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A note on the effects of remittances and overseas migration on some Philippine statistics

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The Philippines is peculiar in that a significant portion of its population is dispersed globally, sending remittances that have exceeded 8 percent of its gross domestic product (GDP) in recent years. For the last two decades, the country has enjoyed a steady flow of remittances from overseas Filipino workers, which has not only provided an additional source of disposable income to domestic households but has also served as a buffer against economic downturns. This note shows that standard GDP accounting and current labor statistics may inadequately account for remittances and overseas migration, especially their corresponding welfare consequences. A better valuation of welfare and living standards requires alternative measures that would better capture the migration phenomenon.

JEL classification: E01, J21, F22, F24
Keywords: remittances, migration

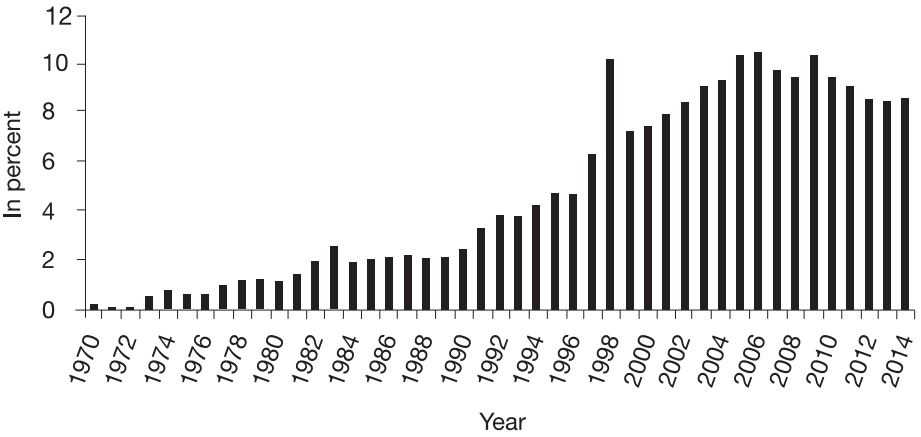
1. Introduction

Cash remittances to the Philippines have progressively grown in importance from a mere 0.14 percent of gross domestic product (GDP) in 1970 to an average of about 9 percent of GDP in the last decade (Figure 1). This is an offshoot of increasing globalization, which has effected greater international mobility, not only of goods and services, but also of factors of productions—such as capital and labor, enabling an unprecedented rise in the number of overseas workers. The Commission on Filipinos Overseas estimates that there are more than 10 million overseas Filipinos, almost half of whom are classified as overseas Filipino workers (OFWs); the rest comprises permanent emigrants, who still remit back cash or transfers in kind to relatives residing in their country of origin.

Consequently, remittances have become a reliable additional source of incomes for domestic households and have even served as a buffer against economic

downturns. Indeed, cash remittances as a percentage of GDP spiked from 6.30 percent in 1997 to 10.20 percent in 1998, during the height of the Asian Financial Crisis. Remittances as a percentage of GDP similarly increased from 9.46 percent in 2008 to 10.30 percent in 2009 at the onset of the Great Recession. These are not merely due to the corresponding declines in GDP, as the level of remittances has risen steadily throughout these periods.

FIGURE 1. Cash remittances as a percentage of GDP, 1970-2014



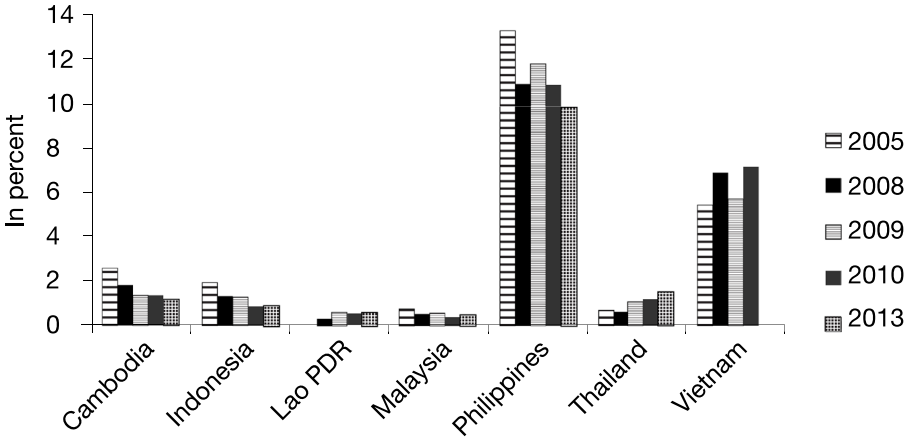
Source: Bangko Sentral ng Pilipinas Economic and Financial Statistics 2015 (Online)

In comparison with six other ASEAN countries (Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Thailand, and Vietnam),[1] the Philippines has the highest remittances-to-GDP ratios, ranging from 9.81 percent to 13.32 percent in the period from 2005 to 2013. (See Figure 2.) The percentages for Vietnam are a distant second; these range only from 5.47 percent to 7.12 percent.

Given these peculiar features of the Philippine economy, it is relevant to ask how remittances and overseas migration affect some key statistics in the country. This note seeks to trace the effects of remittances on the national income and external accounts and of overseas migration on some labor statistics, namely, the unemployment rate, labor force participation rate, wage and salary employment, and fertility rate.

[1] Brunei and Singapore are excluded as outliers in the high-income end, while Myanmar is excluded for missing data.

