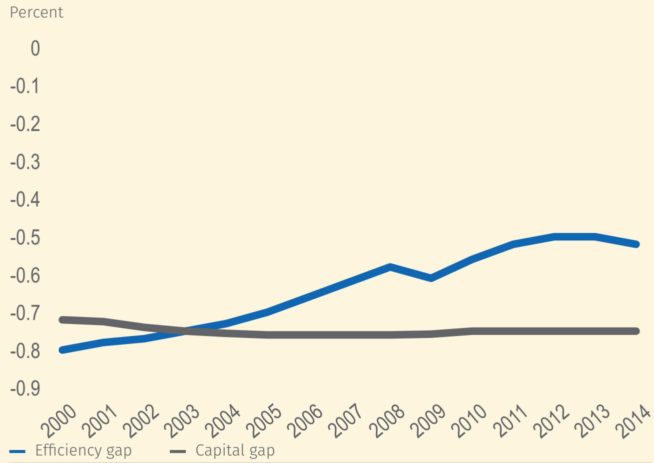
Labor productivity is much lower than in advanced economies, depressed by a variety of factors. An average worker in Ukraine produces in one year what his counterpart produces in 17 days in Germany. To increase output per worker, Ukrainian firms have to not only become more efficient—to learn better ways to use currently available machinery and tools to produce more output (*efficiency gap*)—but also increase the level of capital stock per worker that would allow each worker to produce more output (*capital gap*). While the efficiency gap has improved, Ukraine has not narrowed it capital gap (per worker) since the late 1990s (Figure 26), constrained by low savings, limited FDI, bank deleveraging and corruption and governance challenges that have impeded investment. The challenge of debt overhang—the legacy of the financial crises of 2009–15—has only partly been addressed with the restructuring of banks, with non-performing loans

Figure 25: Contributions to potential growth



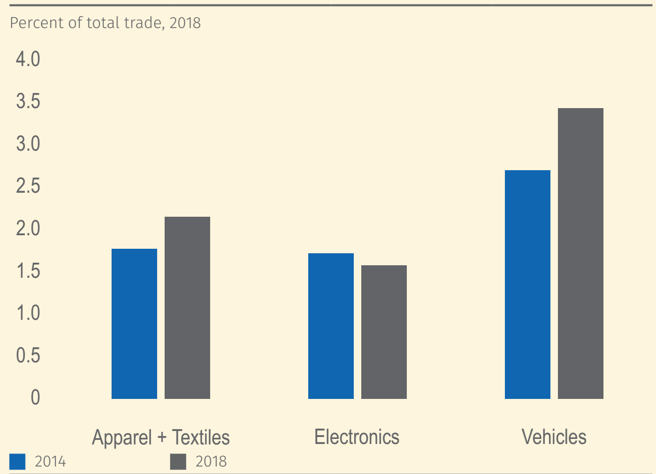
Source: World Bank, MFMOD.

Figure 26: Ukraine's efficiency gap vs Germany



Source: World Bank (2019a).

Figure 27: Major GVC exports of Ukraine



Source: WITS.

still accounting for almost half of the loan portfolio of banks. Stop and go fiscal policies have also played a role, with large public sector imbalances crowding out and diverting limited resources from the banking sector, while fiscal consolidations have been centered on public investment cuts. Between 2009–18 the share of government debt in total domestic credit expanded from just 3 to 40 percent. With most government spending allocated for current consumption rather than investment, this further exacerbates the impact of this crowding-out on growth and investment.[46]

Poor learning and health outcomes impact workplace productivity. Despite rising educational attainment, graduates lack the skills employers need, particularly in the more dynamic sectors of the economy (food processing, IT and renewable energy). The formal education system meanwhile suffers from weak governance and an inefficient funding system. Skills training outside the formal education system has very low take-up rates. Partnerships between firms and education institutions are scarce, with only one-fifth of firms in key sectors maintaining regular contacts with educational and training institutions. The health system, meanwhile, exhibits important coverage and quality gaps: the poor outcomes are reflected in the highest non-communicable disease (NCD) burden in ECA and an average life expectancy that lags 10 years behind the EU average that have resulted in poor health and productivity outcomes for the workforce. There has been no improvement in the Human Capital Index (HCI) between 2010 and 2020, and the 2020 HCI shows that 3 years of schooling is ineffective or wasted (i.e., does not result in learning) for the average student.

The structural realignment of the economy is progressing slowly, but deep sectoral challenges remain. Visible manifestations of structural realignment include the expansion of natural resource-based sectors, like agriculture and metals, where Ukraine has a comparative advantage, and the emergence of new sectors, particularly in renewable energy and ICT. Some progress has been made in demonopolizing gas markets. Gas production and transit at Naftogaz were unbundled in early 2020, and over the past five years, Naftogaz has also ceased to be the near-monopoly supplier of gas to the domestic market, competing with 67 other companies in 2019. In retail gas markets, Naftogaz began competing with other suppliers in August 2020.[47] Nevertheless, insufficient competition in retail and wholesale gas markets remains problematic. Other sectors that have been liberalized include the airline industry and the production and distribution of alcohol. Despite these achievements, the old economy remains visible in the manufacturing sector.

Poor connectivity—physical and digital—impedes trade integration. Ukraine's participation in global value chains (GVC) remains extremely limited despite substantial benefits (Figure 27).[48] A key factor is an underperforming logistical network, with Ukraine ranking 30th out of the 46 countries in the ECA region in the World Bank's Logistic Performance Index, even though it is one of the most transport-intensive countries in the world due to low population density, geography, and the structure of output (heavy metals, agriculture, basic industry). The overall score is lowered by the poor performance of customs services and the poor state of infrastructure. For instance, rail infrastructure dates from the 1970s, and the extensive inland waterway network is heavily underutilized and in poor shape. The poor quality of road transport, deficient

46 World Bank Group (2019a). *Ukraine Growth Study Final Document. Faster, Lasting and Kinder*.
47 Pirani (2020). The market takes shape: The Ukrainian gas sector to 2030.
48 Through GVC exports, countries not only exchange products but also technology, knowledge, and networks, and evidence indicates that a 1 percent increase in participation boosts per capita income levels by more than 1 percent—about twice as much as standard trade. See World Bank Group. (2019c). Trading for Development in the Age of Global Value Chains.

storage management, and port fees also contribute to high logistics costs. The above factors, coupled with weak rule of law, skills gaps, weak institutions, and widespread corruption, hold back integration into the global trade. Aside from depressing overall FDI, they also reduce inflows of efficiency-seeking FDI in Ukraine even though the latter is key to export diversification and has the potential to contribute to technology and knowledge transfer, boosting export diversification, global competitiveness, and creating higher-quality jobs.[49] Digital infrastructure also faces gaps, preventing Ukrainians from leveraging opportunities in what is increasingly a digital world. Mobile broadband (3G+4G connections only) reaches only 77 percent of users, mainly in urban areas with the rest of the country severely underserved; fixed broadband subscriptions serve only 31.7 percent of households.[50]

The agricultural sector's potential for driving growth and jobs remains unfulfilled by major structural bottlenecks. With the largest land endowment (41mn hectares) in Europe and highly fertile soil, agriculture has been a key driver of growth in Ukraine and contributed 44 percent of all FX earnings in 2018.[51] Yields—output per hectare—have been increasing over the past decade and are high by global standards, especially for grains and oilseeds. The sector has a large social imprint, accounting for one-sixth of all jobs and more than half of informal sector employment.[52] Some 4mn small farmers work 15mn hectares of land producing roughly half of agricultural output, especially higher value-added crops.[53] Farmers face high input costs, particularly for fertilizers, whose domestic production is dominated by one major agrochemical giant. Other bottlenecks include opaque, fragmented and poorly targeted subsidies[54] that have been captured by oligarchs; and high transport and logistics costs, weak value chain structures, including poor quality frameworks, and a lack of access to markets. A lack of storage facilities and market infrastructure effectively prevents smaller producers from competing on the export market.[55] The collapse of the irrigation sector after independence is a key infrastructure barrier to productivity and to climate resilience in the sector: currently, only one-third of the 2.2 mn hectares of land currently equipped for irrigation can be irrigated. Management of other natural assets, notably forest resources, is weak. This is contributing to low value-added and reflecting considerable fragmentation of the asset among more than 350 state enterprises, and amidst corruption that is putting the country's remaining forests at significant risk. Major land reforms have started. A 20-year moratorium on land sales was lifted in 2020, but low transparency in land ownership and transactions (a key area of corruption and source of tenure insecurity), and access to financing by small farmers remain pending challenges.

