Four approaches to measuring SDG 4.c.5

Indicator 4.c.5: Average teacher salary relative to other professions requiring a comparable level of qualification

TCG6/ REF/7 Measuring SDG indicator 4.c.5 and the role of the UNESCO Institute for Statistics
Summary tables at http://tcg.uis.unesco.org/wp-content/uploads/sites/4/2020/10/WG-T-8-Measuring-SDG-indicator-4.c.5.-Summary-update.pdf

1. Statutory Teacher Salaries

Definition: Ratio of *annual statutory salary for a teacher with typical qualifications and 15 years' experience by level taught* (UIS questionnaire) to *annual earnings of professionals* (ILOSTAT)

Advantages: Statutory teacher salaries are normally easy for governments to report; monthly earnings of professionals available for many countries on ILOSTAT; similar approach to OECD Education at a Glance

Disadvantages: Does not conform exactly to the SDG definition ("comparable level of qualification"), may exclude teachers at private schools, requires aggregation if statutory salaries vary within countries / levels

Availability: Salaries available for 51% SSA, 54% in LAC, 39% E./SEA (Friedrich could expand and clarify status?)

Country ownership: Yes, as teacher salaries reported by countries through UIS questionnaire; however, UIS would most likely calculate the ratio

2. Labor Force Survey

Definition: Ratio of teacher salaries to others controlling for education and other relevant covariates ("Mincerian earnings model")

Advantages: Most closely matches the definition of the SDG indicator by controlling for education, experience and other indicators of qualification

Disadvantages: Requires analysis of LFS data; small sample of teachers may limit comparability (i.e.: too large confidence intervals to make a conclusion about whether salaries are higher or lower than others)

Availability: A few published studies, primarily in Latin America and U.S.A.

Country ownership: Depends who estimates it: if done by national statistical offices (e.g.: unemployment rates reported to ILOSTAT) then countries would have ownership; perhaps too if in-country researchers; little ownership if calculated by a UIS consultant

3. International learnings assessments?

Definition: Ratio of estimated teacher salaries to annual earnings of professionals (ILOSTAT)

Advantages: Would include public and private providers (as sampled in assessments) and provide an estimate of the average of teachers

Disadvantages: Restricted to teachers of the assessment's target student population; may have large confidence intervals limiting comparability

Availability: Just PASEC 2014 so far (10 countries)

Country ownership: Depends on who provides the estimates.

4. Teaching Staff Compensation?

Definition: Ratio of annual total teacher compensation per full-time equivalent teacher (computed from various UIS questionnaire items) to annual earnings of professionals (ILOSTAT)

Advantages: Generally easy to provide expenditure and teacher counts; provides an average for teachers

Disadvantages: Overestimates earnings collected by ILOSTAT as it would include employer pension contributions, payroll taxes, etc.; need data on full-time equivalent teachers; other limitations as with teacher statutory salaries

Availability: Ratio at primary level was calculated for 22 countries

Country ownership: Yes, as with statutory salaries

1. Statutory Teacher Salaries – primary level example estimates

Table 1. Currently available measure based on statutory salaries (primary school teachers)				
Country	Year	Annual statutory salary for a teacher with typical qualifications and 15 years' experience (local currency)	Monthly earnings of professionals (ILOSTAT, local currency)	Ratio (to annual earnings)
Africa				
Cameroon	2018	2,050,000	216,525	0.79
Liberia	2016	24,975	9,984	0.21
Mauritius	2018	412,425	38,171	0.90
Arab States				
Jordan	2018	8,500	671	1.06
Palestine	2018	54,972	2,579	1.78
Asia and the Pacific				
Mongolia	2018	3,852,727	1,133,997	0.28
Philippines	2017	347,742	26,293	1.10
Europe and North America				
Albania	2018	677,400	67,888	0.83
Latin America and the Caribbean				
Costa Rica	2018	9,700,000	1,163,276	0.69
Ecuador	2017	18,746	904	1.73

Annual statutory salaries of teachers with typical qualifications and 15 years' experience is collected in the UIS education questionnaire A11. *Data for Rwanda as in dataset currently, may be incorrect.

2. Labor Force Survey – example estimates

Table 2. Percent difference in hourly earnings between teachers and non-teachers controlling for experience, age and other characteristics (Mincer earnings function, Liang 2000)

	Hourly Earnings			Annual earnings		
Country	Estimate	95% confidence interval		Estimate	95% confidence interval	
Bolivia	n.a.	n.a	n.a	-31.6***	-36.8	-26.0
Brazil	-6.8**	-12.1	-1.1	-29.5***	-33.6	-25.3
Chile	n.a.	n.a	n.a.	-17.3***	-22.0	-12.3
Colombia	22.1***	17.4	27.0	-4.9***	-8.5	-1.1
Costa Rice	16.2***	7.4	25.7	n.a.	n.a.	n.a.
Ecuador (urban)	-23.7***	-29.4	-17.4	-30.9***	-34.9	-26.7
El Salvador	9.4***	3.2	16.0	-19.7***	-24.3	-14.9
Honduras	33.6***	23.6	44.5	n.a.	n.a.	n.a.
Panama	12.7***	6.3	19.6	-4.9*	-10.3	0.9
Paraguay	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Uruguay (urban)	10.5***	4.2	17.2	-13.1***	-18.0	-7.8
Venezuela	8.3*	0.2	17.2	-8.6*	-15.5	-1.1

Source: Liang 2000; author's conversion to percentages and calculation of the 95% confidence interval. Statistical significance at the 1, 5, and 10 percent levels denotes as *, **, and *, respectively. Liang 2000 did not report non-statistically significant differences defined as higher than 10 percent; they are denoted n.a. in this table.**