

## MDGs INDICATORS ON EMPLOYMENT

### Growth Rate of Labor Productivity

(First of a Series)

#### Background

In 2000, member countries of the United Nations adopted the Millennium Declaration which was translated into a roadmap setting out goals, known as the Millennium Development Goals (MDGs). The eight MDGs, set to be achieved by 2015, are 1) eradicate extreme poverty and hunger; 2) achieve universal primary education; 3) promote gender equality and empower women; 4) reduce child mortality; 5) improve maternal health; 6) combat HIV/AIDS, malaria and other diseases; 7) ensure environmental sustainability; and 8) develop a global partnership for development. Each goal is accompanied by certain targets with time-bound and measurable indicators.

The employment indicators of the MDGs were of fairly recent development. It was only in February 2007 that the Secretary-General of the United Nations began a two-year devoted effort in the Commission for Social Development to actions which "promote full and productive employment and decent work for all" as a vehicle for poverty reduction. Resolutions guided the work of the Inter-Agency and Expert Group (IAEG) in their efforts to include a new target for employment in the MDGs (Goal 1 Target 1.B), bringing to five (5) the total employment indicators in the MDG.

#### MDGs EMPLOYMENT INDICATORS

##### GOAL 1: Eradicate extreme poverty and hunger

**Target 1.B:** *Achieve full and productive employment and decent work for all, including women and young people*

##### Indicators:

- 1.4 Growth rate of labor productivity (GDP per person employed)
- 1.5 Employment-to-population ratio
- 1.6 Proportion of employed people living below the poverty line (Working poverty rate)
- 1.7 Proportion of own-account and contributing family workers in total employment (Vulnerable employment rate)

##### GOAL 3: Promote gender equality and empower women

**Target 3.1:** *Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015*

##### Indicator:

- 3.2 Share of women in wage employment in the non-agricultural sector

This issue of LABSTAT Updates focuses on MDG Employment Indicator 1.4 Growth Rate of Labor Productivity. Labor productivity can be used to assess the likelihood of the country's economic environment to create and sustain decent employment opportunities with

fair equitable remuneration. An increase in labor productivity often influences the social and economic environment positively, which in turn leads to poverty reduction. Without productivity growth, improvements in conditions of work are less likely to occur.

**Fluctuating labor productivity growth**

For the period 1999 to 2011, overall trend of labor productivity growth in the country was fluctuating with the highest growth rate recorded in 2000 (5.5%) and 2010 (4.7%). Labor productivity levels were down in 1999, 2001 and 2009 as indicated by the negative growth rates in these years. Over the period 2002 to 2008, labor productivity, however, consistently improved but at nearly constant pace. The fall of labor productivity in 2009 at the height of the global financial crisis was followed by a regain of 4.7 percent in 2010. This growth rebound was not sustained in 2011 as the labor productivity of ₱159,293 only translated to a growth of 0.7 percent. (Figure 1)

GDP in 2011 only grew by 3.9 percent compared to its 2010 growth rate of 7.6 percent. On the other hand, employment grew by 3.2 percent, higher than its 2.8 percent growth the previous year. The slowdown in GDP brought about the fall in labor productivity.

**Trend for industry sector similar to national**

During the review period, labor productivity levels for the industry sector were about twice that of the services sector and six times that in agriculture.