Further energy reforms are needed to tackle operational and governance challenges that constrain effective functioning of and investment in electricity and gas markets. Major structural shifts are underway in Ukraine's energy markets,[56] with significant milestones achieved in the gas sector (Box 1). Nevertheless, the sector as a whole[57] has suffered from the absence of integrated long-term planning and coordination, and energy policy to support a transition towards clean energy is viewed as inconsistent[58] and insufficiently ambitious. Despite

49 World Bank (2021e). Country Private Sector Diagnostic. Creating Markets in Ukraine.
50 World Bank (2020b). Recommendations to Ministry of Digital Transformation, GoU, on a National Broadband Development Strategy and Implementation Plan.
51 World Bank (2018b) Agriculture Policies and Performance in Ukraine.
52 EU-ILO (2018).
53 15.7 mn hectares of farmland are managed by small households, another 15.7 mn hectares are managed by large commercial operations, with a small balance of land (4.4 mn hectares) managed by medium enterprises.
54 https://voxukraine.org/en/how-to-make-current-agricultural-fiscal-support-more-efficient/
55 http://www.fao.org/europe/news/detail-news/en/c/447159/
56 https://www.esmap.org/rethinking-power-sector-reform-in-the-developing-world
57 https://rise.esmap.org/country/ukraine
58 Rybachuk, O. and K. Krynytskyi (2020).

Box 1: Energy sector reforms in Ukraine

Major energy reforms have been enacted in recent years focused on pricing, diversification away from traditional gas supplies (Russia), and compliance with the EU energy regulations within the 2014 Association Agreement framework. As a result, Ukraine is undergoing major structural shifts in the gas and electricity market.

Gas consumption has fallen to half the level of ten years ago, and energy efficiency gains could reduce it further. A landmark achievement was the unbundling of gas production from transit at Naftogaz, achieved at end-2019, and Ukraine is also emerging as a major gas storage hub for its neighbors. Following several rounds of tariff increases, price regulation was removed from all sectors except district heating, with household gas tariffs set consistent with import parity, and regulation converging with EU rules. Exchange trading has begun. That said, there have been some setbacks: in January 2021, the Government introduced temporary gas price caps for households in response to rising gas prices and popular discontent.

The electricity sector too is being gradually liberalized and price tariffs have increased. To meet the requirements of the EU Association Agreement, Ukraine has pursued to comply with the EU's Third Energy Package and to integrate into the ENTSO-E. A way to promote competition within the sector, it introduced the Law on the Electricity Market in 2017, that replaced the single-buyer model with more competitive elements, including the establishment of bilateral contracts and creating an ancillary services market and market-based pricing. The Electricity Market switched to a competitive power market in mid-2019. Reforms are expected to have many positive benefits for the country in terms of both improving the macroeconomic situation and creating a mechanism to refresh and economize the aging electricity-producing and transmitting infrastructure. Investments in renewable energy have also surged thanks to generous incentives, that will need to evolve towards competitive market-based mechanisms aligned with European guidelines.

reforms, operational and governance challenges continue to constrain the proper functioning of and investment in energy markets and have resulted in large fiscal contingent liabilities. In particular, too-generous administratively determined feed-in-tariffs for renewable energy implemented without capacity caps and though mandatory off-take of the Guaranteed buyer has led to over 8GW of capacity installed and substantial accumulated debts for the system operator, unable to recover the RE purchase cost[59]. Unauthorized gas-offtakes and non-payment of debts by distributor system operators and district heating companies have contributed to cumulative debts of US$3.7 bn in gas markets.[60] Energy efficiency

59 Accumulated debts of UE to GB and SOE power suppliers exceeded UAH 34 billion (US$1.2 billion). Per UE's estimate, nearly UAH 50 billion (US$1.75 billion) is necessary for the RES purchase cost in 2021; expected to grow to UAH 104 billion (US$ 3.6 billion) in 2029 for supplying around 14 percent of the domestic electricity consumption.

60 This is estimated as of September 2020 and accumulated mostly from district heating companies that failed to pay for gas, and from gas distribution companies that failed either to pay for gas off-taken for their operational needs, or to pass on payments from related supply companies (Pirani, 2020).

remains a challenge: the halving of Ukrainian demand for natural gas over the past decade was related to weak growth and the conflict rather than efficiency gains.[61] Concerns also remain about the governance (and vulnerability to political influence) of Ukraine's institutional arrangements in the gas (including Naftogaz) and electricity sectors.[62] The electricity sector also faces chronic problems related to regulation, pricing, and commercial operations. Market manipulation (including price caps and public service obligations imposed on SOEs) and vested interests are a major source of distortion in the electricity market. Low household tariffs are insufficient to cover the cost of power generation, let alone grid investment and decommission costs. Rapidly depreciating generation and grid assets require substantial investments, not just to modernize but also to integrate with the EU power system. The transmission network is one of the least reliable in Europe—transmission and distribution losses reached as high as 12 percent in recent years, two and a half times higher than in OECD countries[63]—and an estimated $17.5 bn in investment is required to bring it to modern standards.[64]

3. Continued vulnerability to external shocks amidst new risks from climate change

Ukraine remains vulnerable to external shocks, especially in the context of increased medium-term spending pressures. Sixty percent of public debt remains denominated in foreign currency, increasing vulnerability to currency depreciation in the context of an external public debt service burden that is expected to average about US$10 bn per year during 2020–25 (versus less than US$6 bn per year over 2015–19).[65] Amidst volatility, global financing remains uncertain—Ukraine briefly saw a de facto closure of access to global financial markets in Q2 2020[66]—and sovereign risk spreads remain among the highest in the ECA sub-region. In the banking sector, the degree of balance sheet damage that will eventually accumulate due to the COVID-19 shock is unclear. Fiscal contingent liabilities are large, particularly in the energy sector, and will eventually have to be recognized. In addition, new sources of fiscal risk have emerged, related to GDP-linked warrants that were issued without caps during the 2015 debt restructurings and that may potentially lead to large fiscal costs and exceed the initial debt write-off if certain growth thresholds are exceeded.[67] Infrastructure gaps in Ukraine are significant, particularly in transport and energy: addressing these is necessary for Ukraine to integrate into EU markets, but will need financing, only part of which can be provided by the private sector.

Socio-economic risks have increased due to COVID-19; with new variants emerging, uncertainty about the duration of the pandemic and pace of recovery is large. An EBRD survey finds that 16 percent of Ukrainians lost a job between February and August 2020, affecting predominately lower-income workers, youth and women. Micro-simulations suggest that the share of people living below the actual Subsistence Minimum could have increased by 3 percentage points in 2020 relative to 2019. The most vulnerable families

61 Mikulska and Kosinski, 2020.
62 https://www.argusmedia.com/en/news/2155342-ukraines-eu-gas-rule-implementation-incomplete
63 https://carnegieeurope.eu/2018/02/06/reforming-ukraine-s-energy-sector-critical-unfinished-business-pub-75449#:~:text=The%20transmission%20network%20is%20one,higher%20than%20in%20OECD%20countries
64 https://www.forbes.com/sites/arielcohen/2020/06/26/ukraine-cannot-stand-up-to-russia-without-a-modern-electric-grid/?sh=3d864a15464d
65 Total debt repayment needs in 2021 alone are projected at 10 percent of GDP.
66 IMF (2020). Ukraine: Request for Stand-By Arrangement.
67 2015, Ukraine's creditors agreed to write off 20 percent of their original holdings as part of a sovereign debt restructuring. In exchange, the bondholders received these GDP-linked warrants, which will have to be paid when certain thresholds are exceeded (GDP growth exceeds 3 percent and nominal GDP exceeds $125.4 bn). The payouts are capped between 2021 and 2025 at 1 percent of nominal overall GDP, but warrants expire in 2040 and could trigger growing payouts in the medium to long term, unless the government buys these back or restructures them.

are the ones who derive their income from the informal sector or remittances; do not have savings to buffer the crisis or access to social protection; and are large households with many children or single-person households consisting of a pensioner.[68] Ukraine has started to inoculate people, but vaccine procurement and deployment remain slow, and it will take time to inoculate the whole population.

Risks are also high in communities/sectors directly exposed to climate change or conflict. In addition to direct economic impacts of climate change (e.g. resulting from heat/water stress, or from the loss of competitiveness relative to other greener producers, as discussed above), social impacts are also expected to be large. These are expected to be particularly pronounced in communities ("mono-industry" cities and villages) centered around Ukraine's loss-making (but heavily subsidized) coal industry. The ongoing loss of jobs is expected to accelerate, as the state begins to privatize coal SOEs and introduces other policies to decarbonize—all these raise challenges of how to support a "just transition" in communities directly impacted by mitigation efforts. As discussed earlier, climate change also poses major risks to agricultural productivity that has implications for informal workers (67 percent of whom work in the sector) and rural livelihoods; severe infrastructure and institutional challenges in irrigation and drainage sector are further expected to reinforce these negative impacts and reduce climate resilience in the agricultural sector. In the Eastern regions, long-running economic decline and de-industrialization has been exacerbated by conflict due to which these regions have lost the core of their industrial base, and most of their skilled employees, along with a major portion of their tax base.[69] The region is now the third most heavily landmine-contaminated in the world (after Iraq and Syria).[70] The COVID-related downturn in Donetsk is expected to be worse than in the rest of the country (due to the prevalence of mining and metallurgy, hit hard by the global crisis).[71] The subsequent recovery, meanwhile, is expected to be slower than in the rest of Ukraine, hampered by deeper constraints in Donetsk and Luhansk—related to negative demographics, labor supply, inadequate physical and social infrastructure, and financial exclusion.

