Higher Education for Development

An Evaluation of the World Bank Group's Support

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WHAT WORKS

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An Independent Evaluation

Contents

Boxes

Figures

Tables

Appendixes

Acknowledgments

This evaluation was prepared by an Independent Evaluation Group (IEG) evaluation team led by Erik Bloom under the overall direction of Caroline Heider, director-general, Evaluation, with the guidance and supervision of Marie Gaarder, manager, Human Development and Corporate Evaluations, and Auguste Tano Kouame, director, Human Development and Economic Management Department. The approach paper and the first phase of the evaluation were supervised by Nicholas York, former director, and Mark Sundberg, former manager.

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Abbreviations

COREHEG	Core Higher Education Group
DPO	development policy operations
GP	Global Practice
GPI	Gender Parity Index
IEG	Independent Evaluation Group
IFC	International Finance Corporation
OECD	Organisation for Economic Co-operation and Development
PDO	project development objectives
PPAR	Project Performance Assessment Report
SABER	Systems Approach for Better Education Results
STEM	Science, Technology, Engineering, and Mathematics

All dollar amounts are U.S. dollars unless otherwise indicated.

Overview

The Independent Evaluation Group (IEG) is undertaking this evaluation to enhance understanding of the design of World Bank Group support for higher education and its contribution to development. Although assessing past performance, much of which predates the 2013 World Bank Group strategy, with its twin goals of eliminating extreme poverty and promoting shared prosperity, the evaluation is intended to be forward-looking. It seeks to identify how the World Bank Group can adapt and align its support for higher education with the new strategy. Although higher education can contribute to the twin goals, it is by no means guaranteed.

Higher Education Context

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.

Higher education systems around the world face a growing demand for enrollment that is increasingly driven by nontraditional students. Limited capacity to respond to demand among existing public institutions has, in turn, led to significant growth in private provision. Furthermore, there is increased demand among employers for skilled and professional workers and increased importance in modern economies for research and development to increase competitiveness.

In this context, governments need to explore (i) the growing demand for higher education; (ii) the role of access, including equity; (iii) the quality and relevance of teaching and its implications for employability; (iv) the role of research and development in higher education; and (v) the role of systems reform within higher education.

World **Bank's Group's** Support for Higher Education

To determine how best to respond to developments within higher education, the World Bank Group must identify how higher education fits into its strategic vision in pursuit of the twin goals, the extent to which the sector is a priority for client governments, as well as the comparative advantage of the World Bank Group itself in relation to external partners.

The World Bank Group's engagement with higher education has evolved over time, focusing on infrastructure in the 1960s and then shifting to support faculty improvement and the development of new institutions. This support tapered off in the mid-1980s in favor of investment in basic education. The past 15 years have seen renewed

engagement in higher education in pursuit of the growth and competiveness agendas.

The World Bank Group's twin goals have redefined the rationale for engagement across all sectors. Although the World Bank Group has never had an explicit strategy for higher education, institutional- and regional-level strategies and knowledge work anchor the World Bank's engagement in supporting and promoting (i) greater access and equity, (ii) relevant and quality teaching and research, (iii) improved management and financial systems, and (iv) institutional diversification and innovation.

The International Finance Corporation (IFC) has aligned itself with the World Bank's approach and focuses on access and equity, relevance, and quality. Additionally, IFC has developed a specific education strategy that focuses on its investments in post-secondary education.

The evaluation of the World Bank Group's engagement at the country level shows higher education as a strategic priority in about one-third of country strategies, with an emphasis on support for governance in the Europe and Central Asia Region, for employability in the Middle East and North Africa Region, and for access and enrollment in the Sub-Saharan Africa Region. Higher education is a key issue in the 22 Systematic Country Diagnostics reviewed by the evaluation, although support for higher education was included in only seven Country Partnership Frameworks. The Country Partnership Frameworks typically focus on challenges associated with skills shortages and mismatches and employability. There is some focus on access and equity with marginal emphasis on governance. None of the Country Partnership Frameworks included research.

From FY03–16, the World Bank spread support across dedicated "core" higher education projects (44 percent) and "noncore" projects, for which higher education is embedded either in a broader education project or as a component in a project led by another global practice (56 percent). The majority of World Bank support is through investment projects, although there were 22 development policy operations supported over the period that include reference—at least to some extent—to higher education. In most cases, development policy operations had a minor engagement with higher education. Over the same period, IFC committed $722 million through 42 investments and $7.8 million in advisory services, representing 69 percent of all IFC education commitments.

World Bank and IFC investments span all Regions, with a concentration in middle-income countries. World Bank support in low-income countries and in fragile and conflict-affected states accounts for 15 percent of commitments for core projects and 16 percent of

commitments for noncore projects. The evaluation found good collaboration between higher education and the rest of the Education Global Practice and between the Education Global Practice and IFC education specialists. However, the level of communication between the Education Global Practice and other global practices could be improved. Likewise, the World Bank seems to have little coordination with other donors, which results in lost opportunities. Projected growth in higher education may present future opportunities for coordination, given the rich and complicated donor landscape.

The portfolio analysis presents generally favorable overall performance, particularly among core projects. However, the portfolio analysis also shows certain design weaknesses, principally associated with poor-quality outcome indicators. Other issues include the lack of definition, targeting mechanisms, and tracking of vulnerable and disadvantaged groups.

Many World Bank projects focus on established universities, often with a strong focus on science, technology, engineering, and mathematics fields. These fields are universally dominated by men. Support that aspires to employability outcomes tends to be measured in terms of access with little post-graduation follow-up and often poor targeting from the perspective of the World Bank Group's twin goals. Likewise, there is room to strengthen indicators used to measure the economic contribution of support provided for research.

The World Bank portfolio does not generally engage in the "third mission" of higher education. Notwithstanding the importance of top-tier institutions, the mission of the World Bank Group suggests a certain logic to supporting strategic, spatial development and, potentially, making higher education more accessible to more people. However, this has not been a major part of the World Bank's portfolio.

The portfolio review also found that World Bank support for higher education typically took the form of grants dispersed through relevant institutions. This approach places the World Bank in the position of intermediary, and the results frameworks tend to focus more on outputs than on outcomes and impact. Of course, this need not be the case. It is possible to require systematic monitoring and evaluation and associated reporting that satisfies World Bank policy and practice requirements. Current practice underpins the lack of hard evidence available to the World Bank, and consequently to IEG, about what works under what circumstances. That, in turn, makes it difficult to identify the real value-added. It also makes it difficult for the World Bank to provide evidence to relevant stakeholders.

IFC support is generally consistent with its strategic objectives, and IFC

investments are more readily amenable to measurement. That said, and with reference to the twin goals, there is room for IFC to ensure enhanced tracking and reporting of target groups to ensure diversity.

Conclusions and Recommendations

The World Bank Group has been proactive in a sector that is rapidly evolving and likely to become increasingly important for the development of low- and middle-income countries. Investing in higher education contributes to competitiveness, but it has important distribution consequences. The World Bank Group's twin goals and its new country-level engagement model raise the bar in relation to the rationale for investing in higher education, given that this investment tends to disproportionately benefit advantaged groups.

The evaluation finds the type of support in the areas of access, equity, teaching and learning, employability, research, and governance broadly in line with the development trajectory of respective client countries. However, the support provided is fairly homogenous in nature and is typically channeled through grants that often lack adequate monitoring and evaluation mechanisms to verify and inform what works.

The evaluation concludes that access to higher education will become increasingly significant as developing countries move up the value chain. Growing demand for higher education will put increasing pressure on limited fiscal resources and on existing systems with consequent threats to quality as well as the possible growth of under-regulated private provision.

This scenario presents opportunities for both the World Bank and IFC to contribute to enhancing development effectiveness in line with Sustainable Development Goal 4 (equal access for all to affordable tertiary education) and the World Bank Group goals. Likewise, IFC is well placed to support quality private sector providers. Based on the available evidence, the evaluation makes the following recommendations:

Recommendation 1: Carry out a strategic review of the World Bank Group's support for higher education and make strategic choices. Through a strategic review, the World Bank Group should reflect on its institutional mission and on the global development agenda. Based on this, it should design a focused approach for higher education that takes into account country needs.

Recommendation 2: Improve the quality of results indicators, ensure their adequate measurement, and further build and draw on the evidence base for higher education in both World Bank and IFC investments. The World Bank Group should design improved monitoring instruments and define new indicators to capture the desired outcomes. The World Bank Group should develop an evidence base

of what works in higher education and support rigorous case studies and impact evaluations to understand what interventions are effective and how they can be replicated. Projects should also more clearly show what evidence they draw on and identify where there are gaps.

Recommendation 3: Increase the participation of employers and the integration of employers' perspectives in World Bank and IFC investments. The World Bank can promote the integration of employer and private sector groups in higher education reforms, such as participation in independent accreditation institutions and university governance bodies. Both the World Bank and IFC could promote more collaboration between the employers and higher education institutions in preparing grants to improve learning and in developing curricula reform.

Recommendation 4: Develop stronger coordination among global practices. This may include the establishment of formal and informal mechanisms to facilitate dialogue and to allow the Education Global Practice to engage better with other units. This could potentially include participation of World Bank Group higher education specialists in more noncore projects.

Recommendation 5: Develop a more comprehensive understanding of external financing for higher education. Identify more thoroughly the landscape of public and private organizations that provide financing of higher education and analyze areas of overlap and possible collaboration. As appropriate, the World Bank can establish a convening role to improve coordination among donor organizations and other international partners involved in higher education.

Management Response

Management of the World Bank Group institutions would like to thank the Independent Evaluation Group (IEG) for its extensive and informative evaluation of support for higher education development. The report provides a comprehensive and balanced account of World Bank Group activities in support of the development of higher education in client countries, reinforcing the importance of its involvement in the sector and providing useful insights and guidance for the future. It finds that the World Bank Group's interventions in higher education support its twin goals and contribute to social and economic development in client countries. Considering the significant growth of tertiary education globally, especially in low- and middle-income economies, the report will help the World Bank Group to more effectively focus its support for advanced human capital as part of its effort to meet its strategic goals.

World Bank Management Comments

Management appreciates the opportunity to comment on the IEG report's comprehensive review of the World Bank Group's work on the higher education subsector. Management concurs with many of IEG's observations—in particular, that developing innovative ways to measure the impact of interventions will allow more effective support to client countries in this area, and that work in higher education can be greatly improved by fostering more collaboration with related Global Practices and relevant external players and donors. Management notes, however, that although the report provides useful feedback to Management of the World Bank Group's institutions and staff working in the subsector, it does not sufficiently discuss the relationship between higher education and the overall tertiary education sector—especially the Technical and Vocational Education and Training subsector—and the linkages with the other levels of the entire educational system. Management's more detailed comments follow.

Strategic Integration

Management appreciates IEG's observations about the need to more effectively align higher education with the World Bank Group strategy. It is well known that a sound tertiary education sector—and for that matter the higher education subsector—can have a direct impact on a country's competitiveness by preparing individuals with advanced skills, for which higher economic return is expected. Nonetheless, more analytic work is needed to demonstrate how higher education also contributes to reducing extreme poverty and enabling shared prosperity—for example, in such areas as the following: (i) the overall impact that higher education institutions have on the surrounding

communities from the economic activities they generate; (ii) noneconomic benefits in the society resulting from having larger numbers of individuals with higher education degrees (who are in general healthier, more environmentally conscious, and more civically informed and active); and (iii) the existence of higher education institutions that are more efficiently managed and more effectively aligned with the needs of the community at large. The IEG report informs the ongoing evolution toward a more integrated World Bank Group approach that includes such dimensions in the rationale for interventions in higher education.

Management agrees with IEG that a further review of the contribution of the World Bank's work in higher education will help develop a more focused approach that takes account of country needs. Further studies and strategic analysis would be useful to assess the contribution of tertiary education to economic and social development, and, for that matter, to World Bank Group's twin goals. The report notes that, even though projects should be generally aligned to the overall World Bank Group strategy, they also need to respond to specific country-level needs. Analysis in this area will help inform Management's decisions about what interventions should be pursued.

Management appreciates IEG's recognition of the value of the recently released SABER-Tertiary Education tool, designed to assess different domains of a national tertiary education system as they contribute to national priorities and to the World Bank Group twin goals. As more countries adopt this tool in support of policy dialogue and project preparation, the Education Global Practice will be able to accumulate additional knowledge and further refine interventions to respond more directly to both country needs and World Bank Group goals.

A number of ongoing regional and country specific studies are expected to contribute to informed policy dialogue and operations design in higher education. To avoid over-generalizations in defining what matters in higher education from a strategic point of view, in recent years the World Bank Group has conducted several regional higher education studies—for example, studies in financing of higher education in Europe and Central Asia, teacher training in Latin America and the Caribbean, science collaboration in Sub-Saharan Africa, and governance in the Middle East and North Africa. These studies have informed policy dialogue and operations design at both the national and regional levels. In addition, the *World Development Report 2018: Learning to Realize Education's Promise* will provide useful information about the higher education subsector.

To be prepared to respond in a timely way to increased demands from client countries, it is important to understand what capacity and knowledge the relevant World Bank Group staff now have. With such an understanding, Management can plan for the

adequate availability of properly qualified staff. There is already in place a very active community of practice—the Core Higher Education Group (COREHEG)—that brings together more than 120 World Bank Group staff from across the globe who are involved or interested in the tertiary education sector. COREHEG facilitates regular exchanges of information on best practices and lessons learned in designing, implementing, and evaluating interventions. Their efforts to collect and make available the acquired knowledge can contribute to informing current staff as they work on new projects, and can reduce the learning curve of new staff in the sector.

Management agrees with the report's assessment on the importance of reflecting on the role of other international players. A variety of international players have interest and involvement in tertiary education: funding entities whose mandate and scope of work are similar to the World Bank Group's, development agencies working to build capacity in a particular subsector or country, and other international players conducting analytical work and/or advocating for particular causes directly or indirectly related to tertiary education. Management believes that it is important to establish and maintain good coordination with other international players when planning country-level interventions. In countries where multiple donors and development agencies are involved, the World Bank can assume a leading role in establishing channels of communication and coordination to mitigate overlaps and maximize overall results. At the Regional level, promising efforts in coordination with other key players are in place. For instance, the Regional dialogue on tertiary education being conducted in Latin America and the Caribbean, in collaboration with the Organization of American States, Inter-American Development Bank, Corporación Andina de Fomento, and the Iberoamerican Organization of States, has resulted in a set of actions that are being implemented with the active involvement of client governments in the Region. At the global level, Management is actively involved in the International Donor Harmonisation Group, which brings together key development agencies working in tertiary education. Also, collaborative work is in place with other global players such as the United Nations Educational, Scientific, and Cultural Organization, the Organisation for Economic Co-operation and Development, and the International Association of Universities. The World Bank Group can play a co-convening role with these global players in more closely reviewing trends and fostering increased awareness of the importance of higher education. Communication and collaboration ties with these and other relevant organizations are crucial as the policy and political landscape of higher education becomes more complex and sophisticated.

DATA ON RESULTS AND EVIDENCE

Management agrees that the evidence base for interventions in higher education should be strengthened. Attribution of results requires a scope of analysis that usually exceeds

project life-cycles. For instance, a project may support higher education institutions in modernizing their academic programs by introducing academic subjects and teaching techniques aimed at improved employability at graduation. To see the results of such interventions will take at least five years after project closing—the time it will take for students who have benefited from the new academic program to graduate and enter the labor market. Moreover, attributing hiring results to specific interventions is often a challenge because many factors contribute to outcomes—for example, not just the quality of the education received, but also the reputation of the institution from which the job seeker graduated, the employment opportunities available in a particular economic sector, the overall economic situation prevalent at graduation time, and so on.

The newly launched SABER-Tertiary Education is expected to serve as a good base of analysis on what works in tertiary education. Its design took into consideration global best practices in a range of areas: vision of the tertiary education system; regulatory framework; governance; financing; educational quality; equitable access, retention, and successful completion; and relevance of tertiary education. A total of 12 policy levers have been developed and properly validated by an external panel of 17 global tertiary education experts. Currently, SABER-Tertiary Education is being piloted in several countries for full implementation in the upcoming fiscal year. As more countries participate in the SABER-Tertiary Education, a stronger evidence base will be built. World Bank Group-supported projects can draw on this consistent shared base in designing analysis and interventions. Also, the resulting benchmarking will provide a good basis for future impact evaluations on what interventions are effective and can be replicated.

Management has taken steps to improve monitoring instruments and define new indicators. Management agrees that further work should be done in developing innovative ways to properly measure the effectiveness of the interventions that are typically included in higher education projects. With support from COREHEG, a working group of experienced tertiary education specialists, supported by external experts, has been charged with proposing new and improved monitoring instruments and indicators. The working group will discuss and present a set of new and revised indicators, which will be piloted before their use is widely recommended.

LINKAGES WITH EMPLOYERS

Management agrees that the participation of employers and the integration of their perspectives are important to ensure a link between tertiary education and increased competitiveness. However, Management is also aware that each country's regulatory framework, historical context, and political environment are unique. When it is relevant and feasible, World Bank Group-financed operations support public-private partnerships in tertiary education, participation of employers in boards of governors of

tertiary education institutions, development of co-op and other types of practical training of students in industry, participation of employers in the design and oversight of academic programs, and so on.

Leveling the playing field helps increase options and improve the responsiveness of higher education institutions. Management considers that allowing a range of high-quality post-secondary public and private (not-for-profit and for-profit) providers to enter the field is the most efficient way to meet the diverse needs of secondary school graduates for further learning or training. At the same time, this principle calls for establishing adequate quality assurance mechanisms that do not differentiate between public and private providers.

GREATER INTERNAL COORDINATION

Management will explore options to involve the relevant GPs and CCSAs more broadly and frequently in higher education projects and discussions. There is a potential to strengthen useful linkages—for instance, by including members of other GPs in teams, by having them as peer reviewers, and by establishing more effective consultation and coordination with them. Incentives and mechanisms to enable a larger scale of cross-GP collaboration also need to be strengthened.

THE EXTERNAL LANDSCAPE OF SUPPORT OF HIGHER EDUCATION

Management recognizes the need for sustainable funding to support higher education projects. The typical life-span of projects poses a significant limitation in fostering larger systemic change in the tertiary education sector. Evidence from long-standing higher education projects seems to show that there is a good chance of fostering substantial long-term or permanent policy change when Bank support is in place for a sustained period. Also, the impact of interventions can be measured more adequately when projects extend beyond the typical life-span—as happened, for example, in the Technical Education Quality Improvement Project in India; support for ICETEX, the Colombian Student Loans Agency; and support to MECESUP, the Chilean Fund for Performance-based Grants to Higher Education Institutions.

Management also agrees that more effective communication and collaboration with other players in the financing of higher education would reduce potential overlap. In several countries and at a regional level, the World Bank Group can play a more active role as a convener of a coordinated approach toward funding support for higher education. The World Bank Group will explore more active collaboration with relevant players—international development agencies, foundations, private funders, NGOs, and so on—in an effort to more effectively define trends and areas of opportunity for collaborative support for higher education.

There are already some mechanisms in place for such collaboration. For example, the semiformal discussions held by the International Donor Harmonisation Group can be the basis for a more structured exchange of information and identification of areas of common interest for joint funding of large-scale projects. Valuable lessons can be drawn from experiences with a more systematic approach, such as the funding of the African Centers of Excellence and the combined funding for a project to establish new technical colleges in Ecuador. And, as noted above, Management is committed to collaborating with other key players in the global policy landscape for higher education and supporting joint work in areas of common interest.

IFC Management Comments

IFC Management would like to thank the Independent Evaluation Group (IEG) for its extensive and informative evaluation of IFC's support for higher education. The report provides a reasonable and balanced account of World Bank Group activities to support higher education, reinforcing the importance of that work and providing insights and guidance going forward. IFC Management commends the IEG team for a thorough process, including consultations with a broad array of stakeholders, experts, and peer reviewers, leading to a detailed, well-written, and thoughtful report. The report is particularly timely, given the growing importance of education to IFC's strategic goals.

In higher education, IFC aims to increase reach and impact, develop skills, and enhance employability. To achieve this, its strategy is to (a) invest in private education players, with a focus on viable and scalable models; (b) support innovation by investing in new service delivery models to increase affordability and quality and replicate successful models in existing and new emerging markets; and (c) leverage WB's convening power to share best practices and foster partnerships. Through financing, knowledge transfers, and partnerships, the team has helped its clients innovate to offer integrated, high-quality programs and scale up their operations for network effects and economies of scale.

With this background, IFC Management makes the following points relevant to the report before discussing the recommendations.

- First, in line with the report's analysis that argues for private providers to enhance lower income groups' equitable access to education, IFC has been making significant efforts to promote access to higher education by lower income segments: investing in student lending companies, engaging with affordable private providers interested in diversifying into less developed regions, and applying blended delivery models.

- Second, IFC reports publicly on its investment projects' gender reach. In the higher education portfolio, Management is pleased to share that several projects have been achieving strong results—for example, in Colombia's Uniminuto the percentage of women students exceeded the national averages.
- Third, IFC appreciates the importance of educational technologies, emphasizing them in its investment strategy. To catalyze innovations in education technology, IFC has also invested in an education innovation fund.
- Fourth, IFC Management shares the concerns raised in the report about education quality as providers continue to increase and diversify. However, it is Management's opinion that the growth in private education in emerging markets is not directly responsible for an overall decline in education quality. In this regard, IFC's appraisal and due diligence processes focus rigorously on evaluating quality on the basis of several facets, including governance, academic standards including accreditation, management depth, technology, and quality and diversity of student services. Only those providers that are seen to deliver tangible value and positive learning outcomes are cleared for further deliberation processes for IFC support.
- Finally, IFC Management supports the role played by higher education institutions in leveraging linkages and alliances, especially in addressing employment challenges. Several IFC investee companies in higher education serve their local communities, including through students' volunteer work (providing, for instance, pro bono legal services under the guidance of their faculty) and provision of free medical, dental, and psychological counselling. As the report noted, going forward, IFC could help them also connect more efficiently with local resources and address their graduates' employability needs.

The IFC team is also broadly in agreement with the analysis on trends and challenges in higher education, including the growing demand; the demographic bulge in some regions; the increasing need for skilled and professional workers to increase competitiveness; the renewed importance of equity, quality, gender, and employability; and recent growth in private providers, given government budgets that are increasingly constrained by conflicting public priorities in the social sector.

IFC Management notes that including technical and vocational education projects in the analysis would have enhanced the report's ability to give a comprehensive picture of IFC's higher education support, as such projects constitute an important part of IFC's portfolio, in line with our strategic objectives. Providers that offer skills-based programs and credentials that are well recognized in the labor market are an important part of the higher education landscape, regardless of whether students exit with a degree Future analyses may want to take this into consideration.

Overall, however, IFC Management welcomes the findings and conclusions of the report. It especially agrees on the importance of higher education to development and to the World Bank Group goals of eliminating extreme poverty and promoting shared prosperity, particularly in the context of the post-2015 development agenda.

IFC Management broadly concurs with the recommendations, which are clearly articulated. On Recommendation 1, IFC is broadly supportive. In particular, regarding the factors listed in paragraph 5.7 for World Bank Group's consideration, it strongly agrees on the need to examine the aspect of the rapid proliferation of new institutions of variable quality that offer credentials of limited value to students and pose grave reputational risks for the private sector. To protect the public interest in these aspects, IFC has supported robust and effective government regulation of higher education systems and high-quality institutions and programs. IFC Management also notes that including technical and vocational education projects in future analysis would enhance IEG's ability to give a comprehensive picture of IFC's tertiary education support as they constitute important parts of IFC's portfolio, in line with our strategic objectives. Providers that offer skills-based programs with well recognized credentials in the labor market are an important part of the higher education landscape.

On Recommendation 2, IFC's institutional views are aligned. To strengthen the evidence base and knowledge in accordance with IFC's business needs, new results indicators are constantly evolving. In particular, IFC has been trying to develop more rigorous methodologies for deeper insights about the relationships between higher education and employability, a critical but relatively new area of focus of research in higher education that is only now beginning to attract the attention of academics, institutions, and employers. IFC is planning to expand its collection of this data, currently being piloted with a few strategic clients, to a broader client base in emerging markets since these datasets are not readily available in private institutions in developing countries. In this process, IFC will also help strengthen the capacity of those educational institutions to measure educational impact.

On Recommendation 3, while IFC has been advancing in the direction recommended, including the participation of employers in and the integration of employers' perspectives into IFC operations, its Management would welcome IEG suggestions to strengthen this effort. Some past and current initiatives include engaging with employers as part of its investment appraisal process and in various sector forums, from student lending in Brazil to trade associations in MENA and LAC. IFC also regularly consults with the private sector in higher education as part of its ongoing knowledge management initiatives.

On Recommendation 4, while there is already good collaboration between IFC and the Education GP on projects and other one-off initiatives, the IFC team is very receptive to the suggestion to better coordinate with Global Practices. As the report notes, IFC's approach to higher education is well aligned with World Bank strategies, focusing on access and equity, relevance, and quality. That said, IFC looks forward to renewed joint WB-IFC work toward achieving the SDGs, particularly regarding affordable tertiary education access for all. IFC is committed to building equitable, high-quality, relevant, and efficient higher education systems and supporting quality private sector providers, working with the Education and other Global Practices.

Finally, on Recommendation 5, IFC Management agrees that developing a more comprehensive understanding of external financing for higher education is another priority, particularly factoring in the contributions of the private sector.

Management Action Record

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
Higher education is rapidly evolving and likely to become increasingly important for the development of low- and middle-income countries. Investing in higher education contributes to competitiveness, but it has important distribution consequences. The World Bank Group's twin goals and its new country-level engagement model raise the bar in relation to the rationale for investing in higher education, given that traditionally, higher education has tended to disproportionately benefit advantaged groups.	**Recommendation 1: Carry out a strategic review of the World Bank Group's support for higher education and make strategic choices.** Through a strategic review, with input from a variety of internal and external stakeholders, the World Bank Group should reflect on its institutional mission and on the global development agenda. Based on this review, it should design a focused approach for higher education that takes into account country needs. There is no single approach to preparing a strategic review. Options include the development of a formal strategy, preparation of an ongoing series of policy papers, and discussions to develop consensus.	Agree	Management agrees that a further review of the contribution of the World Bank's work in higher education will help develop a more focused approach that takes account of country needs. Further studies and strategic analysis would be useful to assess the contribution of tertiary education to economic and social development, and, for that matter, to the World Bank Group's twin goals. A number of ongoing regional and country specific studies are expected to contribute to informed policy dialogue and operations design in higher education. The recently released SABER-Tertiary Education will help accumulate additional knowledge and further refine interventions to respond more directly to both country needs and World Bank Group goals. In addition, the *World Development Report 2018: Learning to Realize Education's Promise* will provide useful information about the higher education subsector. Management of the International Finance Corporation (IFC) strongly agrees on the need to examine the aspect of the rapid proliferation of new institutions of variable quality that offer

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
			credentials of limited value to students and pose grave reputational risks for the private sector. To protect the public interest in these aspects, IFC has supported robust and effective government regulations of higher education systems and high-quality institutions and programs. IFC Management also notes that including technical and vocational education projects in future analysis would enhance the ability of the Independent Evaluation Group (IEG) to give a comprehensive picture of IFC's tertiary education support as they constitute important parts of IFC's portfolio, in line with its strategic objectives. Providers that offer skills-based programs with well-recognized credentials in the labor market are an important part of the higher education landscape.
Documentation supporting most World Bank projects do not offer robust evidence for why the World Bank chose the selected intervention model. Likewise, there is little guidance on what interventions work. Indicators are often based on headcounts that provide little insight into improvements from baseline measures. There is rarely collection of data from treatment	**Recommendation 2: Improve the quality of results indicators, ensure their adequate measurement, and further build and draw on the evidence base for higher education in both World Bank and IFC investments.** The World Bank Group should design improved monitoring instruments and define new indicators to capture the desired outcomes. The World Bank Group should develop an evidence base of what works in higher education and should	Agree	Management agrees that the evidence base for interventions in higher education should be strengthened. However, it recognizes limitations, especially the fact that attribution of results requires a scope of analysis that usually exceeds the life-cycle of projects; for example, the effect of modernization of academic programs in higher education institutions over the employability of graduates. In addition, attributing hiring results to specific intervention is often a challenge because many factors contribute to outcomes.

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
and comparison groups and on external factors that can influence outcomes to allow for rigorous impact evaluation. Furthermore, for policy advice not amenable to quantitative analysis, there is little evidence of the use of qualitative methods to justify the intervention.	support rigorous case studies and impact evaluations to understand what interventions are effective and how they can be replicated. Projects should also more clearly show what evidence they are based on and identify gaps.		The SABER-Tertiary Education is expected to serve as a good base of analysis on what works in tertiary education. World Bank Group-supported projects can draw on this consistent shared base in designing analysis and interventions. Also, the resulting benchmarking will provide a good basis for future impact evaluations on what interventions are effective and can be replicated. Management agrees that further work should be done in developing innovative ways to properly measure the effectiveness of the interventions that are typically included in higher education projects. With support from the Core Higher Education Group, a working group of experienced tertiary education specialists, supported by external experts, has been charged with proposing new and improved monitoring instruments and indicators. The working group will discuss and present a set of new and revised indicators, which will be piloted before their use is widely recommended. To strengthen the evidence base and knowledge in accordance with IFC's business needs, new results indicators are constantly evolving. In particular, IFC has been trying to develop more rigorous methodologies for deeper insights about the relationships between higher education and employability, a critical but relatively new area of focus of research in higher education that is only now beginning to attract the attention of

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
			academics, institutions and employers. IFC is planning to expand its collection of this data, currently being piloted with a few strategic clients, to a broader client base in emerging markets since these datasets are not readily available in private institutions in developing countries. In this process, IFC will also help strengthen the capacity of those educational institutions to measure educational impact.
Research indicates that employers are concerned with the readiness of graduates, including whether they have basic cognitive and "soft" skills. Country case studies undertaken for the evaluation confirm widespread concern among employers about the readiness of graduates for employment. Some World Bank projects have created linkages between higher education and the private sector to develop relevant research. However, there is less evidence of collaboration to leverage the private sector in helping to enhance quality assurance systems, or in engaging industry and employers to improve the	**Recommendation 3: Increase the participation of employers and the integration of employers' perspectives in World Bank and IFC investments.** The World Bank can better promote the integration of employer and private sector groups in higher education reforms, such as participation in independent accreditation institutions and university governance bodies. Both the World Bank and IFC could promote more collaboration between the employers and higher education institutions in preparing grants to improve learning and in developing curricula reform.	Agree	Management agrees on the importance of increasing the participation of employers and the integration of their perspectives to link tertiary education to increased competitiveness. Nevertheless, Management is aware that each country's regulatory framework, historical context, and political environment are unique. When it is relevant and feasible, World Bank Group-financed operations support public-private partnerships in tertiary education, participation of employers in boards of governors of tertiary education institutions, development of co-op and other types of practical training of students in industry, participation of employers in the design and oversight of academic programs, and so on. Management considers that allowing a range of high-quality post-secondary public and private (not-for-profit and for-profit) providers to enter the field is the most efficient way to meet the diverse needs of secondary school graduates for

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
quality and relevance of teaching and learning, including curriculum design.			further learning or training. At the same time, this principle calls for establishing adequate quality assurance mechanisms that do not differentiate between public and private providers. IFC has been advancing in the direction recommended, including the participation of employers in and the integration of employers' perspectives into IFC operations, its Management would welcome IEG suggestions to strengthen this effort. Some past and current initiatives include engaging with employers as part of its investment appraisal process and in various sector forums, from student lending in Brazil to trade associations in the Latin America and the Caribbean Region and the Middle East and North Africa Region. IFC also regularly consults with the private sector in higher education as part of its ongoing knowledge management initiatives.
There is a high level of internal communication, collaboration, and coordination within the Education Global Practice and between the Education Global Practice and IFC. However, coordination is not strong among the Global Practices. It appears that only some noncore projects have a team member from the Education Global Practice, which	**Recommendation 4: Develop stronger coordination among global practices.** This may include the establishment of formal and informal mechanisms to facilitate dialogue and allow the Education Global Practice to engage better with other units. This could potentially include participation of World Bank Group higher education specialists in more noncore projects.	Agree	Management will explore options to involve the relevant technical Global Practices (GPs) and cross-cutting solutions areas more broadly and frequently in higher education projects and discussions. There is a potential to strengthen useful linkages, for instance, by including members of other GPs in teams, having them as peer reviewers, and establishing more effective consultation and coordination with them. It is important to note that implementation of this recommendation at a larger scale requires more

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
potentially limits the degree to which higher education interventions in noncore projects are (i) informed by broader sector intelligence within the World Bank, and (ii) the extent to which they are more broadly integrated into developments in the higher education sector in client countries.			coordination across GPs, and may require establishing a more explicit set of incentives and mechanisms to enable such cross-GP collaboration. While there is already good collaboration between IFC and the Education GP on projects and other one-off initiatives, the IFC team is very receptive to the suggestion to better coordinate with Global Practices. As the report notes, IFC's approach to higher education is well aligned with World Bank strategies, focusing on access and equity, relevance, and quality. That said, IFC looks forward to renewed joint World Bank and IFC work toward achieving the Sustainable Development Goals, particularly regarding affordable tertiary education access for all. IFC is committed to building equitable, high-quality, relevant, and efficient higher education systems and supporting quality private sector providers, working with the Education and other GPs.

IEG Findings and Conclusions	IEG Recommendations	Acceptance by World Bank and IFC Management	Management Response
The World Bank Group is one of the largest financiers of development assistance for higher education and a leader in providing policy support. Many traditional donors are reengaging after limited participation. However, nontraditional donors play a major role, providing scholarships, equipment, research networks, and even policy support. External coordination presents a major challenge and, as such, the World Bank and other related nontraditional donors need to improve their channels of communication and coordination, considering they often provide similar support.	**Recommendation 5: Develop a more comprehensive understanding of external financing for higher education.** Identify more thoroughly the landscape of public and private organizations that provide financing of higher education and analyze areas of overlap as well as possible collaboration. As appropriate, the World Bank can establish a convening role to improve coordination among donor organizations and other international partners involved in higher education.	Agree	Management agrees that more effective communication and collaboration with other players in the financing of higher education would reduce potential overlap. The World Bank Group can play a more active role as convener of a coordinated approach toward funding support in higher education in several countries and at a Regional level. While resources are limited, the World Bank Group will explore more active collaboration with relevant players. There are already some mechanisms in place for such collaboration. For example, the semiformal discussions held by the International Donor Harmonization Group can be the basis for a more structured exchange of information and identification of areas of common interest for joint funding of large-scale projects. IFC Management agrees that developing a more comprehensive understanding of external financing for higher education is another priority, particularly factoring in the contributions of the private sector.

Report to the Board from the Committee on Development Effectiveness Subcommittee

The Subcommittee of the Committee on Development Effectiveness considered the report of the Independent Evaluation Group (IEG) entitled *Higher Education for Development: An Evaluation of the World Bank Group's Support*, together with the draft response of Management of the World Bank Group institutions.

The Subcommittee welcomed IEG's evaluation and Management's broad concurrence with the report's findings and recommendations. They were encouraged to learn the World Bank is already carrying out activities to address the recommendations, including analytical work to have a more policy and country-specific approach. The Subcommittee acknowledged that the World Bank Group has risen to the challenge of the growing demand for higher education in client countries but noted that its contribution could be broader and not only focused on building systems and governance structures. Members highlighted the timeliness of the evaluation, particularly in light of the upcoming *World Development Report 2018: Realizing the Promise of Education for Development*.

Members stressed the importance of making higher education affordable to the poor, of enhancing the quality of teaching and learning, and of addressing demand for skilled manpower, particularly in low income developing countries. They noted that equitable access to higher education is one of the drivers of economic growth and poverty reduction, and that learning has to be addressed in connection with the challenges of employability including within changing job markets, high mobility, and the impact of digitization and technological.

The Subcommittee encouraged the World Bank Group to carry out a strategic review of its support for higher education and asked it take into account the quality of primary and secondary education, employment, and job creation as well as the relationship between higher education and technical and vocational education. They stressed the need for forward-looking thinking on how to address key issues identified in the evaluation such as finding ways to neutralize undesirable distributional consequences and unintentional marginalization of groups; to improve access for the underprivileged and disadvantaged; and to make higher education affordable for the poor, including attracting donor funding. While much of the World Bank Group's support has focused on middle-income countries, the Subcommittee noted that a growing number of low-income countries are increasingly receiving support. They added that while the World Bank and the International Finance Corporation (IFC) experiences were mostly

concentrated in middle-income countries, many lessons could be applicable to low-income countries.

Members emphasized the need for the World Bank and IFC to improve the quality of results indicators, ensure their adequate measurement, and further build and draw on the evidence base for higher educations. They also noted the relevance of benchmarking learning to improve outcomes by establishing standardized tests and metric for learning outcomes. Additionally, they observed that more impact evaluations of education projects should be considered in the medium and longer terms.

The Subcommittee underscored the need to diversify funding sources and to put in place proper regulatory frameworks to monitor performance and the adequacy of higher education service providers. They urged IFC and the World Bank to identify ways to increase the role of the private sector in higher education and to include the input of employers' perspectives in World Bank and IFC investments to ensure the desired link to industry competitiveness. They agreed that wider stakeholder participation could help establish coherent policy frameworks and help inform the discussion of how to bridge skills mismatches and address gender gaps.

Members underscored the importance of increasing coordination within the World Bank Group and strengthening the synergies among the Education Global Practice and other Global Practices. They encouraged Management to foster South-South cooperation to develop and build curricula, share best practices, student exchange programs, and teacher training and posting. They also encouraged Management to work closer with other development partners, including the wide range of nontraditional donors.

1. Introduction

Higher education lies at the nexus of growth, jobs, and competiveness and has the potential to serve as a catalyst for economic transformation. The higher education system sits at the apex of the education system, supporting the lower levels of education, preparing professionals and skilled labor, and serving as an incubator for research. As developing countries expand basic education systems and increasingly transition into the knowledge economy, higher education will play an important role, as acknowledged in the Sustainable Development Goals, serving as an incubator for the knowledge base and human capital needed to promote and sustain development across many sectors. In particular, Sustainable Development Goal 4 aims to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" (UNGA 2015).

Given this context, the Independent Evaluation Group (IEG) is evaluating past World Bank Group interventions in higher education. The evaluation can serve as a guide to help address the challenges posed by the post-2015 development agenda as well as those inherent in the World Bank Group strategy. In particular, the World Bank Group must address the twin goals (eliminating extreme poverty and promoting shared prosperity) by building evidence, developing solutions, and providing insight to understand how to support future interventions (World Bank Group 2013).

