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# **Measuring economic ill-being: Evidence for the ‘Philippine Misery Index’**

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## **Abstract**

This paper uses the gap between the level of an economy’s well-being and that of a people’s well-being as a measure of the overall economic ill-being in a society. In particular, it argues that such disparity is measurable using objective measures of and subjective measures for inflation and joblessness. The inflation rate in this regard signifies the affordability of goods and services; its subjective counterpart then indicates the sense of whether the people can actually afford goods and services or not. The joblessness rate meanwhile shows the extent to which there is no gainful employment; its subjective counterpart then represents the sense of being jobless as understood by the people. The results indicate that the overall economic ill-being in the Philippines did not change much even with robust economic growth in recent years. This finding unveils a scene that is different from that painted by official statistics from the country.

**Keywords:** Economic ill-being; misery index, Philippines

**JEL Classifications:** C43; D60; E24; E31; I31

## 1. INTRODUCTION

Recent analyses on the Philippines suggest that its economy is now operating on a higher growth trajectory. There is even an emerging consensus among analysts across sectors that its growth push is sustainable into the medium term. This development is remarkable because it comes after decades of sputtering economic growth and unstable political environment.

Notwithstanding the exuberance about a bright future for the Philippines, however, analysts still need to keep in mind that economic growth is essentially about an economy's well-being. Indeed, as Kuznets (1934) emphasized, economic growth says little about the people's well-being (c.f., Stiglitz et al. 2010; see also Easterlin 1974, Hirsch 1976, and Scitovsky 1976). There is, in fact, no guarantee that economic growth translates as improvements in the people's well-being. There is, of course, hope that whatever was gained from robust economic performance would in the end manifest as improvements in the people's well-being.

In this paper, I use the gap between the level of an economy's well-being and that of a people's well-being as a measure of the overall economic ill-being in a society. In particular, the mismatch is measured using the rising cost of living and the worsening state of joblessness in an economy, first, using official statistics like the inflation rate and the joblessness rate (MacRae 1977; Barro and Gordon 1983; Blanchard and Fisher 1989; Nordhaus 1989). As such, the sum of the two rates forms an objective measure for the lost economic welfare.

Yet, the mismatch between the two notions of well-being affects people differently. Some are affected less from rising prices than others are. The same applies with regard to jobs: some enjoy gainful employment but others do not or cannot find one. Naturally, the people's evaluation of their life circumstances depends on their personal contexts and expectations. Such information should

also be valuable for measuring economic ill-being. In short, an objective measure of economic ill-being gives an incomplete picture of the welfare implications of the inflation rate and/or the joblessness rate because it excludes the people's experiences with them. As for the measurement itself, I use the self-ratings of poverty and hunger as proxy measure for the subjective impact of inflation and the self-ratings of joblessness as proxy measure for the impact of joblessness. In this context, the combination of the self-ratings constitutes a subjective measure for the lost economic welfare.

I thus introduce in this paper the so-called "Philippine Misery Index" (PMI) as a "comprehensive" metric for the level of the overall economic ill-being in a society. The PMI blends objective and subjective measures of economic ill-being into one measure in order to carry out a more holistic evaluation of an economy (c.f., Helliwell 2003; Diener and Seligman 2004; Cromin 2005; see also Beja 2014 and Binder 2014). This study is as far as I know the first to make use of an index that combines dissimilar statistics with the aim of carrying out a more balanced assessment of the Philippine economy in particular. The study certainly is not the last word on how to go about constructing an index for such purpose, but I hope it shows a way for determining whether or not economic progress is translating into human development and whether or not economic policies contribute toward that end. While this study concerns a specific economy, I still hope that it opens ground for other analysts interested in other societies to come up with their versions of the index, because, as I describe below, the index itself is straightforward to build as long as the data are available.

The rest of the paper has the following structure. Part 2 describes the index construction, the variables, and the data sources. Part 3 presents the results. The last part concludes the discussion.

## **2. METHODOLOGY**

## 2.1 Constructing the Philippine Misery Index

The “Philippine Misery Index” (PMI) is a blend of an objective measure and a subjective measure of economic ill-being. The PMI in particular is a geometric mean of the two measures. My labels of “objective” and “subjective” refer to official statistics and self-rated statistics, respectively. Of course, both types of statistics use scientific protocols.

The inflation rate and the joblessness rate are the main ingredients for my objective measure of economic ill-being in the PMI. The first item is the speed at which the prices of a basket of goods and services are changing between two periods. It suggests the quantities that people could buy with their income. The other item is just a sum of the unemployment and underemployment rates, and so it indicates what portion of the labor force does not enjoy gainful employment.<sup>1</sup>

More specifically, the objective component of the PMI is the sum of the inflation and joblessness rates.<sup>2</sup> I am not claiming here that those who have jobs do not get to experience any economic ill-being at all from the inflation rate; but, rather, I am highlighting joblessness only because a job is necessary for people to fulfill their basic needs. Even though studies find that the joblessness rate is much more undesirable than the inflation rate (e.g., Di Tella et al. 2001, 2003; Wolfers 2003; Blanchflower 2007; Blanchflower et al. 2014), I stick to the simple addition procedure in order to

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<sup>1</sup> It is not sensible to add outright the unemployment rate,  $u$ , and underemployment rate,  $d$ , because their denominators are not the same. The correct way is to use the formula  $u + (1 - u)d$ . The expression  $(1 - u)d$  is the underemployment rate of the employment rate.

