

## Ensuring a more evidence-based policy for basic education

*Dalisay S. Maligalig  
and Jose Ramon C. Albert*

Two

key international commitments for the achievement of education for everyone—the Millennium Development Goals (MDGs) on Education and the Education for All (EFA) Initiative—bespeak of the importance of the nexus between education and development.

The MDGs on Education refer to quantifiable and time-bound targets—achieving universal primary education and gender equality in education by 2015—that are part of the eight MDGs committed by the Philippines and 146 other global signatories to the Millennium Declaration in September 2000. These targets for education are likewise part of the six goals set by the EFA global movement launched in 1990 by governments, the development community, and education stakeholders to bring the benefits of education to every citizen in every society.

Education is a necessary condition for people to develop their capabilities which in turn increases their prospects for better social mobility. Education prepares people for future opportunities to pursue productive, creative, and decent work, especially in today's knowledge-based global economy. A good education thus provides economic security against future risks of vulnerability to income poverty.

Recognizing this, the Philippines' Department of Education (DepEd), through its Basic Education Social Reform Agenda (BESRA), has sought to meet the Philippine EFA 2015 goals

*PIDS Policy Notes* are observations/analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

This *Notes* is based on PIDS Discussion Paper Series No. 2008-16 titled "Measures for assessing basic education in the Philippines" by the same authors. The authors are Senior Statistician of the Asian Development Bank (ADB) and Senior Research Fellow of PIDS, respectively. The views expressed are those of the authors and do not necessarily reflect those of PIDS or ADB or any of the study's sponsors.

that were officially adopted in 2006. Said masterplan aims to attain the improvement of the quality of basic education for every Filipino by 2015.

In monitoring the progress in attaining the MDG of achieving universal primary education, three indicators<sup>1</sup> are used, namely: a) literacy rate of 15–24 year old youth, b) proportion of pupils who started Grade 1 and reached Grade 5, and c) net enrolment ratio.

While at first glance, the Philippines seems to be on its way to reach this goal of universal primary education, as seen in its 94 percent net enrolment ratio in 2004 and 95 percent literacy rate for the youth in 2000–2004, looking closely at the figures, however, suggests that the country may be at risk of not achieving this goal by 2015. For one, compared to the 1991 figures where both net enrolment ratio and youth literacy rate registered at 97 percent, there has been a slight decline in said indicators in recent years. In addition, the proportion of pupils who started Grade 1 and reached Grade 5 has remained almost at the same level, i.e., 74 percent for the 1991 baseline and 75 percent for 2004.

For the MDG target of eliminating gender disparity in primary and secondary education,

<sup>1</sup> The revised UN Official List of MDG Indicators, effective as of 15 January 2008, presents the “proportion of pupils starting Grade I who reach last grade of primary” as the MDG2, Target 2.A, Indicator 2.2.

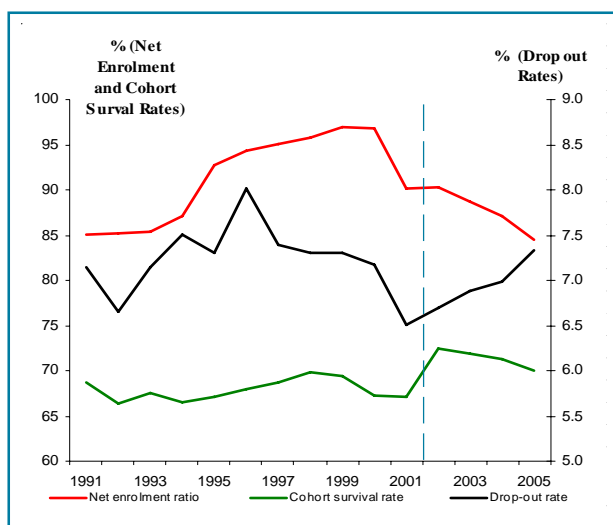
meanwhile, education indicators show that at all levels—primary, secondary, and tertiary—females are at an advantage over males, with the differences growing as the level of education increases. This suggests that a new set of disparities between sexes may be in the offing.