The Importance of Higher Education in Development

Higher education can make an important contribution to building a stronger society, ending extreme poverty, and boosting shared prosperity. It can serve the community by contributing knowledge and advanced skills as well as basic competencies and research. Knowledge plays a growing role in the global economy, driving economic growth and productivity. Economic studies have shown a positive relationship between education and economic growth, particularly those that take into account the quality of education (Barro 2013; Hanushek and Woessmann 2008, 2012). Although it has been more difficult to identify the direct contribution of higher education to growth, evidence suggests that countries with a greater proportion of educated graduates in the labor force have greater labor productivity and increased capacity to adapt technology and to innovate (Bloom et al. 2014). This leads to higher labor productivity and greater total factor productivity (Altbach 2013). These results are present in a number of countries, such as China, Pakistan, and Cameroon (George and Augustine 2009; Stengos and Aurangzeb 2008; Whalley and Zhao 2010). Studies have also shown that higher education leads to robust private returns to graduates and have further shown, over the

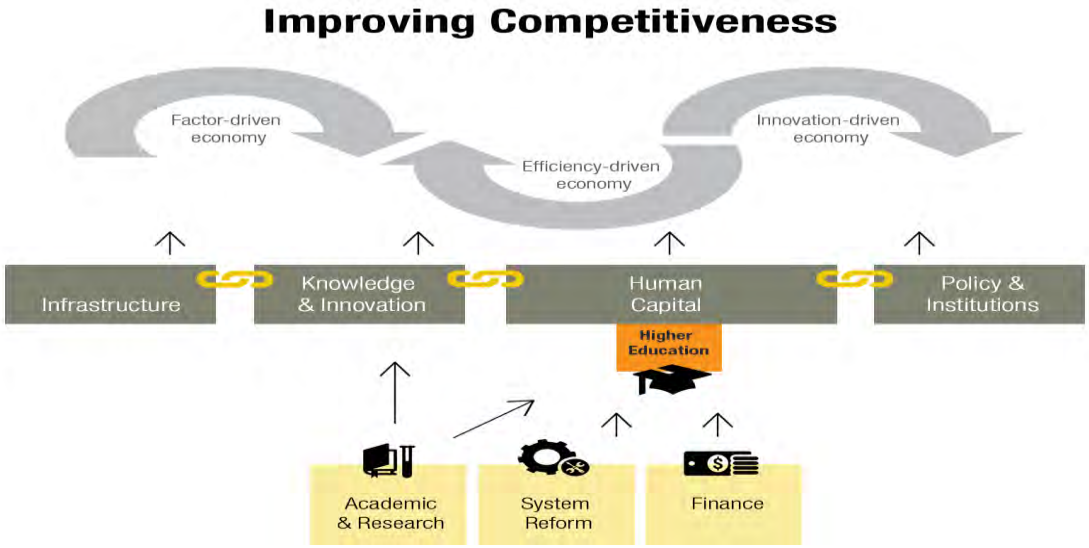
years, that the average returns are increasing and these returns now exceed those at the primary and secondary level (Montenegro and Patrinos 2014).

However, the simple act of graduating does not guarantee significant individual returns or increases in productivity. In fact, in many countries, ranging from China and India to Tunisia and Jordan, some graduates are experiencing difficulties in finding gainful employment. Furthermore, although demand for more educated workers is growing, there are emerging concerns about the quality and relevance of higher education, and about value for money and resource allocation in the sector.

The IEG evaluation of the World Bank Group's contribution to jobs and competitiveness builds on the Global Competitiveness Index methodology and provides a useful conceptual model for identifying higher education's contribution to competitiveness at each stage of development (Sala-i-Martín et al. 2015; World Bank 2016).

In this model, economies compete based on factor endowments such as unskilled labor and natural resources and can increase their competitiveness by strengthening governance and institutions, building a stable economy, and providing basic services. In more advanced, efficiency-driven economies, increasing competitiveness is driven by higher education and training, efficient and well-functioning markets, and access to domestic and global consumers. In innovation-driven economies, countries produce specialized products through sophisticated business processes and innovation. Different types of firms operate at each stage. For example, factor-driven firms dominate in factor-driven economies but continue to play a role in efficiency- and innovation-driven economies (see figure 1.1).

Figure 1.1. Higher Education and Competitiveness



Source: Sala-i-Martín et al. 2015.

The Roles and Missions of Higher Education

The higher education community generally identifies three distinct but interrelated missions (Sánchez-Barrioluengo 2013): (i) teaching and learning, (ii) research, and (iii) community engagement. In practice, these missions are not discrete, and they interact and complement each other.

TEACHING AND LEARNING: PREPARING STUDENTS FOR THE FUTURE

The first mission is perhaps the best known—that of imparting knowledge and skills to educate professionals and skilled workers in both the public and private sectors. As economies move up the value chain, they require a more educated and productive workforce. This requires improved management and specialized skills such as those in physical and social sciences, engineering, and business management.

There is little evidence on how to improve learning in higher education. In part, this reflects the lack of data on student learning and instructor interaction at this level (Carrell and West 2008). The World Bank Group's education strategy indicates that monitoring teaching and learning is weak in higher education. The strategy also notes a paucity of impact evaluations on higher education interventions (World Bank 2011). A recent systematic review identifies 175 studies on evidence at the higher education level in developing countries, of which only 24 were quantitative or evaluative. The systematic reviews find that most of the studies focus on access (Clifford et al. 2013). The absence of significant literature on the quality of teaching and learning in higher education is surprising given the abundance of literature in basic education. The basic education literature documents teacher quality as the single biggest determinant of learning and has also identifies a series of interventions that can improve this impact (Bruns and Luque 2014; Green 2010; Hanushek, Piopiunik, and Wiederhold 2014).

RESEARCH: CREATING KNOWLEDGE AND INNOVATION

The second mission consists of research that can lead to greater competitiveness, and foster innovation (Altbach, Reisberg, and Rumbley 2009). This varies greatly, ranging from applied research, which largely generates private benefits, to pure research, which creates public goods. Both pure and applied research are important foundations for future innovation and complements education (Salmi 2009). Research has network externalities and increasing returns to scale: having more researchers work together produces better results. Likewise, research tends to be costly and therefore concentrated in a small proportion of institutions. Often, certain types (such as in agriculture or public health) are better produced locally to help generate local spillover effects (Altbach, Reisberg, and Rumbley 2009; Kantor and Whalley 2013; Schneider and Sadowski 2015).

As with teaching, there is limited evidence on what works in promoting research. Research is a risky endeavor with significant information asymmetries between the researcher and the financing agency, and the measurable impacts tend to appear with significant time lag (Schneider and Sadowski 2015; Tödtling and Trippl 2005).

The economy-wide impact of research is often measured by what is known as the "residual" approach; namely by total factor productivity after the contributions of labor and capital to productivity have been subtracted (Isaksson 2007).

COMMUNITY ENGAGEMENT: SUPPORTING UNIVERSITY AND COMMUNITY COLLABORATION

The third mission, community engagement, encompasses the support higher education institutions give to bringing groups with diverse interests together to work toward a common goal. This happens through cooperation between the university and community in generating mutual benefits and includes a number of stakeholders, such as the public and private sectors, community organizations, and the general public (Buys and Bursnall 2007; Hanover Research 2011; AUCEA 2006). In particular, community engagement involves a broad range of stakeholders generating action and creating change on multiple and complex community issues (Tamarack 2002). Higher education can serve as a "development pole" that engages with the community to improve productivity (Oketch, McCowan, and Schendel 2014). In partnership with local industries, higher education institutions may harness local resources more efficiently and address employment challenges (Fetters 2010). This ranges from extension services to community radio and is generally aligned with the institution's other mission (McDowell 2003; Soeiro 2012). Community engagement goes beyond traditional efforts to improve equity and the pro-poor focus of teaching and research.

Approach and Methodology

The evaluation aims to understand the design of the World Bank Group's support for higher education and its contribution to the World Bank Group's objectives, in particular the World Bank Group strategy (World Bank Group 2014). It seeks to provide clarity on the World Bank Group's objectives in higher education and identify areas in which a coherent vision is lacking. The evaluation has three central questions:

- Is World Bank Group support for higher education consistent and well articulated?
- How has World Bank Group support contributed to higher education systems?
- How has World Bank Group support for higher education contributed to social and economic outcomes?

The World Bank Group focuses on the economic contribution of the higher education system within the context of competitiveness. The evaluation aims to understand the design of the World Bank Group's support for higher education and identify areas in which a coherent vision or an evidence-based approach are lacking. This can play a role in ensuring that the World Bank Group's support continues to a make a contribution to achievement of the World Bank Group's objectives, particularly the World Bank Group strategy (World Bank Group 2014).

The evaluation covers the period from July 2003 to May 2016, focusing on the portfolio that the World Bank Group identified as higher education or tertiary education. This evaluation uses the term *higher education* since it is the one most commonly used by policy makers and in the majority of the projects included in this portfolio review. This evaluation bases the higher education portfolio on the World Bank Group's internal definitions. In classifying interventions, the World Bank Group defines its support for higher education as "efforts to improve the teaching and research capacity of degree-granting educational institutions that support students beyond the secondary school level, specifically colleges, universities, graduate schools, and professional schools." This closely corresponds to United Nations Education, Social, and Culture Organization's International Standard Classification of Education levels 5–8, which typically offer academic programs of at least two years (UNESCO 2015).

The methodology is discussion in appendix A, which provides further detail on the evaluation design and methodology. It also includes a listing of the World Bank Group portfolio that the evaluation reviewed. Appendix B provides more information on the country case studies developed for this evaluation.

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2. Higher Education in Development: Trends and Challenges

Highlights

- The demand for higher education is increasing, leading to growing enrollment.
- Employers are concerned with the readiness of graduates, including whether they have basic cognitive and "soft" skills.
- Enrollment in higher education favors wealthier groups, though equity has been improving.
- The share of women in higher education is growing, and in some Regions, women outnumber men. However, men outnumber women in science and technical fields in all countries.

Higher education faces many perennial challenges, including expanding and promoting equitable access, improving learning achievement, fostering educational quality and relevance, strengthening knowledge and technology transfer, and encouraging desired values, behaviors, and attitudes. Even when governments recognize these challenges, most governments lack the fiscal resources to address them using the existing financing model.

Figure 2.1. Pressures and Challenges in Higher Education

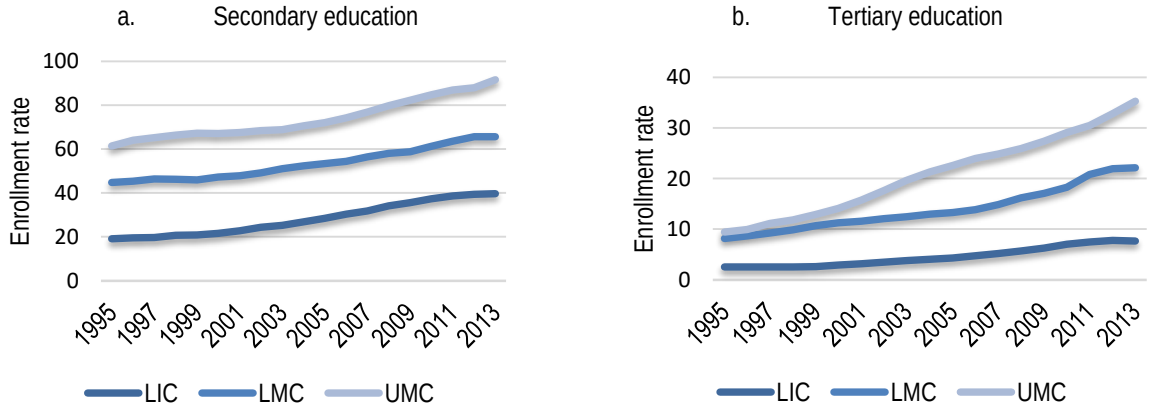
Figure 2.1 summarizes the various challenges and pressures that the higher education system is experiencing. On the one hand, successes achieved in ensuring access to and

completion of the primary education cycle have resulted in increasing enrollment at the postprimary level and, consequently, in higher education. A demographic bulge has in many instances, accompanied this momentum: in 2010, 1.8 billion youth between 10 and 24 years of ages accounted for 28 percent of the world population (UNFPA 2014). This is compounded by economic growth and the emergence of a middle class—likely to increase from 1.8 billion in 2009 to 3.2 billion by 2020 and reach 4.9 billion by 2030 (Pezzini 2012)—that is more likely to enroll in higher education.

Growing Demand for Higher Education

As seen in figure 2.2, there is a rapidly growing demand for higher education because of the substantial expansion in primary and secondary education. In some cases, the enrollment rate in higher education has outpaced that of secondary education, particularly in the East Asia and Pacific and South Asia Regions. However, there is also a great deal of inequality, in that students from poorer households often lack the same access to quality education as students from wealthier backgrounds. Access and completion often differ for male and female students. Likewise, many students lack access because of discrimination on the basis of caste, ethnicity, or other minority status. Likewise, the lack of accommodation is often a real barrier for students with disabilities.

Figure 2.2. Gross Enrollment Rates for Secondary and Tertiary Education



Source: World Bank 2016.
Note: LIC = low-income country; LMC = lower-middle-income country; upper-middle-income country.

Many factors drive rapid growth in higher education. The two main proximate determinates are growth in secondary education and an increased transition rate from secondary to tertiary education. In many countries, this is the result of government to increase the coverage of primary and secondary education. Behind these trends are many cultural and economic factors, including the increased role of females in school and work, higher incomes, and improved learning for many students (Sharma 2012).

Growth in the knowledge economy and the perception that the most desired employment requires a university degree, particularly in countries with high enrollment rates, also drives demand.

Looking forward, there are important demographic changes. From the present until 2050, the Sub-Saharan Africa Region will continue to see growth in the youth population, which will further increase the number of students. In contrast, countries in the East Asia and Pacific Region will see the total number of youth decline relatively quickly, whereas other Regions will see a more gradual decline (Filmer and Fox 2014).

Equity in Higher Education

In both the developed and developing worlds, higher education faces perennial challenges of access, equity, and diversity. Traditionally, higher education has been a privilege largely enjoyed by students from higher socioeconomic backgrounds, and current growth in enrollment raises questions about who gains access to it, and who derives benefits from it. (Appendix D on equity and inclusion in higher education provides a detailed discussion and analysis.)

Although tertiary enrollments have surged globally, there are clear disparities in access based on socioeconomic status and gender. Global data on higher education participation from Demographic and Health Surveys and other sources suggest a number of trends and stylized facts:

- Access inequality is higher in low-income countries and in countries with low overall rates of participation. In some countries, there is extremely limited or no participation from the bottom two quintiles, particularly in low-income countries in the Sub-Saharan Africa Region, such as Tanzania, Burundi, Mozambique, Madagascar, Mali, Sierra Leone, Burkina Faso, and Liberia.
- Although equity is an issue for all countries, the patterns show higher education participation is more equitable in the East Europe and Central Asia Region.
- Although participation has increased for all quintiles, the gap between the wealthiest and the poorest quintiles has widened in most countries.

Equity has many dimensions. Within higher education, there are potential issues in terms of access or enrollment (who attends), results or completion (who graduates and how fast), and learning and employability outcomes (what value-added graduates demonstrate).

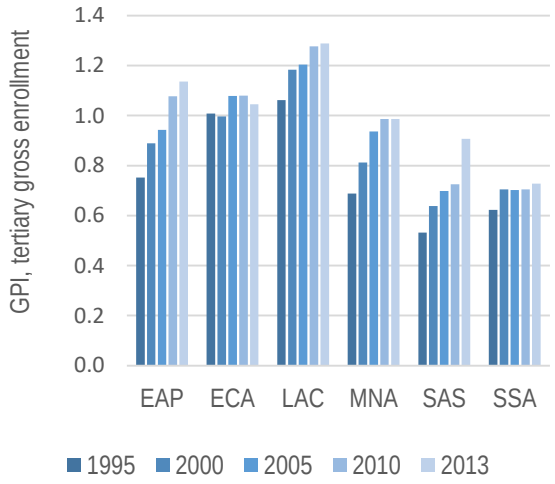
Policy makers have a wide range of policies to improve equity at the tertiary level. Broadly speaking, these can be divided into four groups: (i) financial assistance, including targeted scholarships and student loans; (ii) academic support, covering

supplemental teaching and tutoring; (iii) personal support, including academic guidance and counseling; and (iv) institutional support, comprising affirmative action, accommodation, and tracking (Rowan-Kenyon, Savitz-Romer, and Swan 2010).

Because of the inequality is enrollment, the allocation of public resources for higher education is usually regressive. Several recent World Bank Public Expenditure Reviews completed during 2012–16 categorized the concentration of public spending through a benefit incidence analysis and show that it overwhelmingly favors the wealthiest quintiles.

Gender inequality in higher education is a complicated issue that varies greatly by country, with differing causes and consequences. Unequal access for women to higher education persists in most of the developing world. Figure 2.3 helps to illustrate a number of important points in that regard:

Figure 2.3. Gender Parity Index by Region



Source: World Development Indicators' education statistics.
Note: EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAS = South Asia; SSA = Sub-Saharan Africa.

- The Sub-Saharan Africa Region has the lowest gender parity index (GPI) and has seen the smallest gain in female participation. Although the South Asia Region traditionally had a greater imbalance, its GPI approached 1 by 2013.
- The Europe and Central Asia Region has long had a well-balanced tertiary GPI, generally hovering around 1.
- The Latin America and the Caribbean Region started with a balanced GPI in 1993, but the GPI is now greater than 1, indicating that women outnumber men in higher education. The East Asia and Pacific and the Middle East and North Africa Regions have also increased female participation over time, though the former is becoming increasingly imbalanced in favor of female enrollment, whereas the latter has been moving toward gender parity in recent years.
- Although gender imbalances reflect imbalances at earlier stages of schooling, this does not fully explain gender inequality. In low-income countries, there is more gender parity in higher education than at the secondary level.

- Lower-middle-income countries have generally reached gender parity at the higher education level and upper-middle-income countries generally have a growing gender disparity, with men not enrolling at the same rate as women.

Understanding gender in higher education also requires deeper analysis. A common observation is that men and women tend to pursue different fields of study. This has implications for how resources are allocated within higher education. Moreover, the different choices of men and women regarding the fields of study may have important implications for their occupational choices and their earnings. Although country contexts differ greatly, in all countries with data, the GPI of students in the science, technology, engineering, and mathematics fields is substantially less than 1. These differences may be even greater within specific subfields. There is need for further research on the unemployment rate by gender and on the wage gap.

People with disabilities also encounter significant barriers to furthering education, as few institutions have introduced differentiated accommodations, transportation, and learning modalities to address physical and learning disabilities. This reflects the cost associated with accommodations as well as simple awareness on the part of administrators and instructors. In addition, in many countries, ethnic and religious minorities are excluded from the national economy and face discrimination in the education sector (Buchmann and Hannum 2001; Filmer 2008).

Quality of Higher Education

Quality in higher education can be seen from multiple perspectives. From an external perspective, quality is associated with higher education's contributions to society, including economic and social benefits. From student-centric perspectives, quality focuses on the student experience (Tam 2001). There are also higher education institutional perspectives that often measure quality by aggregating input and output data on students, faculty, programs, and institutions as a whole. Institutions typically have information on facilities and staff, such as faculty credentials, student-to-instructor ratio, or library size. Institutions often measure faculty outputs such as number of articles produced or patents issued (Dwyer, Millett, and Payne 2006). Institutions may also monitor quality through quality assurance, accreditation, and ranking, which can provide guidance to potential students and the institution's administration.

Many countries are focusing on improving the quality of teaching and learning. This mirrors a similar focus in basic education, which increasingly emphasizes the role of quality. Understanding quality in teaching and learning needs to be grounded in the theory of how teachers teach and adults learn. Adults learn differently from children

because of differences in experience, motivation, and cognition. In particular, adult learning draws from previous experiences, inspires acquisition of knowledge and skills in different ways, and requires higher cognitive understanding to permit critical thinking and problem solving (Fry, Ketteridge, and Marshall 2009). The higher levels of cognition build on Bloom's taxonomy, which scaffolds the complexity of learning: remember, understand, apply, analyze, evaluate, and create (Bloom 1956).

At the student level, higher education institutions primarily gather input and output data, with little focus on outcomes beyond grading students in individual classes and possibly a thesis or similar graduation requirement (Cunha and Miller 2014; Dwyer, Millett, and Payne 2006). Assessment of student learning and how they apply learning can be used to certify student aptitude and achievement as well as to improve course curricula and instructional processes at the program level. This can help create accountability at the institutional level (Parekh 2016). This assessment may take the form of standardized tests such as generic aptitude and achievement tests as well as discipline-specific tests and licensing exams (Martin 2014). Although still relatively rare, these types of assessments are on the rise and form part of the practice in countries such as Colombia and Mexico. Similar to the Program for International Student Assessment, the Organisation for Economic Co-operation and Development (OECD) has made a large-scale attempt to measure student learning (known as AHELO). Within the higher education community, the development of AHELO has raised many questions about its purpose, implementation, and use of outcomes (Parekh 2016).

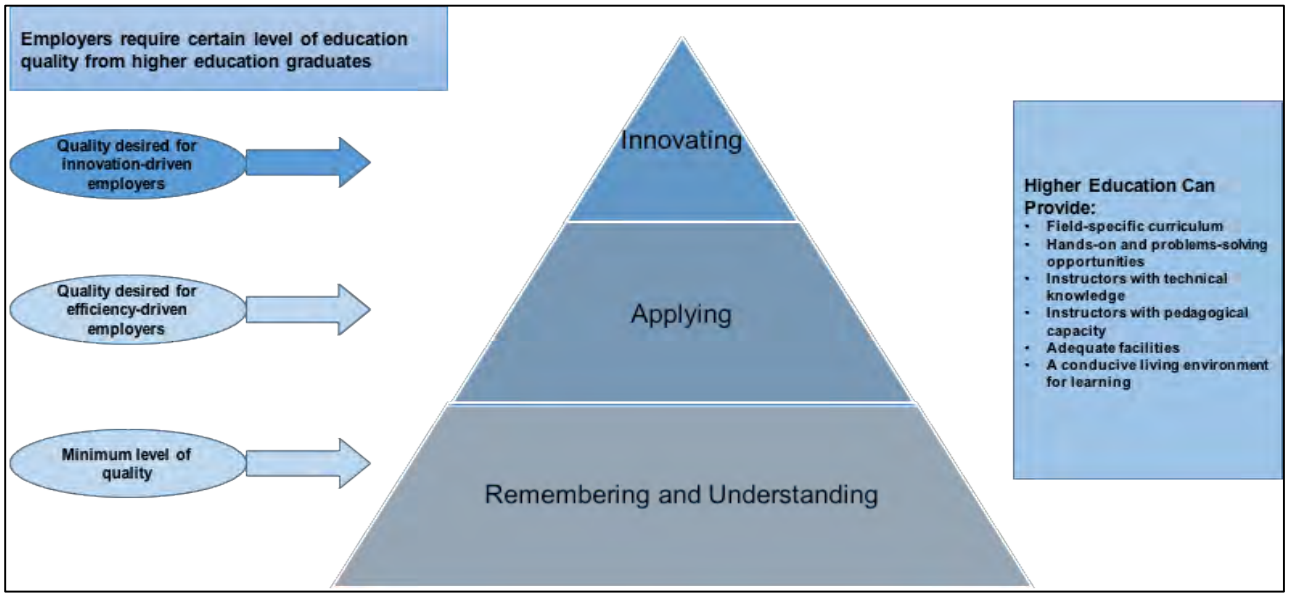
Instructors in higher education typically receive minimal or no training in teaching practices, under the assumption that mastery of a subject is sufficient (Robinson and Hope 2013). The lack of understanding of how adults learn can result in teaching and learning in higher education that is focused more on the transmission of knowledge than on higher-order thinking and application. Improving teaching and learning in higher education can potentially include improving the selection of instructors; upgrading instructor knowledge and competencies through formal training; developing technological platforms and other innovative means, such as massive open online courses; improving learning environments; and providing pedagogical support to instructors (OECD 2009). A system of self-evaluation by students and professors also complements these initiatives. Improving quality can also be supported at the institutional- and system-level through quality assurance and accreditation mechanisms. As with any assessment or evaluation system, it is important to have baselines and a mechanism to measure improvements.

Employability

In addition to access pressure generated by secondary graduates, higher education is also under stress to provide quality and relevant education to ensure the employability of school leavers and graduates. As defined by the International Labor Organization, employability requires a combination of technical skills and broader socio-emotional skills (ILO 2013). A recent review of survey evidence of employer's perspectives reveals that employers view socio-emotional skills as the most important set of skills (Cunningham and Villaseñor 2014). These are followed by cognitive skills (for example, problem solving or communication skills). In many cases, employers identified the lack of soft skills as more important than the gap in technical skills. These results are quite robust across different regions, types of countries, professions, and education levels (Cunningham and Villaseñor 2014). A survey of higher education institutions in high- and middle-income countries found that higher education administrators believe their graduates are ready for the job market more so than employers and even students (Mourshed, Farrell, and Barton 2012). Some graduates prefer to stay unemployed rather than accept a job below their expectations whereas other accept jobs for which they are overqualified (Pushkar 2016).

Although many factors contribute to youth unemployment, the quality and relevance of education is a major factor, as documented by IEG's evaluation on youth employment (World Bank 2012). Broadly speaking, graduates must have relevant technical, cognitive, and noncognitive skills to match the demands of their employer (Cleary and Van Noy 2014). Figure 2.4 outlines the relationship between the qualities of education that students receive and the demands of employers. At a minimum, for graduates to have any economic value-added, they have to be at least at the bottom of the pyramid. Below this level, there is no economic reason to hire a higher education graduate. As defined in the previous chapter, employers in efficiency-driven firms require graduates to have the capacity to apply their knowledge, whereas employers in innovation-driven firms require an even higher level of cognition.

Figure 2.4. Higher Education Quality and Employability



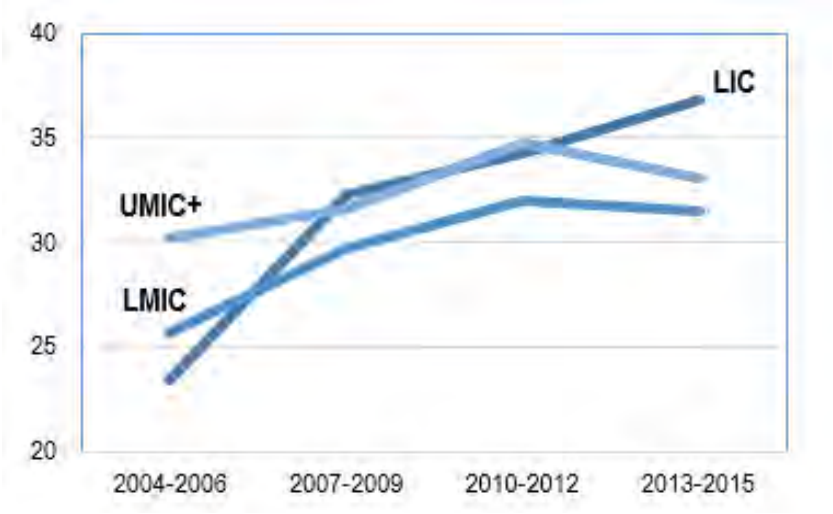
Source: IEG.

The Changing Higher Education Landscape

There is a large variety of colleges and universities, with different objectives as well as types of governance and ownership. Growing demand for higher education and changing economic and political needs have led to a greater role for private and autonomous public providers in domestic and international contexts.

The private provision of higher education. There has been a marked increase in the share of private enrollment in higher education. Figure 2.5 shows steady growth in private provision in lower-income countries compared with upper-middle-income countries that traditionally had a higher share of private provision (Levy 2013). Higher education institutions have a wide range of management and financing models. The ownership structure of private providers can range from nonprofit and faith-based institutions to for-profit providers. In general, most private providers rely on tuition for their budgets. However, in some countries, such as Chile, private higher education institutions can receive public subsidies, and in other countries, such as Colombia, private higher education students can receive public financial aid (Levy 2015). Most private providers in "soft" fields that do not require substantial capital investment (Altbach, Reisberg, and Rumbley 2009).

Figure 2.5. Private Provision of Higher Education Based on Broad Income Level



Source: World Bank 2016.
Note: LIC=Low -income country; LMIC = lower-middle- income country; UMIC+ = upper-middle-income country and above.

In many countries, the lack of educational standards and weak quality assurance systems have raised concerns about the quality of private providers. The rapid growth in enrollment has led to the concern that many private providers are "diploma mills" or "garage universities" that offer limited value-added to their students. These concerns have grown substantially with the growth of internationalization and online education (Levy 2013; Parker 2012). Without some sort of quantitative measure of quality (academic or labor outcomes), all that can be conclusively said is that there are both good- and bad-quality public and private providers and that increasing private provision has the potential to help many students. This is by no means certain or automatic; ensuring this will require good policy as well as information for students.

Autonomy. Traditionally, there has been a wide range in the degree of autonomy among higher education providers. Institutions from the Anglo-American and Latin American context have historically had a high level of autonomy, either as public institutions or private institutions relying heavily on public subsidies (Raza 2009). This has encouraged other countries to increase autonomy. This push for autonomy, combined with growing demand for enrollment and increasing costs, has led many public institutions to rely more on tuition and partnerships with the private sector (Levy 2015).

Internationalization. Increasing numbers of higher education students are studying in overseas universities. In 2012, at least 4 million students went abroad for some sort of higher education study, up from 2 million in 2000 (UNESCO 2016). This reflects the ability and willingness among certain relatively privileged students to pay for high-quality education, the growth of the knowledge economy, and increasing global

integration. Many institutions have created satellite campuses and affiliated programs, while universities in the developing world have adopted internationalized curricula to develop high-quality academics and employable graduates locally. A wide range of institutions—from top universities to medium-tier institutions that primarily focus on teaching—have organized and formed international networks. Likewise, a number of private firms have expanded their own international network, through a combination of equity investments and management contracts.

Related to internationalization is the migration of the higher education graduates to wealthier countries ("brain drain"). Traditionally, many have seen brain drain and, its counterpart, "brain gain," as a zero-sum game. However, in recent years, there has been growing recognition of "brain circulation," which implies that migration can benefit both the origin and host countries; the cases of India and China are typically cited as positive examples (Daugeliene and Marcinkeviciene 2015). Likewise, the establishment of international campuses may also serve to ensure that individuals can receive international education and continue to contribute to local development.

Setting Priorities

The supply and demand for higher education sits within a broader context. Depending on the state of development, higher education systems face differing challenges and priorities. Although basic education is a major constraint for many economies, higher education plays an important role in all countries. Table 2.1 presents higher education's as position in its particular development context, including illustrative challenges and interventions. This is a stylized description that minimizes major differences among countries. There are also other potential typologies—for example, transition economies often have more developed higher education systems than might be expected. These categories apply equally to firms and productive organizations and to the economy as a whole. In reality, countries have a mix of firms that operate simultaneously. In other words, even an advanced innovation-driven economy will have factor-driven firms.

Table 2.1. Stylized Priorities in Higher Education

		Higher education	
Level of development	Development challenges	Major challenges	Interventions
Fragile and conflict-affected states	Limited progress toward Millennium Development Goals Minimal rule of law Few basic institutions Cycle of violence Lack of employment	Poor public institutions and limited private sector Poor infrastructure Lack of trained faculty Lack of access for potential students	Support strategic and financial planning Build facilities and create alternative service delivery Train faculty Provide scholarships
Small states	High trade costs Susceptibility to shocks Low diversification of domestic production	Limited economies of scale to develop institutions Lack of trained professionals "Brain drain"	Support regional cooperation Promote brain circulation Build regional universities Provide scholarships to overseas universities
Factor-driven economies (generally corresponding to low-income countries)	Unstable economy Weak basic institutions Insufficient access to services Lack of support for basic human capital	Underdeveloped systems Poor quality of facilities Shortage of qualified faculty Shortage of skilled workers Out-of-date curriculum Limited linkages to productive economy	Strengthen systems and universities Support curriculum development Provide teacher training Expand higher education infrastructure
Factor-driven economies transitioning to efficiency-driven economies (generally lower-middle-Income countries)	Limited postsecondary workforce Inefficient financial, goods, and labor market Low productivity and efficiency Develop manufacturing economy	Access marked with inequality Lack of skilled workers Low quality and relevance of teaching Underdeveloped research	Create need-based scholarships Design relevant curriculum Upgrade faculty Provide accountability and quality assurance Support critical research Support alternative providers
Efficiency-driven economies transitioning to innovation-driven economies (generally, upper-middle and high-income countries)	Slow technological growth and innovation Lack of value-added in the economy Weak service sector Inequality	High demand for enrollment Barriers for secondary graduates Limited university-industry partnership Low innovation	Promote diversity in higher education modalities Provide student aid Perform research in competitive areas

Source: IEG.

A country's approach to higher education depends on its context. For example, fragile and conflict-affected states need to focus on stability by restoring institutions and establishing rule of law. Their higher education systems are likely to be nascent, and therefore should focus on basic educational infrastructure and alternative systems of education delivery. At the national level, the more stable factor-driven economies should prioritize building stable and robust economies. In these countries, higher

education systems need focus on building basic infrastructure, improving systems and policies, and strengthening institutions. Finally, more advanced efficiency-driven economies are transitioning into manufacturing and service economies. Their economies require a diverse and better-skilled workforce, and their higher education systems should focus on improving higher education opportunities for all students and prioritizing relevant teaching and learning and research.

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3. The World Bank Group and Higher Education

Highlights

- The World Bank Group has a coherent set of strategies for broad education sector development and for higher education, with specific reference to the competitiveness and jobs agenda.
- The overarching framework for World Bank Group support to higher education may need to be adjusted in light of a rapidly changing context and the twin goals of the World Bank strategy.
- While there is communication between the Education Global Practice and other global practices and the International Finance Corporation on higher education, there is little evidence of coordination.
- Many external financiers support higher education with room for more cooperation and collaboration, both among themselves and with the World Bank Group.

Higher education has been a central part of the World Bank Group's support for education since the 1960s. From 1963 to 1970, it accounted for 17 percent of education lending. Most of these early projects focused on providers, particularly construction and equipment. From 1971 to 1984, the proportion of higher education projects increased to 38 percent. The World Bank complemented this with a gradual move toward "soft" investments, such as training and developing skills (World Bank 2011). However, by the mid-1980s the World Bank and other donors shifted away from higher education toward basic education (Bloom et al. 2014; World Bank 1999). Increased support for basic education from other international financial institutions and donors, and the renewed focus on competitiveness in the 2000s led to a reevaluation of World Bank support for higher education in areas such as higher education diversification, educational standards, curriculum reform, and science and technology (World Bank 2000, 2002, 2011; Altbach, Reisberg, and Rumbley 2009). Likewise, the International Finance Corporation (IFC) began investing in the education sectors in the late 1990s, focusing on higher education.

The World Bank Group's Strategies and Its Approach to Higher Education

Institutional Strategies

The World Bank Group has a number of strategic documents that guide its support for higher education. Although these have different purposes, these strategies complement each other, with differences reflecting different regional priorities. Higher education may contribute to the broader World Bank Group strategy, in particular promoting shared prosperity through economic growth, inclusion, and sustainability by producing employable graduates, while strengthening institutions and economies. Although

discussed, higher education does not play a major role in the World Bank Group's education sector strategy, *Learning for All*. The broad thrust of the education strategy is to strengthen the education system and to develop a knowledge base.

Although there is no single higher education strategy, the World Bank has articulated its views in knowledge work, for example, in *Constructing Knowledge Societies* (World Bank 2002). It argues that the World Bank plays an integral role in higher education by facilitating policy dialogue and knowledge sharing in higher education. The World Bank also provides financing to client countries to support a number of goals: (i) greater access and equity; (ii) improved relevance and quality; (iii) strengthened research; (iv) improved management and financial systems; and (v) institutional diversification and innovation. The detailed portfolio analysis presented in chapter 4 reflects these priorities.

IFC has aligned its strategies with the World Bank's approach, with particular reference to access and equity, quality, and relevance. IFC has updated its education strategy twice since 2001—in 2008 and 2012—but its basic strategic priorities have remained consistent over time. IFC's strategic approach combines a business objective, a catalytic objective, and a development objective. IFC investments must be financially viable to make a positive contribution to development and should help mobilize resources. IFC investments also prioritize access for poorer students, although not necessarily the poorest students. The most recent strategy emphasizes scalability, innovation, and the World Bank Group's convening power. Skills, competencies, and employability are strategic priorities of IFC's higher education strategy.

COUNTRY STRATEGIES

Education was identified as a key objective in 88 of the 92 Independent Evaluation Group (IEG) country strategy reviews between FY12 and FY 16. Higher education is a key issue in 30 of those 88 cases. The heaviest concentration of higher education-related objectives is in the East Europe and Central Asia Region with a relatively equal distribution among the remainder of Regions. The thematic emphasis differs from Region to Region. For example, governance is the most common issue in East Europe and Central Asia Region, skills and employability in Middle East and North Africa Region, and access and enrollment in Sub-Saharan Africa Region.

Higher education features in 6 of the 17 IEG country program evaluations that cover the evaluation period, including Kazakhstan, Zambia, Tunisia, Afghanistan, Nepal, and Mozambique. In general, country strategies that supported higher education have promoted it primarily by improve (i) access and equity, (ii) skills and employability, (iii) competitiveness, and (iv) governance and institutional reform.

In 2013, the World Bank Group introduced a new approach to the development of country-level strategies that aims to make its support more systematic, evidence-based, selective, and focused. This incorporates two instruments: (i) the Systematic Country Diagnostic, which is a diagnosis of constraints and opportunities; and (ii) the Country Partnership Framework, which guides the World Bank Group's support. A forthcoming IEG evaluation of the new country engagement model identified 22 Systematic Country Diagnostic / Country Partnership Frameworks approved pairs by May 2016, and this evaluation used this set to explore the degree to which higher education is likely to feature in future country-level strategies. Two-thirds of the Systematic Country Diagnostics (14 out of 22) identified education as a priority issue. Although universities were directly referenced in only two instances (Costa Rica and Côte d'Ivoire), one-third of the Country Partnership Frameworks (7 out of 22) included some aspect of higher education as a priority. Broadly speaking, economic concerns such as skills shortages and mismatches drive the motivation for engagement in higher education. There is some element of emphasis on access and equity, marginal emphasis on governance and building institutions, and no emphasis on research.

