

ResearchReel presentation

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Electricity poverty reduction and progress towards the sustainable development goal 7: Vietnam, 2008-2018.

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Rural electrification does not quite help
solve poverty.

Pr. Edward Miguel, IAEE Keynote today

So why do we measure SDG7 progress
by electrification rate ?

Me, this talk

In the last month, did the consumption of electricity meet the need of your household?

Engineers, economists angles to measure energy poverty

Access to reliable electricity

Basic needs satisfaction, energy poverty line,
multidimensional indexes.

Nussbaumer, Bazilian, and Modi. 2012. "Measuring Energy Poverty: Focusing on What Matters." *Renewable and Sustainable Energy Reviews*

Hills. 2012. "Getting the Measure of Fuel Poverty: Final Report of the Fuel Poverty Review." CASE report 72. *Center for Analysis of Social Exclusion*.

Li, Pan, and Wei. 2015. "A Bibliometric Analysis of Energy Poverty Research: Results from SCI-E/SSCI Databases." *International Journal of Global Energy Issues*

He and Reiner. 2016. "Electricity Demand and Basic Needs: Empirical Evidence from China's Households." *Energy Policy*

Son and Yoon. 2020. "Reducing Energy Poverty: Characteristics of Household Electricity Use in Vietnam." *Energy for Sustainable Development*

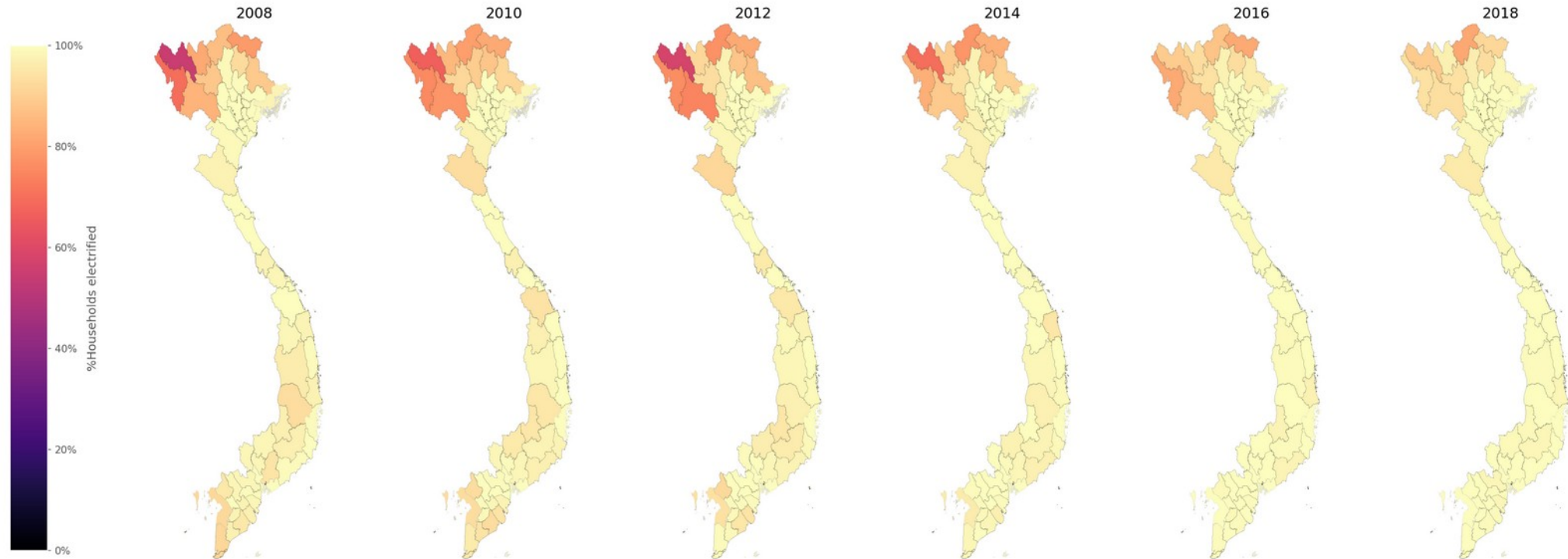
Electricity poverty in Vietnam, from 3 angles

- Engineering: *Access to the grid*
- Social: *Perception that needs are met*
- Economist: *Electricity bill % income*