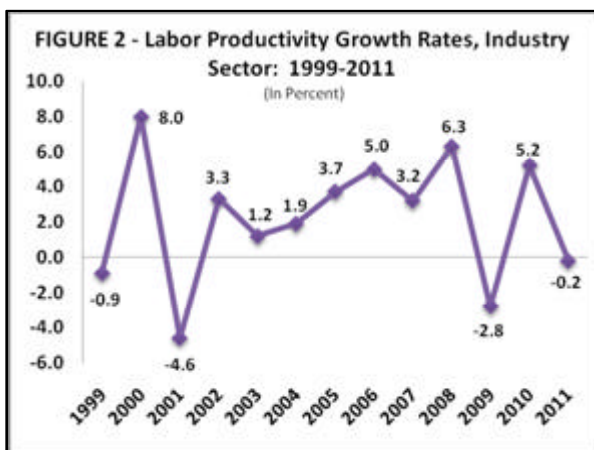
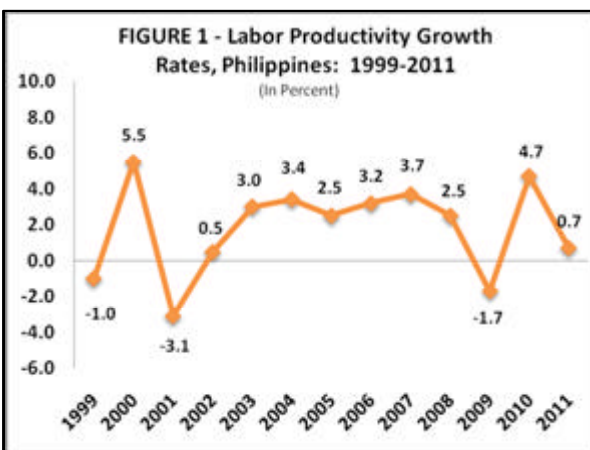
Similar to the national trend, labor productivity levels for the industry sector also dropped in 1999, 2001 and 2009 with the sharpest decline in 2001 (-4.6%). The labor productivity of the sector started to improve in 2002 until 2008 at generally increasing rate with the highest increase in 2008 of 6.3 percent. It weakened in 2009 (global financial crisis), then recovered in 2010 at a rate of 5.2 percent. As in the national growth rate, improvement in the labor productivity of the industry sector was reversed in 2011 with a negative growth of 0.2 percent. (Figure 2)

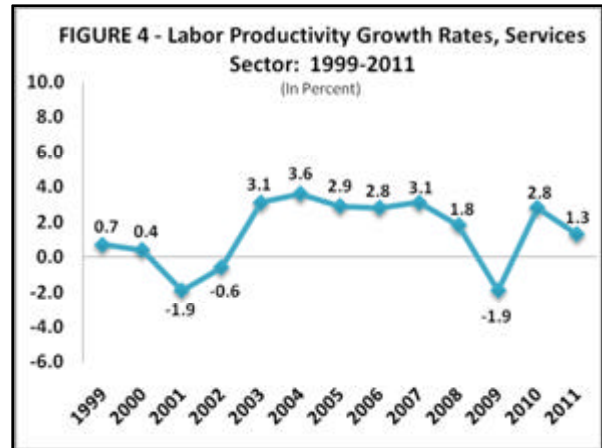
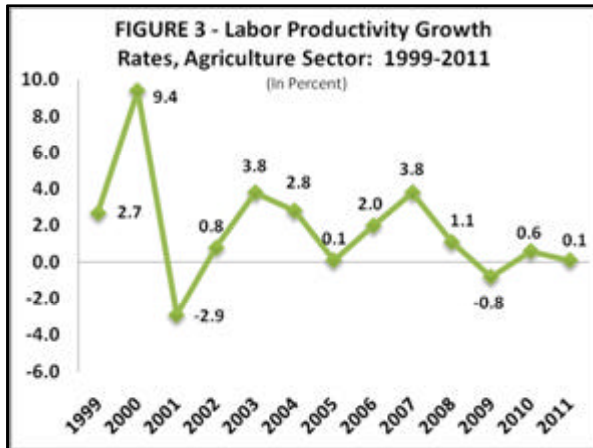
**Growth of labor productivity in agriculture sector barely grew after declining in 2009**

Labor productivity for the agriculture sector was consistently the lowest among sectors. Its growth was also fluctuating with the highest increase in 2000 at 9.4 percent and the biggest dent in 2001 at negative 2.9 percent. Over the period 2001 to 2009, the growth of the sector was erratic with peaks occurring two years after starting to regain. The labor productivity growth rate of the sector barely grew in 2010 and 2011 after a decline in 2009. (Figure 3)

**Services sector was virtually stagnant over time**

Labor productivity in the services sector was struggling in 1999 to 2001 as its





growth rate diminished in these periods. It consistently improved from 2003 to 2007 but in an almost constant rate. It weakened in 2008 with a growth rate of 1.8 percent and further slid to a negative growth rate of 1.9 percent a year after. Recovery in 2010 and 2011 was evident. (Figure 4)