<sup>2</sup> The procedure is similar to the Okun misery index, which was first mentioned in the Wall Street Journal in 1971 (Lovell and Tien 2000). Revisions to the Okun misery index like that of Barro (1996) and Hanke (1999) essentially add the interest rate and the gap between the long run and actual economic growth rates. Barro, on the one hand, uses the change in the rates; but Hanke, on the other hand, uses the actual rates. Both exclude the underemployment rate in their calculations.

minimize computation errors. Arguably, the sum gets a minimum score of the objective economic discontent in an economy.

Meanwhile, the ingredients for my subjective measure of economic ill-being are the self-ratings of poverty, hunger, and joblessness.<sup>3</sup> In this case, the self-rating of poverty, which show the general sense of having low standards of living, and the self-rating of hunger, which refer to the physical experiences of being hungry due to the inability to buy and/or access food, proxy for the subjective impact of inflation. The third ingredient, the self-rating of joblessness, proxies for the lack of gainful employment—that is, being jobless and/or feeling jobless.

In contrast to what I did for the objective ingredients, I take the geometric mean of the subjective ingredients. My claim here is that the self-ratings reflect the lack or absence of achievements that in turn weaken the quality of life in a society and the reason for people to value their lives (c.f., Beja 2014). In taking the geometric mean, then, I draw out the most useful information from the three self-ratings whose information content is partly interconnected. Yet, as with the objective component of the PMI, I end up with a minimum score of the subjective economic discontent in an economy.

If both objective and subjective measures are minimum scores, then the PMI is also a minimum score for the level of overall economic well-being in a society. A high PMI then implies high economic ill-being, and vice versa. In contrast, a steady level PMI suggests a lingering economic ill-being. Still, given the nature of the data, the PMI could also be read as the portion of a

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<sup>3</sup> Evaluative-based ratings have very useful properties for analysis. For instance, someone who gives a high evaluation of a personal situation would in general desire to see the conditions that brought about the high rating to remain the same at the least. Alternatively, someone who gives a low rating about a personal situation would in general desire to see the conditions that brought about the low rating to change.

population who is suffering in the current economic conditions.

## **2.2 Data for the Philippine Misery Index**

For the PMI, I use data that are available in the public domain. This criterion is essential for the integrity of the index because it makes replication unproblematic. Data completeness is the only criterion I use when compiling the information from different sources. For this study, however, the data coverage is from January 2000 to July 2014. The following paragraphs give details of the ingredients.

### ***Inflation Rate and Joblessness Rate***

The ingredients of the objective measure of economic ill-being are from the Philippine Statistical Authority (PSA). The first ingredient, inflation rate, is derived from the consumer price index (CPI), which refers to the overall price change of a basket of goods and services. Depending on the survey area, the current basket of the Philippine CPI could include anywhere between 271 and 693 items covering food and beverages, house maintenance and operations, recreation and related activities, clothing, transport, and communication, as well as health and education. The current reference period of the Philippine CPI is 2006.

Each month, the PSA collects price data from all 81 provinces in the country plus two selected cities.<sup>4</sup> The monthly inflation rate is simply the month-on-month growth rate of the CPI. For the PMI, I obtain a three-month average of the inflation rates.

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<sup>4</sup> In the previous series of the CPI (reference year of 2000), the coverage was 77 provinces and 11 selected cities. To date, there are 144 cities in the Philippines. The cities are classified as “highly urbanized city” (35), “independent component city” (5), or ‘component city” (104). Highly urbanized and independent

The second ingredient is joblessness rate. The PSA collects employment data using the following sequence of questions. The starting query is *“Did [you] do any work at all even for only one hour during the past week?”* If the answer is “no”, then a follow up question is *“Although [you] did not work, did [you] have a job or business during the past week?”* There is another query about job search if the person did not have work or a job during the reference week: *“Did [you] look for work at any time during the past week?”* If the answer is “no”, then a follow up question is *“Why did you not look for work?”* If the answer is schooling, housekeeping, retired, permanent illness or disability, or similar reasons, etc., then the person falls in the category “not in the labor force”.

In the above sequence of queries, “work” or “job” refers to an economic pursuit that is performed by someone in the labor force regardless of the compensation scheme.<sup>5</sup> Work can be in specific locations such as offices, establishments, homes, schools, etc., but it can also refer to activities like fishing, farming, own account businesses, etc. By convention, a person who spent 40 hours at work in a week is classified as “fully employed”; but if less than 40 hours in a week, “part-time employed”. Someone who has employment but still wants to have more hours of work is deemed “underemployed”.

Someone in the labor force who did not work even for an hour during the reference week is thus considered “unemployed”. From 2005, however, the PSA required the unemployed to meet three conditions: first, the person did no work in the past week; second, the person searched for work in the past and current week; and, third, the person would be available to take up work after two weeks of the reference week. Those who meet the first and third conditions but not the second

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component cities are autonomous to the provincial government. A province is comprised of municipalities and component cities.

<sup>5</sup> “Work” is an economic activity that a person does in order to get (a type of) compensation. “Job” is an economic activity that a person does for a living. For the PSA, a person who has the job does the work as well. For example, a self-employed businessperson must operate one’s own business.



condition are still unemployed if the reason is discouragement from searching for work, temporary illness or disability to work or look for work, or waiting results of work applications.

Adding the number of employed to the number of unemployed obtains the size of the labor force. The unemployment rate then is the ratio of those in the labor force who did not have at least an hour of work in a week to the size of the labor force. The underemployment rate, in contrast, is the ratio of those classified as employed but desired more hours of work to the total number of employed.

