The Philippine Review of Economics
Vol. LII No. 2, December 2015 pp. 234-245

Just how good is unemployment as a measure of welfare? A note

Emmanuel S. de Dios* and Katrina Dinglasan*

Governments are rightly concerned with employment generation to make growth inclusive. The use of the open unemployment rate to measure success, however, may be misplaced. In a developing country like the Philippines, with a large informal sector and in the absence of unemployment insurance, open unemployment is primarily a middle-class phenomenon: the unemployed are not predominantly poor, and the poor are not predominantly unemployed. Measures of productivity and shifts of labor across sectors may contain more information and be more welfare-relevant.

JEL classification: J21, I32, O15
Keywords: unemployment, underemployment, labor force, welfare, poverty, development economics

1. Introduction

The Philippine government, like many others, has placed employment generation at the center of its objective of "inclusive growth" [Philippine Development Plan 2010]. Employment generation is also regarded as the principal tool for halving poverty incidence—as committed under the earlier Millennium Development Goals. This has naturally focused the attention of policy-makers and the public on the unemployment rate—the headcount of the unemployed as a proportion of the labor force—as a measure of success or failure of the government's performance in achieving inclusive growth.

This note, however, cautions against an uncritical use of the unemployment rate as a measure of welfare or of inclusion. The reason is that in the specific conditions of a developing country—particularly one with a large informal sector and a poorly developed social insurance system—unemployment correlates only very poorly with poverty. The proposition may be put most starkly as follows:

most of the unemployed are not poor; and most of the are not unemployed.

None of this is new: what is merely curious is how hard-won lessons from the earlier period of development economics have been so casually forgotten.[1] Writing almost forty years ago, Gunnar Myrdal [1968:961-1027], among others, took great pains to question the uncritical appropriation of unemployment concepts derived from developed-country experience—or their use as a significant guide to policy in less developed economies. In industrial-country contexts, he argued, open unemployment represented a readily available labor reserve that could be readily mobilized through the management of aggregate demand. In developing, and especially agricultural countries, by contrast,

> ...[T]he readily available labor supply [*i.e., that which is measured by open unemployment*—ESD] represents only a very small proportion of the real waste of labor. A massive waste of labor—whether because labor is not utilized at all, or is utilized for only parts of the year, month, week, and day, or is utilized in an almost useless way, that is at a low level of productivity—is one of the obvious facts of economic life in the region. In the present context, the important point is that little of this slack in the labor force can be taken up by turning on the tap of aggregate demand. Underutilization of labor vastly exceeds the supply that could be mobilized by expansion in monetary demand [Myrdal 1968:999].

Myrdal drew the conclusion that open unemployment rates understated the true extent of the problem in many economies where agriculture predominates, and moreover that real labor underutilization was unlikely to be addressable through short-term Keynesian aggregate measures: "...'[F]ull employment' is a distant goal and not one which can be reached. The limited scope of organized markets, among other things, makes aggregative measurement of the underutilization of labor far less possible" [Myrdal 1968:1001]. Open unemployment rates, in short, are poor welfare measures for many less-developed countries.

2. Most of the unemployed are not poor

The continuing relevance of critiques such as Myrdal's can be demonstrated empirically. We proceed by using the merged files of the (Philippine Statistics

[1] Part of this may be due to the decline in interest in development issues per se among (especially North American) academic departments, as Krugman later [1994] noted. Hal Hill, with other fellow scholars of the region, has been among the faithful remnants who stayed the course until the ultimate vindication of development economics.

Authority, PSA[2]) Labor Force Survey and the Family Income and Expenditure Survey of 2009 to examine the poverty status of the various sections of the labor force *L*, namely, the unemployed *U* and the employed *N*, with the latter consisting of the fully employed *F* and the underemployed *D*. We have $L = U + N = U + (F + D)$. The most salient results are shown in Table 1.

