

# Are South Africa's teachers among the best paid in the world?

A critique of existing methods to compare pay across countries

*Stellenbosch, September 2019*

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- Ways of estimating teacher pay
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# Why pay comparisons are important

Child is a National Asset

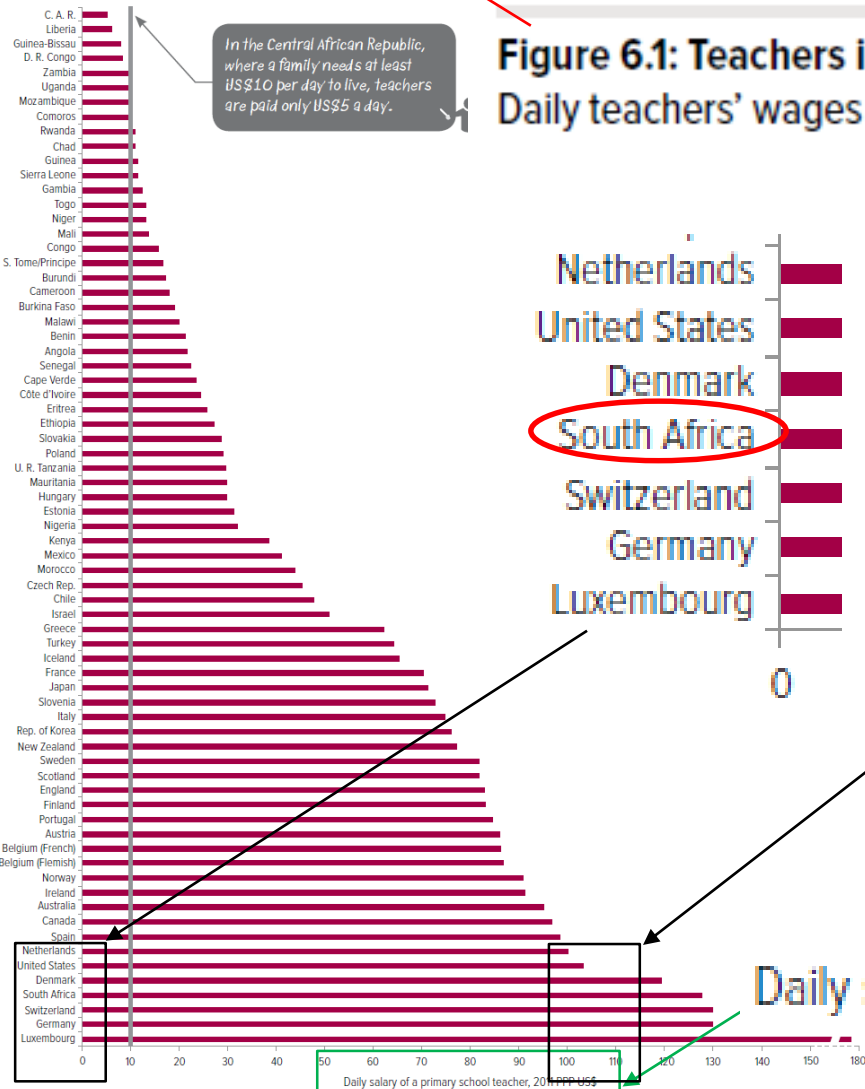
- In South Africa, remuneration of just publicly employed educators working in the schooling sector comes to around 3% of GDP.
- Several factors determine teacher pay:
  - History is important – a ship whose course is difficult to change.
  - Union power.
  - National debates around educational quality, teacher pay in the national wage context, teacher pay in the international context.



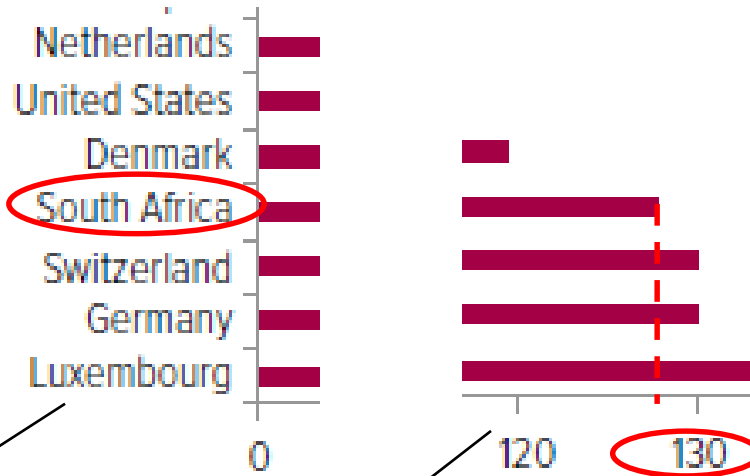
# Ways of estimating teacher pay

is a National Asset

**Figure 6.1: Teachers in some poor countries are not paid enough to live on**  
Daily teachers' wages in public primary institutions, latest available year