The World Bank Group's Portfolio

The World Bank Group's support for higher education has been growing substantially. The World Bank has invested nearly $12 billion in higher education over the past decade, as shown in table 3.1. As developing countries expand basic education systems and transition into the knowledge economy, the World Bank Group is facing increased demand for support of higher education. Appendix E presents more details about the portfolio and the results of the evaluation.

WORLD BANK PORTFOLIO

For the analysis of the public sector portfolio, this evaluation divided higher education projects into two categories. The first, core higher education projects, refers to projects whose primary function is to support higher education. A second group of operations (noncore higher education projects) include a higher education intervention or objective as part of a typically larger project with broader scope. Table 3.1 shows that there were 139 projects that supported higher education during the evaluation period, of which 54 had a significant focus on this subsector.

The majority of core projects and about half the noncore projects were from the education sector. In the Sub-Saharan Africa and the Europe and Central Asia Regions, most noncore higher education projects are part of general education or postprimary education projects (12 out of 16 and 10 out of 13, respectively). Many noncore projects are in other global practices to support other interventions.

The share of higher education is increasing at a time when education lending also appears to be growing. Although the bulk of lending is to middle- and high-income countries (about 85 percent of commitments of core projects), the World Bank provided support to low-income countries, including a regional project in Sub-Saharan Africa and projects in Afghanistan, Burkina Faso, Malawi, and Uganda, among others.

Table 3.1. World Bank Portfolio, FY03–16

	IBRD *(US$, millions)*		IDA[a] *(US$, millions)*		Total	Projects *(no.)*		Projects per
Regions	DPO	IPF	DPO	IPF	*(US$, millions)*	DPO	IPF	global practice
Core	100	1,760	250	3,058	5,168	5	49	Education: 50
AFR	0	0	0	845	845	0	12	Other HD: 2
EAP	0	128	150	499	777	3	7	EFI: 2
ECA	0	16	0	57	73	0	3	
LAC	100	1,445	0	18	1,563	1	12	
MNA	0	171	0	16	187	0	4	
SAR	0	0	100	1,623	1,723	1	11	
Noncore	3,038	1,334	183	2,124	6,679	17	68	
AFR	15	0	85	1,291	1,391	4	26	Education: 45
EAP	0	280	8	175	462	2	9	Other HD: 11
ECA	1,768	822	90	167	2,847	6	19	SD: 10
LAC	505	226	0	0	731	1	4	EFI: 19
MNA	750	6	0	6	762	4	2	
SAR	0	0	0	485	485	0	8	
Total	3,138	3,094	433	5,181	11,847	22	117	

Note: AFR = Africa; DPO = development policy operation; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; EFI = Equitable Growth, Finance, and Inclusion; HD = Human Development; IBRD = International Bank for Reconstruction and Development; IDA = International Development Association; IPF = investment project financing LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia; SD = Sustainable Development.

a. Many current middle-income countries were eligible to receive IDA financing during the evaluation period.

Among 117 higher education investment projects, improving quality and relevance of teaching and learning in higher education was the most common project development objective (PDO), followed by strengthening the higher education system, increasing access and equity, and improving skills and employability (see table 3.2).

Table 3.2. World Bank Higher Education Core and Noncore Projects by Region and Thematic Area

	Total		AFR		EAP		ECA		LAC		MNA		SAR	
Objective area	Core	Non-core	Core	Non-core	Core	Non-core	Core	Non-core	Core	Non-core	Core	Non-core	Core	Non-core
No. of investment projects	49	68	12	26	7	9	3	19	12	4	4	2	11	8
Competitiveness and PSD	4	10	0	3	0	0	0	1	2	4	0	1	2	1
Skills and employability	12	11	3	3	1	1	0	2	2	1	3	0	3	4
Public sector development	1	5	0	3	0	1	0	0	0	0	0	0	1	1
Knowledge economy	3	5	1	0	0	0	0	2	1	2	1	0	0	1
Access and equity	23	7	6	0	2	0	0	2	7	1	2	0	6	4
Teaching and learning	34	15	9	2	5	3	3	5	7	0	3	0	7	5
Improving research	16	6	5	0	4	1	1	1	3	3	0	0	3	1
Higher education system	26	6	6	1	4	0	1	3	7	1	2	1	6	0
Other	2	30	1	17	1	4	0	9	0	0	0	0	0	0

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; PSD = private sector development; SAR = South Asia.

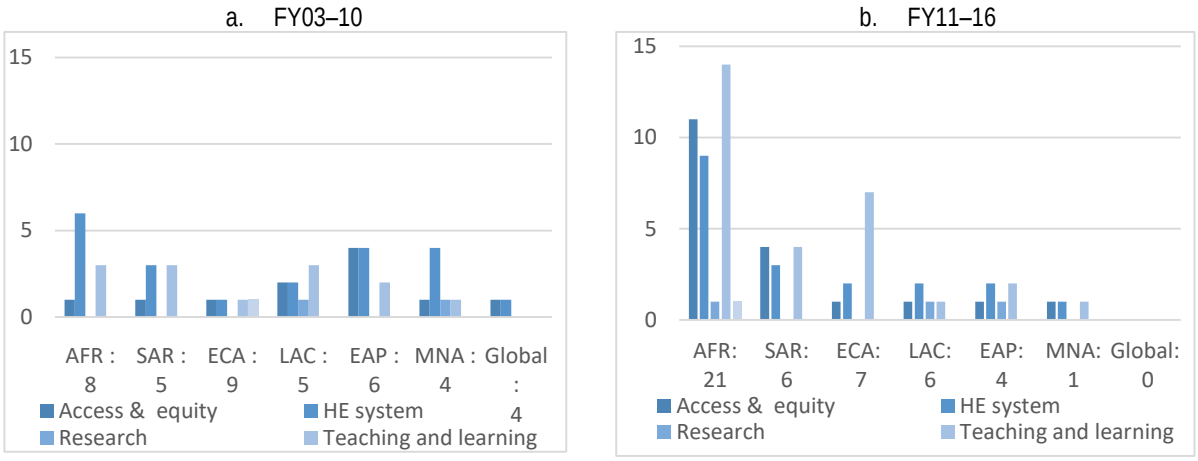
The evaluation identified 22 individual development policy operations (DPOs) that have at least one prior action with a higher education focus, including 4 DPOs in two series that entirely focused on the sector. During the evaluation period, this accounted for 63 individual prior actions. Likewise, it is not surprising that DPOs focus on financial sustainability as well as governance and system reform.

ANALYTICAL AND SECTOR WORK IN HIGHER EDUCATION

The evaluation identified 87 different advisory services and analytics products associated with higher education (figure 3.1). Based on this analysis, the evaluation has identified a number of trends and stylized facts:

- The increase in the number of advisory services and analytics in higher education after the approval of the Education Sector Strategy in 2011 was notable—increasing from an average of 4.7 per year to 7.5 per year, particularly after 2013.
- Governance within higher education (including quality assurance systems and accreditation) became a major theme after 2011.
- Teaching and learning (including employability and skills) were most common in the Sub-Saharan Africa and the Europe and Central Asia Regions.

Figure 3.1. Advisory Services and Analytics in Higher Education, FY03–10 and FY11–16



Note: AFR = Sub-Saharan Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; HE = higher education; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

This evaluation was not able to cover a number of knowledge products, particularly many Reimbursable Advisory Services and some trust fund-supported products due to access issues (for example, confidentiality of some Reimbursable Advisory Services and incomplete filing of reports from trust fund operations). Box 3.1 discusses reimbursable services.

Box 3.1. Reimbursable Advisory Services

A Reimbursable Advisory Service is an instrument that enables the World Bank to deliver targeted technical assistance that the beneficiary government finances. The country and the World Bank work together to develop a program that may include technical advice, analytical services, and capacity building. The World Bank provides its experience and expertise developed through its knowledge and project support. The instrument has enabled the World Bank to work across a wide range of higher education issues in upper-middle and high-income countries, primarily in the Europe and Central Asia Region. The topics include quality assurance, internationalization, and strategic planning and management, among others.

For example, in 2013 and 2014, the World Bank collaborated with the government of Latvia to evaluate its higher education financing, building on country-specific European Commission recommendations. The joint team analyzed the strengths and weaknesses of the current approach to financing public higher education financing and the government in 2015 formally adopted its alignment to national strategies.

Source: IEG analysis.

Knowledge work plays an important role in the World Bank's approach to higher education. The World Bank has provided technical support to a range of countries, including high- and upper-middle-income countries and fragile and conflict-affected

states. The World Bank often relies on its knowledge work to focus on system issues such as quality assurance and governance. For example, in recent years, the World Bank has developed knowledge products to help restore higher education governance in Liberia, Sierra Leone, and Côte d'Ivoire. These products include support to develop higher education strategies and reforms as well as analysis of labor market demands and education finance (World Bank 2016). The World Bank has also prepared a number of regional publications and country-specific sector studies, such as those on Vietnam and Chile. These studies generally focus on both the economy-wide benefits of higher education and the context-specific challenges.

IFC PORTFOLIO

From 2003, IFC committed approximately $721.8 million to higher education (officially classified as "colleges, universities, and professional schools") through 42 investments. This represented 69 percent of IFC's total commitment to the education sector during this period. Table 3.3 shows there were investments in all six Regions, with a particular focus on Latin America and the Caribbean. Nearly 70 percent of IFC's investments were in upper-middle-income countries, with the remainder in lower-middle-income countries. Nineteen advisory service projects—worth $7.8 million—complemented these investments, with 10 projects being in the Sub-Saharan Africa Region and 6 in the Middle East and North Africa Region.

IFC's higher education portfolio focused on infrastructure, including construction, expansion, and rehabilitation of campuses and facilities. IFC's focus on access also included emphasis on distance learning, and provided support to student financing initiatives, primarily through student credit.

IFC defines additionality as the unique contribution it brings to the table. Additionality can be monetary or nonmonetary; it can directly benefit the client or the client's project. In higher education, IFC's additionality justifications at approval included providing the client with global knowledge, sector expertise, or best practices in the higher education sector; enhancing the credibility of a sponsor, business model, or loan program; providing otherwise unavailable long-term financing; providing innovative financing; and improving environmental and social standards.

IFC's advisory services included support for strengthening the capacity of business schools in Sub-Saharan Africa (Global Business School Network); developing skills, competencies, and qualification framework development; providing labor market information in the Middle East and North Africa; and facilitating public-private partnerships, student loan studies, and monitoring and evaluation. Its support has also included strengthening local evaluation capacity and building regional partnerships.

Table 3.3. Private Sector Investment in Higher Education

Time period, Region, or income level	Investment		Advisory services	
	Projects *(no.)*	Amount *(US$, millions)*	Projects *(no.)*	Amount *(US$, millions)*
Years				
2003–05	3	16.6	n.a.	n.a.
2006–08	9	45.1	11	4.8
2009–11	12	150.9	1	0.3
2012–14	14	362.6	7	2.6
2015–16	4	146.6	0	0.0
Region				
AFR	5	19.8	10	5.3
EAP	2	4.7	0	0.0
ECA	3	73.5	0	0.0
LAC	24	474.0	2	0.2
MNA	6	43.7	6	2.0
SAR	0	0.0	1	0.3
Income level				
World or Regional	2	106.0	3	1.4
LIC	0	0.0	0	0.0
LMIC	9	36.2	9	2.8
UMC	25	508.2	7	3.6
Total	42	721.8	19	7.8

Note: Advisory Services were rolled out at the corporate level in FY05. AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; LIC = low-income country; LMIC = lower-middle-income country; MNA = Middle East and North Africa; n.a. = not applicable; SAR = South Asia; UMIC = upper-middle-income country.

Coordination in Higher Education

No sector operates in a vacuum, and the World Bank Group's capacity to coordinate its support internally and externally plays an important role in promoting development effectiveness. Coordination here refers to the World Bank Group's organization of different complex elements or activities so that they work together efficiently. It implies an awareness of different activities related to higher education as well as active efforts to build complementarity between these actions when appropriate.

INTERNAL COORDINATION

Evidence from interviews and country case studies indicates a high level of communication and collaboration within the Education Global Practice. The World Bank's Higher Education Thematic Group, known as the Core Higher Education Group (COREHEG), comprises both education and noneducation specialists and has been quite active in exchanging knowledge and experience in discussions of operational and technical challenges in higher education. Most World Bank staff interviewed were actively involved in exchanging lessons with higher education experts in other Regions.

The country case studies and Project Performance Assessment Reports note turnover in project team leaders appears to be a challenge, particularly for noncore projects outside of the Education Global Practice. Other IEG evaluations have found similar results in many sectors and in the recent evaluation, *Learning and Results in World Bank Operations* (World Bank 2014).

Coordination across global practices may be more of a challenge for noncore higher education projects. For example, in Malawi, two different investment projects supported the same program. However, coordination and communication between the project teams seemed limited. In other noncore projects with important higher education elements (for example, in the Lao People's Democratic Republic and Liberia), there did not appear to be an education specialist on the design or supervision teams. In other countries, coordination among global practices appeared to be ad hoc and opportunistic. For example, in Armenia, there was coordination with the Social Protection Global Practices but other global practices presented missed opportunities.

The evidence suggests a good level of communication and collaboration between the World Bank and IFC during project preparation. In the 16 countries where both are active in higher education, a review of project documents suggests that both institutions had a high level of awareness of each other's portfolio. Usually, this appears as a reference in project documents. For example, in Chile, IFC made specific mention of both World Bank investment projects and analytical work, and in Jordan, the World Bank's technical assistance on financial aid referred to IFC's operations. In India, there were many instances of formal and informal collaboration between the two institutions.

In some cases, the two institutes worked together. In Chile, for example, there is an ongoing joint study on the role of public and private institutions. In Vietnam, the World Bank coordinated with IFC through its knowledge and project work. In Colombia, the World Bank and IFC signed a memorandum of understanding to formalize collaboration for a student loan project.

EXTERNAL COORDINATION

There is a long tradition of international support and cooperation for higher education, although traditional development partners greatly reduced support of higher education in the 1980s and 1990s (Bloom et al. 2014). Current data sets on donor funding in higher education are somewhat limited. The OECD and AidData's databases are incomplete and often include technical vocational education and training. According to OECD, since 2003, the largest bilateral aid donors in postsecondary education are Germany and France, followed by the United States and Japan (OECD 2016). France appears to be the largest provider of bilateral assistance in higher education, focusing on francophone

African countries, divided equally between system support and scholarships (Lewis 2009). Germany provides most of its support as scholarships (Varghese 2011).

Unlike in other sectors, nontraditional donors such as foundations and other agencies contribute to higher education. This support includes in-kind donations, scholarships, partnerships, and exchanges (Varghese 2011). The identification and portrayal of both traditional and nontraditional donor aid in higher education is often incomplete in World Bank project documents. For example, the Higher Education Project in Pakistan did not refer to the British Council's support for improving higher education governance and underestimated the amount of external scholarships and grants available. In Vietnam, universities reported receiving donations of equipment from external sources. In both cases, this support was directly relevant to the World Bank's activities. Likewise, interviews with other donors suggested a lack of awareness of the World Bank's activities. More recently, the World Bank has begun reaching out to nontraditional donors, by participating in international forums.

The higher education investment portfolio includes only five co-financed projects, including two trust funds and a nontraditional donor (the Commonwealth of Learning), for $92 million. The World Bank sometimes works with other development partners informally. More recently, the two African Centers of Excellence are actively coordinating with other financiers to raise funds in parallel with the projects' financing.

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4. Evaluation Findings: World Bank Group Support to Higher Education

Highlights

- The results frameworks in World Bank Group investments in higher education typically focus on measuring inputs and outputs with little information on outcomes.
- There is little use of evidence to justify one particular type of intervention over another and little use of impact evaluation or other types of evaluations.
- The World Bank relies heavily on grants to provide direct support for universities.
- Many World Bank projects support strengthening the higher education system, generally promoting institutional autonomy and quality assurance.
- With important exceptions, improving access and equity has not been a major area of focus for the World Bank. In contrast, the International Finance Corporation (IFC) has generally had an equity focus.
- Employability is a major consideration underpinning World Bank support, primarily addressed by strengthening the quality and relevance of teaching and learning.
- Research is a major theme in World Bank support and is included in most higher education projects.
- The World Bank has provided limited explicit support to community engagement, the "third mission" of higher education.

This chapter presents findings on World Bank Group support for higher education between FY03 and FY16. The chapter first details common issues in the World Bank Group's higher education portfolio. The chapter then moves on to a presentation of findings regarding the core areas of focus in the World Bank Group engagement in higher education as follows: higher education systems; access and equity; teaching and learning; employability; and research.

Common Threads

Improving equitable access, the employability of graduates, and the quality of research are all major goals of the World Bank's support for higher education through both its stated objectives and its activities. The International Finance Corporation (IFC) predominantly focuses on expanding access. In reviewing projects supporting access, employability, and research, the evaluation identified a number of common findings that apply across the World Bank, and to a lesser extent, IFC portfolios.

The World Bank uses both competitive and noncompetitive block grants, known as *performance agreements* or *academic funds*, as its primary instrument to provide financing to higher education institutions. Grants have been used in low-income and fragile and conflict-affected states (for example, Afghanistan, Burkina Faso, Malawi, and Nepal), as well as in countries with more developed higher education systems (such as Armenia, Chile, and Vietnam). As shown in appendix B, virtually all core higher education projects include some sort of grant program that provides financing to higher education institutions, programs, or research teams. The World Bank also uses grants to support equity-oriented interventions. The provision of support through grants to noncore projects is less common. Given its focus on access, IFC generally invests in infrastructure and supports financing of student loans.

This evaluation notes the World Bank appears to be moving away from smaller grant programs that target individual researchers and programs toward larger grant programs and performance agreements at the institutional level. The latter represent a natural evolution in World Bank support of institutional autonomy. The World Bank's support of larger and targeted grants has explicitly promoted autonomy. For example, in Chile, the World Bank has increased the size of grants to focus more on institutional priorities. The World Bank has also decreased the number of participating institutions to generate more institutional impact in Vietnam.

Table 4.1. Allocation of Grants

	Projects *(no.)*			Percentage of projects supporting grants to higher education institutions *(%)*		
Income category	Total	Core	Noncore	Total	Core	Noncore
High income	7	3	4	86	100	75
Low income	34	12	22	41	83	18
Lower middle income	47	21	26	60	81	42
Upper middle income	28	12	16	32	50	19
Regional	1	1	0	100	100	0
Total	117	49	68	50	76	31

Results frameworks in World Bank core higher education projects tend to be weak. They usually concentrate on measuring inputs and outputs with little attention paid to outcomes. For example, projects often measure access and equity in terms of total enrollment or number of scholarships without considering student retention and dropout rates. Result frameworks typically measure employability by looking at the quality of the faculty, with little focus on outcomes or outputs. The use of grants puts investment projects at "arm's length" from beneficiaries, which may limit the World Bank's capacity to gather and analyze data. Project result frameworks could incorporate more results from the grants.

The evaluation also shows limited use of rigorous evidence in the design and development of specific interventions. Micro-interventions to improve equity, teaching and learning, employability, and research outcomes are all amenable to rigorous piloting and evaluation, unlike systemwide reform, which is more difficult to measure. It should be possible to evaluate what types of interventions are appropriate to reach specific objectives, as is commonly done in other areas of education. The evaluation found that implementers must generally develop interventions on their own and that the lessons learned cited in project documents are generic. Thus, it would be safe to say that the World Bank contributes too little to generating new evidence despite the World Bank Group's commitment to using evidence-based interventions.

The design of systemwide reforms appears to be based on limited evidence. The evaluation finds that, despite careful preparatory work and attempts to understand local context, many World Bank interventions default to the following standard set of interventions: promoting autonomy, creating or strengthening quality assurance mechanisms, and financing interventions through grants. Although the World Bank supports both first-tier institutions and lower-tier institutions, it uses an approach typically justified by reference to similar practices in top-tier universities in the United States or the United Kingdom but without sufficiently discussing whether the particular setting warrants such an extrapolation. Although these macro-level interventions are generally not amenable to rigorous quantitative analysis, there are a number of rigorous qualitative evaluation methods that could shed light on "what works" at the systems level.

Given the lack of outcome indicators, it is difficult to draw conclusions about the contribution of higher education interventions. The universe of evaluated public sector projects is small. In the absence of outcome indicators, it is often not possible to decompose the relationship between a project's efficacy rating and a particular intervention. Thus, the evaluation draws on information from the portfolio review along with the country case studies and interviews to describe and analyze World Bank engagement in the sector. This is especially true for noncore projects. Beyond project development objectives, project activities provide further guidance on the World Bank's goals and objectives.

Although IFC projects do not have formal development objectives, various elements of project documents provide insight into its investments' intended purposes and objectives. IFC is aware of the potential reputational risk associated with investments in private education and, as such, its due diligence in the higher education sector is extensive. The IFC's due diligence provides assurance that its investments are in institutions with a reasonable level of quality, thus generally avoiding so-called "diploma mills." The low number of evaluated projects hinders an analysis of its

developmental results. Four of the seven evaluated projects were rated moderately successful or higher on development outcome; however, this rating includes factors other than development effectiveness, including project business success, economic sustainability, environmental and social management, and private sector development. There is little evidence of the extent to which IFC has contributed to improving employability or access for lower-income students.

The World Bank explicitly targeted vulnerable and disadvantaged groups, mainly defined by income, gender, and ethnicity, in about one-third of its investment projects. Projects targeting lower socioeconomic groups predominate in the South Asia and Latin America and the Caribbean Regions as well as in upper-middle countries. Likewise, higher education interventions targeting women were more common in the South Asia and East Asia and Pacific Regions as well as lower-middle income countries. (For more information, see table 4.2 on Projects Targeting Specific Population Groups).

Table 4.2. Projects Targeting Specific Population Groups

Category	Low income	Women	Ethnic minority	Any population group
Region				
AFR	1	4	1	5
EAP	4	3	3	7
ECA	2	2	0	3
LAC	6	0	4	8
MNA	1	1	0	1
SAR	9	6	1	12
Country income				
Low income	5	5	3	9
Lower middle income	10	10	2	18
Upper middle income	7	1	4	8
High income	1	0	0	1
Total	23	16	9	36

Note: Projects may target several population groups. AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

However, few projects specified mechanisms to target vulnerable and disadvantaged groups. In 21 projects, the World Bank used geographic location to target populations. For example, projects in Vietnam, Mexico, Afghanistan, Mozambique, Peru, and Guyana supported higher education institutions located in isolated areas with a higher proportion of vulnerable students. Other projects opted to focus on particular fields or programs in which target groups are concentrated. This is particularly the case for projects that target women, such as those in Sri Lanka that supported female-dominated disciplines like the arts, management, and science. In a few cases, World Bank projects used more sophisticated methods built around an assessment of micro data. In Colombia, student targeting for loans and grants used an existing national system that

identified poor households. In Mexico, a project developed its own system to identify students that qualified for scholarships.

Laying the Foundations: Strengthening Higher Education Systems

The evaluation starts its analysis of specific aspects of World Bank Group support with a focus on governance and system issues because support in this area forms the cornerstone of World Bank Group support. The World Bank Group's education strategy emphasizes the importance of education systems and commits the World Bank Group to promote a systems approach that focuses on policies and accountability mechanisms that binds higher education to the broader education system and, ultimately, the broader economy (World Bank 2011). Although adequate financing is important, strengthening higher education systems involves the improvement of the effectiveness and efficiency of higher education—producing outputs and outcomes for the resources invested. A systems approach involves improving institutional management, developing more sustainable and realistic financing systems, and developing incentives for staff, units, and programs. Given the diversity of higher education's missions and institutions, the system requires monitoring and evaluation as well as quality assurance.

The World Bank often includes an explicit governance focus in its operations. Interviews with World Bank staff emphasized the importance of different types of governance reform, particularly in establishing quality assurance mechanisms. Interviewees also confirmed a general interest in taking a systems approach, although such an approach was not always apparent in interventions. Interviews with IFC staff emphasized the importance of having a strong system as a way to manage risks and ensure better results.

About 45 percent of core investment projects include governance in their PDOs, and 60 percent of core projects support activities that have a clear focus on governance. Of the 32 core and noncore projects that focus on governance at PDO level, 17 focus on institutional management and 14 on systems governance, with many mixing both. In practice, there appears to be little difference between the two approaches when comparing activities. The most common types of interventions involve quality assurance mechanisms and improvement plans. The evaluation team got firsthand feedback on these types of intervention as part of country visits to Malawi and Vietnam. Less common interventions focus on improving financial mechanisms, introducing performance incentives, and building capacity (see table 4.3).

Improving governance is a major focus of development policy operations (DPOs). Of the 28 DPOs that include higher education in at least one prior action, 20 have a

governance focus, with specific attention paid to promoting autonomy, strengthening regulations, and strengthening financing. Pakistan and Vietnam both had DPOs that focused on the establishment of external and institutional quality assurance mechanisms as ways to promote private participation and greater autonomy. In the case of Pakistan, the DPO included a number of indicators directly related to specific policy areas supported by the World Bank (such as greater participation by private providers) with other indicators related to the government's larger program (such as increase in articles published or students enrolled). By contrast, the Vietnam DPO focused more on outcomes directly related to the World Bank's investments, such as the establishment of autonomous bodies and of quality assurance mechanisms.

Much of the World Bank's support for governance focuses on increasing university autonomy. As previously discussed, grants to higher education institutions play an important role in World Bank support. Since grants typically support other goals (such as promoting research and improving teaching), they are not classified as "governance interventions." However, in practice, the interventions clearly relate to efforts to support institutional capacity.

The World Bank also provided support through stand-alone knowledge work, capacity building in the project preparation phase, and technical assistance embedded in project components. As detailed in chapter 3, the number of knowledge products that focused on strengthening higher education systems significantly increased starting in 2011, coinciding with the publication of the World Bank Group's education strategy (World Bank 2011). It is not possible to identify the contribution of these knowledge products; however, they clearly intended to contribute to project design and the development of government policy and may have done so successfully. Currently, the Education Global Practice is developing an instrument, known as Systems Approach for Better Education Results, to measure the implementation of reform in higher education systems. The Education Global Practice has designed its conceptual framework and is piloting the instrument.

Since IFC invests at the institutional level, its support for systems development is indirect. The country case study for Vietnam found IFC's support became an important model for other private and international higher education institutions. Interviewees confirmed that IFC support also had a demonstration effect for the government. As private provider and autonomy are important in the World Bank's program, IFC support complements the World Bank. In all of the case study countries, the World Bank addressed financial sustainability through knowledge work. In some cases (India, Malawi, Vietnam, and to a lesser extent, Chile), this influenced higher education financing policy. One DPO (Armenia) and one investment project (Malawi) directly addressed financing. Both appear to have been successful, although the support in

Malawi is quite recent. The country case studies also show that although the World Bank provided support for regulatory and governance reform, it primarily focused on quality assurance and autonomy through the World Bank's Reimbursable Advisory Services (see box 3.1). Among the case study countries, World Bank support for governance was often justified by concerns that the growth in enrollment outpaced public financing. With the exception of India, the World Bank provided support to create or reform an accreditation agency or a semi-independent system governing council. In the case of India, the World Bank worked at the local level and supported regulatory reforms, generally through investment projects, often bolstered by knowledge products. For example, in Vietnam, the World Bank focused on a range of issues, including establishing quality assurance, promoting foreign investment, improving financial management, and university autonomy.

The World Bank uses a variety of governance indicators. Table 4.3 broadly categorizes them into systems governance and institutional management. Systems governance includes establishing legal frameworks and accreditation frameworks and related agencies. Institutional management includes university-level planning, improved budget execution and transparency, and reformed university governance, among others. Almost all of these indicators are intermediate level. The only indicator that measures higher education institutional management is the number of institutions with accreditation. It appears that seven projects have used a quantitative measure of accreditation. Others focus on the establishment of accreditation bodies.

Table 4.3. World Bank Support for Public Sector

	Systems governance		Governance subareas			Governance indicators	
Category	PDO or prior action	Project activity	Policy development	Institutional development	EMIS	Systems governance	Institutional management
Core	26	38	12	17	6	20	36
Noncore	6	29	18	12	1	8	11
DPO	20	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Source: IEG Evaluation Portfolio Analysis
Note: DPO = development policy operation; PDO = policy development operation. EMIS= Education Management Information System. n.a.= not applicable.

The evaluation identified four closed projects that included a clear higher education system PDO (Indonesia, Mexico, Tunisia, and the West Bank and Gaza). The IEG reviews rated efficacy in meeting this objective as substantial in all four cases. However, given the lack of data on outcomes, it is difficult to draw conclusions regarding the specific impact of the higher education objectives.

The country case studies provide some additional insight into the World Bank's contribution to reforms. For example, the World Bank supported the establishment of

regulatory bodies (primarily focusing on quality assurance) in Armenia and Malawi, and provided assistance to regulatory bodies in Chile and India. This suggests that progress on reforms was usually slower than expected and the World Bank's contributions need further work.

Supporting the Missions

The World Bank Group contributes to the development of many aspects of the higher education sector. This section explores its support for the three so-called missions of higher education, as outlined in chapter 1. Given the World Bank Group's strengths and its commitment to working toward client-owned priorities, it is neither possible nor desirable to give the same level of support to all missions in all instances.

THE FIRST MISSION

The first mission focuses on the traditional definition of education. In other words, higher education's support for students. This section looks specifically at the World Bank Group's efforts to target disadvantaged students, to retain students in higher education, and to improve the quality of teaching and learning.

Access, Retention, and Equity

Enhancing equitable access to higher education is one of the goals set out in *Constructing Knowledge Societies* as well as other statements of strategy at the regional level (World Bank 2002). Although, in interview and during country case study visits, World Bank staff recognized equitable access as an important issue – that is emphasizing equity in opportunity and social mobility as a rationale for investing in higher education—a relatively slight weight was given to this topic in country program documents, including those for country case study countries. Only 1 of the 22 completed Country Partnership Frameworks analyzed for this evaluation explicitly focused on increasing access to and improving quality of higher education (Costa Rica) —access and equity issues are more commonly referenced in lower levels of education. An analysis of country strategies reviewed from 2012 to 2016 shows that only 5 of the 30 country strategies that addressed higher education focused on access and equity (Kenya, Mozambique, Niger, Colombia, and Pakistan).

Portfolio analysis indicates that about 20 percent of the World Bank investment projects focused on increasing participation in higher education, including five projects (Colombia, Mexico, Mozambique, Cambodia, and Romania) that supported student retention objectives. Most of them were core projects implemented in upper-middle-income (11) and low-income countries (8), located in the Latin America and the Caribbean, the South Asia (6), and the Sub-Sahara Africa (7) Regions.

The number of projects that specifically addressed inequalities in access to higher education is low—17 projects. Those projects primarily addressed equity in access, followed by graduation, and only one specified equity in retention. A common feature was the lack of specificity regarding the target population group. Even projects use terms such as *disadvantaged*, *underprivileged*, or *needy*, there was a lack of clarity regarding the target groups. Only three projects clearly defined all the relevant equity dimensions (access, graduation, and retention)—two in Colombia, which sought to increase equity in access and graduation for lower socioeconomic groups, and one in Jordan, which defined equity in terms of access for male and female students. (For more information, see appendix D on equity and inclusion.)

Interviews with World Bank staff highlighted the role of student financial support—such as scholarships and subsidized student loans—in reducing financial barriers to access and progression in higher education studies. As shown in table 4.4, the portfolio evidence shows that almost one in every two of the World Bank's core projects that addressed access, retention, and equity included direct support for student financial aid in countries across the World Bank Regions (in Mexico, Colombia, Tanzania, Mozambique, Uganda, Malawi, Nepal, India, Pakistan, and Cambodia). Even when the World Bank was not directly involved in providing student-targeted scholarships, country case studies show that there was considerable indirect support to student finance through technical assistance and advisory work (as in Chile, Vietnam, Malawi, Jordan). Most of this knowledge work is relatively recent.

Another important intervention to increase access to higher education has been the expansion and improvement of physical infrastructure with an explicit focus on accommodating growth in higher education enrollment, such as in Mozambique, Burkina Faso, and Costa Rica. The World Bank generally channels its support through grants to higher education institutions, based on specific proposals. Grants also supported less academically prepared students to both enter and progress in their studies, through preparatory and remedial courses (as in Armenia, Chile, Colombia, Mozambique, Cambodia, and Romania).

The objectives of IFC investments in higher education are contained in various components of project documents, such as the purpose of the investment and the expected development impacts. The primary objective of all but two of IFC's operations was to increase access to education, through infrastructure (construction, expansion, and rehabilitation), expansion into new markets, and student financing. In the vast majority of cases, support for access focused on employment-oriented education. In the case of student financing, several loan programs focus funding on majors (or disciplines) demanded in the labor market.

The rationale for IFC's investments in higher education is the gap in access and excess demand caused by demographic changes and the increasing numbers of secondary graduates, particularly from middle- and lower-income households. Investments rely on the growth of this population, limited access to subsidized education, and the inability to pay the out-of-pocket costs.

Country case studies shed further light on World Bank interventions toward inclusion of ethnic minorities. In Chile, grant recipients had to include pro-indigenous actions, such as preparatory courses for indigenous students from low-quality secondary schools. Projects also financed studies on targeting mechanisms of current programs for scholarships. In India, grant recipient institutions had to develop an Equity Action Plan with indicators to track progress for traditionally excluded groups that included the establishment of book banks, special remedial classes, guidance for taking entrance exams, counseling, communication and soft skills, preparation for job interviews, and others. In Vietnam, the World Bank addressed ethnic minorities indirectly, through targeting grants to universities in the highlands where these groups represent a larger share of enrollment. However, there were no specific indicators to monitor inclusion.

The most commonly used indicators are those related to student enrollment (mostly measuring number, rather than proportion, of students), followed by number of graduates and completion rates, retention, and dropout rates. The use of graduation indicators based on headcounts in the absence of a comparison with enrollment figures may not be sufficient to indicate improved internal efficiency, as the number of graduates may have increased due to higher rates of participation and not necessarily as a result of progression. In terms of equity, the number of projects including at least one gender-based indicator outweighed those with indicators disaggregated by socioeconomic groups. The former are often related to the number of project beneficiaries and, to a lesser extent, to student enrollment data disaggregated by gender. Few projects included indicators disaggregated by ethnic minority groups.

Table 4.4. Equity and Access Indicators

	Access and equity projects components			Access and equity indicators						
Type	Fin. Aid	Geo-targeting	Grants to HEIs	Student enroll.	Completion and retention	Scholar-ship and loans	Income	Benefi-ciaries by gender	Enroll. by gender	Ethnic group
Core	12	15	13	30	21	10	11	16	7	6
Noncore	1	1	2	9	13	1	0	3	2	1
Total	13	16	15	39	34	11	11	19	9	7

Note: Fin. Aid = financial aid; HEIs = higher education institutions; enroll. = enrollment.

The evaluation assessed the effectiveness of the World Bank's support for increasing equitable access and retention from a narrow sample of closed projects as well as from the country case studies and Project Performance Assessment Reports (PPARs). Most investment operations had relevant efficacy ratings that were substantial or higher. Two projects in Colombia achieved their output targets for financial aid received by students from low-income, indigenous, and other ethnic backgrounds. Impact evaluations showed that student financial assistance was effective in improving transition rates from secondary to higher education, student participation, and graduation. Enrollment and graduation outcomes for economically disadvantaged students, including greater participation by gender and caste, also increased in Mexico, Uganda, and Nepal. Evidence regarding the World Bank's contribution to student retention was scarce. However, student loans contributed to student retention and graduation in Colombia, and competitive grants for tutoring and other programs resulted in greater first-year retention in specific universities in Chile.

Forty-five percent of the World Bank's investment operations (19 of 42) targeted middle- and lower-income students. This excludes nine student loan investments with a stated equity objective but with no mechanism or evidence to support the claim at approval. In the case of Chile, IFC showed its equity focus using data on student income by quintiles. IFC targeted lower socioeconomic strata by expansion into new regions and the locations of campuses, as in IFC's investments in Brazil. For IFC, targeting usually relied on the profile of the student body (primarily working students) or the affordability of the institutions. IFC projects do not generally focus on other dimensions of equity, such as gender, ethnicity, or disability. Clients are required to report data disaggregated by gender for the Development Outcome Tracking System. While number of students are counted in IFC's own monitoring system based on clients' reporting, the external assurance provider observed significant divergence in the students reached indicator results as clients were using definitions that differ from IFC's, which were subsequently corrected to align with IFC's definition (IFC 2016). Except few cases with in-depth evaluation, there is little concrete evidence of the extent to which IFC has contributed to improving employability or access for lower-income students.

IFC has learned some lessons over time regarding private sector student financing. It has not proven to be a successful means to improve access to higher education. Ramp-up of lending was slow and use of facilities was low in the majority of IFC investments. In Jordan, a lack of consumer lending culture caused difficulties for IFC's risk-sharing facility. Changes in government policy also affected private student loan schemes. In the Latin America and the Caribbean Region, competition from subsidized loans reduced the overall reach of IFC's investments; subsequent policy changes led to increased use. On the other hand, in a middle-income African country, the student loan,

which catered to civil servants and not lower-income students, was largely successful in improving access.

Almost one-third of the 28 education-related DPOs focused on improving access to higher education for disadvantaged students. Equitable, access-specific prior actions were related to government resolutions on student financial support in Poland, Chile, and Latvia; such actions involved enrollment policies for subsidized higher education institutions in Pakistan and Vietnam. Overall, there is a good level of linkage among policy areas, prior actions, and selected indicators in the DPOs supporting access. The majority of indicators measure equity in the provision of financial aid to students. Others measure the enrollment rates.

Teaching and Learning

Teaching and learning lie in the broader context of employability for the World Bank Group. World Bank analysis for the East Asia and Pacific, the Latin America and the Caribbean, and the South Asia Regions all note the strong relationship between education and training with employment (World Bank 2003, 2012b). Currently, many Regions identify a disconnect between the pedagogy and curriculum and the skills needed in the workforce (World Bank 2012b). For example, employer surveys in the East Asia and Pacific Region show poor academic skills, as demonstrated by literacy deficiencies in Vietnam and numeracy deficiencies in Malaysia and Thailand. They also show poor cognitive skills, such as problem solving, and noncognitive skills in Indonesia, the Philippines, and Vietnam (World Bank 2012b). These World Bank technical reviews identify the importance of improving the data available to measure quality (learning assessments) and to track employment outcomes (World Bank 2012a).