TABLE 1. Poverty in the labor force, 2009

	Poverty Incidence (%)	Number of poor	Share in poor population %
Unemployed	17.01	485,009	3.72
Employed	22.80	8,202,347	62.92
Of whom:			
Fully employed	19.37	5,511,609	42.28
Underemployed	35.76	2,690,738	20.64
Labor force	22.38	8,687,356	66.64
Not in the labor force	20.35	4,348,001	33.36
Total	21.66	13,035,357	100.00

Source: Computed from PSA 2009 Labor Force Survey and Family Income and Expenditure Survey

It will be immediately evident from Table 1 that poverty incidence is actually *lowest* among the unemployed. Of some 2.85 million unemployed persons in 2009, only 17 percent—less than half a million—were classified as being poor. This should be compared with the much higher poverty incidence of 36 percent among the underemployed—who, it should be remembered, are among those regarded as already employed. Indeed, compared to the unemployed, poverty was even slightly higher among those who were fully employed (19 percent). Poverty among the unemployed was also significantly less than the national average in that year, namely, 22 percent.

Therefore, in terms of the simplest welfare measure—poverty incidence—the unemployed are paradoxically the best-off group in the population; somewhat worse is the situation of the fully employed, followed closely by people not in the labor force. By far, the worst-off are the underemployed.

The other half of the statement is also true, namely, the majority of poor people in the country are *not* among the unemployed but rather among the employed. This is also seen in Table 1, which shows that of the 13 million persons officially classified as poor in 2009, less than four percent were unemployed. Most of the poor are in fact employed—indeed 42 percent of them are even fully employed, while 21 percent are underemployed.

[2] Formerly the National Statistics Office

3. Unemployment is mainly a middle-class phenomenon

Table 2 shows rates of unemployment among various income groups of the population, ranging from the poorest twenty percent (Quintile 1) to the richest (Quintile 5). Open unemployment is lowest among the poorest fifth of the population, where it is only 5.1 percent. It then rises steeply to between 7 and 9 percent among the middle classes (Quintiles 2-4) before dropping slightly among the richest. As a result, more than two-thirds of all the unemployed are from the second to fourth quintiles, while only 15 percent of the unemployed are from the poorest 20 percent of the population.

TABLE 2. Unemployment across income quintiles, 2009

	Q1	Q2	Q3	Q4	Q5
Unemployment rate (%)	5.1	7.2	8.5	9.1	6.9
Share of unemployed (%)	14.9	20.1	23.2	24.0	17.7

Source: Computed from NSO data
(Q1 = poorest income quintile; Q5 = richest income quintile)

The same conclusion is drawn when one looks at educational attainment among the unemployed (Table 3). Almost half of the employed have not completed a secondary education.

TABLE 3. Educational attainment among the unemployed and the employed, 2009

	Unemployed	Employed	Share difference
No education	0.64	1.82	1.17
Incomplete primary	7.26	15.74	8.48
Complete primary	7.60	15.55	7.95
Incomplete secondary	13.81	13.74	(0.06)
Complete secondary	33.09	25.76	(7.33)
Incomplete college	19.09	13.00	(6.09)
Complete college	18.49	14.21	(4.28)
Complete postgrad	0.02	0.18	0.16

Source: Computed from PSA 2009 Labor Force Survey and Family Income and Expenditure Survey

The bottom line is that unemployment in the Philippine case is primarily a problem of the middle class. It is a phenomenon that is bound to assume increasing social significance as the country progresses. For the present, however, it merely implies that fighting poverty and battling open unemployment are two different things.

The weak correlation between poverty and unemployment will surprise some, since it flies against mental pictures formed in the context of industrial economies.

For the U.S., for example, a table similar to Table 1 can be computed. Table 4 shows the large difference in poverty incidence as between the unemployed (28 percent) and among the employed (7 percent). The same table also shows the large gap in unemployment rates as between the poor and the nonpoor in the labor force (i.e., 26 percent and 6 percent, respectively).

