Promoting inclusive growth through higher education

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Investing in higher education contributes to inclusive growth. The benefits from higher education, however, are not automatically inclusive. One major factor behind this is that households, for the most part, finance higher education. There are no credit markets that families with insufficient funds can turn to in order to finance college education for their children. A family must first accumulate funds to be able to finance college education. Entering college, therefore, depends on the ability to pay and not on the ability to learn, a situation that needs to be corrected to make growth that is driven by higher education inclusive. If public policy can adequately address the phenomenon of missing financial markets for college education, then the likelihood of achieving inclusive growth from investing in higher education rises profoundly.

This Policy Note has two objectives: (1) to analyze the role that investing in human capital—especially in higher education—plays in the observed phenomenon of economic growth with income inequality in the Philippines and (2) to present policy recommendations for addressing concerns about inequitable growth, particularly the attention deficit of the country’s policy for higher education.¹ Public policy has long been focused on basic education, and rightfully so.² But in view of the acknowledged importance of

¹ The Commission on Higher Education (CHED), the government institution responsible for higher education policies, has released the Roadmap for public higher education reform (RPHER) for 2011–2016, which is intended to rectify the education policy imbalance. The RPHER coincides with the Philippine Development Plan 2011–2016 (NEDA 2011), the theme of which is inclusive growth.
² For example, an important piece of legislation that Congress enacted in 2014 is the K to 12 program, which adds kindergarten and two years of grade school in basic education, thereby putting the Philippines on par with world standards.
Electronic engineers earn four to seven times more than those who are unskilled. In several occupational groups, the top group’s wage is at least twice that of the unskilled workers’ wage.

Over time, the demand for educated and skilled workers has been increasing, which has also widened the wage gap between the skilled and the unskilled. From a policy standpoint, this suggests that investments in higher education and skills training may help decrease the growing income inequality amid a rapid economic growth. New jobs in new industries, such as those in information and communications technology (ICT), have emerged. As other industries innovate and grow by adopting ICT in their processes, the demand for highly productive jobs increases. It is thus important for public policy to ensure that access to higher education and skills training required by these new jobs is expanded and equalized. Otherwise, income inequality gets perpetuated as the economy continues to grow.

Tables 1 and 2 highlight the ICT subsector. In the PSA’s 2012 Statistical Yearbook, the occupation group is tagged as “computer and related activities”. In 2014, however, the same group is described as “computer programming, consultancy and related activities; information services activities”. Old occupations are removed as new high-quality jobs emerge. These new activities are commonly seen, for instance, in call centers and business process outsourcing, which are new growth areas in the digital age. The ICT subsector is commonly described as a sunrise industry in the Philippines. The demand for ICT skills has been growing, but to qualify for a job in ICT, investment in postsecondary education is essential.

higher education for research and development and technological progress, policies that help in building a critical mass of scientific and technical manpower through higher education institutions (HEIs) are vital to produce a body of knowledge that drives technological progress.

Returns to education

There is evidence showing that economic payoffs to higher education and skill acquisition are positive and increasing. The rates of returns, for example, to high school and college education are rising, accompanied by a widening of the gap between them. Similarly, wage ratios between the top and the lowest occupation groups in selected industry sectors and subsectors where higher education is vital have widened. These are supported by traditional studies on rate of return to various levels of education, and by findings of the Philippine Statistical Authority (PSA) from its special surveys on monthly wages by industry and occupational group.

Studies on rate of return to college education support the view that investment in education is remunerative, and that individuals can capture the benefits from such investment. For example, using 1995 data, Gerochi (2001) found that those who finished college receive returns 14 percent more than those who finished high school only. Son (2009), using 2003 data, reported a 16.57-percent rate of return to tertiary education and a 5.16-percent rate of return to secondary education.

Meanwhile, based on the PSA surveys for 2012 and 2014, food technologists earn twice the salary of unskilled workers per month. In wholesale and retail trade, professionals earn more than twice their unskilled counterparts.
The monthly wage rates of the top three occupation groups in ICT in relation to unskilled workers have widened considerably between 2010 and 2012, and ranged from 3.8 to 6.8. Evidently, the demand for skilled ICT personnel is increasing over time but the supply is not increasing commensurately given the financing constraints that households face. Even if parents wish to enroll their children with aptitude for ICT in a postsecondary school, they may not be able to do so if they do not have the financial capacity. Thus, the income inequality in this sector may widen and persist over time.