Each quarter, the PSA collects labor-related data from a sample of 41,000 households drawn from 3,421 barangays in the Philippines.<sup>6</sup> For the PMI, I use the quarterly unemployment rate reported by the PSA but compute for the adjusted quarterly underemployment rate from the reported data of the PSA (see again Footnote 1). Recall that I take their sum as the joblessness rate.

### ***Self-ratings of Poverty, Hunger, and Joblessness***

The ingredients for the subjective measure of economic ill-being are from Social Weather Stations (SWS). The first ingredient, self-rating of poverty, is elicited using a self-identification procedure. The query is “*Where would you place your family in this card?*” The person sees a display card that lists the responses of “not poor” and “poor” in vertical format with “on the line” in between them. The person points one’s answer on the display card.

Clearly, the person needs to determine what poverty means to the self. All the same, a personal threshold of poverty is likely to be higher than the official threshold of poverty of the PSA since

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<sup>6</sup> “Barangay” is the smallest administrative unit in the Philippines. There are 42,027 barangays to date.

the latter defines poverty as the least cost food expenditure that could meet 2,000 kilocalories per day plus some adjustments for non-food expenditure. Therefore, if a person saw one's family in poverty, then that person would point to "poor" and not point to "not poor" or "on the line" on the display card because they would be irrelevant in the evaluation. This congruence between a self-definition of poverty and an external notion of poverty is important to keep in mind in the SWS procedure because it implies that the data on self-rating of poverty is valid for analysis.<sup>7</sup>

Another ingredient, self-rating of hunger, is about the instances when a person or member of one's family did not eat a meal during a reference period. More specifically, "hunger" is not about voluntary hunger associated with a lifestyle choice, religious obligation, etc.; but, rather, it is about involuntary hunger due to a lack of money to buy food and/or means to access food.

For SWS, self-rating of hunger relies on a self-recollection procedure. Its query is "*In the last 3 months, did it happen even once that your family experienced hunger and not have anything to eat?*" The response is either "yes" or "no". A follow up query finds out the frequency of the experienced hunger—that is, "only once", "a few times", "often", or "always" during the specified timeframe.

How people use their available resources in the best way possible in order to make ends meet, get food to eat, availability and accessibility of food, etc., are not the principal concerns of the self-rating of hunger. As such, if a person responded with a "yes" to the query, then it simply meant that at least someone in the family experienced involuntary hunger. There is no reason to doubt an answer of "yes" because the absence and/or inaccessibility of food that caused in hunger would not be easy to forget. Still, given the timeframe of the query, there is an issue with regard to the

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<sup>7</sup> If SWS self-reported income threshold were applied to PSA data for consumption expenditures, then back of the envelope calculation finds PSA poverty incidence to be comparable to SWS poverty incidence.

validity of responses. For instance, the underreporting of hunger incidents is a possibility because experiences in the distant past are not as easy to recall—that is, even though hunger is hard to forget, it can still be overlooked during self-recollection exercise. The responses should therefore be read as the lowest frequency of involuntary hunger. As such, SWS data on self-rating of hunger is still valid for analysis.<sup>8</sup>

The last ingredient is about work status. For SWS, self-rating of joblessness is elicited by self-declaration about one's work status. Its query is "*Are you working at present, not working at present but used to work, or have never worked?*" If a person answers with "not working at present but used to work" or "have never worked", then the follow up query is "*Are you looking for work or planning to establish a business or not?*" The possible reply is "yes" or "no". Thus, if the response is "no", then the person falls in the "not in the labor force" category.

Notice that there is no reference in the SWS query to work "even for only one hour during the past week," as with the query of the PSA. Not available to take up work even after two weeks of the reference period is also not a condition to be classified as employed, as with the query of the PSA. For SWS, the query takes a person's understanding of what having work means as starting point. Still, the person could be working but the hours of work is too short and/or the wage from work is too low that the person would not be able to consider one's employment as a real job. If so, then the person might not answer "working at present" to the query. Thus, a response that one has no work at present and looking for work is a much more direct indication that a person is indeed jobless. In short, the notion of having and not having work can effectively classify those in

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<sup>8</sup> David et al. (2008) find a weak correlation between the official food poverty measure and the actual household food consumption of the poor. The implication of these findings is that a self-rating of hunger could measure hunger better than the official indicators of hunger and food poverty. The Food and Nutrition Research Institute of the Philippines reports that 33% of Philippine households meet 100% of the daily Recommended Energy and Nutrient Intake.

the labor force in terms of who have and does not have gainful employment. Such consideration is in fact consistent with the textbook interpretation of joblessness. SWS data on self-rating of joblessness is therefore valid for analysis.<sup>9</sup>

For the above three self-ratings, SWS conducts a survey each quarter with 300 randomly selected households each for Metro Manila, Luzon, Visayas, and Mindanao; that is, each survey has a total sample size of 1,200 households. The three self-rating queries have not been changed or modified since their introduction to the SWS surveys.

### **2.3 Data Schedule and Data Compilation**

The PSA reports quarterly unemployment and underemployment rates in January, April, July, and October. It reports monthly inflation rates. The data series for unemployment, underemployment, and inflation rates go back as early as the mid 1950s.

The quarterly inflation rate for, say, January in the current year is just the three-month average of the inflation rates of November and December in the previous year and of January in the current year. For April, July, and October, the quarterly inflation rates are average of the past two months and current month data. This procedure is necessary in order to align the quarterly inflation rates with the schedule of the quarterly joblessness rates.