TABLE 4. Poverty incidence and employment status in the U.S., 2012 (in thousands)

	Poor	Nonpoor	Total	Poverty incidence (%)
All persons	46,496	264,152	310,648	15.0
Unemployed	3,367	8,802	12,169	27.7
Employed	9,587	133,006	142,593	6.7
Labor force	12,954	141,808	154,762	8.4
Memorandum (%) Unemployment rate	26.0	6.2	7.9	

Source: Computed from the (U.S.) *Current Population Survey 2012*.
Notes: "Unemployed" includes those who have just been laid off and those who are looking for work; "employed" includes those at work and those who have a job but are not at work; the labor force excludes those in the military.

The close association is further seen when one relates the period of unemployment with poverty. Poverty incidence was only 2.9 percent among full-time workers, but it was 16.6 percent among those who worked less than a full-time year [Nichols 2013]. Household evidence in the U.S. also shows poverty incidence rising with longer spells of unemployment. U.S. data for 2010 show that poverty incidence was 13 percent among people who experienced no unemployment, but it was 19 percent among those unemployed for 1-28 weeks and as high as 30 percent for those unemployed for 27 weeks or more [Nichols and Callan 2013]. Econometrically, Hoynes, Page, and Stevens [2006] find the unemployment rate to be one of the labor-market opportunity variables that affect the incidence of poverty at the aggregate level. By contrast, no such relationship has, to our knowledge, been established in the Philippines. What appears to have been established instead is a relationship between measures of unemployment and subjective measures of household satisfaction with government performance [Mapa et al. 2013]. This actually jibes with our interpretation of unemployment as a middle-class phenomenon.[3] It is, after all, the middle class that performs a vital role of forming and influencing national political opinion (e.g., through

[3] As an unemployment variable, Mapa et al. [2013] use self-reported "joblessness" as found in the public opinion polls of the Social Weather Stations. This differs from the official definition in some respects, notably the reference being to current idleness rather than to a reference week. Like the official statistic, however, there is "no outstanding correlation" between those who self-report as poor and the self-reported jobless (Personal communication with Mahar Mangahas).

media). One should not be surprised, therefore, if a phenomenon affecting them (unemployment) should figure in the more general opinions of government, even if it does not necessarily affect the greater majority of the poor.

The reason for the discrepancy in the welfare significance of unemployment as between poor and rich countries is as follows: Under standard statistical definitions, being *unemployed* requires one not to have worked even a single hour during the past week, to have actively sought work, and to be available for work. In richer societies, unemployment insurance, welfare benefits, and other transfers typically kick in when one is out of work. Such a system allows unemployed people to devote time to job search and still sustain themselves. Since unemployment and welfare benefits typically pay less than the average wage, people who are unemployed are counted close to or even below the poverty line. Finally, the fact that part-time jobs may pay less than welfare and unemployment benefits discourages unemployed people from accepting such jobs (possibly forfeiting or reducing their benefits) and tend to keep them fully unemployed. This explains the closer relationship between unemployment and poverty in those cases.

In the Philippines, as in many other poor countries, however, two things stand out: (a) there is no system of unemployment or welfare benefits; and (b) an informal sector exists which is easy to enter and exit owing to low skill demands and low productivity. The first removes the feasibility for the poor to devote themselves to full-time job search, since there is no means to support themselves in the process. At the same time, a large informal sector beckons that is easy to enter and to exit. Easy entry into low-productivity, low-wage jobs will suffice to remove one from the ranks of the unemployed, but will hardly ameliorate poverty. As the old development adage goes, "The poor cannot afford to be unemployed." Indeed, the fact of their employment is a sign not of improvement in their welfare, but of their lack of choice.

By contrast, it is people who are better able to support themselves through a spell of job search who will be found among the openly unemployed. These will be those who can rely on personal savings, or who come from families with sufficient means, who have better access to social networks, or people with some education and who, therefore, have better job prospects—or all of these—in short the middle class. For this reason, an unemployed person is more than 80 percent likely to be non-poor.