FIGURE 2. Remittances received as a percentage of GDP in seven ASEAN countries, 2005-2013



Source: World Development Indicators 2014 (Online)

We find that standard national income accounts and the current labor statistics do not adequately account for remittances and overseas employment inasmuch as these are still largely consistent only with the concept of measuring the domestic economy's capacity to produce goods and services and to generate employment within its geographic borders. However, given that overseas employment and the remittances it generates provide significant amount of disposable income to the domestic economy, holding to the current practices of measuring income and employment might diminish the usefulness of these statistics for evaluating household welfare and the overall economy's living standards. Accordingly, we also present some alternative measures of aggregate income and employment that seek to better capture the Philippine migration phenomenon.

The rest of the paper is organized as follows. Part 2 traces the effects of remittances on the national income accounts and offers an alternative aggregate income measure to GDP and gross national income (GNI). Part 3 discusses the effects of overseas labor migration on household labor statistics and presents alternative measures that can better represent overall employment in the Philippines. Finally, part 4 presents some conclusions.

2. Effects of remittances on the national income and external accounts

2.1. Remittances redefined

In 2013, the Bangko Sentral ng Pilipinas (BSP) started fully implementing the framework for recording the external accounts as specified in the International

Monetary Fund's *Balance of payments and international investment position manual*, *6th edition* (BPM6). The revisions and redefinitions stipulated in BPM6 seek to better address the three thematic trends of globalization, balance sheet analysis, and financial innovation. To date, the BSP has backtracked the external accounts series using the new convention only from 2005 onwards.

Accordingly, the BSP has adopted "personal remittances" in lieu of cash remittances[2] as a more comprehensive definition that better captures the migration phenomenon, as it takes into account all cross-border flows of cash and non-cash items between resident and nonresidents that are coursed through both formal channels (e.g., banks) and informal channels (e.g., cross-border, hand-carried transfers). Personal remittances are the sum of the following: 1) the gross compensation of sea-based and land-based OFWs with contracts of less than a year net of taxes, social contributions, and other expenses related to transportation and travel to the host countries; 2) personal transfers, which are (a) "workers' remittances" composed of current transfers[3] in cash or in kind of OFWs with contracts of a year or more and current transfers between households of migrant Filipinos and their relatives in the Philippines, and (b) other household-to-household current transfers, such as gifts; and 3) capital transfers between households, such as transfers of fixed assets, financial assets, and liabilities associated with cross-border migration.[4] At present, the BSP has only been able to back-compute the series of personal remittances from 2009 onwards.[5]

Figure 3 below illustrates the substantial gap between personal remittances and cash remittances from 2009 to 2014. While cash remittances ranged only from about 8.4 percent (in 2013) to 10.30 percent (in 2009) of GDP, personal remittances ranged from around 9.32 percent (in 2012 and 2013) to 11.32 percent (in 2009) of GDP.

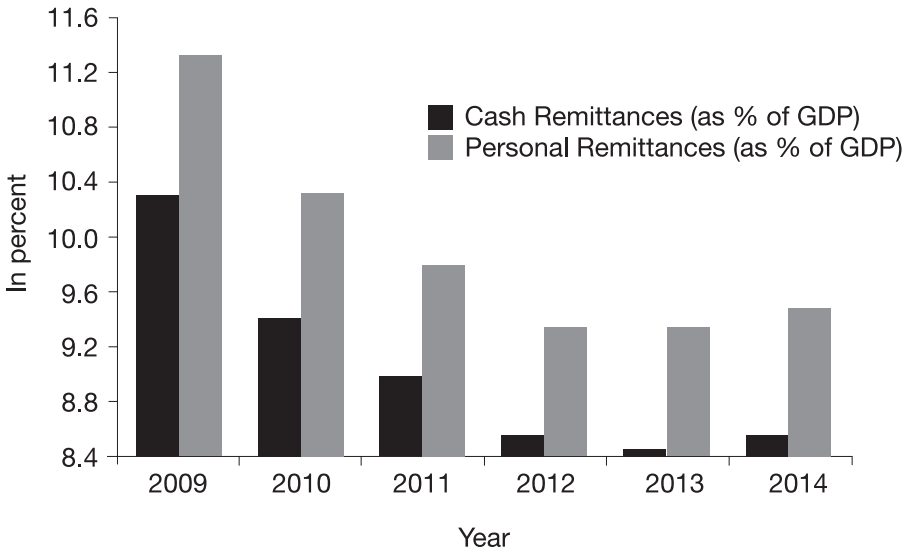
[2] Cash remittances are remittances channeled through banks and other formal financial institutions.

[3] Current transfers are defined as transfers that are primarily intended for the consumption spending of the recipient household.

[4] See Special Philippine Economic Indicators 2015.

[5] In BPM6, two other more comprehensive definitions of remittances are defined: total remittances, which are the sum of personal remittances and social contributions of overseas and migrant workers; and total remittances and transfers to non-profit institutions serving households, which is the sum of total remittances and of current and capital transfers to non-profit institutions serving households.

FIGURE 3. Personal and cash remittances (as percentage of GDP), 2009-2014



Source: bsp.gov.ph

2.2. Remittances in the external accounts

Table 1 below summarizes the items included in personal remittances and their corresponding locations in the external accounts. "Compensation of employees" is in the primary income account, which records the cross-border income flows of factors of production, such as labor, entrepreneurship, financial and natural resources. In the Philippines, "compensation of employees" primarily comprises the incomes of land-based OFWs with work contracts of less than a year.[6] Net primary income (NPI) is then the total value of primary incomes—which is the sum of compensation of employees and property income—receivable by the domestic economy less the total value of primary incomes payable by the same economy. "Personal transfers" is in the secondary income account,[7] which records the cross-border flow of current transfers between residents and nonresidents, for which neither good nor service of commensurate economic value is rendered in return. Aside from personal transfers, foreign aid is also included in the secondary

[6] The other components of the primary income account are dividends, reinvested earnings, interest, investment earnings attributable to policyholders in insurance, standardized guarantees and pension funds, rent and taxes, and subsidies on products and production (International Monetary Fund's BPM6).