68 World Bank (2021a). While a relatively higher share of the "new poor" (people who fell below the poverty line because of the COVID-19 pandemic) are expected to live in big cities, rural households remain the most vulnerable given their lower income levels and weaker assets base.
69 World Bank (2021b). The Economics of Winning Hearts and Minds. Forthcoming.
70 Havlik et. al. (2020). Economic Challenges and Costs of Reintegrating the Donbas Region in Ukraine.
71 Luhansk, thanks to its dependence on agriculture, is expected to be less affected. World Bank (2021b). The Economics of Winning Hearts and Minds. Forthcoming.

D. Pathways to greater resilience, sustainability and inclusion

The SCD Update argues that progress towards greater shared prosperity and poverty reduction requires stronger institutions, rule of law and a reduced footprint of the state, in order to withstand the power of vested interests, reduce opportunities for rent-seeking and corruption and to provide the enabling environment for a more *productive and sustainable economy*, one that is integrated into global trade, able to withstand emergent risks and embrace opportunities from climate change. It will also require reforms to increase *resilience* to enhance the capacity of the economy, institutions and households to absorb shocks, including from climate change. The *Update* frames these into four broad pathways and ten priority areas (Table 4) that are discussed below.

Given Ukraine's complex political economy and active presence of vested interests working to block or reverse reforms, several strategies are advocated to sustain reform momentum. First, as with the 2017 Diagnostic, a two-pronged strategy prioritizing institutional and governance reforms in a cross-cutting pathway, reinforced by institutional reforms to disempower vested interests in the remaining three pathways is adopted. Second, the *Update* prioritizes the completion or consolidation of ongoing reforms to ensure that they deliver the outcomes they were intended to. Third, within Pathway 1, the *Update* highlights the importance of new levers (e-governance and digital reforms) to fast-track accountability, better governance and to reduce the influence of vested interests. These have worked successfully in the case e-VAT, Prozorro and Diia reforms—but there is an opportunity to spread these out systematically across government, reinforced by a strong regulatory/accountability and coordination framework. Finally, it is important to note that, despite this highly challenging and complex reform environment, progress has taken place, often by building a coalition among Ukrainian civil society, reformers within government, and international development partners to advocate for critical reform areas, and that these factors will remain just as important going forward.

Strengthening institutions and rule of law remain the core, overarching and fundamental priority, albeit broadened to emphasize the need to adjust the role of the state in the economy. Compared to the 2017 SCD, ***Pathway 1*** shifts focus from *building* new institutions towards *strengthening* and *reinforcing* existing ones: this pertains to protecting the existing anti-corruption architecture and undertaking judicial reforms to support rule of law, and strengthening *institutional accountability, performance, and transparency* of the public sector, e.g., at the sub-national level and through human resource management reforms. In addition, the direct participation of the state in the economy (via SOEs) is excessive, even as it needs to do much better with the delivery of public services—these two points of interaction between the state and citizens/firms are also major areas of corruption and rent-seeking. Accordingly, Pathway 1 emphasizes *reducing the footprint of the state* through privatization/restructuring of SOEs—this also supports a greater role for market forces in the economy. In addition, it prioritizes digitalization and e-government reforms that reduce the scope for discretionary, rent-seeking decisions by an inefficient/corrupt bureaucracy acting in support of vested interests that impact access to economic opportunity and critical public services for firms and citizens alike.

Table 4: Original and revised priorities

2017 SCD: Key Pathways (4) and Priorities (16)	**2021 SCD Update: Key Pathways (4) and Priorities (10)**
Pathway 1: Better Governance & Anti-Corruption • PFM • Anti-corruption and judicial reform • Public administration reform • Citizen engagement	*Pathway 1:* Stronger Institutions, Rule of Law and Reduced Footprint of the State • Protect anti-corruption architecture, strengthen judicial system, accountability and transparency at sub-national level • Reduce economic footprint of the state through SOE privatization, e-Government and digital reforms
Pathway 2: Macroeconomic stability • Manage fiscal risks to reduce deficit and public debt • Tax reform to broaden tax base and strengthen administration • Pension reforms • Strengthen the financial sector	*Pathway 2:* Macro Resilience and Support to Long-Term Green Growth • Strengthen fiscal sustainability and resilience through expenditure, tax, and fiscal risk and PFM reforms • Enhance governance and regulatory framework of SOBs, privatize SOBs, strengthen non-bank financial supervision and reduce NPLs • Support decarbonization and climate transition through tax, subsidy and green procurement policies
Pathway 3: Private Sector Productivity • Strengthen PIM and expand infrastructure (energy and transport) • Create level playing field in private sector (deregulation, competition policy, SOE reform) • Land reform • Trade facilitation	*Pathway 3:* Lift Private Sector Productivity and Investment in an Inclusive and Environmentally Sustainable Manner Institutional reforms to • Strenghten trade and digital connectivity and competition • Complete agricultural land reforms, and Improve regulatory & governance frameworks, financial sustainbiility and increase role of market forces in energy, water and transport sectors • Support climate transition, adaptation and mitigation to climate change in energy, agricultural, transport and water
Pathway 4: Effective Services and Targeted Assistance • Provide more effective health and education services (skills development) • Improve delivery mechanisms at sub-national level • Enhance targeting and efficiency of social assistance programs • Provide targeted support to conflict affected people	*Pathway 4:* Social Resilience and Inclusion: Investing in and Protecting People • Create access to economic opportunity through investments in skills, health and education, and close gaps in access to basic public services • Strengthen safety nets, support to lagging regions/ communities including to people affected by conflict

The remaining pathways reinforce institutional and governance reforms advocated in Pathway 1; they also reflect the growing salience of resilience, sustainability and inclusion. In ***Pathway 2****, the priority has shifted towards supporting macro-financial resilience and long-term growth.* It argues for tax and expenditure reforms to rebuild fiscal buffers (and to keep macro-fiscal imbalances, a key precursor of crises in the past, in check), efficiently allocating scarce public resources towards the most productive areas and strengthening public financial and fiscal risk management (including from contingent fiscal liabilities). To support Ukraine's transition to a low-carbon economy, it prioritizes energy/carbon tax and energy subsidy reform. The pathway also supports the adjustment of the role of the state: firstly, through prudent macro-fiscal policies that dampen volatility in growth (in turn providing signals of macro-stability needed to attract long-term investment and FDI); and secondly, in the allocation of credit to the wider economy through governance reforms of state-owned banks that support their eventual privatization, reduction of NPLs in the banking sector as well as strengthening supervision of the non-bank financial sector that, among other things, will help to deepen capital markets.

***Pathway 3** remains focused on lifting economy-wide productivity and investment in key sectors such as energy, transport, land and agriculture, through institutional and governance reforms that help to increase transparency, contestability and competition but with an eye to enhancing long-term sustainability and inclusion.* A critical priority in Pathway 3 is completing ongoing reforms in the agricultural land sector, where some of the largest dividends in terms of lifting the overall growth and exports of the economy lie, and which deeply intersects with the inclusion agenda (because of the broad potential to reduce poverty in rural areas where informality is high, and women comprise a substantial share of small farm-owners[72]). The Pathway also supports institutional reforms to enhance connectivity and trade, both physical and digital, and prioritizes adaptation to and mitigation of climate change impacts (in agriculture, energy, water and sanitation, and transport sectors). To the extent that these reforms open up new sources of growth, they: (a) support a faster recovery from COVID-19. especially insofar, that they encourage more dynamic, productive, private sector firms to participate and compete in critical sectors of the economy on a level playing field; and (b) also enhance economic resilience, especially if they are rooted in investments in innovation, modernization of aging (and typically carbon-intensive) infrastructure, or support adaptation to and mitigation of climate shocks. By supporting new areas of economic opportunity, Pathway 3 also has the potential to support the adaptation of workers and firms in the upcoming climate transition and thus lessen the economic pain associated with the decline of carbon-intensive sectors. Finally, it is worth noting that green growth policies can provide another lever to reduce the power of vested interests (e.g, in the energy, transport and land sectors).

***Pathway 4** emphasizes the need to reinforce social resilience and strengthen inclusion through investing in and protecting people.* Skill gaps, shortages and mismatches generate suboptimal results, reflected in low wage/productivity jobs and poor working conditions that push people overseas for jobs, and ultimately also contribute to low social and economic resilience for households and the overall economy. Accordingly, investments in human capital will enable workers to access economic opportunities and adapt to short-term shocks and equip them to meet the needs of an economy growing in complexity over the long term. Central priorities in this pathway are reforms to improve the allocative efficiency of health and education spending, alongside governance and financing reforms (in hospital care and higher education) to improve incentives for stronger health and education service delivery within a decentralized setting. Digital skills and investments will be key to maximizing the impacts of ongoing health and education reforms, and to equip the workforce with skills needed in a modern economy. Finally, continued safety net reforms through better targeting of key social assistance programs, and better provision of basic public services, are needed for cushioning the impact of shocks, including for the most vulnerable or lagging regions/communities.