4. The poverty impact of falling unemployment

How is a change in the unemployment rate related to a change in poverty incidence? An answer *in purely accounting terms* can be provided as follows. Let P be the number of poor persons in the labor force L and $p = P/L$ the (headcount) poverty incidence in that category. Then, using the fact that $L = U + N = U + (F + D)$, where U, N, F, and D are defined as before, and letting P_k, $k = U, F, D$, be the poverty headcounts among the unemployed, the fully employed, and the

underemployed, respectively, we obtain:

$$\begin{aligned} p &= (P_U + P_F + P_D) / L \\ &= (\alpha_U U + \alpha_F F + \alpha_D D) / L \\ &= \alpha_U (U/L) + \alpha_F (F/L) + \alpha_D (D/L) \end{aligned} \tag{1}$$

where the α_k, are rates of poverty incidence among $k = U, F, D$. We note that the unemployment rate $u = U/L = (1 - N/L)$ so that $N/L = (1 - u)$; $F/L = (N/L) - (D/L)$; and the underemployment rate $d = D/N$, so that $D/L = (D/N)(N/L) = d(1 - u)$. Substituting these into the last identity of (1) above yields:

$$\begin{aligned} p &= \alpha_U u + \alpha_F (1 - u) - \alpha_F (1 - u)\, d + \alpha_D (1 - u)\, d \\ &= \alpha_F + u\,(\alpha_U - \alpha_F) + (1 - u)\, d\,(\alpha_D - \alpha_F) \end{aligned} \tag{2}$$

This last expression relates overall poverty incidence in the labor force with poverty incidence in its various categories. The association between poverty incidence and a change in the unemployment rate can then be approximated as

$$\partial p / \partial u = (\alpha_U - \alpha_F) - d(\alpha_D - \alpha_F) \tag{3}$$

If using Table 1 we substitute into (3) the values $\alpha_U = 0.17$, $\alpha_F = 0.19$, $\alpha_D = 0.34$, and $d = 0.19$ we obtain a value of: –0.00326. This is remarkable not only for its small magnitude but more importantly its sign. It suggests not only that an increase in the unemployment rate has little effect on poverty, but that a higher unemployment rate might indeed even improve it!

It is plainly wrong, of course, to interpret this to mean that poverty incidence could actually be reduced by increasing the rate of unemployment. It merely reflects the accounting identity that (with a fixed labor force) the ranks of the unemployed can fall only by drawing away from the employed. Given the existing rates of poverty, however, the random unemployed person is even less likely to be poor than her employed counterpart; so a move from unemployment to employment can be an ambiguous matter.

More constructively, one might look for conditions under which the expression in (3) is positive—i.e., where an increase (decrease) in unemployment is likely to increase (reduce) poverty. The sufficient condition is given by

$$\alpha_U > (1 - d)\, \alpha_F + d\alpha_D \tag{4}$$

As is readily evident, this says that poverty among the unemployed must be worse than average poverty among the employed (the weight being represented by d): a reduction in unemployment is more likely to reduce poverty if poverty among

the fully employed is far less among the unemployed and the underemployed, and the lower is the rate of underemployment.

The pathology of the Philippine case (which may also be true of other developing countries), however, is that $\alpha_F > a_U$, $\alpha_D > \alpha_F$ so that condition (4) is impossible to fulfill for any d in the interval [0, 1]. This explains the perverse result.

At any rate, this simple exercise does focus attention on the key problem, which is the poverty incidence among those who are employed, particularly those who are fully employed. Somewhat paradoxically, in order for unemployment reduction to imply poverty reduction, poverty must be reduced among those who are *already employed*.

5. Poverty among the employed

For more detail, we can disaggregate the employed by sector as well as by their poverty status (Table 5). Most of the employed poor can be found in sectors where informal employment relations predominate and which are notorious for low-productivity jobs. The most prominent is agriculture, which alone already accounts for almost two-thirds of the employed poor. Other sectors that serve as major collecting pools for the employed poor are wholesale and retail trade (think vendors and hawkers); private household services (e.g., domestic help); informal sector manufacturing (e.g., sweatshops and small household businesses); and transport (e.g., jeepney drivers, tricycles, *kuliglig*, and pedicabs).