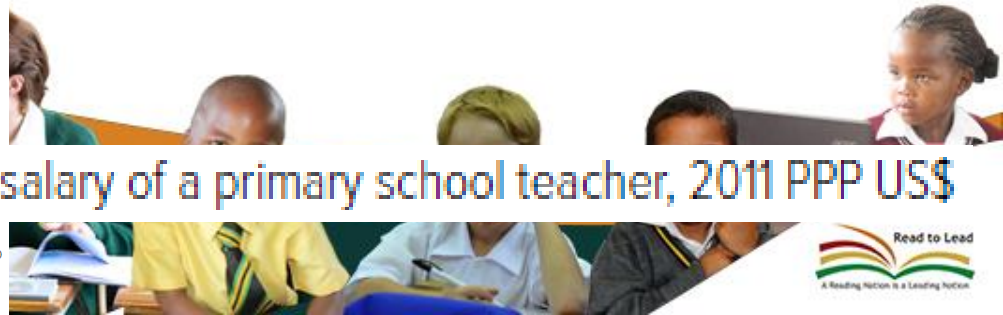


**Figure 6.1: Teachers in some poor countries are not paid enough to live on**  
Daily teachers' wages in public primary institutions, latest available year



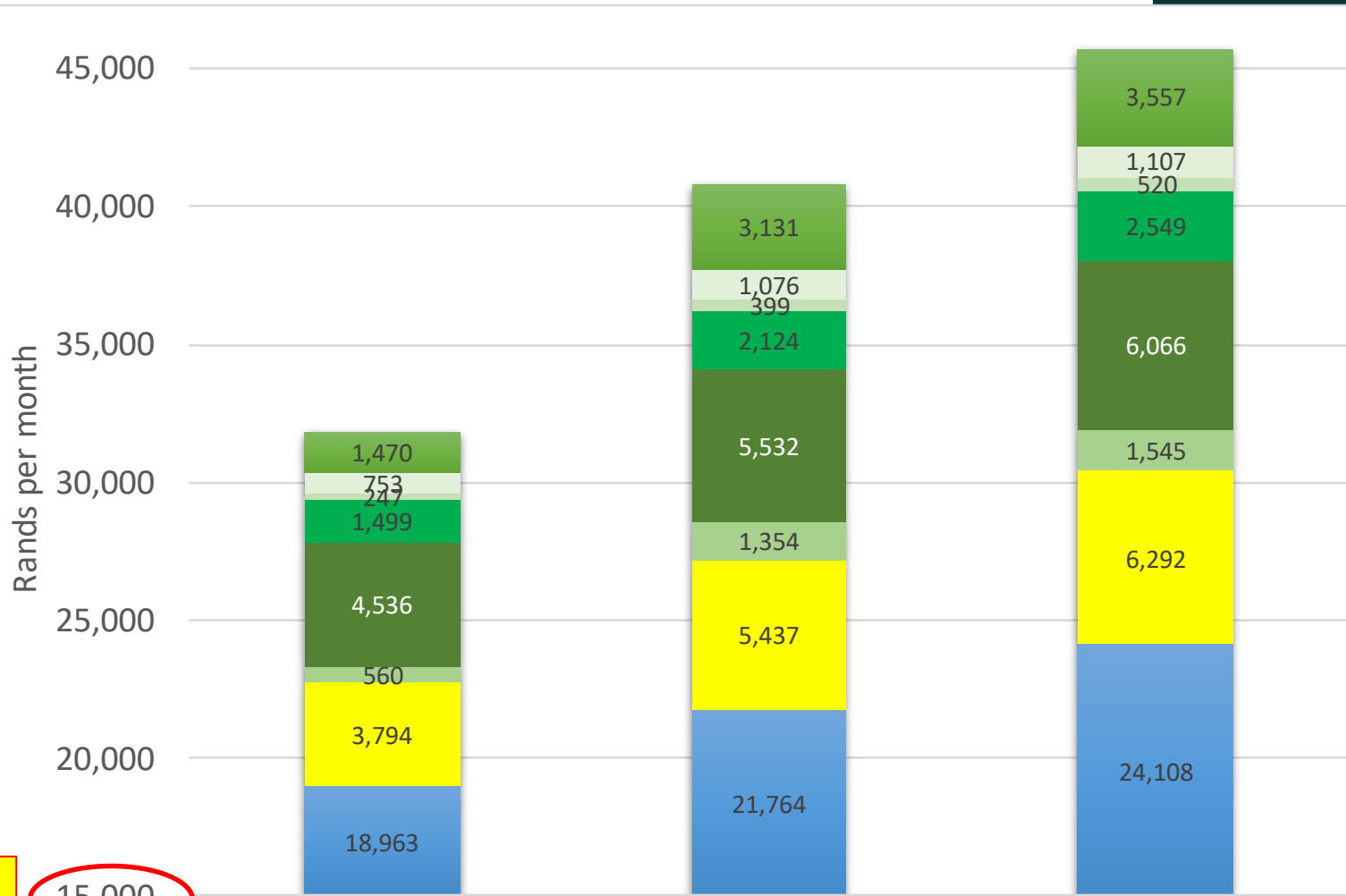
From UNESCO (2014: 255).