72 Women represent 53.1 percent of Ukraine's rural population, one-third of its 132,000 registered farmers, and 60 percent of landowners. See USAID (2013).

Pathway 1: Stronger Institutions, Rule of Law and Reduced Footprint of the State

The pathway identifies two broad priorities: the first emphasizes the need to strengthen institutions and rule of law, while the second points to the need to reduce the footprint of the state. The first priority speaks to the weakness of (rather than lack of) institutions in Ukraine, and thus to the need to strengthen and reinforce these across the breadth of the state. The second priority speaks to the "appropriate" role of the state in the economy. The high levels of direct economic participation by the state are a legacy of Ukraine's incomplete transition and are detrimental not only because of the opportunities for rent-seeking, but also because capital and labor are tied up in stagnant enterprises, and because the presence of SOEs constrains the role of market forces in the economy. Coupled with ineffective service delivery, this stifles the growth of more dynamic, productive firms in the economy (because of the lack of level playing field tilted to the advantage of SOEs or connected firms), as well as broader equity (due to a lack of access to economic opportunity and critical public services).

Protecting the recently established anti-corruption architecture alongside judicial system reforms are critical priorities to anchor rule of law. Protecting the institutional and legal reforms of the past four years will require further strengthening the independence and capacity of the key anti-corruption institutions. Priorities include the implementation of s of the revised Corruption Prevention Law (adopted at the end of 2020) related to the implementation of the electronic asset declaration system and recriminalization of the filing of false declarations. In addition, it will also be critical to secure the independence of NABU and SAPO via timely selection of their directors through transparent procedures with international involvement. The main priorities for judicial system reform are: (i) institutional restructuring and reform of judicial management bodies; and (ii) strengthened and transparent frameworks and processes for judicial selection, promotion and removal. This requires the timely and effective implementation of the two judicial laws adopted mid-2021 to comply with legislative timelines indicated in the law, particularly relating to the Selection Commission for the High Qualification Commission for Judges and the Ethics Council for the High Council of Justice in which international judicial experts have a decisive role. Institutionalizing the ethics adherence mechanisms can also help in providing continuing review and evaluation of existing and new members of these bodies and address judicial ethical weaknesses. Other priorities include reforming the judiciary and strengthening small claim or alternative dispute resolution and arbitration that can facilitate more rapid bankruptcy and domestic debt resolution (including via e-courts), as well as strengthening enforcement of court decisions in key areas (such as recovery of creditor dues). By strengthening the ability of courts to act as effective arbiters in business disputes, they will help to increase trust in the judiciary and help in freeing up scarce capital (that, for example, is tied up in litigation).

However, responsibility for reducing corruption lies throughout the public sector; supporting this will require strengthening of other accountability bodies and streamlining human resource management in the public sector. Measures to reduce corruption on the frontline may be as important as those carried out by the formal anti-corruption agencies. Besides the anti-corruption agencies, it will be increasingly important to minimize opportunities for corruption through systematic reforms of human resource management and merit-based compensation and hiring (supported by e-government solutions) throughout the public sector—line ministries and SOEs—such that they strengthen incentives for better performance and attract skilled professionals. Equally important is the strengthening of existing accountability institutions, such as the Accounting Chamber that contributes to the increased transparency of public services and helps address corruption concerns, or other empowering regulatory bodies such as the Anti-

Monopoly Committee and the National Energy and Utilities Regulatory Commission.

Strengthening the fiscal autonomy, accountability and capacity of local governments is needed to complete decentralization reforms and increase the responsiveness of the state to citizens' needs. With respect to decentralization, reforms of recent years have sought to undercut influence of vested interests at the central level; it now becomes imperative to curb opportunities for rent-seeking at the local level, through the clarification of the scope, structure, oversight and powers of local and municipal authorities. The legal and institutional framework for public investment management requires strengthening at national and sub-national levels, properly placing the Ministry of Economy as the single public agency charged with coordination and monitoring of public investments. In parallel, it's institutional capacity needs strengthening to perform effectively and deliver on their public investment mandate. At the local government level, priorities are to strengthen PFM (cash management, compliance with the fiscal forecast, and PIM), revenue mobilization and tax administration, strategic planning systems, transparency in allocation of intergovernmental transfers and systematic internal control and external audit systems.

Privatization, restructuring and better corporate governance of SOEs are central to efforts to roll back the footprint of the state, to reduce opportunities for rent-seeking, and for fostering broader competition and factor reallocation in the economy. Important governance challenges that need to be addressed at the company and state levels include shortcomings associated with Ukraine's current decentralized ownership arrangements (e.g., conflicts of interest, limited monitoring capacity); the lack of a comprehensive state ownership policy and autonomy of SOEs, as well as frequent state interventions in SOEs' operational activities. A first round of corporate governance reforms has been implemented at SOBs and selected large SOEs, and needs to be more broadly implemented in the non-financial sector, following examples of Naftogaz, Ukrenergo, Ukrpost, and Ukrzailznitsya. Privatization must continue for the small SOEs and begin for large SOEs. Not all SOEs will be privatized however, and restructuring/corporatization reforms are necessary for those that will remain in state ownership (because of strategic reasons, or because they are natural monopolies). As part of these efforts, stronger corporate governance practices and increased transparency of SOEs via regular aggregate reporting will need to be continued by the Government to expose their financial condition to public scrutiny, and to gradually harden their budget constraint. To achieve privatization objectives, the State Property Fund requires significant institutional strengthening and support in unlocking the bottlenecks for administering the privatization process, including overcoming SOEs' resistance to increased financial transparency and responding to attempts to contest SOEs' eligibility for privatization in courts.

E-government and digitalization reforms are critical levers for reducing the imprint of the state, and for increasing effectiveness and transparency of public services to citizens. The shift to electronic VAT administration in 2015 and e-procurement (Prozorro) in 2016 provided tangible benefits in terms of substantial fiscal savings, decline in related corruption and reduced fraud.[73] Going forward, e-government reforms will be an increasingly important priority in public administration reforms. They are a key commitment under the EU Association Agreement and a precondition to the effective development of the digital economy and its integration into the EU Digital Single Market. They will also help to increase transparency (and thus reduce scope for corruption) and help expand public services to underserved areas/communities and support citizen engagement. Key priorities include, firstly, the need for a *whole of government* strategy

73 Lough and Dubrovisky (2019).

aimed at expanding broadband connectivity (including 5G), strengthening data management at the center (ICT procurement, analytics, data centers, citizen identification, implementation of cloud, shared services and platforms), and clear demarcation of institutional roles for e-government policy making, strengthening of regulatory and institutional frameworks (including for cyber risks) and their implementation across government. Digitalization of health and education service delivery needs to expand to increase access especially in rural communities; the transformation of the health sector and related service provision will benefit from an e-health strategy.[74] Institutional reforms are also needed to strengthen transparency e.g., in land markets and registries (including at the State GeoCadastre), and international transactions of business entities. Stronger citizen engagement can be supported through proper provisioning of public and stakeholder consultations in policy formulation, e-democracy tools, and strengthening public participation in the budget process.

Pathway 2: Macro Resilience and Support to Long-Term Green Growth

Macroeconomic policies need to be oriented towards supporting long-term growth, while safeguarding macro resilience and fiscal sustainability over the medium term. The shift to a flexible exchange rate and foreign exchange reserves that have been built up in recent years provide some buffers, but vulnerability to a variety of external shocks remains. Contingent liabilities—especially in the energy and SOE sectors—also pose fiscal risks. The use of PPPs can be instrumental in providing increased quality and access to services but can also pose fiscal risks if not managed properly. Fiscal space has tightened as a result of the COVID-19 shock, and is expected to remain tight even after the pandemic ebbs, due to growing outlays on "rigid" expenditures, notably public wages, debt amortization and pension spending. Simultaneously, Ukraine will need to mobilize additional fiscal resources/efficiencies to finance critical healthcare supply chains, including a vaccine infrastructure, upgrade its energy, transport and digital infrastructure, invest in climate adaptation and mitigation, and finance recovery and reconstruction costs in the East. These will accelerate its recovery, and seed future growth. These investments will also need to be complemented by the private sector, which will require increased financing. However, corporate lending (after accounting for NPLs) is too low at just 13 percent of GDP,[75] and broader capital markets too shallow in Ukraine to support this private sector response. As Ukraine emerges from the COVID-19 crisis, private sector lending may well be even more constrained if financial institutions are hit by a wave of NPLs.