[7] "Personal transfers" is introduced as a broader measurement of workers' remittances, which consist of all current transfers in cash or in kind by overseas Filipino workers with work contracts of one year or more as well as other household-to-household transfers between Filipinos who have migrated abroad and their families in the Philippines (Special Philippine Economic Indicators 2015).

income account. Accordingly, net secondary income (NSI) is defined as the total value of current transfers received by residents less the total value of current transfers made to nonresidents. "Capital transfers between households" is in the capital account, which records the cross-border, household-to-household capital transfers, and other transfers of non-produced financial assets.

TABLE 1. Composition and location in the external accounts of personal remittances

Item	Location
Compensation of employees	Primary income account
Less: travel and transport expenses related to employment of border, seasonal and short-term workers	Goods and services account (supplementary item)
Less: taxes and social contributions related to employment of border, seasonal and short-term workers	Secondary income account (supplementary item)
Personal transfers	Secondary income account
Capital transfers between households	Capital account (supplementary item)

Source: International Monetary Fund's BPM6

Table 2 shows that, on the average, (net) personal transfers in the Philippines comprise 80.3 percent of (net) personal remittances and 93.1 percent of NSI. Net compensation of employees constitutes almost the entire remaining portion of personal remittances, while capital transfers between households are intermittent and negligible in amount.[8] In turn, workers' remittances already form around 98.8 percent of personal transfers. Thus, the bulk of personal remittances are contained in the secondary income account.

TABLE 2. Personal transfers and workers' remittances, 2005 – 2014

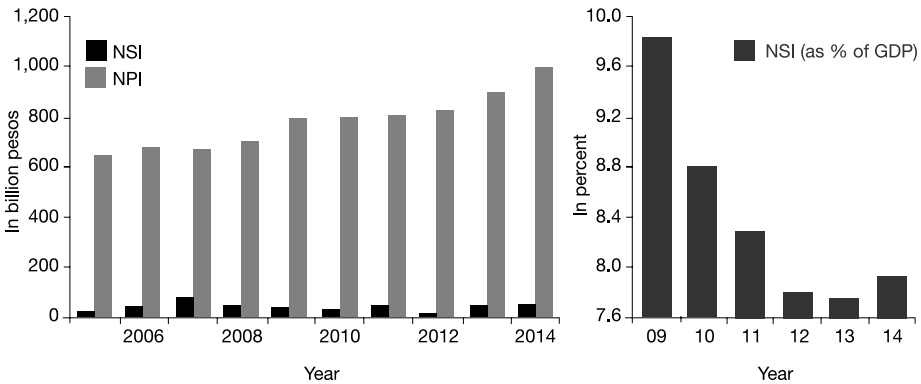
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	Average
Personal transfers (percent of personal remittances)	82.4	84.8	84.4	81.3	80.4	79.7	78.3	77.3	77.4	77.3	80.3
Personal transfers (percent of NSI)	92.7	95.9	92.6	93.5	92.5	93.1	92.5	92.5	93.2	92.4	93.1
Workers' remittances (percent of personal transfers)	98.7	98.2	99.0	98.9	98.8	99.1	99.8	99.5	98.2	97.8	98.8

Source: International Monetary Fund's BPM6

[8] See the external account in BPM6 format at http://www.bsp.gov.ph/statistics/efs_bop2.asp.

The external accounts (BPM6 version) confirm that NSI is substantially larger than NPI. As the left-hand panel of Figure 4 shows, while NPI from 2005 to 2014 fluctuated considerably between the range of ₱8 billion (in 2012) to ₱75 billion (in 2007), NSI rose steadily from around ₱640 billion in 2005 to ₱1 trillion in 2014. As a percentage of GDP, NSI remained above 7.6 percent from 2005 to 2014. (See right-hand panel of Figure 4.)

FIGURE 4. Net primary income and net secondary income, 2005-2014



Source: bsp.gov.ph

A problem immediately becomes apparent in reconciling BPM6 conventions and the national income accounts. This is due to the large discrepancy between NPI in the national income accounts[9] and the NPI as recorded in the external accounts (BPM6 version). In particular, the former is 2.5 times higher on average than even the sum of BPM6 NPI and NSI. This may be due to differences in assumptions or definitions regarding the stock of deployed Filipino workers and the average compensation of workers (as reported by the Philippine Overseas Employment Administration) employed by the Philippine Statistics Authority and by BSP. For instance, while the BSP includes both sea-based and land-based OFWs, the Philippine Statistics Authority only includes land-based OFWs. Another source of discrepancy may be the difference in the definition of residents: while the Philippine Statistics Authority defines a resident as one who has lived and worked in the country of destination for more than two years, the BSP uses a one-year criterion. Moreover, the Philippine Statistics Authority's NPI is but "net factor income from abroad" renamed,[10] which includes the incomes of "normal residents", which includes foreign institutions and individuals, who have lived

[9] See http://www.bsp.gov.ph/statistics/statistics_key.asp.
[10] See http://www.nscb.gov.ph/headlines/StatsSpeak/2011/061311_rav.asp.

for more than a year in the Philippines and/or whose economic interests lie in the Philippines. (See Special Philippine Economic Indicators 2013.) In the discussion below, we employ the NPI values from 2004 to 2015 as found in the external accounts (BPM6 version), since these are more consistent with the current account balance.

2.3. Remittances and gross national disposable income

We present gross national disposable income (GNDI) as a more fitting measure of macroeconomic activity and welfare in an economy like the Philippines, which continuously receives a substantial amount of remittances. We make the following arguments.