SWS reports quarterly self-ratings of poverty, hunger, and joblessness in December, March, June,

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<sup>9</sup> The key difference between the PSA and SWA data is the ‘one hour work during the past week’ criterion used in the labor force survey of the PSA. If the one hour of work is discarded, the PSA data on joblessness rate (i.e., unemployment rate plus underemployment rate) turns out to be comparable to SWS data on joblessness rate.

and September. The data series for self-rating of poverty start from 1992; for self-rating of hunger, from 1999; and for self-rating of joblessness, from 1994. Given the different schedules, I adjusted the data sequence by one quarter so that the data schedules of PSA and SWS match. In particular, the SWS December data in the previous year is matched with the PSA January data in the current year. The other data pairings then are PSA April and SWS March, PSA July and SWS June, as well as PSA October and SWS September. In doing so, I assume that the availability of PSA information and concomitant media coverage on unemployment rate or underemployment rate, for instance, does not influence the self-rating of joblessness. The reverse argument should also hold. This assumption is sensible given that both the PSA and SWS use different protocols for their surveys and data compilation.

### 3. RESULTS

This section presents the results for the PMI. Consider Figure 1, which contains the graphs of the data for the inflation and joblessness rates. Notice that each graph in Figure 1 appears to contain two segments. The first segment for the joblessness rate covers the period January 2000 to July 2007 and for the second segment, October 2007 to July 2014. The average of the former is larger than the latter ( $\Delta \overline{Ave.} = 2.684$ ,  $p < 0.01$ ); but, more important, there are no statistically significant period trends for both segments ( $b_{Jan00-Jul07} = -0.026$ ,  $b_{Oct07-Jul14} = 0.003$ , both  $p = n.s.$ ). The analysis also finds that the joblessness rate in the second segment is less volatile ( $S_{Jan00-Jul07} = 2.62$  vs.  $S_{Oct07-Jul14} = 1.14$ ;  $range_{Jan00-Jul07} = 11.2$  vs.  $range_{Oct07-Jul14} = 5.1$ ), with the recent data indicating relatively more stable movements at the mean ( $Ave_{Oct07-Jul14} = 24.91$ ). Joblessness rates seem to be steady at 23.0 especially in the recent periods.

The bottom graph in Figure 1 for the inflation rate has two segments covering the periods January 2000 to October 2009 and January 2010 to July 2014, respectively. The first segment, which

appears like a wave-like pattern ( $b_{\text{Jan00-Oct09}} = -0.736$ ,  $b_{\text{Jan00-Oct09}}^2 = 0.040$ , and  $b_{\text{Jan00-Oct09}}^3 = -0.001$ , all  $p < 0.05$ ), is a contrast to the second segment, which appears like a ripple-type pattern ( $b_{\text{Jan10-Jul14}} = -0.185$ ,  $b_{\text{Jan10-Jul14}}^2 = -0.240$ , and  $b_{\text{Jan10-Jul14}}^3 = -0.181$ , all  $p = \text{n.s.}$ ). The latter, in fact, has no period trend ( $b_{\text{Jan10-Jul14}} = -0.039$ ,  $p = \text{n.s.}$ ). Perhaps, the swings in global prices of oil and rice explain such movements. Average inflation rate is higher in the first segment than in the second segment ( $\Delta \overline{\text{Ave.}} = 1.175$ ,  $p < 0.05$ ), with relative stability in the latter segment ( $s_{\text{Jan00-Oct09}} = 2.11$  vs.  $s_{\text{Jan10-Jul14}} = 0.75$ ;  $\text{range}_{\text{Jan00-Oct09}} = 8.1$  vs.  $\text{range}_{\text{Jan10-Jul14}} = 2.5$ ). Notice, however, that the recent inflation rates in 2014 are indicating an upward trend but the numbers are still within the range of values in the second segment.

**[Insert Figure 1 Here]**

**[Insert Figure 2 Here]**

Next, consider the graphs in Figure 2 representing the data for the subjective component of the PMI. The graph for the self-rating of poverty, for instance, has two segments as well. In this case, the period average of the first segment for the period January 2000 to April 2004 is also larger than that of the second segment for the period July 2004 to July 2014 ( $\Delta \overline{\text{Ave.}} = 9.024$ ,  $p < 0.01$ ). The two segments do not have statistically significant period trends ( $b_{\text{Jan00-Apr04}} = 0.171$ ,  $b_{\text{Jul04-Jul14}} = -0.013$ , both  $p = \text{n.s.}$ ). In short, the graph for the self-rating of poverty exhibits a two-step pattern like the graphs in Figure 1, albeit in this case the last part of the second segment appears to be an upward trend as with the graph of the inflation rate ( $b_{\text{Apr10-Jul14}} = 0.375$ ,  $p < 0.05$ ). Still, the analysis finds that both segment have comparable volatilities ( $s_{\text{Jan00-Apr04}} = 3.91$  vs.  $s_{\text{Jul04-Jul14}} = 3.76$ ;  $\text{range}_{\text{Jan00-Apr04}} = \text{range}_{\text{Jul04-Jul14}} = 16.0$ ). The data nevertheless show that the self-rating of poverty did not fall below 43.0 percent but that in recent periods there is a reversal in the numbers.