The key priorities on the fiscal front are to support macro-fiscal resilience, and to steer scarce resources towards human and physical capital investments that are the levers of long-term growth. Accommodative fiscal policies in the past have crowded out more productive investments, and eroded buffers needed to withstand shocks when they have occurred (in turn contributing to volatility in growth and providing negative signals to investors). Going forward, more stable, predictable and prudent fiscal policies—in essence, those that enhance the demand stabilization function of fiscal policy and support macro-fiscal resilience—will be a necessary (albeit not sufficient) pre-condition for less volatile growth, and in turn for providing the signals on macro-stability needed by long-term investors. On the tax front, reforms to address tax evasion/avoidance, and strengthen

74 World Bank (2021). Country Private Sector Diagnostic.
75 Q2 2020 data. National Bank of Ukraine (2020b).

compliance and asset disclosure (including through the implementation of the OECD Base Erosion and Profit Shifting action plan[76]) will broaden and diversify the tax base and reinforce the anti-corruption and transparency priorities in Pathway 1. Carbon pricing, including fuel and carbon taxes, emissions trading and energy subsidy reform will also be critical elements of policies for a low-carbon recovery. On the expenditure front, the priorities are increasing the efficiency and effectiveness of current and capital spending, and strengthening public sector wage bill management. It will also be important to address PFM gaps, including in public investment management, cash management and strengthening the medium-term orientation of the budget (through improvements in the recently introduced Medium Term Budget Framework); and strengthening risk management, including through better debt management, monitoring, reporting, management and disclosure of fiscal risks such as liabilities associated to renewable energy FiTs in the energy sector. Finally, while Ukraine is recognized as a leader in modernizing its procurement function, green public procurement (GPP) policies provide an opportunity to deliver environmental and climate change goals, by incentivizing industry to develop environmentally friendly services and products, and establish high environmental performance standards. Over the medium to long term, GPP policies will help to increase competitiveness of, and access to, green and climate financing and stimulate modernization of Ukrainian industries to meet increased green trade and economic requirements.

Financial sector reforms are needed to safeguard macro-financial resilience and increased flow of financing to the private sector. Going forward, it is important that the National Bank of Ukraine continues to adhere to the strengthened risk monitoring, supervision and monetary policy frameworks that have been adopted in recent year, as these are essential for implementing pending financial sector reforms, and anchoring investor confidence and inflation expectations. Other critical priorities include implementing corporate governance reforms of SOBs through majority independent governance structure to prevent a re-occurrence of the serious credit misallocation and banking stability challenges that arose in the past because of the influence of vested interests, and the crowding out of private investment because of the heavy reliance on SOBs to finance government deficits (as has been the case in the past). A further priority is to reduce NPLs, particularly in SOBs, using recently approved NPL resolution measures to enhance the efficiency of credit allocation and to increase overall lending to the private sector in the economy. It will also require tackling inefficiencies in the judicial system (as discussed in Pathway 1). These measures will not only aid the recovery, but also help to prepare SOBs for eventual privatization, thus reducing the government footprint in the financial sector. In order to address fraud and deepen capital markets (and eventually to support private sector financing of the coming climate transition), it will be important to strengthen supervision of non-banking financial institutions and facilitate the diversification of the financial sector, including via development of insurance markets, pension funds, and credit unions.

Pathway 3: Lift Private Sector Productivity and Investment in an Inclusive and Environmentally Sustainable Manner

76 In May 2020, Ukraine passed changes to its tax legislation, that adopted key recommendations under the OECD BEPS action plan and changes to tax administration procedures, including measures on transfer and thin pricing, as well Control of Foreign Company (CFC) rules that mandate reporting of (and thus enable taxation) of offshore companies. If implemented, they increase tax transparency and reduce opportunities for money laundering, offshoring and tax evasion. The critical next steps would be to ensure automatic information exchange between international tax jurisdictions in accordance with common reporting standards and implementation of CFC rules.

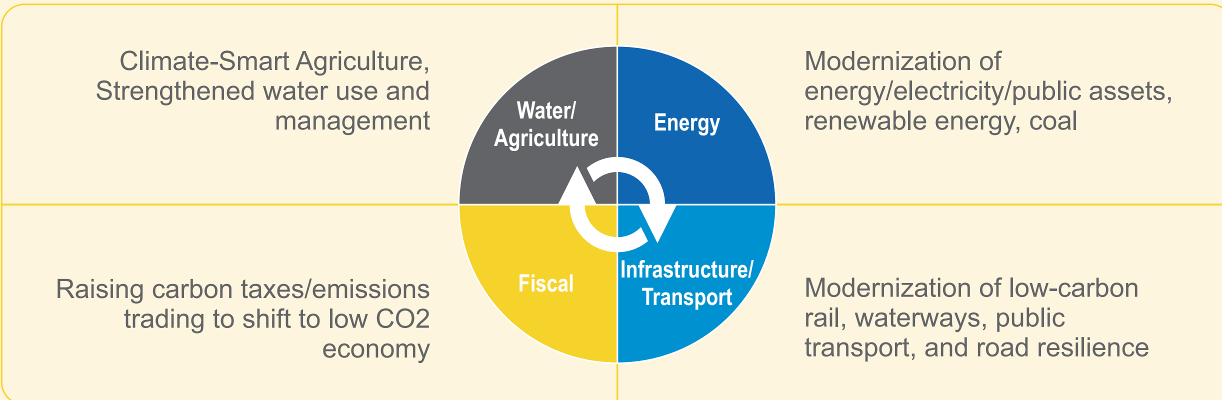
Pathway 3 retains focus on enhancing productivity and investment in the economy—however it also takes into account that investments and decisions made now will either set Ukraine on a high-emissions path or help to lock it into a low-carbon growth trajectory. This Pathway speaks to the challenge of reducing regulatory and institutional bottlenecks in energy, land markets, agriculture and connectivity that drag on contestability, and on private sector growth, investment and job creation (and in the case of energy markets, fiscal and financial sustainability). The priorities discussed below reinforce better institutional governance (in energy, transport and land markets), inclusion (land, agriculture, water and connectivity) and climate resilience, adaptation and mitigation. In addition, they support the enabling environment to attract greater FDI (and ultimately integration into GVCs and a stronger recovery from the COVID-19 shock).[77] A key challenge appears to be a lack of long-term policy planning and *whole-of sector* approach: this is vital for climate policy, which requires coordinated interventions in multiple sectors (Box 2) to incentivize the private sector to shift to a low-carbon path. Although Ukraine's NDC commitments are still insufficiently ambitious, it aims to achieve its 2030 target through aligning climate policy and legislation with the European Green Deal, particularly in the areas of renewables, hydrogen, and the transformation of the coal sector. The Government aims to phase out coal-fired power generation and increase the share of renewables in the energy mix. The lack of policy consistency and coordination remains a major challenge: it has already contributed to sub-optimal outcomes with respect to renewable energy and functioning of the electricity sector in recent years, and to fiscal contingent liabilities.

Ongoing institutional reforms in the energy sector need to be completed to ensure they work as intended and are financially sustainable; but the reform agenda has been broadened to support Ukraine's climate transition. The objective is to attract private investment (including FDI) into the sector, increase competition, ensure financial sustainability in the sector, reduce energy intensity and decarbonize the economy. In the gas sector, it will require deepening existing reform that address an incomplete legal and regulatory framework that has enabled unauthorized gas offtakes, prevented the daily balancing market from functioning properly and contributed to fiscal contingent liabilities related to public service obligations. In the electricity sector, it is necessary to update the regulatory framework to increase the flexibility of the system facilitate the integration of renewables as well as establish IT systems to allow the wholesale and ancillary service market to work as designed, reduce vast debts accumulated by various players, eliminate cross-subsidies between households and industry, expedite synchronization and market integration with the EU and reduce costs for firms and households. More broadly, a comprehensive approach is needed to support Ukraine's energy transition that shifts the energy system towards low-carbon sources and increases energy efficiency throughout the economy. This will require establishing carbon markets (e.g., through emissions trading scheme or raising carbon taxes), upgrading and retrofitting infrastructure (energy and electricity assets, public and private buildings), undertaking urgently needed district heating reforms, and phasing out coal mines while mitigating impacts on local value chains and communities to ensure that the energy transition is "just." Many of the "green" policies can be leveraged to further reduce the space for vested interests to operate in these areas.

A substantive land reform agenda remains pending. Harnessing Ukraine's immense agricultural and rural potential—to drive overall growth, exports and investment—will also yield substantial benefits in

77 As the World Bank (2021e) Country Private Sector Diagnostic notes foreign investors play an active role in shaping host economies' export structure and their participation in international production networks. Therefore, policies that attract FDI also constitute an indirect way to deepen countries' participation in GVCs.