2.3.1. GNDI renders a better measure of living standards.

For all its advantages—mainly, as a measure of an economy's productive capacity—GDP fails to capture the contribution of remittances to the domestic economy, since it only covers the extent of economic activity within the country's geographic borders. Neither does gross national income (GNI)—defined properly and strictly as the sum of GDP and BPM6 NPI—provide an adequate measure of standard of living, as it neglects a large portion of remittances found in the secondary income account.

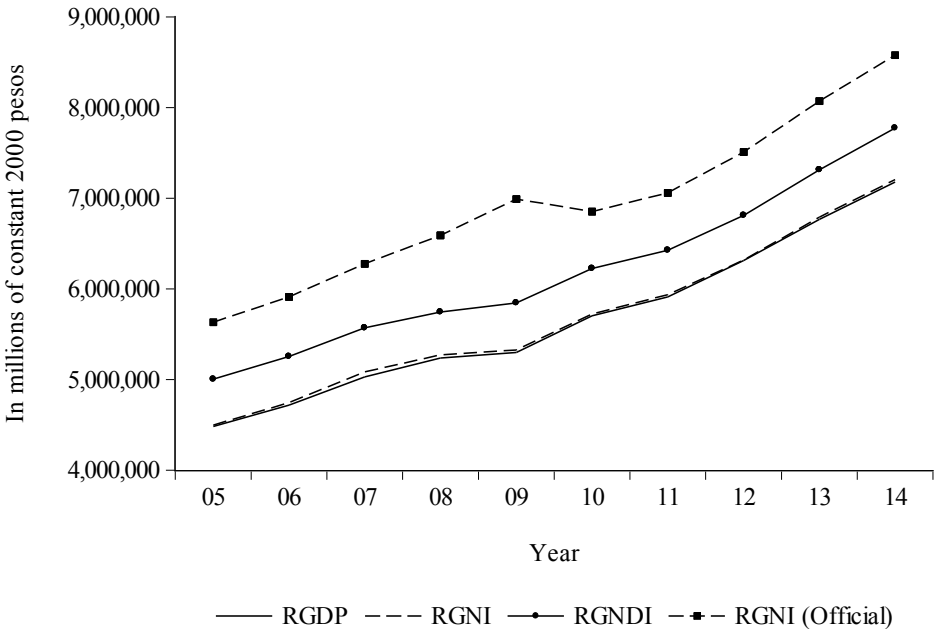
Stiglitz, Sen, and Fitoussi [2008] and Capelli and Vaggi [2013] argue for a better indicator of standard of living: *Gross national disposable income* (GNDI) is proposed as a more accurate gauge of economic well-being, since it takes into account the total income available—regardless of origin or source—for the spending of households in the domestic economy. The reckoning, in accordance with BPM6 standards, is as follows:

$$\text{GNDI} = \text{GDP} + \text{NPI} + \text{NSI}. \tag{1}$$

Since around 80 percent of personal remittances are workers' remittances (Table 2), which are exclusively contained in the secondary income account, and the rest is almost entirely in the primary income account in the form of employees' compensation, GNDI accounts for almost all of personal remittances.

Figure 5 presents GDP, GNI, and GNDI (computed using BPM6 definitions) in constant 2000 pesos for the period 2005-2014. We have also included GNI as officially computed in the national income accounts for comparison in a later subsection. Throughout the period, GNDI remains above both GDP and GNI, while there appears to be no significant distinction between GDP and GNI. Indeed, Table 3 shows that GNDI is around 8 percent to 11 percent higher than either GDP or GNI in the period 2005-2014.

FIGURE 5. Real GDP, real GNI, and real GNDI, 2005-2014



Source: BSP's Economic and Financial Statistics 2015 (Online)

Moreover, GNDI is less volatile than either GDP or GNI. While the coefficients of variation of GDP and GNI are 0.16 and 0.15, respectively, that of GNDI is 0.14.[11] In terms of the compounded annual growth rate over the nine-year period spanning 2005 to 2014, GNDI has the lowest with around 5.02 percent, while that for GDP and GNI are around 5.38 percent and 5.37 percent, respectively.[12] These figures, combined, suggest that GNDI might provide a more stable measure of economic well-being.

[11] Coefficient of variation is computed as the ratio of the mean to the standard deviation.

[12] The compounded annual growth rate is computed as $\left(\sqrt[9]{X_{2014}/X_{2009}} - 1\right) \times 100\%$, where X_t denotes the value of the relevant aggregate measure at time t.

TABLE 3. Ratios of GNDI to GNI and of GNI to GDP, 2005-2014

Year	GNDI-GNI ratio	GNI-GDP ratio	Official GNI-GDP ratio
2005	1.12	1.00	1.26
2006	1.11	1.01	1.26
2007	1.11	1.01	1.25
2008	1.10	1.01	1.27
2009	1.10	1.00	1.33
2010	1.09	1.00	1.21
2011	1.09	1.00	1.20
2012	1.08	1.00	1.20
2013	1.08	1.00	1.20
2014	1.08	1.00	1.20

Source: BSP's Economic and Financial Statistics 2015 (Online)

