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Report No: PAD3535

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED LOAN

IN THE AMOUNT OF US\$ 200 MILLION

TO

UKRAINE

FOR A

UKRAINE IMPROVING HIGHER EDUCATION FOR RESULTS PROJECT

April 13, 2021

Education Global Practice  
Europe And Central Asia Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective March 31, 2021)

Currency Unit = Ukrainian Hryvnia (UAH)

UAH 27.89 = US\$1

## FISCAL YEAR

January 1 - December 31

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## ABBREVIATIONS AND ACRONYMS

CPF	Country Partnership Framework
DA	Designated Account
ECA	Europe & Central Asia
EDEBO	Unified State Electronic Database on Education
EIT	External Independent Test
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESG	European Standards and Guidelines
ESRS	Environmental and Social Review Summary
ESS	Environmental and Social Standard
EU	European Union
FM	Financial Management
GDP	Gross Domestic Product
GoU	Government of Ukraine
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
GTS	Graduate Tracer Study
HEI	Higher Education Institution
IBRD	International Bank for Reconstruction and Development
ICB	International Competitive Bidding
IEA	Institute for Education Analytics
IFR	Interim Unaudited Financial Report
IPF	Investment Project Financing
KPI	Key Performance Indicator
LMP	Labor Management Procedures
M&E	Monitoring & Evaluation
MOES	Ministry of Education and Science
MOF	Ministry of Finance
NAHEQA	National Agency for Higher Education Quality Assurance
NCB	National Competitive Bidding
NPF	New Procurement Framework
NQF	National Qualification Framework
NSS	National Student Survey (in higher education)
NUS	New Ukrainian School
OECD	Organisation for Economic Cooperation and Development
PBC	Performance-Based Condition
PDO	Project Development Objective
PIU	Project Implementation Unit
POM	Project Operational Manual

PPSD	Project Procurement Strategy for Development
R&D	Research and Development
RAP	Resettlement Action Plan
RBF	Results-Based Financing
RFB	Request for Bids
RFP	Request for Proposals
RFQ	Request for Quotations
RPF	Resettlement Policy Framework
SEP	Stakeholder Engagement Plan
SOE	Statement of Expenditure
SORT	Systematic Operations Risk-Rating Tool
STEM	Science, Technology, Engineering, and Mathematics
STEP	Systematic Tracking of Exchanges in Procurement
TFSCB	Trust Fund for Statistical Capacity Building
TOR	Terms of Reference
WB	World Bank



TABLE OF CONTENTS

<b>DATASHEET .....</b>	<b>vi</b>
<b>I. STRATEGIC CONTEXT .....</b>	<b>1</b>
A. Country Context.....	1
B. Sectoral and Institutional Context.....	2
C. Relevance to Higher Level Objectives.....	13
<b>II. PROJECT DESCRIPTION.....</b>	<b>14</b>
A. Project Development Objective .....	14
B. Project Components .....	15
C. Project Beneficiaries .....	24
D. Results Chain .....	24
E. Rationale for Bank Involvement and Role of Partners .....	24
F. Lessons Learned and Reflected in the Project Design .....	25
<b>III. IMPLEMENTATION ARRANGEMENTS .....</b>	<b>28</b>
A. Institutional and Implementation Arrangements .....	28
B. Results Monitoring and Evaluation Arrangements.....	31
C. Sustainability.....	33
<b>IV. PROJECT APPRAISAL SUMMARY .....</b>	<b>34</b>
A. Technical and Economic Analysis .....	34
B. Fiduciary.....	35
C. Legal Operational Policies.....	37
D. Environmental and Social.....	38
<b>V. GRIEVANCE REDRESS SERVICES .....</b>	<b>39</b>
<b>VI. KEY RISKS .....</b>	<b>39</b>
<b>VII. RESULTS FRAMEWORK AND MONITORING .....</b>	<b>41</b>
<b>ANNEX 1: Implementation Arrangements and Support Plan .....</b>	<b>57</b>
<b>ANNEX 2: Economic Analysis.....</b>	<b>62</b>
<b>ANNEX 3: Ukraine Country Program Adjustment Responding to COVID-19 .....</b>	<b>66</b>
<b>ANNEX 4: International Evidence on Project-Supported Interventions .....</b>	<b>70</b>
<b>ANNEX 5: Team Members .....</b>	<b>73</b>



DATASHEET

**BASIC INFORMATION**

Country(ies)	Project Name	
Ukraine	Ukraine Improving Higher Education for Results Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P171050	Investment Project Financing	Moderate

**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input checked="" type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
05-May-2021	31-Dec-2026

Bank/IFC Collaboration

No

**Proposed Development Objective(s)**

The Project Development Objective is to improve the efficiency, conditions for quality, and transparency in Ukraine's higher education system.

**Components**

Component Name	Cost (US\$, millions)
Sector-Wide Improvements to Governance, Financing, Quality and Transparency	54.00
Alliances and Partnerships for Improved Efficiency and Quality	73.00
Capacity Building and Education Environment Enhancement	69.00
Project Management, Monitoring & Evaluation	4.00

**Organizations**

Borrower:	Ukraine
Implementing Agency:	Ministry of Education and Science of Ukraine

**PROJECT FINANCING DATA (US\$, Millions)****SUMMARY**

<b>Total Project Cost</b>	200.00
<b>Total Financing</b>	200.00
<b>of which IBRD/IDA</b>	200.00
<b>Financing Gap</b>	0.00

**DETAILS****World Bank Group Financing**

International Bank for Reconstruction and Development (IBRD)	200.00
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**Expected Disbursements (in US\$, Millions)**

WB Fiscal Year	2021	2022	2023	2024	2025	2026	2027
<b>Annual</b>	0.00	55.20	53.60	43.30	25.80	21.50	0.60
<b>Cumulative</b>	0.00	55.20	108.80	152.10	177.90	199.40	200.00



**INSTITUTIONAL DATA**

**Practice Area (Lead)**

Education

**Contributing Practice Areas**

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

Risk Category	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate
9. Other	
10. Overall	● Moderate

**COMPLIANCE**

**Policy**

Does the project depart from the CPF in content or in other significant respects?

Yes  No

Does the project require any waivers of Bank policies?

Yes  No





**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Not Currently Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant

**NOTE:** For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

**Legal Covenants**

Sections and Description

Schedule 2, Section I.A.1 - Without limitation to the provisions of Article V of the General Conditions and except as the Bank shall otherwise agree, the Borrower, through MOES, not later than sixty days after the Effective Date, shall establish and thereafter maintain throughout Project implementation, a Project implementation unit (PIU) with staff in numbers and with terms of reference, and functions acceptable to the Bank as set forth in the Operational Manual.

Sections and Description

Schedule 2, Section I.A.1 - The Borrower, through MOES, shall maintain throughout Project implementation the Project Coordinator.

Sections and Description

Schedule 2, Section I.A.2 - Not later than sixty days after the Effective Date, the Borrower, through MOES, shall establish an automated accounting system, acceptable to the Bank, as further defined in the Operational Manual.



Sections and Description

Schedule 2, Section I.A.3 - The Borrower, through MOES, shall not carry out any activities under Parts 1.1, 2.1 and 3 of the Project until the PIU has been established in a manner acceptable to the Bank.

Sections and Description

Schedule 2, Section I.A.4(a) - For purposes of facilitating the carrying out of the Project, the Borrower, through MOES, shall enter into an agreement with each Selected Public HEI, under terms and conditions acceptable to the Bank (Public HEI Agreement), including, inter alia, the Selected Public HEI’s obligations as beneficiaries from Parts 2 and 3 of the Project, including the Selected Public HEI’s obligation to comply with the applicable provisions of the Loan Agreement, the ESCP and the Operational Manual.

**Conditions**

Type	Description
Effectiveness	The Operational Manual has been adopted in a manner acceptable to the Bank.
Disbursement	Without limitation to the provisions set forth in Section III.B.1 of Schedule 2 of the Loan Agreement, each withdrawal under Category (2) shall be made only after the Borrower has furnished to the Bank evidence acceptable to the Bank in its form and content and following the requirements set forth in the Operational Manual, confirming the achievement of the respective PBC set forth in Schedule 4 to the Loan Agreement.



## I. STRATEGIC CONTEXT

### A. Country Context

1. **In the midst of the COVID-19 pandemic, the second wave in 2021 and beginning of vaccinations, Ukraine is both focusing on its longer-term strategic objectives while addressing the immediate crisis.** Ukraine is a large lower-middle-income country with a gross domestic product (GDP) per capita of US\$ 3,141 as of 2019 and an economy that has been hit hard by the COVID-19 outbreak, while still recovering from the last economic crisis of 2014-15. In 2014-16, Ukraine experienced acute political, security and economic challenges leading to the *Euromaidan* uprising, the armed conflict in eastern Ukraine, and a large cumulative contraction of the economy of 16 percent. Economic growth recovered to 3.3 percent in 2018<sup>1</sup> and remained at 3.2 percent in 2019 before the COVID-19 outbreak. Moderate poverty (as measured by the World Bank's methodology for Ukraine) declined from a peak of 27 percent during the crisis of 2015 to an estimated 18 percent in 2019. Even so, at the current growth rate, it will take Ukraine more than 50 years to reach income levels of today's Poland.<sup>2</sup> Consumption of the bottom 40 percent contracted in the period between 2011-2016 emphasizing the need for faster economic growth. However, this has been further impacted by the COVID crisis.

2. **Looking beyond 2021 and the COVID-19 crisis, improving labor productivity and the quality of human capital is key to faster growth in Ukraine as well as ensuring a long-term recovery.** In recent years, the share of labor income in total income has started to decline due to a significant decline in real wages, rather than an increase in labor productivity. This hints at a mismatch in the skills produced by the education system and the needs of the economy. Furthermore, human capital represents *only 34 percent of total wealth in Ukraine, compared to 51 percent in lower-middle-income countries, 62 percent in the Europe and Central Asia (ECA) region, and 70 percent in high-income OECD (Organization for Economic Cooperation and Development) countries.* In fact, 40 percent of employers surveyed across four sectors in Ukraine reported significant skills gaps among their employees which harm business objectives.<sup>3</sup>

3. **Further jeopardizing Ukraine's economy is a declining labor force due to demographic pressures and outward migration (brain drain).** Ukraine has a total population of 42 million but has experienced negative population growth for 20 years. The working age population of 29 million will decline by another 8.3 million by 2050. Emigration has also increased substantially in recent years, particularly to Poland, due to the appeal of higher expected earnings. A record-breaking 2 million Ukrainians entered the Polish labor market in 2017 – an increase of 40 percent from 2016 signifying a growth in brain-drain. It is estimated that over 3 million Ukrainians are permanently abroad, and 7-9 million people leave for seasonal work. These demographic factors create further pressure to increase labor productivity and growth.

4. **On top of the preexisting barriers to growth, the COVID-19 pandemic has forced a sudden slowdown in economic activity and a significant contraction is expected.** The COVID-19 pandemic has significantly affected the economy through reduced disposable incomes and consumption (resulting from necessary restrictions and closures), as well as lower remittances due to weaker economic activity in neighboring countries. The economy contracted by an estimated 5.5 percent in 2020, as weaknesses in the first half of the year are only partly offset

<sup>1</sup> World Bank Special Focus Note on Tapping Ukraine's Growth Potential

<sup>2</sup> World Bank Ukraine Growth Report and Special Focus Note on Tapping Ukraine's Growth Potential

<sup>3</sup> WB (2017) Skills for a Modern Ukraine



by a recovery in domestic demand in the second half and positive contributions from net exports. Going forward, annual GDP growth is expected to remain modest at 3 percent in 2021, rising to about 3.7 percent by 2023. The outlook depends on the duration of the health crisis and reforms that address bottlenecks to investment and safeguard macroeconomic sustainability.

5. **Additionally, Ukraine's economy is increasingly vulnerable to the impacts of climate change.** Ukraine is at risk of hydrometeorological hazards and natural disasters, with the impacts of climate change making Ukraine increasingly vulnerable to droughts, high temperatures, heat waves, heavy precipitation, mudflows, and floods. Key adaptation priorities across the economy have been identified. Ukraine submitted its Sixth National Communication to the UN Framework Convention on Climate Change in 2012 and focus remains on the country's capacity to monitor its greenhouse gas emissions, continue implementation of key efficiency gains in reducing emissions, and develop a more resilient economy.<sup>4</sup> In January 2020, Ukraine published a draft concept of Green Energy Transition of Ukraine until 2050,<sup>5</sup> which aims at increasing renewable energy share in the national energy balance up to 70 percent by 2050. Moreover, at the Climate Ambition Summit in December 2020, Ukraine announced plans to increase its mitigation target for 2030 to 58 percent from its previous target of at least a 40 percent reduction in greenhouse gas emissions. Supporting a future generation of human capital conscientious of climate change issues as well as approaching the issue in an entrepreneurial way, will be critical for combating some of these effects and generate new sustainable businesses.

6. **Strengthening public trust, accountability, and transparency also remains a key cross-cutting objective for the Government.** Public discontent with corruption, living standards and a demand for improved public services led to the election of President Volodymyr Zelenskyy in April 2019. Surveys consistently show strong public support for reform: over 60 percent of Ukrainians believe in the success of reforms to date. Anti-corruption and transparency reforms are perceived to be most important by the public.

7. **In the context of these vulnerabilities and opportunities, as well as the current COVID-19 pandemic, Ukraine recognizes human capital and skills development as a key priority for both resilience and growth while addressing shorter term aspects and resilience of education provision through digitalization.** The Government's plan of reform identifies human capital development and education system reform as a core priority for contributing to the ultimate goals of increasing economic growth, attracting foreign direct investment, and creating new jobs<sup>6</sup> while bridging the COVID crisis and minimizing its impact on the most vulnerable.

## B. Sectoral and Institutional Context

8. **Higher education coverage in Ukraine has increased substantially over the last 20 years, and higher education represents the top objective for most young Ukrainians, though the COVID-19 pandemic has significantly affected teaching and research in Ukrainian universities.** The growth in the higher education system—particularly in higher education institutions (HEIs) offering academic degrees—was accompanied by a large increase in the higher education coverage rate, from about 45 percent at the time of independence in 1993 to 82 percent as of 2018. Approximately 75 percent of students enroll in long-cycle degree programs in universities, academies and institutes, whereas colleges have 25 percent of enrollments. The share of the population age 25+ with at least some higher education has reached about 40 percent, exceeding that of the OECD

<sup>4</sup> World Bank Climate Change Knowledge Portal.

<sup>5</sup> <http://uwea.com.ua/en/news/entry/ukraina-planiruet-osuschestvit-zelenyj-energeticheskij-perehod-k-2050-godu/>

<sup>6</sup> Cabinet of Ministers of Ukraine (2020). Education and Science Reform.



average. However, the COVID-19 pandemic and second wave in 2021 as well as the suspension of face-to-face learning, have highlighted both new challenges to learning, but also the importance of digitalization, technology and distance learning as new methods of learning.

9. **To meet the growing demand over the last decades, the higher education sector in Ukraine has grown to contain an extensive and diverse array of universities, academies, and institutes (academic HEIs).** As of 2019, Ukraine had a total of 327 HEIs (231 public and 96 private).<sup>7</sup> The majority of State-funded public HEIs (141 institutions) are subordinated to the Ministry of Education and Science (MOES), although a subset of HEIs are also subordinated to other ministries like the Ministry of Health and Culture. Expansion of the higher education system was driven by the development of private HEIs, upgrading the status of some institutions to academies and universities, and the establishment of branches and separate structural divisions of HEIs.

10. **A large supply of higher education graduates, many with insufficient skills for the needs of the modern labor market, has contributed to unemployment and education-job mismatch, particularly among young university graduates.** The share of workers with higher education among the unemployed increased from 32 percent in 2004 to 47 percent by 2013 when the last comprehensive analysis was conducted, though recent data indicate this trend has continued. Moreover, 40 percent of young university graduates were working in lower-level jobs which did not require university-level education, as of 2013, compared to 29 percent for prime-age and older workers. Only one-third of youth believe that Ukrainian education meets the needs of the modern labor market, compared to 73 percent in the European Union (EU), according to Eurobarometer polls from 2017. In the labor market, a serious skills mismatch has been identified: 40 percent of employers report significant skills gaps, including both cognitive and socioemotional skills, which harm business objectives.<sup>8</sup> Only half of job vacancies in a recent study even mention needing a minimum educational level and less than a third a specific field of study.<sup>9</sup> This disconnect between educational credentials and labor market needs is driven by the high number of Ukrainians with higher education as well as the poor signaling value of many higher education credentials as evidence of high-quality education and relevant skills. This challenge is further hindered by low internal labor mobility, which stands at 4.5 percent, half that of comparator countries.

11. **Since the peak in 2008, Ukraine's higher education system has been facing a significant decline in enrollments largely due to the declining population as well as greater numbers of students going abroad for higher education. The COVID-19 pandemic will likely further impact these trends.** The number of students in HEIs declined by 45 percent between 2008 and 2018, from over 2.37 million students in 2008 down to about 1.33 million in 2018. Overall, this trend is projected to continue over the coming years given the demographic conditions in Ukraine. At the same time, more and more students have sought to study abroad, due in part to deterioration in higher education quality and relevance in Ukraine, as well as the perception that it will facilitate access to a better job market. Between 2009 and 2016, the number of Ukrainians going abroad for higher education increased by 176 percent (reaching nearly 70,000 students).

12. **The governance and regulatory set-up for higher education in Ukraine is complex, with multiple agencies playing an important role in the backdrop of increasing university autonomy.** The governance structure for higher education requires Parliament to set legislation, the Cabinet of Ministers to develop secondary

<sup>7</sup> In addition to the 327 HEIs, Ukraine also has 349 colleges that are classified as pre-tertiary professional education institutions.

<sup>8</sup> STEP Survey 2014

<sup>9</sup> STEP Survey 2014; World Bank (2019) Discussion Paper No. 1932 "What Employers Actually Want: Skills in Demand in Online Job Vacancies in Ukraine."



legislation and implement policy, and other ministries and agencies to oversee their subordinated HEIs. The MOES plays the most important role in the governance of Ukraine's higher education sector. Another key agency is the recently established National Agency for Higher Education Quality Assurance (NAHEQA) which works autonomously to accredit universities and certify the quality of their programs. Under the MOES, the Ukrainian Center for Education Quality Assessment manages and implements the university admissions exam (External Independent Test, EIT) and the Institute for Education Analytics (IEA) provides data and analysis on key issues in the sector.

13. **The regulatory framework has undergone important changes, starting with Ukraine joining the pan-European Bologna Process in 2005 and passing the Law on Higher Education in 2014, both of which set the stage for governance and quality assurance reforms underpinned by an agenda of European integration.** Regarding governance and university autonomy, the law greatly expanded the degree of administrative and academic autonomy granted to HEIs, allowing them to finally be autonomous and self-governing in line with the Bologna Process vision for creating a common European Higher Education Area. It established democratic management structures within HEIs to manage operations, structure, performance, and monitoring within HEIs. However, many HEIs are not well-equipped to operate according to a more autonomous set-up and Ukraine lacks the means in terms of information and steering mechanisms to orient newly autonomous HEIs towards competitiveness and performance.

14. **The regulatory framework also supports a functional quality assurance system in line with modern higher education systems, with the obligation to rebuild the accreditation system for higher education based on the principles of the European Standards and Guidelines (ESG).** The 2014 law took several important steps to support and reinforce the quality assurance system and move away from the Soviet education system structure towards one more aligned with European norms and the Bologna Process. This included redefining the levels, degrees, and qualifications of higher education in relation to a National Qualifications Framework (NQF). It specified the requirement to establish higher education standards according to the NQF and in line with the European Credit Transfer System. Additionally, and in line with ESG principles, Ukraine established its autonomous National Agency for Higher Education Quality Assurance (NAHEQA) and charged it with launching updated accreditation procedures for programs and institutions in line with European norms. NAHEQA has been functional only since early 2019 and is currently being supported by several donor-funded projects and activities. The agency has initiated its work on accreditation of study programs, with relevant accreditation regulations approved in August 2019 followed by high demand from HEIs for program accreditation.<sup>10</sup>

15. **Within this environment, the main challenges facing the higher education sector in Ukraine include improving quality and relevance to meet labor market needs while also supporting the sector to maintain continuity of learning in the face of COVID-19, strengthening fiscal sustainability and efficiency across the sector, and rebuilding public trust in educational credentials through greater transparency and governance.** These challenges are described in the recent World Bank's 2019 Education Flagship Study, *Review of the Education Sector in Ukraine: Moving towards Effectiveness, Equity, and Efficiency*, and in more detail below.

### ***Challenges with Quality: Poor Relevance and Quality of Teaching, Learning and Research***

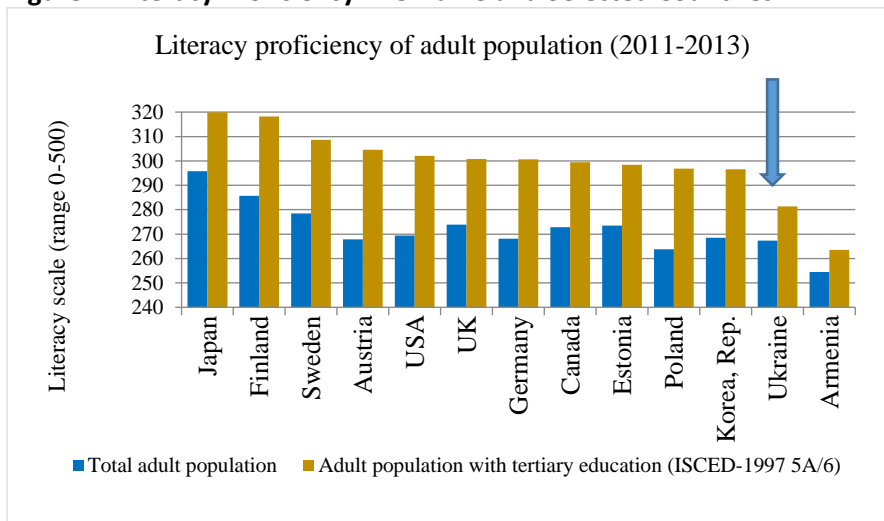
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<sup>10</sup> Currently accreditation is demand-driven and not obligatory. There are over 40,000 study programs in total across the higher education sector, covering all levels of higher education. However, many are undergoing review and consolidation, so the total number of programs will decline over time.



16. **Proficiency levels among adults with higher education in Ukraine lag many high-income countries, even though average educational attainment is higher than most OECD countries.** Reading proficiency among those with higher education in Ukraine, a proxy for cognitive skills built through higher education, is lower than in other countries in the region and beyond (Figure 1). At the same time, many university graduates in Ukraine score lower on reading proficiency than top-performing individuals in Ukraine with only a general secondary education, suggesting wide variation in quality of higher education and in the ability of the higher education system to ensure a minimum level of skills of its graduates.<sup>11</sup> Data from international university rankings, such as the Times Higher Education ranking and the Academic Ranking of World Universities, suggest that the quality of university education in Ukraine is lagging.<sup>12</sup> This analysis indicates that while the ECA aggregate higher education quality score is 17.3 the score for Ukraine is 9.9 which reflects the relatively low level of university rankings in the country.

**Figure 1: Literacy Proficiency in Ukraine and Selected Countries**



Source: World Bank Skills Towards Employment and Productivity Survey 2014

17. **Teaching and learning in universities remains focused on knowledge acquisition, often with outdated content and pedagogical methods that are not adjusted to the ESG on student-centered learning and teaching, research or technology.** Although there is little systematic information on quality of learning outcomes in higher education, there is evidence that curriculum, pedagogical teaching methods, and learning environments need to be modernized to reflect the evolving needs of society and the economy, including on technology, sustainability and climate change.<sup>13</sup> One-third of Ukrainians surveyed in 2016 by the Democratic Initiatives Foundation highlighted the divergence of higher education from the demands of the labor market as a major problem in higher education, along with poor infrastructure and facilities in higher education institutions. Nearly half of HEIs reported that they do not evaluate curriculum and program contents, pedagogical approaches and intended learning outcomes on a regular basis.<sup>14</sup> Only a few universities actively use project or problem-based learning or

<sup>11</sup> Literacy proficiency scores collected through the World Bank’s Skills Towards Employment and Productivity survey indicate that higher educational attainment does not guarantee even basic cognitive skills relative to other countries. Although dated, the STEP survey provides an adequate reflection of the current status. More recent data is used, if available.