In 2014, the monthly wage rate of electronics and telecommunication engineers shot up to the top occupation ladder, overtaking systems analysts and designers, and computer programmers (Table 2). Over time, the manpower supply in each of the top three occupation groups changes. Occupational choice is a private decision of households while firms determine the demand. As shifts in demand for and supply of the top three skills occur, monthly wage rates change.

It is useful to note that the wage of the unskilled declined from PHP 10,095 in 2010 to PHP 8,085 in 2012, based on the two PSA surveys. As the ICT subsector grows, the number of unskilled workers seeking employment therein increases; the effect is a decline in their wage rate. Meanwhile, electronics and telecommunication engineers shot up to the top of the occupation ladder, an indication of relative scarcity.

The behavior of wages and earnings in the ICT sector may be happening likewise in other industry subsectors. If the skill scarcity persists, then the income inequality is not likely to narrow down over time. This brings about the issue of building the stock of skilled labor with higher education.

### Building a highly educated and scientific labor force

A look at some figures on enrollment and graduation in higher education provides some information on the nature and extent of the challenge in building a stock of highly educated labor. Table 3 shows total enrollment and graduation figures in higher education. In school year (SY) 2011–2014, the ratio of higher education graduates to the current number of enrollees has averaged only 17.2 percent. Between SY 2011–2012 and SY 2012–2013,
the number of graduates slightly declined, recovering to a growth rate of 8 percent between SY 2013–2014 and SY 2012–2013. These figures pale in comparison with those in high middle-income and newly industrializing economies, and suggest a policy challenge of raising the stock of highly educated labor.

Table 4 looks at scientifically trained graduates, which include graduates of engineering and technology-related courses, ICT, medicine and allied professions, mathematics, and natural science. As a proportion of the total number of graduates, scientific degree holders averaged about 34.8 percent each year. The share has grown in recent years due to the increasing number of enrollees in ICT courses. In view of the role that scientific graduates play in technological progress, a related policy challenge is building a stock of scientifically trained graduates.

Investing in college education is an economic decision of households that takes into consideration costs and stream of future earnings from having a college degree. Costs are both direct and indirect. Direct costs come mainly from tuition fees and other charges, while indirect costs are the earnings foregone from choosing college, instead of entering the workforce immediately after high school.

Household decisions, however, may be influenced by public policy. If households mainly finance college education, the government may intervene by setting up financial assistance programs to compensate for the missing credit markets to finance college education. It can also introduce tax-and-subsidy schemes that will support households to send their children to college. Job search after graduation is also costly and the government can step in to ease the cost of job search. In short, public policy can design incentive structures geared toward investing in college education.

**Policy recommendations**

The national government, through the Commission on Higher Education (CHED), has played an important role in higher education, both at the upstream policymaking and downstream implementation of policies and programs. It also exercises regulatory functions over both public and private HEIs. Upstream, the CHED exercises oversight functions over budget allocations of state colleges and universities (SUCs) and is commonly an ex-officio member or chairperson of the board of regents of SUCs.

In pursuing inclusive growth, the CHED can exert an influential role in at least four activities: (1) designing student loan and other financial aid programs, (2) determining the

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**Table 3. Total number of enrollees and graduates in higher education**

<table>
<thead>
<tr>
<th>School Year</th>
<th>Enrollees</th>
<th>Graduates</th>
<th>Growth Rate of Graduates (%)</th>
<th>Percentage of Graduates to Enrollees (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011–12</td>
<td>3,033,967</td>
<td>522,617</td>
<td>–</td>
<td>17.2</td>
</tr>
<tr>
<td>2012–13</td>
<td>3,317,265</td>
<td>522,570</td>
<td>(0.0)</td>
<td>15.7</td>
</tr>
<tr>
<td>2013–14</td>
<td>3,653,396</td>
<td>564,769</td>
<td>8.0</td>
<td>15.8</td>
</tr>
</tbody>
</table>

Source: PSA (2014)