Design

There are 49 projects that identify quality or relevance of teaching and learning in the PDOs, including 34 core and 15 noncore projects. Although teaching and learning play an important role in projects in all Regions, they are most prevalent as project attributes in the South Asia and Sub-Saharan Africa Regions.

The World Bank Group supports teaching and learning at multiple levels, from the ministerial level down to the institutions, faculty, and students. Grants often include support for initiative to improve teaching. For example, Sri Lanka used institutional block grants to improve teaching infrastructure. Indonesia and Vietnam used competitive or semicompetitive institutional grants to improve academic programs. Grant recipients developed proposals to improve the quality of teaching through a variety of interventions. Although the World Bank supervised the grants, there is little evidence that it provided support or direction to project staff or beneficiaries in the form

of evidence on "what works" in higher education pedagogy. The Implementation Completion and Results Report ratings for these projects typically rate the design of most teaching and learning components as substantial. However, it is also not possible to rate teaching and learning outcomes due to the composition of the project's PDO.

Table 4.5. Quality and Relevance of Teaching and Learning Indicators

Type	Improving learning and research environment	Improving faculty qualifications	Improving curriculum	Strengthening regulation and quality assurance	Promoting areas of strategic importance	Strengthening university-industry linkage
Core	33	26	15	17	14	8
Noncore	16	10	10	6	9	12
Total	49	36	25	23	23	20

Teaching and learning activities concentrate on improving the research and learning environment. Typical indicators include improving student learning outcomes and performance, and creating student and faculty self-assessments and evaluations related to teaching and learning. They also include teaching and learning innovations in institutional reform, infrastructure development, and sustainable financing. Other means of supporting teaching and learning involve improving faculty qualifications, improving curriculum, and creating quality assurance mechanisms. Indicators for quality assurance include establishing and expanding accreditation and quality assurance programs at the university and program level and, to a much lesser extent, establishing national coordinating bodies and frameworks on quality. At times, teaching and learning are also coordinated with improving research (see table 4.5).

Implementation and Results

PPAR analysis reveals that the majority of teaching and learning activities intended to increase employability, which is in accordance with regional strategies. For example, in Chile the World Bank's support concentrates on improving curriculum with specific outputs such as adult training, technical and professional education, and vocational pathways. In India, projects tied to employability to teaching and learning outputs such as the provision of equipment and labs, upgrading faculty qualifications, and curriculum linked to the labor market.

IEG reviews show that even well-designed teaching and learning interventions do not always lead to successful outcomes, often due to measuring issues. For example, in Jordan, Yemen, and the Arab Republic of Egypt, project design articulated clear input, process, and output indicators but failed to articulate outcomes. In other words, there is no evidence of student outcomes in either increased learning or better preparation for the labor market. On the other hand, a project in Vietnam that conducted teaching and

learning activities—such as upgrading faculty qualifications—used tracer studies to track student employability outcomes. That is the type of approach required to be able to demonstrate whether teaching and learning activities related to employability contribute to actual employability.

THE SECOND MISSION

Higher education around the world seeks to provide research and development as one of its primary missions. Research and development contributes to the World Bank's twin goals of ending extreme poverty and shared prosperity. World Bank strategies, particularly in the Latin America and the Caribbean and East Asia and Pacific Regions, identify research as critical to advancing the knowledge economy, increasing competitiveness, and fostering innovation. In particular, these strategies note that research and development with a strong emphasis on science and technology within universities plays an integral role in training the professional and highly skilled workers needed to advance technological capability and innovation (World Bank 2002, 2003, 2012).

More recent higher education investments prioritized science and technology. For example, in Brazil, Chile, Mexico, and Venezuela in the late 1990s and early 2000s the World Bank provided support the Millennium Science Initiative (World Bank 2002). Beyond science and technology, research also can encourage entrepreneurship in higher education; give rise to university incubators, which leads to innovation; and create university and private sector and industry partnerships (World Bank 2012).

Program Design

The World Bank's higher education portfolio on improving the quality and relevance of research are in 16 core projects and 6 noncore projects. World Bank higher education investments usually knit some element of research into the PDOs. Of the World Bank higher education projects, only Vietnam, Indonesia, and Kazakhstan were stand-alone research projects. There are few research-oriented projects in the East and Central Asia and Middle East and North Africa Regions, while in the other Regions there were between 4 to 6 projects each.

Country strategies rarely identify research as a priority, although they often implied its importance in improving competitiveness. Of the country case studies, only Armenia and Chile's World Bank strategy directly identified research as a stated goal within higher education. Higher education projects often include some element of research, which is justified for competitiveness and economic growth. World Bank projects in Uganda, Nigeria, Kazakhstan, and Bangladesh explicitly note research as the

cornerstone to improve competitive economic relevance. Bangladesh and Indonesia note competitive research as useful for creativity and innovation.

Table 4.6. Distribution of Indicators Related to Research

Input indicators	Projects *(no.)*	Output indicators	Projects *(no.)*
Number of research grant applications	3	Articles published in journals	9
Number of research groups or centers	2	Number of patent applications	1
Number of university-private partnerships	5	Private sector share of R&D spending	1
		Revenue generated from research	1
		Number of doctoral students	5

Note: R&D = research and development.

Most higher education projects with research components do not include indicators to measure impact, as outlined in table 4.6. The most prevalent indicator is the number of articles published in professional journals, in particular in international, peer-reviewed journals. Although this is a common indicator of scientific production, it does not necessarily measure broader goals of competitiveness and economic growth and may underestimate return on investment. Indicators such as number of university-private partnerships or funding for research may better represent broader goals and are sometimes included in projects. Finally, research projects appear to struggle with baseline and target data. Of the seven restructured research components, the majority of modifications were to include baseline values or target data.

Program Implementation and Results

Competitive or semicompetitive research grants are the World Bank's main instrument to finance and research at the higher education level. Research grants often include financing to educate graduate students and faculty, provide equipment, and facilitate research partnerships. For example, Burkina Faso's Africa Center for Excellence included scholarships, faculty development, minor rehabilitation, provision of research equipment and materials, and partnerships.

There is generally little focus on equity and access in research although a project in Kazakhstan funded graduate students for research, and a project in Uruguay built on previous lessons to create research programs in disadvantaged areas by earmarking funding for smaller research initiatives.

Country case studies and PPARs reveal that some projects were successful in strengthening the links between higher education and the private sector. A World Bank project in Uganda aimed to produce more qualified graduates and better-quality research. Its activities provided incentives to junior and senior researchers to conduct relevant high-quality research; upgrade relevant basic science and engineering

undergraduate programs; liaise with the private sector to create technology platforms; and provide internships in science, engineering, and business. A World Bank project in Kazakhstan supported efforts to link research with industry and graduates with jobs by upgrading faculty and strengthening partnerships with the private sector. Other projects did not always facilitate activities to strengthen the relationship between universities and the private sector. For example, Chile had active university-private partnerships with cooperative research consortia, research teams, and postdoctoral researchers. However, a review suggested a weak impact on research and development and limited contribution to developing capacity in science and technology.

Some research grants addressed relevance by prioritizing areas of competitiveness, usually in science and technology, both on national and local levels. A World Bank project in Uruguay incorporated competitive research grants in high-priority areas as defined through its national science and technology strategy. The World Bank project Uganda awarded six grants among higher education researchers and industry, including grants related to student internships in relevant firms, commercial feasibility studies in relevant fields, and product innovation and development. However, even in relevant areas, only two of the grants resulted in adoption of technology. Projects in Chile, Indonesia, Uganda, and Vietnam also prioritized grants in science and technology, with Indonesia prioritizing agriculture, technology, and natural sciences. In Uganda, the project also prioritized a wide range of applied research fields.

THE THIRD MISSION

The evaluation notes World Bank support of the "third mission" (community engagement) is limited. The portfolio review of projects through objectives did not indicate any direct evidence of "the third mission." Given the nature of World Bank Group support, it is likely that at least some of its interventions have a community focus. However, that focus is not explicit in project documentation at the PDO, subobjective, component, activity, or indicator levels, making it unamenable to systematic review.

The country cases and PPARs provide some additional insight. In Vietnam, the World Bank provided grants to five "group 2 universities" located in the poorest regions, and it supported a number of agricultural universities and faculties. The reporting does not present the required level of detail to identify if the project contributed to the community. The project's internal ratings of these five universities were above average. The design of the World Bank's projects in Indonesia and Uganda make it likely that some of the research targeted to the local level. In both cases, grants financed relevant activities. As with Vietnam, there is no information on the contents of these research grants or their specific contributions from a local development perspective. Likewise,

projects that focus on research in top regional universities may contribute to community needs to improve productivity and local living standards.

Social and Economic Contributions of Higher Education

Higher education has the potential to affect a broad range of social and economic goals. The evaluation looks at a number of select areas of interest in that regard—employability, private sector development, and public sector development.

EMPLOYABILITY

The foreword to *Education Strategy 2020* notes the need to develop a more highly skilled workforce, particularly in middle-income countries (World Bank 2011). Persistently high levels of youth unemployment also highlight the failure of education systems to prepare young people with the right skills for the job market. Interviewed World Bank staff almost universally identified *competitiveness* and *expanding the skill base* as a rationale to support higher education, given the demand for enrollment. Interviews also identified a number of issues and challenges, including ensuring quality and labor market relevance. As noted in chapter 3, skills and employability represent a major thematic emphasis in advisory services and analytics carried out during the evaluation period, particularly from 2011 to 2016. (For more information, see appendix C on employability).

Country-Level Findings on Employability

The evaluation's country case studies found a widespread concern among employers about the readiness of graduates for employment. In particular, employers expressed concern about the low level of *soft skills* (in, for example, Chile, India, and Vietnam) as well as an overly theoretical approach to learning (in, for example, Burkina Faso, Malawi, and Vietnam). In Chile, where private institutions enroll more than 80 percent of 1.2 million higher education students, the World Bank concentrated on improving relevance and quality through grants. IFC worked with private providers to expand provision of quality education. In India, the World Bank focused on improving employability in poorer states. In Vietnam, IFC supported a foreign university to focus on producing high-quality employable students, both to encourage students to study in the country and to serve as a model for other private providers.

Higher education features in 5 of the 17 country program evaluations conducted by IEG during the evaluation period. Tunisia, where youth employment is a major issue, is a prominent example. The World Bank supported assistance to revise curricula to improve relevance. The Tunisia country program evaluation found that the implementation of the new system focused on current students without supporting

measures such as the provision of credit for experience. Employability-related issues are prominent in about a quarter of 30 Country Assistance Strategy Completion Report Reviews conducted by IEG since 2012 that identified higher education as a priority. The evaluation's review of 22 Country Partnership Frameworks for this evaluation revealed that six Country Partnership Frameworks focused on employability-related areas, specifically technical education and industry linkages.

Employability in the Higher Education Portfolio

The World Bank addressed employability in about one-fifth of its higher education projects (23 of 117). They were notably concentrated in the South Asia (7) and Sub-Saharan Africa (6) Regions. About 40 percent of projects focused on science, technology, engineering, and mathematics (that is, STEM) fields. Analysis of the project appraisal documents for core and noncore projects shows that previous in-country projects, international experience, and knowledge products were the primary source of design. With the exception of a core project in Burkina Faso, there is no mention of collaboration with other World Bank Group institutions or external partners. The provision of grants to higher education institutions was common in core projects (10 out of 12). Grants are less common among noncore projects (4 out of 11), which tend to emphasize the development of the policy framework through technical assistance (6 out of 11). Most projects provide their support at the institution level. Nine (4 core and 5 noncore) of the 23 employability projects targeted disadvantaged groups, although the targeting mechanisms are not always apparent in project documentation.

A quarter of employability projects included graduate employment rate (within six months) as an indicator. Two projects have indicators that seek to measure graduate employability in a relevant field of study. Other indicators include graduation rates, student satisfaction, and employer satisfaction. Analysis of the portfolio of all core and noncore higher education projects shows discussion of tracer studies in 26 of the 131 project appraisal documents, whereas the Implementation Completion and Results Report only referred to tracer studies on five occasions. A tracer studies can be a valuable measure of outcomes, although the typical World Bank project cycle means that the project closes before the administration or analysis of surveys. However, the development of a permanent tracer study mechanism is an important element of a quality assurance system.

As noted earlier, IFC support to higher education is largely associated with infrastructure and expansion, particular concerning access. Sixty percent of IFC's operations support the goal of improved employability or labor market outcomes (excluding student loans, for which the results chain is weak). Statements that emphasize either course offerings related to areas of market demand or the

employment history of graduates generally support claims of increasing employability. IFC often invests in institutions that provide professional and technical degrees, and in community colleges. IFC's Education for Employment initiative is the only investment to include soft skills as a development outcome (box 4.1).

Box 4.1. Education for Employment

Education for Employment is a joint IFC-Islamic Development Bank initiative focused on job-oriented education in the Middle East and North Africa Region. The initiative addresses challenges such as low enrollment in technical and vocational education, limited relevance of education, and outdated pedagogical methods. It promotes qualification frameworks, independent quality assurance, governance, and institutionalized job-matching processes. The investments and advisory services target high-priority sectors with both the potential for growth and a shortage of skills. Under the initiative, IFC supported (i) the creation of an information and communication technology Sector Skills Organization in Jordan; (ii) market-responsive information and communication technology training in Tunisia; (iii) a qualifications framework for the tourism and logistics sector in Morocco; and (iv) standards for the information and communication technology sector in the Egypt. IFC also supported student loan programs in Egypt, West Bank and Gaza, and Jordan, as well as investments in community colleges.

Source: E4E 2011; IEG country case analysis.

There is limited evidence on "what works" in higher education to improve employability of graduates. Individual project success in employability, as identified through the Technical/Engineering Quality Improvement Project in India PPAR, notes the following: "The small numbers of postgraduate students in engineering [is] . . . a long-term concern. In 2007–08, the [number of] Masters and PhD students had increased by 50% and 69%. The achievements of the 127 project institutions in this regard (587 PhD students graduating in 2007–08) is a significant break from this trend."

Other evidence suggests less-favorable outcomes, including that contained in the Implementation Completion and Results Report Review for the Innovation for Competitiveness project in Mexico. "The intervention that substantially under-performed expectations was the effort to promote hiring of doctoral and masters' graduates as researchers in industry. Hindsight showed the demand for employees with advanced degrees of Mexican firms was far more limited than had been expected."

IFC projects focused on employment either (i) did not provide indicators at approval or (ii) did not report on employment indicators. IFC recently supported two investment clients to develop internal monitoring that provide clients with evidence of quality and

results. Two recent quasi-experimental impact evaluations found positive effects on the employability and income of graduates of two IFC investment institutions; however, IFC needs to do further work in this area. In Mexico, employers regarded graduates of IFC's client highly, and these graduates earned more than their peers who attended private universities. In Chile, graduates of IFC's investment client find jobs faster than graduates of other higher education institutes.

Private Sector Development

Supporting competitiveness has long been an important element in the World Bank Group's strategies. Country strategies often include higher education under the pillar that addresses competitiveness and private sector development. In addition, many higher education institutions have become more entrepreneurial, seeking to generate revenue and to improve relevance. Higher education's position in increasing employability demonstrates its role in providing education for private sector development. For research, the cooperation between higher education and industry falls into four broad categories (Santoro and Chakrabarti 2002): (i) research support to industry, where firms provide seed money; (ii) cooperative research, where a university undertakes research in collaboration with industry; (iii) knowledge transfer, where knowledge is transferred from the university to the private sector; and (iv) technology transfer, where technology is transferred through commercialization or similar partnership arrangements.

An explicit focus on private sector development as an objective in World Bank projects does not capture the full extent of World Bank Group support. First, it excludes IFC, which has a strong private sector development focus. Much of IFC's focus is on opening up the education sector to private investors that will lead to increased opportunities for higher education institutions and students. Second, a large number of World Bank projects include "relevance" of either teaching or research or both in their PDOs. This implies support for strengthening the private sector. Some projects explicitly incorporate the private sector development in their design. Table 4.7 presents data on the number of projects that include the term "relevance," including 60 percent of all core projects.

Table 4.7. World Bank Support for Private Sector Development

	Private sector development or competitiveness in PDO			"Relevance" in PDO		
Status	Core	Noncore	Total	Core	Noncore	Total
Active	1	7	8	19	14	33
Closed	3	3	6	15	2	17
Total	4	10	14	34	16	50

Source: IEG Evaluation Portfolio Analysis.

Considering the projects that included private sector development or competitiveness in the PDOs, one core project (in Mexico) and several noncore projects (in Argentina, Kazakhstan, and Uruguay) supported joint research or private sector incubators. However, collaboration was also included in other projects, such as in Uganda. In the latter, collaboration and private sector development were important elements even though few PDOs directly referenced this as an objective. Other global practices organized several projects, including a mining project in Malawi, aimed at strengthening the private sector through higher education provision.

Private sector development is an important institutional objective for IFC. Although none of IFC's investments directly supported private sector development at the economy-wide level, many served as "demonstrations" that helped to promote new types of investments in higher education. As previously mentioned, IFC's investment in Vietnam played an important role in opening the higher education market to new players. At least three advisory services (in Jordan, Mexico, and Tunisia) supported direct links with the private sector, through qualification frameworks or studies.

Likewise, IFC had a number of financial innovations that also serve as demonstrations. This includes developing a bond-financing mechanism in Chile, which was later adopted in Peru and explored in Pakistan through advisory services. IFC documentation indicates that improving capital markets is often part of the institution's approach in student financing investments.

Few indicators directly measure higher education's support for private sector development. The World Bank's support for research includes some relevant indicators, such as the share of research that, as previously discussed. Likewise, IEG only rates one project (Mexico) on its contribution to the private sector with a substantial rating.

Public Sector Development

Much of the World Bank's early support for higher education implicitly supported the strengthening of the public sector. This built on other initiatives to strengthen government capacity, such as the Colombo Plan and its focus on educating professionals in all sectors. More recently, the World Bank Group has increased its focus

on public sector reform and governance to improve the impact of "hard" investments (Santiso 2001). This is likely to require efforts to improve the education and skills of public officials, as was incorporated in a noncore World Bank in Madagascar.

Although public sector development was rarely included in the PDOs of World Bank projects, many investment projects included relevant activities. This primarily involves activities that specifically target and educate public officials. (For more information, see table 4.8 on World Bank support for public sector development.) Few projects have indicators associated with strengthening the public sector, and where they do, the indicators largely measure output. Only on project, in Madagascar, appears to have a public sector development outcome indicator.

Table 4.8. World Bank Support for Public Sector Development

Status	PDO with public sector development	Activities that train public officials	Public sector development indicator
Active	1	11	1
Closed	5	12	4
Total	6	23	5

Source: IEG Evaluation Portfolio Analysis.

With existing data, it is not possible to identify the World Bank's contribution to public sector development. Noncore projects may have other outcome indicators that combine higher education and other outputs, which makes it difficult to evaluate the particular contribution of higher education to public sector development and governance. None of the country cases had a direct focus on public sector development. In the case of Malawi, there was an implicit focus on strengthening the capacity of the public sector. This support is recent, and it is not possible to evaluate its contribution. Likewise, in Vietnam, the World Bank supported some public administration programs.

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5. Conclusions and Recommendations

Conclusions

Enrollment in higher education will continue to increase as incomes and secondary enrollment numbers rise. In line with findings from a recent Independent Evaluation Group (IEG) evaluation, the growth in enrollment needs to match the growth in demand for an educated workforce (World Bank 2016). These two factors will put pressure on governments to expand their support at the higher education level, placing inevitable strain on limited fiscal resources. The growth in enrollment may place pressure on the quality of higher education, both because of the likely reduction of public financing per student and because of the potential for an increasing number of unregulated private providers.

The type of support provided by the World Bank Group is broadly consistent with the competitiveness model described in chapters 1 and 2. In middle-income countries, the World Bank primarily supports interventions on improving student learning and the quality of research, with a focus on improving employability. The World Bank also concentrates on strengthening governance and, in some cases, equity.

The World Bank also plays a role in financing higher education in low-income countries, such as Burkina Faso and Malawi and, in fragile and conflict-affected states, such as Afghanistan and Yemen. In these countries, support focuses on improving learning and establishing basic research capacity. Through investment projects and knowledge products, the World Bank additionally promotes improved governance.

International Finance Corporation (IFC) support is concentrated in upper-middle-income countries, principally in the Latin America and the Caribbean Region. That support seeks to strengthen the private sector provision of higher education and focuses on access. Many of IFC's investments serve as models for others in the sector.

Recommendations

Importance of Aligning Higher Education with World Bank Group Strategy

The World Bank Group has been proactive in a sector that is rapidly evolving and likely to become increasingly important for the development of low- and middle-income countries. Investing in higher education contributes to competitiveness, but it has important distribution consequences. The World Bank Group's twin goals and its new country-level engagement model raise the bar in relation to the rationale for investing in

higher education, given that this investment tends to disproportionately benefit advantaged groups.

Recommendation 1: Carry out a strategic review of the World Bank Group's support for higher education and make strategic choices. Through a strategic review, the World Bank Group should reflect on its institutional mission and on the global development agenda. Based on this review, it should design a focused approach for higher education that takes into account country needs.

There is no single approach to preparing a strategic review. Options include the development of a formal strategy, preparation of an ongoing series of policy papers, and discussions to develop consensus. A strategic review requires the input from a variety of internal and external stakeholders. The Education Global Practice's work on Systems Approach for Better Education Results instrument for higher education may be an important element in the strategic review.

The strategic review should reflect what the World Bank Group understands to be its value-added and comparative advantage to higher education. To determine this, the World Bank needs to reflect on the following: (i) its role in providing evidence-based solutions; (ii) the institutional mandate (the twin goals and Sustainable Development Goals); (iii) the existing capacity and knowledge among the relevant World Bank Group staff; (iv) the other international players' role; and (v) specific country needs, competing priorities, and limited financial resources. More specifically, the following should be analyzed: (i) growing enrollment; (ii) the shifting role of higher education in the economy; (iii) the need to improve employability; (iv) concerns about equity and the distribution of public resources; (v) the rapid proliferation of new institutions of variable quality; (vi) strained governance and financial sustainability; (vii) the role of second-tier universities and community colleges; and (viii) the trade-off between higher education benefits and equity.

LIMITED DATA ON RESULTS AND A LACK OF EVIDENCE

The World Bank Group is committed to using evidence to develop solutions. This is clearly reflected in the World Bank Group's strategy and is a key principle of the World Bank Group's education strategy (World Bank 2011; World Bank Group 2013). The World Bank should strengthen its evidence base for interventions in higher education. Higher education's heavy reliance on grants appears to complicate many aspects of monitoring and evaluation. World Bank projects do not offer robust evidence for *why* the World Bank chose the selected model. Likewise, there is little guidance on *what* interventions work. Indicators are often based on headcounts that provide little insight into improvements from baseline measures. There is rarely collection of data from treatment and comparison groups as well as from external factors that can influence

outcomes, so as to be able to carry out rigorous impact evaluations. For policy advice not amenable to quantitative analysis, qualitative methods that could justify the intervention do not seem to be used.

- **Recommendation 2: Improve the quality of results indicators, ensure their adequate measurement, and further build and draw on the evidence base for higher education in both World Bank and IFC investments**. The World Bank Group should design improved monitoring instruments and define new indicators to capture the desired outcomes. The World Bank Group should develop an evidence base of what works in higher education and should support rigorous case studies and impact evaluations to understand what interventions are effective and how they can be replicated. Projects should also more clearly show what evidence they are based on and identify gaps.

WEAK LINKAGES WITH EMPLOYERS

The evaluation showed that while employability and competitiveness are major themes in the World Bank Group support, the connection with the private sector could be stronger. Many World Bank projects have created linkages between higher education and the private sector to develop relevant research. However, there is less evidence of collaboration to leverage the private sector in the governance issues such as promoting increased autonomy and contributing to quality assurance systems. The World Bank could also use industry and employers to improve the quality and relevance of teaching and learning including curriculum design. This sort of collaboration goes beyond employers discussing the weakness of their employees and focuses more on ensuring that the private sector has a voice in the higher education system.

- **Recommendation 3: Increase the participation of employers in and the integration of employers' perspectives into World Bank and IFC investments.** The World Bank can promote the integration of employer and private sector groups in higher education reforms, for example, through participation in independent accreditation institutions and university governance bodies. Both the World Bank and IFC could promote more collaboration between the employers and higher education institutions in preparing grants to improve learning and in developing curricula reform.

OPPORTUNITIES FOR GREATER INTERNAL COORDINATION

There is a high level of internal communication, collaboration, and coordination within the Education Global Practice and between the Education Global Practice and IFC. However, coordination is not strong among the global practices. It appears that only some noncore projects have a team member from the Education Global Practice.

- **Recommendation 4: Develop stronger coordination among global practices**. This may include the establishment of formal and informal mechanisms to facilitate dialogue and allow the Education Global Practice to engage better with other units. This could potentially include participation of World Bank Group higher education specialists in more noncore projects.

Creating incentives to encourage collaboration across global practices is a major challenge throughout the World Bank Group. Although COREHEG has a significant number of members from other global practices, collaboration requires a different set of incentives. Within the Education Global Practice, Reimbursable Advisory Services constitute a major contributor to the work plan. This service may be able to support other global practices in a similar fashion.

A COMPLICATED EXTERNAL LANDSCAPE OF SUPPORT FOR HIGHER EDUCATION

The World Bank Group is one of the largest financiers of development assistance for higher education and a leader in providing policy support. Many traditional donors are reengaging after limited participation. However, nontraditional donors play a major role, providing scholarships, equipment, research networks, and even policy support. External coordination presents a major challenge: The World Bank and other related nontraditional donors need to improve their channels of communication and coordination, considering they often provide similar support.

- **Recommendation 5: Develop a more comprehensive understanding of external financing for higher education**. Identify more thoroughly the landscape of public and private organizations that provide financing of higher education and analyze areas of overlap as well as possible collaboration. As appropriate, the World Bank can establish a convening role to improve coordination among donor organizations and other international partners involved in higher education.

Recently, the World Bank has been exploring contacts with a spectrum of financiers at the institutional and project level. Although these contacts are nascent, they may serve as a model for further engagement.

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Appendix A. Evaluation Design and Methodology

Objectives and Evaluation Questions

Objectives

1. The evaluation aims to understand the design of the World Bank Group's support for higher education and its contribution to the World Bank Group's objectives. The evaluation seeks to provide clarity on the complementary and sometimes competing objectives for higher education that inform the World Bank Group's support and to identify areas in which a coherent vision is lacking. It attempts to discern the underlying rationale behind the World Bank Group's support for higher education, what strategies have worked to address the challenges for higher education in developing countries, and how the World Bank Group might improve its capacity to learn from its experience with higher education. This includes the range of strategies pursued in interventions from improving teaching and research, to addressing governance issues, to promoting autonomy, to bolstering capacity in quality assurance—interventions that are expected to support inclusive economic growth, jobs, and competitiveness. It examines how the World Bank Group combines these types of interventions at the country level. The evaluation identifies lessons based on the World Bank Group's recent experiences that can inform future support for higher education.

Evaluation Questions

2. The evaluation's overarching question is, "How has the World Bank Group's support to higher education contributed to its twin goals of poverty reduction and shared prosperity?" To address this subject, the evaluation is divided into three questions and 13 subquestions. Each of the evaluation questions was designed with three criteria: (i) the question should serve the evaluation's purposes and objectives, (ii) a viable methodology should be available to answer it, and (iii) the question should not be merely descriptive. Although the evaluation does have an accountability function, it will not rate the efficacy or relevance of the World Bank Group's overall higher education program.

3. The first evaluation question asks, "Is the World Bank Group's support for higher education consistent and well-articulated?" This question focuses on the logic behind the World Bank Group's strategies in higher education. It aims to understand whether the World Bank Group's approach to higher education is internally coherent and in line with established policy approaches. Likewise, it focuses how the World Bank Group generates and applies evidence and lessons, and how the World Bank

Group works in partnership with other actors. This question is divided into four subquestions:

- How has the World Bank Group incorporated higher education in its strategic documents?
- How does it coordinate its support for higher education internally within the World Bank Group?
- How does it coordinate its support for higher education with external development partners and nongovernment actors?
- How does it conceptualize higher education and incorporate local context into the design of its operations?

4. The second evaluation question asks, "How has World Bank Group support contributed to higher education systems?" This question focuses on the linkages between the design of the World Bank Group's operations and outcomes affecting higher education systems. The evaluation analyzes its support that contributes to the reform of higher education institutions and systems. The evaluation addresses this line of inquiry through four subquestions:

- How has the World Bank Group contributed to changes in the financial sustainability and management of higher education systems?
- How has its support strengthened the connection between higher education and both the public and private sectors?
- How has it supported regulation and quality assurance in public and private universities?
- How has its support contributed to internal efficiency in higher education?

5. The third evaluation question asks, "How has the World Bank Group's support for higher education contributed to social and economic outcomes?" This question focuses on the linkages between the design of the World Bank Group's operations and outcomes affecting society and the economy. The question identifies how the World Bank Group's support has addressed vulnerable groups and improved opportunities for women. The evaluation question has five subquestions:

- How has World Bank Group support improved access and equity for lower-income households?
- How has its support addressed gender and other traditionally excluded groups in higher education?
- How has its support contributed to external efficiency through developing skills and improving the employability of graduates?
- How has its support contributed to external efficiency through private sector development and increased industry competiveness?

- How has its support contributed to the quality of research and its relevance to local development challenges?

Evaluation Universe, Scope, and Limitations

Box A.1. The World Bank Group's Definition of Higher Education

The World Bank Group defines its support for higher, or tertiary, education under the Sector Definition Guidelines of Operations Policy and Country Services as "efforts to improve the teaching and research capacity of degree-granting educational institutions that support students beyond the secondary school level, specifically colleges, universities, graduate schools, and professional schools." This captures the dual objective of improving teaching and improving research capacity. The definition excludes nondegree technical and vocational programs and dedicated research institutions that are not under the jurisdiction of education authorities.

This broadly corresponds to levels 5, 6, 7, and 8 of the International Standard Classification of Education, which includes short-cycle tertiary, undergraduate, and graduate professional education. Tertiary education builds on secondary education by providing learning activities in specialized fields of study. Learning is at a high level of complexity and specialization.

Source: Campbell and Carayannis 2012; UNESCO 2015.

6. The evaluation covers the period from FY03 to FY16. The portfolio review included all World Bank Group investments and knowledge work approved between July 1, 2003, and April 30, 2016. Inclusion is based on the approval date, not the date of effectiveness. Tables A.1, A.2, and A.3 report the included interventions.

7. The evaluation universe broadly corresponds to categories 5, 6, 7, and 8 of the International Standard Classification of Education (UNESCO 2015). It included teacher training carried out through a degree program as well as diploma programs offered at community colleges. The evaluation primarily used the World Bank classification of operations to define the evaluation universe. For public sector projects, the initial screening was conducted for the projects that are classified to the *tertiary education* (ET) sector or to the *education for the knowledge economy* (theme 66). The evaluation team inspected all of these projects and included those that had a clear and direct focus on the higher education. This included projects that made a direct reference to universities, higher education students, or the higher education sector, particularly in the description of project activities or indicators. The evaluation uses the term *higher education* because it is the one most commonly used by policy makers and in the majority of the projects included in this portfolio review. This avoids confusion, given the long list of terms, including tertiary education, higher education, postsecondary education, and third-level education, that generally describe the same type of intervention.

8. Once the universe of the higher education projects for this evaluation was identified, the projects were divided into two categories: core and noncore projects. Core projects refer to projects the primary function of which is to support higher education. This includes stand-alone higher education projects and projects that have a substantial focus on the higher education sector. Noncore projects refer to those that had a higher education component or activity but that were not primarily focused on higher education.[1]

9. Based on this methodology, the evaluation acknowledges that the approach may exclude projects that supported higher education and were not so classified by the World Bank (false negative). It also excluded projects that are notionally mapped to higher education but have no clear relationship to the sector in their design or monitoring and evaluation framework.

10. The International Finance Corporation's (IFC) portfolio included all investments and advisory service operations that were classified as *colleges*, *universities*, and *professional schools*. This was followed by an inspection to ensure appropriateness for inclusion in the portfolio.

11. The evaluation reviewed World Bank's knowledge work as identified by its operations database. It appears that several important pieces of work were excluded from the database. These include some work that was supported as *Reimbursable Advisory Services* (that is, partially or wholly financed by the beneficiary country) as well as some financed by *trust funds* (that is, with support from a development partner).

12. The Independent Evaluation Group (IEG) evaluation on youth employment provides insight on alternative forms of postsecondary education (World Bank 2012) as does IEG's evaluation on jobs and competitiveness (World Bank 2016a). There are several interventions that the evaluation did not analyze, including

- other types of postbasic and postsecondary education, including nondegree technical and vocational training programs at the secondary and postsecondary level, typically classified as 4 in the International Standard Classification of Education (UNESCO 2015); and
- nondegree adult education, such as "second-chance" learning or lifelong learning initiatives.

[1] Current World Bank practices requires that a task team indicate the share of each sector classification, in the project, ranging from 1 percent to 100 percent. Most of the projects classified ET greater than 50 percent were categorized as core projects, whereas the projects classified ET less than 50 percent became, with a few exceptions, noncore projects.

13. In addition, the evaluation did not focus on higher-level objectives or impacts that are beyond the immediate influence of the World Bank Group's operations. This reflects the difficulty in establishing causality and the paucity of data. Specifically, the evaluation did attempt to quantify directly

- impacts on broad education outcomes, such as the average level of education; or
- direct impacts on broad economic outcomes, such as employment rates, productivity, poverty reduction, and economic growth.

Table A.1. Core Higher Education Projects

Project ID	Project name	Country	Region	Fiscal year	Project status	Lending type	Type	Sector board / global practice	Amount *(US$, millions)*
P077282	Science for the Knowledge Economy	Chile	LAC	2003	Closed	IPF	IBRD	Education	25.3
P074138	Higher Education Improving Access	Colombia	LAC	2003	Closed	IPF	IBRD	Education	200.0
P072123	Technical/Engineering Quality Improvement	India	SAR	2003	Closed	IPF	IDA	Education	250.0
P050741	Relevance and Quality of Undergrad Edu	Sri Lanka	SAR	2003	Closed	IPF	IDA	Education	40.3
P089040	Strengthening Higher Education	Afghanistan	SAR	2005	Closed	IPF	IDA	Education	40.0
P078692	Postsecondary Education SIL (FY05)	Ethiopia	AFR	2005	Closed	IPF	IDA	Education	40.0
P085374	Managing Higher Education for Relevance and Efficiency	Indonesia	EAP	2005	Closed	IPF	IBRD	Education	80.0
P087180	Higher Education Project	Mauritania	AFR	2005	Closed	IPF	IDA	Education	15.0
P089865	Innovation for Competitiveness APL1	Mexico	LAC	2005	Closed	IPF	IBRD	Financial and Private Sector Dev	250.0
P088498	Tertiary Education Finance for Results APL1	Chile	LAC	2006	Closed	IPF	IBRD	Education	25.1
P099652	Additional Financing for Maldives Education and Training III	Maldives	SAR	2006	Closed	IPF	IDA	Education	1.3
P085593	Tertiary Edu Student Assistance APL1	Mexico	LAC	2006	Closed	IPF	IBRD	Education	180.0
P075809	Higher Education Reform Support II	Tunisia	MNA	2006	Closed	IPF	IBRD	Education	76.0
P086513	Millennium Science Initiative (FY06)	Uganda	AFR	2006	Closed	IPF	IDA	Education	30.0
P090967	Second Higher Education	Nepal	SAR	2007	Closed	IPF	IDA	Education	60.0
P074132	Nigeria Federal Science & Technical Education at Postbasic Levels	Nigeria	AFR	2007	Closed	IPF	IDA	Education	180.0
P079665	Second Higher Education Project	Vietnam	EAP	2007	Closed	IPF	IDA	Education	59.4

Project ID	Project name	Country	Region	Fiscal year	Project status	Lending type	Type	Sector board / global practice	Amount *(US$, millions)*
P108791	International Institute for Water and Environmental Engineering	Burkina Faso	AFR	2008	Active	IPF	IDA	Education	5.0
P105164	Second Student Loan Support Project, APL Phase I	Colombia	LAC	2008	Closed	IPF	IBRD	Education	300.0
P105205	MZ Higher Education Project	Mozambique	AFR	2008	Closed	IPF	IDA	Education	15.0
P098496	Science & Technology Higher Education	Tanzania	AFR	2008	Active	IPF	IDA	Education	100.0
P106216	Higher Education Quality Enhancement	Bangladesh	SAR	2009	Active	IPF	IDA	Education	81.0
P102487	Higher Education Reform for the Knowledge Economy	Jordan	MNA	2009	Closed	IPF	IBRD	Education	25.0
P104694	Higher Education Development Policy Program - First Operation	Vietnam	EAP	2009	Closed	DPL	IDA	Education	50.0
P121805	Strengthening Higher Education Additional Financing	Afghanistan	SAR	2010	Closed	IPF	IDA	Education	20.0
P102549	Technical Engineering Educational Quality Improvement II	India	SAR	2010	Active	IPF	IDA	Education	300.0
P113341	Health Professional Education Quality	Indonesia	EAP	2010	Active	IPF	IBRD	Health, Nutrition and Pop	77.8
P111592	Higher Education Science and Technology	Mozambique	AFR	2010	Active	IPF	IDA	Education	40.0
P102607	Higher Education Support Program	Pakistan	SAR	2010	Closed	DPL	IDA	Education	100.0
P113402	Higher Education for the Twenty First Century Project	Sri Lanka	SAR	2010	Active	IPF	IDA	Education	40.0
P110693	New Model University	Vietnam	EAP	2010	Active	IPF	IDA	Education	180.4
P110733	Higher Education Quality Improvement	Yemen, Republic of	MNA	2010	Active	IPF	IDA	Education	13.0
P106605	Higher Education Quality and Capacity Improvement	Cambodia	EAP	2011	Active	IPF	IDA	Education	23.0
P110018	Improving Teacher Education	Guyana	LAC	2011	Active	IPF	IDA	Education	4.2
P125288	UG Science and Technology Support	Guyana	LAC	2011	Active	IPF	IDA	Education	10.0
P118779	Tertiary Education Support Project	Pakistan	SAR	2011	Active	IPF	IDA	Education	300.0
P123673	Senegal Tertiary Education Governance and Financing for Results	Senegal	AFR	2011	Active	IPF	IDA	Education	101.3
P116353	Higher Education Development Policy	Vietnam	EAP	2011	Closed	DPL	IDA	Education	50.0

Project ID	Project name	Country	Region	Fiscal year	Project status	Lending type	Type	Sector board / global practice	Amount *(US$, millions)*
	Program - Second Operation								
P111661	Tertiary Education Finance for Results Project III	Chile	LAC	2012	Active	IPF	IBRD	Education	40.0
P122785	Higher Education Research for Innovation and Competitiveness Project	Montenegro	ECA	2012	Active	IPF	IBRD	Education	16.0
P131061	International Institute for Water and Environmental Engineering AF	Burkina Faso	AFR	2013	Active	IPF	IDA	Education	10.0
P123146	Higher Education	Costa Rica	LAC	2013	Active	IPF	IBRD	Education	200.0
P122194	Higher Education Quality Improvement	Peru	LAC	2013	Active	IPF	IBRD	Education	25.0
P116354	Higher Education Development Policy Program - Third Operation	Vietnam	EAP	2013	Closed	DPL	IDA	Education	50.0
P117394	Fostering Innovation through Research, Science and Technology	Vietnam	EAP	2013	Active	IPF	IDA	Education	100.0
P126974	African Centers of Excellence	Africa	AFR	2014	Active	IPF	IDA	Education	150.0
P145749	Higher Education Quality Enhancement Project-AF	Bangladesh	SAR	2014	Active	IPF	IDA	Education	125.0
P145782	Access with Quality to Higher Education	Colombia	LAC	2014	Active	IPF	IBRD	Education	200.0
P131660	Skills Development	Malawi	AFR	2014	Active	IPF	IDA	Education	50.9
P131825	Health Professionals Education and Training for Health System Reforms	Vietnam	EAP	2014	Active	IPF	IDA	Health, Nutrition and Pop	106.0
P150394	MP-Higher Education Quality Improvement	India	SAR	2015	Active	IPF	IDA	Education	300.0
P151318	Higher Education Support	Mali	AFR	2015	Active	IPF	IDA	Education	33.0
P146602	AF for Higher Education Science and Technology Project	Mozambique	AFR	2015	Active	IPF	IDA	Education	45.0
P147010	Higher Education Reforms Project	Nepal	SAR	2015	Active	IPF	IDA	Education	65.0
P148291	Tajikistan - Higher Education Project	Tajikistan	ECA	2015	Active	IPF	IDA	Education	15.0
P149464	TZ Science & Technology for Higher Education Additional Financing	Tanzania	AFR	2015	Closed	IPF	IDA	Education	15.0

Project ID	Project name	Country	Region	Fiscal year	Project status	Lending type	Type	Sector board / global practice	Amount *(US$, millions)*
P150129	Higher Education Quality Improvement Project - Additional Financing	Yemen, Republic of	MNA	2015	Active	IPF	IDA	Education	3.0
P154213	Social Inclusion for Shared Prosperity DPL	Chile	LAC	2016	Active	DPL	IBRD	Poverty and Equity	100.0
P156746	UG Science and Technology Support	Guyana	LAC	2016	Active	IPF	IDA	Education	3.7
P151059	Tertiary Education for Employability	Tunisia	MNA	2016	Active	IPF	IBRD	Education	70.0
P128516	Modernizing Higher Education	Uzbekistan	ECA	2016	Active	IPF	IDA	Education	42.2
P153111	Africa Higher Education Centers of Excellence Project Add. Fin.	Western Africa	AFR	2016	Active	IPF	IDA	Education	15.0

Note: Add = Additional; DP = Development Policy; DPL = development policy loan; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; Edu = Education; Eng = English; Engr = Engineering; Fin = Financing; FY = fiscal year; HEQEP = Higher Education Quality Enhancement Project; HEQIP = Higher Education Quality Improvement Project; IBRD = International Bank for Reconstruction and Development; IDA = International Development Association; IPF = investment project financing; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; MP = Madhya Pradesh; Ph = Phase; SandT = science and technology; SA = South Asia; SIL = Specific Investment Loan; UG = University of Guyana.