<sup>12</sup> Times Higher Education World University Rankings contains only three universities in Ukraine listed in the top 1,000, though none rank in the top 500. The Academic Ranking of World Universities, also known as the Shanghai ranking, does not include any universities in Ukraine.

<sup>13</sup> KAS (2017). *Higher Education in Ukraine: Agenda for Reforms*. KAS Policy Paper.

<sup>14</sup> Mazurkiewicz ed. (2016). *Quality Assurance in HEIs in Ukraine 2016 through the prism of European Standards and Guidelines 2015*.



promote entrepreneurship training and programs.<sup>15</sup> Business executives surveyed by the World Economic Forum also noted the low quality of management training in Ukrainian universities which serves as a barrier to developing the skills important for economic competitiveness.<sup>16</sup>

18. **COVID-19 has significantly affected teaching and learning in Ukrainian universities, with many ill-equipped to make the transition to effective distance education.** All schools and universities in Ukraine were initially closed in March 2020 due to the COVID-19 outbreak. The switch to online modes of teaching and learning in HEIs has revealed significant challenges. Global evidence on the impacts of COVID-19 on higher education indicate that the digital gap and lack of preparation of instructors are exacerbating disparities in access and success, especially among vulnerable students.<sup>17</sup> Ukrainian HEIs have used various e-learning platforms, videoconferencing platforms, and social media networks to maintain learning continuity, but HEIs have largely operated independently in determining how to organize study processes. Access to technical and digital infrastructure, competences and pedagogies for distance learning remains a major constraint. Students also have challenges in coping with distance learning, and many students particularly in rural areas have difficulty with internet connectivity and inadequate digital devices. A survey of higher education students in Ukraine identified major challenges: limited access to the internet (cited by 45 percent), lack of motivation (37 percent), and vague or unclear guidance from instructors (29 percent).<sup>18</sup>

19. **The divide between higher education and research also limits the quality and relevance of higher education.** Ukraine still retains a Soviet-era legacy in which HEIs focus on education (teaching), whereas research and scientific innovation occurs in the National Academy of Sciences and the six sectoral national academies of science. The Government's reform envisions more integration between research carried out in HEIs and in the academies, thereby making better use of resources and potentially increasing Ukraine's competitiveness in European and global research areas. Since the 2014 higher education reform law was passed, most universities explicitly refer to research and/or innovation, along with education, in their institutional mission statements, indicating a growing focus and expectation for research activities in universities.<sup>19</sup>

20. **However, research activities in universities remain weak and most universities are poorly equipped to integrate research activities with teaching—a challenge made worse by COVID-19.** According to the U-Multirank 2020 report, over 70 percent of participating Ukrainian universities ranked below average in terms of research and knowledge transfer. Only 50 percent of HEIs perform any kind of research and development (R&D), receiving only 7 percent of the State budget that is allocated for R&D. At the same time, around 70 percent of Candidates of Science and Doctors of Science are working in the higher education sector, mainly involved in teaching rather than research. Although research output overall remains quite limited due to Ukraine's historical isolation and limited use of English or other foreign languages, Ukrainian HEIs do produce some research output that is primarily concentrated in sciences, technology, engineering, and mathematics (STEM) fields. Even so, existing facilities and equipment to support research in many HEIs are significantly out-of-date, depreciated, or absent. For example, lack of material, technical, financial, and other equipment in universities was highlighted as a major barrier to quality of education by 60 percent of survey respondents.<sup>20</sup> Lack of resources and outdated teaching and research

<sup>15</sup> World Bank (2017) *Innovation and Entrepreneurship Ecosystem Diagnostic: Ukraine*. Washington DC: World Bank.

<sup>16</sup> World Economic Forum Global Competitiveness Report 2017.

<sup>17</sup> Salmi (2020). COVID's Lessons for Global Higher Education: Coping with the Present while Building a More Equitable Future.

<sup>18</sup> Nenko, Kybalna, and Snisarenko (2020)

<sup>19</sup> Hladchenko (2016). 'Organizational Identify of Ukrainian Universities.' *Tertiary Education and Management*, 22(4).

<sup>20</sup> International Renaissance Foundation (2013). *The Right for Education and the Rights of Education Specialists: Theory and Practice in Ukraine*. Developed by European Research Association.





facilities is a particular barrier in engineering and natural sciences programs.<sup>21</sup> The COVID-19 pandemic adds to this challenge, as remote/distance operations of universities have adversely affected research activities and further isolated Ukrainian researchers from international projects.

*Bank corporate priorities related to quality and relevance: climate and gender*

21. **While environmental awareness is growing in Ukraine, the education sector has a key role to play in supporting the Government’s priorities in climate adaptation and mitigation.** For example, in secondary education, the *New Ukrainian School (NUS)* curriculum explicitly emphasizes a core competency of environmental awareness and healthy lifestyles. Through the NUS curriculum, Ukraine aims to develop in students the ability to use natural resources in a prudent and rational way within the framework of sustainable development. In higher education, however, universities could play a much larger role in the future in supporting Ukraine’s climate agenda. For those Ukrainian universities with available data, most tend to score low on climate sustainability measures related to transportation, water usage, waste management, and energy consumption. Although the higher education sector is investing in measures to improve energy efficiency and consumption with support of the European Investment Bank, the investments are limited to only seven universities and they do not support efforts to modernize teaching and research facilities in core study fields that will be key for fighting climate change, such as water management, energy, ecology, transport, or agricultural productivity.

22. **Girls outperform boys in the higher education entrance exam, External Independent Test (EIT), in all subjects, yet girls are clustered in certain study fields leading to a high degree of gender segregation across academic programs.** Although Ukraine has achieved gender parity in terms of access and enrollment<sup>22</sup>, females are more likely to transition to higher education, with better performance on the Ukrainian language/literature and mathematics exams. But in students’ selection of higher education study programs, over 80 percent of students admitted to bachelor’s programs in 2018 in computer science, software engineering, computer engineering, and related high-demand STEM fields are male, while females comprise over 80 percent of students admitted to programs in philology, education, nursing, design, and journalism.

23. **These gender disparities are driven in part by gender stereotypes that are reinforced in educational settings through norms, limited information, and limited awareness and sensitivity to gender disparities.** Despite the government’s focus on gender mainstreaming as a priority, building institutional capacity and awareness for promoting gender equality in higher education remains a challenge.<sup>23</sup> Gender segregation in study fields leads to gender segregation by occupation and gender disparities in labor market outcomes, including a 45 percent gender wage differential among young wage and salaried workers (ages 15-29) which exceeds that of other countries in the region.<sup>24</sup> Men are more likely to work in industry and agriculture, while women are more likely to work in services (73 percent of women work in services, compared to 48 percent of men), which also reflects patterns of demand for study fields in higher education.<sup>25</sup> Therefore, more attention is needed to build

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<sup>21</sup> KAS (2017). *Higher Education in Ukraine: Agenda for Reforms*. KAS Policy Paper.

<sup>22</sup> UNFPA and Ministry of Social Policy of Ukraine (2018). “Masculinity Today: Men’s Attitudes to Gender Stereotypes and Violence Against Women.” Supported also by UN Population Fund and UK Government.

<sup>23</sup> Koriukalov (2014). *Gender Policy and Institutional Mechanisms of its Implementation in Ukraine*. UN Women Programme, Ukrainian Women’s Fund, and Friedrich Ebert Foundation in Ukraine.

<sup>24</sup> Elder & Kring (2016). “Young and female – a double strike? Gender analysis of school-to-work transition surveys in 32 developing countries.” ILO Work4Youth Publication Series No. 32.

<sup>25</sup> World Bank Gender Data Portal



awareness of these issues at the system and institutional levels, and to promote gender-inclusive approaches to high-demand STEM education and to learning environment in HEIs more broadly.

**Challenges in Efficiency and Financing: Inadequate Incentives for Network Rightsizing and Mergers**

24. **Given Ukraine’s high public sector spending and high public debt levels, ensuring that the education reform is fiscally affordable is critical as future investments in education will have to be generated from fiscal savings and efficiency gains creating a “leaner (simpler) and meaner” system.** Although education spending has come down from 7.2 percent of GDP in 2013 to 6 percent in 2017, it remains higher than the OECD average of 4.5 percent. The 2020 education budget of USD 5.3 billion included an increase of 14 percent from 2019, though this represents only a 1 percentage point increase (from 10 to 11 percent) as a share of the overall State Budget. Higher education represents about 19 percent of the MOES general fund budget, and the majority (over 75 percent) of this higher education spending is dedicated to personnel salaries, leaving little for the capital investments and recurrent expenditures required for improving quality. At the same time, the youth population (age 0-19) has declined by 38 percent (from 14.5 million to 8.9 million) since 1990 and continues to decline, meaning the demand for higher education that the system must satisfy will continue to decline.

*Low efficiency in higher education due to non-strategic use of policy tools and inadequate financial incentives:*

25. **The network of public HEIs is oversized and inefficient, relative to a declining population and poses challenges both for financial sustainability and quality of service delivery.** With a total population of around 42.2 million, Ukraine’s network of 327 HEIs—of which 231 are public—is quite large. This amounts to 7.7 HEIs per 1 million population, or 5.4 public HEIs per 1 million (see Figure 2) which is high compared to other countries in Europe. Around 60 percent of academic HEIs enroll fewer than 5,000 students, particularly academies and institutes where the average enrollment size is around 680 students for institutes and 1,800 students for academies. There are over 300 public colleges and technikums in Ukraine, with an average enrollment size of approximately 550 students. The majority of HEIs and the colleges/technikums – about 75 percent – are legally subordinated to the MOES. At the same time, these institutions offer a large number of programs with varying quality and overlapping or irrelevant specializations. The 2014 law consolidated the list of study fields (majors) from 500-600 fields at the peak to approximately 125 fields, with greater correspondence to the International Standard Classification of Education (ISCED). Still, there is substantial overlap and duplication across the sector, particularly given the high number of public HEIs subordinated to agencies other than MOES, as well as municipal and private HEIs (see Table 1).

<b>Table 1. HEIs in Ukraine: Number of Institutions and Enrollment Shares by Ownership Type</b>						
	<b>Public</b>				<b>Private</b>	<b>TOTAL</b>
	State	State	Municipal	<b>Total</b>	<b>Total</b>	
	MOES	Other agencies				
<b>Number of HEIs (universities, academies and institutes)</b>	141	68	22	231	96	327
<b>Share of Total Enrolled Students (all higher education cycles)</b>	77%	13%	2%	92%	8%	100%

Source: Education Flagship Study, based on 2019 data from the Unified State Electronic Education Database (EDEBO)

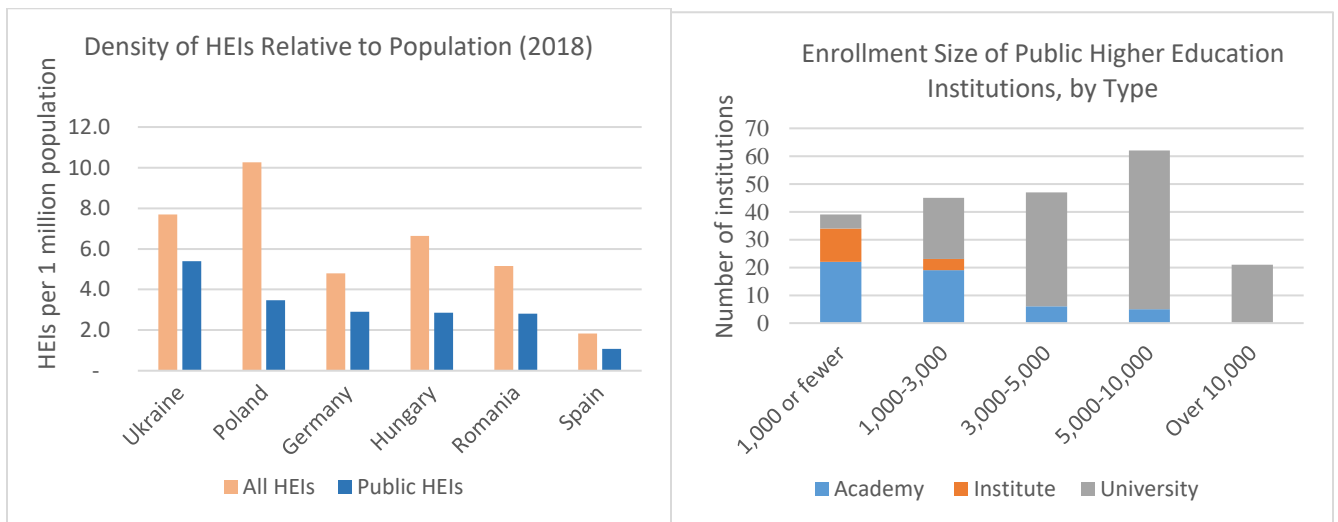
26. **The Government has also identified the need for strong incentives to drive for optimal consolidation of the massive network of HEIs using a bottom-up approach.** In recent years, there has been a 25 percent reduction



in the number of HEIs, including colleges and branch colleges that were ‘diploma mills’ but more needs to be done. Further aggregation of universities is required through a bottom-up process while differentiating and diversifying the types of universities (such as research, professional, teaching) and optimizing their geospatial catchment area. Governance and policymaking in higher education is fragmented, since the Cabinet of Ministers of Ukraine (CMU) is obliged by law to take any decisions that lead to changes in funding, which affect many government agencies with subordinate universities under them. This means that *approaches driven by higher education institutions themselves and with strong incentives (bottom up)* are needed to encourage institutions to merge, thereby generating efficiencies and improving quality.

27. **Ukraine’s input-based funding model for public higher education combined with declining public funding in recent years has created incentives to lower admissions and quality standards while maximizing fee-paying students.** Public funding has been allocated through a system of quotas determined centrally for each study field and level of education by the Ministry of Economic Development and Trade. With declining public funding as well as decline in number of students, HEIs had strong financial incentives to lower entrance requirements by accepting less relevant EIT subject tests for a field of study as well to qualify under-performing students to keep them enrolled. Declining public funding combined with limited financial autonomy has constrained many HEIs from making needed investments to improve quality and relevance.

Figure 2. Higher Education Institutions in Ukraine relative to Population and Enrollment Size



Source: Authors’ analysis of EDEBO for Ukraine, excluding colleges; EACEA for selected EU countries

28. **Higher education performance-based funding and greater financial autonomy for HEIs are key reforms that are currently under discussion, building on several positive steps that have been taken to improve transparency of funding and create competitive pressure to improve quality.** Although the Law on Higher Education afforded HEIs more institutional, administrative and academic autonomy, financial autonomy of universities remains quite limited. HEIs prepare budgets to be approved by their ‘parent’ ministries, but the overall budget funding for higher education and the number of state-funded places are determined independently in practice. At the same time, some universities receive special coefficients provided by decree to increase faculty salaries leading to persistent funding disparities even for the same study field. A new mechanism for allocating budget seats at the bachelor’s level means that public funding depends on the number of applications. This differs



from good practice in countries such as the Netherlands and Latvia,<sup>26</sup> where differences in actual cost of delivery are prioritized as a principle for ensuring financial sustainability of a given university. However, Ukraine has revised the legislation on higher education funding to introduce a performance-based component that is driven by several transparent performance metrics, along with a “stability funding” component that ensures some degree of funding continuity over time. Strengthening the foundations for performance-based funding and expanding HEIs’ financial autonomy will generate fiscal savings over time by creating the incentives to consolidate resources.

***Challenges in Governance: Lack of Financial Autonomy, Poor Transparency, Accountability and Low Public Trust in the Higher Education System***

29. **Lack of university financial autonomy, self-governance, and options for internationalization are barriers to successful mergers and for implementing envisioned governance reforms and full alignment with Bologna requirements.** While HEIs have received a high level of academic autonomy, most have lacked the internal governance culture and financial autonomy needed to effectively incentivize HEIs to improve content, teaching methods, and research in line with the ESG. This is problematic given extensive research showing that autonomy and self-governance are prerequisites for Bologna-associated reforms. While the reform direction would grant HEIs more financial and governance autonomy, significant efforts and investment will be needed to support the implementation and change management efforts if intended outcomes are to be achieved, given that this process has not started. For example, the MOES currently lacks specialized and HEI-specific information on leadership capacity, internal policies and processes, change management capacity, and potential for growth and internationalization which will determine HEIs’ individual needs for support in fully transitioning to a system in which HEIs have substantially more financial and administrative autonomy. A consistent and objective approach based on European good practices is needed to generate this information for decision-making and sector steering.

30. **Few Ukrainian HEIs collaborate with foreign universities, which further limits the credibility and trust in the offerings of national HEIs. Stronger national efforts to support internationalization are needed.** Internationalization of the curriculum in Ukrainian HEIs is quite limited, and few universities offer dual or joint degree programs with foreign HEIs. Support is also needed in helping faculty/staff apply for international grants and joint research projects as well as faculties seeking collaboration with international universities that will help them ‘internationalize’, establish semester and study abroad programs and possible joint degrees which would also help slow the brain-drain and reverse the number of the best talented students going abroad never to return to Ukraine.

31. **Ukraine is also an outlier among other countries in Europe and Central Asia in terms of the low levels of public trust in the education system, which erodes the value of education.** Prior to the Maidan Revolution of 2014, nearly three-quarters of Ukrainians believed that corruption is pervasive or widespread in higher education.<sup>27</sup> According to the 2016 Life in Transition Survey, Ukraine is an outlier among other countries, with relatively low levels of satisfaction with public education along with relatively high experience of corruption in public education. The new Government retains high levels of public support and trust. This presents the opportunity that education reforms, particularly those aimed at strengthening transparency and trust, will continue to be supported by the public.

<sup>26</sup> Center for Higher Education Policy Studies (2015) Report on Performance-based funding and performance agreements in fourteen higher education systems; World Bank (2018) Support to Higher Education in Latvia Reports on System-Level Funding

<sup>27</sup> OECD (2017), citing the Razumkov Centre (2013)



32. **Low transparency in the system and poor information feedback loops contribute to this problem.** For example, Ukrainians have a high demand for higher education, and approximately 85 percent of youth plan to obtain higher education.<sup>28</sup> However, this high demand is poorly informed by information (such as graduate tracer studies or university rankings) on available educational paths, quality of programs and institutions, and corresponding employment outcomes, leaving students and their families in the dark when making an important choice regarding the transition to higher education.

33. **Limited access to academic and career counseling and non-transparent information on labor market outcomes in connection with study programs and institutions complicates the situation.** Ukraine does not have any national or large-scale programs offering relevant counseling in secondary schools, and the situation varies significantly in HEIs. For example, some larger universities in urban centers organize job fairs (e.g. Igor Sikorsky Kyiv Polytechnic Institute, V. N. Karazin National University in Kharkiv), but they are often limited to specific study programs. According to the ILO (2015), youth who did not have access to academic and career guidance or the returns by study field are more likely to randomly select study fields and occupations. This is further complicated by gender segregation into study fields and occupations as described above. Thus, students would benefit from more information on their labor market prospects depending on their choice of study field and in turn HEI should include a performance aspect related to graduate employability.<sup>29</sup>

*Low transparency in the use of public funding for higher education*

34. **Historically, the higher education system has suffered from non-transparent approaches to management and governance, with limited mechanisms for holding public HEIs accountable for performance.** The 2014 higher education law advanced and improved higher education governance by regulating procedures and requirements for appointment to administrative positions in HEIs, thereby creating more open and democratic processes within HEIs for management. However, such changes were considered insufficient since HEIs did not receive financial autonomy and rectors in practice maintained substantial power, with limited accountability to the HEI founder or metrics to track performance of HEIs.<sup>30</sup> In a ranking of university transparency in Ukraine, conducted by CEDOS in 2016, most universities received around 30 out of 100 points, reflecting low levels of publicly available information on financing, strategy, and educational content.

35. **Finally, moving away from its Soviet legacy to a results-oriented, decentralized approach for education service delivery, Ukraine has a unique opportunity to carefully adopt more transparent policies and systems for education data management.** Thus, it is necessary to begin imbuing a culture of data use for transparent planning and decision making at various sub-national levels. The sector lacks reliable, consistent and updated information on students, faculty, and expenditures to create the evidence base for and contribute to creating a labor force that would correspond to the demands of the labor market.

***Government Strategy and Vision for Reform***

<sup>28</sup> ILO School-to-Work Transition Survey 2015

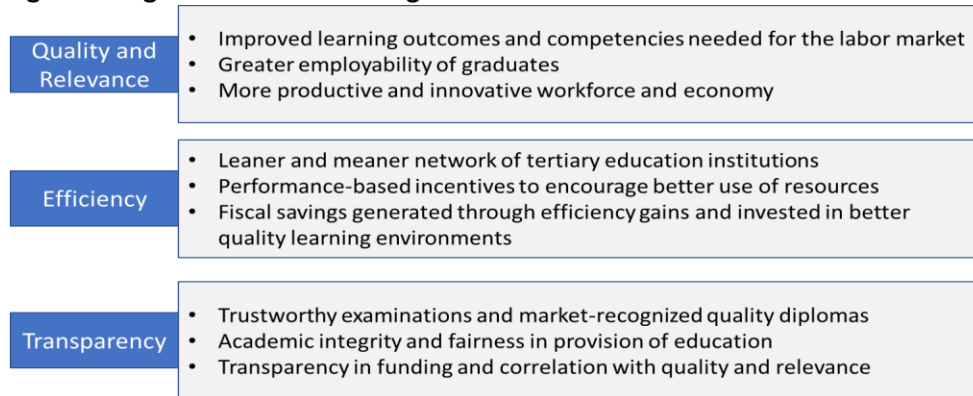
<sup>29</sup> There are many good practice examples of such guidance systems in Europe which are well-summarized by Euroguidance, the European network of national resource and information centers for guidance in 34 European countries (euroguidance.eu)

<sup>30</sup> KAS (2017). Higher Education in Ukraine: Agenda for Reforms. KAS Policy Paper.



36. **To address these challenges, the Government of Ukraine has been pursuing an ambitious education reform program that envisions a modern education system facilitating integration into Europe and the wider world.** The Law on Higher Education was the first large systemic reform-oriented law adopted in 2014. This was followed by a Budget Decentralization Strategy across political, administrative and fiscal dimensions and a new vision for secondary education—the *NUS* program, adopted in 2017 as part of the new Framework Law ‘On Education.’ This sector-wide reform program aims to address persistent imbalances of poor quality, low efficiency and fiscal sustainability, and insufficient transparency and public trust, summarized in Figure 3. Further revisions to the laws on higher education, which are centered around increased higher education autonomy, governance, financing and accountability (with additional regulations on licensing conditions, standards, and educational program accreditations) are key steps in moving the reform agenda forward and improving the relevance and quality of higher education. In 2020, President Zelenskyy issued Decree No. 210/2020 (“On the improvement of higher education in Ukraine”) which elevates strategic planning for higher education by establishing the Council for Development of Higher Education, preparing the National Strategy for Higher Education 2021-2031, and supporting further state programs to support higher education and research in Ukraine.

**Figure 3. Higher Education Strategic Vision for Reform**



Source: World Bank Education Flagship Study (2019)

37. **Implementation of these systemic reforms inside HEIs remains a major challenge and investments and support are needed to drive changes, though fiscal savings generated by the reform would also help to offset the costs of such investments.** Autonomy and quality assurance reforms have started but were heavily delayed and only now starting in earnest. Other key reforms, namely on financing and resource consolidation, have not started yet, leaving the sector to continue the status quo. Overall, the regulatory changes to the law to support the anticipated increased financial autonomy (with academic autonomy) and performance-based financing in HEI will set the framework for changing incentives for HEIs throughout the system. This will be complemented by ongoing accreditation and quality assurance processes that will drive greater quality and relevance. Financing reform and administrative and demand-driven efforts to merge and consolidate higher education programs and institutions are needed to produce fiscal savings over the medium-term but needs support to be implemented. The size of potential fiscal savings is estimated at US\$381 million over a five-year period, with larger savings in the following years depending on the speed of reform and the size of institutions to undergo mergers. This will help to offset costs of needed investments.