In contrast to the graphs for the self-rating of poverty (and those in Figure 1), the graphs for both self-ratings of hunger and joblessness indicate three segments. The first and third segments in both cases do not suggest a period trend (hunger:  $b_{\text{Jan00-Jul03}} = -0.271$ ,  $b_{\text{Jan08-Jul14}} = 0.036$ , both  $p = \text{n.s.}$ ; joblessness:  $b_{\text{Jan00-Jul03}} = 0.057$ ,  $b_{\text{Jan07-Jul14}} = 0.038$ , both  $p = \text{n.s.}$ ); but, as expected, their middle segments indicate positive period trends (hunger:  $b_{\text{Oct03-Oct07}} = 0.745$ ,  $p < 0.01$ ; joblessness:  $b_{\text{Oct03-Oct06}} = 0.809$ ,  $p < 0.01$ ). For both self-ratings, the averages for their first segments are smaller than for their third segments (hunger:  $\Delta \overline{\text{Ave.}} = 8.841$ ,  $p < 0.01$ ; joblessness:  $\Delta \overline{\text{Ave.}} = 16.626$ ,  $p < 0.01$ ). In these cases, however, their third segments are more volatile than the first segments (hunger:  $S_{\text{Jan00-Apr03}} = 2.34$  vs.  $S_{\text{Jan08-Jul14}} = 2.80$  and  $\text{range}_{\text{Jan00-Apr03}} = 9.5$  vs.  $\text{range}_{\text{Jan08-Jul14}} = 8.9$ ; joblessness:  $S_{\text{Jan00-Apr03}} = 2.07$  vs.  $S_{\text{Jan08-Jul14}} = 4.11$  and  $\text{range}_{\text{Jan00-Apr03}} = 7.4$  vs.  $\text{range}_{\text{Jan08-Jul14}} = 17.4$ ). These results in short reveal that the self-rating of joblessness exhibits unstable movements along with a Philippine economy that undergoes robust expansion.

What the findings further suggest is that attitude changes occurred in the periods covered by the above middle segments. Indeed, further analysis for the whole period finds that economic growth rates that exceeded five percent, for example, correlate with rising self-rating of hunger ( $d_{\text{growth} > 5\%} = 2.853$ ,  $p < 0.05$ ) and rising self-rating of joblessness ( $d_{\text{growth} > 5\%} = 6.747$ ,  $p < 0.05$ ). Moreover, for the middle segments, there is a tight (partial) correlation between the two self-ratings ( $r = 0.861$ ,  $p < 0.01$ ). The notion of an attitude change thus makes sense if, as suggested earlier, it is viewed in the context of a Philippine economy that shifted from a low economic growth path to a high one in the period 2003 to 2007. Higher consumption thresholds in the context of hunger and greater desires to work are therefore expected with such economic adjustments. In the present context, though, the results also suggest that high economic growth rates may not be anymore adequate to see noteworthy reductions in the self-ratings of hunger and joblessness.<sup>10</sup>

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<sup>10</sup> There is a positive effect of self-ratings of hunger on self-ratings of joblessness ( $b_{\text{hunger}} = 1.272$ ,  $p < 0.01$ ;

**[Insert Figure 3 Here]**

The information in Figures 1 and 2, in turn, obtain the objective measure and subjective measure of economic ill-being, respectively. Obviously, the two graphs shown in Figure 3 reflect the behavior of their respective ingredients: the upper graph reflects more of the wave-type pattern from the inflation rates (Figure 1); and the lower graph reflects more of the upward-sloping segments from the self-ratings of hunger and joblessness (Figure 2).

In contrast to the graphs in both Figures 1 and 2, the graphs in Figure 3 indicate three segments. To facilitate the analysis, I simply assumed that the two components of the PMI share the same timeframes for each segment. Thus, I find a downward trend for the first segments (objective:  $b_{\text{Jan00-Jul03}} = -0.672$ ,  $p < 0.01$ ; subjective:  $b_{\text{Jan00-Jul03}} = -0.135$ ,  $p = 0.10$ ), an upward trend for the second segments (objective:  $b_{\text{Oct03-Jan07}} = 0.368$ ,  $p < 0.05$ ; subjective:  $b_{\text{Oct03-Jan07}} = 1.183$ ,  $p < 0.01$ ), and no period trend for the third segments (objective:  $b_{\text{Apr07-Jul14}} = -0.089$ ,  $p = \text{n.s.}$ ; subjective:  $b_{\text{Apr07-Jul14}} = 0.006$ ,  $p = \text{n.s.}$ ). Further analyses reveal that the first two segments comprise quadratic trends (objective:  $b_{\text{Jan00-Jan07}} = -0.982$ ,  $b_{(\text{Jan00-Jan07})^2} = 0.033$ , both  $p < 0.01$ ; subjective:  $b_{\text{Jan00-Jan07}} = -0.761$ ,  $b_{(\text{Jan00-Jan07})^2} = 0.036$ , both  $p < 0.01$ ). These findings in turn indicate that the graphs in Figure 3 are two hook-shaped graphs in supine position with parallel values in the third segments (objective vs. subjective:  $\Delta \overline{\text{Ave.}} = 0.13$ ,  $p = \text{n.s.}$ ).

**[Insert Figure 4]**

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$d_{\text{growth} > 5\%} = 3.119$ ,  $p < 0.05$ ) but not the converse ( $b_{\text{joblessness}} = 0.473$ ,  $p < 0.01$ ;  $d_{\text{growth} > 5\%} = -0.338$ ,  $p = \text{n.s.}$ ). Perhaps, this finding is an indication that hunger induces people to look for work because a robust economy implies more opportunities for work rather than address hunger through informal credit, self-help activities, and related actions.