All these results lead to questions about the state of basic education in the Philippines, the basic education monitoring and evaluation (M&E) system in place, and the coherence between education policy and education data. Although a number of studies in the literature have already pointed to the deteriorating quality of basic education in the country, this *Policy Notes* supplements their conclusions with a re-examination of available indicators from the DepEd administrative reporting systems and an analysis of the results of household surveys conducted by the National Statistics Office (NSO). Ultimately, the *Notes* aims to initiate and elicit more debates on the required program interventions and policy adjustments in basic education.

### **Trends in basic education performance indicators**

In terms of the trends in school performance indicators, particularly for net enrolment ratio, dropout rate, and cohort survival rate, Figure 1 shows a slight improvement between 1991 and 2001. However, primary school net enrolment ratio and cohort survival rate declined by 3 and 4 percentage points, respectively, from 2001 to 2005 while primary

**Figure 1a. Elementary education performance indicators: 1991–2005**



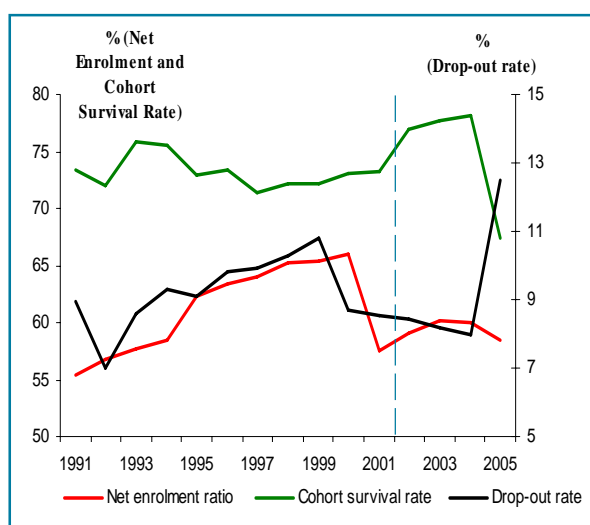
Note: Prior to 2001, net enrolment ratio was computed using the population between the ages of 7–12 years old; from 2001 onwards, the Department of Education revised the methodology and used the population between the ages of 6–11 years old.

Source: Department of Education

dropout rate increased by 0.8 percentage points. For secondary schools, cohort survival rate dropped by almost 7 percentage points while dropout rate increased by 4 percentage points between 2001 and 2005. In general, there have been no improvements, if not worsening conditions, in these indicators.

Aside from these output measures, the DepEd also monitors other key performance indicators. In particular, at the elementary level, the quality of education is monitored through the results of the National Achievement Test (NAT) that was given in Grade 4 in school years (SY) 2002–03 and 2003–04 and in Grade 6 in SY 2004–05, 2005–06, and 2006–07 by the DepEd’s National Educational Testing and

**Figure 1b. Secondary education performance indicators: 1991–2005**



Source: Department of Education

Research Center (NETRC). The overall achievement rate for the elementary level, as seen in Table 1, has remained low at 59.9 percent in 2006–07.

In the case of secondary schools, the NAT was administered to first year students in SY 2002–03, to second year students in SY 2006–07, and to fourth year students in the three intervening school years. Hence, comparisons can only be made in the three intervening years wherein the overall achievement rate has remained stagnant at around 44 percent, with marginal gains in Mathematics and Science but with a decline of more than two percentage points in English (Table 2).

The low achievement rates for both elementary and secondary schools are indicative of

**Table 1. Primary National Achievement Test (NAT) mean percentage scores by subject: national\***

Subject	SY2002-03 Grade IV	SY2003-04 Grade IV	SY2004-05 Grade VI	SY2005-06 Grade VI	SY2006-07 Grade VI
Achievement Rate (MPS)	...	...	58.73	54.66	59.94
Mathematics	44.84	59.45	59.10	53.66	60.29
Science	43.98	52.59	54.12	46.77	51.58
English	41.80	49.92	59.15	54.05	60.78
Hekasi (Social Studies)	...	...	59.55	58.12	61.05
Filipino	...	...	61.75	60.68	66.02

\* National Achievement Tests (NAT) for elementary level were given in Grade IV in SY 2002–2003 and SY 2003–2004 and in Grade VI in SY 2004–2005 to SY 2006–2007.