**Table 4. Percentage of scientific graduates to total graduates**

<table>
<thead>
<tr>
<th>School Year</th>
<th>Graduates of Scientific Courses</th>
<th>Percentage (%)</th>
<th>Growth Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011–12</td>
<td>211,283</td>
<td>40.4</td>
<td>–</td>
</tr>
<tr>
<td>2012–13</td>
<td>150,530</td>
<td>28.8</td>
<td>(0.28)</td>
</tr>
<tr>
<td>2013–14</td>
<td>199,350</td>
<td>35.3</td>
<td>32.4</td>
</tr>
</tbody>
</table>

Source: PSA (2014)
budget allocations of SUCs by region, (3) setting content standards in core courses and subjects in all colleges and universities, and (4) devising standardized tests for determining compliance with content standards of both public and private HEIs.

Loan program for college education
The demand for college graduates is increasing over time and parents respond by choosing to enroll their college-age children. Furthermore, tuition fees are likely to increase from inflation and from the drive for quality improvements in all aspects of college education. In this environment, student loans and other forms of financial aid are critically important. Since the caps on student loans will have to be standardized, financial aid to needy students must include scholarship grants and work-study programs.

One of the empirical regularities in the economics of education is that the rate of return from college education exceeds the weighted average cost of capital. Investment in college education is remunerative. The graduate is able to recover the investment through the increases in his or her stream of lifetime earnings after college (Psacharopoulos 1991). Moreover, the income gap between college and high school graduates has been widening as a result largely of increasing labor market demand for skills.

Investment in college education is thus a worthy undertaking. But because households finance college education out of their own pockets, only those who can afford could send their children to college, in the absence of credit facilities for higher education.

Amid missing markets for college education loans, the government can fill the gap. A loan program is advisable as the graduate can capture the returns from his or her investments through enhanced lifetime earnings. It also improves allocation of resources. If the household is paying for the investment, the student may be more studious in school as loan repayment starts after getting the degree and a job is found. Moreover, it is important for the graduate with a loan to look for a quality job—one that yields earnings sufficient to support his or her living standards and pay for the student loan.

University administrators can help reduce the size of a student loan for tuition by tapping resources from other financing entities, such as the national government, local government units (LGUs), private foundations, and alumni imbued with philanthropy. Furthermore, work-study programs on campus should be instituted to supplement student loans. Student councils and organizations can be authorized to run some businesses on campus as part of work-study programs.

The national government can also institute a fiscal policy regime whereby the interest paid on student loans is admissible as a tax credit or a deductible expense in paying personal income taxes. The government can also put up scholarship programs for college-eligible but financially needy students. Work-study programs in the university can definitely help in this regard. Private foundations and philanthropic alumni could be sources of research grants, professorial chairs, and academic buildings with naming rights.
These financial contributions help defray other costs per student through the provision of support to instruction in the form of laboratories, libraries, and Internet access; administration, maintenance, and operation of academic buildings; and faculty research, but excluding income foregone while in college.

One major task of the national government is to design a student loan program that minimizes loan defaults. This entails instituting caps on what the student can borrow per year for tuition support, and requiring parents to be co-makers. Options for loan repayment must be incorporated in the design while taking into consideration the ability to pay of the individual over his or her life cycle.

A national loan program will need to be legislated with the CHED taking the lead in drafting the bill. A matching grant mechanism must be built into the design whereby regional SUCs, for instance, that are able to institute a loan program with minimal loan defaults can be rewarded with additional grants. At the same time, if some SUCs incur loan defaults that exceed some established thresholds, eligibility of those SUCs for the loan program will have to be withdrawn or suspended.

The national loan program may also include the option of accrediting private lending institutions, say, banks, to participate. Loan guarantees and subsidy schemes will have to be extended to incentivize lending institutions to join the program.

**CHED's roles beyond student financial aid**

Under the *Roadmap for Public Higher Education Reform*, a critical goal is to come up with an optimal number of quality SUCs. Having regional university systems and centers of excellence is part of the mission. To do this, consolidation is necessary, and may entail transforming some existing SUCs that do not meet standards of excellence into community colleges that may provide education and training to accelerate the entry of college students into the workplace.

Some graduates of community colleges may be eligible for a college degree, necessitating an accreditation scheme for an associate degree acquired in community colleges.