38. **The need for reforming the higher education sector has been underscored by the COVID-19 crisis with unintended budget cuts adversely affecting the relevance and quality of higher education provision and learning.** Moreover, the government is seeking support to help bridge the crisis while supporting digital



transformation in the sector and introducing the necessary reforms. In this context the MoES has set up a new unit and dedicated a new Deputy Minister for Digital Transformation given the strategic importance over both the short-term and longer-term horizons.

### C. Relevance to Higher Level Objectives

39. **By supporting the modernization of Ukraine’s higher education sector, the proposed Project will directly support Ukraine to address ineffective service delivery, weak productivity, and poor governance – priorities identified in the Country Partnership Framework (CPF).** The proposed operation is well aligned with the Ukrainian CPF discussed by the World Bank Group Board on June 20, 2017 covering the period FY17–21 (Report No. 114516-UA). Specifically, the proposed operation will contribute directly to the CPF’s strategic *Focus Area 3: Efficient, Effective, and Inclusive Service Delivery* and to *Cross-cutting Focus Area: Better Governance, Anticorruption, and Citizen Engagement*.

40. **The project is consistent with the World Bank’s COVID-19 Crisis Response Approach, particularly on strengthening policies and institutions for rebuilding better (Pillar 4).** This project will support Ukraine’s country program, which has been adjusted in response to COVID-19 (see Annex 3), in both the *restructuring* and *resilient recovery* stages of the crisis. In the restructuring stage, the project will support HEIs to sustain and enhance service delivery through multiplatform remote learning programs and to mitigate and recover learning losses and prevent dropout from tertiary education, thereby helping to restore and protect human capital. In the recovery stage, the project will support systemic improvements in the quality, sustainability, and transparency of higher education with a line of sight to Ukraine’s long-term development vision.

41. **The proposed Project is also fully consistent with Ukraine’s commitment to reforms for more sustainable economic development.** The Cabinet of Ministers of Ukraine committed the country to a path of reforms for sustainable economic development focused on good governance, human capital development, supremacy of law and combating corruption, and strengthening security and defense. The Government’s Program of Activities directly supports these reforms. The proposed operation directly supports the pillar on human capital development, which will not only improve service delivery, but also make markets work better.

42. **The proposed Project is also aligned with other high-level objectives in Ukraine related to gender equality, climate change, and citizen engagement.** The CPF FY17-21 notes that citizen engagement will be a key feature of program implementation given the governance challenges in Ukraine. Empirical evidence shows that higher education itself, through its impacts on intellectual engagement and prosocial attitudes, contributes to civic engagement and citizenship. The proposed Project directly supports the engagement of citizens in higher education reform, both through communications and outreach as well as structured approaches to engage with students (as beneficiaries) and HEIs (as service providers). The CPF also notes the importance of climate change and gender equality<sup>31</sup> in potential new operations in Ukraine. By addressing these issues through interventions (described in more detail below) in the higher education sector, the proposed Project is aligned with the World Bank Group Gender Equality Strategy FY16-23 and the World Bank Group Action Plan on Climate Change Adaptation and Resilience.

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<sup>31</sup> The Government of Ukraine is committed to gender equality and has approved an Action Plan for the implementation of commitments related to gender quality. This includes direct tasks for the MOES including development and approval of a strategy for implementation of gender equality in education through 2030, as well as gender audits of HEIs.



## II. PROJECT DESCRIPTION

### A. Project Development Objective

#### PDO Statement

The Project Development Objective is to improve the efficiency, conditions for quality, and transparency in Ukraine's higher education system.

#### PDO Level Indicators

43. The following PDO-level indicators would be used to measure the outcomes specified in the PDO statement:

- a. Performance-based funding formula is used to allocate public funding to HEIs during at least two consecutive fiscal years (yes/no) (efficiency and financial transparency)
- b. Percent of institutions that have developed change management plans for improving university governance and teaching and learning (conditions for quality)
- c. Number of institutions with active performance-based contracts in place (transparency)
- d. Number of mergers of public HEIs under MOES (efficiency) (Performance-Based Condition (PBC) #5)

The progress towards the achievement of the PDO will also include the achievements of the PBCs as both contribute to the achievement of the PDO.

#### Conceptual Framework for Project Design

44. In response to the COVID-19 crisis and with a view to address longer term structural reforms, about 40 percent of project financing particularly under Component 3 will be directed towards mitigating the impact of the COVID-19 crisis over the coming years and building resilience, while the remaining funds will be directed towards the much needed structural reforms over the medium-term. The project would finance strategic investments along with specific results along the results chain using a results-based approach to complement financing from the State budget that is supporting reform implementation. Project interventions are mainly targeting public (State) HEIs, while some of the legislative, governance, and financing policies would affect the entire sector, including private HEIs<sup>32</sup>.

45. The project will support fiscal *efficiency* and sustainability of higher education networks through incentives for consolidation, driven by governance and financial autonomy reforms, foundations for performance-based financing, and demand-driven investments to incentivize university alliances and partnerships and support digitally enhanced teaching, learning and research. The project will support improvements in the *conditions for*

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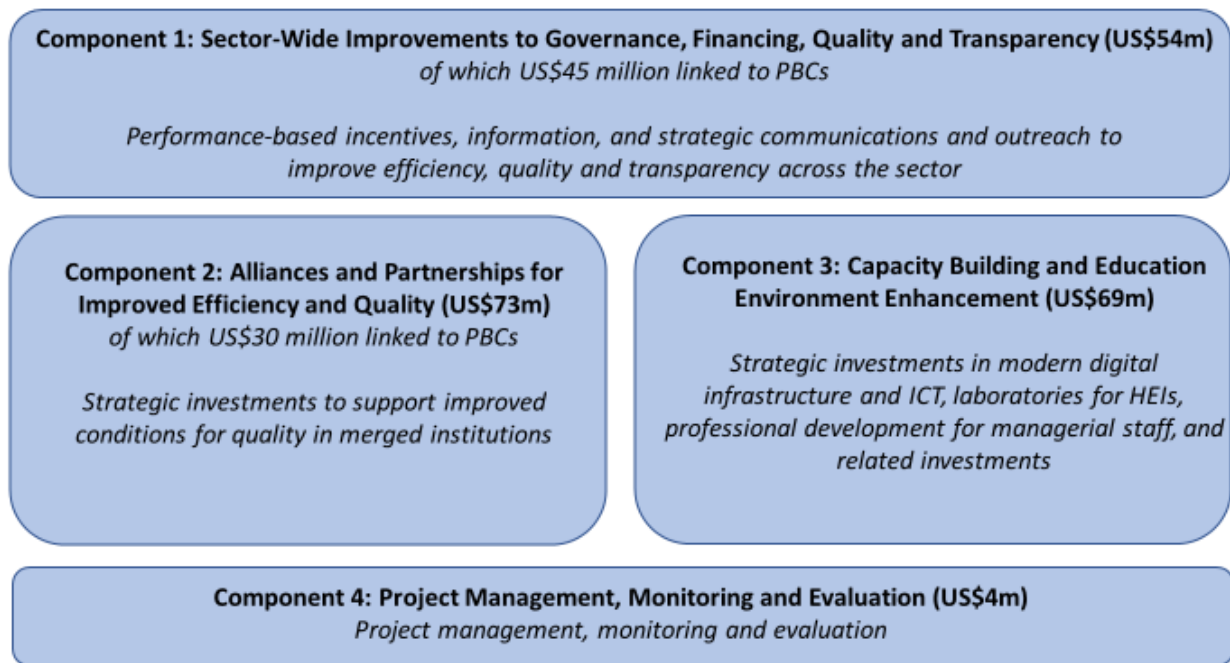
<sup>32</sup> Currently there are 141 public HEIs under the MOES, but given legislative changes, this may change in the future. Therefore, the relevant baseline would be established by the first year of the project.





**quality** through strategic investments in learning environments and digital capabilities of HEIs to ensure learning continuity through remote and distance learning modalities, modern practice-based teaching approaches integrated with opportunities for research, and capacity building. Finally, the project will improve **transparency** of inputs and outputs through support for key information and feedback tools and through transparent allocation and use of funds in higher education. The Project Conceptual Framework is depicted in Figure 4.

**Figure 4. Project Conceptual Framework**



## B. Project Components

46. The Project is divided into four components as described below.

### **Component 1: Sector-Wide Improvements to Governance, Financing, Quality and Transparency (US\$54 million)**

47. The objective of this component is to support the Government with implementation and monitoring of sector-wide reforms affecting higher education governance and financing, quality, and transparency. This component contains two mutually reinforcing sub-components:

- *Sub-component 1.1:* Strengthening autonomy, transparency, and monitoring of higher education through strategic sector-wide investments, including, *inter alia:* (a) the development of information systems to ensure stakeholder engagement, increase transparency, and provide evidence-based policy for the Borrower’s higher education system; (b) the development of standardized digital tools for higher education learning assessments; and (c) the carrying out of communication campaigns.



- *Sub-component 1.2:* Supporting the introduction and implementation of performance-based incentives in the Borrower's higher education system.

*Sub-component 1.1 – Strategic sector-wide investments to support autonomy, transparency, and monitoring (US\$ 9 million)*

48. This sub-component would support strategic investments in information systems, standardized tools and support for digital transformation of learning assessments, surveys, evaluations, and strategic communications and outreach activities. These strategic investments are needed to support the introduction of autonomy reforms and performance-based incentives for HEIs, and to improve transparency of funding and information flows within the sector. Specific strategic investments are described in more detail below:

49. *Higher Education Management Information System (HEMIS), Unified Information System on competitive research funding of HEIs, and surveys/studies to promote transparency.* This sub-component would also support necessary investments to modernize software and hardware of the Unified State Electronic Database on Education (EDEBO) for the Higher Education Management Information System (HEMIS) necessary for evidence-based policymaking on formation, implementation, and monitoring of higher education policies. This would also contribute to enhancing comparability with international databases and integration with external information systems. The system will allow for calculation of standard higher education indicators such as participation and enrollment, repetition, completion, graduation, and transition, graduates' employment etc. The graduate tracer study (GTS) is an integral part of EDEBO and will be developed within HEMIS with support from the project. This will also help to provide objective information to employers and students on employability and labor market transition of students, thereby contributing to improved transparency and information flows in the system.

50. This sub-component would also finance development of the Unified Information System on competitive research funding of HEIs that shall ensure transparent and effective distribution and efficiency monitoring of public funding for research and development of HEIs. The system aims to ensure clarity on issuing the respective funds and their supervision, thus limiting corruption risks, and to allow for practical audit of finances etc. It is expected to create and support digital services for research needs of HEIs that provide for interoperability and act as a single-entry point for existing research digital services.

51. In connection with the development of the HEMIS, this sub-component would finance the design, establishment, and implementation of a *National Student Survey (NSS)* to be launched as a central beneficiary feedback loop for the perceptions of students on learning environments, teaching quality, academic integrity, and diversity and inclusion at their respective institutions. The Ukrainian NSS is to orient itself towards similar good practices, e.g. the United Kingdom National Student Survey. During the project duration, the NSS would be used to track and publicly report on student beneficiary feedback and satisfaction with the higher education system. Results of the NSS would be publicly disseminated and used to help inform policymaking and further outreach and communication efforts with HEIs. Ultimately (though outside the project implementation period), student feedback will contribute to improvements in teaching practices and learning environments at HEIs. Additionally, the NSS will be designed to collect and report data disaggregated by gender to allow for analysis of gender disparities between HEIs and study fields. It would include a module on gender awareness and inclusion in higher education, which will help to close information and awareness gaps within and between HEIs regarding gender disparities in STEM enrollment, faculty interactions, living in dormitories, campus environment, and so on. This



may be contained within a larger module on diversity and inclusion on campus.<sup>33</sup>

52. This sub-component would also support introduction of digitally enhanced standardized learning assessments for higher education, including in a distance format. This would be focused on the Unified State Qualification Exam for selected regulated professions, the Unified Foreign Language Entrance Exam, the Unified Professional Entrance Exam, and the Test of General Academic Competencies. Support would involve development of relevant banks of test questions, purchase necessary software, and certification of computer classes at designated testing facilities. It would also involve strong methodological and operational support for maintaining academic integrity. These activities would support MOES to expand capacity for transparent learning assessments while adapting to the needs for greater digitalization in the sector.

53. Finally, this component would support strategic communications related to both the project and the larger higher education reform. The component would finance a comprehensive communications campaign and outreach effort for the ongoing higher education reform as a critical element both for transparency and building engagement and consensus amongst the higher education community in Ukraine.

*Sub-component 1.2: Strategic results to strengthen performance-based incentives in higher education (US\$45 million)*

54. To incentivize policy changes and implementation of key activities, this sub-component will finance eligible expenditures incurred for the purposes of preparation of specialists at Public HEIs<sup>34</sup>, including remuneration expenditures and incremental operating costs, to support the achievement of critical PBCs related to introduction and implementation of performance-based incentives at the system-level and at institutional levels in the higher education sub-sector. Under the PBCs mentioned below, the project will support results that will lay the foundations for performance-based incentives to improve efficiency, conditions for quality, and transparency in higher education while building on the strategic activities financed under sub-component 1.1. This sub-component will reimburse the Government for results achieved, financing eligible expenditures for remuneration and incremental operating costs in support of the following specified performance-based conditions (PBCs), as shown in Table 2 and described in more detail below. Verification procedures for each PBC are described in the Results Framework.

- *PBC 1: Performance-based funding formula for HEIs (US\$10 million allocated).* The proposed Project will support the implementation of the Government's financing and governance reforms in the higher education sector, specifically the legal and regulatory changes associated with continued development and utilization of a performance-based funding formula for public HEIs that incorporates a stability funding component and a performance-based component. The implementation of this reform over the project period will lay the foundation for efficiency gains in the sector and eventual fiscal savings, along with greater transparency of funding allocation.

<sup>33</sup> As an example, in the U.S., the Higher Education Data Sharing Consortium (HEDS) leads a Diversity and Equity Campus Climate Survey aimed at assessing perceptions of the institution's climate, how the HEI supports diversity and equity, and experiences with gender bias.

<sup>34</sup> "Preparation of specialists at public HEIs" is the common terminology used in Ukraine for education and training services provided by higher education institutions at accreditation levels III and IV for their enrolled students.



- *PBCs 2 and 3: Financial autonomy for HEIs (US\$15 million allocated, split between PBCs 2 and 3).* The proposed Project will support the Government’s vision for expanding financial autonomy for HEIs by financing actions that enable such autonomy. Two PBCs would be supported:
  - *PBC 2: Financial autonomy for HEIs: Amendments to package of laws (US\$10 million allocated).* This will include necessary revisions to the Law of Ukraine on Higher Education, the Budget Code, and the Tax Code with a view to improve procedures for autonomous use of institutional own source revenues by HEIs, empower HEIs to independently manage institutional funds, determine internal system and level of staff remuneration, and expand capacity of HEIs to dispose of property. However, this would not involve preferential tax treatment, VAT exemption, or other similar amendments to the Budget Code or Tax Code of Ukraine.
  - *PBC 3: Financial autonomy for HEIs: Amendments to bylaws (US\$5 million allocated).* This will include amendments or repeal of the Resolution of the Cabinet of Ministers of Ukraine No. 1134 (dated August 17, 2002) on approving students per one full-time equivalent of research and teaching staff, and to the Order of the MoES No. 450 (dated August 7, 2002) on approving norms of time for planning and accounting for educational work. Both sets of amendments will provide for further institutional financial autonomy for HEIs. (US\$5 million)
  
- *PBC 4: HEI performance-based contracts with key performance indicators (KPIs) (scalable) (US\$20 million).* Within the frame of financial autonomy of higher education, the system of performance-based relationships between the MOES and HEIs shall be introduced. These are to be established in the form of performance agreements (contracts), whose KPIs are negotiated jointly between the MOES and the rector of the HEI. Rectors’ performance contracts consist of general provisions for the HEI and rector, KPIs of the HEI that the rector is obliged to achieve (including deadlines for their achievement, verification mechanisms and evaluation criteria), rights and liabilities of the MoES and the rector, work arrangements, and duration of the performance contract. Progress on this PBC is expected to balance the expanded financial autonomy of HEIs with reasonable expectations for accountability and transparency in HEIs. The PBC target will be achieved on a scalable basis. For every 5 contracts signed, US\$2 million could be disbursed, up to US\$20 million (one contract equivalent to US\$400,000 = \$20 million / 50 contracts).

<b>Table 2. PBCs to Strengthen Incentives and Sector Alignment in Higher Education</b>			
	<b>Indicative Timeline</b>		
	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>
<b>PBC 1:</b> Performance-based funding formula for HEIs  US\$10 million	PBC 1: The Borrower has issued a Resolution of the Cabinet of Ministers of Ukraine setting forth a performance-based funding formula for HEIs.  <b>US\$10 million</b>		



<p><b>PBCs 2 and 3:</b> Financial autonomy for HEIs</p> <p>US\$15 million</p>		<p>PBC 2: The Borrower has enacted amendments to: (i) the Budget Code; (ii) the Tax Code; and (iii) Law on Higher Education, to provide for HEIs’ financial autonomy, as further detailed in the POM</p> <p><b>US\$10 million</b></p>	<p>PBC 3: The Borrower has amended or repealed: (i) the Resolution of the Cabinet of Ministers of Ukraine No. 1134, dated August 17, 2002; and (ii) MOES Order No. 450, dated August 7, 2002, to provide for HEI’s financial autonomy, as further detailed in the POM.</p> <p><b>US\$5 million</b></p>
<p><b>PBC 4:</b> HEI performance-based contracts with KPIs (scalable)</p> <p>US\$20 million</p>		<p>PBC 4: The Borrower, through MOES, has entered into at least 50 performance-based contracts (including key performance indicators) with HEIs, from a baseline of 0.</p> <p><b>US\$20 million</b></p>	

**Component 2: Alliances and Partnerships for Improved Efficiency and Quality (US\$73 million)**

55. The objective of this component is to support the Government improve fiscal efficiency in the higher education sector and to support merged HEIs to improve conditions for quality teaching and learning as part of institutional merger processes. This component is also divided into two sub-components:

- *Sub-component 2.1:* Improving conditions for quality teaching and learning of Selected Public HEIs which have started a Merger process, including *inter alia*: (a) the provision of equipment for modern basic teaching laboratories and advanced scientific research laboratories; (b) the provision of information technology equipment; and (c) the carrying out of minor refurbishment and rehabilitation works.
- *Sub-component 2.2:* Supporting Mergers of HEIs.

*Sub-component 2.1: Strategic investments to ensure successful university mergers (US\$ 43 million)*

56. Under this sub-component, the Project would finance packages of investments for implementation in merged HEIs<sup>35</sup> related to key higher education priorities: (i) improving quality of teaching, learning, and research while enabling digital transformation in the sector; (ii) implementation of nation-wide reforms on governance and financial autonomy, and (iii) ensuring successful implementation of mergers at the institutional and/or program level (i.e. unique to a particular merger). A key design aspect is that this package of investments should facilitate the merging process and support actions to improve quality that would otherwise be unlikely or impossible to take by the institutions themselves without the additional seed funding provided through the Project.

57. The Project would finance pre-defined investments (“merger support packages”) according to proposals

<sup>35</sup> The concept of HEI mergers is described in detail in the Law of Ukraine ‘On Higher Education.’ Several types of formation and reorganization of HEIs are included: mergers (legal entities merge to create one new legal entity); accession (an existing legal entity absorbs another); and transformation (transferal from one legal entity to another).



from HEIs which have started a merger process and pre-defined selection criteria/KPIs as described in the Project Operational Manual (POM). Eligible HEIs would receive guidelines from MOES with a list of pre-defined investment options to support and incentivize mergers and quality improvements, as well as an indicative maximum amount of funds (estimated at an *average* of US\$ 1.1 million per institution allocated reflecting its priority, size, scope, needs and reform efforts as will be defined in the POM) to allocate across investment needs. The Project would support the MOES to develop such guidelines along with technical specifications for items on the list of pre-defined investment options. Targeted guidelines would be provided for merging HEIs based on national success stories and international good practices (see lessons learned). HEIs would submit proposals to MOES based on guidelines and the list of investment options. The MOES would then aggregate all results and procure all packages centrally. This approach ensures that strategic investments are based on institutional needs and differences in institutional mission, while also avoiding likely implementation delays associated with channeling project funds through the local level (which would require extensive and specialized procurement and financial management (FM) arrangements).

58. *Merger Support Packages.* The list of pre-defined investment options for the merger support packages would be comprised of goods and minor works. These would be specified in detail in the POM, but they would be selected by MOES to promote successful implementation of governance and financial autonomy reforms, as well as quality and relevance improvements. Merger support packages would include *inter alia* laboratories for teaching, research, and/or learning, equipment for laboratories, learning support facilities, and other learning spaces, modern digital infrastructure to support distance learning, and minor refurbishment/rehabilitation. New construction would not be supported. To ensure sustainability of these investments, climate vulnerability and climate-resilient design measures would be considered for refurbishment/rehabilitation, and energy efficiency would be prioritized among relevant criteria for the procurement of equipment.

59. *Allocation limits.* The Project would set limits for allocation by expenditure category in order to ensure that HEIs prepare comprehensive proposals to support their mergers and associated quality improvements. In particular, the maximum allocation for goods and minor refurbishment/rehabilitation would be 80 percent of the total allocation, which means that the minimum allocation allowed for services and training would be 20 percent of the total allocation or as defined in the Project Operational Manual.

60. *Selection criteria.* The selection of HEIs to benefit from this sub-component will be based on further selection criteria to be defined in the POM and in line with the merger concept as described in the Law on Higher Education. HEIs benefiting from the ongoing Higher Education Project financed by the European Investment Bank (EIB) and the Nordic Environment Finance Corporation (NEFCO) would in principle not be subject to mergers and hence would in principle not be eligible to receive support under this component.

#### Sub-component 2.2 - Strategic results to support consolidation in higher education (US\$30 million)

61. To incentivize policy changes and implementation of key activities, this sub-component will support a critical result related to institutional mergers and consolidation of the network of higher education institutions in Ukraine. Under the PBC mentioned below, the project will support a result that will incentivize consolidation, thereby putting the overall sector on a path to greater fiscal efficiency and economic sustainability while supporting HEIs to develop a critical mass for quality teaching and learning. This sub-component will reimburse the Government for results achieved, financing eligible expenditures for remuneration and incremental operating costs in support of the following performance-based condition (PBC), as shown in Table 3 and described in more detail below. Verification procedures are described in the Results Framework.



- *PBC 5: Number of mergers of Public HEIs (scalable) (US\$30 million).* This PBC recognizes the significant political economy and technical challenges associated with driving institutional mergers and consolidating the number of Public HEIs, despite the widespread recognition that the status quo in Ukraine in terms of the number of HEIs relative to the declining student-age population is unsustainable. This PBC target would be achieved on a scalable basis, measured by the number of mergers of Public HEIs up to a total of 15 mergers (US\$2 million per merger).

Table 3. PBC to Support Consolidation in Higher Education					
	Indicative Timeline				
	Year 1	Year 2	Year 3	Year 4	Year 5
PBC 5: Number of mergers of Public HEIs (scalable)			PBC 5: At least 15 Public HEIs have completed Mergers from a baseline of 0. (scalable)		
<b>Total \$30 million</b>			US\$30 million		

**Component 3 – Capacity Building and Education Environment Enhancement (US\$69 million)**

62. The objective of this component is to build capacity of HEIs and improve their educational environments and research capacity, including with a focus on supporting HEIs during and after the COVID-19 crisis to maintain learning continuity and operational resilience via remote and distance modalities *inter alia* participatory online portals, purchase of certified software, etc. In the short-term, this will support HEIs to adapt to the new operating reality imposed by COVID-19. In the medium-term, this will improve the overall relevance, quality and external economic efficiency of the HEIs and their graduates in support of innovation and economic development. All Public (state) HEIs would be eligible for support under this Component, to be further defined in the POM.