MPS – mean percentage scores

Source: National Educational Testing and Research Center (NETRC) as cited by the Department of Education

**Table 2. Secondary National Achievement Test (NAT) mean percentage scores by subject: national\***

Subject	SY2002-03 1st Year	SY2003-04 4th Year	SY2004-05 4th Year	SY2005-06 4th Year	SY2006-07 2nd Year
Achievement Rate (MPS)	...	44.36	46.80	44.33	46.64
Mathematics	32.09	46.20	50.70	47.82	39.05
Science	34.65	36.80	39.49	37.98	41.99
English	41.48	50.08	51.33	47.73	51.78
Filipino	...	...	42.48	40.51	48.89
Araling Panlipunan	...	...	50.01	47.62	51.48

\* National Achievement Tests (NAT) for secondary level were given in 1st year in SY 2002–2003, in 4th year in SY 2003–2004 to SY 2005–2006, and in 2nd year in SY 2006–2007.

MPS – mean percentage scores

Source: National Educational Testing and Research Center (NETRC) as cited by the Department of Education

the low quality of basic education. A contributing factor is the lack of competent teachers who are the primary resource for elementary and secondary students in lieu of books and other learning materials. Preliminary results of a Teachers Test in Science, Math, and English piloted among selected school divisions suggest the lack of teacher competencies and the need to seriously address them. Information from the Commission on Higher Education (CHED) and the Professional Regulatory Commission (PRC) also suggests that the number of new teachers (graduates

of Bachelor of Science in Education) is declining and the passing rate for the Licensure Exam for Teachers has remained low and, in fact, decreased from 35.7 percent in 2000 to 30.8 percent in 2006.

Manasan (2007) shows that the inadequate government (per capita) expenditures for education are strongly correlated with the basic education's performance indicators. When expenditure for education rises, for instance, net enrolment also increases. The results of a simple linear regression confirm

this as they show that for a one percentage point increase from its current level in the share of education expenses (in relation to GDP), there will be a 9.4 percent increase in the net enrolment ratio from its current figure. In addition, one could also see that inadequate government support has effects on quality: the NAT achievement rate for the elementary level dipped from 58.73 percent in 2004 to 54.66 percent in 2005 when the per capita expenditure also dipped from PhP1,051.3 to PhP975.9, and the NAT achievement rate for the same educational level increased to 59.94 percent in 2006 when the per capita expenditure for basic education also increased to PhP1,014 in the same year.

### Survey says

The reasons for the seeming lack of progress in improving participation and cohort survival rates, meanwhile, could also be obtained from surveys such as the Annual Poverty Indicator Survey (APIS) conducted by the NSO during years when the triennial Family Income and Expenditure Survey (FIES) is not conducted. In the APIS, all members of sampled households aged 6–24 years old are asked whether he/she is attending school and, if not, the reason for not attend-

ing school. In addition, inasmuch as the APIS also asks questions on income, a rich analysis could be obtained relating household income to reasons for nonattendance in school.

The two latest available rounds of the NSO survey—the 2002 APIS and 2004 APIS—estimated that about 716,000 and 750,000 children between the ages of 6 and 11 years old (the primary age group) were not attending school in 2002 and 2004, respectively. Both these figures represent about 6 percent of children in the primary age group in said years. For the secondary age group (12 to 15 years old), about 705,000 and 896,000 were not attending school, representing 10 percent and 9 percent of the total, in 2002 and 2004, respectively.