Box 2: Cross-cutting environmental sustainability and climate change priorities



terms of job creation and poverty reduction, especially in rural areas where land reforms will help to create substantial collateralizable assets for farmers (including women farmers who comprise some 60 percent of landowners) and foster financial market development and inclusion. While the lifting of the land sale moratorium is a major advance, there is a risk of even worse outcomes if systemic corruption and non-transparent functioning of markets are not addressed. Farmers, especially smaller ones, require access to credit to help them undertake productivity investments and grow their incomes and productivity. This will require the establishment of a partial credit guarantee fund that will reduce their credit risk. Reform (and registration) of long-term land leases is needed to level the playing field for foreign investors and local legal entities, and support FDI/technology transfer. Other institutional reforms include the reform, audit and digitalization of the State GeoCadastre, with oversight over state land. In particular, the decentralization of land management, with streamlined procedures to create, transfer, and use land parcels; and transfer of the ownership and administration of state land from the Geocadaster to local authorities would play a critical role in stemming the widespread loss of state land through "free privatization." Transfer of state land to local government, and transparent management of public land (e.g., through e-auctions for state land sales and tightening of rules for free privatization) will also support environmental sustainability and sustainable revenue mobilization at the local level.[78] Ensuring the completeness of land cadastre and registry of rights (in the context of significant errors in land records) is also important for securing land rights for farmers and limiting scope for corruption.

But parallel agricultural and water sector reforms are increasingly critical to support growth and inclusion. The greatest potential for future growth in agriculture lies in higher-value products, such as fruits, vegetables, livestock products and agro-forestry. Small household farms dominate the production of such high-valued crops. Finding ways to better integrate these farmers into supply chains and to harness the productive capacity of 15 mn hectares of small farms can help

78 State land expected to provide local communities with a $20 bn endowment—or $2 bn in annual revenue.

the sector grow in an inclusive way. Actively shifting towards crops which are predicted to have higher productivity, combined with improved irrigation infrastructure, could lead to higher agricultural output and climate risks reduction. Supporting this pathway calls for a pivot from inward physical supply-oriented policies and input subsidies towards policies that support markets and provide public goods in agriculture. This entails better targeting of public expenditures to smaller farms, who face more market failures than large farms. It also entails redirecting state expenditures and support toward public goods like research and extension, investments in climate-smart agriculture, better soil and disease management, strong public and private food safety standards, and transport links, and storage infrastructure. Greater competition in the nitrogen fertilizer markets, where abuse of market dominance by the largest producer has been documented, is critical to reduce input costs. Improved access to finance for smallholder farmers through alternative financial instruments (i.e., crop receipts systems, index insurance, digital credit scoring) that are not dependent on land reform outcomes, will also increase the scope for land-attached investments. In the water sector, key priorities will be to support more efficient and sustainable water use and irrigation practices and reducing severe pollution of water resources through reform of water tariffs, reform of legal and regulatory framework for issuing groundwater-abstraction permits, and addressing the underinvestment in irrigation and wastewater treatment. These measures will be beneficial for public health and the environment, for enhancing climate resilience in a country expected to suffer from increasing frequency of droughts, and will also increase the potential for water-based activities such as fisheries.

Connectivity reforms—physical and digital—are needed to tap EU and digital markets; regulatory reforms supporting the upgrading and shifting to low-carbon modes of transport will help decarbonize the economy. The proximity to EU markets, coupled with Ukraine's strong natural resource base, creates opportunities for increasing value-added trade and providing returns on investment in the transport sector. This will require both institutional and financial measures aimed at addressing infrastructure bottlenecks, improving resilience of assets, and obtaining better value for money that is spent. A positive spillover is that they will also enable a shift to low-carbon modes of transport. Territorial broadband coverage is vital, if the transport, logistics, finance and payments and other sectors are to benefit from the innovations, efficiencies and disruption offered by digital technologies.[79] An expansion in broadband networks and penetration will only yield the desired benefits through simultaneous "analog" investments in regulatory and legal frameworks. For instance, supporting the development of sector regulators, especially in areas such as ex-ante regulation of the electronic communications markets, data protection, antitrust, etc. will enable the development of efficient competition and protect consumer rights in the cyber environment. Finally, it will also be important to promote financial inclusion through new digital payments legal frameworks aligned to best practices, supporting a regulatory sandbox for fintech solutions, and open banking API principles.

Strengthening transport infrastructure, services, and institutions is critically important for the Ukrainian economy and climate change adaptation/mitigation. Ukraine's transport networks are struggling to support further growth and development. The railway already carries two-thirds of Ukraine's grain exports and may become increasingly important if land yields and agricultural exports increase following land and agricultural reforms. However, the sector suffers from deep challenges with respect to obsolete assets

79 For instance, smart technologies can reduce road deaths by 8-10 percent and travel times by 15–20 percent. World Bank (2020b).

and legal, institutional, governance and financial frameworks.[80] Ukraine's road sector has benefitted from a nearly four-fold increase in investment since 2016 but remains underdeveloped and unnecessarily unsafe.[81] Waterway reforms, meanwhile, are needed to address deficiencies in public management (including insufficient infrastructure maintenance and investments) and a legacy regulatory governance of the river system that has also contributed to a captured market (and are hence an example of green growth policies that can help disempower vested interests while supporting environmental sustainability). Climate resilience of transport networks across modes needs to improve—particularly where redundancy in vital service is limited. In urban areas, cities are at different levels of transport planning capability and all need to develop skills, technical tools, and institutional behaviors required for sustainable urban mobility planning. Road-based modes account for 71 percent of transport emissions in Ukraine. Increasing the effectiveness of public transport networks and implementing policies that shift demand to low-emissions technologies such as non-motorized transport or electric mobility will help Ukraine reduce local and global emissions. At present, most development financing for urban public transport projects in Ukraine is provided on a sub-sovereign basis and national government's role is limited—that institutional approach needs to evolve and include national government to support larger more complex initiatives. Ukraine has limited experience with public-private-partnerships (PPPs) in the transport sector which may have a role to play in capturing additional efficiencies in the transport network's development and operations. However, increasing their effective use will require an eye to managing fiscal risks and further developing the institutional set-up/legal framework for PPPs.[82] Simplification of complex institutional coordination processes would benefit Ukraine's use of PPPs as well as the efficiency of publicly financed investments across the transport sector.

Pathway 4: Social Resilience and Inclusion: Investing In and Protecting People

The focus of Pathway 4 is increasing social resilience and promoting inclusion by investing in and protecting people. Relative to the 2017 SCD, the priorities in Pathway 4 are nuanced and informed by the need to address structural vulnerabilities and gaps in health, education and social safety net supports exposed by the COVID-19 shock, as well as new analysis indicating increased social risks and deep pockets of vulnerabilities among lagging/at-risk communities due to conflict and climate change.[83] Ukraine has also suffered long years of underinvestment in critical areas (e.g for water and sanitation, or primary care). These reform priorities would help cushion the poor from short term shocks (and correspondingly support a stronger, more inclusive recovery thereafter), but also enable them to take advantage of economic opportunities arising during the climate transition or due to deepening trade and economic ties with Europe. In this regard, the ability to re-skill, adapt, and relocate towards expanding sectors/regions will support resilience at the household level, and

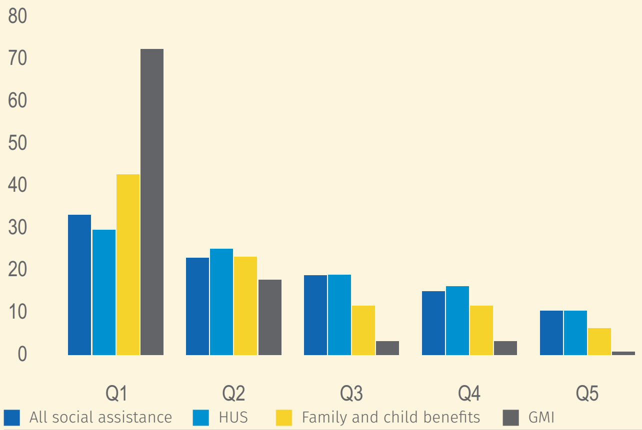
80 Ukrainian railways (Ukrzaliznytsia; UZ), handle a little less than half of the country's exports and generates about 4 percent of its GDP. UZ is one of Ukraine's largest SOEs and its largest employer with a staff of over 260,000.

81 Annually there are about 3,500+ recorded road crash fatalities in Ukraine in addition to 35,000+ crash related injuries. Relative to population, Ukraine's road traffic fatality rate is about 2-3 times the level of Western European countries.

82 The MEDT is responsible for technical approval of projects proposed by line ministries and overall coordination; the MOF is responsible for review of PPPs with respect to affordability and fiscal risks; and the overall strategic planning rests with the Cabinet.

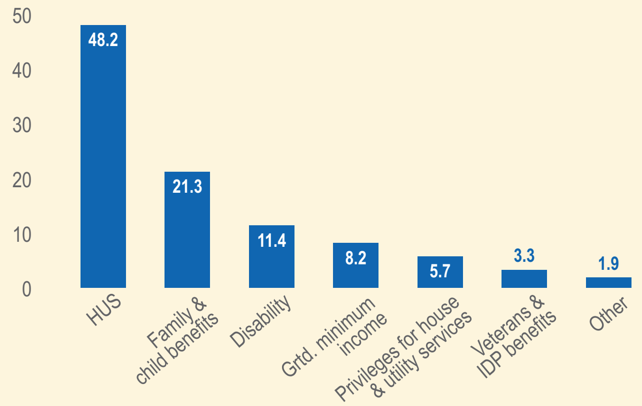
83 These analyses include (i) World Bank (2019c) Review of the Education Sector in Ukraine: Moving Toward Effectiveness, Equity and Efficiency; (ii) World Bank (2021b) The Economics of Winning Hearts and Minds (forthcoming); (iii) World Bank (2021d) Climate change Note; and (iv) World Bank (2020c) Additional Financing for the Serving People, Improving Health Project.