- *Component 3:* Strengthen the capacity of and improving educational environments and research capacity of Selected Public HEIs, including, *inter alia*: (a) the development of change management plans; (b) the provision of digital teaching and learning resources, digital devices, multimedia equipment and software, and modern digital infrastructure to ensure continuity of learning via remote and distance learning modalities; (c) the provision of modern basic teaching laboratories and advanced scientific research laboratories; (d) the carrying out of training for managerial staff in support of higher education reforms; (e) the carrying out of minor refurbishment and rehabilitation works; and (f) the provision of support to MOES and Selected Public HEIs to strengthen academic innovation, labor market linkages, strategic planning and change management, entrepreneurship and business engagement, human resource management, and financial management and taxation.

63. The detailed description of Component 3 is included below:

64. The project would finance pre-defined categories of goods and services, including modern digital infrastructure for distance learning, digital devices, multimedia equipment and software, electronic learning management systems, and similar types of IT investments to improve quality of distance learning modalities. Investments would also include modern basic teaching laboratories and advanced scientific research laboratories, related equipment, targeted training for managerial staff in support of autonomy reforms, minor refurbishment and rehabilitation, and targeted support for *inter alia* development of change management plans, academic



innovation, labor market linkages, strategic planning and change management, entrepreneurship and business engagement, human resource management, and financial management/taxation. To ensure sustainability of these investments, climate vulnerability and climate-resilient design measures would be considered for refurbishment/rehabilitation, and energy efficiency would be prioritized among relevant criteria for the procurement of equipment.

65. The pre-defined categories of goods and services will be specified in the POM. Investment support would be allocated based on proposals from eligible HEIs to ensure that it adequately reflects their strategic needs. However, the proposals would need to be in line with a set of pre-defined investment options depending on the focus of the institutional mission. In the proposal, the HEI could present (i) its positive and ambitious vision for their program, faculty or university, (ii) the added value of the HEI for economic development and for the benefit of its staff, students, and society; and (iii) their timebound plan for implementation, together with performance metrics. More specifically the following selection criteria has been proposed by the MOES to be taken into consideration while selecting HEIs: results of state attestation with regard to research activities; institutional development strategy in place; HEIs' capacity development index (based on the level of commercialization, and gain on attracted investments, high-tech solutions, share of employed graduates, good governance reforms). Further it is proposed to procure laboratory equipment for the creation of modern environmental training and research laboratories in 5 HEIs - each in one of the macro-regions of Ukraine (South, North, Center, East and West). The eligibility criteria for the selection of the 5 HEIs, including the geographic location, will be detailed in the Operational Manual. It is also proposed to purchase equipment to refurbish modern offices and laboratories at pedagogical HEIs. HEIs given highest priority and deliberately targeted will include those that have demonstrated linkages with the regional economy and priority sectors of the economy, and that have identified efforts to address gender disparities and gender inclusion across study programs, including girls' enrollment in STEM programs, in their institutional development strategies (to be tracked in project results framework as part of the project's 'gender tag'). Together with greater awareness of gender disparities and gender inclusion supported through the NSS, support under Component 3 will ensure that project resources are used to support HEIs to close identified gender gaps in STEM enrollment for girls, which will then be tracked in the project's results framework. These will be elaborated in the POM and updated as needed.

66. Proposals would then be reviewed by MOES (through a Technical Selection Committee), and MOES would make a final decision on the investment package for each HEIs and procure such investments centrally. Specifications of the roles and functions of the Technical Selection Committee, including terms of reference, would be described in the POM. The Project would set limits for allocation by expenditure category in order to ensure that HEIs prepare comprehensive proposals towards the national vision for higher education reform and for differentiation within the higher education sector. In particular, the maximum allocation for goods and minor civil works would be 80 percent of the total allocation, which means that the minimum allocation allowed for services and training would be 20 percent of the total allocation.

67. This component would also support MOES in defining all operational criteria and procedures for the concept, including precise specifications for investment packages. This component would also support the establishment of an Operational Sustainability Team within the MOES, staffed by a small number of specialized consultants to facilitate the process of introducing financial, staffing, human resources, and other types of autonomy at the institutional level. This would help to enhance sustainability for long-term implementation of all types of autonomy in HEIs. This team would be tasked with developing and promoting instructional guidelines on changing the HEI status from a budget institution, conducting seminars with HEI funding and administrative managers, and on supporting ad hoc consultations. The functions of this team would be described in more detail





in the POM.

**Component 4: Project Management, Monitoring & Evaluation (US\$4 million)**

68. The objective of this component is to support the effective management and implementation of the proposed project. The component would finance the day-to-day management and monitoring of the proposed project through MOES staff as well as consultants hired to support project implementation through a Project Implementation Unit (PIU). It would finance salaries for such consultants, including a project manager and fiduciary, environmental and social risk management specialists. It would also finance training activities, targeted technical assistance, and operating costs, including outreach related to the project and the project-specific Grievance Redress Mechanism (GRM).

- *Component 4:* Support Project management, monitoring and implementation, including *inter alia*: (a) the carrying out of training activities and the provision of targeted technical assistance; (b) the carrying out of data collection and monitoring and reporting for Project monitoring and evaluation purposes; and (c) the maintenance of the Project’s grievance redress mechanism.

<b>Table 4. Summary of Project Financing and Activities</b>	
<b>Financing Category and Amount</b>	<b>Project will finance:</b>
<b>Component 1: Sector-Wide Improvements to Governance, Financing, Quality, and Transparency (\$54m)</b>	
<b>1.1 Investments</b> <i>US\$9 million</i>	Improving transparency and stakeholder engagement, higher education information systems development; developing standardized tools for higher education learning assessments including support for their digital transformation; communications campaign and outreach related to higher education reform
<b>1.2 Results</b> <i>US\$45 million</i>	PBC 1 (\$10m) - Performance-based funding formula for HEIs
	PBC 2 (\$10m) - Financial autonomy for HEIs: amendments to package of laws
	PBC 3 (\$5m) - Financial autonomy for HEIs: amendments to bylaws
	PBC 4 (\$20m) – HEI performance-based contracts with KPIs (scalable)
<b>Component 2: Alliances/Partnerships for Improved Efficiency and Quality (\$73m)</b>	
<b>2.1 Investments</b> <i>US\$43 million</i>	Project will finance pre-defined packages of investments (“merger support packages”): labs, equipment, minor refurbishment/rehabilitation
<b>2.2 Results</b> <i>US\$30 million</i>	PBC 5 (\$30m) – Number of mergers of Public HEIs (scalable)
<b>Component 3: Capacity Building and Education Environment Enhancement (\$69m)</b>	
<b>Investments</b> <i>US\$69 million</i>	Project will finance procuring of digital and distance learning resources, laboratories for HEIs, introducing the professional development system for 1500 academic managers for embedding all types of autonomy at HEIs, operational sustainability team
<b>Component 4: Project Management, Monitoring &amp; Evaluation (\$4m)</b>	
<b>Investments</b> <i>US\$4 million</i>	Project Implementation Unit (PIU), operating costs, training, outreach related to project, monitoring and evaluation (M&E), project financial audits, grievance redress mechanism (GRM), technical assistance

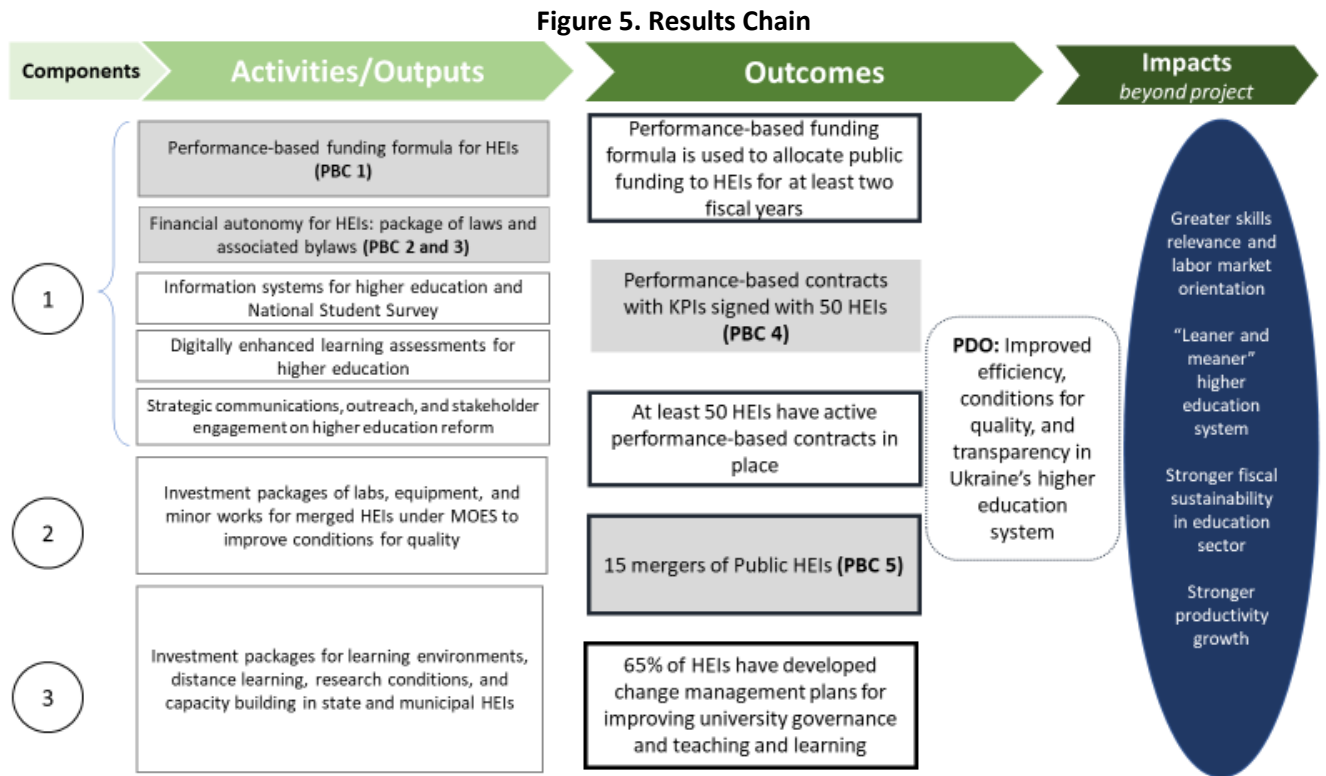


### C. Project Beneficiaries

69. Direct project beneficiaries will include approximately 209,000 university students and 43,500 faculty and staff.<sup>36</sup> Direct beneficiaries will benefit from improved quality of conditions in learning environments for teaching and research, as well as improved administrative and organizational structures supporting more efficient and transparent functioning of HEIs. Indirect beneficiaries include the broader higher education sector (outside institutions directly supported by the Project), students, parents, employers, other local stakeholders, and the community-at-large that would benefit from improved quality, efficiency, and transparency of higher education and human capital development.

### D. Results Chain

70. The results chain in Figure 5 illustrates how the Project’s activities contribute to the achievement of the Project’s main development objectives as well as longer-term impacts that are beyond the scope of the project. The four boxes with thick borders represent the four PDO indicators, while the four boxes highlighted in grey represent the five PBCs (under sub-components 1.2 and 2.2). The results chain is described in more detail in the Results Framework.



### E. Rationale for Bank Involvement and Role of Partners

<sup>36</sup> Calculated as follows: 3,800 students on average per HEI x 55 institutions = 209,000 students; 791 staff on average per institution x 55 institutions = 43,500 staff.



71. **Rationale for Bank Involvement:** *First*, the World Bank has substantive experience in supporting large government reforms focused on improving quality, efficiency, and transparency in higher education systems in ECA, EU member states, and across the world. This includes experience with areas of reform that would be targeted directly or indirectly under this operation, including network consolidation, distance teaching and learning, modernization of university teaching and research facilities, management and faculty development and training, financing, and information management and transparency.

72. *Second*, the World Bank has prepared the Education Flagship Report—Review of the Education Sector in Ukraine: Moving towards Efficiency, Effectiveness and Equity (RESUME3, P168704)—covering all sub-sectors, which has acted as an input to the identification of priorities for the project design. The findings and recommendations from this study have substantial alignment with the goals and ambitions of the new Government’s reform program.

73. *Third*, the World Bank has learned and applied valuable lessons from its previous education project in Ukraine in 2010 as well as from other projects focused on service delivery in Ukraine to be able to strengthen this design, notably on disbursement, procurement and financial management (see Lessons Learned below). *Finally*, the Bank can play a crucial role in supporting the education reform program across changes in leadership within the higher education sector, helping to maintain continuity of reform efforts over time as well as high-level support for challenging reforms, such as improving governance and management of the higher education system as well as addressing the shorter term digitalization goals as a result of the COVID-19 pandemic and the need to build back better and ensure resilience in education provision.

74. **Role of Development Partners:** Although no development partners are anticipated to join the proposed operation, the Project would be aligned with and informed by ongoing projects supported by development partners as part of the Government’s wider reform program. This would include programs supporting reform in secondary and vocational education (e.g. EU4Skills Project, EUR 58 million funded by the European Commission), as well as relevant programs in higher education such as the energy efficiency investment project in higher education institutions supported by the European Investment Bank (EIB) and the transparency and integrity programs for higher education supported by USAID and British Council.

## F. Lessons Learned and Reflected in the Project Design

75. The proposed project design incorporates key lessons learned from the Bank’s operational experience in Ukraine, including under the previous Bank-financed education project, as well as from existing research. Key lessons are described in the following paragraphs.

### *Lessons from Bank operational experience in Ukraine*

76. **Simpler project design including simpler disbursement mechanisms are recommended.** The proposed Project consists of 3 main components, each to support reforms in higher education specific to improving the efficiency, quality and transparency of the sub-sector while pursuing a hybrid disbursement approach for flexibility (together with a small fourth component on project management). In Ukraine, only the selection of an investment project financing (IPF) instrument in the national budget laws (particularly Resolution #70) is ring-fenced/protected for the implementing agency. Results-based financing (RBF) through the financing of eligible expenditures linked to the achievement of PBCs is considered to be part of a “system project” meaning that it is



not earmarked for the implementing agency, but instead funds are disbursed to finance the state budget, without any guarantees that the disbursed funding will benefit the implementing line ministry.<sup>37</sup> A complete RBF operation in Ukraine at the moment does not carry the sufficient incentive or reward for the implementing agency to achieve results. This is the justification for a hybrid approach, with a traditional approach to ensure that the implementing agency has sufficient resources to implement reforms, and an RBF approach to incentivize and drive critical actions and pre-conditions for reform.

**77. Design considerations to address low disbursements in the Ukraine portfolio and the adverse fiscal impact of the COVID-19 crisis:** The disbursement record for IPF operations in Ukraine is poor. Key reasons for the slow disbursements relate to: (i) risk aversion with regards to civil works contracts slowing tendering processes; (ii) low thresholds for use of national procurement; (iii) significant delays under International Competitive Bidding (ICB) procedures as new foreign companies need to go through a lengthy process of registration; (iv) national companies' difficulty with providing the size of performance bonds/bank guarantees and (v) slow processing of payments/invoices as it entails the approval by several ministries before approval inside the Ministry of Finance (MOF). Given this, the project will not finance any new construction (only minor rehabilitation/refurbishment using National Competitive Bidding (NCB) procedures). Essential equipment, including for teaching and research labs, IT and digital equipment needed in the post-COVID context, and other similar investments would be centrally procured under NCB and/or ICB. The project will also finance change management proposals from HEIs to ensure that the governance and conditions for quality teaching and research within HEIs improves (based on guidelines, criteria and operational manual using either national procurement or Bank procurement). A strong fiduciary team will be recruited. Technical assistance for the processing of payments/bills may also be procured and assigned to work closely with the Ministry of Finance to accelerate disbursement and the processing for payments/withdrawal applications.

**78. Simplification of PBC verification procedures to ensure early disbursement into the Treasury (fiscal support to budget in post-COVID-19 context):** Literature on effective RBF highlights the importance of balancing the reward (incentive) versus the underlying efforts to achieve the result. If the efforts are too unrealistic or entail an imbalance with regards to the incentive (reward) and underlying efforts needed, the risk of not achieving a result or outcome rises. Too often in RBF operations, there is a misalignment between the reward and underlying efforts, along with costly and time-consuming verification processes and documentation, both leading to delays because inadequate attention has been made during preparation with regards to the agreed steps, process and documentation for each PBC. In this regard, the proposed Project design incorporates only a few critical PBCs that while they may entail a significant amount of implementation effort or political commitment, the rewards reflect these significant and major outcomes critical for the achievement of the PDO while the monetary amounts also reflect these efforts. Moreover, the project will ensure some early achievements and outcomes to ensure that funds flow to the government as well as securing disbursement while the IPF activities progress. Finally, by using government processes and information, including official approvals (e.g. regulations, decrees, etc.), verification processes will be streamlined and less costly.

**79. Capacity building of the MOES and relevant stakeholders, along with broader citizen engagement efforts, are critical for managing implementation challenges.** The implementation of the previous education project in Ukraine was highly centralized in a largely ineffectual Directorate that resulted in an unsatisfactory

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<sup>37</sup> Government Resolution #70 distinguishes between an investment project (whose realization is on the basis of financial self-sufficiency) and a system project (aimed at supporting implementation of reforms under which funds come as a result of the achievement of relevant indicators and are used to finance the state budget).



project performance. The current MOES team has no prior experience with the Bank-financed education project, except for their exposure to the Trust Fund for Statistical Capacity Building (TFSCB) grant managed by IEA. Thus, the MOES has limited familiarity with Bank processes and the implementation context is underpinned by a volatile and unpredictable political environment. Therefore, Component 4 has been established to support the project management activities of the Project, especially to recruit skilled staff and consultants to support MOES with Bank fiduciary, environmental, and social risk management and compliance. The project will also support rigorous outreach and communications efforts, including stakeholder consultations, to build capacity and ownership of the project as well as the broader ongoing reform efforts. Through these activities, key stakeholders (e.g. rectors, deans, and faculty in HEIs) are interwoven in the Project to safeguard sustainability after the completion of the Project.

*Relevant lessons from global evidence on higher education*

80. **Comprehensive education reform efforts in high-performing European education systems all provide clear lessons on the need for alignment to make the system work for learning while promoting skills relevance for the labor market.** Apart from well-known examples from high-performing countries, such as Finland in the 1970s and Poland in the 1990s/2000s, emerging economies in Europe, such as Belarus, Albania, and Moldova have also made notable progress through comprehensive education sector reform in recent years.<sup>38</sup> These cases provide important lessons for Ukraine, namely on efficient organization of education networks and on the timing and sequencing with the recognition that many of these reforms took years to implement before major results were observed. There are also important lessons from other countries managing large higher education systems related to sustainable and transparent financing mechanisms, institutional autonomy and governance, diversity rather than stratification, and mobility.<sup>39</sup>

81. **Higher education can make an important contribution to building a stronger society, ending extreme poverty, and boosting shared prosperity.** Economic studies have shown a positive relationship between education and economic growth, particularly those that consider the quality of education.<sup>40</sup> Higher education fulfills multiple roles that go beyond educating students. Specialists often identify three distinct, but interrelated missions: (i) teaching and learning; (ii) research; and (iii) community engagement. Given the evidence, the proposed Project will support activities to improve the quality and relevance of teaching and learning as well as strengthen the institutional governance and management of the higher education system, while engaging relevant stakeholders, including employers in Ukraine. Additional lessons from global evidence on higher education are included in Annex 4.

82. **RBF in education can be applied to achieve transformative results, leveraging resources while cutting through bureaucratic inertia and competing priorities.** Research and global evidence on best practices in RBF in education shows that it can be a very effective tool to focus policy dialogue on the theory of change and the mechanisms that need to change to generate results. It can also galvanize and align important actors in the pursuit of results while also instilling a culture of measurement.<sup>41</sup> These are all important objectives in their own right in Ukraine, given the scale of ongoing reform and the sizeable investment needs that will persist in the sector.

<sup>38</sup> See, for example, Darling-Hammond (2010) on Finland; Jakubowski (2015) on Poland; ETF Review of Education Sector Developments in Belarus, World Bank (2019) Public Expenditure Review for Albania; World Bank (2017) Country Partnership Framework for Moldova.

<sup>39</sup> World Bank (2015). Managing Large Systems: Challenges and Opportunities for Large Higher Education Systems.

<sup>40</sup> World Bank (2017). Higher Education for Development: An Evaluation of the World Bank Group's Support.

<sup>41</sup> World Bank (2017). *Results-Based Financing in Education: Financing Results to Strengthen Systems*.



*Relevant lessons from the ECA region on higher education consolidation*

83. **University reforms affect entire institutions, particularly in the case of mergers, and EU experiences offer several important lessons for mergers/alliances in higher education.** A key lesson of Bank-supported operations in higher education in ECA is that university reforms need to be managed carefully at the institutional level, ensuring that academic and administrative staff are informed about ongoing activities and can benefit from improvements to the teaching and learning environment. Taking an institutional approach is key. However, this also means that institutional innovations can be cultivated through a bottom-up approach. Experiences across the EU also offer several good practice examples of partnerships, mergers and alliances in higher education, e.g. in Denmark, France, Russia, and Romania (EUA 2015; Curaj et al. 2015; *Higher Education in Russia and Beyond* 2018). For example, research shows that mergers are unlikely to be successful without substantial investment in capital and systems and in most cases the public sector is the source of such funds. Government ownership of the process, driven by national ambition and expectations, is important to ensure that mergers serve their role as a tool for implementing a national systemic vision in higher education.

84. **Efficiency reforms in education often take years of concerted efforts, particularly in higher education where bottom-up approaches are needed to ensure sustainability.** For example, Denmark, a much smaller country, took about 10 years to plan and implement a consolidation and merger of universities to improve quality, relevance and ensuring a supply of future graduates needed for the economy.

85. **Demand-driven proposals from HEIs, paired with objective information on institutional capacity, can provide strong underpinning for change management processes.** This combination been employed with consistent success by institutional systems, governments and development assistance agencies to introduce or accelerate a positive process of adaptive change within teaching, learning and research programs around the world, including in Armenia, Chile, Colombia and Vietnam.<sup>42</sup> Demand-driven proposals from HEIs offer several main benefits. First, they have proven to be effective mechanisms for improving educational quality and relevance in higher education. In this regard, they have been particularly useful in promoting the introduction of institutional strategic planning within universities and fostering ownership and commitment among institutional staff. Additionally, their incentive system fosters changes in professional attitudes and institutional culture through awards for creative thinking. The support offers opportunities for university staff to pursue ambitions, to experiment, and to test possible solutions. In the process, they often transform planning and decision-making, leadership styles and accountability within the participating institutions.

### III. IMPLEMENTATION ARRANGEMENTS

#### A. Institutional and Implementation Arrangements

##### *Project Financing*

86. **The Project will be implemented over five years, through an Investment Project Financing (IPF) IBRD loan with PBCs in the amount of US\$200 million (Table 5).** Sub-components 1.1, 2.1, 3, and 4 follow standard

<sup>42</sup> World Bank. (2006). Innovation Funds for Higher Education: A Users' Guide for World Bank Funded Projects.



investment project financing arrangements with traditional disbursement methods. Sub-components 1.2 and 2.2 follow a results-based approach using PBCs.