Table 3 summarizes the reasons for the nonattendance in school. For the primary age group, about a third in 2002 and 2004 cited

**Table 3. Reasons for not attending school, national level: 2002 and 2004**

	Primary		Secondary	
	2002	2004	2002	2004
<b>Not currently in school (persons)</b>	715,650	750,474	704,707	896,325
<b>Reasons for not attending school (%)</b>				
Cannot cope with school work	12.1	10.5	4.1	3.3
High cost of education	14.8	15.0	27.4	26.8
Illness/ Disability	6.6	7.7	6.8	6.3
Lack of personal interest	29.0	29.4	38.2	43.0
Schools are far/No school w/n brgy	9.3	8.0	2.7	2.9
Employment/Looking for work	0.6	1.1	12.5	9.2
Finished schooling	0.2	0.0	0.0	0.1
House keeping	0.8	0.7	3.1	3.8
No regular transportation	1.2	0.5	0.2	0.3
Others	25.3	27.0	5.0	4.2

Source: Authors' computations using data from APIS 2002 and 2004

lack of personal interest as the reason for not attending school, about a fourth of the children specified other reasons and about three out of twenty children cited the high cost of education. For the secondary age group (12 to 15 years old), about two in five children cited lack of personal interest for not attending school while about a fourth cited the high cost of education.

Figure 2, meanwhile, shows the relationship between nonattendance in school and household income: the percentage of children who are not attending school decreases as income (of the household to which the children belong) increases. It is also interesting to note that for the primary age group, 72 percent and 67 percent of those who were not attending school (or about 518,000 and 500,000) in 2002 and 2004, respectively, belong to the bottom 30 percent of the

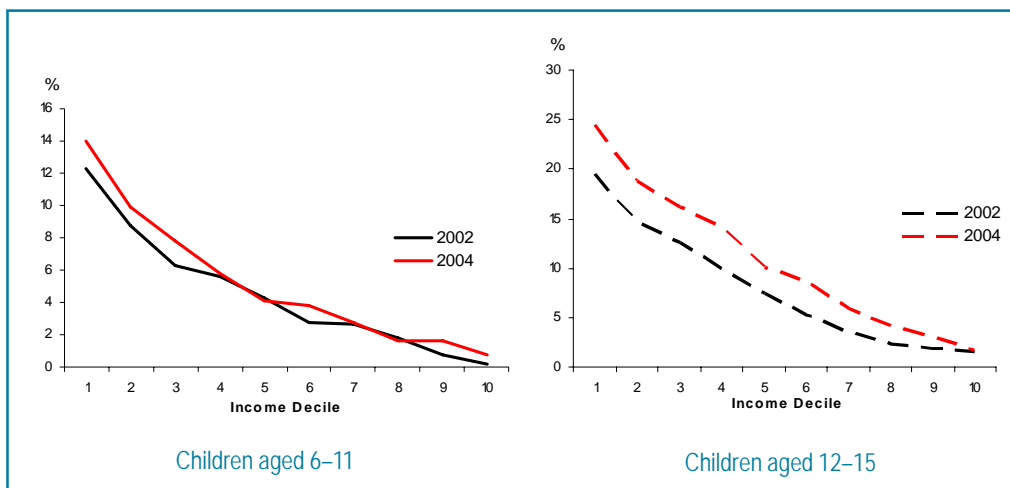
income distribution groups. In the case of the secondary age group, 68.1 percent and 57.5 percent of those who were not attending school (or about 479,600 and 392,000) in 2002 and 2004, respectively, belong to the bottom 30 percent of the income distribution groups.

While education, as mentioned earlier, is a mechanism for the poor to exit poverty, the results of APIS 2002 and 2004, however, imply that the poor are less likely to obtain basic education. Children, especially from poor families, are forced to stay out of school not only because they cannot afford the costs but also because given the poor quality of education, it becomes more rational for them to work than to stay in school. Both cost and quality factors are inherently tied to poverty, as poor families have to sacrifice sending their children to school especially during

periods of crisis (Tabunda and Albert 2002) and poor families have limited means of sending their children to schools that provide quality education.

The issue of poverty is being further complicated by gender issues. This may be gleaned from an analysis done in the 2004 APIS which covered children with

**Figure 2. Percentage of children not in school by income decile: 2002 and 2004**



Source: Authors' computations using data from APIS 2002 and 2004.

ages ranging from 6 to 11 years old. The results of the logistic regression model run on the best explanatory variables for not attending school show that those who belong to the bottom 30 percent of the income decile are 2.8 times more likely to be out of school than those in the upper 70 percent income group. In addition, the results also indicate that it is the boys, more than the girls, who are more likely not to attend schools, all things being equal. More specifically, boys are 1.4 times more likely not to attend schools than girls.