Table A.2. Noncore Higher Education Projects

Project ID	Project name	Country	Region	Fiscal year	Project status	Lend type	Type	Sector board / global practice	Amount *(US$, million)*
P080746	HD Program Sector Reform Loan	Brazil	LAC	2003	Closed	DPL	IBRD	Education	505.1
P073772	Health Workforce and Services (PHP 3)	Indonesia	EAP	2003	Closed	IPF	IBRD	Health, Nutrition and Pop	105.6
P074503	Education Quality and Relevance APL1	Armenia	ECA	2004	Closed	IPF	IDA	Education	19
P074114	Education Development	Bhutan	SAR	2004	Closed	IPF	IDA	Education	31
P071039	Economic Management Structural Adjustment Credit	Bosnia and Herzegovina	ECA	2004	Closed	DPL	IDA	Public Sector Gov	34
P050620	Education Sector Project	Ghana	AFR	2004	Closed	IPF	IDA	Education	78
P071157	Land Administration Project	Ghana	AFR	2004	Closed	IPF	IDA	Envt	20.5
P078113	Second Education Development	Lao People's Democratic Republic	EAP	2004	Closed	IPF	IDA	Education	13
P081269	Second Education Sector Development Project (Phase 2)	Lesotho	AFR	2004	Closed	IPF	IDA	Education	21
P074448	Governance and Institutional Development Project	Madagascar	AFR	2004	Closed	IPF	IDA	Public Sector Gov	30
P083370	Public Sector Capacity Building	Pakistan	SAR	2004	Closed	IPF	IDA	Public Sector Gov	55

Project ID	Project name	Country	Region	Fiscal year	Project status	Lend type	Type	Sector board / global practice	Amount *(US$, million)*
P079226	Education Restructuring	Bosnia and Herzegovina	ECA	2005	Closed	IPF	IDA	Education	10
P088663	Health Sector Enhancement Project	Bosnia and Herzegovina	ECA	2005	Active	IPF	IDA	Health, Nutrition and Pop	17
P050272	Private Sector Development Capacity Building Project	Ethiopia	AFR	2005	Closed	IPF	IDA	Financial and Private Sector Dev (I)	24
P078458	Ethiopia Information and Communication Technology Assisted Development Project	Ethiopia	AFR	2005	Closed	IPF	IDA	Financial and Private Sector Dev (I)	25
P083126	Real Estate Cadastre & Registration Project	Macedonia, former Yugoslav Republic of	ECA	2005	Active	IPF	IBRD	Agr and Rural Dev	14
P070823	Education Sector Support Project 1	Malawi	AFR	2005	Closed	IPF	IDA	Education	32.2
P073206	Land Administration and Management II	Philippines	EAP	2005	Closed	IPF	IBRD	Agr and Rural Dev	19
P066149	Secondary Education Project	Turkey	ECA	2005	Closed	IPF	IBRD	Education	104
P077738	Equal Access to Quality Education in Ukraine Project	Ukraine	ECA	2005	Closed	IPF	IBRD	Education	86.6
P078933	Education Excel and Equity	Albania	ECA	2006	Closed	IPF	IDA	Education	15
P098956	Postprimary Education	Burkina Faso	AFR	2006	Closed	IPF	IDA	Education	22.9
P086671	Education Sector Development Program Project	Croatia	ECA	2006	Closed	IPF	IBRD	Education	85
P070544	Accountability, Transparency & Integrity Program	Tanzania	AFR	2006	Closed	IPF	IDA	Public Sector Gov	40
P104467	Health System Modernization Project (APL2) in Support of the Second Phase of the Health Sector Reform Program	Armenia	ECA	2007	Active	IPF	IDA	Health, Nutrition and Pop	22
P073458	Private Sector Development	Bhutan	SAR	2007	Closed	IPF	IDA	Financial and Private Sector Dev (I)	8
P086294	DRC Education Sector Project	Congo, Democratic Republic of	AFR	2007	Closed	IPF	IDA	Education	150
P083110	First East-West Highway Improvement	Georgia	ECA	2007	Closed	IPF	IDA	Transport	19

Project ID	Project name	Country	Region	Fiscal year	Project status	Lend type	Type	Sector board / global practice	Amount *(US$, million)*
P098217	Education System Realignment & Strengthening Program (APL #2)	Georgia	ECA	2007	Closed	IPF	IDA	Education	15
P087479	Education Sector Support Program	Kenya	AFR	2007	Closed	IPF	IDA	Education	80
P105282	Health Systems Reconstruction (FY07)	Liberia	AFR	2007	Closed	IPF	IDA	Health, Nutrition and Pop	8.5
P105291	Education Sector Investment Program II - Scaling up	Mali	AFR	2007	Closed	IPF	IDA	Education	15
P086875	Education and Training Sector Improvement Program - ETSIP	Namibia	AFR	2007	Closed	DPL	IBRD	Education	7.5
P095520	Promoting Innovation to Enhance Competitiveness	Uruguay	LAC	2007	Active	IPF	IBRD	Education	26
P052608	Antioquia Secondary Education	Colombia	LAC	2008	Closed	IPF	IBRD	Education	20
P090695	Technology Commercialization Project	Kazakhstan	ECA	2008	Active	IPF	IBRD	Financial and Private Sector Dev (l)	13.4
P101928	Health Sector Technology Transfer and Institutional Reform	Kazakhstan	ECA	2008	Active	IPF	IBRD	Health, Nutrition and Pop	117.7
P102174	Institutional Development for Education Project	Kosovo	ECA	2008	Closed	IPF	IDA	Education	10
P106752	Unleashing Productive Innovation Project	Argentina	LAC	2009	Active	IPF	IBRD	Financial and Private Sector Dev (l)	150
P107772	Second Education Quality and Relevance (APL 2)	Armenia	ECA	2009	Active	IPF	IDA	Education	25
P115400	Social Sectors Institutional Reform Development Policy Loans (SIR DPL 3) Program	Bulgaria	ECA	2009	Closed	DPL	IBRD	Social Protection	200
P082927	Promoting Innovation and Competitiveness Project	Chile	LAC	2009	Closed	IPF	IBRD	Education	30
P096707	Guangdong Technical and Vocational Education and Training Project	China	EAP	2009	Active	IPF	IBRD	Education	20
P098132	Tourism Development Project	Ethiopia	AFR	2009	Active	IPF	IDA	Financial and Private Sector Dev (l)	35

Project ID	Project name	Country	Region	Fiscal year	Project status	Lend type	Type	Sector board / global practice	Amount *(US$, million)*
P106855	General Education Quality Improvement (FY09)	Ethiopia	AFR	2009	Closed	IPF	IDA	Education	50
P109333	Support of ETSIP1 DPL2 (FY09)	Namibia	AFR	2009	Closed	DPL	IBRD	Education	7.5
P090807	Skills and Training Enhancement	Bangladesh	SAR	2010	Active	IPF	IDA	Education	79
P117107	Liaoning and Shandong Technical and Vocational Education and Training Project	China	EAP	2010	Active	IPF	IBRD	Education	40
P120783	Third Education Project - Additional Financing	Gambia, The	AFR	2010	Closed	IPF	IDA	Education	5.5
P109736	TA for Hydropower and Mining sectors	Lao People's Democratic Republic	EAP	2010	Active	IPF	IDA	Energy and Mining	8
P117666	DPL 3	Poland	ECA	2010	Closed	DPL	IBRD	Economic Policy	1,331.30
P121755	Afghanistan ICT Sector Development	Afghanistan	SAR	2011	Active	IPF	IDA	Global ICT	50
P121728	Additional Financing for the 2nd Health System Modernization Project (APL2) in Support of the 2nd Phase of the Health Sector Reform	Armenia	ECA	2011	Active	IPF	IBRD	Health, Nutrition and Pop	19
P124648	Mineral Development Support	Burkina Faso	AFR	2011	Active	IPF	IDA	Energy and Mining	33
P118112	Ghana Skills and Technology Development Project	Ghana	AFR	2011	Active	IPF	IDA	Education	70
P120005	Gas and Oil Capacity Building	Ghana	AFR	2011	Active	IPF	IDA	Energy and Mining	38
P112227	First Sustainable Employment Development Policy Operation	Kosovo	ECA	2011	Closed	DPL	IDA	Social Protection	6.3
P120825	Mining Technical Assistance	Malawi	AFR	2011	Active	IPF	IDA	Energy and Mining	25
P104015	Enhanced Vocational Education and Training	Nepal	SAR	2011	Active	IPF	IDA	Education	50
P117161	Tunisia Employment DPL	Tunisia	MNA	2011	Closed	DPL	IBRD	Social Protection	50
P122195	Third Development Policy Operation	Armenia	ECA	2012	Closed	DPL	IBRD	Economic Policy	80
P122008	Yunnan Technical and Vocational Education and Training Project	China	EAP	2012	Active	IPF	IBRD	Education	50
P123315	Strengthening Institutional Capacity	Djibouti	MNA	2012	Active	IPF	IDA	Education	6

Project ID	Project name	Country	Region	Fiscal year	Project status	Lend type	Type	Sector board / global practice	Amount *(US$, million)*
P120566	First Skills and Employment DPL	Morocco	MNA	2012	Closed	DPL	IBRD	Social Protection	100
P121842	Research and Innovation in Science and Technology Project	Indonesia	EAP	2013	Active	IPF	IBRD	Education	95
P128909	Liberia Health Systems Strengthening	Liberia	AFR	2013	Active	IPF	IDA	Health, Nutrition, and Pop	10
P131331	Enhancing Education Development Project	Maldives	SAR	2013	Active	IPF	IDA	Education	10
P128284	First Governance and Growth	Senegal	AFR	2013	Closed	DPL	IDA	Economic Policy	55
P128251	Governance Opportunities and Jobs DPL	Tunisia	MNA	2013	Closed	DPL	IBRD	Economic Policy	500
P130182	Education Improvement Project	Armenia	ECA	2014	Active	IPF	IBRD	Education	30
P127665	Second Economic Recovery Development Policy Loan	Croatia	ECA	2014	Closed	DPL	IBRD	Economic Policy	206.8
P129828	Ethiopia General Education Quality Improvement Project II	Ethiopia	AFR	2014	Active	IPF	IDA	Education	130
P148224	Oil and Gas Capacity Building Add Fin	Ghana	AFR	2014	Active	IPF	IDA	Energy and Mining	19.8
P148755	TA for Hydropower and Mining Add Fin	Lao People's Democratic Republic	EAP	2014	Active	IPF	IDA	Energy and Extractives	17.8
P131202	Mobile Internet Ecosystem	Lebanon	MNA	2014	Active	IPF	IBRD	Global ICT	6.4
P128378	Skills Development & Innovation Support	Macedonia, FYR	ECA	2014	Active	IPF	IBRD	Education	24
P145861	Skills Development and Youth Employment	Mali	AFR	2014	Active	IPF	IDA	Education	63
P126470	Governance and Growth Support Credit 2	Senegal	AFR	2014	Active	DPL	IDA	Economic Policy	30
P132698	Skills Development	Sri Lanka	SAR	2014	Active	IPF	IDA	Education	101.5
P145488	Tuvalu Development Policy Operation	Tuvalu	EAP	2014	Closed	DPL	IDA	Economic Policy	3
P149233	Quality and Relevance of Secondary and Tertiary Education Project	Congo, Democratic Republic of	AFR	2015	Active	IPF	IDA	Education	200
P146474	Stepping Up Skills	Guinea	AFR	2015	Active	IPF	IDA	Education	20
P150183	Skills and Jobs	Kazakhstan	ECA	2015	Active	IPF	IBRD	Education	100
P144185	Second Skills Employment DPL	Morocco	MNA	2015	Closed	DPL	IBRD	Social Protection and Labor	100
P148585	Romania Secondary Education Project	Romania	ECA	2015	Active	IPF	IBRD	Education	243.1

Project ID	Project name	Country	Region	Fiscal year	Project status	Lend type	Type	Sector board / global practice	Amount *(US$, million)*
P149886	Solomon Islands Recovery Financing Development Policy Operation	Solomon Islands	EAP	2015	Closed	DPL	IDA	Macroecon and Fiscal Mgmt	5
P155389	Additional Financing Skills and Training Enhancement Project	Bangladesh	SAR	2016	Active	IPF	IDA	Education	100
P150148	Statistics Development	Congo, Democratic Republic of	AFR	2016	Active	IPF	IDA	Poverty and Equity	45

Note: Add = Additional; APL =Adaptable Programmatic Loan; BERMUTU = Better Education through Reformed Management and Universal Teacher Upgrading; Dev = Development; DPL = development policy loan; DPO = development policy operation; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; Edu = Education; ETSIP = Education and Training Sector Improvement Project; Fin = Financing; FY = fiscal year; GEQIP = General Education Quality Improvement Project; HD = Human Development; HSMP = Health System Modernization Project; IBRD = International Bank for Reconstruction and Development; ICT = information and communication technology; IDA = International Development Association; Inv = Innovation; IPF = investment project financing; LAC = Latin America and the Caribbean; Macroecon = Macroeconomics; Mgmt = Management; MNA = Middle East and North Africa; Pop = population; SA = South Asia; SEDPO = Sustainable Employment Development Policy Operation; SIL = Specific Investment Loan; SIR = Sectors Institutional Reform; STEP = Systematic Tracking of Exchanges in Procurement; Supt = Support; TA = Technical Assistance; Voc = Vocational.

Table A.3. International Finance Corporation Higher Education Projects

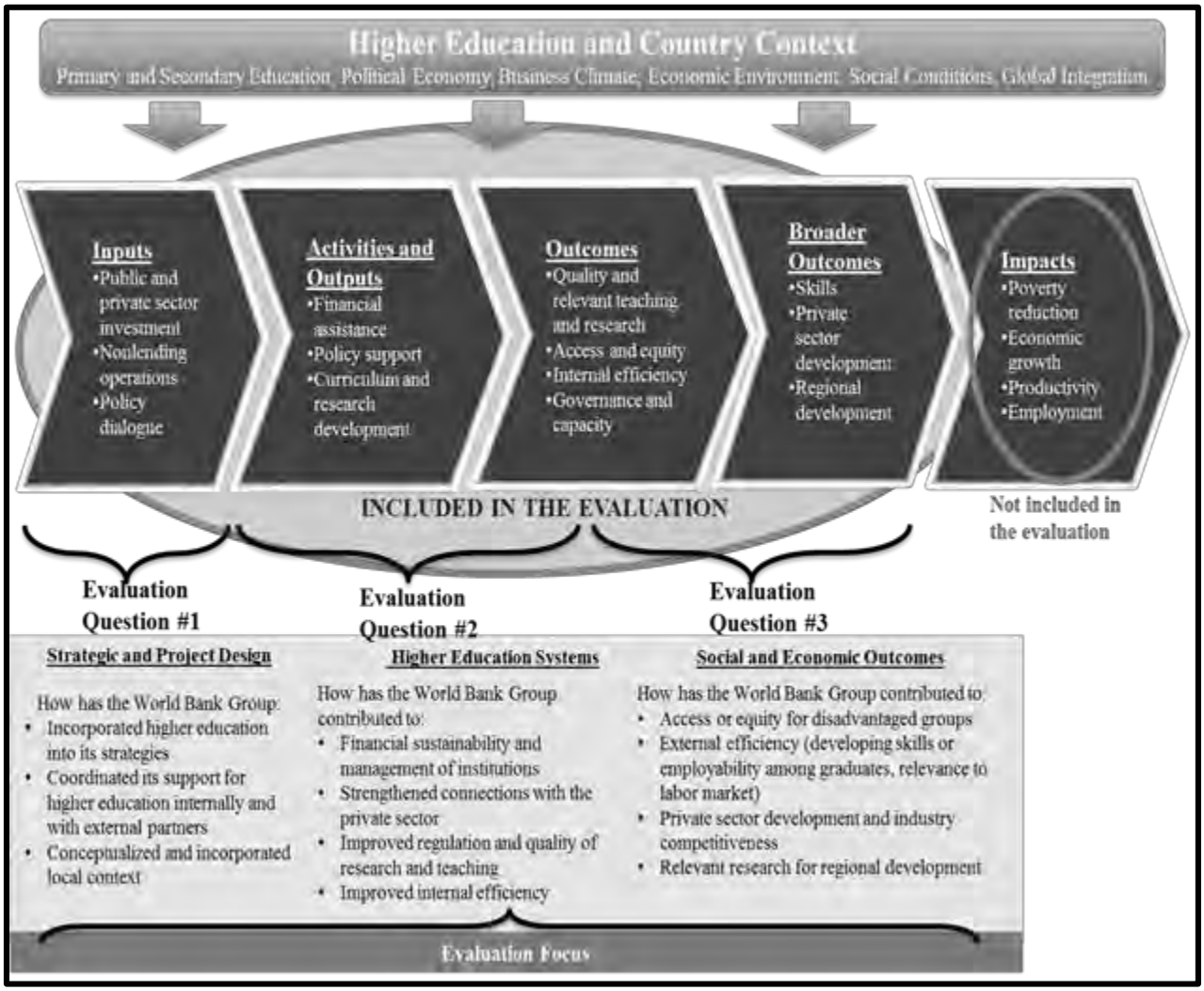
Project	Country	Region	Approval fiscal year	Expenditures *(US$, million)*
Kenya: USIU	Kenya	Sub-Saharan Africa	2006	0.48
Ghana: GIMPA	Ghana	Sub-Saharan Africa	2006	0.61
CBN Nigeria: LBS-EDS	Nigeria	Sub-Saharan Africa	2006	0.25
CBN South Africa: GIBS	South Africa	Sub-Saharan Africa	2006	0.54
AIST, Gulf of Guinea Institute, School of Management and Public Policy	Nigeria	Sub-Saharan Africa	2006	0.08
Pakistan Student Loan	Pakistan	Middle East and North Africa	2006	0.05
BIUST	Botswana	Sub-Saharan Africa	2007	1.37
PEP Africa Tourism Training Network	Africa Region	Sub-Saharan Africa	2007	0.21
Enterprise Development Curriculum and Training of Trainers	Africa Region	Sub-Saharan Africa	2007	0.62
Jordan Student Loan Market Study	Jordan	Middle East and North Africa	2007	0.07
Global Business School Network Transition	Africa Region	Sub-Saharan Africa	2008	0.54
Gujarat Uni PPP	India	South Asia	2010	0.34
Kenyatta University Student Hostel PPP	Kenya	Sub-Saharan Africa	2012	0.63
e4e ICT Jordan	Jordan	Middle East and North Africa	2013	1.2
Tunisia E4E ICT	Tunisia	Middle East and North Africa	2013	0.24
E4E Logistics/ Tourism Morocco	Morocco	Middle East and North Africa	2013	0.12
E4E ICT Sector Egypt	Egypt, Arab Republic of	Middle East and North Africa	2014	0.27
Uniminuto Results Measurement	Colombia	Latin America and the Caribbean	2014	0.02
Laureate Results Measurement	Mexico	Latin America and the Caribbean	2014	0.13

Note: CBN = Central Bank Nigeria; E4E = Education for Employment; FY = fiscal year; GIBS = Gordon Institute of Business Science (GIBS) of Pretoria University in South Africa; GIMPA = Ghana Institute of Management and Public Administration; ICT = information and communication technology; LBS-EDS = Lagos Business School-Enterpise Development Services; PPP = public-private partnerships; USIU = United States International University Africa.

Approach and Methodology

14. The evaluation used a variety of methods to develop an understanding of the World Bank Group's support for higher education. The evaluation triangulated qualitative and quantitative data to understand how the World Bank Group's support for higher education works. Figure A.1 presents a conceptual model for World Bank Group support and the evaluation's approach.

Figure A.1. The Evaluation Framework for Higher Education



15. The evaluation aimed to provide qualitative answers to the evaluation questions to develop a better understanding of the World Bank Group's contribution to higher education. The evaluation did not attempt to rate or grade the World Bank Group's performance against any particular question and thus reports on existing self-evaluation and IEG ratings of World Bank Group operations.

EXTERNAL DATA

16. **Review of academic and policy literature**. The evaluation reviewed the existing academic and policy literature to provide a better understanding of current thinking about the sector. It was complemented by a number of technical literature reviews that focused on specific areas.

17. **Consultation with country higher education stakeholders and key informants**. The evaluation team consulted with higher education leaders at the country level to identify key issues in the sector, including government officials, university administrators and staff, students, private sector actors, and nongovernmental organizations. The evaluation team held consultations and reviewed literature to understand higher education priorities. Through consultations with stakeholders in France, Malawi, the Philippines, the United Kingdom, and the United States, and through country case studies and other interviews, the evaluation team developed an analysis of the state of thinking on higher education.

18. **Data.** Secondary data played a major role in the evaluation. The evaluation did not produce any primary quantitative data. Secondary data came primarily from the World Bank's *World Development Indicators* (World Bank 2016) and from the World Bank's results frameworks and IFC's investment database. The evaluation also used data in its country cases from the World Bank Group and other sources, including governments and universities.

WORLD BANK GROUP DATA

19. **Analysis of the public sector portfolio.** The portfolio analysis examined project documents and evaluations: Implementation Completion and Results Reports, Implementation Completion and Results Reports Reviews, and Project Performance Assessment Reports. This included both a description of the portfolio and analysis of individual operations as well as a review of the lessons reported by the World Bank Group in both project and evaluation documents. The initial screening used data from FY03 to FY14, downloaded on December 1, 2014. This was later supplemented by operations approved between July 1, 2014, and April 30, 2016.

20. The portfolio analysis classified the public sector portfolio into a variety of categories. The World Bank portfolio analysis identified the projects' beneficiaries (including institutional level, faculty level, students, public officials, and higher education agencies) and if any disadvantaged groups were specifically targeted. Each project objective was classified according to its contribution to broader social and economic objectives, if any, and its specific sector objectives, which refers to the goals that are specific to higher education. Likewise, the evaluation coded each activity according to its contribution to a specific set of sector objectives. Given their design, most projects had multiple classifications because they supported various objective areas and focused on multiple goals. The evaluation also classified projects according to the type of instrument or intervention that used and the specific approaches for each activity. Table A.4 outlines the categories for projects' broad objectives, sector objectives, and type of support.

Table A.4. Classification of World Bank Portfolio

Broad objectives: "The investment is promoting . . ."	Sector objectives: "The investment's policy development operation or a particular activity supports improving . . ."	Type of support
• Skill and employability of graduates • Competitiveness and private sector development • Local community development • Knowledge • Other or not applicable	• Access and enrollment • Quality of teaching and learning • Relevance of teaching and learning • Quality of research • Relevance of research • Efficiency of institutional management • Governance of higher education system • Internal efficiency • Equity and diversity • Other	• Provision of financial students • Provision of grants to higher education institutions • Technical assistance for policy and legal framework • Technical assistance for institutional development • Support for information and communication technology • Support infrastructure • Training for faculty • Training for government staff • Management information systems • Other

21. **Analysis of the private sector portfolio**. A standard quantitative portfolio review was conducted of IFC's higher education portfolio detailing the number of new investment projects committed between FY03 and April 30, 2016 and the volume of investments committed. A similar review was conducted for the number and expenditure of IFC advisory services approved between FY05 and May 30, 2066.

22. The private sector qualitative portfolio review consisted of analysis of IFC documentation (Board reports, investment review memoranda, credit risk ratings, Development Outcome Tracking System indicators, Expanded Project Supervision Reports, and evaluation notes). A protocol was developed to capture salient aspects of IFC's higher education portfolio, including the extent to which IFC ensured key strategic priorities up-front (for example, focus on lower-income groups) and the project's intended development impact. As far as possible, the IFC review paralleled the World Bank review while maintaining its intention to capture all IFC-specific expected development impacts (capital market development).

23. **Review of the World Bank Group's strategies**. The evaluation analyzed corporate, sector, and country strategies as well as associated documents, such as Systematic Country Diagnostics. A total of 92 Country Assistance Strategy Completion Report Reviews completed between FY12 and FY16 were screened to identify higher education as a priority issue based on relevant keywords. The evaluation analyzed specific areas of the World Bank Group support based on the description of the pillars and objectives of the country strategies. Likewise, the evaluation reviewed and analyzed the 22 completed pairs of Systematic Country Diagnostics /Country Partnership Frameworks based on the description of the pillars and objectives pertaining to higher education.

24. **Review of World Bank knowledge work**. The evaluation identified the relevant portfolio of higher education analytical and advisory work during the evaluation period 2003–2016. Portfolio identification was based on the higher education sector and the education for the knowledge economy theme, resulting in a total of 87 knowledge products. The evaluation reviewed the portfolio of knowledge products based on a description of their development objectives.

COUNTRY CASE STUDIES

25. The country case studies were selected as a purposeful sample to cover the diversity of support the World Bank Group provides and the diversity of country contexts where it supports higher education. Therefore, selected countries were not intended to be a random sample of beneficiary countries or of World Bank Group interventions. The unit of observation was the World Bank Group's country program in higher education, that is, the portfolio of public and private investments in the country, the World Bank Group's knowledge work, and its advisory services. The country case studies included collection of data and interviews with government officials, beneficiaries, and local stakeholders.

Selection of Country Cases

26. Countries were classified according to two primary criteria based on World Bank support to ensure a mix of different types of country interventions. The primary criteria included the following:

- **The public and private sector mix of World Bank Group support for higher education**. Support is provided through both the public sector window—primarily from the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA)—and the private sector window primarily from IFC. The first category consists of countries in which the World Bank Group has only provided support through its public sector window (IBRD and IDA). The second category is for countries that receive IFC support, either alone or in conjunction with public sector support. For a country to be included, it must have either a core higher education World Bank project or an IFC project.
- **The continuity of the World Bank Group's support for higher education**. In some countries, the World Bank Group has long provided support for higher education, and the investment represents part of a long-term engagement with the sector. In other cases, this support is more recent. For purposes of the evaluation, the cutoff date is 2005. When the World Bank has an engagement in higher education from 1995 to 2005, the World Bank Group country portfolio will be classified as having a *continuous engagement*. Otherwise, it will be classified as having a *recent engagement* in higher education.

27. Table A.5 outlines the initial division of countries based on these primary criteria.

Table A.5. Initial Classification of Countries by World Bank Group Support

	Countries with core higher education operations	
Initial classification	Recent World Bank Group engagement	Continuous World Bank Group engagement
World Bank support only	Afghanistan	Burkina Faso
	Armenia	Ethiopia
	Bangladesh	Indonesia
	Cambodia	Mauritania
	Costa Rica	Mozambique
	Guyana	Nepal
	Malawi	Senegal
	Maldives	Sri Lanka
	Montenegro	Uganda
	Tanzania	Vietnam
	West Bank and Gaza	Yemen, Rep.
IFC support only or both	Antigua and Barbuda	Brazil
	Botswana	Chile
	Kenya	China
	Namibia	Colombia
	Nigeria	Dominican Republic
	Peru	Arab Republic of Egypt
	South Africa	Ghana
	Turkey	India
		Jordan
		Mexico
		Morocco
		Pakistan
		Trinidad and Tobago
		Tunisia

Source: IEG Evaluation Portfolio Analysis
Note: The following countries have World Bank Group higher education operations but were excluded because they did not have a core investment project: Albania, Argentina, Bhutan, Bosnia and Herzegovina, Bulgaria, the Democratic Republic of Congo, Croatia, Djibouti, The Gambia, Georgia, Jamaica, Kazakhstan, Kosovo, Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, the former Yugoslav Republic of Macedonia, Madagascar, Mali, the Philippines, Poland, Tuvalu, Ukraine, and Uruguay. IFC = International Finance Corporation.

28. To ensure diversity among the choice of countries, the evaluation used two secondary criteria based on country characteristics:

- **Enrollment in higher education.** The evaluation divided countries according to the size of the higher education sector, measured by the average gross enrollment rate for tertiary education in the period 2002–12 available from the World Bank Group's education statistics database (EdStats).
- **Share of private enrollment in higher education**. Countries were also classified according to the share of private higher education in total higher education enrollment. As before, the source of the data is EdStats for the period 2002–12.

26. After mapping countries according to primary and secondary criteria, the final selection of prioritized candidates was based on regional diversity, number of projects, and estimated mission budgets, resulting in a sample of seven country case studies.

Country Cases Implementation

27. Of the seven countries originally chosen as country case studies, the evaluation team was able to visit five (Armenia, Chile, Jordan, Malawi, and Vietnam). The evaluation team carried out the India case study as a desk study due to administrative limitations in visiting the country. Given the availability of data and the support from the World Bank's Country Office, the India country case study is equivalent to the studies carried out in the field. Due to security concerns, the proposed mission to Burkina Faso was canceled. A local consultant was hired to carry out a partial assessment of the World Bank's support for higher education. Given the time constraint and unexpected change in plans, the country case study for Burkina Faso is not complete and is used as appropriate.

28. Although the results of the country case studies are confidential, the evaluation has summarized the findings and developed a selection of tables. The draft instrument is also available, and the team can provide additional tables.

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Appendix B. Country Case Studies

1. Country case studies are an important input in understanding the World Bank Group's support for higher education. They use a combination of quantitative and qualitative data to study the country context and the contributions of World Bank Group's support for higher education in the country. The evaluation team selected specific country case studies based on criteria to serve as a purposeful sample of the World Bank Group's support for higher education. The country case studies include Armenia, Burkina Faso,[2] Chile, India, Jordan, Malawi, and Vietnam.

Systems and Major Challenges

ARMENIA

2. Higher education in Armenia was first organized under the Soviet system, which traditionally separated teaching and research. Today, higher education institutions have begun to integrate teaching and research but the Academy of Science still remains the country's premiere research institute. Higher education comprises both public and private universities. Currently, there are 67 public and private universities, including roughly twice as many private universities than public universities. Public universities are better regarded in quality and some private universities are questioned as having poor quality. Roughly 75 percent of the private universities and 80 percent of the public universities are located in the capital city Yerevan, and the remaining institutions are in the provinces. Both higher education institutions and the number of students enrolled have decreased over time, partly due to a declining population.

3. Higher education is associated with low public expenditures. Universities are financially autonomous, and governing councils submit budget projections for state funds to the central government and have discretion over nonstate funds. Students bear the burden of their education through tuition. Only merit-based scholarships are available to students, and student loans are provided only by the commercial sector.

4. Challenges in the sector include insufficient public financing of higher education, lack of access for all students, including poor access for women to nontraditional fields, lack of relevance of employable and relevant skills, lack of capacity in the areas of quality assurance and evaluation, poor quality of teaching and research, poor linkages with the private sector, and low relevance of research. The Bologna Process has

[2] Burkina Faso's country case study was hastened due to political and social instability during the evaluation. It is not included in this appendix.

encouraged the Armenian higher education system to harmonize quality assurance such as accreditation and certification processes with that of the rest of Europe through the Armenian National Quality Assurance Agency.

5. The World Bank Group has supported higher education in Armenia through investments supporting competitive grants, one development policy operation, and knowledge work over the years. There are no stand-alone higher education projects, and higher education is provided as an additional component to education or health projects. Nevertheless, higher education is important and has focused in the areas of improving access to and quality and relevance of higher education. Projects, through competitive funds, have focused on research, including promoting skills and employability in competitive sectors, private sector development, and university and industry linkages to increase competitiveness.

6. Projects have resulted in the establishment of national institutions to support quality such as a national agency for quality assurance, a national agency for education management, and separate national agencies for assessments and curriculum. Support for strengthening existing institutions through the competitive grants program has improved the quality, relevance, and efficiency of higher education institutions by providing skills development for students, improving quality and relevance of teaching and research, and facilitating linkages with industry. Knowledge work in higher education has prioritized reforms in governance; access, including equity; strengthening quality; and strengthening higher education support in the pharmaceutical sector. The World Bank's competitive grants program has contributed to institutional financial sustainability but has been critiqued for lack of attention toward corruption.

CHILE

7. There are three types of higher education institutions in Chile: universities, professional institutes, and technical vocational centers. The latter offers technical degree programs for shorter durations. The 1980s education reform led to an enormous proliferation of private providers in a largely unregulated system. The most prominent "traditional" universities belong to the Council of Rectors, known as CRUCH. These institutions play a central role in the higher education systems and operate under a different set of regulations. Currently, there are a total of 162 higher education institutions, of which there are 16 public and 9 private CRUCH universities.

Table B.1. Types of Higher Education Institutions in Chile

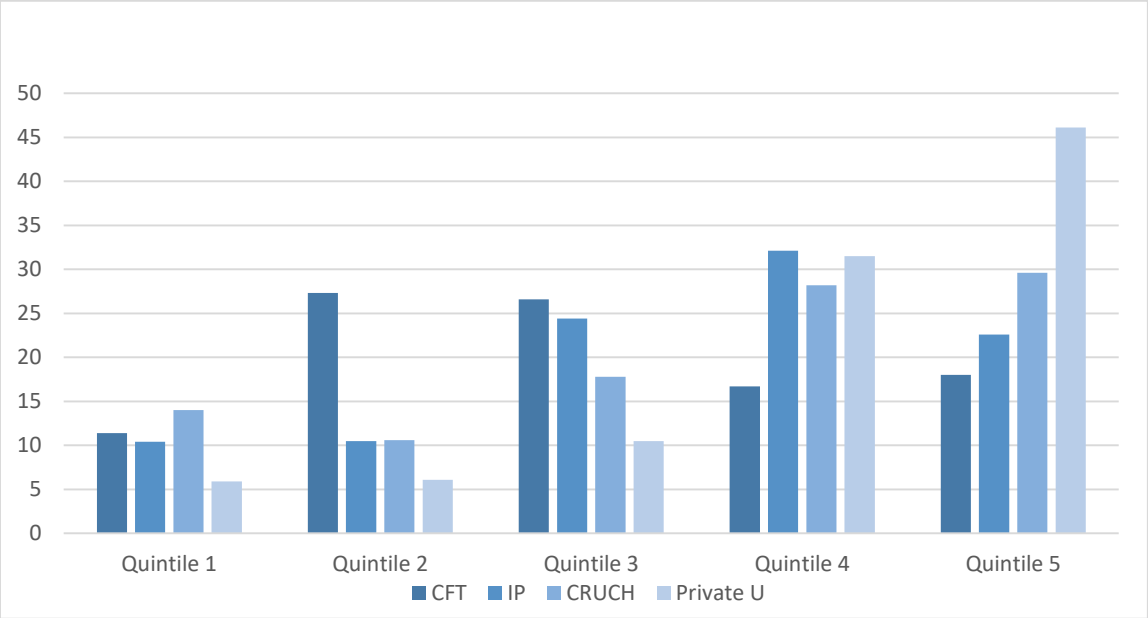
Type of institution	Accredited	Not accredited	Accreditation in progress	Total
Public CRUCH university	16	0	0	16
Private CRUCH university	9	0	0	9
Private university (non-CRUCH)	20	13	2	35
Professional institution	19	14	11	44
Technical vocational centers	20	18	20	58
Total	84	45	33	162

Source: Chile Country Case Study. IEG Evaluation Portfolio Analysis
Note: Based on data from August, 2014.