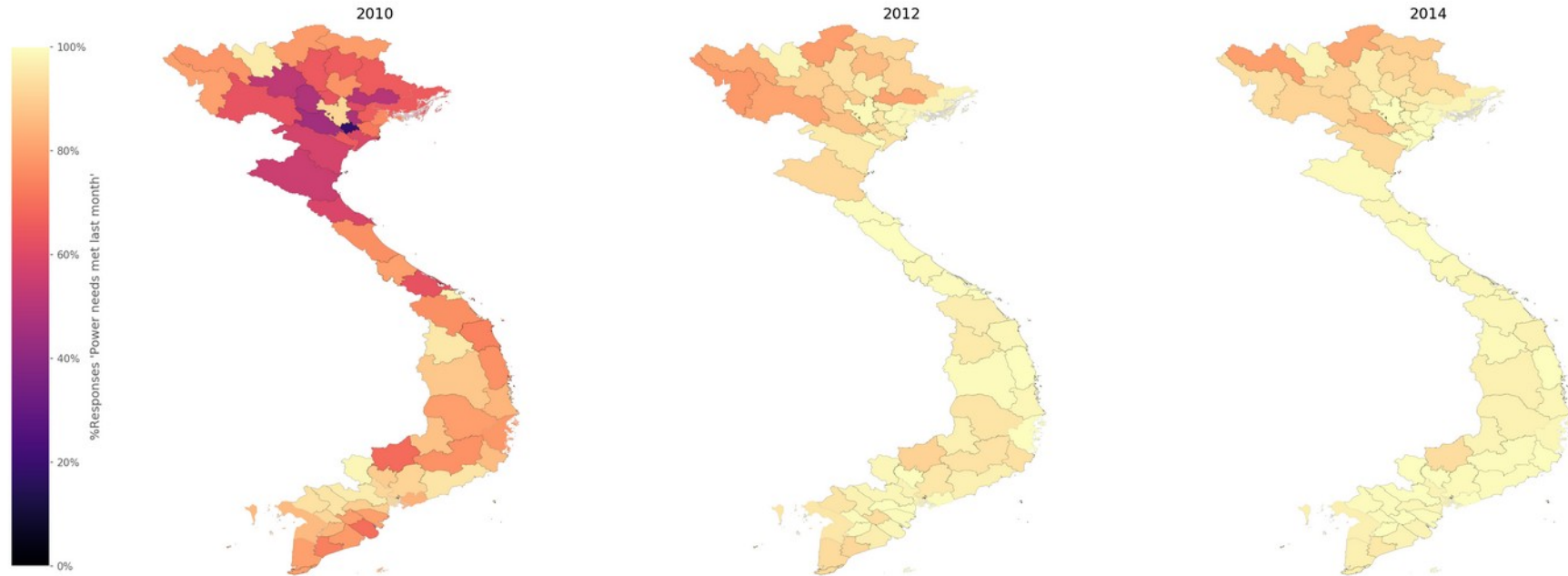
Vietnam's economy and electricity 2008-2018

	2008	2018
Population (Thous. pers.)	85 119	94 666
GDP per capita, PPP, constant 2017 \$	4 628	7 586
Share of population in urban areas	29,0 %	34,5 %
Electricity production, annual per person	834 kWh	2 221 kWh