**Table 5. Project Costs**

Project Components	IBRD Financing
1. Sector-Wide Improvements to Governance, Financing, Quality and Transparency	\$54 million <i>of which \$45 million linked to PBCs</i>
2. Alliances and Partnerships for Improved Efficiency and Quality	US\$73 million <i>of which \$30 million linked to PBCs</i>
3. Capacity Building and Education Environment Enhancement	US\$69 million
4. Project Management, Monitoring and Evaluation	US\$4 million
Total Project Costs	US\$200 million

87. For sub-components 1.2 and 2.2, disbursements will be linked to achievement of specific PBCs and will finance defined eligible expenditures (i.e. expenditures incurred for the purposes of preparation of specialists at Public HEIs including remuneration expenditures and incremental operating costs) and disbursements will be triggered by verified achievement of agreed specific results (performance-based conditions, PBC). Components 1.2 and 2.2 will reimburse the State Treasury for eligible expenditures incurred during the project period. The World Bank would disburse the Loan proceeds against verification of eligible expenditures (and upon verification of the PBCs, as discussed below). The State Treasury will submit semi-annual reports on the execution of eligible expenditures under Parts 1.2 and 2.2 of the Project.

88. **Eligible Expenditures.** Eligible expenditures under the project will constitute goods, works, non-consulting services, and consulting services under Components 1.1, 2.1, 3, and 4, as well as remuneration expenditures and incremental operating costs incurred by the Borrower, through MoES, for the purpose of preparation of specialists at Public HEIs under the results-based Components 1.2 and 2.2 of the Project. The project’s eligible expenditures will finance the implementation of the higher education financing and governance reforms through reimbursements against remuneration expenditures and incremental operating costs in higher education. Remuneration expenditures for higher education personnel in higher education institutions subordinated to the MoES (under budget line 2201160<sup>43</sup>) are directly related to and required for the successful implementation of the higher education reform program within HEIs and thus are classified as eligible expenditures. These expenditures are eligible and required for achievement of the PBCs and PDO, particularly given two considerations: (i) that the Project is supporting enhancements and changes to how these expenditures are being made and thus the conditions of service for higher education sector personnel (e.g. in the case of revisions to the higher education financing formula and introduction of performance contracts with KPIs); and (ii) that the Project is supporting enhancements to the effectiveness and efficiency of teaching and instruction (e.g. through support for change management processes in HEIs and targeted professional development).

<sup>43</sup> This refers to the code of program classification of expenditures and crediting of the state budget (KPKVK - Код програмної класифікації видатків та кредитування державного бюджету).



89. **Disbursements of funds for Components 1.2 and 2.2 will be triggered by achievement of results and incurrence of reimbursable eligible expenditures.** A series of results chains contribute to the achievement of the Project Development Objective (PDO) indicators, and ultimately the PDO. Along the results chain, some of the critical outputs, processes, intermediate outcomes, and outcomes have been selected as PBCs. A total of 5 PBCs have been discussed with the Government of Ukraine (GoU) and are detailed above. These PBCs will be achieved with support from the investments in inputs under Components 1.1, 2.1, 3, and 4 as shown in the results chain diagram in Figure 5.

90. **The achievement of each PBC will be monitored, measured and verified** according to specific protocols elaborated in the POM. The Project's Task Team Leader must certify achievement of a PBC and incurrence of reimbursable eligible expenditures before the associated Loan amount is released. It is important to note that the projected timing and the associated disbursement projections are indicative; PBCs are "floating" meaning that disbursements will be made upon verified achievement of the specified PBC at any time during the implementation period.

91. **The Project's contribution will represent a small share of the Government's spending on higher education—about 4 percent per year.<sup>44</sup> Fiscal savings directly generated from higher education optimization is estimated to US\$1.3 billion over the 20 years period with the first efficiency savings generated in the last five years of the project totaling approximately US\$381 million** or about 9 percent of public subsidies to higher education institutions. IBRD financing will cover the full costs of the specific investments identified for institutional strengthening and implementation of the reform under Components 1.1, 2.1, and 3, namely investment packages for HEIs (of laboratories, equipment and support for digitalization, and minor refurbishment/rehabilitation), together with surveys, training, communications campaigns, targeted technical assistance, and other related activities.

92. **The proposed Project will be implemented over a five-year period by the Ministry of Education and Science (MOES) of Ukraine.** The MOES would have the overall lead role and responsibility for project coordination and monitoring of implementation progress. As of February 2021, the MOES has already designated a Project Coordinator (Deputy Minister) responsible for the project as well as a Deputy Project Coordinator.

93. Consultants will be recruited to support project implementation on a regular basis throughout the project period, under the supervision and direction of MOES leadership. Capacity enhancement of the MOES will be financed by the Borrower to maintain, throughout project implementation, a Project Implementation Unit (PIU) with qualified consultants in sufficient numbers, as well as adequate funds, facilities, services, and other resources for project implementation (including procurement, financial management, environmental and social aspects and monitoring and evaluation and PBC verification), all acceptable to the Bank. Key qualified consultants which are needed for implementation include a project manager, fiduciary consultants who would support the MOES on financial management, procurement, monitoring, and administration; and thematic or technical consultants related to the substantive areas of higher education in line with the envisioned project activities.

94. The preparation of key Terms of Reference (TORs) may be prepared by directorates/units/departments inside the MOES or may be outsourced to externally recruited consultants/experts. The approval of any TORs or

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<sup>44</sup> The GoU's estimated education budget financing for higher education over a five-year period is approximately US\$4.5 billion. Project financing of US\$200 million represents approximately 4.4 percent of this amount over the five-year project period.





technical specification will follow normal ministerial procedures to ensure ownership and reinforcing existing administrative structures.

95. The opening of technical or financial proposals will be undertaken through (a) the establishment of a contract/tender/evaluation committee made up of a core team, including but not limited to fiduciary staff, chair/head of contract/tender/evaluation committee and the inclusion of relevant project consultants and unit/department staff depending on the content of the specific tender or (b) through a smaller technical working group established for these purposes only since opening procedure per se does not require a separate meeting of a contract/tender/evaluation committee. External experts outside of MOES may be invited as members of the contract/tender/evaluation committee, smaller technical groups and/or as evaluators as the case may require.

96. The MOES will assign 2-4 officials empowered legally to sign all payments/contracts (designated signatures). Also, the MOES will maintain the Project Coordinator which has been appointed and who will be responsible for managing the project (deputy minister or other duly authorized official). The Project Coordinator could chair the tender/contract/evaluation committee. As the Project Coordinator is a high-level government official, the MOES would also recruit a day-to-day project manager to ensure that the project runs smoothly on a daily basis.

97. **Support to merged HEIs under Component 2 and selected public HEIs under Component 3:** The project will support demand-driven proposals from universities based on identification of priorities needed to implement new institutional and financial autonomy reforms, institutional mergers, and quality improvements. This will be based on a clear set of criteria with eligible and ineligible list of expenditures to be financed and can be updated as needed with the Bank's no objection or agreement during supervision mission (and recorded in the Aide Memoire). On average, investment packages of about US\$1.1 million per institution (or as defined in the POM) will be supported depending on the size or the HEI/merger and their needs. The proposals will then be evaluated with requests for adjustments and corrections. Once a proposal has been approved, a bilateral or tripartite Memorandum of Understanding (MOU) will be signed between the MOES representative and the representative of the selected HEI. However, all procurement and financial management functions associated with these investment packages will be conducted centrally by the MOES on behalf of beneficiary HEIs.

## B. Results Monitoring and Evaluation Arrangements

98. **The PDO-level indicators, PBCs, and intermediate results indicators would be monitored using the following data collection instruments:** (i) regular surveys and data collection processes; (ii) administrative data, including from EDEBO; and (iii) monitoring reports prepared by the MOES. The selection of project indicators as shown in the Results Framework was guided by the current state of data availability in the higher education sector and the reasonable expectations about the development of sector monitoring systems resulting from the proposed project.

99. **PBC verification processes and protocols:** Verification will be undertaken in ways that are both credible and sustainable by using, to the fullest extent possible, existing government systems for oversight and monitoring notably through the MOES. Verification completion and payment can be accommodated using simple verification principles referencing government approvals, regulations, procedures as well as final accounts under the project's eligible expenditures (as described in more detail in Section II.B). Verification of PBCs will be undertaken directly by the Borrower, while the Bank is responsible for validating the results presented by the Borrower as part of the



Bank's supervision and implementation support function. Verification protocols and agreed documentation are included in the Results Framework.

100. **The MOES, through its designated staff and consultants, would carry out the day-to-day coordination of monitoring and evaluation activities** to monitor the Project's objectives and results and would communicate with the World Bank according to the frequency of reports as described in the Results Framework. Under the Project, the monitoring and evaluation capacity of the MOES would be further developed to allow more effective sector management going forward and to ensure sustainability in the future.

101. **Citizen Engagement.** The proposed project design incorporates various mechanisms for beneficiary and stakeholder engagement in project implementation and monitoring activities. The nature of this Project is underpinned by the Government's intention to expand autonomy and democratic participation in the higher education system, providing more choice and voice to stakeholders in the system: students and parents, academic teaching staff, rectors/deans, and to some extent employers. The Government recognizes the importance of communication, proactive outreach, and participatory two-way engagement as a critical pillar of its reform. As such, the proposed Project would support multiple mechanisms for feedback loops and beneficiary inputs to inform implementation, make course corrections, and feed into the results framework and PBC verification process. In particular, the Project aims to support communications and citizen and beneficiary engagement, including poor vulnerable and disadvantaged groups, through the following activities:

- Comprehensive communication and outreach campaigns for higher education reform
- Development and implementation of Ukrainian National Student Survey in higher education under sub-component 1.1, including regular public reporting on the results of the NSS (reflected in Results Framework and in connection with corporate requirement on citizen engagement)
- Implementation of graduate tracer study as part of EDEBO
- Continuous stakeholder consultation activities as outlined in the Stakeholder Engagement Plan (SEP)
- Establishment and implementation of a project-specific Grievance Redress Mechanism (GRM)

102. In addition to the above-mentioned activities, the Project would also support continuous feedback through participatory planning and decision-making activities, particularly in relation to activities under sub-Component 2.1 and Component 3. Proposals for investment packages would be developed in a participatory manner, with opportunities for students and faculty to provide comments and voice concerns, along with input from the MOES. Targeted information and awareness building materials would ensure that students from vulnerable groups are given the opportunity to provide informed inputs and fully participate in the planning and decision-making processes.

103. **The project will also support a project-specific Grievance Redress Mechanism (GRM) as well as GRMs for direct and contracted workers as applicable.** The project-level GRM would be supported under Component 4. The project's GRM should build on existing and similar mechanisms and be able to capture grievances through various channels including telephone and internet-based applications for computers and smart phones. The results of the project's GRM should be made public by the MOES. Separately, it is expected that MOES will incorporate the requirements of Environmental and Social Standard (ESS) #2 on Labor and Working Conditions into contractual agreements with contractors together with appropriate non-compliance remedies. Contractors will develop and adopt Contractor's Labor Management Procedures (LMP). GRMs specifically for direct and contracted workers, as well as government civil servants will be provided by their respective employers. The GRM for direct workers will be designed at an early stage and will be formally established by project effectiveness.



Systems for handling complaints for employees will be reviewed during the implementation support missions.

### C. Sustainability

104. **The sustainability of the proposed project depends on two factors.** First, the Government’s ownership of this project and other activities implemented under the current Country Partnership Framework; and, second, the institutional and fiscal sustainability of project activities. The former stems from the Project’s support for the Government’s demonstrated commitment to reform through, for example, the amendments to the Law on Higher Education and the activation of the higher education quality assurance agency (NAHEQA). The Project will support costs required to implement and advance the reforms and activities already supported by the Government. The latter factor—on fiscal sustainability—will derive from increased cost-effectiveness across the higher education system, which will reduce over time the amount of resources that must be allocated from the central budgets to maintain provision of higher education services. Meanwhile, the systems strengthening activities and higher education financing reforms will drive significant fiscal savings in the outer years of the project. Operating within government structures will ensure institutional sustainability.

105. **Climate Co-Benefits:** As mentioned, Ukraine’s economy is increasingly vulnerable to the impacts of climate change, and the Government is prioritizing climate sustainability and environmental resilience in several ways across the economy. In the education sector, the *New Ukrainian School* competencies established for secondary education specifically emphasize environmental awareness, climate adaptation, and healthy lifestyles. Additionally, ongoing decentralization of environmental management, climate change adaptation and planning strategies have significant implications for the higher education sector and the role of universities in supporting Ukraine to adapt to and manage climate risks. In this context, there are several opportunities for climate adaptation and mitigation through the proposed operation:

- ***Climate Adaptation.*** The Project would support investments in teaching and research laboratories, and a subset of these laboratories support study fields that address climate adaptation and mitigation, including but not limited to ecology, water management, agricultural productivity, energy, transport, forestry, and climate science. Over time, improved conditions for teaching and research in these study fields would result in higher quality education and skills development in scientific disciplines that will be key for climate adaptation in Ukraine. Additionally, the Project will incorporate climate-resilient design measures into the minor rehabilitation and renovation that is anticipated in higher education institutions under sub-Component 2.1 (“merger support packages”) and Component 3 (enhancements to the educational environment). Such measures would consider the use of alternative energy, environmentally friendly and weather-resistant materials, and related options reflecting best practices in the EU and beyond. Finally, the project would also support targeted training and professional development for managers of HEIs which would include, among other topics, a focus on “green practices” and climate resilience in universities.<sup>45</sup>
- ***Climate Mitigation.*** The Project would also support incorporation of energy-efficient materials and approaches through the rehabilitation and renovation anticipated under sub-component 2.1 and Component 3. As mentioned above, the project would also support targeted training for managers in HEIs related to climate change mitigation and energy conservation techniques.

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<sup>45</sup> The organization UI GreenMetric produces a World University Ranking of universities based on current conditions and policies related to green campus and sustainability initiatives. Ten universities in Ukraine are currently included in this ranking.



## IV. PROJECT APPRAISAL SUMMARY

### A. Technical and Economic Analysis

106. **The proposed project is expected to have positive development impact through two mechanisms: (i) learning and skills gains and COVID-19 crisis relief and (ii) fiscal savings as described in Annex 2 (Economic Analysis).** By strengthening the quality, efficiency and transparency of the higher education system at this important initial phase of the reform process, the expected medium- to long-term project outcomes would have both market and non-market benefits. In terms of *learning and skills gains*, such benefits include improvement in development of advanced 21<sup>st</sup> century skills, greater social trust, better learning outcome and improvements in labor productivity, employment, and wages. Moreover, by allocating significant project resources to improve digitalization in the higher education system and to alleviate the fiscal shortfall, the project will soften the adverse economic impacts of the COVID-19 crisis while improving digitalization to increase future resilience in higher education provision. Additionally, the project is expected to generate initial *fiscal savings* and lay the foundations for further savings over the medium-term. Such fiscal savings are much needed for the financial sustainability of the education reforms as well as to reduce the burden on government expenditures stemming from inefficient allocation of scarce budget resources.

107. **The combined benefits from the proposed Project are expected to outweigh the investment costs.** A cost-benefit analysis of the proposed project was conducted based on: (a) reasonable projections of investment and recurrent costs, and (b) benefits from similar types of education interventions. The estimates below stem from a quantitative analysis based on conservative assumptions. Project components were amenable to a cost-benefit analysis because the benefits of activities under these components could be reasonably appraised from existing evidence.

108. **The project is expected to produce learning gains and fiscal savings totaling an estimated US\$ 1.3 billion over a 20-year period. Expected savings from higher education network consolidation over a 5-year period (excluding the first year of project implementation) are estimated at US\$381 million.** The benefits are expected to arise from reduced per student cost from state funding to subsidize higher education. Over a 5-year project period, estimated savings are US\$ 381.3 million with a BCR of 7.6. These savings will accrue to the state budget through better administrative efficiencies achieved through mergers, rationalization of non-pedagogical staff, and greater transparency in funds flow through the financing formula leading to reduction in hidden costs. Learning and skills gains, together with greater labor market relevance and matching are anticipated as a result of support for quality enhancements as well as activities to enhance transparency and information in the sector, for example related to graduates' employability. Over the medium-term through financing and governance reforms (which will create financial incentives for efficiency at the institutional level) and through mergers of higher education programs and institutions, further fiscal savings will be generated.

#### Rationale for public sector financing

109. In higher education provision in Ukraine, the evidence points to market failure and spillover effects which can be seen in the form of oversized networks, suboptimal provision of study programs, poor quality environments for teaching and research, and governance and corruption concerns. Reforming higher education in Ukraine requires public sector financing to provide direct and critical incentives for the government's massive reform efforts to take root, lay the foundation, drive consensus and build capacity. This support is crucial to activate



performance-based, transparent and efficient markets that can supply relevant skills to meet labor market demands, support Ukraine’s labor productivity and overall growth, and ensure fiscal sustainability over time. The investments in increased digitalization will support the ‘building back better’ approach to recovery from COVID-19 and ultimately a more resilient and fair higher education system.

## B. Fiduciary

### *Financial Management:*

110. Based on the FM assessment of MOES fiduciary risk is assessed as Substantial, given the size and complexity of the project, need of MOES to build capacity in implementation of World Bank financed operations, and notable PBC sub-components. The FM assessment concluded that FM and disbursement arrangements will be acceptable subject to the implementation of agreed action plan (see Table 6).

111. For Parts 1.1, 2.1, 3 and 4 of the Project, the MOES will rely extensively on its existing arrangements and country systems, including using existing staff for project implementation (with assistance of external expertise), including use of the State Treasury System, current available IT solutions (which are to be further modified), and partly rely on the existing system of internal controls and division of responsibilities (which will be further strengthened, and clearly laid out in the POM). FM and disbursement arrangements for this Project will be described in the POM, which will be prepared and adopted as a condition to project effectiveness and will include specific information on the division of responsibilities on FM and disbursements, internal controls that will apply, and descriptions of systems for accounting and reporting, etc. MOES will be responsible for quarterly Interim Unaudited Financial reports (IFRs) prepared in accordance with the template agreed with the World Bank and annual project financial statements audits, carried out by the Accounting Chamber of Ukraine or an eligible audit firm in accordance with the agreed TORs.

112. For Parts 1.1, 2.1, 3 and 4 of the Project, traditional disbursement arrangements will be used, including use of direct payments, reimbursement, and advances. One Designated Account (DA) will be opened, and the respective DA ceiling and minimum application size will be set in the DFIL. DA will be opened in Ukreximbank in USD, the currency of the loan, and DA reports will be submitted at a frequency specified in DFIL.

113. For Parts 1.2 and 2.2 of the Project (linked to PBCs), MOES will rely fully on its existing system for planning and execution of expenditures that are managed under budget line 2201160 (“training of personnel by higher education institutions and ensuring activity of their premises”). MOES will prepare and submit semi-annual reports on the execution of this program, and upon completion of respective PBCs. MOES records on this program execution will be verified to the State Treasury records, and reports will include comparison of budget estimates and actual expenditures. Expenditures incurred under the mentioned budget line will be subject to annual audit, performed by an independent auditor acceptable to the World Bank.

114. For Parts 1.2 and 2.2 of the Project (linked to PBCs), disbursements will be triggered by achievement of results and incurrence of eligible expenditures. Disbursements will be made by the World Bank to an account in the State Treasury that would be indicated by Government to reimburse incurred eligible expenditures under the Project.

115. Further details on the FM assessment are provided in Annex 1.



<b>Table 6. Actions for FM Capacity Building</b>		
<b>Actions for capacity building</b>	<b>Responsible</b>	<b>Completion Date</b>
1. Develop the FM chapter of the POM to reflect the project related disbursement procedures, staff responsibilities and internal controls, budgeting, external auditing, financial reporting and accounting policies and procedures.	MOES	<i>By effectiveness (adoption of POM in manner acceptable to the Bank is a condition of effectiveness)</i>
2. Recruit additional financial management specialist with relevant experience in World Bank procedures (possibly part-time), to assist existing MOES fiduciary team	MOES	<i>Within 60 days after effectiveness</i>
3. Introduce module for Project accounting and reporting under existing accounting system. The module shall have functionality of automatic generation of Statement of Expenditures (SOEs), IFRs and have the functionality for dual-currency accounting, as well as the inbuilt controls to ensure data security, integrity and reliability. TORs are to be agreed with the World Bank and the system will require World Bank review and approval.	MOES	<i>Within 60 days after effectiveness</i>

*Procurement:*

116. Procurement will be conducted according to the New Procurement Framework (NPF) – Procurement Regulations for Procurement in Investment Project Financing: Goods, Works, Non-Consulting and Consulting Services dated July 2016 (revised November 2017, August 2018 and November 2020), World Bank Standard Procurement Documents, with the latest Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants and in accordance with the provisions of the Loan Agreement and the POM. With regard to each contract financed by the IBRD Loan, the various procurement methods, the estimated cost, and the respective implementation dates will be agreed by the Borrower and the World Bank in the Procurement Plan. The Procurement Plan will be updated at least once a year or as the need arises, taking into account real circumstances and institutional capacity.

117. The national public procurement law in force meets the requirements of the Procurement Regulations for national open competitive procurement, except necessity to incorporate applicability of the Bank's Anti-Corruption Guidelines, including the Bank's right to sanction and the Bank's inspection and audit rights (without any limitations) in the sample bidding documents. Ukraine's e-procurement system called ProZorro may be used as a tool for e-reverse auctions for any procurement method/new selection with a cost estimate below US\$ 1 million for Goods and US\$ 5 million for works using Request for Quotations (RFQ), National Request for Bids (RFB) and/or National Request for Proposals (RFP) methods or as may be additionally agreed with the Bank. The decision will be taken on a case by case basis depending on the project procurement risk rating, other associated risks and the Project Procurement Strategy for Development (PPSD). The initial procurement packages may be submitted for prior review.



118. *Procurement Capacity and Risk Assessment.* MOES will be responsible for all project-related procurement. The procurement assessment completed in February 2020 confirmed the project procurement risk rating as Substantial due to MOES’s inexperience in World Bank operations, procurement and contract execution of goods, works and consulting and non-consulting services under the Bank’s procurement rules and procedures (with the only exception being the TFSCB grant managed by the IEA according to applicable Procurement Regulations and which closed in the summer of 2019), as well as no direct experience in large value complex procurements financed out of country’s budget in the past several years. The mitigation measures proposed cover (a) procurement regulatory framework and management capability; (b) integrity and oversight; (c) procurement process and market readiness and (d) procurement complexity. The MOES shall establish a unit with fulltime procurement specialists/consultants familiar with Bank rules. Relevant staff and project consultants will undergo additional trainings and further strengthening with special focus on the NPF, the procurement process from planning to contract management, complaint management, dispute resolution, etc. as needed. Technical or sector expert consultants may also be recruited to expand MOES capacities. MOES shall make use of and benefit from IEA experience and capacity in preparation, implementation and closing of the World Bank financed project to the extent possible.

119. *Overall procurement risk is rated Substantial* based on the capacity of the implementing agency. The following risks are identified: (a) limited or no knowledge and experience with the World Bank Procurement Framework; (b) limited or no knowledge of the new approach to procurement and specifically on Procurement Regulations and the Systematic Tracking of Exchange in Procurement (STEP); (c) usual for the country delays in preparation of technical specifications, qualifications, and requirements; (d) systemic delays in evaluation process and contract award recommendation; (e) delays in contract signing with successful bidders and implementation of signed contracts, etc. To mitigate these risks, measures have been incorporated into the PPSD for investment components which is developed with support from the Bank.

120. Based on the project requirements, operational context, economic aspects, technical solutions and market analysis, a PPSD identifies the following types of activities: (a) civil works contracts; (b) goods contracts; (c) consulting and non-consulting services, etc. for activities envisaged by project components. The recommended approach to the planned procurement activities is summarized in the PPSD.

121. The World Bank will exercise its procurement oversight through a risk-based approach comprising ex-ante and ex-post procurement due diligence and independent procurement reviews, as appropriate. Procurement supervision visits will be carried out twice per year or as the case may require. These will include special procurement supervision for ex-post-review on procurement processes undertaken by the MOES/PIU to determine whether they comply with the requirements set in the Legal Agreement. More details on procurement implementation arrangements are included in Annex 1.