8. Although most higher education institutions are autonomous, only about half of them are accredited. In 2005, the government passed the Quality Assurance Law, which created the National Accreditation Commission and aimed to consolidate the accreditation process. This led to an increase in universities seeking accreditation. Accreditation is on a voluntary basis except for medicine and education programs.

9. Public expenditure for higher education has increased substantially over the past decade, as shown in figure B.1. Despite these trends, higher education is highly dependent on tuition and fees—over two-thirds of total revenue comes from tuition and fees at the undergraduate and postgraduate level. The government finances higher education through student aid (59 percent), block grants to institutions (22 percent), and grants for science and technology (19 percent). About 50 percent of students receive some form of student aid through student scholarships or loans. There are 12 types of scholarships available for both public and private university students. Most of them target academically performing students from lower socioeconomic groups. On average, public funds account for about 10 percent of revenues. However, public funds for CRUCH universities account for more than one-fifth of total revenues. Accordingly, both public and private CRUCH universities depend substantially less on tuitions and fees. CRUCH universities benefit because they are allocated resources based on historic budget. This contributes to inequity in the higher education system as these institutions tend to be the best in the country.

Figure B.1. Share of Enrollment by Income Quintile and Type of Institution (%, 2006)



Source: Bío Bío's Regional Steering Committee. 2009. "The Bío Region, Chile: Self-Evaluation Report," OECD Reviews of Higher Education in Regional and City Development, IMHE.

10. From 2003 to 2013, enrollment rates almost doubled, from 43 percent to 79 percent. The proliferation of private higher education institutions along with the expansion of student scholarships and state-guaranteed loans transformed higher education from an elite into a mass system in the 1980s. Despite the rapid increase in higher education participation in recent years, low-income students continue to be less likely to enroll in higher education than those from the high-income backgrounds.

11. As the system shifts from an elite higher education system to a mass system, student retention has become an important issue. The system has absorbed a higher proportion of vulnerable students who are more like to drop out because they are less prepared to cope with university studies and take longer to graduate because of expenses associated with university. Students with exam scores close to the threshold for admission are less likely to successfully complete first semester courses, calling for the need to create remedial courses to improve their performance.

INDIA

12. India's higher education system is the third largest in the world, after the United States and China. The system comprises more than 30,000 higher education institutions, such as universities and colleges (FICCI Higher Education Summit 2014; Stolarick 2014). As a result, the government is not able to regulate, monitor, and accredit all the institutions. Many institutions are too small to have a critical mass of students or qualified faculty to offer good-quality education. Some of the lowest-quality education

comes from private institutions. However, the system also contains four to six "world-class" institutions, based on international rankings (FICCI Higher Education Summit 2014).

13. The gross enrollment rate in higher education increased from 15 percent to just over 20 percent between 2010 and 2012 (Stolarick 2014). There is significant variation across states and union territories in India, ranging from 2.3 percent (Daman and Diu) to 47.9 percent (Delhi Capital Territory). Enrollment is further complicated by disparity based on geographic location, gender, caste, or tribe. Scholarships constitute a small percentage of the budget for higher education. Significant efforts are needed to achieve the government's goal of increasing the average enrollment rate to 25 percent by 2020.

14. The system is highly centralized, with institutions having limited autonomy to govern and manage without interference by state or central governments. In response, the World Bank has designed specific leverages to make systemic changes at the state level. For example, through World Bank support of second-tier technical and engineering universities (rather than the top tier), the World Bank introduced eligibility criteria for state and institutional autonomy and emphasized a changing role for government from directly administrating institutions to shaping and monitoring institutional performance.

15. There has been consistent support from the World Bank directed to technical and engineering higher education institutions throughout the country with three loans spread over more than a decade. (The third operation is currently being prepared.) Lessons have been applied within each operation, but central issues of governance, autonomy, and quality continue to be addressed across all loans. With direction provided by the latest country partnership strategy, the World Bank is much more focused on low-income states and its higher education portfolio is now directed to state loans and analytical work (such as Madhya Pradesh and Odisha), in addition to national projects. These two state directed loans provide both general and technical higher education, which is a change from the previous concentration on technical.

16. Higher education loans have also addressed persistent challenges, such as supporting higher education institutions to attain accreditation, including conditions to improve institutional performance; improving postgraduate education; supporting faculty development; and increasing the number of postgraduate students. Industrial linkages between private sector and institutions have also been emphasized. The International Finance Corporation (IFC) no longer provides support for higher education in India.

JORDAN

17. Jordan places significant value on higher education. There are 28 universities—10 public and 18 private—offering higher diplomas, bachelor's degrees, master's degrees, and doctorates. There are also 50 community colleges: 29 public and 21 private. Public universities account for 68 percent of total enrollment. The ratio of university to community college students is 6 to 1 (see figure B.2).

18. Growth in higher education is driven by increases in secondary school completion and new "parallel programs" in public universities. Declining government transfers, rapidly increasing student enrollments, and caps on raising student fees prompted universities to introduce parallel fee-paying programs in the late 1990s. The parallel program was designed to solve the problem has, however, created its own problems. It allows students with lower grades on the entrance examination (the Tawjihi) to enter certain programs by paying a higher tuition fee. The parallel tuition fee system is inherently regressive, as students from advantaged socioeconomic backgrounds tend to receive better schooling and do better academically.

19. Jordan's higher education system faces many challenges. Enrollment in tertiary education has steadily increased over the past two decades (see figure B.3). High gross enrollment rates (47 percent, higher than the regional average) have made it increasingly difficult to maintain the quality of education at public universities. Private universities can absorb some excess demand; however, they receive no public subsidies, and private university enrollment is capped at 8,000 students. Combined with declining public financing for higher education, subsequent increases in tuition fees, and the absence of significant student aid schemes, universities are financially strained, and higher education is out of reach for the poorest Jordanians.

20. Universities have not been able to adapt and respond quickly to the emerging needs of the economy given the rigid governance system. Furthermore, lack of university autonomy is hindering innovation. This has contributed to high unemployment of university graduates. Community colleges have strayed from their mandate and become a "bridge" to a university education instead of institutions that provide the technical needs of the labor market.

Figure B.2.Share of Students by Type of Institution (2014)

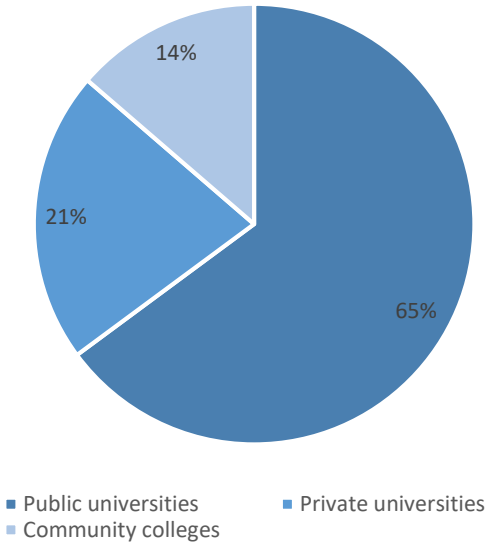
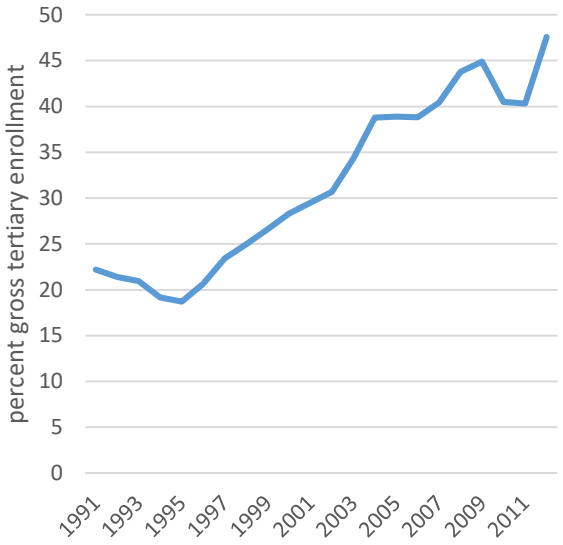


Figure B.3. Gross Higher Education Enrollment Rate (1991–2012)



21. The World Bank Group's vision for Jordan's higher education system is in line with the country's Human Resources Development Committee, which is intended to address issues surrounding employability. The committee is focusing on technical and vocational education. The World Bank has engaged in higher education with a project already under implementation and with technical assistance. The World Bank's assistance was relevant to the needs of the sector; however, little progress was made in improving the quality and relevance of education (especially in community college education's relevance to the labor market), governance, and student financing. IFC's portfolio is highly aligned with the needs of Jordan's education system. IFC made one investment and had one advisory service project under the Education for Employment initiative, but it is too soon to judge the outcomes of these activities.

MALAWI

22. Higher education in Malawi consists of the following types of institutions: (i) university colleges, (ii) teacher training colleges for primary school teachers, and (iii) technical colleges. Traditionally, Malawi's higher education system has been predominantly public. There are currently four public universities including the University of Malawi, which is the largest higher education institution and consists of four colleges.

23. The higher education subsector in Malawi is still very small. Access to higher education is quite limited, with a less than 1 percent enrollment rate, which is among the lowest in the world and well below the average for Sub-Saharan Africa. At the same

time, the expansion of secondary education since late 1990s has led to a growing demand for higher education, although the completion rate of secondary education remains very low compared with other countries. Limited access to public higher education exacerbates the issue of equity. The lowest share of students come from the poorest families, whereas more than 80 percent of students come from the wealthiest quintile. Malawi's higher education system is highly regressive in that student loans are not needs-based and are almost never recovered, which further worsened inequities.

24. The capacity of higher education institutions is too limited to meet this growing demand. For example, only 3,000 out of 70,000 eligible secondary graduates were selected for the public universities in 2015. Overall, inadequate infrastructure and equipment has constrained access and compromised quality.

25. As the demand for higher education increases, private universities have been growing rapidly, particularly since the mid-2000s. The establishment of these universities helped ease the pressure and support steep enrollment growth. However, many of these new private higher education institutions are not accredited and raise critical concerns about quality.

26. Although the World Bank's education portfolio in Malawi has mostly focused on basic education until recent times, higher education has been explicitly included in strategic documents and operations since 2010. The World Bank's goals of supporting higher education are overall consistent, aiming to increase skilled labor in key growth areas identified in government strategy. This is congruent with the government's Malawi Growth Development Strategy, which recognizes the crucial role of higher education as a key driver of competitiveness and growth. Under the most recent Skills Development Project, the World Bank provided the support to address a wide range of issues including access, quality, and equity. It provided performance-based grants for major higher education institutions in Malawi, as well as technical assistance to strengthen quality assurance systems for all public and private universities.

VIETNAM

27. Vietnam's higher education system was built under a socialist government, incorporating elements from both the colonial French and the Soviet education systems. The system was traditionally divided into three levels of school: primary, lower secondary, and upper secondary.

28. Before independence in 1945, there were only three universities in the country. The system now includes numerous universities and colleges, along with technical and vocation schools. The public system had several national universities, under the Ministry of Education. Most public universities operated under different ministries or

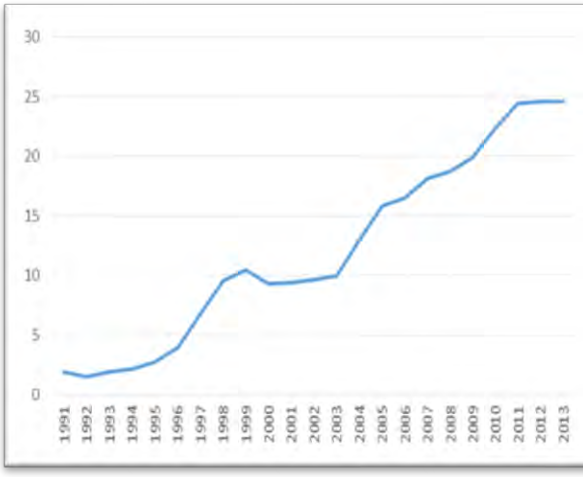
under local governments. The 1986 economic reforms led to the initially unofficial introduction of fees. Later, private education was introduced, which accounts for a growing share of enrollment.

29. The higher education system has grown quickly, reflecting increases in higher education enrollment and growing household incomes. Enrollment has grown from about 2 percent in 1991 to 25 percent in 2013. According to a recent report, half of the budget for universities is spent on the top income quintile, and for colleges it is about a third of the budget (see figure B.4, panels a and b.) The overall budget for higher education has been growing steadily. Data from 2009 to 2012 (the only data available) suggest that spending has increased to roughly 50 percent during the four-year period. However, higher education has also grown rapidly and has to rely on fees and other sources of financing. This has led some universities to the point of bankruptcy (World Bank 2016).

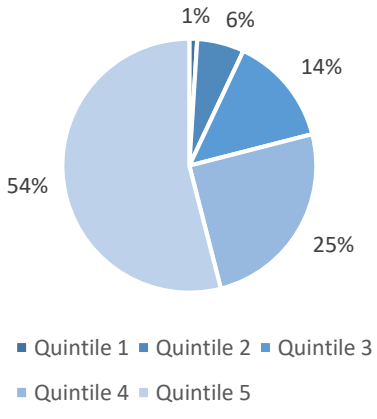
30. In response to a changing higher education landscape, the World Bank Group has supported efforts to strengthen the autonomy of universities, allowing them to experiment and respond to priorities. It has supported efforts to transform the role of the government as a "steward" of the higher education system. World Bank support has also financed grants to universities to promote improved learning and research. Consistent with this vision, both the World Bank and IFC have worked to develop innovative university models through investment and policy support. The World Bank Group's approach does not have a strong focus on supporting "lower-level" public and private higher education institutions, and it has not provided much direct support to improve equity.

Figure B.4. Enrollment Patterns in Vietnam Higher Education

a. Gross higher education enrollment rate (1991 to 2013)



b. Enrollment in higher education by income quintile (2014)



Source: IEG Country Case Study IEG Evaluation Portfolio Analysis.

Reference

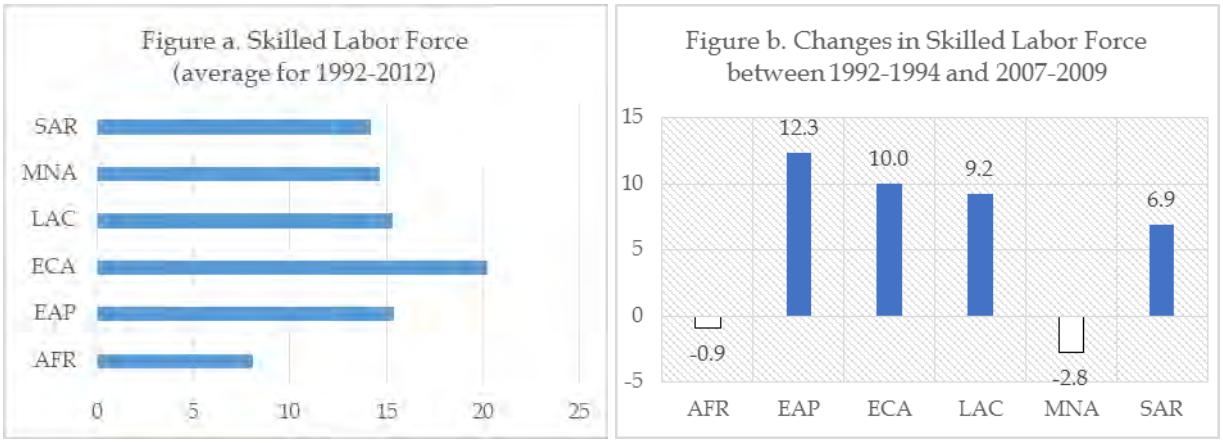
World Bank. 2016. *Vietnam: Unit Cost Study for Universities: Efficiency through Accurate Information.* Washington, DC: World Bank.

Appendix C. Employability

1. With many countries increasing their primary and secondary completion rates, higher education represents the next significant policy challenge. More schooling is widely considered a pathway to development, with postsecondary studies often associated with sizable private and social benefits (McMahon 2009; Oketch, McCowen, and Schendel 2014). However, increasing access and average attainment is the beginning of a long-term process. One of the main challenges is ensuring that skilled workers obtain jobs that maximize their productivity. This appendix describes available knowledge about the skilled labor force and employability of higher education graduates to pinpoint key areas for intervention and future research. While countries may have specific priorities, the aim here is to identify common challenges across the world. This appendix also acknowledges that there are many reasons for unemployment that go beyond the scope of this evaluation.

2. *Labor force participation*. Skilled individuals make up 15 percent of worldwide labor supply (see figure C.1, panel a). However, this share varies widely across Regions. Although the skilled workforce is only 8 percent in Sub-Saharan Africa, it is almost 20 percent in Europe and Central Asia.

Figure C.1. Labor Force Participation Rates and Changes by Region



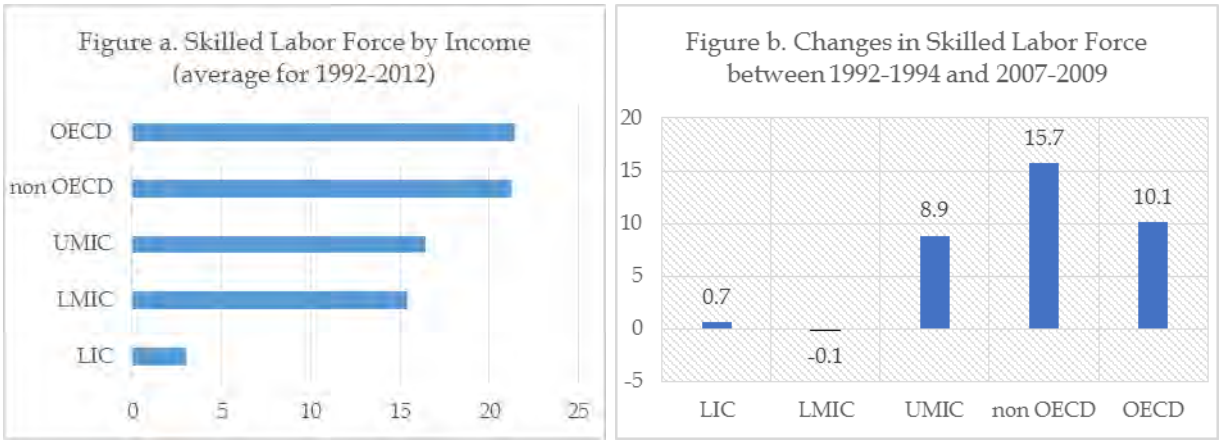
Source: ILO 2015.
Note: AFR = Sub-Saharan Africa; EAP=East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia

3. The size of the skilled workforce has grown over time (see figure C.1, panel b). Observed changes are largest in South Asia, Middle East and North Africa, Latin America and the Caribbean, and Europe and Central Asia. Available data indicate small declines in the Sub-Saharan Africa and East Asia and Pacific Regions.

4. Using the World Bank's income classification, we explore differences across this dimension. Panel a of figure C.2 shows that the skilled workforce rises with income

level. On average, 3 percent of the labor force has a tertiary degree in low-income countries. This fraction is five times higher for lower-middle-income countries and almost sevenfold for high-income nations. Income levels are correlated with the growth in the size of the skilled workforce. Although low-income and low-middle-income countries show virtually no change, the labor force has become more educated in general (see figure C.2, panel b).

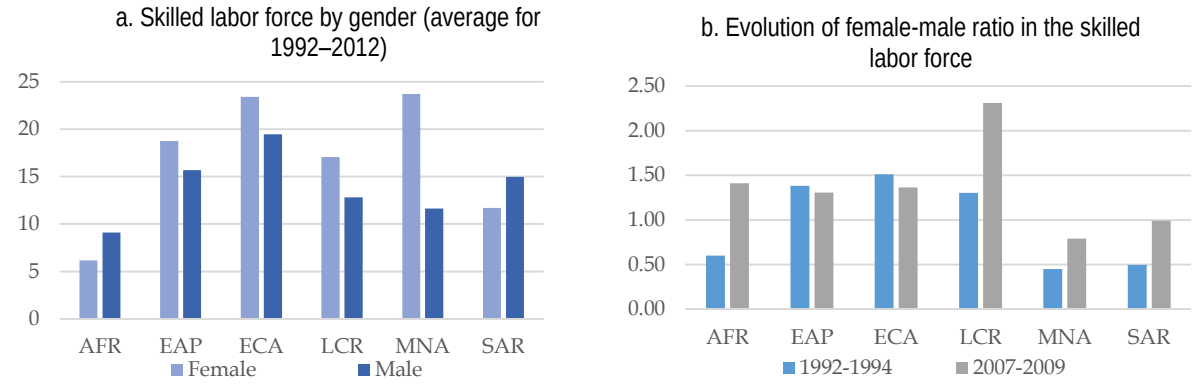
Figures C.2. Labor Force Participation Rates and Changes by Income



Source: ILO 2015.
Note: LIC = low-income country; LMIC = lower-middle-income country; non-OECD = high-income non-OECD country; OECD = high-income OECD country; UMIC = upper-middle-income country.

5. Gender inequality is more prominent in some Regions (see figure C.3, panel a). More male graduates participate in the labor market in Sub-Saharan Africa and South Asia, whereas the opposite is true for other Regions. More female graduates have joined the labor force over time, denoted by rising female-male labor force participation ratios (see figure C.3, panel b). In fact, more women with tertiary degrees are currently attached to labor markets in all Regions except South Asia.

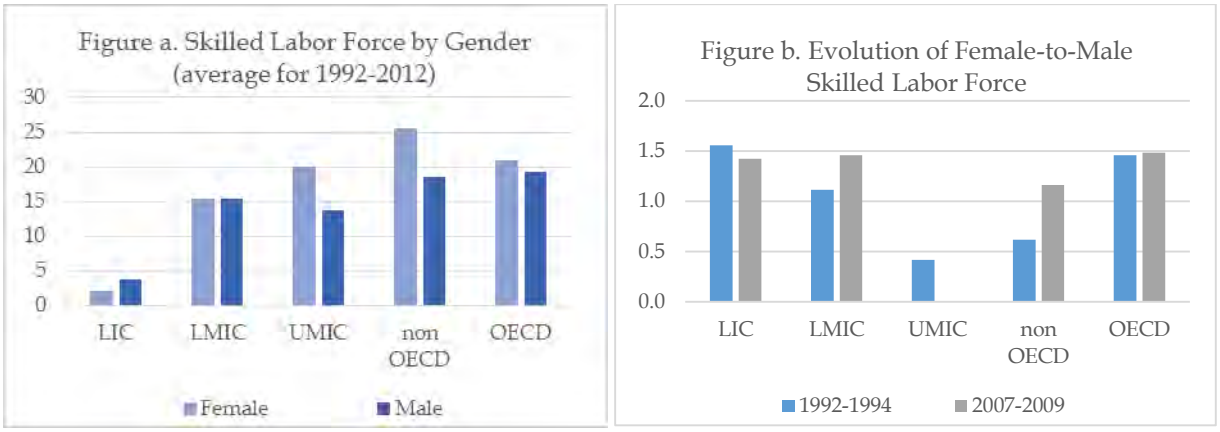
Figures C.3. Gender Disparities in Labor Force Participation Rates and Changes by Region



Source: ILO 2015.
Note: AFR = Sub-Saharan Africa; EAP=East Asia and Pacific; ECA = Europe and Central Asia; LCR = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

6. Gender differences are smaller in lower-income countries (see figure C.4, panel a), which also have the lowest amount of skilled labor. The most unequal nations are upper-middle-income and non-OECD countries. For countries with available data, the female-male ratio has risen, denoting that more women are both obtaining tertiary degrees and joining the labor force (see figure C.4, panel b). The only exception is low-income countries, where estimates indicate that more skilled women are active in the labor market.

Figures C.4. Gender Disparities in Labor Force Participation Rates and Changes by Income



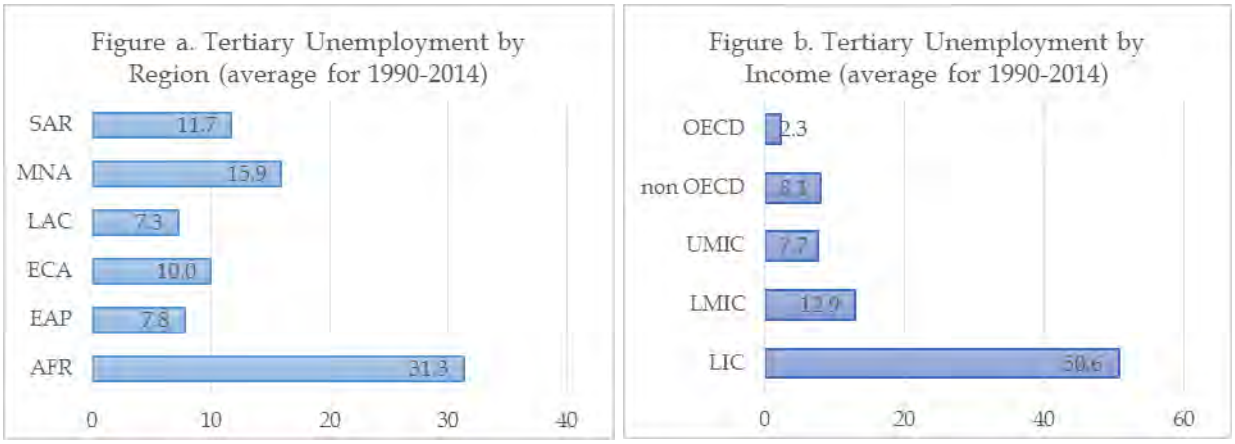
Source: ILO 2015.
Note: LIC = low-income country; LMIC = lower-middle-income country; non-OECD = high-income non-OECD country; OECD = high-income OECD country; UMIC = upper-middle-income country

7. We now discuss several challenges to employability: high rates of youth unemployment and underemployment, job search duration, skills mismatch, student preferences and major choice, quantity-quality trade-offs, and the importance of complementarity among sectors in higher education policy.

8. *Youth unemployment and underemployment*. Rising enrollment in higher education will increase the supply of skilled labor. Since different countries value different skills, it is imperative to align these changes with labor demand to prevent increases in already high unemployment and underemployment rates. Previous research finds that skilled unemployment tends to be high in some countries. Panel a of figure C.5 shows considerable heterogeneity across Regions. Although 7.3 percent of tertiary graduates are unemployed in Latin America and the Caribbean, this fraction is 31.3 percent in Sub-Saharan Africa.

9. Unemployment rates for tertiary graduates are highest in low-income countries (see figure C.5, panel b), where almost one of every two individuals is out of work. In comparison, all countries above middle income have unemployment rates at least four times lower.

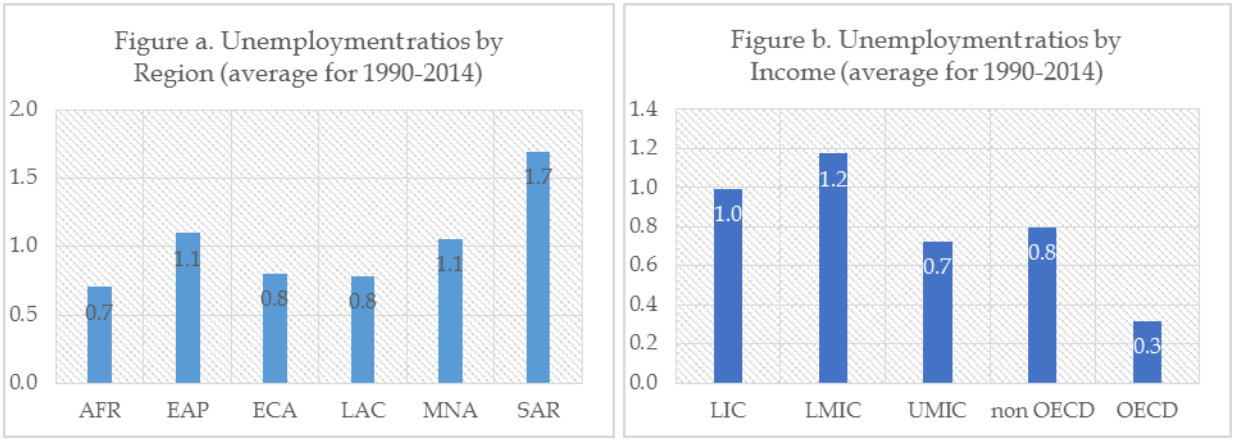
Figures C.5. Unemployment for Tertiary Graduates



Source: ILO 2015.
Note: AFR = Sub-Saharan Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; LIC = Low-income country; LMIC = lower-middle-income country; MNA = Middle East and North Africa; non-OECD = high-income non-OECD country; OECD = high-income OECD country; UMIC = upper-middle-income country

10. Moreover, this level of unemployment is occasionally higher when compared with that of less educated workers. Estimates of the ratio between tertiary- and secondary-level unemployment rates in figure C.6, panel a, show that more skilled workers are out of work in the Middle East and North Africa, East Asia and Pacific, and South Asia Regions. The ratio between skilled and unskilled unemployment is less than 1 for higher-income countries and larger for low- and lower-middle-income nations (see figure C.6, panel b). In these cases, unemployed tertiary graduates outnumber those with secondary studies, likely because job seekers outnumber available skilled positions (Drine 2012).

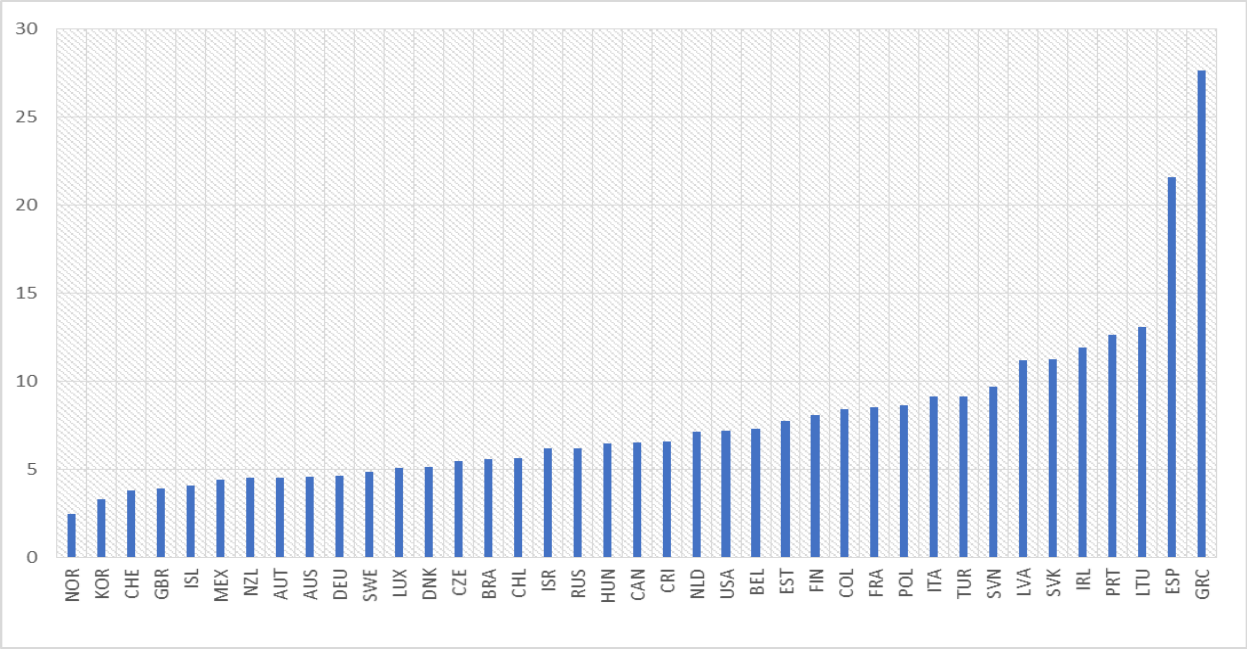
Figures C.6. Ratio of Tertiary Unemployment to Secondary Unemployment



Source: ILO 2015.
Note: AFR = Sub-Saharan Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; LIC = low-income country; LMIC = lower-middle-income country; MNA = Middle East and North Africa; non-OECD = high-income non-OECD country; OECD = high-income OECD country; UMIC = upper-middle-income country

11. Since detailed data are available, figure C.7 shows the percentage of higher education graduates that are unemployed in OECD countries. On average, 7 percent are unemployed, but this fraction varies sizably across countries.

Figure C.7. Tertiary Unemployment Rates for Adults (Ages 25–64) in Selected OECD Countries



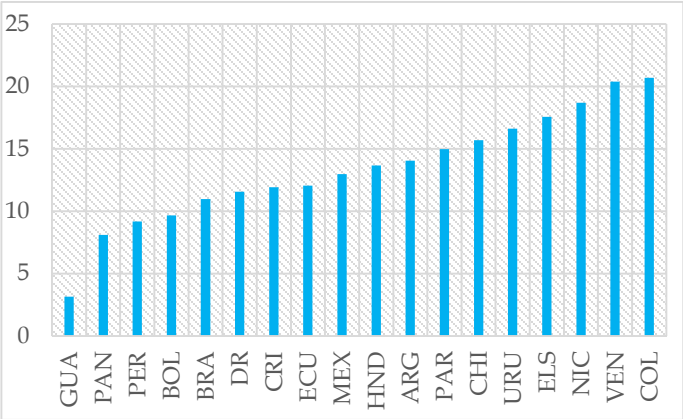
Source: OECD 2016.
Note: AUS = Australia; AUT = Austria; BEL = Belgium; BRA = Brazil; CAN = Canada; CHE = Switzerland; CHL = Chile; COL = Colombia; CRI = Costa Rica; CZE = Czech Republic; DEU = Germany; DNK = Denmark; ESP = Spain; EST = Estonia; FIN = Finland; FRA = France; FSP = GBR = Great Britain; GRC = Greece; HUN = Hungary; IRL = Ireland; ISL = Iceland; ISR = Israel; ITA = Italy; KOR = Republic of Korea; LUT = Lithuania; LUX = Luxembourg; LVA = Latvia; MEX = Mexico; NLD = Netherlands; NOR = Norway; NZL = New Zealand; POL = Poland; PRT = Portugal; RUS = Russian Federation; SVN = Slovenia; SWE = Sweden; TUR = Turkey; USA = United States

12. Unemployment rates for young college graduates are higher in developing countries (see figure C.8). In Latin America, 13.4 percent of workers ages 20–24 who have a tertiary degree are jobless. Figure C.8 shows that unemployment is largest in Nicaragua, Venezuela, and Colombia. Academic research has found similar rates in China (Soo 2015), South Africa (Oluwadoju et al. 2016), and Tanzania (Ndyali 2016). In the Middle East and North Africa Region, unemployment increases for more educated youth (Drine 2012).

13. A way to address skilled youth unemployment is to foster cooperation between higher education systems and employers (Yamada 2015). A successful example is Costa Rica, which invested in training skilled workers in the electronics industry that attracted foreign investment from Intel (Rodríguez-Clare 2001). Intel's impact is currently reflected in a series of higher education programs designed to increase both the number of graduates and their proficiency in skills valued by the firm (MIGA 2006). The Russian Federation has also embarked on similar initiatives among firms, colleges,

and the government to strengthen youth labor market outcomes (Mishalenko et al. 2016).

Figure C.8. Tertiary Unemployment Rates for Young Workers (Ages 20–24) in Selected LAC Countries

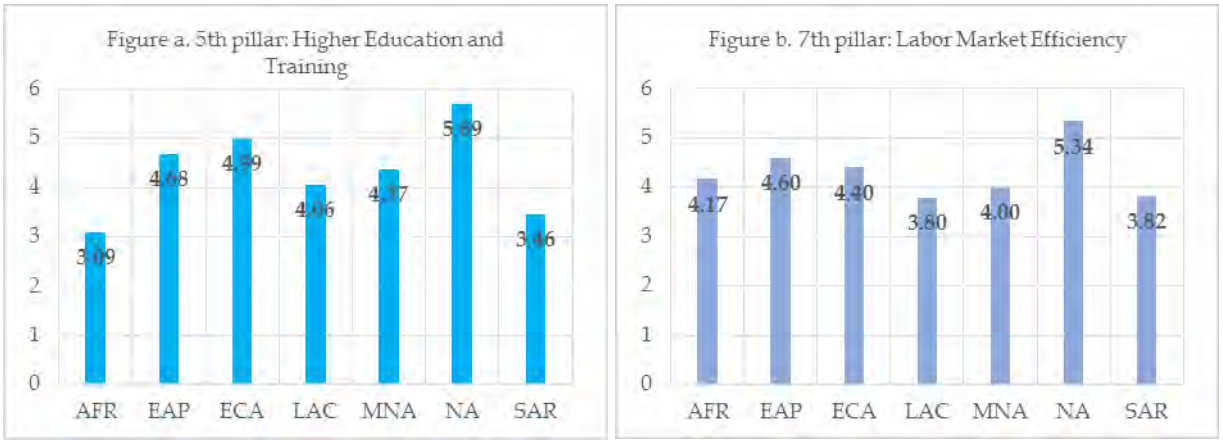


Source: LaborAL Observatory (CEDLAS and the World Bank), October 2013.
Note: ARG = Argentina; BOL = Bolivia; BRA = Brazil; CHI = Chile; COL = Colombia; CRI = Costa Rica; DR = Dominican Republic; ECU = Ecuador; ELS = El Salvador; GUA = Guatemala; HND = Honduras; MEX = Mexico; NIC = Nicaragua; PAN = Panama; PAR = Paraguay; PER = Peru; URU = Uruguay; VEN = Venezuela

14. In practice, each country can prioritize different industries depending on sectoral growth and comparative advantages. The Global Competitiveness Index (GCI) measured by the World Economic Forum is a useful tool for countries to identify key areas for investment in skilled labor (Sala-i-Martín et al. 2014). The GCI takes the stages of development into account by attributing higher relative weights to those competitiveness pillars that are more relevant for an economy given its particular stage of development.