Daily salary of a primary school teacher, 2011 PPP US\$



# Ways of estimating teacher pay (contd.)

is a National Asset



Not zero!

15,000

- Disposable income
- Income tax
- Insurance
- Pension
- 13th cheque
- Other benefits
- Housing subsidy
- Medical subsidy



# Flaws in the existing UNESCO-OECD approach

Issue 1: Applying the definitions correctly to South African data

\$128	In UNESCO's 2014 graph.	Denmark, Switzerland
\$95	Using wrong definition: 'average actual salary'.	
\$86	Naïve use of correct definition: 'statutory' and 'starting' salary' (in SA, 'basic salary', or 'notch'), <u>without benefits</u> , but <u>before tax</u> .	England, Finland
\$71	Non-naïve use of correct definition: takes into account employee's own contributions (some mandatory) to benefits, also <u>study fees</u> and e.g. <u>life insurance</u> deductions.	Japan, Italy



# Flaws in the existing UNESCO-OECD approach (contd.)

## Issue 2: Questions relating to the PPP index

Under-valuation of ZAR (vs. USD)	PPP approach	Daily teacher pay 2011	
52%	Overall World Bank PPP figures	\$71	Japan, Italy
43%	World Bank PPP figures applicable to just 'private consumption'	\$67	Turkey, France
52%	Big Mac Index	\$71	Japan, Italy
0%	If no difference in purchasing power	\$46	?

## Issue 3: South Africa's income tax in an international context?



# The new SDG indicator on teacher salaries

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

A good indicator, but...

- Preference seems to be for comparison to other public employees only.
- Use of labour force survey data actually de-emphasised, in favour of published salary scales.
- No conditioning on e.g. age and gender.
- If countries calculate, high likelihood of non-comparability across countries.





# Alternative measures using household assets

al Asset

Use of household assets to measure socio-economic status – popularised by Filmer and Paterinos (2001).

The IPUMS data of the Minnesota Population Center – probably the best international normalised dataset of household surveys available for our purposes.