Agriculture is also the sector with the highest incidence of poverty (44 percent) among those it employs. Poverty among people engaged in the mining sector is also extremely high (42 percent), although the poor in that industry are only a small percentage of the total poor. The high incidence of poverty in mining doubtless also reflects the desperate conditions of the informal mining sector, as exemplified by the small-scale mining operations in Compostela Valley. This example also illustrates the duality of conditions existing in many important economic sectors. There will in many cases be a wide gulf in scale, skills, productivity, and pay as between informal and formal employment even in the *same sector*: e.g., high- v. low- productivity manufacturing; high- v. low-productivity services; high and low productivity mining; and so on. As a result, simple classification of the employed according to industries will not be a reliable guide to their welfare status. Small exceptions to this are sectors such as finance, education, and utilities, where poverty is low in both incidence and extent.

TABLE 5. Poverty among the employed: distribution and incidence by sector, 2009

	Distribution (%)	Incidence (%)
Agriculture and fishing	63.7	44.3
Mining and quarrying	1.0	41.5
Manufacturing	5.1	13.8
Electricity, gas, water	0.1	2.7
Construction	4.6	19.1
Wholesale and retail services	10.1	11.7
Hotels	0.9	6.8
Transport	4.5	13.7
Financial	0.0	1.0
Real estate	0.4	3.1
Public administration	2.1	9.4
Education	0.2	1.6
Health and social services	0.2	4.1
Other community services	1.8	15.5
Private households	5.2	20.1

Source: Computed from NSO data

6. The takeaway for policy

The foregoing has merely sought to demonstrate how employment status can be a poor guide to policy. For government (and its critics) to use open unemployment—especially by itself—as a measure of failure or success is to completely miss the mark and underestimate the development task at hand. An undue focus on unemployment could induce policy-makers, for example, to mistakenly engage in large-scale emergency job-creation schemes financed by public spending. Such stopgap schemes are likely to have adverse budgetary consequences without making a real dent on poverty, since all they would do is transfer people who are already employed in low-productivity jobs to similar low-productivity jobs—except underwritten now by government.

It has been suggested that perhaps the extent of unemployment *taken together* with underemployment might provide a better measure for policy makers to track. What has been called a "job misery index" (see, e.g., Mapa et al. [2013]) takes the unemployed and underemployed together as a proportion of the labor force.[4] Such a statistic is an improvement over the simple unemployment rate, especially considering how poverty is markedly higher among the underemployed. But it

[4] A convenient expression involving only rates for computing $(U + D)/L$ is $u + (1 - u)d$, where u and d are the unemployment and underemployment rates, respectively.

unfortunately still falls short of the mark. First, the unemployed are markedly *different* as a group from the underemployed, so that adding the two is something of a statistical pastiche, since the former are predominantly from the middle class, while more of the underemployed are from the poor. Second, even the job misery index neglects the fact that far more of the poor are to be found among the fully employed. If job "misery" and dissatisfaction plague even the fully employed, then real job misery would have to include virtually the entire labor force, which threatens to render the concept meaningless.

The mismeasure can impart a wrong sense of the scale of the problem of employment and its relation to poverty. A recent World Bank development report, for example, rightly focuses on the problem of providing "good jobs—meaning jobs that raise real wages and bring people out of poverty". But its assessment of the scale of the task is hampered by an inability to sort out the most crucial welfare aspects of the problem. It defines the "jobs challenge" as one of providing jobs to "around 10 million Filipinos who were either unemployed (three million) or underemployed (seven million) in 2012, and to around 1.15 million potential entrants to the labor force every year…*In addition, better jobs need to be provided to another 21 million Filipinos who are informally employed. All in all informal workers comprise about 75 percent of total employment*" [World Bank 2013:5]. (Emphasis supplied).