2.3.2. It is more consistent with external accounts.

In accordance with BPM6, the current account balance (CAB) is defined as follows:

$$CAB = TB + NPI + NSI, \tag{2}$$

where TB denotes the trade balance, which is exports net of imports of goods and services. Equation 2 is consistent with GNDI as the main measure of aggregate economic activity since

$$GNDI = C + I + G + X - M + NPI + NSI, \tag{3}$$

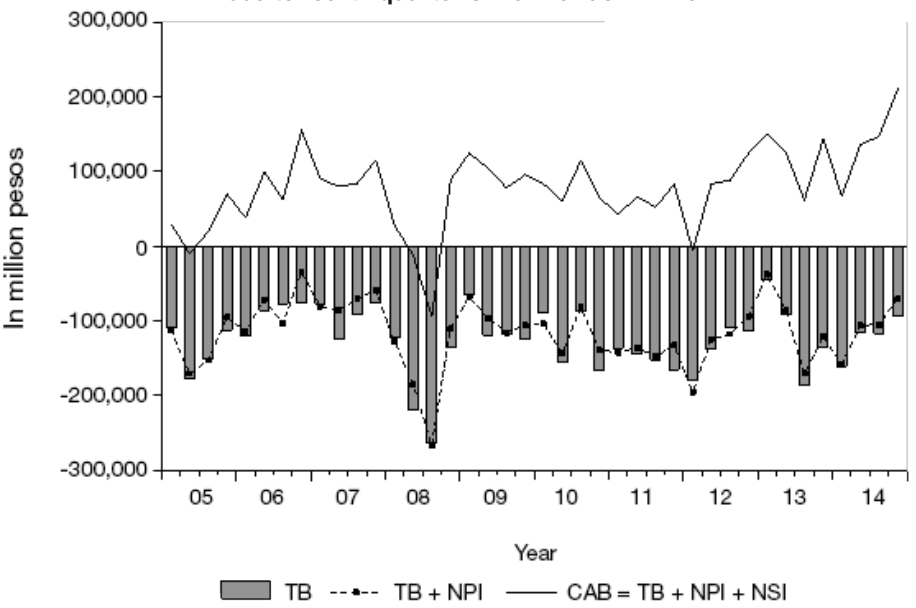
where C, I, G, X, and M denote aggregate consumption, gross domestic investment, government spending, exports and imports, respectively. Equation 3 can be rewritten as

$$S - I = CAB = TB + NPI + NSI, \tag{4}$$

where S denotes national saving, which equals GNDI – C – G.

Figure 6 plots the quarterly series of CAB, TB and the sum of TB and NPI from 2005 to 2014. For the entire period, TB was consistently negative, which indicates that the Philippine economy owed the rest of the world in terms of goods and services. However, when both NPI and NSI are added to TB, the resulting CAB is positive for almost the entire period, indicating that the Philippines was a net lender to the rest of the world.

FIGURE 6. Trade balance, current account balance, NPI and NSI, first quarter of 2005 to fourth quarter of 2014 under BMP6



Source: BSP's Economic and Financial Statistics 2015 (Online)

2.3.3. It avoids ad hoc misclassifications in the national income accounts.

In the country's official national income accounts, what used to be called net factor income from abroad was simply renamed NPI.[13] As already noted, however, NPI in the national income accounts is significantly larger than NPI in the external accounts. While the official GNI series as computed by the Philippine Statistics Authority attempts to maintain the definition GNI = GDP + NPI, the Philippine Statistics Authority apparently does so by bloating NPI, which appears to wrongly include a substantial portion—if not all—of NSI and evidently more. As a result, the current account balance (CAB) one obtains by properly adding the trade balance, the official NPI, and BPM6 NSI yields an abnormally large CAB, or a very large saving-investment surplus.

Indeed, the GNI values obtained by summing GDP and NPI from the national income accounts will on average be around 24 percent higher than GDP for the period 2005-2014. (Refer to Figure 5 and Table 3). These numbers, in turn, imply implausibly high current account surpluses and, thus, savings-investment gap values with an average of around 21 percent of GDP for the period 2005-2014.

[13] See http://www.nscb.gov.ph/headlines/StatsSpeak/2011/061311_rav.asp.

Thus, using GNDI allows for a "cleaner" accounting, as it avoids the need for improvisation and *ad hoc* misclassification by simply including NSI explicitly in the computation.

2.3.4. GNDI implies a more accurate saving-investment gap.

As Equation 4 shows, the saving-investment gap equals the current account balance if GNDI is used as the primary measure of economic activity. Otherwise, the savings-investment gaps implied by GDP and GNI would be

$$(S - I)_{GDP} = TB = X - M, \tag{5}$$

and

$$(S - I)_{GNI} = TB + NPI, \tag{6}$$

where and are the savings-investment gaps associated with GDP and GNI, respectively. As Figure 5 implies, both and are negative throughout the period 2005 to 2014.[14] In contrast, the savings-investment gap as a percentage of GDP—consistent both with GNDI and the current account surplus recorded in the external accounts—was positive for most quarters throughout the entire period. In annual terms, the values of the savings-investment gap as a percentage of GDP consistent with GNDI range from 0.1 percent to 5.7 percent in the period 2005-2014. (See external accounts, BPM6 version.) While these indicate that the Philippines was a net lender to the rest of the world from 2004 to 2015, it also strongly suggests a valid cause for concern: that the domestic economy might not be investing sufficiently in growth-enhancing activities.

2.3.5. It is a better indicator of growth prospects.

Table 4 presents the correlation matrix of the seasonally adjusted cyclical components of consumption, fixed capital formation, GDP, GNI, and GNDI from first quarter of 2005 to the fourth quarter of 2014.[15] While consumption positively correlates better with GDP than with either GNI or GNDI, fixed capital formation positively correlates better with GNDI than with either GDP or GNI. As fixed capital formation primarily goes towards the expansion of the economy's productive capacity, increases in GNDI might embody a better picture of the domestic economy's long-run prospects for growth.

[14] As noted earlier, while the current account balance and, thus, the saving-investment gaps implied by the official GZNI statistics are also positive, these figures are bloated.

[15] Cyclical components are generated using the Hodrick-Prescott filter.