Finally, the objective and subjective measures of economic ill-being together obtains the PMI (Figure 4). The graph indicates three segments that reflect the nature of the components in Figure 3. Again, the analysis finds a downward trend in the first segment ( $b_{\text{Jan00-Jul03}} = -0.339$ ,  $p < 0.01$ ), an upward trend in the second segment ( $b_{\text{Oct03-Jan07}} = 0.899$ ,  $p < 0.01$ ), and a zero trend in the third segment ( $b_{\text{Apr07-Jul14}} = -0.039$ ,  $p = \text{n.s.}$ ). Analysis also finds that the first two segments make up a quadratic trend ( $b_{\text{Jan00-Jan07}} = -0.808$ ,  $b_{(\text{Jan00-Jan07})^2} = 0.035$ , both  $p < 0.01$ ), exhibiting a hook-shape pattern in supine position (c.f., Figure 3).

The graph of the PMI as such reveals two important properties. First, the PMI has not changed much despite a robust Philippine economy in recent years. It is an interesting finding because, if it is correct that the Philippine economy indeed has shifted to a higher growth path, then the recent economic developments have little—or, perhaps, no impact—in reducing the level of economic ill-being in the country. Moreover, it can also be argued that economic ill-being has lingered at the same level notwithstanding what the government trumpets as sound governance (since 2010) or what the opposition believes as a problematic approach to governance (before 2010). As such, the recent political developments also have little—or, perhaps, no impact—in reducing the level of economic ill-being in the country.

Perhaps, rather than being concerned about economic growth and politics, the people today are more concerned about issues that have more direct bearing on their lives like the availability of jobs, the affordability of goods and services, etc. If so, then the creation of jobs and management of inflation may be important accomplishments at the aggregate level but they are not concrete enough at the ground level. That is, the people must experience for themselves not only that they have gainful employment and receive wages enable them to fulfill their basic needs but also that the goods and services they need are affordable to them given their money. If so, too, then it is not enough for government to say that many jobs were created in the past years yet the people

found it hard to get one that gave reasonable wages. It is equally not enough for government to say that the inflation rate was moderated because of the effective application of monetary and expenditure programs yet the people found it hard to purchase a kilo of rice, for example. In short, in order to see decreases in the PMI, public policy needs to grapple with the indicators of economic ill-being in a more systematic and complete way.

And, thirdly, the fact that the PMI remains unchanged in recent years suggests that a mismatch between the economy's well-being and the people's well-being lingers. Put differently, the portion of the population who is suffering given the current economic conditions remains the same and the extent of their suffering is aggravating over time despite the advances in both economic and political governance. Perhaps, refocusing public policy in order to deal with the suffering and less on economic growth and political governance may be sensible in this juncture for the Philippines.

#### **4. CONCLUSION**

This paper presented the "Philippine Misery Index" (PMI) as a measure for the general loss in economic well-being for a country. It argued that the lost welfare is measurable using objective measures and subjective measures of and for inflation and joblessness. Here, the PMI blended objective and subjective measures of economic ill-being into a single metric. More specifically, the paper showed that the PMI contained the inflation rate and the self-ratings associated with the impact of the inflation rate as well as the joblessness rate and self-rating of joblessness. Of course, by design, the PMI excluded other indicators; but the choice of ingredients could be rationalized by pointing out that putting in more ingredients would only mean a quantitative difference and not a qualitative difference in the results.

The PMI showed that the level of economic ill-being in the Philippines remained the same despite

a robust Philippine economy in recent years. The PMI also showed that the level of economic ill-being in the country remained stagnant despite sound governance in recent years. Put another way, the nature of Philippine economics and politics did not reduce the level of economic ill-being in the country.

The finding in turn suggested that public policy must go beyond economics and politics so that it would grapple with economic ill-being more directly. In addition, public policy must proceed in such a way that the evaluation of life went beyond abstract indicators and made more concrete in terms of how people experienced their lives. The orientation at least in the context of the indicators used for the PMI should not only be about the number of jobs created and about the level of prices of goods and service but must include the sense that jobs were indeed available and that goods and services were indeed affordable. In this regard, the impact of the joblessness rate would not be just that which was defined by the government but also that which was understood by the people. Likewise, the impact of the inflation rate would not be just in terms of the overall affordability of goods and services but also in terms of the general feeling that one could afford goods and services using one's income. The economic and political gains of a county would therefore be enjoyed by the people more directly.

Evaluating the Philippine economy using the PMI is arguably a more holistic approach because of its inclusive character. This type of evaluation is arguably more consistent with the objective of enabling the people to pursue the "good life" by providing them the necessary conditions to do so as far as possible. This type of evaluation is also consistent with the aim of allowing the people to pursue the "good life" in their own terms and not in terms set by others. While the subjective and objective measures of economic ill-being are still different ways of thinking about and evaluating well-being, they in fact share the same end goal, which is to guarantee a much closer association between the economy's and the people's well-being. That way, the economy's well-being has

more to say about the people's well-being because the former translates as improvements in the latter. In the end, there is a lot to gain from an integration of both measures into an index that is not only informative about an economy and its people but also useful for public policy.