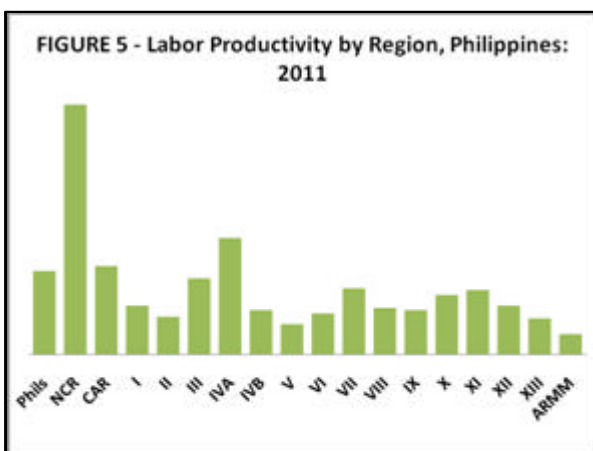
**NCR posted the highest labor productivity**

The data on Gross Regional Domestic Product at 2000 prices (based on the rebased/revised Philippine System of National Accounts) are only available for 2009 to 2011. This limits long-term analysis of regional labor productivity.

Among regions, the National Capital Region (NCR) posted the highest labor productivity of ₱473,861 at constant 2000 prices in 2011. This was followed by Region IVA and CAR with labor productivity of ₱220,781 and ₱167,685, respectively. The lowest labor productivity of ₱39,486 was reported in the Autonomous Region in Muslim Mindanao (ARMM). (Figure 5)

**Growth rate of labor productivity was highest in Caraga**

Caraga (7.1%) led the regions in terms of labor productivity growth rate in 2011. In 2010, it grew by 6.8 percent, almost as fast as its rate in 2011. Other regions with improvement in the growth of labor productivity were Regions II and VI. Regions III and VII, which had the highest rate of improvement in 2010, slowed down in 2011. Growth rates in NCR, and Regions V and XII also decelerated from 2010 to 2011. The rest of the regions experienced a downtrend in their labor productivity levels as indicated by their negative growth rates in 2011. (Table 3)



### DEFINITION OF TERMS

<i>Labor Productivity or GDP per Person Employed</i>	- the amount of output (GDP measured at constant 2000 prices) achieved per unit of labor input
<i>Growth Rate of Labor Productivity</i>	- annual change of GDP per employed person
<i>Gross Domestic Product (GDP)</i>	- the total value of national production less the value of intermediate inputs (i.e., raw materials, semi-furnished products, services purchased and energy inputs).
<i>Total Employment</i>	<ul style="list-style-type: none"> <li>- total persons in the labor force who are reported either as at work or with a job or business although not at work. Persons at work are those who did some work, even for an hour during the reference period.</li> <li>- average number of employed persons for a given year, that is, sum of employed persons for the four quarters divided by four (4), which is the official methodology for estimating annual LFS data.</li> </ul>

### INTERPRETATION GUIDELINES

Productivity growth refers to the volume of output rising faster than the volume of inputs.

The main limitation of labor productivity as an indicator lies in the fact that it associates changes in output with only one factor of production, labor. Most significantly, the amount of capital used by labor or changes in that capital is/are not taken into account. However, investment in technology, human capital and increase in inputs other than labor can affect labor productivity growth.

Computing labor productivity as GDP per employed person (or per hours worked) does not separate labor productivity from the capital used and/or changes in labor force composition. SNA 2008 recommends measuring labor productivity per hours worked as it allows more detailed analysis, for example, measuring productivity by industry thus making it possible to take into account multiple jobs in different industries.

Analyzing labor productivity growth together with employment indicators, for example, the employment-to-population ratio or the unemployment rate can inform about labor utilization. For instance, a combination of low labor productivity with low unemployment and a rising GDP can point to high labor utilization. Labor productivity is dependent on both employment and GDP which are subject to different factors of seasonality and volatility.

**Reference:** International Labour Office (ILO). (2012). *Decent Work Indicators: Concepts and definitions*, ILO Manual First Edition. Geneva: ILO.

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**TABLE 1 - Labor Productivity by Sector, Philippines: 1998-2011**

(In Pesos; At Constant 2000 Prices)

SECTOR	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>PHILIPPINES</b>	<b>124,926</b>	<b>123,619</b>	<b>130,435</b>	<b>126,366</b>	<b>127,026</b>	<b>130,846</b>	<b>135,291</b>	<b>138,683</b>	<b>144,510</b>	<b>149,830</b>	<b>153,630</b>	<b>151,086</b>	<b>158,222</b>	<b>159,293</b>
Agriculture	43,719	44,899	49,122	47,680	48,059	49,864	51,281	51,318	52,941	54,954	55,574	55,110	55,425	55,470
Industry	258,780	256,471	277,003	264,297	272,978	276,122	281,324	291,596	306,747	316,584	336,603	327,298	344,418	343,834
Services	142,553	143,570	144,092	141,350	140,568	144,925	150,093	154,478	160,742	165,688	168,668	165,526	170,183	172,350

Notes: 1. Labor Productivity by sector is measured as the ratio of Gross Value Added (GVA) of the sector to corresponding employment.