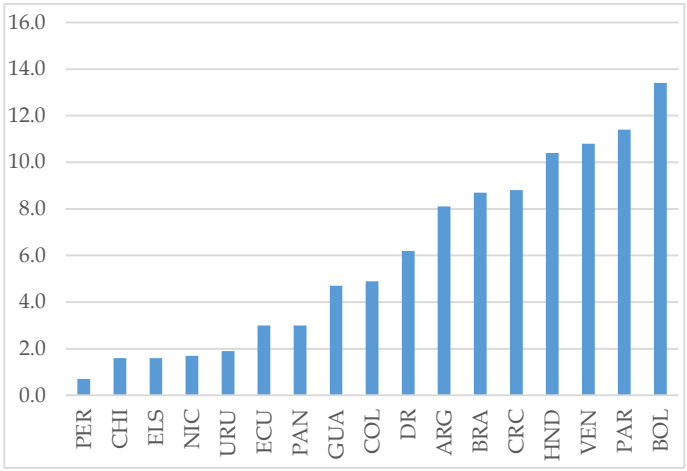
15. The GCI is made up of 12 pillars (Schwab and Sala-i-Martín 2015), measured on a scale from 1 (worst) to 7 (best). Of those, two directly relate to higher education and employability, respectively. The fifth pillar measures secondary and tertiary enrollment rates and the quality of education as evaluated by business leaders (figure C.9, panel a). The best performing Regions are North America and East Asia and Pacific, while Sub-Saharan Africa and South Asia lag behind. The 7th pillar measures worker performance and the attractiveness of the country for talent (figure C.9, panel b). Similar to the last pillar, the worst-off countries are in Sub-Saharan Africa and South Asia but also include countries in Latin America and the Caribbean.

Figures C.9. 5th and 7th GCI Pillar Indexes by Region



Source: Schwab and Sala-i-Martín 2015.
Notes: AFR=Sub-Saharan Africa; EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; NA = North America; SAR = South Asia.

Figure C.10. Unemployment Duration in Months for Young Workers (Ages 20–24) in Selected LAC Countries



Source: LaborAL Observatory (CEDLAS and the World Bank), October 2013.
Note: ARG = Argentina; BOL = Bolivia; BRA = Brazil; CHI = Chile; COL = Colombia; CRC = Costa Rica; DR = Dominican Republic; ECU = Ecuador; ELS = El Salvador; GUA = Guatemala; HND = Honduras; MEX = Mexico; NIC = Nicaragua; PAN = Panama; PAR = Paraguay; PER = Peru; URU = Uruguay; VEN = Venezuela.

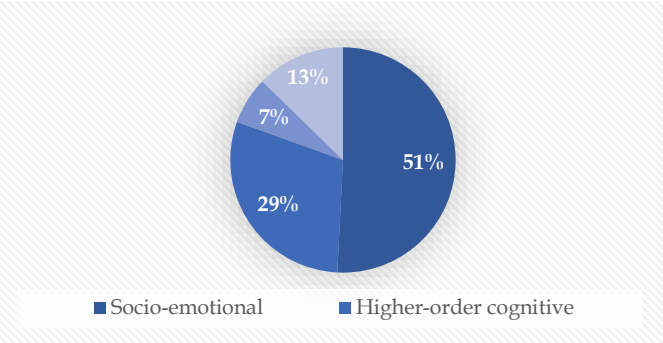
16. *Job search duration.* Given the high levels of youth unemployment, a corollary issue lies in the amount of time that college graduates spend seeking employment. Although some research indicates that longer search time leads to better matches, others suggest that extended unemployment spells may have detrimental consequences (Busso et al. 2012). As shown in figure C.10, Latin American college graduates spend an average of six months seeking employment. Turnover is rapid in Chile and Peru but may take up to a year in countries such as Paraguay and Bolivia.

17. Similar to the case for youth unemployment, mechanisms may be set in place to minimize unemployment duration by designing or expanding programs that attach graduates to the labor market. Many tertiary programs across the world require students to complete mandatory internships or training before granting degrees. Evidence for Germany shows that such requirements lower the probability of lengthy unemployment spells and increase average earnings (Saniter and Siedler 2014). Nevertheless, less evidence is available on the effectiveness of these requirements in

developing countries. It is important to evaluate whether demand-driven interventions are sufficient to improve job matches or whether employer incentives are also necessary. For instance, an assessment of Colombia's recently passed Ley Projoven would provide valuable insight into this matter.

18. *Skills mismatch.* The skills that employers' value are not necessarily those taught in higher education programs. Formal education at the tertiary level largely focuses on developing cognitive skills such as mathematics, language, and problem solving (Hanushek and Woessmann 2008). Nevertheless, employer surveys reveal that noncognitive or "soft" skills are at least as important in the labor market (Brunello and Schlotter 2011; Busso et al. 2012). As shown in figure C.11, firms actually value noncognitive skills more than cognitive or technical skills (Cunningham and Villaseñor 2014). In theory, coordinating taught skills to desired abilities would likely increase firms' incentives to invest in further training, since workers' human capital maximizes their productivity in that job and lowers the probability of leaving.

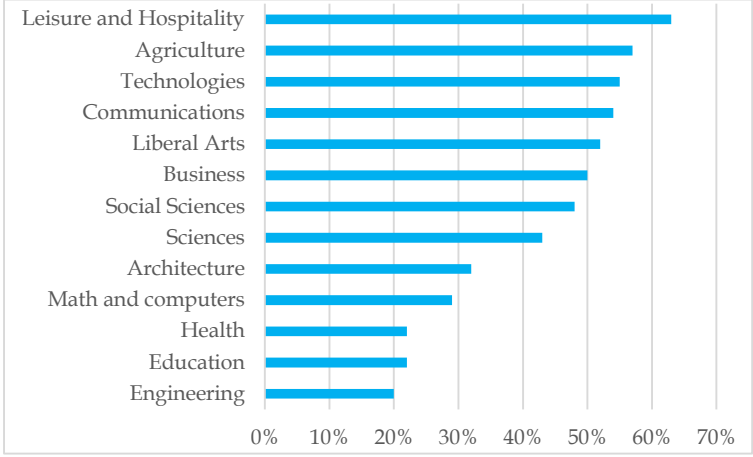
Figure C.11. Employer Preferred Skills for Tertiary Graduates



Source: Table 2 in Cunningham and Villaseñor 2014.

19. Programs that enhance the socioemotional skills of higher education graduates may have an important place in a portfolio of educational policies (Heckman and Kautz 2012). However, only providing soft skills training is not necessarily the best way to boost employability. Experimental evidence for Jordan shows that training programs for female community college graduates have no employment impact (Groh et al. 2016). Further evidence for university graduates and men is required to comprehensively assess the effectiveness of soft skills training. An interesting direction would be to evaluate the relative importance of cognitive and noncognitive skills in the labor market. Results from such studies would be useful to determine any potential changes to tertiary-level curricula to supply workers with skills desirable to employers, mitigating the "disconnection" between labor demand and supply.

Figure 19. Underemployment by field in the United States



Source: Abel and Dietz (2015)

20. *Student preferences and major choice.* Although preferences are the main determinant of individuals' major choice (Wiswall and Zafar 2015), beliefs and information may also influence higher education choices. Since aligning the supply and demand of skilled labor is a desirable outcome, information may be useful for this purpose. For instance, science, technology, engineering, and mathematics (called STEM) degrees are currently in high demand and graduates in this field often fare well in the labor market (Abel and Dietz 2015). Majors that are quantitatively oriented (for example, accounting, business analytics, economics, and finance) also tend to have positive employment outcomes. In turn, graduates in the humanities (for example, English, ethnic studies, art history, or anthropology) are often unemployed (Drine 2012) or underemployed (Pushkar 2016). Figure C.12 shows underemployment by field for U.S. college graduates.

21. The effectiveness of interventions that disclose the returns to basic education has led to studies that replicate these campaigns at the postsecondary level to study changes in demand and major choice (see review in Bonilla et al. 2016). Overall, these studies find that providing information on the returns to college does not increase the demand for higher education but has small intensive margin effects on college and major selectivity. In other words, informed students choose better colleges and higher paid careers. Since the demand for tertiary degrees is growing, providing useful information at the correct time may guide individuals into certain programs that benefit each country's comparative advantages. However, much remains unknown about the effects of information campaigns at the college level. More research is needed with regard to scaling up, what information is useful, and its ideal timing.

22. *Quantity and quality of higher education supply*. Given the sustained growth in higher education demand since the turn of the century, more efficient service provision is required. On one hand, countries where college is free will need to expand their current service, for example, creating more sections, teacher hiring, and so on. On the other, countries where college has high financial barriers to entry have seen a rise in alternative (usually private) institutions. An interesting question for future research is whether higher college demand is better served by creating more institutions or expanding the capacity of current colleges, that is, extensive versus intensive margin supply.

23. Consequently, any supply-side discussion will eventually lead to a debate about the quantity and quality of higher education. Are labor markets interested in more college graduates or better-prepared graduates? Surely, the answer to this question is country specific and depends on the stage of development (Castelló-Climent and Hidalgo-Cabrillana 2012). For example, low-income countries may be interested in increasing the size of the skilled workforce (Hanushek 2013). Countries with a sizable skilled workforce, such as China, are more concerned with improving quality (Zhong 2011). In fact, higher-quality workers are more likely to be employed and have better jobs (Boccansfuso, Larouche, and Trandafir 2015). It is essential for countries to assess their current standing in the higher education process to form a long-term policy strategy that will allow nations to guide their institutions into creating a suitable workforce for the future.

24. *Linkage between higher education systems and employers*. Throughout this appendix, a common theme has been the necessity for cooperation between employers and higher education systems to maximize the gains from a growing skilled workforce. The employability of skilled workers will depend on efficient matching mechanisms between the demand and supply of labor. Surveys that help understand what employers want in graduates and what students seek in a job are useful tools to construct such mechanisms. These information sources have been implemented in the United States (Robinson, Garton, and Baughn 2007), the United Kingdom (Bridgstock 2009), Latin America (Busso et al. 2012), and East Asia (Li and Zhang 2010). The policy scope of any intervention would involve finding middle ground between the demand and supply of college graduates, which is no easy task. Moreover, different countries require distinct efforts. Although some may prioritize reducing unemployment, others may focus on reducing unemployment duration or involve industry in shaping tertiary curricula.

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Appendix D. Equity and Inclusion in Higher Education

1. The contribution of higher education to economic growth and development is widely acknowledged. In addition to private market and nonmarket benefits, higher education generates social benefits that spill over to others, including future generations. Although higher education generates significant economic and social externalities, access to higher education tends to be very unequal for the most vulnerable and disadvantaged population groups. Thus, externalities as well as equity considerations constitute a rationale for public sector support to higher education (McMahon 2009).

2. Higher education inequalities refer not only to equity in access (the opportunity to participate in tertiary education), but also to equity of results (equal possibility of progressing through and timely completing studies) and equity of outcomes (the value-added of higher education— the chances of finding employment within a reasonable amount of time). Since unequal labor market outcomes may be influenced by multiple factors inside and outside the higher education system, it will be discussed in appendix C on employability. This appendix focuses on access inequalities in higher education across different population groups identified in the literature: low-income, women, ethnic minorities, and people with disabilities. Secondary data sources are used to present stylized facts and trends in higher education inequalities (Rowan-Kenyon, Savitz-Romer, and Swan 2010).

Socioeconomic Inequalities

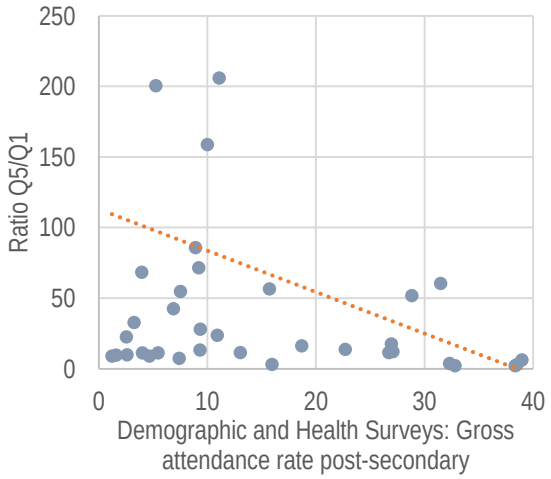
3. Equity in higher education is a major challenge particularly in low- and middle-income countries. Social, economic, and educational changes have dramatically increased the number of students, including the substantial expansion of primary and secondary education. Despite the extensive efforts to improve access worldwide, tertiary education—especially the university sector—is generally accessible only to the wealthier segments of society.

4. Global data from Demographic and Health Surveys [3] show that inequalities in higher education participation are higher in countries where the overall participation

[3] The Demographic and Health Surveys offer comparable data on gross attendance rate in post-secondary education disaggregated by household income. Although this indicator is less accurate than gross enrollment rate to measure access to higher education, both indictors are highly correlated and will be used as a proxy for higher education participation. Between 2003 and 2014, the World Bank's database on

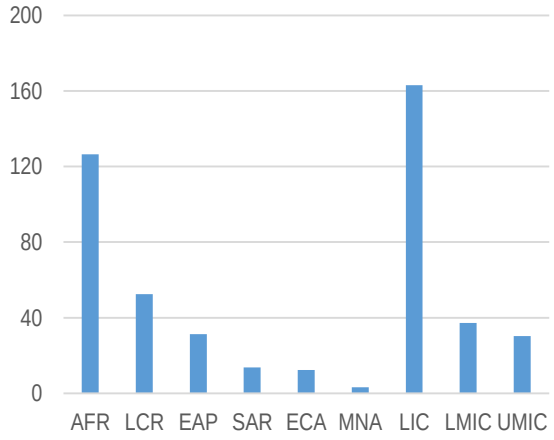
rate is low (figure D.1). Disparities in attendance between the poorest and richest quintile are particularly high in low-income countries in Sub-Sahara Africa, such as Tanzania, Burundi, Mozambique, Madagascar, Mali, Sierra Leone, Burkina Faso, and Liberia, where for some countries there is little or no participation from the bottom two income quintiles. Although equity concerns in higher education is present in all countries, it seems to be a smaller challenge in Europe and Central Asia (figure D.2).[4]

Figure D.1. Global Access Inequalities by Tertiary Participation



Source: World Development Indicators' education statistics, based on Demographic and Health Surveys, last available year within 2005–2014.
Note: Q = quintile.

Figure D.2. Access Inequalities by Region and Income Level (Average Ratio Q5/Q1)



Source: World Development Indicators' education statistics, based on Demographic and Health Surveys, last available year within 2005–2014.
AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; LIC = low-income country; LMIC = lower-middle-income country; MNA = Middle East and North Africa; Q = quintile; SAR = South Asia; UMIC = upper-middle-income country.

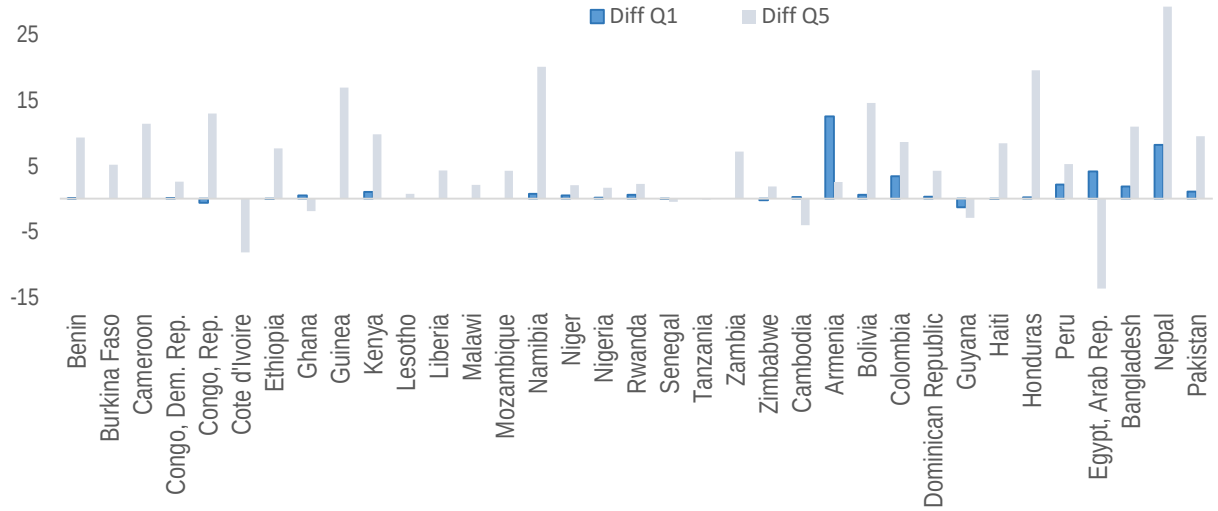
5. Figure D.3 compares the change in the first and fifth income quintiles over time for select years when data is available. The gap in higher education participation between the wealthiest and the poorest quintiles has widened in most countries. A notable exception is Armenia where access has become more equal between socioeconomic groups. Participation rates had greater increases for the bottom quintile (6.5 to 19 percent) than for the top quintile (53 to 55.6 percent) from 2005–2010. Other countries such as Cambodia, Côte d'Ivoire, the Arab Republic of Egypt, Ghana, Guyana, Senegal, and Tanzania experienced decreases in participation rate of the richest quintile

education statistics provided data for at least one year for nearly 60 countries (Please see http://datatopics.worldbank.org/education/).

[4] Middle East and North Africa is misrepresented since the Arab Republic of Egypt is the only country in that region with Demographic and Health Surveys available data.

coupled with slight increases or decreases in participation rates of the poorest quintile, thus reducing the access gap.

Figure D.3. Higher Education Participation by Income Quintile (Percentage Point Differences)



Source: World Development Indicators' education statistics, based on Demographic and Health Surveys, last available years 2003–14.
Note: Diff = difference Q = quintile

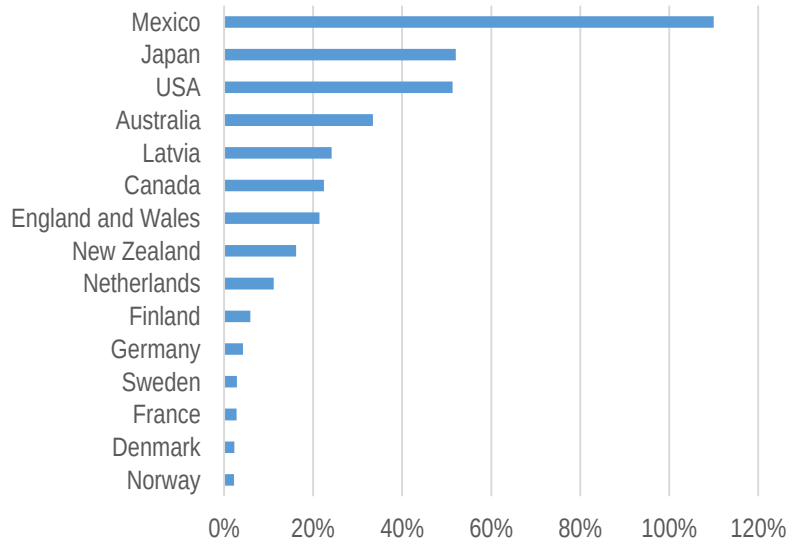
6. From an access perspective, the first obvious barrier for students to higher education are the secondary education qualifications that would enable entry into higher education institutions. To the extent poorest segments of the population have lower chances to graduate from secondary schools, policies aiming at expanding higher education participation (such as student aid programs) would have a limited impact on reducing higher education inequalities (World Bank 2016). Although enrollment in secondary education is also unequal, the level of inequity is higher at the tertiary level. Thus, inequality at the university level is not simply driven by inequality at the secondary level.

7. Other factors may limit access to higher education, including parents' education level, cost of education, insufficient academic preparedness, low motivation, and lack of access to information about labor market prospects from various higher education institutions and academic programs.

8. Inequality in access is more significant in developing countries, although even OECD economies historically have inequality. Participation in tertiary education has been strongly correlated with family socioeconomic status and the educational attainment of parents. Intergenerational mobility, including family background and parental education, play a major in determining access to higher education. A study based on survey data from 68 developing countries shows that intergenerational educational mobility is higher in Latin America than Asia.

9. Financial constraints are one of the major barriers for greater equitable access to higher education. Education costs vary greatly across countries, from almost negligible tuition fees in Norway to large expenses in Mexico (Figure D.4). Emphasis on cost-sharing rules may contribute to increasing inequality because only those who can afford to pay tuition fees have access. Since higher education is a scarce good in many low-income contexts, with diplomas conferring positional advantage over others in society, access inequality in higher education may result in a cycle of intergenerational reproduction of inequalities (McMahon 2009).

Figure D.4. Ratio of Tuition to Median Income for Selected Countries



Source: Usher, Alex, and Jon Medow. "Global higher education rankings 2010."Higher Education Strategy Associates (2010): 30.

10. Financial aid programs—namely student loans and scholarships—are important policy tools to potentially boost access and completion in tertiary education (Dynarski 2003). Despite the widespread use of student loans, there have been concerns about their high default rates and complex rules. The selection of loan candidates, the management of large numbers of borrowers, and the collection of loan repayments postgraduation have proven to be burdensome. State-guaranteed loans in Chile and zero-interest loans in Colombia are examples of well-targeted programs (Beyer et al. 2015; Melguizo, Sanchez, and Velasco 2016).

11. Scholarships based on merit may disproportionately favor students from middle- and high-income families, who are likely to attend tertiary education, thus worsening disparities. Need-based scholarships, in contrast, have been found to reduce inequality in contexts with high enrollment rates and in which financial support for higher education is not based on high regressive taxes (McMahon 2009; Oketch 2003). If scholarships cover only a portion of the costs of higher education—that is, partial

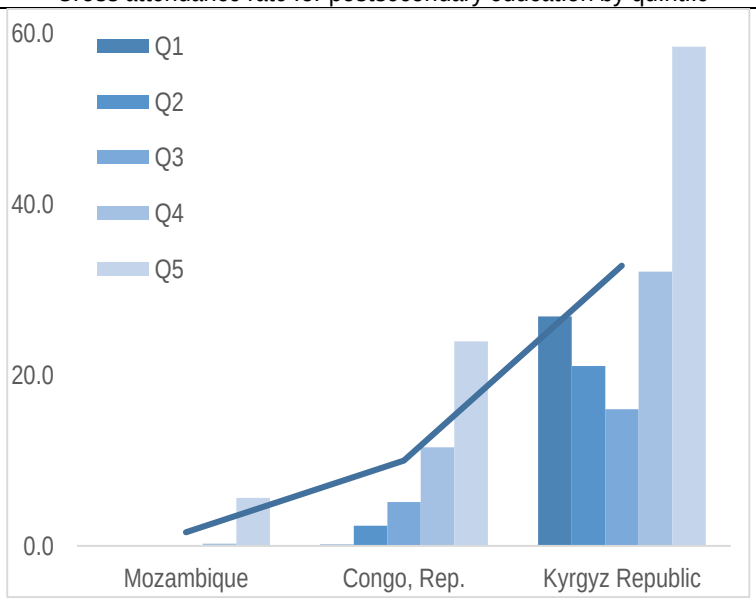
tuition costs and contributions for living allowances—they may be of limited use to the poorest students.

12. An important challenge is to identify the best combination of funding mechanisms that could significantly contribute to greater equity in access. This will result in greater opportunities for social and economic mobility and ultimately reduce income inequality (Oosterbeek 1998). Evidence on the progressivity or regressivity of public expenditure in tertiary education based on benefit incidence analyses is scarce. Figure D.5 summarizes the main findings of available data from a reduced set of World Bank's public expenditure reviews. All such analyses indicate that a larger proportion of public funds for higher education are targeted to the wealthiest groups in countries where postsecondary education participation rates are highly unequal.

Figure D.5. Equity of Expenditure and Access to Postsecondary Education

Country	Year	Equity of Expenditure
Congo, Republic of	2011	57% of higher education budget is allocated for the top 20%
Kyrgyz Republic	2011	Approximately 40% of HE budget is spent on the top 20%
Mozambique	2008	Above 90% of the higher education budget is spent on top 20%
Paraguay	2010	Analysis shows higher education is the least pro-poor expenditure

Gross attendance rate for postsecondary education by quintile



Sources: Public expenditure reviews; World Bank 2013, 2014; *World Development Indicators*' education statistics, based on Demographic and Health Surveys data 2011–12.
Note: Q = quintile.

13. Table D.1 presents a more detailed analysis of various financing instruments in Chile. This disaggregation provides analysis on mechanisms that are more likely to reduce income inequality (OECD and World Bank 2009). Although low-income students are underrepresented in higher education enrollment, they receive a disproportionate share of public resources—the poorest quarter of student population receives 38 percent of total public subsidies. In particular, well-targeted scholarship and loan programs are the most effective instrument to improve equity and inclusion in higher education. The distribution of competitive grants for higher education institutions supported by the World Bank is relatively neutral since regional

universities—which concentrate on a larger proportion of low-income students—also benefit from these quality improvement resources. Other public funds for improving science and technology research and indirect funding for universities are regressive mechanisms, since they concentrate in top institutions and have the highest proportion of students from wealthy backgrounds.

Table D.1. Benefit Incidence of Public Expenditures in Higher Education, Chile

Share of public financing mechanisms (%)	Q1	Q2	Q3	Q4	Q5	Total
Direct financing	10.8	14.1	18.3	25.9	30.9	100.0
Indirect financing	7.6	13.9	18.2	27.6	32.7	100.0
Scholarships	53.8	32.3	6.2	7.4	0.3	100.0
Loan program	39.7	24.1	22.7	13.5	0.0	100.0
Competitive grants	11.2	15.0	19.6	26.6	27.5	100.0
Science and technology funds	7.2	13.0	16.1	24.3	39.4	100.0
Public subsidies received by quintile	20.7	17.3	21.0	22.9	18.1	100.0
Total enrollment by quintile	10.0	14.1	18.7	26.6	30.5	100.0

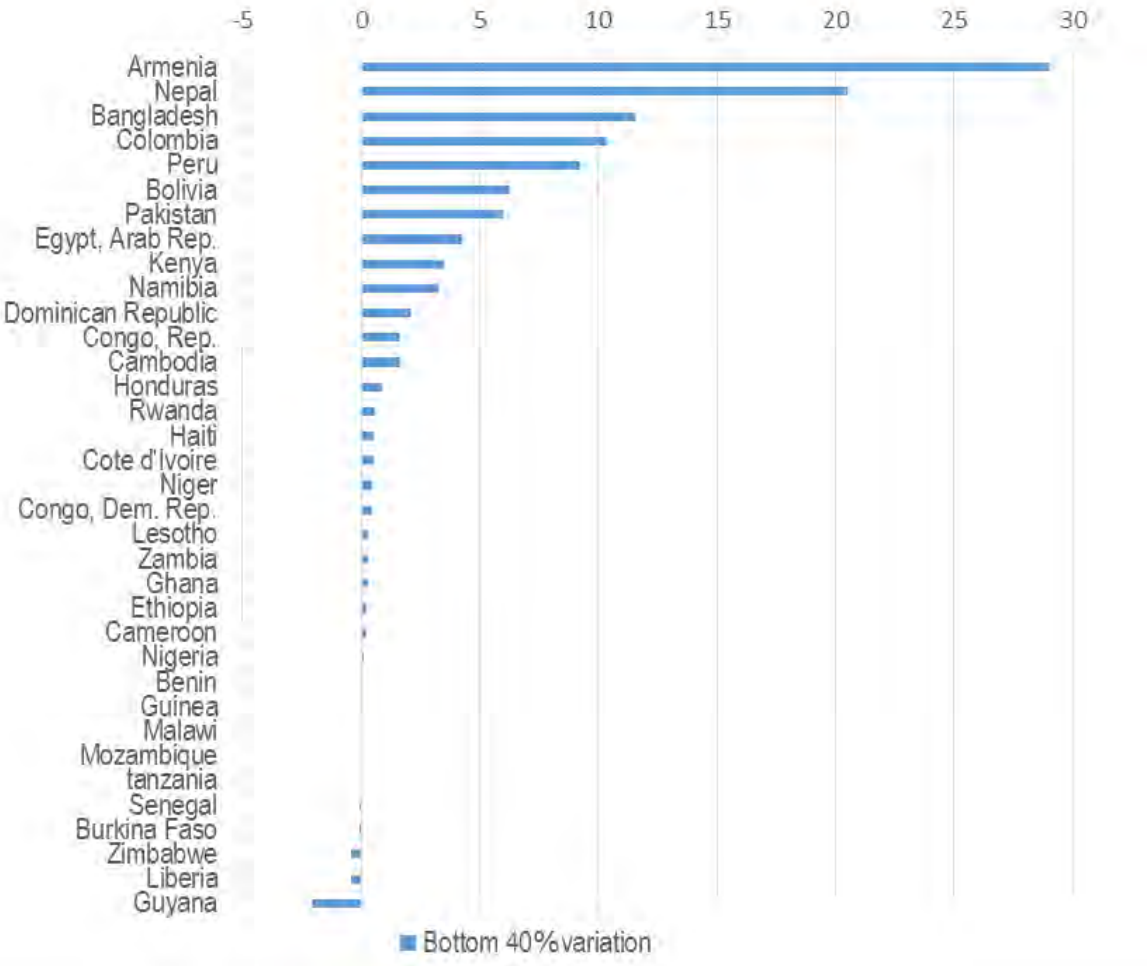
Source: OECD and World Bank 2009.
Note: Q = quintile

14. Insufficient academic preparedness, associated with poor-quality secondary education and lack of family encouragement for first-generation students also limits access to higher education among other reasons. Even those who manage to be admitted in a tertiary program are more likely to drop out during the first year. Higher education systems may be faced with challenges in supporting students with basic academic readiness when absorbing larger number of students from the lower two quintiles of the income distribution due to expansion of higher education participation (see figure D.6).

15. Outreach and bridge programs between secondary education and higher education institutions have been a global practice to expand tertiary enrollment among disadvantaged populations. These programs are generally implemented through school-university partnerships, which entail university staff and student volunteers that providing mentoring and counseling support for tertiary education preparation and planning. University partners play an important role within the school community in molding future students' aspirations and promoting the importance of higher education within first-generation university students' families. Similarly, remedial courses are designed to help less academically prepared current higher education students succeed in their studies. Although remedial programs tackle student dropouts due to lack of academic preparedness, student aid programs do so due to financial constraints. These bridge and remedial programs look very promising to boost secondary school completion rates and provide access to and retention in higher education, but evidence is not robust.

Figure D.6. Expansion of Higher Education Participation by Bottom 40%

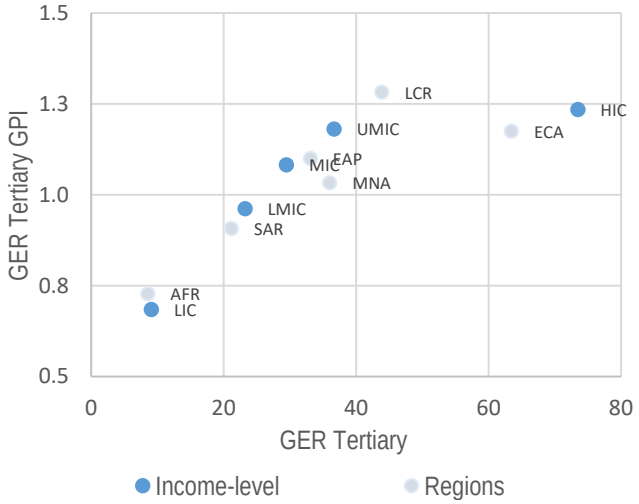
Percentage Point Variation



Gender-Related Inequalities

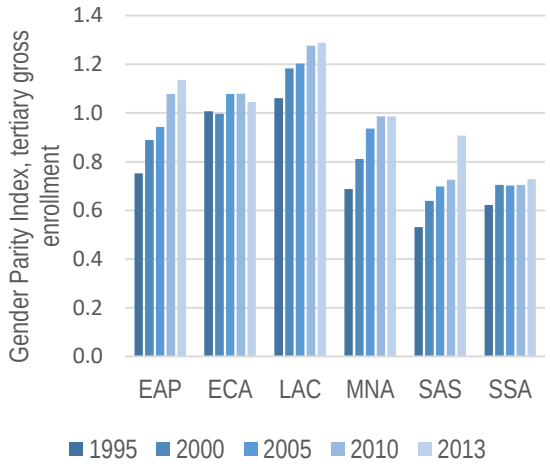
16. Unequal access of women to higher education persist in most of the developing world. Figure D.7 depicts a positive relationship between the overall level of tertiary education enrollment and its gender parity index (GPI). Gender imbalances against women are more challenging in lower-income countries, particularly in the Sub-Saharan Africa and South Asia Regions, and in countries with lower tertiary enrollment rates. The East Europe and Central Asia Regions has long had a well-balanced tertiary GPI, whereas higher education enrollment in Latin America and the Caribbean Region has turned to have higher female enrollment. East Asia and Pacific and Middle East and North Africa have also increased women participation over time, but the former is becoming increasingly imbalanced, while the latter has had more gender parity in recent years (figure D.8).

Figure D.7. Gross Enrollment Rate and GPI by Region and Income Level



Source: World Development Indicators' education statistics.
Note: GER Tertiary and GER Tertiary GPI correspond to averages 2013–15. EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; GER = gross enrollment rate; HIC = high-income country; LAC = Latin America and the Caribbean; LIC = low-income country; LMIC = low-middle-income country; MIC = middle-income country; MNA = Middle East and North Africa; SAS = South Asia; SSA = Sub-Saharan Africa; UMIC = upper-middle-income country.

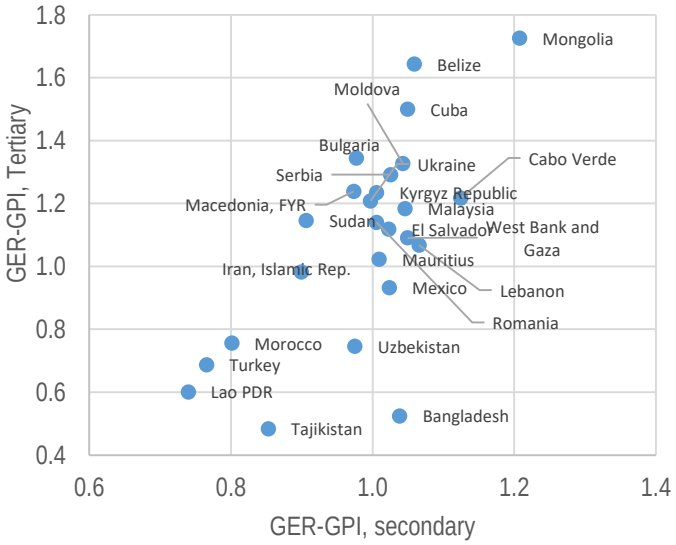
Figure D.8. Gross Enrollment Rate and GPI by Region



Source: World Development Indicators' education statistics.
Note: EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAS = South Asia; SSA = Sub-Saharan Africa.

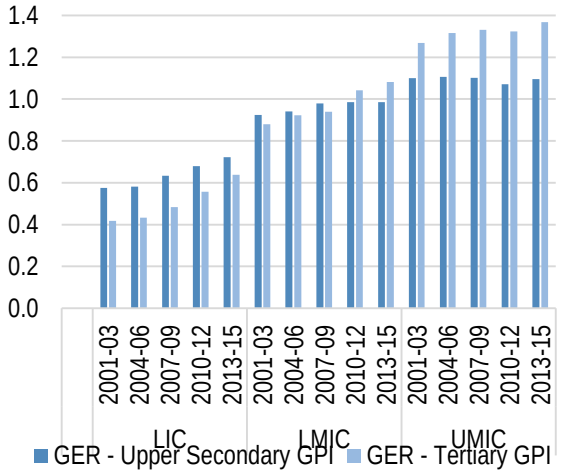
17. As with socioeconomic inequalities, gender imbalances can be largely explained by factors outside of the tertiary education system, such as earlier stages of schooling. Figure D.9 shows that low enrollment of girls in secondary education will inevitably lead to low female enrollment at the tertiary level. However, this does not appear to fully account for inequalities in access. In low-income countries, the gender balance is increasing faster at the tertiary than at the secondary level, whereas lower-middle-income countries have reached gender equality at the higher education level after constant progress, and upper-middle-income countries have a growing gender imbalance, with men not enrolling at the same rate as women (figure D.10). In Chile, more women than men successfully complete secondary education (77 percent compared with 69 percent in 2005) and thus a larger proportion have school-leaving certificates required for higher education. Also, more women than men take the university admissions exams but a lower proportion obtain scores high enough to allow them to enter more prestigious universities (OECD and World Bank 2009).

Figure D.9. Gross Enrollment Rate and GPI in Secondary and Tertiary Education



Source: World Development Indicators' education statistics.
Note: GER = gross enrollment rate

Figure D.10. Gender Parity Index, by Income Category



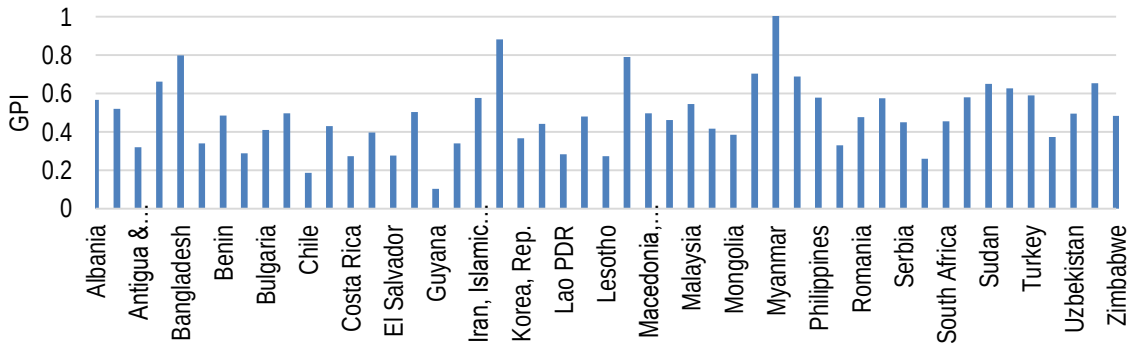
Source: World Development Indicators' education statistics.
Note: GER = gross enrollment rate; LIC = low-income country; LMC = low-middle-income country; UMC = upper-middle-income country.

18. Labor market factors certainly influence women's participation in tertiary education. Discrimination against women in the labor market may reduce their incentive to invest in or complete tertiary education. But, at the same time, knowledge economy and labor market pressures may require women higher education credentials to secure better-paid jobs.

19. Access disparities by gender are also driven by culture and traditions that mandate different roles for females and males, narrowing the educational choices available for girls. A number of barriers facing female students have been identified such as strong social pressures to marry and bear children and gender stereotypes relating to particular disciplinary areas. A common observation is that men and women tend to pursue different fields of study. This has implications for how resources are allocated within higher education as well as the value of a university degree in the job market. Figure D.11 shows that are more male students pursuing science, technology, engineering, and mathematics (called STEM) fields in select countries with available data.