Beyond streamlining the overall size of the SUC sector, quality-enhancing goals of the CHED for SUCs matter. In this regard, the CHED can also implement some grant-matching programs that will help SUCs develop content standards in core courses and subjects, and come up with standardized tools for measuring progress. This way, accountability for either good or poor performance of various SUCs can be tracked. Good institutions continue to receive grant support while poor performers are terminated.

Furthermore, given increasing labor mobility in a revitalized Philippine economy, setting content standards in higher education reduces job search costs. For example, employers in Manila will have less difficulty in evaluating the qualifications of a job applicant who is a graduate of a university in, say, Cebu or Davao if they know that these applicants are subjected to the same high standards that universities in Manila or any other place impose.

Setting uniform content standards constitutes the many tasks that the CHED can coordinate and incentivize with grants. Related to standard setting are the provision of teacher training.
and promoting innovations in educational technology.

**College-to-the-workplace initiatives**

Graduates of HEIs do not necessarily possess the skills that the workplace immediately demands. On-the-job-training (OJT) is essential. Social ties also matter as graduates lacking with sufficient networks normally go through a prolonged job search. The CHED can start a one-stop shop, in partnership with other implementing agencies like the Department of Labor and Employment, Department of Trade and Industry, and Department of Science and Technology, to ease the transition from college to the workplace.

In college, internships and apprenticeships in an actual workplace are deemed effective. Skills are acquired that make graduates readily employable. The above agencies can share information about OJT; wage and salary offers and other compensation schemes, including jobless benefits, if any; and training and re-training programs with financial assistance.

**Private response**

One of the interesting and welcome developments in recent years is the entry of private industrialists and corporations in the higher education sector. Seeing the growing demand for skilled labor that can be met only by improving the quality of higher education, they have ventured into HEIs specializing in, for instance, engineering and technology, ICT, and medicine and allied medical professions.

This is a welcome development. It seems that HEIs are remunerative enough to warrant investing in them, thereby supplementing with private financial resources the government budgetary resources allocated to the sector. Tuition fees in these private HEIs tend to be reasonable since their university administrators are cost conscious. In addition, in view of the long experience of the owners in private industry, they embrace innovation mechanisms that ensure a smooth transition from college to the job market. The reinvention of higher education by these private investors is revitalizing the sector.

Any concern of the CHED that private corporations in higher education may be overly profit driven can be dealt by the commission by passing the necessary regulations.

**Concluding remarks**

The labor market needs highly skilled workers, and the payoffs to these skills are immense. However, the country has a narrow base in relation to labor that requires higher and scientific education. Building a stock of highly educated and scientific manpower is critical for technological progress, the major source of long-run growth.

In an environment with liquidity-constrained households and absent credit markets for higher education, and amid rising returns to skills, income inequality is likely to persist. How to achieve sustained growth without exacerbating income inequality is a major challenge that policymakers in government face.

In an environment where demand for skilled labor, returns to higher education, wage gaps between college and high school graduates, and college tuition fees are all increasing, policymakers are advised to institute a well-
designed national education loan program for higher education. This is essential to complement the government’s student financial aid program based on scholarships and specific cash transfers, for instance, to SUCs. Loans are justified since graduates are able to capture much of the rising payoffs to college education.

The emphasis that CHED places in establishing regional centers of excellence is laudable. However, it is also important to involve the LGUs in financially supporting these centers of excellence. After all, local jurisdictions and their constituents capture much of the benefits from these SUCs. The principle of devolution should be extended to the provision of education at all levels.

Meanwhile, university administrators of private HEIs should continue to tap financial support from foundations and philanthropic alumni for support to teaching, research, and extension to reduce the burden of student loans, once instituted. In return, graduates could repay them in kind by working for them once they enter the workforce.

Programs to ease the job search process after graduation are essential in a labor market with limited and unequally distributed information. Lacking social ties, graduates from low-income groups may be disadvantaged and would greatly benefit from acquiring information about vacancies, training and re-training, wage offers, and other forms of compensation that are publicly disclosed.

Lastly, families must take advantage of the opportunities that are opening up in human capital formation. They will find that the living standards of their children will improve and they will capture more opportunities for economic and social advancement far more abundant than what they are seeing today.

References