**C. Legal Operational Policies**

	<b>Triggered?</b>
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No



#### D. Environmental and Social

122. **The proposed Project is expected to have moderate environmental impacts.** This is one of the first projects in the country that applies the World Bank's new Environmental and Social Framework (ESF). The Environmental and Social Risk Classification for the Project has considered the potential environmental and social risks associated with minor rehabilitation and renovation, and these activities will not generate significant adverse environmental impacts or substantial risks on human population. The predictable impacts are expected to be temporary, reversible, moderate in magnitude and site-specific. No adverse impacts such as involuntary land acquisition, impacts on indigenous peoples, or on biodiversity and habitats are expected. Although specific sites where physical works will take place are not yet identified, key environmental and social issues will be related to: (i) waste management of construction spoils, (ii) noise and air pollution with dust, (iii) hazardous materials such as asbestos containing materials, and maybe old lead containing paints; (iv) health and safety of students, teaching staff, and visitors during renovation/rehabilitation phases; (v) impacts on water quality and quantity; etc. Adequate adoption of work-related health and safety practices (OHS requirements) during construction both for workers and education personnel and students is required.

123. **Social risks related to project activities are considered moderate.** A moderate risk rating is proposed because the likely impacts are predictable, expected to be minor, reversible, and can be managed through implementation of appropriate mitigation measures. The Project does not envisage any new construction that would involve additional land acquisition or resettlement. However, under component 2.1 and component 3, the project aims to fund minor rehabilitation, refurbishment or renovation of existing facilities such as teaching/instructional laboratories. Although these civil works are expected to be confined to the existing facilities/premises of HEIs, potential impacts under the World Bank's Environmental and Social Standard (ESS) 5 on Land Acquisition and Resettlement are not ruled out. For example, there might be some HEIs whose lands are occupied or used for other purposes. These impacts are not known but will be available only after screening HEI proposals and final selection of HEIs for project support. Hence, MOES prepared a Resettlement Policy Framework (RPF) to guide the participating HEIs to prepare required mitigation measures such as Resettlement Action Plans (RAPs) in case such impacts/issues are identified. The social risks of the project may also affect aspects of social inclusion, especially related to vulnerable groups and disadvantaged communities and students outside urban areas. Hence, an inclusive public outreach program has been discussed with the counterparts to enable a more equal access to project benefits and has been included under Component 4. The MOES has also prepared a SEP, which maps the main stakeholders and project beneficiaries. The SEP lays out a strategy to identify and map key stakeholders, including representatives from vulnerable and disadvantaged groups. The SEP will be updated throughout the lifetime of the Project to ensure that it reflects the reality of the implementation.

124. Detailed analysis of the application of the World Bank's Environmental and Social Standards (ESSs) for the project has been provided as part of the Environment and Social Review Summary (ESRS). The project applies ESS 1-5, 8, and 10 as relevant and needed environmental and social measures would be implemented through the actions agreed in the Environment and Social Commitment Plan (ESCP). The ESCP prepared by the MOES has been discussed, approved by the Bank, and publicly disclosed by the MOES on January 26, 2021. The Environmental and Social Management Framework, RPF, SEP, and LMP were also developed and disclosed by the MOES together with the ESCP. Once the project activities are finalized and environment and social assessments completed, additional measures such as LMP and site-specific Environmental and Social Management Plans and RAPs are to be prepared. A project-specific Grievance Redress Mechanism (GRM) will be established as outlined in the SEP. In addition, the public may use the World Bank's Grievance Redress Service (GRS) to submit complaints/grievances, if any.





## V. GRIEVANCE REDRESS SERVICES

125. Communities and individuals who believe that they are adversely affected by a World Bank (WB) supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the World Bank Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## VI. KEY RISKS

126. **The overall risk to achieving the PDO is rated Moderate given the following major factors:** (i) macroeconomic risk and fiscal restrictions which pose challenges for budget execution, (ii) weak institutional capacity, and (iii) weak fiduciary capacity.

127. *Macroeconomic Risk is rated Substantial* due to the fiscal impacts of the COVID-19 crisis, high public debt servicing requirements and volatility in key economic sectors, which may pose challenges for budget allocation and execution under this project. The growth outlook is weak, and Ukraine faces substantial financing needs in the next years. The IMF approved an 18-month US\$5 billion Stand-By Arrangement for Ukraine to help cope with COVID-19 pandemic challenges by providing balance of payments and budget support, but with conditions for a small set of key structural reforms. An additional consideration is that intensified conflict in the east could result in higher military spending, thus crowding out public spending in the education sector. The mix of traditional investments and results-based financing helps to mitigate this risk to achievement of the PDO, but substantial risk remains.

128. *Institutional Capacity Risk is rated as Substantial* given the high degree of decentralization and power-sharing in the education sector, with identified capacity gaps at central as well as regional and local levels. Additionally, under the proposed project, as each beneficiary HEI will have to enter into an agreement or MoU with the MOES as beneficiaries related to both legal transfer of assets to be procured under the project and compliance with environmental, social, and fiduciary aspects, this could hinder project implementation due to delays in the transfer of assets. The design explicitly aims to mitigate this risk through measures such as additional oversight, capacity building, and close monitoring, including with the support of third-party stakeholders. Centralized procurement under the MOES will also further help to mitigate this risk, along with standard agreements with selected beneficiary HEIs. However, the residual institutional capacity risk is rated as substantial.



129. *Fiduciary Risk is rated as Substantial.* Limited fiduciary experience and the size of this project pose high risk to the project. Mitigation measures to address fiduciary risk and capacity gaps will be addressed through training of existing MOES fiduciary staff, hiring experienced procurement, FM, and M&E consultants, and through strengthening existing internal control and procedures, including IT systems. Lessons learned and recent experience of the IEA in implementing Bank-financed activities shall also help MOES mitigate related fiduciary risks. These activities and support measures will be financed under Component 4.



VII. RESULTS FRAMEWORK AND MONITORING

Results Framework

COUNTRY: Ukraine

Ukraine Improving Higher Education for Results Project

Project Development Objectives(s)

The Project Development Objective is to improve the efficiency, conditions for quality, and transparency in Ukraine's higher education system.

Project Development Objective Indicators

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
<b>Improve efficiency in higher education</b>							
Performance-based funding formula is used to allocate public funding to HEIs during at least two consecutive fiscal years (Yes/No)		No	No	Yes	Yes	Yes	Yes
Number of mergers of public HEIs (Number)	PBC 5	0.00	0.00	2.00	6.00	10.00	15.00
<b>Improve conditions for quality in higher education</b>							
Percentage of higher education institutions that have developed change management plans for improving university governance and teaching and learning (Percentage)		0.00	10.00	20.00	35.00	50.00	65.00



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
<b>Improve transparency in higher education</b>							
Number of institutions with active performance-based contracts in place (Number)		0.00	10.00	20.00	30.00	40.00	50.00

**Intermediate Results Indicators by Components**

Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
<b>Sector-Wide Improvements to Governance, Financing, Quality and Transparency</b>							
Performance-based funding formula for HEIs (Text)	PBC 1	No performance-based funding formula for higher education is in place	Resolution of the Cabinet of Ministers of Ukraine on a performance-based funding formula has been issued	Resolution of the Cabinet of Ministers of Ukraine on a performance-based funding formula has been issued	Resolution of the Cabinet of Ministers of Ukraine on a performance-based funding formula has been issued	Resolution of the Cabinet of Ministers of Ukraine on a performance-based funding formula has been issued	Resolution of the Cabinet of Ministers of Ukraine on a performance-based funding formula has been issued
Financial autonomy for HEIs (Text)	PBC 2, 3	HEIs do not have financial or budget autonomy	Package of laws providing for financial autonomy for HEIs has been enacted	Bylaws and regulations providing for financial autonomy of HEIs have been issued	Bylaws and regulations providing for financial autonomy of HEIs have been issued	Bylaws and regulations providing for financial autonomy of HEIs have been issued	Bylaws and regulations providing for financial autonomy of HEIs have been issued
HEI performance-based contracts with KPIs (Number)	PBC 4	0.00	10.00	20.00	30.00	40.00	50.00
Increase in students reporting satisfaction with the higher education system based on National Student Survey (Text)		Baseline to be determined after first round of NSS	Development and implementation of NSS	Increase in percent of students reporting satisfaction with higher education system	Increase in percent of students reporting satisfaction with higher education system	Increase in percent of students reporting satisfaction with higher education system	Increase in percent of students reporting satisfaction with higher education system
State Electronic Database on Education (EDEBO) is upgraded		No	No	No	Yes	Yes	Yes



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
for higher education management information system (Yes/No)							
Unified information system on competitive research funding of HEIs is established and operational (Yes/No)		No	No	Yes	Yes	Yes	Yes
National Student Survey includes module on gender awareness and inclusion in higher education (Text)		National Student Survey has not been established or implemented	Development and implementation of NSS	National Student Survey includes module on gender awareness and inclusion in higher education	National Student Survey includes module on gender awareness and inclusion in higher education and NSS results have been publicly disseminated	National Student Survey includes module on gender awareness and inclusion in higher education and NSS results have been publicly disseminated	National Student Survey includes module on gender awareness and inclusion in higher education and NSS results have been publicly disseminated
<b>Alliances and Partnerships for Improved Efficiency and Quality</b>							
Number of merged HEIs benefiting from investment packages (Number)		0.00	0.00	2.00	6.00	10.00	15.00
<b>Capacity Building and Education Environment Enhancement</b>							
Operational criteria, procedures and investment specifications completed by MOES (Yes/No)		No	Yes	Yes	Yes	Yes	Yes
Number of HEI proposals approved by MOES (Number)		0.00	0.00	20.00	75.00	150.00	200.00
Total number of laboratories delivered under Components 2 and 3 (Number)		0.00	0.00	0.00	100.00	200.00	300.00
Share of female students enrolled in STEM programs in project-supported HEIs (Text)		To be determined in Year 1 of project	Implementation of Component 3 sub-projects	Increase from baseline	Increase from baseline	Increase from baseline	Increase from baseline



Indicator Name	PBC	Baseline	Intermediate Targets				End Target
			1	2	3	4	
Students benefiting from direct interventions to enhance learning (CRI, Number)		0.00	0.00	20,000.00	50,000.00	80,000.00	120,000.00
Students benefiting from direct interventions to enhance learning - Female (CRI, Number)		0.00	0.00	10,000.00	25,000.00	40,000.00	60,000.00

**Monitoring & Evaluation Plan: PDO Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Performance-based funding formula is used to allocate public funding to HEIs during at least two consecutive fiscal years	This indicator measures implementation of the performance-based funding formula for the allocation of public funds to HEIs for at least two consecutive years. The indicator is met when performance metrics are used as part of the formula for allocating funds to HEIs, as envisioned in the higher education reform and legal/regulatory changes that are anticipated.	Annually	MOES documents and Project progress reports	MOES will monitor implementation of the performance-based funding formula when allocating funds to HEIs.	MOES Directorate for Professional Pre-Higher and Higher Education



<p>Number of mergers of public HEIs</p>	<p>This indicator measures the number of mergers of state (public) higher education institutions that are subordinated to the MOES, as a measure of the consolidation of the network of HEIs (this indicator is also PBC 4). The baseline number of state HEIs under MOES is 141 universities, academies and institutes as of December 2019.</p>	<p>Semi-annually</p>	<p>MOES and Project progress reports (including EDEBO database)</p>	<p>The MOES will monitor changes in the number of state HEIs (due to mergers, administrative consolidation, or other actions) that are subordinated to the MOES.</p>	<p>MOES Directorate for Professional Pre-Higher and Higher Education</p>
<p>Percentage of higher education institutions that have developed change management plans for improving university governance and teaching and learning</p>	<p>This indicator measures progress towards improvements in university governance and teaching/learning environments in accordance with change management plans in HEIs. The indicator will be met when at least 65 percent of HEIs benefiting from Component 3 have developed change management plans with linkage to Project-financed investments.</p>	<p>Semi-annually</p>	<p>MOES documents and Project progress reports</p>	<p>MOES will monitor progress by analyzing documents and reports on change management plans in HEIs.</p>	<p>MOES Directorate for Professional Pre-Higher and Higher Education</p>
<p>Number of institutions with active performance-based contracts in place</p>	<p>This indicator measures progress towards implementing performance-</p>	<p>Semi-annually</p>	<p>MOES documents and Project</p>	<p>MOES will monitor progress through formal reporting</p>	<p>MOES Directorate for Professional Pre-Higher</p>



	based contracts with rectors in higher education institutions. While PBC 4 measures initiation and signature of such contracts, this PDO indicator measures the maintenance of active performance-based contracts in at least 50 HEIs.		progress reports	channels as well as project documents and progress reports	and Higher Education
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**Monitoring & Evaluation Plan: Intermediate Results Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Performance-based funding formula for HEIs	This indicator measures formal adoption and introduction of a revised performance-based funding formula for HEIs.	Semi-annually	MOES documents and Project progress reports (including legislative documents)	MOES will monitor progress of legislative and regulatory changes.	MOES Directorate for Professional Pre-Higher and Higher Education
Financial autonomy for HEIs	Measures formal adoption of legal changes on budget and financial autonomy for HEIs.	Semi-annually	MOES documents and Project progress reports (including legislative documents)	MOES will monitor progress of legislation and associated regulations/bylaws.	MOES Directorate for Professional Pre-Higher and Higher Education





HEI performance-based contracts with KPIs	This indicator measures progress towards establishing a system of performance-based contracts with rectors across the higher education system, thereby contributing to further transparency in the sector.	Semi-annually	MOES documents, Project progress reports, and performance contracts signed with HEI rectors	MOES will monitor progress through Project documents	MOES Directorate for Professional Pre-Higher and Higher Education
Increase in students reporting satisfaction with the higher education system based on National Student Survey	Citizen engagement corporate indicator: Measures percent increase in student satisfaction with higher education system, and progress towards greater collection and dissemination of beneficiary feedback as a result of developing and implementing a National Student Survey. Results of NSS will be published and publicly disseminated.	Annually	Feedback collected through National Student Survey and Project progress reports	National Student Survey	MOES Directorate for Professional Pre-Higher and Higher Education and MOES Directorate for Digital Transformation
State Electronic Database on Education (EDEBO) is upgraded for higher education management information system	Measures development of the existing State Electronic Database on Education (EDEBO) and modernization into a fully operational higher education	Annually	MOES documents and Project progress reports	MOES to monitor progress through Project documents	MOES Directorate for Professional Pre-Higher and Higher Education and MOES Directorate for Digital Transformation



	management information system				
Unified information system on competitive research funding of HEIs is established and operational	Measures development and completion of unified information system on competitive research funding of HEIs	Annually	MOES documents and Project progress reports	MOES to monitor progress through Project documents	MOES Directorate for Professional Pre-Higher and Higher Education and MOES Directorate for Digital Transformation
National Student Survey includes module on gender awareness and inclusion in higher education	Measures the establishment of a focused module on gender inclusion and awareness as part of the National Student Survey to be developed and implemented with Project support.	Annually	MOES documents and Project progress reports (with EDEBO as needed)	MOES will provide data based on analysis of National Student Survey results	MOES Directorate for Professional Pre-Higher and Higher Education and MOES Directorate for Digital Transformation
Number of merged HEIs benefiting from investment packages	This indicator measures the number of merged HEIs selected for support under Component 2 which receive investment packages of labs, equipment, and/or minor works.	Semi-annually	MOES documents and Project progress reports	MOES will monitor progress through proposal documents submitted by merged HEIs and through Project progress reports.	MOES Directorate for Professional Pre-Higher and Higher Education
Operational criteria, procedures and investment specifications completed by MOES	Measures completion of readiness steps needed to launch investment packages and support change management plans of HEIs under Component 3	Semi-annually	MOES documents and Project progress reports	MOES to monitor progress using Project documents	MOES Directorate for Professional Pre-Higher and Higher Education
Number of HEI proposals approved by MOES	This indicator measures the number of proposals	Semi-annually	MOES documents	MOES will monitor documents and	MOES Directorate for Professional Pre-Higher



	submitted by HEIs and approved by MOES in support of investments for capacity building and enhancements to education environments under Component 3.		and investment proposals	proposals	and Higher Education
Total number of laboratories delivered under Components 2 and 3	This indicator measures the number of laboratories procured and delivered to HEIs under both Components 2 (mergers) and 3 (capacity building and educational environment enhancement).	Annually	MOES documents and Project progress reports	MOES will monitor progress on procurement and delivery of laboratories to selected HEIs	MOES Directorate for Professional Pre-Higher and Higher Education
Share of female students enrolled in STEM programs in project-supported HEIs	Measures share of female students enrolled in science, technology, engineering, and mathematics programs in project-supported HEIs. Baseline to be established in year 1 given that selection of beneficiary HEIs will not be conducted prior to project approval. However, the national average based on EDEBO data from 2018 on admissions to BA programs is approximately 20 percent female students enrolled in STEM fields.	Annually	MOES documents and Project progress reports (with EDEBO as needed)	Enrollment figures by program type to be calculated by PIU on behalf of MOES	MOES Directorate for Professional Pre-Higher and Higher Education



Students benefiting from direct interventions to enhance learning		Annually	MOES documents and Project progress reports	MOES will collect data on enrollment in project-supported HEIs	MOES Directorate for Professional Pre-Higher and Higher Education
Students benefiting from direct interventions to enhance learning - Female		Annually	MOES documents and Project progress reports	MOES will collect data on female enrollment in project-supported HEIs	MOES Directorate for Professional Pre-Higher and Higher Education

**Performance-Based Conditions Matrix**

<b>PBC 1</b>	Performance-based funding formula for HEIs			
<b>Type of PBC</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Intermediate Outcome	No	Text	10,000,000.00	5.00
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	No performance-based funding formula for higher education is in place			
2022	Resolution of the Cabinet of Ministers of Ukraine setting forth a performance-based funding formula for HEIs		10,000,000.00	Resolution = 10,000,000 (not scalable)
2023	Resolution of the Cabinet of Ministers of Ukraine setting forth a performance-based funding		0.00	N/A



	formula for HEIs			
2024	Resolution of the Cabinet of Ministers of Ukraine setting forth a performance-based funding formula for HEIs		0.00	N/A
2025	Resolution of the Cabinet of Ministers of Ukraine setting forth a performance-based funding formula for HEIs		0.00	N/A
2026	Resolution of the Cabinet of Ministers of Ukraine setting forth a performance-based funding formula for HEIs		0.00	N/A
<b>PBC 2</b>	<b>Amendments to package of laws to provide for HEIs' further autonomy</b>			
<b>Type of PBC</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Intermediate Outcome	No	Text	10,000,000.00	5.00
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	HEIs do not have financial or budget autonomy			
2022	HEIs do not have financial or budget autonomy		0.00	N/A
2023	Package of Laws providing for financial autonomy of HEIs has been enacted		10,000,000.00	PBC2 = 10,000,000
2024	Package of Laws providing for financial autonomy of HEIs has been enacted		0.00	N/A
2025	Package of Laws providing for financial autonomy of HEIs has been enacted		0.00	N/A



2026	Package of Laws providing for financial autonomy of HEIs has been enacted		0.00	N/A
<b>PBC 3</b>	Amendments to bylaws on HEIs' financial autonomy			
<b>Type of PBC</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Output	No	Text	5,000,000.00	2.50
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	HEIs do not have financial or budget autonomy			
2022	HEIs do not have financial or budget autonomy		0.00	N/A
2023	HEIs do not have financial or budget autonomy		0.00	N/A
2024	Bylaws providing for financial autonomy of HEIs have been issued		5,000,000.00	PBC3 = 5,000,000
2025	Bylaws providing for financial autonomy of HEIs have been issued		0.00	N/A
2026	Bylaws providing for financial autonomy of HEIs have been issued		0.00	N/A
<b>PBC 4</b>	HEI performance-based contracts with KPIs			
<b>Type of PBC</b>	<b>Scalability</b>	<b>Unit of Measure</b>	<b>Total Allocated Amount (USD)</b>	<b>As % of Total Financing Amount</b>
Intermediate Outcome	Yes	Number	20,000,000.00	10.00
<b>Period</b>	<b>Value</b>		<b>Allocated Amount (USD)</b>	<b>Formula</b>
Baseline	0.00			



2022	25.00	10,000,000.00	5 contracts = 2,000,000
2023	50.00	10,000,000.00	5 contracts = 2,000,000
2024	50.00	0.00	N/A
2025	50.00	0.00	N/A
2026	50.00	0.00	N/A

PBC 5				
Number of mergers of public HEIs				
Type of PBC	Scalability	Unit of Measure	Total Allocated Amount (USD)	As % of Total Financing Amount
Outcome	Yes	Number	30,000,000.00	15.00
Period	Value		Allocated Amount (USD)	Formula
Baseline	0.00			
2022	0.00		0.00	N/A
2023	5.00		10,000,000.00	1 merger = 2,000,000
2024	10.00		10,000,000.00	1 merger = 2,000,000
2025	15.00		10,000,000.00	1 merger = 2,000,000
2026	15.00		0.00	N/A

**Verification Protocol Table: Performance-Based Conditions**

<b>PBC 1</b>	Performance-based funding formula for HEIs
<b>Description</b>	The MOES will show proof of issuance of Resolution of Cabinet of Ministers to include definition of performance-based financing formula and allocation of funding according to the formula.
<b>Data source/ Agency</b>	MOES
<b>Verification Entity</b>	World Bank
<b>Procedure</b>	The following items, submitted to the World Bank, will be considered as proof of the accomplishment of the PBC: (a) An official letter from the MOES confirming the issuance of the Resolution of Cabinet of Ministers on performance-based funding formula for HEIs, including relevant legal approval and protocol documents. (b) No-objection from the World Bank certifying the acceptable completion of proof of verification mentioned above.
<b>PBC 2</b>	Amendments to package of laws to provide for HEIs' further autonomy
<b>Description</b>	The MOES will show proof of amendments to and enactment of revised package of legislation. 'Package of laws' includes the Budget Code, Tax Code, and Law on Higher Education, providing for HEIs' financial, budgetary and management autonomy.
<b>Data source/ Agency</b>	MOES
<b>Verification Entity</b>	World Bank
<b>Procedure</b>	The following items, submitted to the World Bank, will be considered as proof of the accomplishment of the PBC 2: (a) an official letter from the MOES confirming the adoption of the revised package of legislation, including relevant legal approval and protocol documents; and (b) No objection from the World Bank certifying the acceptable completion of proof of verification mentioned above.
<b>PBC 3</b>	Amendments to bylaws on HEIs' financial autonomy
<b>Description</b>	The MoES will show proof of amendments to or repeal of: (i) Resolution of the Cabinet of Ministers of Ukraine No. 1134, dated August 17, 2002; and (ii) MOES Order No. 450, dated August 7, 2002, to provide for HEIs' financial autonomy, as





	further detailed in the POM.
<b>Data source/ Agency</b>	MOES
<b>Verification Entity</b>	World Bank
<b>Procedure</b>	The following items, submitted to the World Bank, will be considered as proof of the accomplishment of PBC 3: (a) an official letter from the MoES confirming the amendment to specified bylaws and/or regulations providing for HEIs' financial autonomy; and (b) No objection from the World Bank certifying the acceptable completion of proof of verification mentioned above.
<b>PBC 4</b>	HEI performance-based contracts with KPIs
<b>Description</b>	The Borrower, through MOES, has entered into at least 50 performance-based contracts (including key performance indicators) with HEIs, from a baseline of 0.
<b>Data source/ Agency</b>	MOES
<b>Verification Entity</b>	World Bank
<b>Procedure</b>	The following items, submitted to the World Bank, will be considered as proof of the accomplishment of the PBC: (a) An official letter from the MOES confirming the signing of performance-based contracts with selected HEIs, including relevant legal approval/force and protocol documents; (b) Copies of the performance-based contracts with specified key performance indicators; and (c) No objection from the World Bank certifying the acceptable completion of proof of verification mentioned above.
<b>PBC 5</b>	Number of mergers of public HEIs
<b>Description</b>	The MOES will show proof of completion of up to 15 mergers of public HEIs from a baseline of 0. The PBC is scalable.
<b>Data source/ Agency</b>	MOES
<b>Verification Entity</b>	World Bank
<b>Procedure</b>	The following items, submitted to the World Bank, will be considered as proof of the accomplishment of the PBC: (a) an



official letter from the MOES confirming the completion of up to 15 merger(s) of public HEIs and the names of the respective HEIs, along with relevant legal approval and protocol documents; and (b) No objection from the World Bank certifying acceptable completion of proof of verification mentioned above.