Figure 28: Consumption of social assistance by quintile



Source: World Bank staff calculations.

Figure 29: Social assistance spending by type



Source: World Bank staff calculations.

contribute to structural transformation and resilience at the economy-wide level.

A key priority in Ukraine is to address the exclusion of the poor and reduce inclusion errors by strengthening safety nets through better targeting and integration of eligibility rules with other programs. Many of the structural reforms that Ukraine is embarking on can potentially increase inequality in the short term. At the same time, the growth in incomes in the B40 population has largely been driven by transfers and is not sustainable. Vulnerability to poverty among older households, where women are overrepresented, and which tend to rely on pension benefits as their main source of income, is also high. A stronger and fiscally sustainable safety net is critical. Currently, however, only around half of Ukraine's social safety assistance reaches the B40 (Figure 28) which includes some universal child benefits. The largest social assistance program—the Housing Utility Subsidy (HUS)—could be further improved in terms of targeting as significant leakages occur to better-off households. The Guaranteed Minimum Income (GMI) program is the best targeted—72 percent of it reaches the bottom 20 percent; however, its coverage is low and it only accounts for 8 percent of total social assistance spending (Figure 29). Accordingly, improving the targeting and sustainability of social safety net programs will require strengthening the GMI to improve support to poor households and improving targeting of the HUS. These measures are complementary to other reforms e.g., in the energy sector to improve competition and energy efficiency (highlighted in Pathway 3) and rationalization of fiscal spending (notably wage and other entitlement spending, which as discussed in Pathway 2 is contributing to significant budget rigidities and crowding out resources that can be directed towards the neediest).

In addition, addressing huge gaps in access to basic public services is necessary for bolstering resilience and inclusion. This will entail a mix of policies to meet basic public service needs (W&S, health, education as well as others) of lagging households and communities, particularly rural households, those in the bottom deciles of the income distribution or those impacted by conflict and climate change. With respect to water, meeting Ukraine's SDG targets of universal access by 2030 will require modernizing the water and sanitation sector, including through reforms that address the financial sustainability and under-investment challenges of water utilities.[84] These reforms are needed to reduce the significant disparities—in both level and quality of service—that can be observed across urban/rural areas, income levels, social groups, and between regions and within individual settlements. More broadly, given the fragmented nature of the water sector, Ukraine needs to develop a comprehensive multi-sectoral strategy aligned with SDG goals that delineates targets for services, funding, institutional roles and responsibilities. These efforts will complement agricultural reforms to lift productivity and broader efforts to strengthen climate resilience and adaptation (through investments in wastewater treatment, waterways, flood protection and modernization of irrigation and drainage infrastructure). Finally, local governments play a central role in the "last mile" of service delivery, so that reform priorities in Pathway 1 on decentralization closely intersect with efforts to improve quality of public services.

Workers and communities exposed to conflict and/or climate risks also need support. In addition to specific communities that are critically exposed to climate risks (e.g coal mining communities), there are also broader risks to workers during the transition to a low carbon economy; local governments will need a customized approach to deal with these challenges. Supporting vulnerable workers will require retraining for those who are able to transition into new jobs and strengthened social safety nets for those who are not able to do so. In conflict-affected areas it will be critical to: (i) eliminate service delivery and connectivity "islands" in government-controlled areas, e.g. through targeted measures to attract skilled or public service personnel; (ii) skills development and vocational training aligned with market needs to enable/facilitate mobility of workers, and regulatory policies that facilitate a recovery of firms and diversification into other sectors (based e.g. around agricultural value-add); (iii) transport connectivity and mobility policies (e.g. reduced housing market frictions) that expand access to growing markets and jobs in other parts of the country and/or facilitate the inflow of workers back into conflicted affected areas if recovery strategies near results. Likewise, local governments especially in growing oblasts and with large urban centers may require investments to minimize negative congestion externalities to urban productivity from resettled IDPs from the East.

Investments in human capital to unlock the full potential of the Ukrainian people and improve long-term economic growth will require addressing misallocations in health and education spending. Education and health sector expenditures are relatively large as a percent of GDP (compared to countries with similar income and other countries in the region) and coverage continues to be high. However, spending inefficiencies are visible, linked to misallocations across levels of education[85] and health care, and across expenditure categories (particularly wages due to overstaffing in both schools and hospitals). They also give rise to equity concerns. For example, too much is spent on higher education to which the poorer have more limited access. Similarly, in health, expenditures are skewed towards oversized hospital networks, and finance inputs rather than services, distorting incentives and resulting in poor health outcomes, especially for men who have lower life expectancy than women and suffer more from cardiovascular diseases. Out of pocket payments are sizable, affecting access to and quality of services for lower income households.

84 Non-revenue water is estimated at 44 percent in recent years, up 30 percent since 2013, reflecting a combination of physical losses due to inadequate network maintenance, inadequate water metering and under-investment in system replacement, and from commercial losses, as well as low tariffs. For instance, the water metering level, at only 40 percent, is significantly below the average metering rate across the Danube region of 90 percent (World Bank 2019). Tariffs are significantly lower than the EU average: the average residential tariff (including water and wastewater) was €0.52 per m3, which while close to the EU candidate country average of €0.57 per m3, is significantly lower than the Danube country average of €1.36 in 2017. Cited from World Bank (2021c).

85 Public spending analysis indicates a number of inefficiencies in education spending stemming, in part, from relatively large allocations to higher education (especially for student stipends) and a preponderance of small rural schools in the general education network, which drive up unit costs of education provision.

Within education, it is vital that workers are equipped with the skills required by firms, to enhance social and economic mobility and resilience, and to enable more dynamic firms to grow. Ambitious education reforms have begun in recent years, emphasizing competency-based and inclusive learning in primary and secondary education. As part of this, greater institutional autonomy has been granted to schools, universities, and local authorities for education planning and policy, and schools are now directly financed by local authorities; however, governance and accountability structures and institutional capacities remain weak, and large-scale optimization of the school network is also needed (though it has been progressing, particularly in TVET education). Due to the conflict in the East and long-term underinvestment in school infrastructure, many education facilities require capital investments. Additional critical priorities include the alignment of teacher incentives and capabilities to incentivize *modern* approaches to teaching and curriculum; reforms of higher education financing and teacher workforce management; enhanced student assessment systems, and transparency and quality assurance in line with EU standards. The COVID-19 pandemic has heavily affected the delivery of Technical and Vocational Education and Training (TVET) in Ukraine, affecting the ability of older workers to retrain and re-skill themselves.[86] Reform priority areas require reorienting TVET programs (and leveraging digital technologies to deliver this) towards towards areas where structural changes in skill demand are occurring (e.g., digital skills, logistics, healthcare). This may also help increase participation rates to offset the economic drag from a shrinking labor force, especially by ensuring older workers can work longer and be re-skilled and retrained to match firms' needs.

In health, the priority is to improve population health and protect households from the financial impact of health shocks. The modernization of primary health care began in 2017, is progressing well, and has been followed by a second phase of tertiary care reforms (launched April 2020). However, the COVID-19 outbreak affected implementation, shifting priorities of the health sector to retain labor and infrastructure capacities. The reform needs to be advanced in terms of stronger governance mechanisms and quality of care. It will require improving the efficiency and equity of health spending to protect people from high out of pocket spending, including through continuing reforms of hospital payments; improving efficiency and quality of service delivery through further strengthening of primary care as well as modernization and optimization of specialized care (especially in the hospital sector); and finally by addressing the behavioral risk factors that lead to Ukraine having the highest NCD burden in ECA and an average life expectancy that lags almost 10 years behind the EU average. Private sector investment in the sector is also constrained by lack of, or costly, financing, and improved implementation of PPPs can be instrumental in attracting private expertise, capacity, and financing.[87]

Finally, digital investments are needed to support ongoing health and education delivery reforms, equip the workforce with skills needed in a modern economy, and improve the innovation capacity of firms. Low broadband coverage is a challenge for key social infrastructure, especially in rural areas: some 6,544 schools and 7,565 primary health care institutions are currently unconnected for example. This is despite health legislature mandating that all healthcare institutions maintain electronic records and exchange medical and financial information electronically. Low school digital connectivity has held back effective implementation of initiatives such as online classes including during COVID-19 crisis. More broadly, digital skills are a prerequisite for a well-functioning digital economy, and one factor supporting broader technological upgrading and diffusion (and thereby higher productivity) in the economy in sectors such as agriculture, energy and transport. However, recent

86 https://www.ilo.org/budapest/what-we-do/projects/WCMS_753153/lang--en/index.htm

87 World Bank Group (2021e) Country Private Sector Diagnostic.

analysis shows that Ukraine has a limited capability to generate, as well as absorb, new technology, and ranks low relative to peer countries in a composite index of technology upgrading.[88] Meanwhile, some 53 percent of the population have below-average digital skills and 15 percent have none.[89] Going forward, it will be imperative to equip the workforce with relevant skills through prioritization of digital and STEM skills in educational curricula and vocational training, as well as strengthening firm-level incentives to train workers. It will also be important to restructure key public research institutions to become market and industry oriented and to develop a coherent innovation strategy for the Government.[90]

88 Radosevic et al (2019) and Aridi et al. (2020).

89 World Bank (2020b). Recommendations to Min. of Digital Transformation, GoU, on a National Broadband Development Strategy and Implementation Plan.