TABLE 4. Correlation matrix of the seasonally adjusted cycles of consumption, fixed capital formation, GDP, GNI, and GNDI, first quarter 2005 to fourth quarter 2014

	Consumption	Fixed capital formation	GDP	GNI	GNDI
Consumption	1.00	0.21	0.51	0.49	0.46
Fixed capital formation	0.21	1.00	0.53	0.54	0.57
GDP	0.51	0.53	1.00	0.94	0.90
GNI	0.49	0.54	0.94	1.00	0.96
GNDI	0.46	0.57	0.90	0.96	1.00

Source: BSP's Economic and Financial Statistics 2015 (Online)

2.3.6. It affords the Philippines a better position within the ASEAN context.

When GDP per capita, BPM6 GNI per capita, and GNDI per capita are computed for each of the seven ASEAN economies, the rankings of these economies in terms of the aforementioned aggregates do not change. In the interest of space, only Table 5, which shows the values of GNDI per capita across the seven ASEAN countries from 2005 to 2014, is reported below. Malaysia has the highest GNDI per capita values throughout the period, followed by Thailand, Indonesia, the Philippines, Vietnam, Lao People's Democratic Republic, and Cambodia. The same ranking prevails when either GDP or BPM6 GNI is used.

TABLE 5. GNDI per capita of seven ASEAN countries (in million U.S. dollars), 2005-2014

Year	Malaysia	Thailand	Indonesia	Philippines	Vietnam	Lao PDR	Cambodia
2005	5136	2435	1237	1330	726	471	488
2006	5827	2899	1562	1535	828	597	561
2007	6892	3478	1826	1830	970	710	645
2008	8006	3848	2136	2107	1199	902	752
2009	6927	3686	2228	2021	1272	944	742
2010	8229	4349	2880	2331	1372	1138	789
2011	9581	4941	3378	2563	1585	1288	879
2012	9840	4993	3460	2791	1779	1428	929
2013	10000	5083	3384	2985	1934	1680	982
Ave.	7827	3968	2455	2166	1296	1018	752

Source: World Development Indicators 2014 (Online)

However, when the ratios of GNDI and of BPM6 GNI between the Philippines and some of its peers are compared, considerable differences are observed. (See Table 6.) For instance, when GNI ratios are used, Thailand's GNI was, on the average, more than twice the Philippines' GNI. However, if GNDI instead was used, Thailand's GNI becomes less than twice as large as that of the Philippines. Similarly, Indonesian-Philippine and Vietnamese-Philippine GNI ratios are larger than the corresponding GNDI ratios. Using GNDI places the Philippines in a "better position" with respect to its neighbors, a statistical fact that can be argued to correspond with real conditions of welfare or development.

TABLE 6. Thai-Philippine, Indonesian-Philippine, and Vietnamese-Philippine GNDI and GNI ratios

Thai-Philippine ratios of	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
GNDI	1.83	1.89	1.90	1.83	1.82	1.87	1.93	1.79	1.70
GNI	2.14	2.18	2.16	2.06	2.08	2.14	2.14	2.02	1.96
Indonesian-Philippine ratios of	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
GNDI	0.93	1.02	1.00	1.01	1.10	1.24	1.32	1.24	1.13
GNI	1.02	1.11	1.08	1.09	1.20	1.33	1.42	1.33	1.21
Vietnamese-Philippine ratios of	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
GNDI	0.55	0.54	0.53	0.57	0.63	0.59	0.62	0.64	0.65
GNI	0.57	0.56	0.53	0.58	0.65	0.60	0.63	0.65	0.66

Source: World Development Indicators 2014 (Online)

3. The effect of overseas migration on household level statistics

The number of overseas Filipino workers (OFWs) on temporary status was estimated to range between 2.1 million to close to 5 million in 2013, depending on data source. The low estimate derives from the Labor Force Survey (LFS), which asks households whether they have a member currently working abroad who has left within 5 years prior to the survey. The high estimate comes from the Commission on Filipinos Overseas and is the sum of Filipinos overseas on a temporary basis plus a fraction of those who are overseas on an irregular status.[16] Thus, depending on which estimate is used, OFWs comprise anywhere from 3 percent to 7 percent of the total population of Filipinos 15 years old and older.[17]

[16] A fraction of those in an irregular status may not be employed, such as many of those in Malaysia (448,000 total).

[17] The LFS estimate of OFWs is likely a significant underestimate. Overseas Filipinos in West Asian countries alone are estimated to total more than 2.3 million, which because of the immigration rules in that region are almost all likely be temporary workers.

The official labor statistics of the Philippines exclude OFWs from the working age population.[18] OFWs are thus not considered part of the labor force and are not counted among the employed. This convention has been consistently followed since the 1980s, when the question on overseas work was added to the LFS questionnaire, although its justification has not been made explicit.

The practice is compatible with the idea of labor statistics as measuring the domestic economy's capacity to generate employment for the local population. However, to the extent that overseas employment of a member confers economic benefits to the household, this practice reduces the effectiveness of standard labor statistics as a measure of overall household welfare.[19] This has become increasingly true as the number of OFWs has grown in absolute numbers and as a share of the working age population over time. In 1988, based on the LFS, there were 446,000 OFWs in 411,000 households (7.3 percent of total households). By 2013, there were 2.1 million OFWs in 1.6 million households (8.5 percent of total households).

Using the LFS for various years, we examine below the effect on standard labor statistics of counting OFWs as part of the employed population.[20] As will be shown below, OFWs differ substantially in their profile from the domestic working age population. (See also Ducanes [2015].) For this reason, we also examine the effect of their inclusion by subgroup.

3.1. Difference by subgroup

OFWs differ in terms of composition by sex, age profile, education, and distribution by place of origin from those domestically employed, the larger set of the domestic labor force (employed plus the unemployed), and the even larger set of the domestic working age population (labor force plus those not part of the labor force). Table 7 shows that OFWs are almost evenly divided between males and females, in contrast to those employed domestically and the domestic labor force, where males dominate. In this regard, OFWs more closely approximate the actual distribution of the working age population. OFWs are disproportionately from the 25 to 40 age group, i.e., 62.5 percent of OFWs in 2013. In comparison, the age group comprised only a third of the working age population and only about 40 percent of the domestic employed and the domestic labor force. OFWs are also much better educated, with 38 percent having graduated from college in 2013, in contrast to only 15 percent to 16 percent for the domestic employed and

[18] The working age population is thus defined as those 15 years of age and older who are not working overseas.