The expenditure pattern of families by income deciles also suggests that food and utilities are given more priority over education and health by families. Again, according to the 2002 APIS, 50.7 percent of the total family expenses are allocated for food, 7.3 percent for utilities, 4.5 percent for education, and 2.5 percent for health. In 2004, with the increase of about 2.5 percentage points in food expenditure, the expenditure share for education dropped to 3 percent. With the current and continuing increase in food prices, especially rice, the staple food of most Filipinos, the expenditure share in education will probably decrease further. Thus, targeted improvements in the net enrolment ratio and dropout rate may not be achievable this year.

### Policy and data issues

In August 2005, the DepEd developed the BESRA to improve nationwide basic education outcomes. It then started to implement the BESRA, taking into account the trends in the

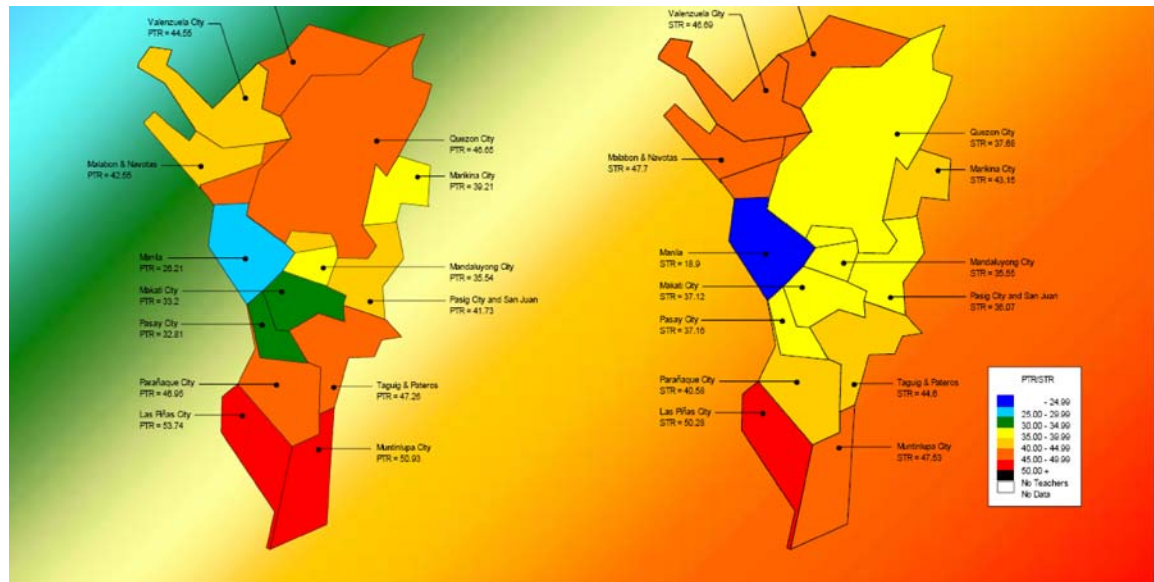
*The expenditure pattern of families by income deciles also suggests that food and utilities are given more priority over education and health by families. With the current and continuing increase in food prices, especially rice, the staple food of most Filipinos, the expenditure share in education will probably decrease further.*

education sector (DepEd 2008) and the Basic Education Information System (BEIS) data. The BEIS is meant to monitor and plan teacher deployment in terms of the number of teachers and the pupil-to-teacher ratio. Analysis of the ratios is done on the basis of schools at the district, city/municipality, provincial, and regional levels using geographic information systems (GIS) as seen in Figure 3.

A target pupil-to-teacher ratio is set by the DepEd Secretary for the incoming school year, and using this target, needs of each school are analyzed from the BEIS to meet the pronounced target. Preliminary analysis is done by assuming different sets of scenario targets. The derived teacher needs of each school are then further analyzed at each division in order to identify the number of new teachers to be hired or to set programs in place for redeploying existing teachers within each division.