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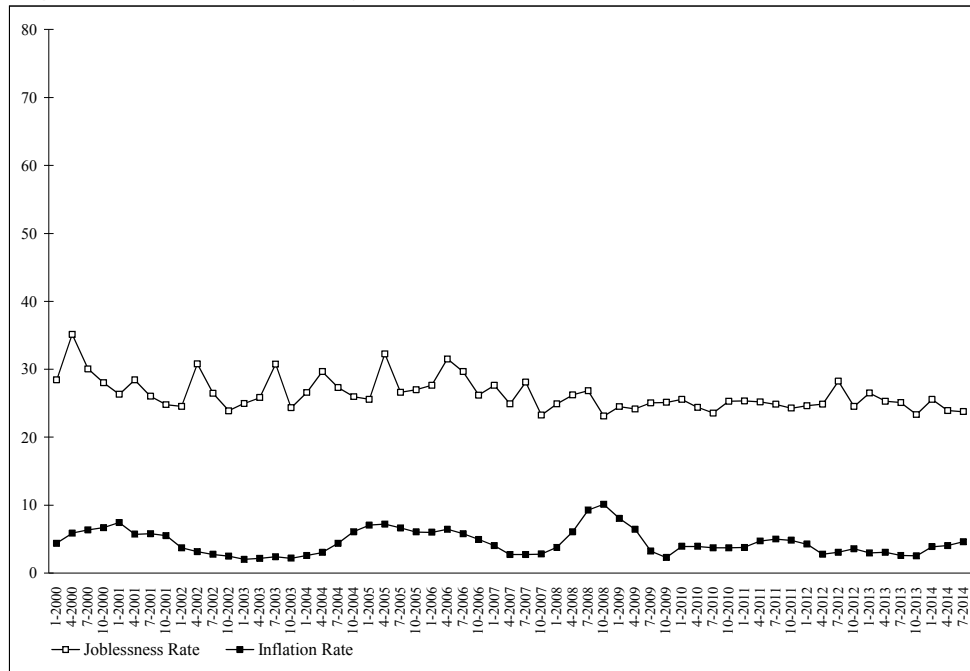
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**Figure 1: Inflation rate and joblessness rate**



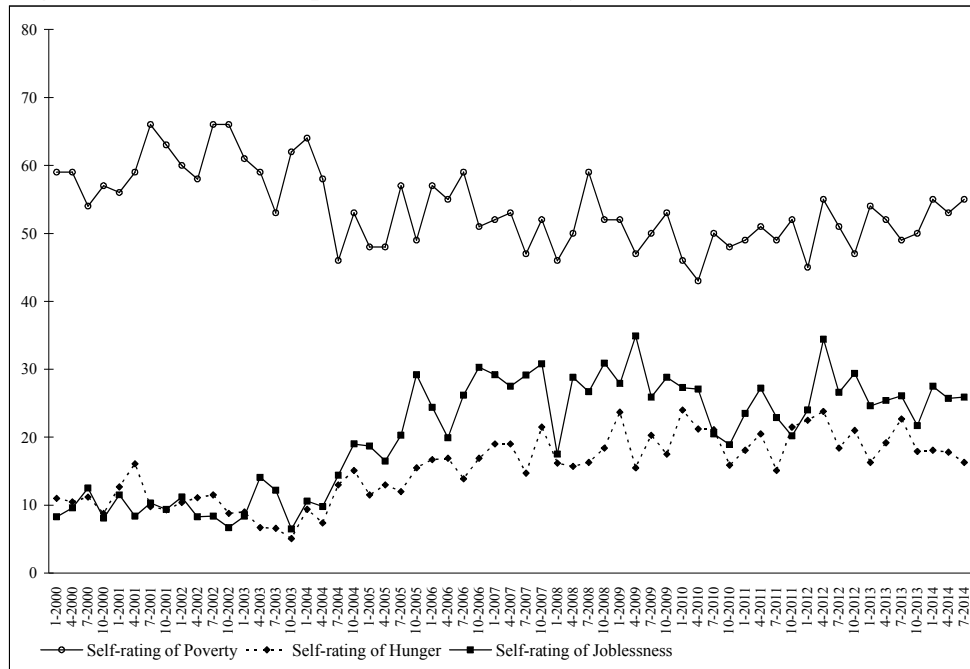
**Source of data:** Philippine Statistical Authority

**Notes:**

1. Joblessness rate: full period ave. = 26.32; segments: ave.<sub>Jan00-Jul07</sub> = 27.59 and ave.<sub>Oct07-Jul14</sub> = 27.59
2. Inflation rate: full period ave. = 1.64; segments: ave.<sub>Jan00-Oct09</sub> = 4.92 and ave.<sub>Jan10-Jul14</sub> = 3.74