90 World Bank (2017). *Ukraine - Science, technology, and innovation public expenditure analysis.*

References

Aridi, A., C. S. Hayter, and S. Radosevic. 2020. *Windows of Opportunities for Catching Up: An Analysis of ICT Sector Development in Ukraine*. Journal of Technology Transfer, May.

Frias, Jaime Andres Uribe; Zolotarev, Andrey P.; Cirera,Xavier; Aridi,Anwar.2017. *Ukraine - Science, technology, and innovation public expenditure analysis* (English). Washington, D.C.: World Bank Group.

Balabushko et al. 2018. *Crony capitalism in Ukraine: Impact on Economic Outcomes*. Washington, D.C. : World Bank Group.

Dragon Capital. 2020. *Foreign Investor Survey 2020*. https://dragon-capital.com/media/press-releases/nedovira-do-sudovoi-sistemi-posila-1-mistse-sered-pereshkod-dlya-inozemnikh-investitsiy/

EU-ILO. 2018. Undeclared Work in Ukraine: Nature, Scope and Measures to Tackle It. Working Paper

Havlik, P., Kochnev, A. and Pindyuk, O. 2020. *Economic Challenges and Costs of Reintegrating the Donbas Region in Ukraine*. The Vienna Institute for International Economic Studies. Research Report 447

IMF. 2016. *Ukraine – Technical Assistance Report: Reforming Management and Oversight of State Assets*, Washington, D.C.: International Monetary Fund

IMF. 2020a. Ukraine: *Request for Stand-By Arrangement* -Press Release; Staff Report; and Statement by the Executive Director for Ukraine. IMF Country Report *20/197*, International Monetary Fund.

Kupets, O. 2014. *Labor Market Challenges of an Aging and Shrinking Population in Ukraine*. Journal of Comparative Economic Studies, Vol. 9: 99-134.

Lough, J. and V. Dubrovisky. 2019. *Are Ukraine's Anti-Corruption Reforms Working?* Chatham House Research Paper. November 2018.

Mikulska and E. Kosinski, 2020. *What's Next for Natural Gas in Ukraine*. Baker Institute for Public Policy, Working Paper (https://www.bakerinstitute.org/media/files/files/6754d0f0/ces-wp-ukraine-050720.pdf

National Bank of Ukraine. 2020a. *Financial Stability Report*, June 2020.

National Bank of Ukraine. 2020b. *Banking Sector Review*. August 2020

Pirani, S. 2020. *The market takes shape: The Ukrainian gas sector to 2030*. Oxford Institute for Energy Studies. Energy Insight #77.

Radosevic, Slavo, Randolph Luca Bruno, Christopher Scott Hayter, and Anwar Aridi. 2019. *Path for Ukraine's Economic Growth: Technology Upgrading*. World Bank, Washington, DC

Rybachuk, O. and K. Krynytskyi (2020). *A turning point for Ukraine: full-scale energy transition or re-established gas dependency?* Commentary. Heinrich Boll Stiftung.

Saha, D and G. Zachmann. 2020. *What Would be the Impact of a Possible EU Carbon Adjustment Mechanism on Ukraine*. German Economic Team. Policy Briefing 5/2020.

World Bank-GFDRR. 2015. *Ukraine Flood and Earthquake Profile*. Washington, D.C.: World Bank Group.

World Bank. 2017. *Ukraine Science, Technology, and Innovation Public Expenditure Analysis*. World Bank, Washington, DC. World Bank

World Bank. 2018a. *Reducing Market Distortions for a More Prosperous Ukraine*. Washington, D.C.: World Bank Group.

World Bank. 2018b. *Agriculture Policies and Performance*: Background study for 2019 Growth Study

World Bank. 2019a. *Ukraine Growth Study: Faster, Lasting and Kinder*. Washington, D.C.: World Bank Group.

World Bank. 2019b. *Review of the Education Sector in Ukraine: Moving Toward Effectiveness, Equity and Efficiency*. Washington, D.C.: World Bank Group.

World Bank Group. 2019c. *Trading for Development in the Age of Global Value Chains*. World Development Report 2020. Washington, D.C.: World Bank Group.

World Bank. 2019c. *Ukraine: Analysis of e-government reform options and implementation plan*. Washington, D.C.: World Bank Group.

World Bank. 2020a. *Eastern Ukraine: Reconnect, Recover, Revitalize (3R) Project*. Project Document. World Bank Group.

World Bank. 2020b. *Recommendations to Ministry of Digital Transformation*, GoU, on a National Broadband Development Strategy and Implementation Plan, 2020 to 2025

World Bank 2020c. *Additional Financing for the Serving People, Improving Health Project*. Project Document. Washington, D.C.: World Bank Group.

World Bank. 2021a. *Poverty Note*, forthcoming. Washington, D.C.: World Bank Group.

World Bank 2021b. *The Economics of Winning Hearts and Minds*. Forthcoming. Washington, D.C.: World Bank Group.

World Bank 2021c. *Water Policy Note*: Background Note for SCD Update.

World Bank 2021d. *Climate Change Note*. Background Note. World Bank

World Bank 2021e. *Creating Markets in Ukraine. Doubling Down on Reform: Building Ukraine's New Economy*. Country Private Sector Diagnostic. World Bank Group.

World Bank 2021f. *Public Financial Review*. Forthcoming. World Bank Group.

UNCTAD. 2020. *How COVID-19 is Changing Global Value Chains*. https://unctad.org/news/how-covid-19-changing-global-value-chains

UNOCHA. 2018. *Humanitarian Response Plan Ukraine, January–December 2019*, United Nations.

USAID. 2013. *Gender Analysis. Opportunities to Strengthen Family Farms and the Agricultural Sector in Ukraine*. USAID

Annex: Knowledge and Data Gaps

The 2017 SCD, which was prepared in the immediate aftermath of an acute political, economic, and security crises, did not explicitly list any knowledge gaps. During the preparation of the *2021 SCD Update*, the team has identified a number of gaps in the knowledge base in Ukraine, particularly related to labor markets. Additional information to fill these gaps would enable a more precise identification of policy actions to address some of the priorities:

- Labor force participation, minimum wages, and remittances: Though labor force participation and employment rates have recovered from their post-conflict troughs, they remain low and their recovery appears to have been uneven, with employment rates increasing for better-off households but stalling at low levels among workers in the B40. Persistently low labor force participation and employment rates among vulnerable households can potentially be explained by several factors, two of which seem particularly important in Ukraine's context: The frequent and substantial increases in the minimum wage and the increasing dependence on remittances. Better understanding the role of different factors in explaining low participation and employment rates is necessary to inform more performant labor market policies.

- Informality: Ukraine's shadow economy is estimated at 30–50 percent of GDP and accounts for up to 30 percent of employment. Over the past years, the GoU has attempted to promote formality by decreasing employer social contributions and increasing the minimum wage. While these measures may have helped at the margins, informality remains pervasive. Better understanding the underlying reasons for high levels of informality (linked to the business environment, the tax regime, the enforcement environment, etc.) is key to understanding the pressure points that generate non-compliance among firms and individuals and the appropriate policy solutions.

- Distributional impacts of climate change adaptation and mitigation: Ukraine will need to shift its carbon-intensive economy towards a greener model of production to remain competitive with cleaner producers. This green transition will open up new opportunities but will also adversely affect population segments and localities that have traditionally depended on the old carbon-intensive economy (e.g. coal mining and certain heavy industries). Carefully assessing, ex ante, the distributional impacts of green growth reforms will be required to inform mitigation measures to smooth the transition for affected population groups and localities to make sure the transition is just.

Next to these knowledge gaps, the data gaps as already highlighted in the 2017 SCD remain highly relevant. Though data are being collected and reported in an aggregated fashion, access to microdata is highly constrained. The State Statistics Service of Ukraine (SSSU) publishes a Public Use File (PUF) of the Household Budget Survey and the Labor Force Survey, but the number of variables included in the PUF is far too limited to conduct rigorous analytical research and distributional analysis, including the Bank's due diligence analytical work. Access to a more comprehensive database containing more variables is not granted. The lack of access to data constrains the Bank's ability to conduct policy-relevant analytical work.

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