While such information and analysis are extremely helpful, the current system does not, however, take into account teacher

Figure 3. Pupil-to-teacher ratios in Metro Manila, 2004



attrition due to resignations and retirement. Neither does this monitoring system take into account the supply side of teachers.

For a policy agenda such as the BESRA and its components to be effective, therefore, a comprehensive monitoring and evaluation (M&E) system is required and needs to be in place. The policy agenda must have defined goals, with each goal identifying measurable indicators and setting up realistic targets.

To monitor the development process, indicators for each milestone—for inputs, outputs, outcome, and impact—should be formulated. These indicators must be consistently measured using standard definitions and methods across time and space. Subnational estimates of the indicators are also important in identifying areas that need more attention or

supervision. This set of indicators should be made accessible to the public to promote transparency and accountability at all levels.

Statistics on education can also be a powerful instrument for getting the attention of policymakers and the public regarding the state of basic education. It is therefore essential that the set of indicators for the EFA 2015, including the report card for schools, be reviewed in order that each development milestone is represented. Issues such as incomplete coverage because of the noncompliance of the private schools to report timely data due to the lack of information about children who have not been part of the education system, must be addressed by carefully studying the proposed set of indicators. To maintain comparability, definitions and compilation methods must be standard-

ized. If definitions are changed, it is important for parallel runs of the old and the new series of statistics to be maintained for a reasonable length of time to allow assessment of the comparability and consistency of the figures.

While the DepEd already monitors a number of key performance indicators of basic education, including the MDG and EFA indicators, there is a sense that these and other measures describing the state of basic education are not being effectively disseminated to the public and the education stakeholders. Currently, the information available in the DepEd website, especially time-series and disaggregated data, are sparse. It is important for education statistics to be more widely disseminated for use by researchers and the public in general. An effective approach is to put the set of indicators in a statistical database wherein a clear set of standards (metadata) is used. The database, including the metadata or data attributes, can be disseminated through the Internet from the DepEd website. With the use of an efficient reporting system that has a clear set of definitions and concepts, this can be done through the use of existing e-mail systems and a simple database architecture. Good examples of this, though not solely on education, can be viewed through the Internet (MDG official website: <http://mdgs.un.org/unsd/mdg/Default.aspx> and the Asian Development Bank's Statistical Database System: <http://sdfs.adb.org>).

Generating subnational information from both the BEIS and NSO surveys is also important to see the policy linkages between, say, poverty and education. Table 4, for instance, shows that as poverty increases, the dropout rate also increases but the net enrolment rate and cohort survival rate decrease. The same table also shows that the Autonomous Region of Muslim Mindanao (ARMM) is the most adversely affected region, having the highest poverty incidence, highest dropout rate, and lowest cohort survival rate among the regions.

### Conclusion

The trends in the key performance indicators in basic education should compel government to intensify its effort in improving basic education by having evidence-based policies and actions. In particular, the DepEd should be required to have a sound M&E system to regularly assess the conditions of basic education. Comparable measures across time and space will help assist policymakers see linkages in policy actions. To judge the soundness of policies, one would ideally like to monitor their effects and evaluate the

*While the DepEd already monitors a number of key performance indicators of basic education, including the MDG and EFA indicators, there is a sense that these and other measures describing the state of basic education are not being effectively disseminated to the public and the education stakeholders...It is important for education statistics to be more widely disseminated for use by researchers and the public in general.*