2. Data from 1998-2005 used employment data based on 1995 Census-based population projections.

3. Data from 2006 onwards used employment data based on 2000 Census-based population projections.

Sources of basic data: National Statistics Office, Labor Force Survey.

National Statistical Coordination Board, National Accounts of the Philippines.

**TABLE 2 - Labor Productivity Growth Rates by Sector, Philippines: 1999-2011**

(In Percent)

SECTOR	1999	2000	2001	2002	2003	2004	2005	2006 <sup>a</sup>	2007	2008	2009	2010	2011
<b>PHILIPPINES</b>	<b>-1.0</b>	<b>5.5</b>	<b>-3.1</b>	<b>0.5</b>	<b>3.0</b>	<b>3.4</b>	<b>2.5</b>	<b>3.2</b>	<b>3.7</b>	<b>2.5</b>	<b>-1.7</b>	<b>4.7</b>	<b>0.7</b>
Agriculture	2.7	9.4	-2.9	0.8	3.8	2.8	0.1	2.0	3.8	1.1	-0.8	0.6	0.1
Industry	-0.9	8.0	-4.6	3.3	1.2	1.9	3.7	5.0	3.2	6.3	-2.8	5.2	-0.2
Services	0.7	0.4	-1.9	-0.6	3.1	3.6	2.9	2.8	3.1	1.8	-1.9	2.8	1.3

<sup>a</sup> For comparability of 2006 growth rate with that of 2005, the labor productivity for these two years both used data based on 1995 Census-based population projections.

Sources of basic data: National Statistics Office, Labor Force Survey.

National Statistical Coordination Board, National Accounts of the Philippines.

**TABLE 3 - Labor Productivity and Growth Rates by Region, Philippines: 2009-2011**

(In Pesos Except Rates)

REGION	Labor Productivity (At Constant 2000 Prices)			Growth Rates (%)	
	2009	2010	2011	2010	2011
<b>PHILIPPINES</b>	<b>151,086</b>	<b>158,222</b>	<b>159,293</b>	<b>4.7</b>	<b>0.7</b>
National Capital Region	456,059	467,400	473,861	2.5	1.4
Cordillera Administrative Region	166,116	169,514	167,685	2.0	-1.1
Region I - Ilocos Region	89,971	93,961	93,711	4.4	-0.3
Region II - Cagayan Valley	71,718	71,190	71,634	-0.7	0.6
Region III - Central Luzon	129,288	138,386	144,288	7.0	4.3
Region IV - A - CALABARZON	210,065	223,529	220,781	6.4	-1.2
Region IV - B - MIMAROPA	85,982	85,770	83,817	-0.2	-2.3
Region V - Bicol Region	54,363	56,029	56,932	3.1	1.6
Region VI - Western Visayas	75,436	75,802	77,385	0.5	2.1
Region VII - Central Visayas	112,896	120,853	126,251	7.0	4.5
Region VIII - Eastern Visayas	88,045	89,875	88,268	2.1	-1.8
Region IX - Zamboanga Peninsula	84,924	86,260	83,943	1.6	-2.7
Region X - Northern Mindanao	108,202	113,980	112,977	5.3	-0.9
Region XI - Davao Region	120,577	125,229	123,205	3.9	-1.6
Region XII - SOCCSKSARGEN	92,198	93,430	93,416	1.3	**
Caraga	59,644	63,687	68,183	6.8	7.1
Autonomous Region in Muslim Mindanao	39,324	39,989	39,486	1.7	-1.3

Note: Labor Productivity by region is measured as the ratio of Gross Regional Domestic Product to corresponding total employment.

\*\* Less than 0.05 percent.

Sources of basic data: National Statistics Office, Labor Force Survey.

National Statistical Coordination Board, Gross Regional Domestic Product 2009-2011.