

A Brief Description of the Methodology for the Philippine Labor Index

The shortfall or gap approach, also used for the Human Development Index, was adopted in the construction of the dimension indices. In this approach, the shortfalls of the country relative to desired targets or goals are measured. For this, the following minimum and maximum values or benchmarks for each component indicator were identified.

Orientation	Dimension and Indicator	Minimum	Maximum
Opportunities for Work			
-	Unemployment to working age population ratio	5	95
+	Percentage of employees to total employed	20	80
-	Percentage of part-time workers to total employed	20	80
Freedom of Choice of Employment			
-	Economic activity rate of children 10-14 years old	1	99
+	School attendance rate of children 10-14 years old	0	100
Productive Work			
+	Percentage of employed working 40-48 hours a week to total employed	20	80
-	Visible underemployment rate	5	95
-	Percentage of low paid employees to total employees	0	45
Security at Work			
+	Percentage of permanently employed to total employed	10	90
+	Percentage of workers covered by social security schemes to total self-employed and employees	0	100
-	Permanently displaced workers due to economic reasons per 1,000 employees in private establishments	5	95

Orientation	Dimension and Indicator	Minimum	Maximum
Representation at Work			
+	Union density rate for employees in private and government establishments	0	20
+	Collective bargaining coverage rate for employees in private establishments	0	20
-	Workdays not worked due to strikes/lockouts per worker	1	26
+	Percentage of workers association membership to total employed	0	5

Orientation	Dimension and Indicator	Reference*	Max [actual value-1]
Equity in Work			
+/-	Female-male ratio in non-agricultural wage employment	1	1
+/-	Industry-agriculture hourly basic pay ratio	1	2
+/-	Female-male hourly basic pay ratio for clerical, sales and service occupations	1	1

* This refers to the ideal ratio and any value on either side of the ideal ratio indicates inequity.

Component Index Value

Component Index = 100 - Shortfall

$$\begin{aligned}
 &= 100 - \left[100 \times \left(\frac{\text{maximum} - \text{actual value}}{\text{maximum} - \text{minimum}} \right) \right] \\
 &= 100 \times \left(1 - \frac{\text{maximum} - \text{actual value}}{\text{maximum} - \text{minimum}} \right) \\
 &= 100 \times \left(\frac{\text{maximum} - \text{minimum} - \text{maximum} + \text{actual value}}{\text{maximum} - \text{minimum}} \right) \\
 &= 100 \times \left(\frac{\text{actual value} - \text{minimum}}{\text{maximum} - \text{minimum}} \right)
 \end{aligned}$$

For a negatively oriented indicator, the index value is,

$$\text{Component Index} = 100 \times \left(\frac{\text{translated value} - \text{minimum}}{\text{maximum} - \text{minimum}} \right)$$

where the translated value is the actual value subtracted from 100 (except for the percentage of low paid employees to total employees and the number of workdays not worked due to strikes/lockouts per worker, for which the actual values are subtracted from 45 and 27, respectively).

For indicators expressed as ratios as in the case of indicators in the dimension Equity in Work, the index value is,

$$\text{Component Index} = 100 - \text{Shortfall}$$

$$\text{where: Shortfall} = 100 \times \frac{|\text{actual value} - 1|}{\text{maximum } |\text{actual value} - 1|}$$

and the values of the denominator have been predetermined as indicated in the previous table.

The Dimension Index

Each dimension index is computed by taking the average of the index values of its component indicators.

$$\text{Dimension Index} = \frac{\sum_{i=1}^n \text{Component Index}_i}{n}$$

where n is the number of indicators in the dimension.

The Philippine Labor Index

The overall index is the weighted average of its dimension indices.

$$PLI = 0.5 \left(\frac{\sum_{D=1}^2 \text{Dimension Index}_D}{2} \right) + 0.5 \left(\frac{\sum_{D=3}^6 \text{Dimension Index}_D}{4} \right)$$

where,

D₁ = Opportunities for Work
D₂ = Freedom of Choice of Employment
D₃ = Productive Work

D₄ = Equity in Work
D₅ = Security at Work
D₆ = Representation at Work