# Alternative measures using household assets (contd.)

Table 1: Percentage of workers who are teachers

	Below technicians and associate professionals	Technicians and associate professionals (excl. primary teachers)	Primary and pre-primary education teaching professionals	Primary education teaching <i>associate</i> professionals	Secondary education teaching professionals	Other professional	Managers	Total	Sum of three teacher columns	Sampled teachers
Botswana 2011	80.0	6.4		2.2	2.6	4.5	4.3	100.0	4.7	2,776
Costa Rica 2000	73.6	13.7	2.5		1.0	6.2	3.0	100.0	3.5	4,020
Cuba 2002	65.4	13.5	1.3	0.6	1.3	7.5	10.4	100.0	3.2	12,691
Ecuador 2001	86.5	2.5	1.3	0.7	1.6	4.4	2.9	100.0	3.7	13,093
Egypt 2006	71.0	9.4	5.0	0.0	1.4	8.3	4.9	100.0	6.4	116,924
Greece 2001	70.8	8.1	1.6	0.2	2.1	8.5	8.8	100.0	3.9	14,660
Malaysia 2000	74.9	10.0	0.0	2.1	1.8	4.2	7.0	100.0	4.0	5,837
Mozambique 2007	95.4	2.1	0.1	1.0	0.1	0.6	0.7	100.0	1.3	7,690
Nicaragua 2005	84.3	4.7	0.5	1.9	0.8	4.7	3.0	100.0	3.3	4,618
Nigeria 2010	74.0	17.4	1.7	0.2	1.2	3.2	2.2	100.0	3.2	724
Philippines 2010	81.8	3.0	1.9		0.6	3.8	8.9	100.0	2.5	69,369
Portugal 2001	74.9	8.7		1.0	2.7	5.9	6.7	100.0	3.7	8,301
Romania 2011	71.4	9.3	1.0		1.8	13.7	2.8	100.0	2.8	22,005
Rwanda 2002	97.4	0.6	1.1	0.0	0.2	0.5	0.2	100.0	1.3	3,337
Senegal 2002	90.4	3.7	0.9		0.4	4.0	0.7	100.0	1.3	2,904
South Africa 2001	76.7	8.1	1.2	2.3	0.1	6.1	5.6	100.0	3.6	25,822
South Africa 2007	70.2	6.8	2.2	0.0	1.8	8.9	10.2	100.0	4.0	7,543
Switzerland 2000	52.9	20.2		1.7	2.1	12.1	11.0	100.0	3.8	4,777
Thailand 2000	81.8	3.7	2.5	0.0	1.0	3.9	7.1	100.0	3.6	7,091
Uganda 2002	92.0	4.2	0.0	2.3	0.3	0.7	0.4	100.0	2.6	15,260
Zambia 2010	90.8	2.3	1.9	0.3	0.8	2.9	1.1	100.0	2.9	8,979

Source: Own analysis of IPUMS microdata – Minnesota Population Center (2019).

These percentages for SA look right.

Samples are large!

# Alternative measures using household assets (contd.)

Asset

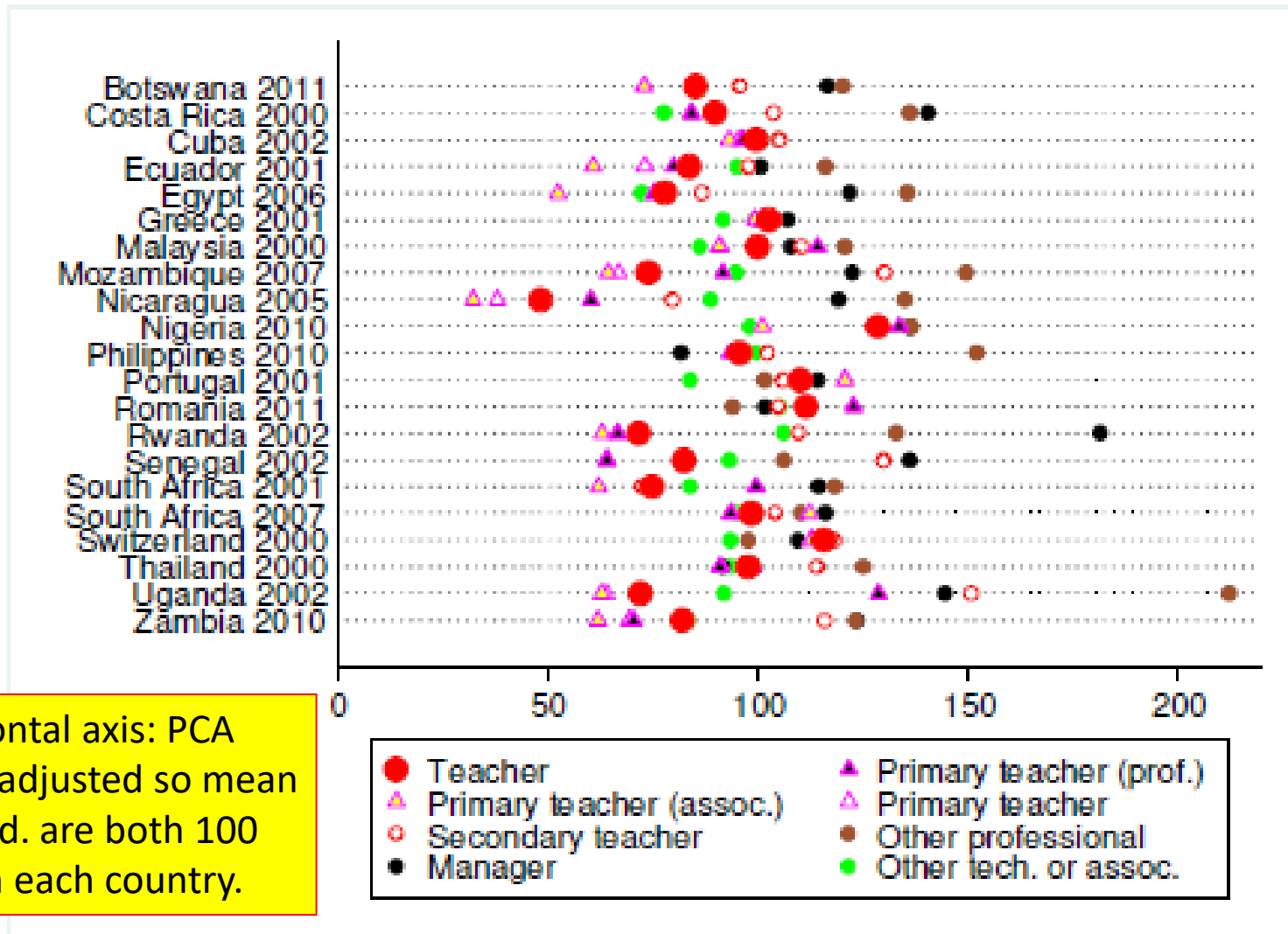
Table 2: Means of household statistics for associate professionals and above