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## **ANNEX 1: Implementation Arrangements and Support Plan**

**COUNTRY: Ukraine**

**Ukraine Improving Higher Education for Results Project**

### **Project Institutional and Implementation Arrangements**

#### *Leadership level*

1. The official representative of the Borrower is the Ministry of Finance (MOF). The MOF will maintain overall responsibility for ensuring compliance with the conditions of the Loan Agreement. The MOF will be responsible for ensuring the proper flow of funds, financial monitoring of project activities, the replenishment of Designated Accounts and allocation of funds for project activities.
2. The Ministry of Education and Science (MOES) will be responsible for the overall implementation of the project, under the leadership of the Minister and key Deputy Ministers, Directors and Heads of Departments. The MOES has as of February 2021 designated a Deputy Minister as the Project Coordinator and a Deputy Project Coordinator to provide project oversight, support implementation, and evaluate progress towards the key objectives and outcomes.
3. Given the scope of the project, there are several relevant stakeholders (students and parents, community at large, government officials, multiple education agencies subordinated to the Ministry, higher education institutions and rectors/deans) that can be influential or have a stake in the education sector. The proposed Project strengthens the accountability framework between the MOES, HEIs, key educational agencies and the public and supporting the monitoring of learning outcomes, which would provide solid and regular information on the status of the education system's performance. To properly address the needs and concerns of these stakeholders, the MOES will conduct stakeholder consultations and focus group discussions (initial consultations first held on October 7, 2019 and again on February 27, 2020) during the implementation of the proposed project and will develop a solid communication and stakeholder engagement strategy as mentioned under Component 1.

#### *Project Management & Administration Mechanisms*

4. The MOES will be supported in Project implementation by the services of project management, fiduciary, and environmental and social compliance consultants, recruited externally (1 project manager, 1-3 procurement consultants, 1-2 FM specialists, and 1-2 environmental and social compliance consultants on a retainer basis). One of the procurement consultants could be identified as the fiduciary team/project manager solely responsible for advancing the implementation. These consultants will work solely on project implementation and will report directly to the Project Coordinator. In addition to the Project Coordinator (with authorization to sign bills, invoices) another 2 MOES civil servants will be authorized to sign bills, invoices, etc. in the absence of the Project Coordinator. Given observed bottlenecks in the MOF for processing and authorizing payments, a consultant clerk may be recruited to advance processing and the administrative paperwork (working closely with MOF). Experts can also be hired as needed.



5. Content or substance related to project activities will still be owned and processed like any other content matter following government structures and procedures. This means that the relevant directorate/unit/department within the MOES will be officially designated and will 'own' the technical content (e.g. in Terms of Reference or Technical Specifications), then to be handed to the team of fiduciary consultants for processing (e.g. advertisement, bids, evaluation, etc.). The detailed description of the fiduciary team staff will be provided in the POM.

## **Financial Management, Disbursements and Procurement**

### ***Financial Management and Disbursement***

6. Based on the FM assessment of MOES fiduciary risk is assessed as Substantial, given the size and complexity of the project, need of MOES to build capacity in implementation of World Bank financed operations, and notable PBC sub-components. The FM assessment concluded that FM and disbursement arrangements will be acceptable subject to the implementation of agreed action plan (see Table 6 below).

7. For Parts 1.1, 2.1, 3 and 4 of the Project, the MOES will rely extensively on its existing arrangements and country systems, including using existing staff for project implementation (with assistance of external expertise), including use of the State Treasury System, current available IT solutions (which are to be further modified), and partly rely on the existing system of internal controls and division of responsibilities (which will be further strengthened, and clearly laid out in the POM). FM and disbursement arrangements for this Project will be described in the POM, which will be prepared as a condition to project effectiveness and will include specific information on the division of responsibilities on FM and disbursements, internal controls that will apply, and descriptions of systems for accounting and reporting, etc. MOES will be responsible for quarterly IFRs prepared in accordance with the template agreed with the World Bank and annual project financial statements audits, carried out by an eligible audit firm in accordance with the agreed TORs.

8. For Parts 1.1, 2.1, 3 and 4 of the Project traditional disbursement arrangements will be used, including use of direct payments, reimbursement, and advances. One Designated Account (DA) will be opened, and the respective DA ceiling and minimum application size will be set in the DFIL. DA will be opened in Ukreximbank in USD, the currency of the loan, and DA reports will be submitted at a frequency specified in DFIL.

9. For Parts 1.2 and 2.2 of the Project (linked to PBCs), MOES will rely fully on its existing system for planning and execution of expenditures that are managed under budget line 2201160 ("training of higher education institutions and ensuring operation of their premises") . MOES will prepare and submit semi-annual reports on the execution of this program, and upon completion of respective PBCs. MOES records on this program execution will be verified to the State Treasury records, and reports will include comparison of budget estimates and actual expenditures. Expenditures incurred under the mentioned budget line will be subject to annual audit, performed by an independent auditor acceptable to the World Bank.

10. For Parts 1.2 and 2.2 of the Project (linked to PBCs), disbursements will be triggered by achievement of results and incurrence of eligible expenditures. Disbursements will be made by the World Bank to an account in the State Treasury that would be indicated by Government to reimburse incurred eligible expenditures under the Project.



<b>Table A1.1 Actions for FM Capacity Building</b>		
<b>Actions for capacity building</b>	<b>Responsible</b>	<b>Completion Date</b>
<ul style="list-style-type: none"> <li>Develop the FM chapter of the POM to reflect the project related disbursement procedures, staff responsibilities and internal controls, budgeting, external auditing, financial reporting and accounting policies and procedures.</li> </ul>	MOES	<i>By effectiveness (adoption of POM in manner acceptable to the Bank is a condition of effectiveness)</i>
<ul style="list-style-type: none"> <li>Recruit additional financial management specialist with relevant experience in World Bank procedures (possibly part-time), to assist existing MOES fiduciary team</li> </ul>	MOES	<i>Within 60 days after effectiveness</i>
<ul style="list-style-type: none"> <li>Introduce module for Project accounting and reporting under existing accounting system. The module shall have functionality of automatic generation of Statement of Expenditures (SOEs), IFRs and have the functionality for dual-currency accounting, as well as the inbuilt controls to ensure data security, integrity and reliability. TORs are to be agreed with the World Bank and the system will require World Bank review and approval.</li> </ul>	MOES	<i>Within 60 days after effectiveness</i>

11. The World Bank will conduct risk-based FM implementation support and supervision within six months of the project effectiveness date, and then at appropriate intervals. During project implementation, the World Bank will supervise the project's FM arrangements in the following ways: (a) it will review the project's quarterly interim financial reports and annual audited project financial statements and the auditor's management letters and remedial actions recommended in the auditor's management letters; and (b) during the World Bank's on-site missions, it will review the following key areas: (i) project accounting and internal control systems; (ii) budgeting and financial planning arrangements; (iii) disbursement arrangements and financial flows, including counterpart funds, as applicable; and (iv) any incidences of corrupt practices involving project resources. As required, a World Bank-accredited Financial Management Specialist will participate in the implementation support and supervision process.

**Procurement**

12. *Procurement Procedure:* Procurement will be carried out in accordance with the World Bank's "Procurement Regulations for IPF Borrower July 2016 revised November 2017, August 2018 and November 2020." A Project Procurement Strategy for Development (PPSD) developed and finalized with support from the World Bank will serve as a basis for a detailed Procurement Plan for the first 18 months of the project implementation. Project procurement communication and Procurement Plan implementation will be performed through STEP (Systemic Tracking of Exchanges in Procurement) system.



13. *Procurement Implementation arrangement:* Procurement is planned to be conducted centrally by the fiduciary team under the MOES. The MOES fiduciary team will be responsible for all procurement following ProZorro and the Bank's Procurement Regulations regime as mentioned above.
14. *Procurement capacity:* The MOES has no experience to implement Bank-funded projects. Considering this factor, the Procurement Risk Rating is assessed as "Substantial."
15. *Procurement risk mitigation measures* include the following: (i) hiring of full-time, experienced procurement consultants throughout the project life; (ii) use of Government electronic procurement system ProZorro for simple goods, services, and works under RFQ and National RFP/RFB for standard goods and works; (iii) provision of customized in-depth procurement training for implementing agencies on Procurement Regulations and STEP and all project staff closely involved in the project operations and procurement including members of contract/tender/evaluation committee, working groups, project manager, project coordinator, etc.; and (iv) submission of monthly contract monitoring report mentioning both physical & financial progress and other key implementation issues.
16. *Review by the Bank:* Prior review of contracts is determined based on the Procurement Risk of the project and agreed in the Procurement Plan. The Bank will do periodic post procurement due diligence on a sample basis.
17. The Procurement Plan, including its updates, shall include for each contract: (i) a brief description of the activities/contracts; (ii) selection methods to be applied; (iii) cost estimates; (iv) time schedules; (v) the Bank's review requirements; (vi) any other relevant procurement information. The Procurement Plan covering the first 18 months of the project implementation will be prepared based on the PPSD and approved prior to negotiations. Any updates of the Procurement Plan will be submitted for the Bank's no objection. STEP will be used to prepare, no object and update the Procurement Plan and conduct all procurement transactions for the project. Accordingly, all the procurement activities under the project will be entered, tracked and monitored online through the system. Once approved by the Bank, the Procurement Plan will be published on the Bank's and MOES website.
18. Irrespective of the use of ProZorro as a tool for procurement or Bank standard procedures, all procurement-related notices will be published in ProZorro to enhance competition and transparency.

### ***Implementation Support***

19. Before project effectiveness, it will be critical to ensure that Project staff resources and technical capacity (especially at the PIU) are already in place to effectively start implementation. During implementation, the project will support, based on identified needs, the recruitment of additional experts to assist the PIU and MoES in the coordination and implementation of project activities. The project also includes a number of activities that will contribute to build the capacity of PIU and MoES as needed.
20. The task team, including one senior education specialist or economist (and Task Team Leader), one education specialist, environmental and social specialists, procurement and FM specialists, will play an active role during implementation to support the full implementation and participation of beneficiaries. In collaboration with the task team, other World Bank specialists/consultants are also expected to join the team to provide timely, effective, specific technical expertise to the client. In terms of local support, the task team will depend on colleagues that are currently based in the country or in region and will frequently be in Ukraine to ensure regular



and consistent technical and fiduciary support.

**Semi-annual and annual reviews**

21. The Project will have semi-annual and annual implementation support reviews – or more if needed – which will take place in the country and involve key national stakeholders and development partners. These reviews will be to evaluate the progress made in project implementation, identify potential or actual bottlenecks and make recommendations for improvement. The reviews will also monitor progress toward achievement of Project indicators and PBCs. All finding will be documented in aide-memoires and policy papers, as needed. A project launch mission will take place shortly after project effectiveness during which will consist of confirming the Government and stakeholders’ roles and responsibilities in project coordination, implementation, and monitoring and evaluation, and agreeing on the annual work plan for the first year of the project. A comprehensive mid-term review will take place and is also included in the implementation support plan.

**Table A1.2: Main Focus for Support to Implementation**

Project Timeline	Focus	Skills needed	Estimated Staff Weeks
Years 1-2	<ul style="list-style-type: none"> <li>Development of guidelines and provision of support for Component 1 (EDEBO for HEMIS, competitive research funding system for HEIs, digital learning assessments, NSS, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>HE specialist</li> <li>IT specialist</li> </ul>	6
	<ul style="list-style-type: none"> <li>Development of guidelines and provision of support for Component 2 on university mergers, alliances, and partnerships</li> </ul>	<ul style="list-style-type: none"> <li>HE specialist</li> </ul>	6
	<ul style="list-style-type: none"> <li>Development of guidelines and provision of support for Component 3 on investment packages, technical specifications for labs, digital equipment, etc.</li> </ul>	<ul style="list-style-type: none"> <li>HE specialist</li> <li>IT specialist</li> <li>Architect/Engineer</li> </ul>	6
	<ul style="list-style-type: none"> <li>Procurement</li> </ul>	<ul style="list-style-type: none"> <li>Procurement specialist</li> </ul>	4
	<ul style="list-style-type: none"> <li>Financial Management / Internal audits</li> </ul>	<ul style="list-style-type: none"> <li>FM specialist</li> </ul>	3
	<ul style="list-style-type: none"> <li>External audits</li> </ul>	<ul style="list-style-type: none"> <li>FM specialist</li> </ul>	
	<ul style="list-style-type: none"> <li>Social and environmental risk management</li> </ul>	<ul style="list-style-type: none"> <li>Social and environmental specialists</li> </ul>	4
Years 3-5	<ul style="list-style-type: none"> <li>Supervision of installation of laboratories, equipment, and minor civil works</li> </ul>	<ul style="list-style-type: none"> <li>Architect/Engineer</li> </ul>	8
	<ul style="list-style-type: none"> <li>Information systems</li> </ul>	<ul style="list-style-type: none"> <li>IT specialist</li> <li>Education specialist</li> </ul>	6 6
	<ul style="list-style-type: none"> <li>Procurement</li> </ul>	<ul style="list-style-type: none"> <li>Procurement specialist</li> </ul>	16
	<ul style="list-style-type: none"> <li>Financial Management / Internal audits</li> </ul>	<ul style="list-style-type: none"> <li>FM specialist</li> </ul>	10
	<ul style="list-style-type: none"> <li>External audits</li> </ul>	<ul style="list-style-type: none"> <li>FM specialist</li> </ul>	
	<ul style="list-style-type: none"> <li>Social and environmental risk management, reviewing screening, documentation and mitigation measures, monitoring GBV risks</li> </ul>	<ul style="list-style-type: none"> <li>Social and environmental specialists</li> </ul>	10



## ANNEX 2: Economic Analysis

1. The proposed Project aims to improve efficiency, conditions for quality, and transparency in higher education in Ukraine. The project emphasizes modernizing key aspects of the education system that can give momentum to greater short- and long-run economic returns (public and private returns), increase efficiency and improve productivity.

2. The economic analysis confirms that the Project's investments and results-based financing of US\$200 million planned for the period of 2021-2026 is well justified and that the proposed interventions are likely to bring private and public benefits and savings exceeding the Project's initial costs. The benefits of the Project are driven by increasing network efficiencies and performance-based financing, as well as investments to strengthen quality and labor market relevance of higher education.

### Expected development impact of the project

3. Ukraine's productivity growth and investment rate remains low. Boosting total factor productivity growth to 3 percent per year and investment to 30 percent of GDP would result in sustained growth of about 4 percent per year over the medium- to long-term. To realize this growth requires implementation of appropriate policies that boost productivity and increase the returns on factors of production. Under status quo, due to declining contribution of labor as the country undergoes the demographic transition, medium-term growth rates will converge to almost zero per annum<sup>46,47</sup>.

4. To drive growth and improve productivity, there is a need to strengthen the conditions and capabilities for using its available resource endowments—human capital and physical capital to produce the flow of goods and services (GDP) that is responsive to changing external and domestic demand. Increases in stock of aggregate physical and human capital are constrained in Ukraine, the working age population is declining, and technological advances are rapidly affecting everyday economic activities. Hence, a surefire way to sustain the initial reform efforts and continue a growth path is by enhancing labor productivity and ensuring appropriate skills-based linkages to the labor market. This requires an environment that supports fair competition and equitable access to high quality opportunities for enhancing skills and establishes accountability systems to educate the next generation of learners and workers.

5. Towards this, higher education reform will play a critical part in aligning the needs of the economy in the medium- to long-term. Ukraine needs to better prepare its youth, so they can respond better to a changing labor market landscape and integrate with the world economy. Recent wealth estimates<sup>48</sup> of 141 countries indicate that while human capital accounts for nearly 64 percent of global wealth and 51 percent of wealth in lower-middle-income countries, human capital accounts for only 34 percent of total wealth in Ukraine. This suggests human capital has been a relatively weak factor of production in driving economic growth. Delivering tangible benefits will require addressing longstanding structural bottlenecks in human capital development.

6. **The proposed project is expected to have positive development impact through two mechanisms: (i) learning and skills gains and COVID-19 crisis relief and (ii) fiscal savings.** By strengthening the quality, efficiency

<sup>46</sup> World Bank (2019). *Ukraine Growth Study: Faster, Lasting and Kinder*.

<sup>47</sup> Ukraine Special Focus Note: Tapping Ukraine's Growth Potential (May 2019).

<sup>48</sup> World Bank (2018). *The Changing Wealth of Nations*.





and transparency of the higher education system at this important initial phase of the reform process, the expected medium- to long-term project outcomes would have both market and non-market benefits. In terms of *learning and skills gains*, such benefits include improvement in development of advanced 21<sup>st</sup> century skills, greater social trust, better learning outcome and improvements in labor productivity, employment, and wages. Moreover, by allocating significant project resources to improve digitalization in the higher education system and to alleviate the fiscal shortfall, the project will soften the adverse impacts of the COVID-19 crisis. Additionally, the Project is expected to generate initial *fiscal savings* and lay the foundations for further savings over the medium-term. Such fiscal savings are much needed for the financial sustainability of the education reforms as well as to reduce the burden on government expenditures stemming from inefficient allocation of scarce budget resources.

7. **Rationale for public sector financing:** In higher education provision in Ukraine, the evidence points to market failure and spillover effects which can be seen in the form of oversized networks, suboptimal provision of study programs, issues of low transparency and corruption, and weak quality assurance systems. Reforming higher education in Ukraine certainly requires public sector financing to the extent of providing direct and critical incentives for the government's massive reform efforts to take root, lay the foundation, drive consensus and build capacity. This support is crucial to activate performance-based, transparent and efficient markets that can supply relevant skills to meet labor-market demands and support Ukraine's labor productivity and overall growth while ensuring fiscal sustainability over time.

8. **The combined benefits from the proposed Project are expected to outweigh the investment costs.** A cost-benefit analysis of the proposed project was conducted based on: (a) reasonable projections of investment and recurrent costs, and (b) benefits from similar types of education interventions. The estimates below stem from a quantitative analysis based on conservative assumptions. Project components were amenable to a cost-benefit analysis in relation to higher education network consolidation because the benefits of activities could be reasonably appraised from existing evidence.

9. **The Project is expected to produce learning gains and fiscal savings totaling an estimated US\$1.3 billion over a 20-year period, including externalities. The fiscal savings alone from higher education consolidation attributable to the project over the 5-year period are expected to be USD 381.2 million, with a benefit-cost ratio of 7.6.** Learning and skills gains, together with greater labor market relevance and matching are anticipated as a result of support for quality enhancements as well as activities to enhance transparency and information in the sector, for example related to accredited study programs and graduates' employability. The generation of future earnings gains to students due to quality improvements in the project will also be sizable and in addition to the fiscal savings. The typical private rate of return to higher education in Europe is at least 10 percent a year<sup>49</sup> (see below for project-specific returns). These investments are expected to generate gains/externalities over the medium-term that lead to better skills alignment between higher education and the labor market. Over the medium-term through financing and governance reforms (which will create financial incentives for efficiency at the institutional level) and through mergers of higher education programs and institutions, further fiscal savings will be generated.

### **Higher Education Network Consolidation**

10. The economic model accounts for the cash flow generated by savings from network consolidation against

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<sup>49</sup> Psacharopoulos, G. and H.A. Patrinos (2018). Returns to investment in education: a decennial review of the global literature, *Education Economics*, 26:5, 445-458, DOI: 10.1080/09645292.2018.1484426.



relevant project costs. Estimating the number of beneficiaries in higher education requires determining the number of enrolled students who receive state funding. Table 1 below lists parameter assumptions.

**Table A2.1. Parameters for estimating cash flows in Higher Education**

<b>Higher Education Network Consolidation</b>	<b>Base Scenario</b>
Total Number of State Funded HEIs under MOES (2019)	141
Total students enrolled and receive funding through state funding (2019)	350353
Total HEI allocations from state budget (2019)	USD 823,940,638
Avg state funding cost per student (2019)	USD 2352
Percentage savings from reducing cost per student over 5 years	10%
Project Finance for HEI consolidation investment	USD 100 million
Number of years for project	5 years

**Expected benefits and costs from Higher Education Network Consolidation**

11. The benefits of this sub-component are expected to arise from reduced per student cost from state funding to subsidize higher education. Over the 5-year Project period, estimated savings are US\$381 million with a benefit-cost ratio of 7.6. These savings will accrue to the state budget through better administrative efficiencies achieved through mergers, rationalization of non-pedagogical staff, greater transparency in funds flow through the financing formula leading to reduction in hidden costs. Estimates are based on data from the MOES Directorate of Higher Education which indicate that over the project period, the cost per student can reduce by US\$526. This is a conservative estimate for the 5-year project period and covers cost savings related to the state budget transfers only. The efficiency measures are likely to lead to even greater savings when costs of local budget transfers and student fees are also regulated and rationalized.

**Table A2.2. Higher Education Consolidation – Savings in 5 years**

NPV of Savings over 5 years	USD 381,272,518
Benefit to cost ratio	7.63

**Expected Benefits over the Long Term**

12. Beyond the conservative estimate of quantified benefits from higher education network consolidation as described above, the Project is also expected to generate longer-term benefits for economic growth and poverty reduction. Economic growth is due mainly to growth in labor productivity and employment, and investment in human capital is directly linked to both.<sup>50</sup> Skills have been found to explain a substantial part of the difference in growth rates among OECD countries. Therefore, accumulating human capital through education and training leads to economic growth and poverty reduction, particularly when the skills acquired are those currently needed in the labor market.<sup>51</sup> A mismatch between skills acquired through education and skills needed in the labor market can result in highly educated workers doing low-productivity jobs or being excluded from the labor market entirely. This is a particularly important observation for Ukraine, where this mismatch of skills increasingly constrains the growth and productivity of firms.<sup>52</sup>

<sup>50</sup> Son, H., (2010). Human capital development; ADB economics working paper series

<sup>51</sup> Son, H., (2010). Human capital development; ADB economics working paper series

<sup>52</sup> World Bank (2012). Golden Growth – Restoring the Lustre of the European Economic Model. World Bank, Washington DC, USA.



13. Empirical research also shows that building skills (whether cognitive, socioemotional, or technical) can drastically improve employment and social outcomes, as well as civic engagement. In almost all countries worldwide, individuals with higher levels of education enjoy higher employment rates, are more often formally employed, and have higher earnings, with positive changes in earnings being the largest contributor to poverty reduction.<sup>53</sup> Therefore, improvements in skills that are relevant to the changing needs of Ukraine’s labor market will ultimately help to improve earnings and reduce poverty.

14. These expected benefits are also consistent with other World Bank-supported projects in higher education and the types of estimated returns they have yielded or are expected to yield. The main benefits displayed below were those suitable to cost-benefit analysis, primarily those that led to improvements in earnings, employment, and value-added to the economy through interventions in higher education.