20. The underrepresentation of women in specific disciplines that lead to high-paying jobs (such as engineering) calls for policies to expand the pool of women who pursue careers in science and technology. policy makers need to ensure that careers and role models are not gender specific and support girls in science and math before they reach higher education level (World Bank 2003).

Figure D.11. GPI in Science, Technology, Engineering, and Mathematics Fields of Study



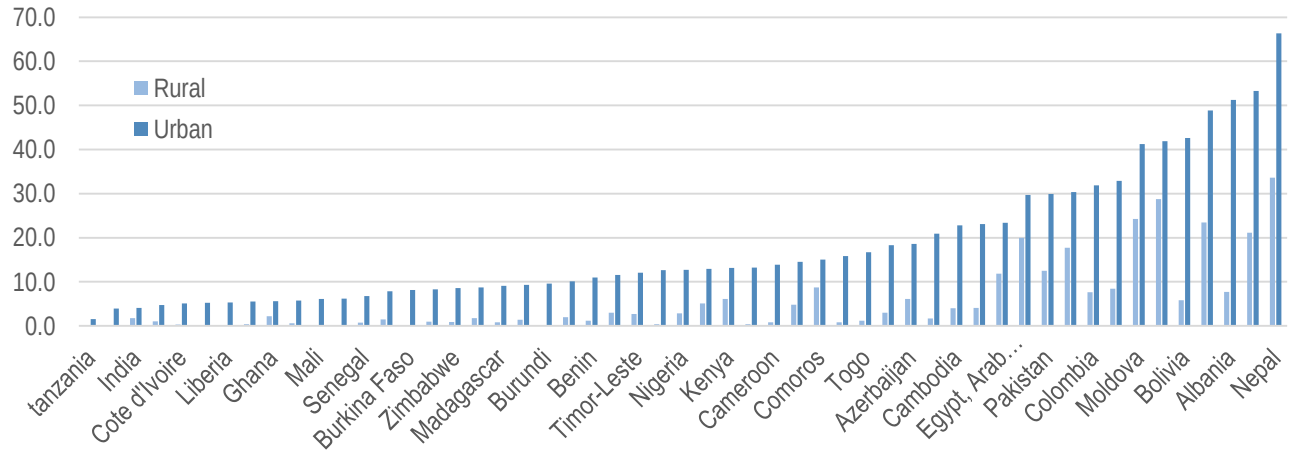
Ethnicity and Urban-Rural Divide

21. These traditionally excluded groups, including indigenous, religious, and social castes, are often concentrated in lower-income quintiles of the income distribution, and face difficulties in affording education costs and competing academically. In addition, linguistic minorities may experience difficulties in mastering literacy at school level where the spoken language differ from the national language. This could lead to student repetition and dropouts, and eventually may reduce the share of linguistic minorities who obtain the credentials to pursue higher education studies.

22. Students from rural and remote areas often lack both nearby higher education institutions and information about study programs and possible student finance options. Unconditional differences in access to higher education tend to be large among rural and urban areas (see Figure D12). A recent World Bank report (2016 forthcoming "At a Crossroads Higher Education in Latin America and the Caribbean") shows that access inequalities in terms of ethnicity and urban-rural divide tend to diminish once parents' income and education level is taken into account.

23. The transition from rural and poor areas to pursue higher education studies includes a shift in a culturally different environment and is often a challenge for ethnic minorities (World Bank 2014). In many countries, ethnic minorities are excluded from the national economy and face discrimination in the education sector (Buchmann and Hannum 2001; Filmer 2008).

Figure D.12. Gross Attendance Rate of Postsecondary Education by Rural and Urban Regions



Source: World Development Indicators education statistics, based on Demographic and Health Surveys, last available years 2003–14.

Students with Disabilities

24. Disabilities and learning difficulties are often neglected issues since most of the discussion of higher education inequity is centered on socioeconomic disadvantaged groups and gender. Although there are not internationally agreed definitions for disabilities and learning difficulties, the first term refers to students with difficulties that are often visible in all settings, such as physical and cognitive impairments, and the second includes students whose difficulties may often be invisible learning disabilities and behavioral or emotional disorders.

25. Disabilities remain a major barrier to furthering education, as few institutions have introduced accommodations to address physical (*visible*) and learning (*invisible*) disabilities. Equality of access for these group of students may require teaching adaptations, since many disabilities affect the way the curriculum is accessed, and funding mechanisms must consider the additional time students may require to complete their studies as well as the higher living costs.

26. There is limited data available on students with disabilities and their difficulties in tertiary education even within OECD countries. In the Netherlands, for example, the majority of these students are unaware of the support and facilities available to them, and almost half consider unsuitable teaching materials puts them in a disadvantaged position. On average, graduation rates are lower than their peers in tertiary education and those with learning difficulties may not complete their courses. It is estimated that 50 percent of students with disabilities fall behind in their studies. Essentially, they are more likely to drop out and are twice as prone as their nondisabled peers to discontinue their undergraduate studies. Although they do receive additional resources, the proportion of students with disabilities and difficulties in tertiary education receiving

support varies substantially among countries (from 0.4 percent in France to 18.9 percent in Germany in 2006). These figures likely reflect differences in data collection methods and definitions of disabilities (Evans and Ebersold 2012).

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Appendix E. World Bank Group Higher Education Portfolio

International Bank for Reconstruction and Development and International Development Association Higher Education Projects Summary

Higher Education Project Distribution by Lending Type

1. Sixty percent of both core and noncore higher education projects are financed by the International Development Association (IDA). Of these projects, 62 percent supports lower middle-income countries and 32 percent supports low-income countries. The number of core projects have steadily increased over the evaluation period, with the exception of 2010 and 2011 which had a higher number of projects. For more information, see figure E.1 for the number of core and noncore projects approved by the International Bank for Reconstruction and Development (IBRD) and IDA, figure E.2 for the number of core projects from 2003–16, and figure E.3 for the number of noncore projects from 2003–16.

Figure E.1. Number of Projects by IBRD and IDA

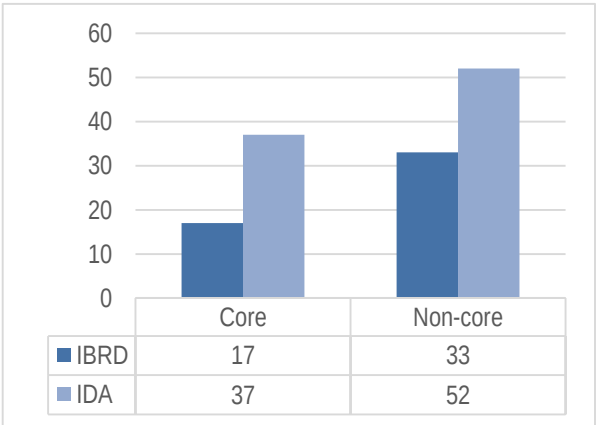


Figure E.2. Number of Core IBRD and IDA Projects from 2003–16

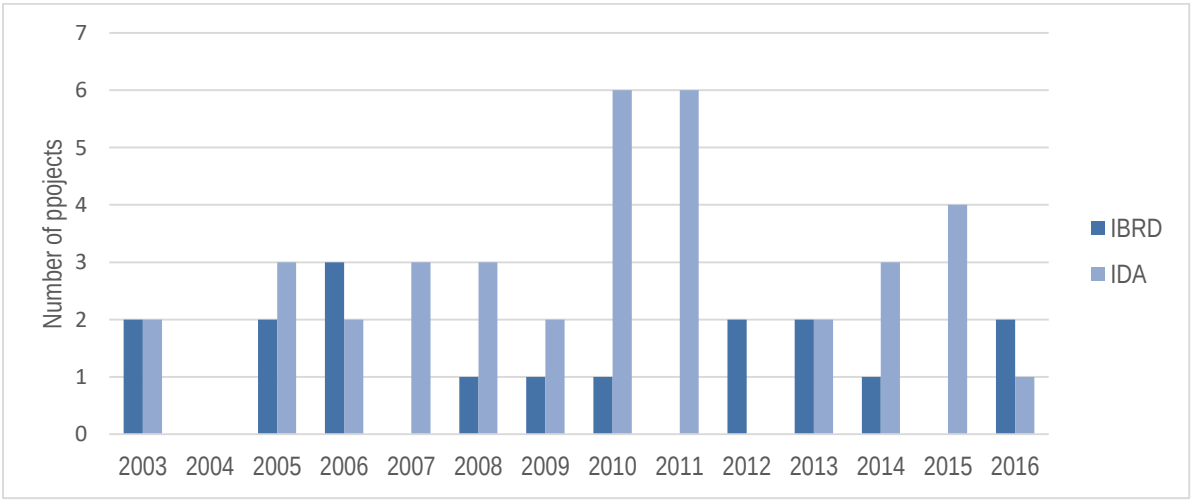
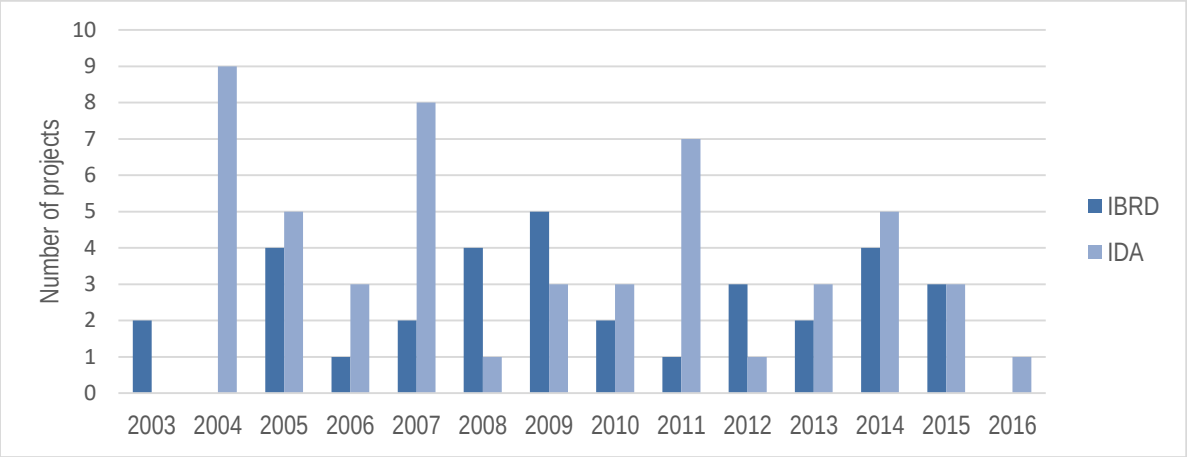


Figure E.3. Number of Noncore IBRD and IDA Projects from 2003–16



Higher Education Project Distribution by Region

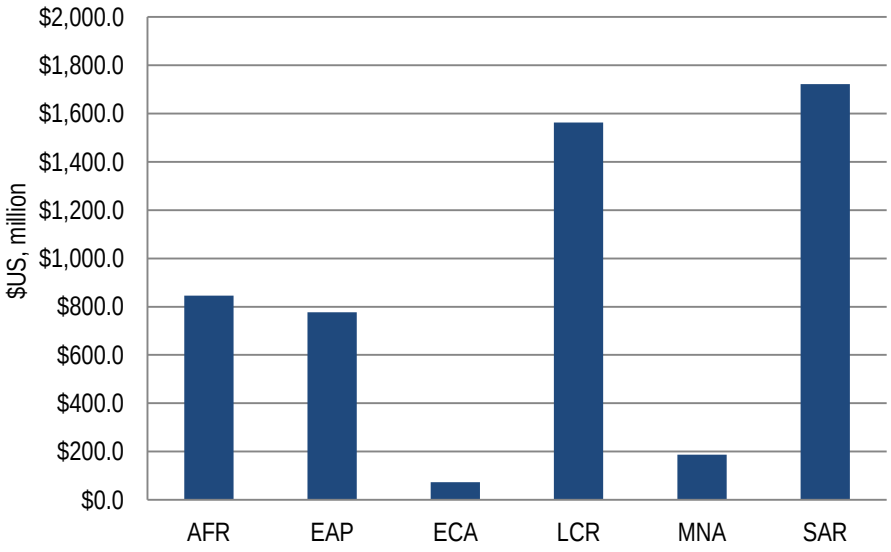
2. The ratio between core and noncore projects varies significantly among the Regions. The majority of higher education projects in the Latin America and the Caribbean Region are core projects, whereas the majority of higher education projects in the Europe and Central Asia Region are noncore projects. The Sub-Saharan Africa Region has more higher education projects than any other Region, although the number of core projects dedicated higher education falls slightly below the Latin American and the Caribbean Region.

Table E.4. Number of Core and Noncore Higher Education Projects Approved by Fiscal Year and Region

	Fiscal Year														
Region	03	04	05	06	07	08	09	10	11	12	13	14	15	16	Total
Core	4	0	5	5	3	4	3	7	6	2	4	4	4	3	54
AFR	0	0	2	1	1	3	0	1	1	0	0	2	1	0	12
EAP	0	0	1	0	1	0	1	2	2	0	2	1	0	0	10
ECA	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3
LAC	2	0	1	2	0	1	0	0	2	1	2	1	0	1	13
MNA	0	0	0	1	0	0	1	1	0	0	0	0	0	1	4
SAR	2	0	1	1	1	0	1	3	1	0	0	0	2	0	12
Noncore	2	9	9	4	10	5	8	5	8	4	5	9	6	1	85
AFR	0	4	3	2	5	0	3	1	4	0	2	3	2	1	30
EAP	1	1	1	0	0	1	1	2	0	1	1	1	1	0	11
ECA	0	2	5	2	3	3	2	1	1	1	0	3	2	0	25
LAC	1	0	0	0	1	1	2	0	0	0	0	0	0	0	5
MNA	0	0	0	0	0	0	0	0	1	2	1	1	1	0	6
SAR	0	2	0	0	1	0	0	1	2	0	1	1	0	0	8
Total	6	9	14	9	13	9	11	12	14	6	9	13	10	4	139

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

Figure E.4. Core Higher Education Project Funding by Region



Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

3. The high lending volume of core projects in the South Asia Region is largely based on three higher education projects in India (Technology and Engineering Quality Improvement Projects I and I and the Higher Education Quality Improvement Project) and two projects in Pakistan (the Higher Education Support Project and the Tertiary Education Support Project). India has the first highest lending amount with US$850 million from three projects, followed by Colombia with a total of US$700 million from three projects. For more information, see table E.5 on support for higher education investments and development policy loans by Region and country.

Table E.5. Core Project Total Investment and DPL Support by Region and Country

Core	DPL	Investment *(US$, million)*	Total *(US$, million)*
AFR	0	845	845
Africa	0	150	150
Burkina Faso	0	15	15
Ethiopia	0	40	40
Malawi	0	51	51
Mali	0	33	33
Mauritania	0	15	15
Mozambique	0	100	100
Nigeria	0	180	180
Senegal	0	101	101
Tanzania	0	115	115
Uganda	0	30	30
Western Africa	0	15	15
EAP	150	627	777
Cambodia	0	23	23
Indonesia	0	158	158
Vietnam	150	446	596
ECA	0	73	73
Montenegro	0	16	16
Tajikistan	0	15	15
Uzbekistan	0	42	42
LAC	100	1,463	1,563
Chile	100	90	190
Colombia	0	700	700
Costa Rica	0	200	200
Guyana	0	18	18
Mexico	0	430	430
Peru	0	25	25
MNA	0	187	187
Jordan	0	25	25
Tunisia	0	146	146
Yemen, Republic of	0	16	16
SAR	100	1,623	1,723
Afghanistan	0	60	60
Bangladesh	0	206	206
India	0	850	850
Maldives	0	1	1
Nepal	0	125	125
Pakistan	100	300	400
Sri Lanka	0	80	80
Total	350	4,818	5,168

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SandT = science and technology; SA = South Asia.

HIGHER EDUCATION PROJECT DISTRIBUTION BY GLOBAL PRACTICE AND REGION

Table E.6. Core and Noncore Higher Education Projects by Global Practice and Region

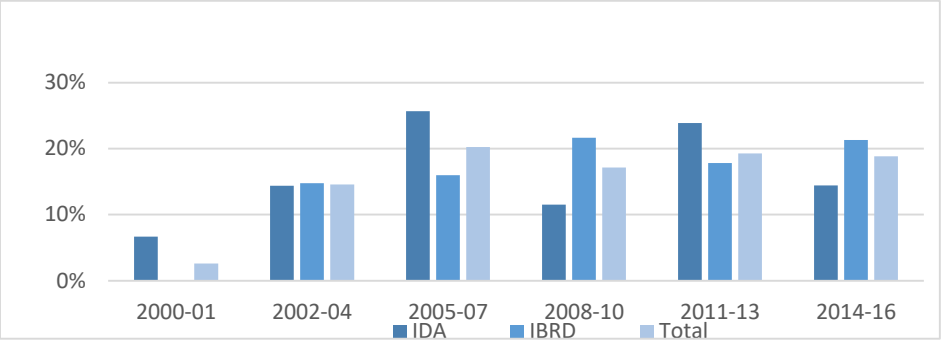
Sector	AFR	EAP	ECA	LAC	MNA	SAR	Total
Core higher education	12	10	3	13	4	12	54
Education	12	8	3	11	4	12	50
Financial and private sector development	0	0	0	1	0	0	1
Health, nutrition, and population	0	2	0	0	0	0	2
Poverty and equity	0	0	0	1	0	0	1
Noncore higher education	30	11	25	5	6	8	85
Agriculture and rural development	0	1	1	0	0	0	2
Economic policy	2	1	3	0	1	0	7
Education	16	6	13	4	1	5	45
Energy and Extractives	3	1	0	0	0	0	4
Environment	1	0	0	0	0	0	1
Financial and private sector development	3	0	1	1	0	1	6
Global information and communication technology	0	0	0	0	1	1	2
Health, Nutrition, and Population	2	1	3	0	0	0	6
Public sector governance	2	0	1	0	0	1	4
Social protection	0	0	2	0	2	0	4
Transport	0	0	1	0	0	0	1
Poverty and equity	1	0	0	0	0	0	1
Macroeconomics and Fiscal Management	0	1	0	0	0	0	1
Social Protection and Labor	0	0	0	0	1	0	1
Total	42	21	28	18	10	20	139

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; SAR = South Asia.

HIGHER EDUCATION PROJECTS IN THE WORLD BANK EDUCATION PORTFOLIO

4. Figure E.5 presents the percentage of higher education lending as a percentage of total education lending for core projects. By the end of the evaluation period in 2016, higher education made up approximately 15–20 percent of total education lending. The increased priority for higher education is also commensurate with an increased priority for education in general. For more information, see figure E.5 on the percentage of higher education lending from total education lending.

Figure E.5. Percentage of Higher Education Lending from Total Education Lending



Objective Areas

5. Out of 117 investment projects, higher education projects included teaching and learning as the most frequent program development objective. There are some regional and income-level trends, such as the emphasis of governance in the Latin America and the Caribbean Region and strengthening of institutional management of higher education institutions in lower-middle-income countries. However, the limited number of projects makes it difficult to identify any patterns. For more information, see table E.7, "Higher Education Projects by Program Development Objectives."

Table E.7. Higher Education Projects by Program Development Objectives

Objective areas	Total	Core	Non-core	AFR	EAP	ECA	LAC	MNA	SAR	UMC and HI	LMC	LIC	Africa
Projects (no.)	117	49	68	38	16	22	16	6	19	35	47	34	1
Competitiveness/PSD	14	4	10	3	0	1	6	1	3	8	2	4	0
Skills and employability	23	12	11	6	2	2	3	3	7	8	11	4	0
Public sector development	6	1	5	3	1	0	0	0	2	0	3	3	0
Knowledge economy	8	3	5	1	0	2	3	1	1	4	2	2	0
Access and equity	30	23	7	6	2	2	8	2	10	13	7	10	0
Teaching and learning	49	34	15	11	8	8	7	3	12	16	21	11	1
Research	22	16	6	5	5	2	6	0	4	8	8	5	1
Higher education system	32	26	6	7	4	4	8	3	6	11	15	6	0
Other	2	0	2	1	0	1	0	0	0	1	1	0	0
Broader higher education sector objectives	30	2	28	17	5	8	0	0	0	5	11	14	0

Note: AFR = Africa; EAP = East Asia and Pacific; ECA = Eastern Europe and Central Asia; LAC = Latin America and the Caribbean; MNA = Middle East and North Africa; PSD = private sector development; SAR = South Asia.

6. Projects that addressed the broader objective of competitiveness and private sector development in their program development objectives seem to also prioritize research. In contrast, projects that do not have these broader objectives focus on teaching and learning. Support to higher education systems, including institutional strengthening at the university level and national levels, was found at the activity level instead of the program development objective level. For more information, see table E.8, "Broader Objective Areas in Program Development Objectives and Activity Objectives."

Table E.8. Broader Objective Areas in Program Development Objectives and Activity Objectives

Broader objectives in PDOs	Competitive/ PSD	Skills and employability	Public sector development	Knowledge economy	N/A
Projects (no.)	14	23	6	8	78
PDO objective areas					
Access and equity	3	11	0	3	20
Teaching and learning	2	13	1	3	37
Research	7	5	1	3	12
Higher education system	3	6	1	1	24
Other	0	0	0	0	2
NA	6	5	5	3	39
Activity objective areas					
Access and enrollment	4	12	1	2	28
Teaching and learning	8	17	5	7	55
Research	9	12	1	5	25
Higher Education system	2	13	1	4	50
Other	0	0	0	0	1

Note: PDO = project development objective; PSD = private sector development.

7. Core and noncore projects showed relatively similar pattern in terms of the intermediate objective areas of project activities. For both types of projects, (i) improving learning and research environment and (ii) strengthening management and strategic planning capacity were two of the most commonly addressed intermediate objectives. Strengthening regulation and quality assurance seemed to be more commonly addressed among middle-income countries. For more information, see table E.9, "Number of Projects by Intermediate Objectives and Intervention Areas."

Table E.9. Number of Projects by Intermediate Objectives and Intervention Areas

Intermediate objectives or intervention areas	Core (N = 49)	HIC (N = 3)	UMIC (N = 12)	LMIC (N = 21)	LIC (N = 12)	Africa (N = 1)	Noncore (N = 68)	HIC (N = 4)	UMIC (N = 16)	LMIC (N = 26)	LIC (N = 22)	Total (N = 117)
Learning and research environment	36	2	8	14	11	1	30	3	5	16	6	66
Management/strategic planning capacity	39	3	7	17	11	1	25	0	4	12	9	64
Curriculum	14	1	2	5	5	1	25	1	7	13	4	39
Regulation/QA	21	1	7	10	2	1	16	1	4	8	3	37
Promotion of the areas of strategic importance	17	1	4	7	5	0	19	2	2	8	7	36
University-industry linkage	14	1	4	5	3	1	14	3	5	5	1	28
Faculty qualifications	11	0	0	7	3	1	14	1	4	6	3	25
Internationalization/regional partnerships	10	0	2	4	3	1	11	1	2	7	1	21
Financial sustainability	11	0	3	2	5	1	6	0	2	3	1	17
Support for students from disadvantaged groups	10	0	5	3	2	0	2	0	1	0	1	12
Promotion of distance learning	6	0	1	2	3	0	5	0	0	4	1	11
Autonomy at higher education institutional level	8	0	1	4	2	1	2	0	1	1	0	10

Note: HIC = high-income country; LIC = low-income country; LMIC = lower-middle-income country; UMIC = upper-middle-income country.

Type of Support

8. The majority of support for core higher education projects is through grants to higher education institutions. Specifically, grants were used for approximately 80 percent of projects in lower-income countries and lower-middle-income countries, whereas they were only used for 50 percent of projects in upper-middle-income countries. Conversely, grants were not the most prominent type of support among noncore projects. Approximately 32 percent of noncore projects supported grants to higher education institutions, and about 40 percent of them supported technical assistance. Grants are used for many different purposes, with the improvement of learning and research environment and the strengthening of management or strategic planning capacity of higher education institutions as the most common.

Table E.10. Number of Projects by Support Type

	Direct financing		Infrastructure and equipment		Technical assistance			Training		
Income category	Fin aid to student	Grant to HEIs	ICT	Other	Policy	Program	Inst develop	Faculty	Gov staff	HEMIS
Core (N = 49)	10	38	11	12	17	7	20	10	11	7
HIC (N = 3)	0	3	0	0	0	0	0	0	0	0
UMC (N = 12)	6	6	3	3	5	2	4	3	2	0
LMC (N = 21)	1	18	7	6	7	3	8	5	4	5
LIC (N = 12)	2	10	1	3	5	2	8	1	4	2
Africa (N = 1)	1	1	0	0	0	0	0	1	1	0
Noncore (N = 68)	6	21	11	19	27	27	25	22	12	2
HIC (N = 4)	2	3	1	0	0	2	1	2	0	0
UMIC (N = 16)	3	3	1	3	9	6	7	6	4	1
LMC (N = 26)	1	11	6	9	13	14	11	9	7	1
LIC (N = 22)	0	4	3	7	5	5	6	5	1	0
Total (N = 117)	16	59	22	31	44	34	45	32	23	9

Note: HIC = high-income country; HEI = higher education institution; ICT = information and communication technology; LIC = low-income country; LMIC = lower-middle-income country; UMIC = upper-middle-income country.

9. Overall, the core projects received positive IEG ratings with over 80 percent (18 out of 23) of them showing satisfactory or moderately satisfactory outcome rating. This is the above the average of all World Bank projects rated between FY2003 and 2015, of which approximately 71 percent received more than moderately satisfactory outcome rating. The ratings for other areas such as World Bank and borrower performances, and Quality of entry and supervision also indicate that the core projects have generally performed well, all shows the same or above the average of all World Bank projects.

10. In contrast, noncore projects received more mixed ratings. Over 40 percent (11 out of 26) of these projects were rated moderately unsatisfactory or unsatisfactory outcome rating, which is lower than average of all World Bank projects. In addition to the outcomes, the noncore projects were rated particularly worse in World Bank and borrower performances. Overall, the noncore education projects and other noncore projects show similar patterns in outcome and World Bank/borrower performance ratings.

11. The analysis of the noncore education projects with low outcome or performance ratings provided no clear pattern of the reasons for these ratings. The majority of the low ratings do not seem to be related to the higher education activities. It also did not provide enough evidence to show that the lower ratings of these noncore education projects resulted from the complexity of the project design and implementation by including multiple subsectors within one education project. The breakdown of the noncore projects by sectors indicates that the lower ratings are concentrated in the certain sector projects.

APPENDIX E
WORLD BANK GROUP HIGHER EDUCATION PORTFOLIO

Table E.11. Core Higher Education Projects

Project ID	Project name	Lending Type	Sector Board/ Global Practice	Outcome	World Bank Performance	Borrower Performance	RDO	QAE	QOS	ME Quality
P050741	Relevance and Quality of Undergrad Education	IPF	ED	MS	MS	S	M	MS	S	MOD
P072123	Tech/Engineering Quality Improvement Project	IPF	ED	MS	MS	S	M	MS	S	MOD
P074132	Science and Technology Education in Postbasic Education (FY07)	IPF	ED	MU	MU	MS	M	MS	MU	MOD
P074138	Higher Education Improving Access	IPF	ED	S	MS	S	M	MS	S	SUB
P075809	Higher Education Reform Support II	IPF	ED	MU	MU	MS	NEG TO LOW	MU	MU	NEG
P077282	Science for the Knowledge Economy	IPF	ED	MS	S	S	NEG TO LOW	S	S	MOD
P078692	Postsecondary Education SIL (FY05)	IPF	ED	MU	U	U	SIG	U	MU	NEG
P079665	2ND Higher Education	IPF	ED	S	MS	S	NEG TO LOW	MS	S	MOD
P085374	Higher Education	IPF	ED	MS	MS	MS	SIG	MU	MS	MOD
P085593	Tertiary Education Student Ass APL1	IPF	ED	MS	MS	MS	NEG TO LOW	MU	MS	MOD
P086513	Millennium Science Initiative (FY06)	IPF	ED	S	S	MS	SIG	S	S	SUB
P087180	Higher Education (FY05)	IPF	ED	U	U	MU	SIG	U	MU	LOW
P088498	Tertiary Education Financing for Results APL1	IPF	ED	MS	MS	S	NEG TO LOW	MS	MS	MOD
P089040	Strengthening Higher Education Program	IPF	ED	S	MS	MS	SIG	S	MS	SUB
P090967	Second Higher Education Project	IPF	ED	S	MS	MS	SIG	MS	S	MOD
P102487	Higher Education Reform for Knowledge Economy	IPF	ED	NA	MU	MS	NA	MU	NA	NA

Project ID	Project name	Lending Type	Sector Board/ Global Practice	Outcome	World Bank Performance	Borrower Performance	RDO	QAE	QOS	ME Quality
P105164	Second Student Loan Support Project APL	IPF	ED	S	S	S	M	MS	S	SUB
P102607	Higher Education Support Program	DPL	ED	S	S	S	SIG	S	S	MOD
P104694	Higher Education DP Program 1st Operation	DPL	ED	MS	MS	MS	NEG TO LOW	MS	S	SUB
P116353	Higher Education DP Program 2nd Operation	DPL	ED	MS	MS	MS	NEG TO LOW	MS	S	SUB
P116354	Higher Education DP Program 3rd Operation	DPL	ED	MS	MS	MS	NEG TO LOW	MS	S	SUB
P089865	Innovation for Competitiveness APL1	IPF	FPD	S	S	S	SIG	S	S	SUB
P113341	Health Professional Education Quality	IPF	HE	S	S	MS	M	S	S	SUB

Note: ME = monitoring and evaluation; QAE = quality at entry; QOS = quality of supervision; RDO = risk to development outcome.

Table E.11.2. Noncore Higher Education Projects

Project ID	Project name	Lending Type	Sector Board/ Global Practice	Outcome	World Bank Performance	Borrower Performance	RDO	QAE	QOS	ME Quality
P050620	Education Sector SIL (FY04)	IPF	ED	MU	MU	MU	SIG	MU	MU	MOD
P052608	Antioquia Secondary Education Project	IPF	ED	MU	MU	MS	M	MS	MU	MOD
P066149	Secondary Education	IPF	ED	MU	U	MU	M	HU	MS	MOD
P070823	Education Sector Support SIL 1 (FY05)	IPF	ED	MU	MU	MU	M	MU	MS	MOD
P074114	Education Development Project	IPF	ED	MS	MS	MS	M	MS	S	MOD
P074503	Education Quality and Relevance APL #1	IPF	ED	MS	MS	S	M	MS	MS	MOD
P077738	Quality Education Equal Access APL #1	IPF	ED	U	MU	U	HIGH	U	MU	MOD

Project ID	Project name	Lending Type	Sector Board/ Global Practice	Outcome	World Bank Performance	Borrower Performance	RDO	QAE	QOS	ME Quality
P078113	Second Education Development	IPF	ED	MS	S	MS	M	S	S	SUB
P078933	Education Excellence and Equity	IPF	ED	MU	MU	MU	M	U	MS	MOD
P079226	Education Restructuring	IPF	ED	NA	MU	U	NA	MU	NA	NA
P080746	HD Program Sector Reform Loan	DPL	ED	S	HS	HS		HS	HS	
P081269	Education Sector Development Program II APL 2 (FY04)	IPF	ED	MU	MS	MS	M	MS	S	MOD
P082927	Promoting Innovation and Competitiveness	IPF	ED	NA	S	MU	NA	S	S	NA
P086294	Education Sector Project (FY07)	IPF	ED	MS	MU	MS	SIG	MU	MU	MOD
P086671	Education Sector Development Program (CRL)	IPF	ED	MU	MU	MS	M	MS	MU	MOD
P086875	Education & Training DPL (FY07)	DPL	ED	MU	U	MU	M	MU	U	NEG
P087479	Education Sector Support Project (FY07)	IPF	ED	U	MS	U	HIGH	MS	MS	MOD
P095520	Promoting Innovation to Enhance Competitiveness	IPF	ED	S	MS	S	LOW	MS	S	SUB
P096707	Guangdong Technical and Vocational Education and Training	IPF	ED	S	S	S	NEG TO LOW	S	S	HIGH
P097104	Better Education through Reformed Management and Universal Teacher Upgrading	IPF	ED	S	S	MS	NEG TO LOW	S	S	SUB
P098217	Education II APL2	IPF	ED	MS	MS	MS	M	MS	S	MOD
P098956	Postprimary Education SIL (FY06)	IPF	ED	S	MS	S	M	S	MS	
P102174	Institutional Development for Education	IPF	ED	MS	MS	MU	M	MU	MS	MOD

APPENDIX E
WORLD BANK GROUP HIGHER EDUCATION PORTFOLIO

Project ID	Project name	Lending Type	Sector Board/ Global Practice	Outcome	World Bank Performance	Borrower Performance	RDO	QAE	QOS	ME Quality
P106855	General Education Quality Improvement (FY09)	IPF	ED	MS	MS	MS	SIG	MS	MS	MOD
P107772	Education Quality and Relevance (APL#2)	IPF	ED	MS	MS	MS	M	MS	MS	SUB
P109333	Support of ETSIP1 DPL2 (FY09)	DPL	ED	MU	U	MU	M	MU	U	NEG
P050272	Private Sector Development CB	IPF	FPD	MS	MS	MS	M	MS	MS	SUB
P070544	Accountability, Transparency and Integrity	IPF	PS	MU	MU	MU	SIG	MU	MS	MOD
P071157	Land Administration (FY04)	IPF	ENV	MU	MU	MU	M	MU	MU	NEG
P073206	Land Administration and Management II	IPF	ARD	MS	MS	MS	SIG	MS	MS	SUB
P073458	Private Sector Development	IPF	FPD	MS	MS	MS	SIG	MS	S	SUB
P073772	Health Workforce and Services (PHP 3)	IPF	HE	U	MU	MU	SIG	U	MS	NEG
P074448	Governance and Institutional Development TAL (FY04)	IPF	PS	MU	MU	MU	HIGH	MU	U	MOD
P078458	ICT-Assisted Development SIM (FY05)	IPF	FPD	MS	MS	MU	HIGH	MU	MS	MOD
P083110	Highway Improvement I	IPF	TR	S	S	MS	M	MS	S	MOD
P083126	Real Estate Cadastre and Registration (CRL)	IPF	ARD	HS	S	S	LOW	S	HS	SUB
P083370	Public Sect Capacity Building	IPF	PS	U	U	U	HIGH	U	MU	MOD
P088663	Health Sector Enhancement	IPF	HE	MS	MS	MS	M	MS	MS	MOD
P105282	Health Systems Reconstruction (FY07)	IPF	HE	MS	MU	MS	SIG	U	MS	MOD
P071039	Economic Management Structural Adjustment Credit	DPL	PS	MU	MU	MU	SIG	MU	S	SUB
P112227	Sustainable Education Development Policy Operation	DPL	SP	MS	MS	MS	SIG	MS	S	SUB

Project ID	Project name	Lending Type	Sector Board/ Global Practice	Outcome	World Bank Performance	Borrower Performance	RDO	QAE	QOS	ME Quality
P115400	Strategic Investment Review DPL3	DPL	SP	MU	MU	MU	M	MS	MU	MOD
P117161	Employment DPL	DPL	SP	U	MS	MU	SIG	MS	MS	MOD
P117666	DPL 3	DPL	EP	S	S	S	M	S	S	HIGH
P122195	DPO 3	DPL	EP	MS	MS	MS	SIG	MU	MS	MOD

Note: Rating: HS = Highly satisfactory; S = Satisfactory; MS = Moderately satisfactory; MU = Moderately unsatisfactory; U = Unsatisfactory; HU = Highly unsatisfactory; NA = Not Applicable or Nonevaluable or Not rated; M = Moderate; SIG = Significant; NEG = Negligible; SUB = Substantial; MOD = Modest.
BERMUTU = Better Education through Reformed Management and Universal Teacher Upgrading; DPL = Development Policy Loan; DPO = development policy operation; HD = Human Development; ICT = Information and Communication Technology; ME = monitoring and evaluation; QAE = quality at entry; QOS = quality of supervision; RDO = risk to development outcome; SIL = Specific Investment Loan; SIM = Sector Investment and Maintenance Loan.

Table E.11.3. Rating Summary

Category	Core	Noncore (Education)	Noncore (Other)	Total
Outcome				
HS	0	0	1	1
S	9	5	2	16
MS	9	8	8	25
MU	3	9	5	17
U	1	2	3	6
NA	1	2	0	3
World Bank performance				
HS	0	1	0	1
S	6	4	3	13
MS	12	10	8	30
MU	3	8	7	18
U	2	3	1	6
Borrower performance				
HS	0	1	0	1
S	9	4	2	15
MS	12	10	8	30
MU	1	8	8	17
U	1	3	1	5
Risk to development outcome				
HIGH	0	2	3	5
SIG	8	3	9	20
M	6	15	6	27
LOW	0	1	1	2
NEG TO LOW	8	2	0	10
NA	1	2	0	3
Blank	0	1	0	1
Quality at Entry				
HS	0	1	0	1
S	6	5	2	13
MS	11	10	8	29
MU	4	7	6	17
U	2	2	3	7
HU	0	1	0	1
Quality of supervision				
HS	0	1	1	2
S	14	8	5	27
MS	4	9	9	22
MU	4	5	3	12
U	0	2	1	3
NA	1	1	0	2
Monitoring and evaluation quality				
HIGH	0	1	1	2
SUB	9	4	6	19
MOD	10	15	10	35

LOW	1	0	0	1
NEG	2	2	2	6
NA	1	2	0	3
Blank	0	2	0	2

Glossary

Term	Definition
Competitiveness	The set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can earn.
Employability	The skills, knowledge, and competencies that enhance a worker's ability to secure and retain a job, progress at work and cope with change, secure another job if he or she so wishes or has been laid off, and enter more easily into the labor market at different periods of the life cycle.
Higher education	Education receives at degree-granting educational institutions that support students beyond the secondary school level, specifically colleges, universities, graduate schools, and professional schools, often supporting applied and pure research
Nontraditional donors	Nontraditional donors are foreign agencies and organizations that provide support to higher education institutions or the higher education system outside of the established official development assistance framework and are not likely to be registered in donor databases. They may include ministries of education, science agencies, and other public organizations in donor countries; private international foundations; international universities; and other types of voluntary support from donor countries. Assistance may be offered through financing, the provision of technical assistance and scholarship, and the donation of equipment, texts, and other materials.
Quality assurance	Quality assurance is the systematic review of educational programs to ensure that acceptable standards of education, scholarship and infrastructure.
Third mission or community engagement	Higher education's support to a coordinated effort to bring diverse interests together to a common goal through the participation and mutual benefits of the university and the community, including the public and private sectors, local organizations, and the general public.

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