	Persons	Electricity	Phone	Cell phone	Internet	Hot water	Heating	Air con	Computer	Washing machine	Freezer	Refrigerator	TV	VCR	Radio	Cars	Rooms	Bedrooms	Variables
Botswana 2011	3.5	92	25	100	20							84	90		77	0.7	2.9		10
Costa Rica 2000	4.2	100	84			73			43			97	97			0.6	5.8	3.0	10
Cuba 2002	3.7	99															4.4	2.7	4
Ecuador 2001	4.4	98	71														4.2		4
Egypt 2006	4.5	100	74	50	8			12	24	97	10	97	98	20	79	0.2	3.9		15
Greece 2001	3.3	100					98										3.6		4
Malaysia 2000	4.8	100	76		20			32	35	81		89	92	73	87	1.1		3.1	13
Mozambique 2007	5.5	62	10	77					17				60		81	0.2	3.3	2.3	10
Nicaragua 2005	5.2	94	41	58	5			7	21	11		63	90		43	0.3		2.5	13
Nigeria 2010	4.9	77	1	81													3.3		5
Philippines 2010	5.1	97	25	93	28				39	61		74	94	81	77	0.3			12
Portugal 2001	3.3	100					89										4.3		4
Romania 2011	3.1	100				93	100	21									3.0		6
Rwanda 2002	6.5	37	27	25	1				3				19		89	0.1	3.5		10
Senegal 2002	10.4	76	36					6	1			45	63	24	90	0.2	4.3		11
South Africa 2001	3.9	94	63	78					39			91	88		92		5.6		9
South Africa 2007	3.9	95	45	91	26				49			91	90		91		5.2		10
Switzerland 2000	2.7					99	100										4.2		4
Thailand 2000	4.1		72					37		68		96	99		93	0.9			8
Uganda 2002	5.6	34	5	29									24		79			2.2	7
Zambia 2010	5.8	79	9	91	10				29			66	83		85	0.3	1.1	2.4	12