**Table A2.3. Rates of Return and Benefit-cost Ratios from Interventions in other Countries**

Project	Results	Principal benefits
	<b>Rate of Return</b>	
<b>Uzbekistan Modernizing Higher Education Project (\$42.2M, FY17-23).</b> <i>Financing to modernize laboratories; Higher Education Market Information System, industry-university partnerships to improve higher education.</i>	26%	Increased earnings of graduates; added value to economy from innovation
<b>Nepal Second Higher Education Project (\$60M, FY08-14)</b> <i>Grants to universities, capacity building (quality assurance and accreditation, EMIS)</i>	35%	Efficiency gains (higher student retention); higher wage-premium
<b>Vietnam Higher Education Project II (\$59M, FY08-12)</b> <i>Grants to universities to support teaching and research, capacity building for universities and policymakers</i>	34%	Productivity gains of graduates, efficiency gains in universities, and return from R&D investments
	<b>Benefit-Cost ratio</b>	
<b>Armenia Education Improvement (\$15M, FY15-20)</b> <i>For Innovation and Higher Education Fund to improve quality, relevance, efficiency, equity and access of programs.</i>	> 3.5 to 1	Efficiency gains (lower drop-outs); increased earnings of graduates, higher firm productivity
<b>Belarus Tertiary Education Project (\$50M, FY20-25)</b> <i>Higher Education Project to improve teaching and learning environment, and fostering quality through a quality assurance system</i>	4.23	Efficiency gains (skill gap reduction); increased earnings of graduates, lower firm training costs
	<b>Other</b>	
<b>Chile Tertiary Education Finance for Results III (\$40M, FY13-17)</b> <i>Improved quality and relevance via accountability and financing mechanism</i>	Net Present Value: > \$114M	Efficiency gains (student retention and graduation); higher earnings

<sup>53</sup> World Bank (2013). World Development Report 2013. Jobs. World Bank. Washington DC, USA.



### ANNEX 3: Ukraine Country Program Adjustment Responding to COVID-19

- 1. Ukraine's reforms since 2017 allowed it to enter the COVID-19 crisis stronger, though challenges continue.** Over the last five years, Ukraine has undertaken considerable policy measures to reinforce macroeconomic stability and bolster the foundations of economic growth. As a result of these reforms, Ukraine entered the COVID-19 crisis with stronger macroeconomic and financial sector conditions than during the 2014-2015 crisis – with 3.3 percent economic growth in 2018-2019; public and publicly-guaranteed debt declining from 81 percent of GDP in 2016 to 50 percent in 2019; and moderate poverty declining from a peak of 27 percent during 2015 to an estimated 18 percent in 2019. These reforms helped strengthen Ukraine's resilience when the pandemic hit. The macroeconomic framework remains adequate, but risks to economic stability have increased due to the looser fiscal policy.
- 2. Impact of the COVID-19 Pandemic and Government Response:** Ukraine's economy was hit hard by the COVID-19 outbreak during 2020, but the impact appears to be less severe than initially anticipated with GDP declining 6.5 percent in the first half of 2020. The full-scale lockdown lasted only from mid-March to early May and was replaced by an adaptive quarantine that enabled many services (except passenger transport) to return to normal functioning. Domestic demand has also been supported by a recovery in real wages, which grew by 4.8 percent YoY since June, and by continued remittance inflows (remittances are down only 10 percent YoY, while initially they were expected to decline by half). On the supply side, metals and mining and manufacturing have been significantly impacted by weak external demand.
- 3.** The economy is expected to contract by 5.5 percent in 2020 (against an initial estimate of 7.8 percent decline) as domestic demand recovers further in the second half of the year and reflecting a positive contribution from net exports. Economic recovery in 2021 is expected to be mild - annual GDP growth at just 3 percent - given high uncertainty associated with the rollout of the vaccine and the direction of economic policies to address bottlenecks to investment and safeguard macroeconomic sustainability.
- 4.** A flexible exchange rate policy is helping to partially absorb external shocks, while tight monetary policy together with fiscal restraint in 2019 helped reduce inflation to 2.4 percent in July 2020, below the NBU's 5 percent inflation target. This in turn has enabled a cut in the policy rate from 17 percent in July 2019 to 6 percent in June 2020, although further room for easing is constrained by the need to anchor inflation expectations (which averaged 6.7 percent in August). The overall deficit is projected at 4.5 percent of GDP for 2020 and gross fiscal financing needs at \$18 billion. External financing sources of US\$ 7.5 billion include US\$ 2.5 billion in Eurobonds, US\$ 3.5 billion from the IMF (assuming the second tranche is disbursed before the end of the year), US\$ 1.1 billion from the EU, and US\$ 0.4 billion from the World Bank, with a further US\$ 10.6 billion in domestic financing.
- 5.** Notwithstanding the improved policy stance entering the crisis and the less-severe-than-expected impact on manufacturing, the effect on jobs has been significant. Since March, workers have filed 120,000 new unemployment claims, translating into an estimated 28 percent increase in the total number of unemployed. About 10 percent of the two million Ukrainian temporary workers in Poland have had to return to Ukraine, with the rest facing difficulties due to the economic slowdown in the EU.
- 6.** In response, the floor for unemployment benefits has been increased for applicants whose employment history does not qualify them for full benefits. For those most affected by the crisis, the authorities have eased access to a number of social support programs, such as household utilities subsidies and aid to families with



children. Further, the government introduced a one-off pension increase to low-income pensioners and a regular monthly pension top-up for retirees aged 80 years or more. The authorities' policies also include an earlier-than-planned indexation adjustment of pensions in 2020, as well as a moratorium on penalties and disconnection of consumers who are late on utility payments.

7. The response to the health crisis was swift. In addition to the lock-down and travel restrictions and clear public messages on face masks and social distancing, the authorities established a COVID-19 stabilization fund, which has helped provide urgently needed resources for health and social protection activities. Despite these early and robust measures, the incidence of COVID-19 infections increased dramatically by the winter of 2020, with new cases reaching 15,000 by December, and total cases exceeding 1 million by January with deaths approaching 20,000.

8. Going forward, it will be critical to maintain reform momentum to anchor investor confidence and support the economic recovery. Risks to a prudent macroeconomic policy stance have increased. The draft budget for 2021 indicates a shift towards a looser fiscal policy stance underpinned by a 35 percent minimum wage increase. Total financing needs for 2021 will reach 16 percent of GDP (vs 12 percent estimated for 2020). Financing risks will remain high in the medium term, with public debt repayment needs estimated at 10 percent of GDP in 2021 and around 8 percent in 2022. Given the uncertainty in global financial markets and with respect to the timing of IFI financing, meeting such large financing needs is challenging. The unidentified financing is estimated at 2.5-4 percent GDP. If these financing requirements are monetized, this will contribute to inflationary pressures and a deterioration in broader macroeconomic imbalances in 2021-22.

9. **WBG support in responding to the crisis:** The WB's program of assistance to Ukraine since the outbreak of the pandemic has been adjusted to support the country in the three phases of its response to the crisis: relief, restructuring, and resilient recovery.

10. **Ukraine's recovery from the crisis will depend not only on the duration and intensity of the pandemic, but also on reforms that ensure macroeconomic sustainability and address key structural bottlenecks to investment and productivity.** These include strengthening governance and ensuring the continued performance of anticorruption institutions; bolstering markets through measures to advance de-monopolization and state influence; continuing the path of fiscal and financial sustainability; and efficient, effective, and inclusive delivery of public services. The program, underpinned by the World Bank Group's FY2017-2021 Country Partnership Framework (CPF) (Report#115416-UA), is being adjusted in two ways: first, to support the country in managing the ongoing health, social, and economic crisis; and second, to strengthen the institutional foundations for an inclusive and sustainable longer-term recovery.

11. **Support to health for saving lives threatened by the virus.** An *Additional Financing operation (US\$ 135 million for the Serving People, Improving Health Project (SPIH) - P170740)* was prepared which included US\$ 35 million in financing for COVID-19 response and the ongoing project was also restructured to reallocate a further US\$ 22 million in existing funds, including for the purchase of equipment and strengthening of laboratories. The COVID-19 Additional Financing finances the procurement of critical materials and equipment and essential capacity-building and communications assistance related to COVID-19 activities (US\$ 20 million), as well as for the reimbursement for expenditure by service providers for interventions in suspected or confirmed COVID-19 cases, using two disbursement-linked indicators: (i) number of hospital COVID-19 cases treated following agreed protocols and reimbursed by the National Health Service of Ukraine (NHSU); and (ii) number of COVID-19 patients with complications attended by emergency medical services following agreed protocols and reimbursed by NHSU.



This support will be supplemented by a new vaccine project (P175895) of US\$ 90 million to procure COVID-19 vaccines, strengthen the vaccine cold chain, incentivize timely delivery of vaccines to priority groups (through performance-based conditions), and bolster the broader ongoing COVID-19 response measures, particularly the scale-up of testing (which remains low in comparison with other countries in ECA). This new project will be subject to Board approval, and it is expected that this operation will be presented to the Board in the third quarter of FY21.

12. **Protecting the poor and vulnerable:** As noted above, the country is losing the hard-won poverty gains achieved since the crisis of 2015-2016. Additional Financing (P170563; US\$ 150 million) under the ongoing Social Safety Nets Modernization project (P128344; US\$ 300 million), approved in April 2020, is helping support Ukraine's emergency response to the COVID-19 coronavirus pandemic, ensuring larger amounts and faster disbursement of cash transfers via the country's Guaranteed Minimum Income and Housing and Utilities Subsidy programs. A second Additional Financing (P174436; US\$ 300 million) to provide further support was approved by the Board in December 2020. The First Economic Recovery Development Policy Loan (ER-DPL) (P172597; \$350 million) supports further strengthening of the social assistance programs to respond to needs exacerbated by the crisis.<sup>54</sup> The Additional Financing approved by the Board in November includes a Contingent Emergency Response Component (CERC) to provide support for any Eligible Crisis or Emergency meeting the eligibility criteria for financing, including as a flexible mechanism for supporting vulnerable communities in Eastern Ukraine facing the additional socio-economic shock of COVID-19.

13. **Ensuring sustainable business growth and job creation:** The March 21, 2020 vote in the Ukrainian parliament to open the agricultural land market provides an opportunity for the WBG to leverage its engagement with the authorities in the sector. Land reform, a central agenda supported by the first ER-DPL and the proposed second ER-DPL, will be foundational for Ukraine's economic recovery, and its success can add at least one percentage point to the growth rate over the medium term. FY21 pipeline projects under preparation will be refined to boost business growth and job creation. A project to strengthen Ukraine's electricity sector through deeper linkages with the European system will aim to help strengthen the foundations for economic recovery, especially for the private sector, through improving energy security and system reliability. The Reconnect, Recover, Revitalize (3R) Project has been adjusted to support local economic recovery in conflict-affected Eastern Ukraine through engagement of vulnerable rural households in agricultural activities, short-term job creation through construction works, and support for agricultural sector reforms to help the safe resumption of market activity as COVID-19 control measures are implemented. Another Additional Financing (P175927) to scale-up the ongoing Access to Long Term Finance (P156766) project is aimed to support the financing needs of private small and medium enterprises (SMEs) affected by the COVID-19 crisis. Access to credit for viable enterprises, that have become cash-strapped during the COVID-19 crisis is critical to preserve the SME sector, avoid a wave of defaults, and provide the needed financing support during the recovery phase. IFC will continue promoting crop receipts as a pre-harvest financing instrument for small and medium-sized farmers. IFC, in cooperation with IBRD, will also further promote the development of financing instruments, inclusive of partial credit guarantees and risk sharing facilities, to create a market for added value agricultural products. And with respect to investments, Nyva Pereyaslavschyny, Ukraine's second largest pork producer and an IFC client since 2013, became the first real sector client in ECA to receive financing via the WBG COVID-19 response program. IFC financing will be used to meet working capital requirements and liquidity shortages of US\$ 20 million that emerged due to supply chain disruptions and economic uncertainty, resulting from the COVID-19 pandemic. Once the situation normalizes and working capital requirements return to normal levels, Nyva plans to redirect the IFC loan proceeds to partially

<sup>54</sup> DPL Loan Agreement has not yet been signed.



finance its expansion.

14. **Strengthening policies, institutions, and investment for rebuilding better.** To ensure sustained recovery, the World Bank is deepening support to strengthening key economic institutions. Beyond institutions supporting a transparent, inclusive, and efficient land market, the first ER-DPL reinforced policies to de-monopolize the gas sector and strengthen the concessions framework and to help increase private participation in infrastructure development. It supported key anti-corruption institutions, including the National Agency of Corruption Prevention, and helped restore liability for illicit enrichment. And it helped strengthen the pension system to improve the predictability and sustainability of pension benefits for those most at risk to be impacted by COVID-19. A higher education project in the pipeline for FY21 (P171050; US\$ 200 million) aims to deepen Ukraine's human capital investments by supporting improved education quality and financial stability, with design adjustments under discussion to improve system preparedness for remote/online learning as well as specific issues to respond to COVID-19, such as accelerated training of health professionals.

15. **The financial support offered by the WB to Ukraine has been complemented with the analytical and capacity building support.** From the start of the COVID-19 pandemic in Ukraine, the WB team provided technical assistance to the Ministry of Health (financed through WB own resources and a Trust Fund from the Swiss Cooperation Office in Ukraine). This has included collaboration with researchers on modeling the pandemic, working with partners to bring international evidence to Ukraine's COVID-19 response, mapping of procurement support offered by different partners and provided through government channels, and assistance in design of payments mechanisms for COVID-19 care. There was also substantial provision for technical assistance within the financing for the SPIH project on which the Ministry of Health has, and will continue to, draw for COVID-19 response. The social protection AF built on a strong program of analytical and advisory work on the targeting efficiency of the government's social assistance programs which meant that when the COVID-19 economic downturn began the team knew exactly which programs would best be able to reach the most vulnerable.

16. **Selectivity, Complementarity, Partnerships:** The Government is closely coordinating its COVID-19 response with the WB and other international partners. There has been strong coordination among Ukraine's partners (including the WB, IMF, other IFIs, and bilateral partners) to ensure the consolidation of key structural reforms essential for economic recovery. In this context, in June, the IMF Executive Board approved an 18-month US\$ 5 billion Stand-By Arrangement for Ukraine. This is to help Ukraine cope with COVID-19 pandemic challenges by providing balance of payments and budget support, while safeguarding achievements to date including around anti-corruption institutions and advancing a small set of key structural reforms. The WB is coordinating closely with the IMF on policy actions. The European Commission, on behalf of the EU, has approved the disbursement of a €500 million loan to Ukraine as part of its fourth macro-financial assistance (MFA) program. The Additional Financing for Health *project* (P170740) and Preparation of the New Vaccine project (P175895) involves *procurement* of needed materials and equipment for the COVID-19 response through UN agencies (WHO, UNICEF, and UNDP), collaboration among these partners in providing technical assistance and capacity-building, and coordination with the investments of other lenders (including the European Investment Bank which intends to provide a €50 million loan to support vaccination). These contracts will also include essential capacity-building and communications assistance related to COVID-19 activities.



## ANNEX 4: International Evidence on Project-Supported Interventions

### Impact of laboratories and learning environments on higher education outcomes

1. A substantial body of evidence suggests scientific and technological laboratories in higher education can have a positive impact on students' engagement, learning outcomes, and interest in the sciences, technology, engineering, and mathematics (STEM). Since the late 19th century, science educators have believed that the laboratory is an important means of instruction in science because it provided training in observation, supplied detailed information, and aroused students' interest.<sup>55</sup> Science labs can be among the richest experiences students have in higher education as they provide students a chance to practice science in a similar fashion as professionals, therefore emphasizing the practical application of theoretical knowledge.<sup>56</sup> There are five types of knowledge and skills that can be addressed through laboratories: 1) *Research Skills* - manipulative, inquiry, investigative, organizational, communicative; 2) *Conceptual knowledge* - hypothesis, theoretical model, taxonomic category; 3) *Cognitive skills* - critical thinking, problem solving, application, analysis, synthesis; 4) *Socio-emotional skills* - curiosity, risk-taking, objectivity, precision, confidence, perseverance, satisfaction, responsibility, consensus, collaboration; 5) *Understanding of the nature of science* - scientific enterprise, scientists and how they work, existence of a multiplicity of scientific methods, interrelationships between science and technology and among the various disciplines of science.<sup>57</sup>

2. Getting involved in research labs as an undergraduate can also improve the odds of students persisting in a degree program in STEM, especially for disadvantaged students.<sup>58</sup> For example, a Canadian study of university Earth science courses demonstrated that students who participated in laboratory in addition to lecture, had a conceptual grasp of Earth science that was 33 percent greater than students who only attended the lecture-only course.<sup>59</sup> The study found that a positive lab environment and enjoying their everyday research tasks, as well as flexible schedules, positive social interactions and feeling included motivated students to continue with science. Students also persisted when they felt they were learning important skills and perceived the work was important to their career goals.<sup>60</sup> In addition, Arizona State University's LEAP Scholars program<sup>61</sup>, a four-semester scholarship program funded by the U.S. National Science Foundation to help community college transfer students get involved in undergraduate science research found that because many transfer students need to work a job while attending college, the LEAP program's scholarships and mentors allowed them to work in a research lab instead and focus full-time on their coursework, which has contributed to their retention.

### Effective professional development programs for university administrators and managers with a focus on all aspects of institutional autonomy (financial, human resources, leadership, etc.)

<sup>55</sup> Blosser, Patricia E. (1980). A Critical Review of the Role of the Laboratory in Science Teaching. Columbus, OH: ERIC Clearinghouse for Science, Mathematics, and Environmental Education.

<sup>56</sup> Hofstein, A., and Lunetta, V. (1982). The Role of the Laboratory in Science Teaching: Neglected Aspects of Research. Review of Educational Research, 52(2), 201-217.

<sup>57</sup> Shulman and Tamir (1973). "Research on teaching in the natural sciences." In R.M.W. Travers, (Ed.), Second handbook of research on teaching. Rand McNally.

<sup>58</sup> Cooper et al. (2019). Factors that predict life sciences student persistence in undergraduate research experiences. *PLOS One*; 14 (8).

<sup>59</sup> Forcino, F. L. (2013). "The Importance of a Laboratory Section on Student Learning Outcomes in a University Introductory Earth Science Course." *Journal of Geoscience Education*; 61, 213-221.

<sup>60</sup> Ibid.

<sup>61</sup> LEAP stands for: Learning, Entering, Advising and Producing research.





3. As universities have grown more autonomous in the last half century in Europe, providing appropriate opportunities for university leaders to obtain competence with effective and innovative institutional management is critical.<sup>62,63</sup> Professional development refers to the processes and activities that change the professional knowledge, skills, attitudes and actions of individuals. Professional development aims to enhance individuals' career competencies and enable them to perform successfully in professional roles. It is also known to be one of the key determinants for improving the quality and relevance of education and learning.<sup>64</sup> In the field of education, professional development programs have an important impact on educational leaders, as they increase knowledge, add to and enhance management skills and leadership techniques, broaden perspectives, and stimulate creativity.<sup>65</sup>

4. With the rise of globalization and technology, it has never been easier and faster to share best practices on professional development across countries. Professional development for educational leaders may consist of workshops, conferences and seminars, mentoring, shadowing and coaching that are planned at the national level through education systems, universities, government organizations, professional associations, non-profit organizations or for-profit organizations, and etc.<sup>66</sup> However, consortiums of stakeholders invested the professionalization of higher education in the EU and broader international community, such as the International Association of Universities (IAU), the European Association of Institutions in Higher Education (EURASHE),<sup>67</sup> and the Higher Education Institutions and Responsible Research and Innovation (HEIRRI) can be good resources for universities in Ukraine.

### **Impact of information provision on labor market outcomes and student experiences in universities on higher education decisions**

5. Graduate tracer studies (GTS) are instruments employed by many countries around the world to provide data to better understand the relevance of higher education to the labor market. The studies generate retrospective evaluations of the connection between higher education and employment, focusing on several characteristics of graduates' employment, incomes, and the correspondence between their studies and jobs. Most studies also trace graduates who continue with further education after graduation, and some also explore issues beyond the core elements of GTS. They may look, for instance, at graduates' satisfaction with their careers or at reasons for taking alternative paths to employment after graduation. To obtain a broader picture of the relevance of higher education in the graduates' careers, GTS may look not only at their insertion into the labor market, but also at their progression later in life.

6. A variety of stakeholders can use GTS for different purposes.<sup>68</sup> By looking at the actual employment

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<sup>62</sup> OECD. (2001). "Higher Education Management." *Journal of the Programme on Institutional Management in Higher Education*; Vol. 13 - No. 2.

<sup>63</sup> Davies, R. and Preston, M. (2002). "An Evaluation of the Impact of Continuing Professional Development on Personal and Professional Lives." *Journal of In-service Education*. 28:2, 231-254.

<sup>64</sup> Inamorato dos Santos, A., Gaušas, S., Mackevičiūtė, R., Jotautytė, A., Martinaitis, Ž. (2019). *Innovating Professional Development in Higher Education: Case Studies*. Luxembourg: European Commission.

<sup>65</sup> McDade (1987). *Higher Education Leadership: Enhancing Skills through Professional Development Programs*. Washington D.C.: ASHE-ERIC.

<sup>66</sup> Goldring EB, Preston C and Huff J (2012) Conceptualizing and evaluating professional development for school leaders, *Planning and Changing* 43(3/4): 223–242.

<sup>67</sup> Inamorato dos Santos, et al. (2019). *Innovating Professional Development in Higher Education: Case Studies*. European Commission.

<sup>68</sup> World Bank. (2018). *International Experience in the Implementation of Graduate Tracer Studies in Higher Education – Case Studies of Good Practice*.



situation of graduates, GTS can help to identify supply and demand issues as well as skills mismatches. Thus, governments and HEIs can use these studies to, for instance, assess the quality of the higher education sector and its institutions based on their ability to meet labor market demands. Both governments and HEIs can also, based on GTS data, consider strategic changes or curriculum redesigns. HEIs' career services, in turn, can benefit from published GTS data, using them to fine-tune the advice and support they offer to students. Employers can use GTS for recruitment purposes. Prospective and current students can make better-informed decisions when selecting an academic program and institution for their studies and when considering future job options. Researchers, finally, can contribute to expanding the knowledge about the relationship between higher education and the world of work by conducting specific analyses using the data made available by GTS. These analyses can look, for example, at disciplines in more depth or at the situation in moments of economic crises. In many countries, conducting tracer studies is a formal requirement for the accreditation of study programs.<sup>69</sup>

7. Recent World Bank analysis highlighted three cases of good practice in conducting GTS, selected based on four criteria.<sup>70</sup> First, the studies are implemented on a regular basis. Second, they are managed by a state authority or some form of non-governmental organization. Third, the studies use to some extent data that are already collected by the government or third parties. Fourth, examples were selected with the intention of illustrating different approaches to conducting GTS in terms of, for instance, their survey designs, the variables covered, and the data collection strategies used. The cases selected are from the United Kingdom (Graduates Outcome Survey and the Longitudinal Education Outcomes), Italy (Alma Laurea and Italian National Institute of Statistics studies), and Chile (Mi Futuro). The three cases are implemented on a regular basis and while the state is involved in all three cases, the management model is different in each case. All cases use administrative or government data, albeit doing so to different extents and in different ways. Finally, while the three of them are innovative, methodologically robust, and widely used in their countries, they differ significantly in their design and in their core objectives and uses. Therefore, they present an ample spectrum of different options that can be considered to start the development of a GTS in Ukraine.

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<sup>69</sup> European Training Foundation, European Centre for the Development of Vocational Training, and International Labour Office. (2016). *Carrying Out Tracer Studies: Guide to Anticipating and Matching Skills and Jobs*. Vol. 6.

<sup>70</sup> World Bank. (2018). *International Experience in the Implementation of Graduate Tracer Studies in Higher Education – Case Studies of Good Practice*.

**ANNEX 5: Team Members**

<b>World Bank Staff</b>	
Soren Nellemann	Senior Economist, Co-Task Team Leader
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Klavdiya Maksymenko	Senior Country Officer
Irina Babich	Senior Financial Management Specialist
Dmytro Donets	Procurement Specialist
Mariia Nikitova	Social Development Specialist
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Iryna Kohut	Education Consultant
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Anastasiia Zakharova	Social Development Consultant
Alexei Ionascu	Social Development Consultant
Alla Ljungman	Environmental Consultant
<b>Advisors</b>	
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F. Halsey Rogers	Lead Economist
Elizabeth Ninan Dulvy	Senior Education Specialist
Jason Weaver	Senior Education Specialist