As already demonstrated, to regard unemployment plus underemployment as the target is certainly too narrow. But to lump *all* the unemployed plus *all* the informally unemployed as the problem is also certainly too broad, since that would comprise some 77 percent of the entire labor force.[5] This certainly exaggerates the welfare problem, since poverty in the entire labor force is no more than 22 percent (Table 1). The result is that no clear focus is achieved.

More importantly, the policies required to address unemployment are vastly different from those needed to solve low-productivity employment, so that lumping the two together makes little sense. The former requires mainly improving the workings of labor markets and the matching of expectations as between qualified job seekers and employers—so physical and virtual job fairs, information given to parents and students regarding career options, measures facilitating labor mobility, and perhaps temporary unemployment benefits for people between jobs are effective policies to lower the open unemployment rate.

But these measures are obviously unlikely to reduce poverty. Solving the poverty problem ultimately means raising the productivity and incomes of people who are already employed. Again it is worth noting how Myrdal's early lucidity on

[5] Here we accept the World Bank's estimate that 75 percent of the employed are in the informal sector (which, it is important to note, does not necessarily make them poor). If unemployment and employment rates are approximately 0.93 and 0.07, respectively, then the informally employed plus the unemployed are 0.77 (= (0.75)(0.93) + 0.07) as a proportion of the labor force, as stated in the main text.

these issues has been forgotten. He noted that productivity in the labor force could be broken into three components: participation, duration, and efficiency. Letting L, N, H, and Q represent the labor force, employment, hours worked, and output, respectively, one has $Q/L = (N/L)(H/N)(Q/H)$. "Broadly speaking," he wrote, "the modern approach has been preoccupied with the first of these ratios, and then only in a partial and unrealistically biased way, whereas all three are essential to an understanding of labor utilization in South Asia" [Myrdal 1968:1016]. Myrdal's complaint was that the concern for unemployment related only to N/L, i.e., its complement $(1 - N/L)$. Since his time, statistical authorities have generated data, albeit partially, relating to H/N in the form of visible underemployment rates. It is still the case, however, that no labor statistic in developing countries captures the efficiency of hours worked, i.e., Q/H.

Yet ultimately the quality or efficiency of employment matters. Either people must attain higher productivity in their current employment, or they must transfer to higher-productivity sectors. This means, for example, increasing productivity in agriculture through higher private and public investments in that sector; the infusion of new entrepreneurship and the linking of small farm operators into higher value-added chains; extension, training, and education for small farmers and their families; and the gradual movement away from agriculture and fisheries into manufacturing and better service-sector jobs. (Always remembering of course that there are also low-productivity jobs in manufacturing and services.)

There is no direct reason the effect of such measures will be reflected in the unemployment rate; but they are more substantial and more relevant to welfare nonetheless.

*University of the Philippines School of Economics

This paper is offered to Hal C. Hill, development economist, steadfast friend, and *patronus vini* to the U.P. School of Economics. Support from the Philippine Center for Economic Development is gratefully acknowledged.

References

Hoynes, H., M. Page, and A. Stevens [2006] "Poverty in America: trends and explanations", *Journal of Economic Perspectives* **20**(1): 47-68.

Krugman, P. [1994] "The fall and rise of development economics", Available from: http://web.mit.edu/krugman/www/dishpan.html. Accessed September 2014.

Mapa, D., S. Dineros, K. Flores, and C. Japlit [2013] "The link between job misery index and the net satisfaction rating of the President: evidence from household surveys" (Paper presented at the National Conference on Statistics)

Myrdal, G. [1968] *Asian drama: an inquiry into the poverty of nations* (3 vols.). Harmondsworth: Penguin Press.

Nichols, A. [2013] "Poverty in America", Urban Institute Fact Sheet. Available from: http://www.urban.org/publications/412898.html. Accessed September 2013.

Nichols, A. and T. Callan [2013] "Unemployment and poverty", Urban Institute Fact Sheet. Available from: http://www.urban.org/publications/412400.html. Accessed September 2013.

World Bank [2013] *Philippine development report: creating more and better jobs*. Philippine Office. Asia Pacific Region.