**Figure 2: Self-ratings of poverty, hunger, and joblessness**

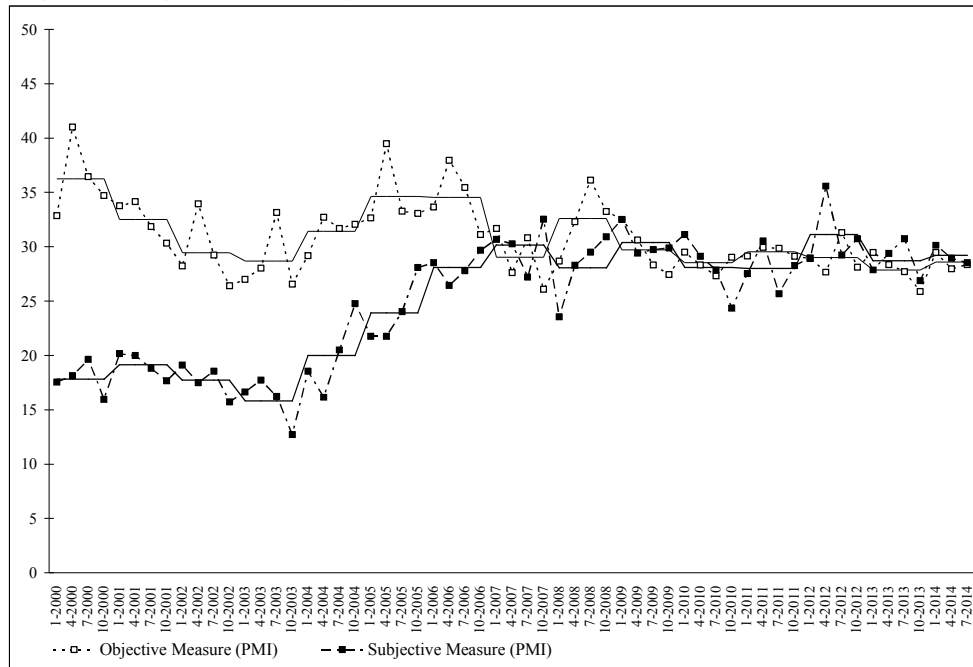


**Source of data:** Social Weather Stations

**Notes:**

1. Self-rating of Poverty: full period ave. = 53.73; segments: ave.<sub>Jan00-Apr04</sub> = 60.00 and ave.<sub>Jul04-Jul14</sub> = 50.98
2. Self-rating of Hunger: full period ave. = 15.41; segment: ave.<sub>Jan00-Jul03</sub> = 10.23, ave.<sub>Oct03-Oct07</sub> = 14.15, and Ave.<sub>Jan08-Jul14</sub> = 19.07
3. Self-rating of Joblessness: full period ave. = 21.51; segment: ave.<sub>Jan00-Jul03</sub> = 9.83, ave.<sub>Oct03-Oct06</sub> = 18.91, and ave.<sub>Jan07-Jul14</sub> = 26.35

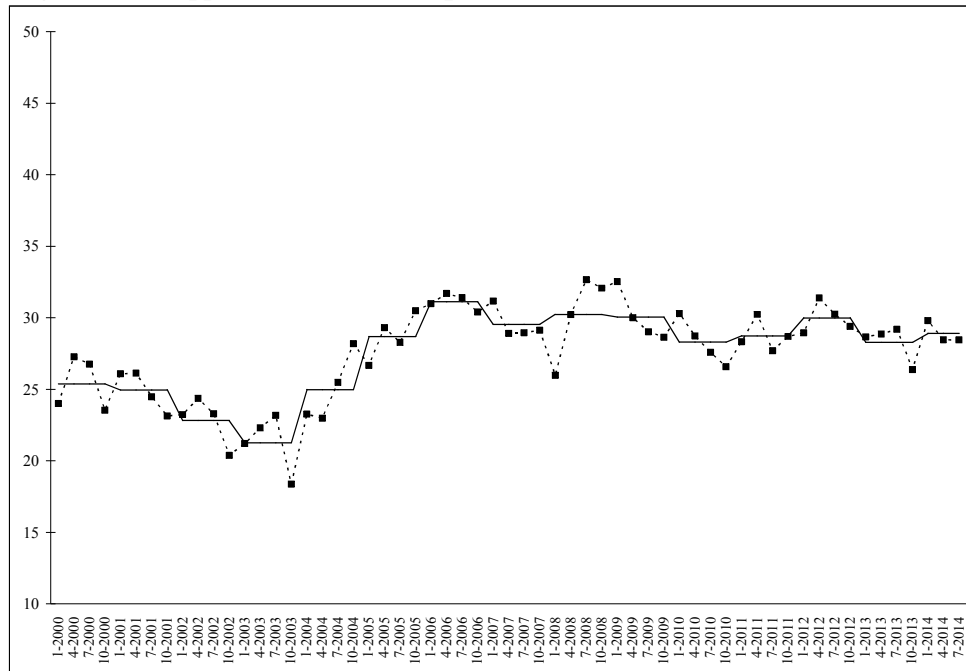
**Figure 3: Objective and subjective measures of economic ill-being**



**Notes:**

- Objective measure of economic ill-being is the sum of the inflation and joblessness rates. Joblessness rate is the sum of the unemployment (u) and underemployment (d) rates using the following formula:  $u + (1 - u)d$ . Data are in Figure 1.  
Objective measure: full period ave. = 30.86; segments: ave.<sub>Jan00-Jul03</sub> = 32.07, ave.<sub>Oct03-Jan07</sub> = 39.47, and ave.<sub>Apr07-Jul14</sub> = 29.31
- Subjective measure of economic ill-being is the geometric mean of self-ratings of poverty, hunger, and joblessness. Data are in Figure 2.  
Subjective measure: full period ave. = 25.07; segments: ave.<sub>Jan00-Jul03</sub> = 20.15, ave.<sub>Oct03-Jan07</sub> = 30.67, and ave.<sub>Apr07-Jul14</sub> = 29.17
- The horizontal lines are annual averages.

**Figure 4: Philippine Misery Index, quarterly 2000-2014**



**Note:**

1. PMI is the geometric mean of the objective and subjective measures of economic ill-being. Data are in Figure 3.

PMI: full period ave. = 27.52; segments: ave.<sub>Jan00-Jul03</sub> = 23.95, ave.<sub>Oct03-Jan07</sub> = 27.76, and ave.<sub>Apr07-Jul14</sub> = 29.20

2. The horizontal lines are annual averages.