[19] Note that this is similar and related to whether per capita GDP, per capita GNI, or per capita GNDI should be the measure of country welfare.

[20] Because the LFS contains the low estimate of the number of OFWs, the estimated effect may be understated as well.

the domestic labor force, and only 12.5 percent from the working age population. While not shown in the table, it is also the case that OFWs disproportionately come from the regions of CALABARZON, Southern Tagalog, Ilocos, and Cagayan.

TABLE 7. Profile of OFWs compared to domestic employed, labor force, and working age population, 2006 and 2013

	2006				2013			
	OFWs	**Domestic employed**	**Domestic labor force**	**Domestic working age population**	**OFWs**	**Domestic employed**	**Domestic labor force**	**Domestic working age population**
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Sex								
Male	53.0	61.8	62.0	49.8	51.5	60.2	60.4	49.8
Female	47.0	38.2	38.0	50.2	48.5	39.8	39.6	50.2
Age group								
24 and below	12.8	19.0	21.4	29.9	8.7	18.9	21.0	30.1
25-40	59.5	41.8	41.5	35.3	62.5	40.1	39.8	33.6
41-64	27.7	34.7	33.0	28.0	28.4	37.0	35.4	29.6
65 and over	0.0	4.4	4.1	6.9	0.4	4.0	3.8	6.7
Education								
High school undergrad and below	9.8	49.7	48.0	49.8	8.5	44.2	43.1	45.1
High school graduate	25.6	24.2	24.9	23.8	37.2	31.4	32.1	30.4
College undergrad	28.1	12.1	12.8	14.9	16.3	9.0	9.3	12.0
College graduate	36.5	14.0	14.3	11.5	38.1	15.4	15.5	12.5

Source: Philippine Statistics Authority's labor force surveys 2006 and 2013

3.2. Unemployment rate

Counting OFWs among the employed population reduces the overall unemployment rate by 0.4 percentage point in 2013 (and a slightly lower 0.3 percentage point in 2006). This puts the country's unemployment rate at 6.7 percent rather than 7.1 percent, though still the highest among ASEAN countries according to International Labour Organization figures (Table 8).[21] The reduction in unemployment rates differs by subgroup, following the distribution of the OFWs. For college graduates and college undergraduates, unemployment rates are reduced by close to a percentage point. For those in the 25 to 40 years age group, the unemployment rate falls by half a percentage point.[22]

TABLE 8. Unemployment rate with and without OFWs as part of the employed, 2006 and 2013

	2006			2013		
	Without OFWs (base)	With OFWs as part of employed	Difference (percentage point)	Without OFWs (base)	With OFWs as part of employed	Difference (percentage point)
Total	8.1%	7.8%	-0.3	7.1%	6.7%	-0.4
Age group						
24 and below	18.2%	17.8%	-0.4	16.6%	16.3%	-0.4
25-40	7.3%	7.0%	-0.4	6.3%	5.8%	-0.5
41-64	3.3%	3.2%	-0.1	2.9%	2.8%	-0.1
65 and over	1.2%	1.2%	0.0	1.6%	1.6%	0.0
Sex						
Male	8.3%	8.1%	-0.2	7.5%	7.1%	-0.3
Female	7.6%	7.3%	-0.3	6.5%	6.1%	-0.4
Education						
High school undergrad and below	4.9%	4.8%	0.0	4.7%	4.6%	0.0
High school graduate	10.4%	10.0%	-0.4	9.2%	8.6%	-0.5
College undergrad	13.2%	12.2%	-1.0	10.0%	9.1%	-0.8
College graduate	10.1%	9.3%	-0.8	7.7%	6.8%	-0.9

Source: Philippine Statistics Authority's labor force surveys 2006 and 2013

[21] Indonesia had a 6 percent unemployment rate in 2013 according to the ILO. The other eight ASEAN countries had unemployment rates below 4 percent.

[22] If one parses the data finer, it turns out unemployment rate in 2013 drops by 1.4 percentage points for college graduate males from 25 to 40 years of age, and drops by 1.3 percentage points for college undergraduate females of the same age group, when OFWs are counted among the employed.

3.3. Labor force participation rate

The labor force participation rate increases by 1.2 percentage points overall to 65.2 percent from 64 percent, after counting OFWs as employed (Table 9). Note that this is still the third-lowest labor force participation rate in ASEAN, and higher only than Malaysia's and Brunei's. By age subgroup, those in the 25-40 year age-group increased labor participation by 1.4 percentage points. The participation rate of females increases by 1.5 percentage points. Most notably, by education, those who reached or finished college increased their participation rate by about 2 percentage points.[23]

TABLE 9. Labor force participation rate with and without OFWs as part of the employed, 2006 and 2013

	2006			2013		
	Without OFWs (base)	**With OFWs as part of employed**	**Difference (percentage-point)**	**Without OFWs (base)**	**With OFWs as part of employed**	**Difference (percentage-point)**
Total	63.7%	64.5%	0.8	64.1%	65.2%	1.2
Age group						
24 and below	45.6%	46.1%	0.5	44.8%	45.4%	0.5
25-40	75.0%	75.9%	0.9	75.7%	77.2%	1.4
41-64	75.3%	75.8%	0.5	76.6%	77.3%	0.7
65 and over	37.9%	37.9%	0.0	36.4%	36.5%	0.1
Sex						
Male	79.3%	79.8%	0.5	77.7%	78.5%	0.7
Female	48.3%	49.3%	1.1	50.6%	52.1%	1.5
Education						
High school undergrad and below	61.5%	61.6%	0.2	61.2%	61.5%	0.2
High school graduate	66.5%	67.3%	0.8	67.7%	69.0%	1.3
College undergrad	54.8%	56.6%	1.9	49.9%	52.1%	2.2
College graduate	79.4%	80.8%	1.4	79.1%	81.1%	1.9

Source: Philippine Statistics Authority's labor force surveys 2006 and 2013

[23] Parsing the data finer, it turns out the labor participation of college undergraduate females from 25 to 40 years of age increased by 3.8 percentage points, and those of high school graduate females of the same age group increased by 3.1 percentage points, when counting OFWs as part of employed.