# Alternative measures using household assets (contd.)

Figure 1: Mean SES for all countries and selected ISCO groups

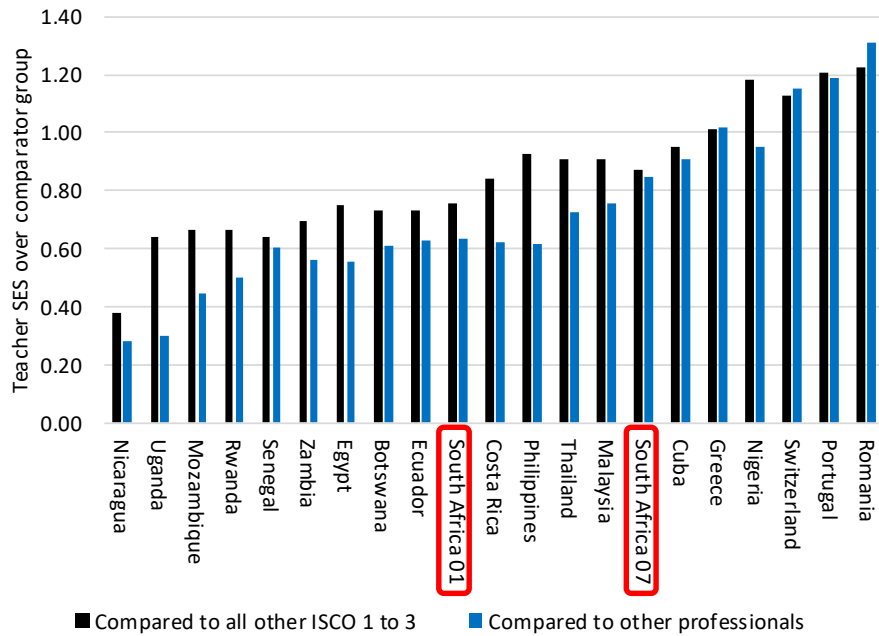


Horizontal axis: PCA score adjusted so mean and s.d. are both 100 within each country.

- Teacher
- ▲ Primary teacher (assoc.)
- Secondary teacher
- Manager
- ▲ Primary teacher (prof.)
- ▲ Primary teacher
- Other professional
- Other tech. or assoc.