**Table 4. Primary education performance indicators and poverty incidence by region: 2000, 2003, and 2006**

Region	2000				2003				2006*			
	Poverty Incidence	Net enrolment ratio	Drop-out rate	Cohort Survival Rate	Poverty Incidence	Net enrolment ratio	Drop-out rate	Cohort Survival Rate	Poverty Incidence	Net enrolment ratio	Drop-out rate	Cohort Survival Rate
Philippines	33.0	96.8	7.7	67.2	30.0	88.7	6.9	71.8	32.9	84.4	7.3	70.0
NCR	7.8	101.0	7.3	80.2	6.9	96.8	3.7	84.2	10.4	92.6	3.8	83.5
Region I	35.3	97.7	3.9	80.7	30.2	88.5	3.3	85.6	32.7	84.9	3.1	86.8
Region II	30.4	95.7	5.7	69.9	24.5	85.7	4.8	79.5	25.5	79.9	5.3	77.3
Region III	21.4	98.3	4.8	79.5	17.5	93.6	3.7	84.3	20.7	90.8	4.2	82.0
Region IV-A	19.1	98.5	6.3	74.4	18.4	95.3	5.5	77.2	20.9	92.9	5.2	78.2
Region IV-B	45.3				48.1	89.4	6.7	72.6	52.7	84.4	7.5	69.6
Region V	52.6	95.6	7.1	66.4	48.5	89.3	6.5	73.7	51.1	85.4	6.5	73.9
Region VI	44.5	96.2	6.6	64.0	39.2	83.2	7.3	70.4	38.6	77.1	7.5	69.4
Region VII	36.2	98.6	5.9	68.4	28.3	85.6	6.3	74.0	35.4	80.1	6.4	73.4
Region VIII	45.1	94.6	9.4	58.0	43.0	83.7	7.3	70.4	48.5	80.0	10.0	60.2
Region IX	44.8	93.4	11.6	50.7	49.2	84.8	11.2	57.8	45.3	79.1	11.8	55.7
Region X	43.8	95.6	8.2	61.7	44.0	86.9	8.1	67.4	43.1	80.2	9.7	61.7
Region XI	33.3	93.9	8.6	61.1	34.7	84.4	8.7	65.5	36.6	79.0	10.9	57.8
Region XII	46.8	97.3	12.6	55.7	38.4	81.2	8.7	66.2	40.8	77.4	10.2	60.7
CAR	37.7	94.4	7.7	66.0	32.2	89.2	6.0	75.0	34.5	82.6	7.4	71.4 **
ARMM	60.0	91.3	23.0	33.6	52.8	90.1	21.9	31.0	61.8	87.3	20.3	36.2
CARAGA	51.2	92.9	9.2	62.0	54.0	78.0	7.7	68.6	52.6	74.8	7.8	68.3

\*Latest education indicators data are for 2005.

\*\* Data for 2004.

Sources: National Statistical Coordination Board and Department of Education.

outcomes based on comparable statistics. Rigorous analysis of this kind is needed to improve the design of projects and programs and to weed out interventions that are not working. 📄

## References

Caoli-Rodriguez R. 2007. The Philippines country case study. Country profile commissioned for the Education for All Global Monitoring Report

2008. *Education for all by 2015: Will we make it?* UNESCO.

Department of Education. 2008. Coordinating mechanisms for implementing the Basic Education Sector Reform Program Agenda (BESRA). DepEd Order No. 16, s. 2008.

Manasan, R. 2007. Risks and opportunities in securing increased resources for MDGs at the national level. PIDS Policy Notes No. 2007-08. Makati City: Philippine Institute for Development Studies.

National Economic and Development Authority. 2004. *Medium Term Philippine Development Plan*. Pasig City: NEDA.

Roces, L. and D. Genito Jr. 2004. Basic Education Information System. Proceedings of the Ninth National Convention on Statistics.

Tabunda, A.M. and J.R.G. Albert. 2002. Philippine poverty in the wake of the Asian financial crisis and El Niño. In *Impact of the East Asian financial crisis revisited*, edited by S. Khandker. The World Bank Institute and the Philippine Institute for Development Studies.

For further information, please contact

The Research Information Staff  
Philippine Institute for Development Studies  
NEDA sa Makati Building, 106 Amorsolo Street, Legaspi Village, 1229 Makati City  
Telephone Nos: (63-2) 894-2584 and 893-5705  
Fax Nos: (63-2) 893-9589 and 816-1091  
E-mail: dmaligalig@adb.org; jalbert@pids.gov.ph; jliguton@pids.gov.ph

The *Policy Notes* series is available online at <http://www.pids.gov.ph>. Reentered as second class mail at the Business Mail Service Office under Permit No. PS-570-04 NCR. Valid until December 31, 2008.