3.4. Wage and salary employment

As a measure of quality of employment, the percentage of employed workers in wage and salary jobs increases by 2.1 percentage points when counting OFWs among the employed with wage and salary jobs (Table 10). By age subgroup, again the most notable gain in the amount of 2.7 percentage points is among those 25 to 40 years of age. By sex, females gained significantly more than males, while in terms of education, the highest gains were by those who are college undergraduates, followed by college graduates.

TABLE 10. Percent of employed in wage and salary jobs with and without OFWs as part of employed, 2006 and 2013

	2006			2013		
	Without OFWs (base)	**With OFWs as part of employed**	**Difference (percentage-point)**	**Without OFWs (base)**	**With OFWs as part of employed**	**Difference (percentage-point)**
Total	50.1%	51.9%	1.9	60.2%	62.3%	2.1
Age group						
24 and below	61.5%	62.5%	1.0	72.7%	73.4%	0.7
25-40	56.6%	58.9%	2.3	67.0%	69.6%	2.7
41-64	40.5%	42.3%	1.8	50.6%	52.7%	2.0
65 and over	14.0%	14.0%	0.0	21.0%	21.4%	0.4
Sex						
Male	50.1%	51.7%	1.6	61.9%	63.7%	1.7
Female	50.1%	52.4%	2.3	57.6%	60.3%	2.7
Education						
High school undergrad and below	37.9%	38.4%	0.5	50.6%	51.1%	0.5
High school graduate	56.2%	57.9%	1.7	63.2%	65.5%	2.3
College undergrad	57.2%	60.7%	3.5	63.8%	67.2%	3.3
College graduate	76.5%	78.6%	2.2	79.6%	82.1%	2.5

Source: Philippine Statistics Authority's labor force surveys 2006 and 2013

3.5. Fertility rate

Beyond labor statistics, overseas labor migration in particular among women is also likely to affect the estimation of fertility rates. Statistics on fertility rate come from the National Demographic and Health Survey. But the sampling frame of the survey excludes OFWs, a practice which is weakly founded because (temporary) OFWs are still considered residents of the country. To the extent that women OFWs have less children than non-OFW women, this likely results in an overstatement of the fertility rate. The LFS provides some evidence for this. Table 11 provides a breakdown of women 20 to 40 years of age—considered the prime child-bearing years—by marital status for OFWs and non-OFWs. OFW women 20 to 40 years of age comprise 5 percent of the total women of such age in the country, according to the LFS. A larger share of OFW women 20 to 40 years of age are single, and thus less likely to have children, compared to non-OFW women. Moreover, even married OFW women tend to have a smaller number of children, an average of 2.2 compared to 2.7 for similar non-OFW women. Back-of-the-envelope computations indicate the total fertility rate for those in the age group will be lower by 0.04 if OFW women are taken into account. The magnitude of the reduction in the estimated total fertility rate will bze larger the larger the population of OFW women becomes.

TABLE 11. Marital status of women 20 to 40 years of age, 2013

Marital status	OFWs	Percentage share	Non-OFW (domestic population)	Percentage share	Total	Percentage share
Single	401,097	50.3%	4,823,927	32.5%	5,225,024	33.4%
Married	340,449	42.7%	9,479,475	63.9%	9,819,924	62.9%
Others	55,898	7.0%	521,620	3.5%	577,518	3.7%
Total	797,444	100.0%	14,825,022	100.0%	15,622,466	100.0%
Average number of children in 2013						
Married female OFWs who are either household head or spouse		2.23				
Married female non-OFWs who are either household head or spouse		2.74				

Source: Philippine Statistics Authority's labor force survey 2013

4. Conclusions

The Philippines is atypical in that a significant portion of its population works overseas and regularly sends a large volume of remittances. One consequence of this is that the typical macroeconomic and labor statistics, as normally defined, may inadequately describe the state of the Philippine economy or of household welfare.

This study argues that GDNI is a more appropriate measure of aggregate income for the Philippines, since it also takes into account net secondary income, which contains workers' remittances. Using GDNI results in a higher measured standard of living for the Philippines and better placement within the ASEAN region. It also avoids *ad hoc* misclassifications of types of remittances and allows for better consistency with the external accounts and a more accurate measure of the savings-investment gap.

We also measure the effect on standard labor statistics of counting OFWs as part of the employed. The effects are sensitive to over- or under-estimates of the OFW population, and there is good reason to believe LFS figures underestimate the number. With OFWs counted as part of the employed, the overall unemployment rate drops by at least 0.4 percentage points, the labor force participation rate increases by at least 1.2 percentage points, and the share of the employed with wage and salary jobs increases by at least 2.1 percentage points. Since OFWs relative to the domestic labor force are more likely to be female, to be in the 25 to 40 age group, and to be highly educated, the improvements in the employment rate, labor force participation rate, and quality employment are higher among females.

These results suggest that, at the very least, these alternative statistics or alternative approaches to the computation of standard statistics should be officially reported and monitored, since they could be a stronger measure of the state of the economy and better correlated with household welfare.

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