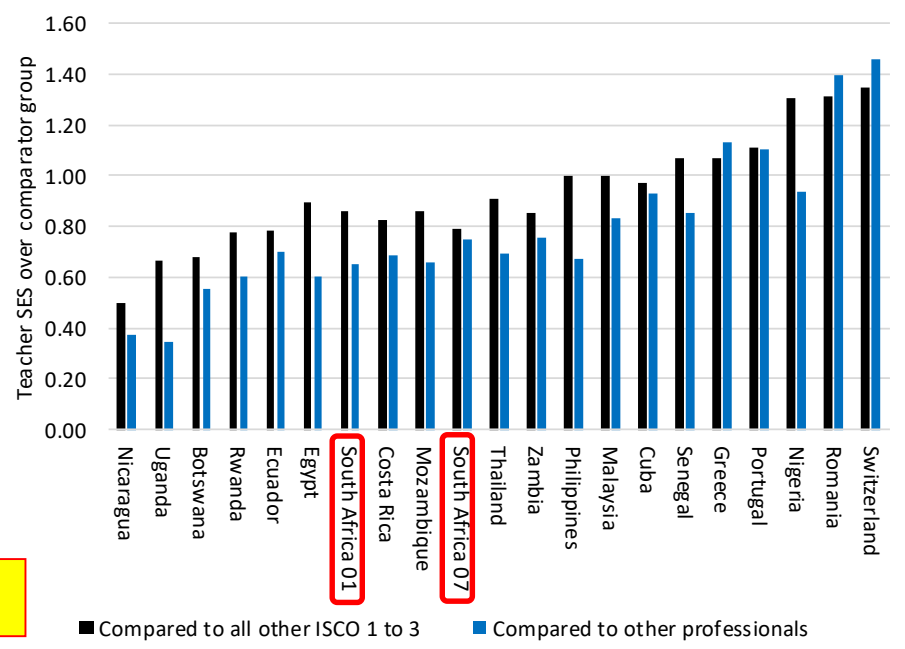


# Alternative measures using household assets (contd.)



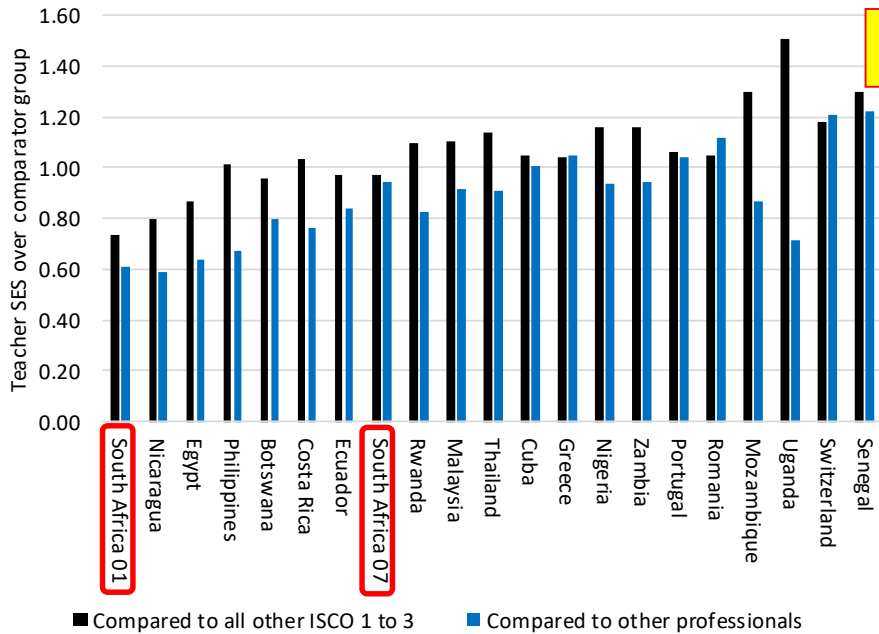
← All primary teachers

European countries tend to value primary teachers most.  
 Conditioning on gender age does make a difference. In South Africa, more opportunities for women outside teaching?  
 South Africa in relatively respectable company.



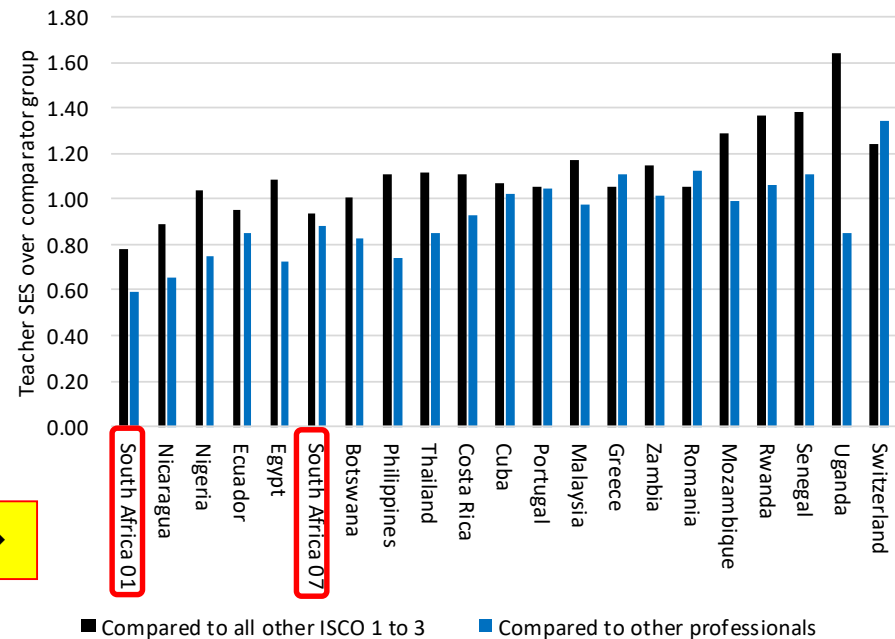
Female primary teachers aged 35 to 44 →

# Alternative measures using household assets (contd.)



A few African countries emerge as strong prioritisers of secondary teachers.

South African secondary teachers do not rank highly in terms of SES.



Female secondary teachers aged 35 to 44 →

# How relatively well-paid are South African teachers?

UNESCO  
2014 report:

Near... **X**  
Switzerland  
Germany

Our  
corrected  
but naive  
figures:

Near...  
England  
Finland

Our corrected non-  
naive with private  
consumption PPP:

Near...  
France  
Turkey

A contradiction  
probably best  
explained by South  
Africa's skills shortfall  
and hence high middle  
class pay by global  
standards, especially  
outside teaching.

Our household assets  
within-country relative  
calculation (à la SDG):

Primary near...  
Zambia, Thailand, Costa  
Rica

Secondary near...  
Nigeria, Nicaragua



# References

Filmer, D. & Pritchett, L.H. (2001). Estimating wealth effects without expenditure data - or tears: An application to educational enrollments in states of India. *Demography*, 38(1).

UNESCO (2014). *Education for All global monitoring report 2013/4: Teaching and learning: Achieving quality education for all*. Paris.