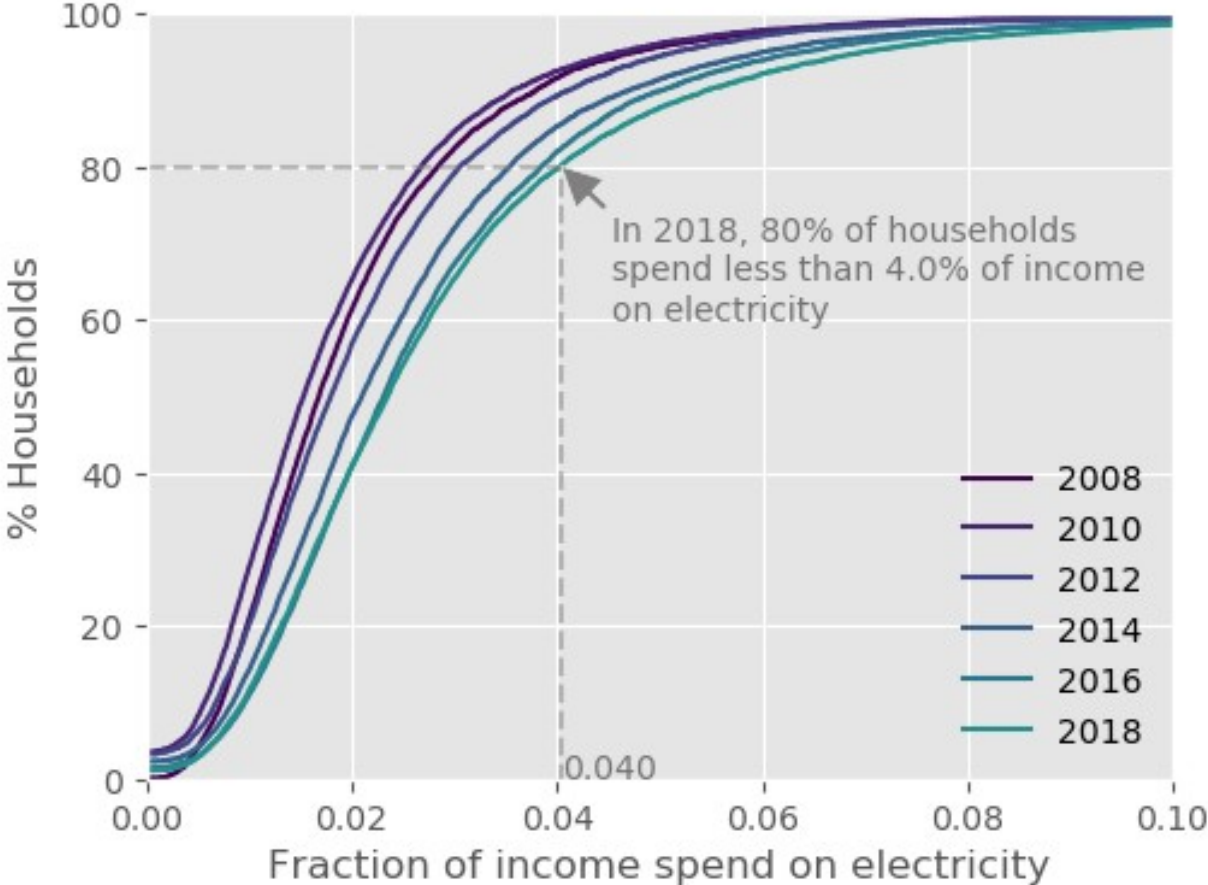
Quasi-universal access achieved in 2008 already



The share of households declaring *their electricity consumption did not meet their needs* decreased after 2010.



Electricity bills relatively low but growing



Electricity bills relatively low but growing



Unaffordable cooling during a heatwave makes media headlines, but welfare effect ambiguous

- Electricity substitutes other energy forms
- Rich households can afford high bills

The 2008 Vietnam situation illustrates objective vs. subjective criteria can differ

- *Access to the grid YES*
- *Electricity bill % income LOW*

but

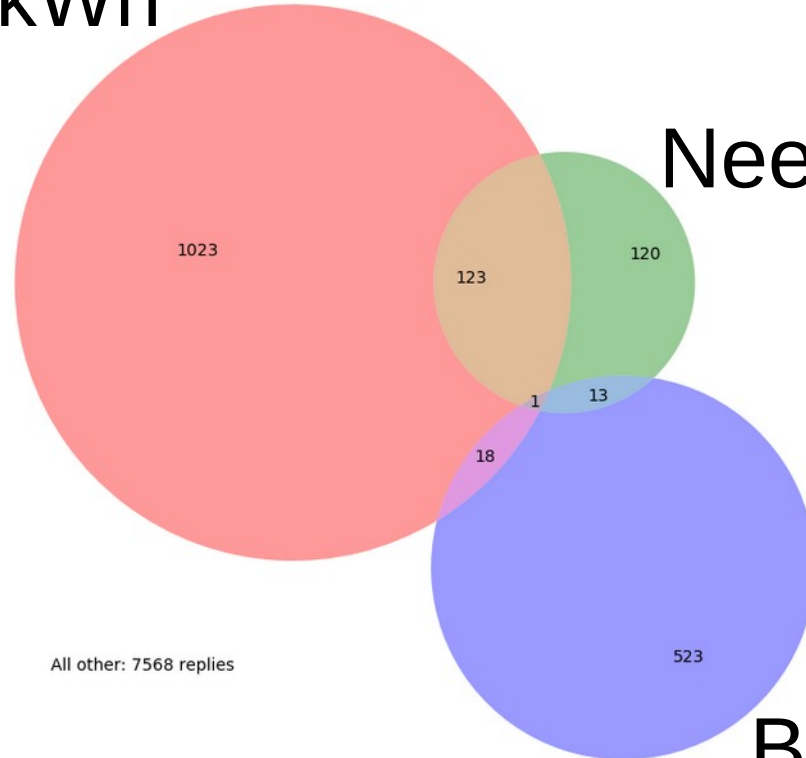
- *Perception that needs are NOT met*

Electricity poverty criteria do not overlap (2014)

Energy poverty in Vietnam Households 2014 survey
(n=9389)

Used < 30 kWh
last month

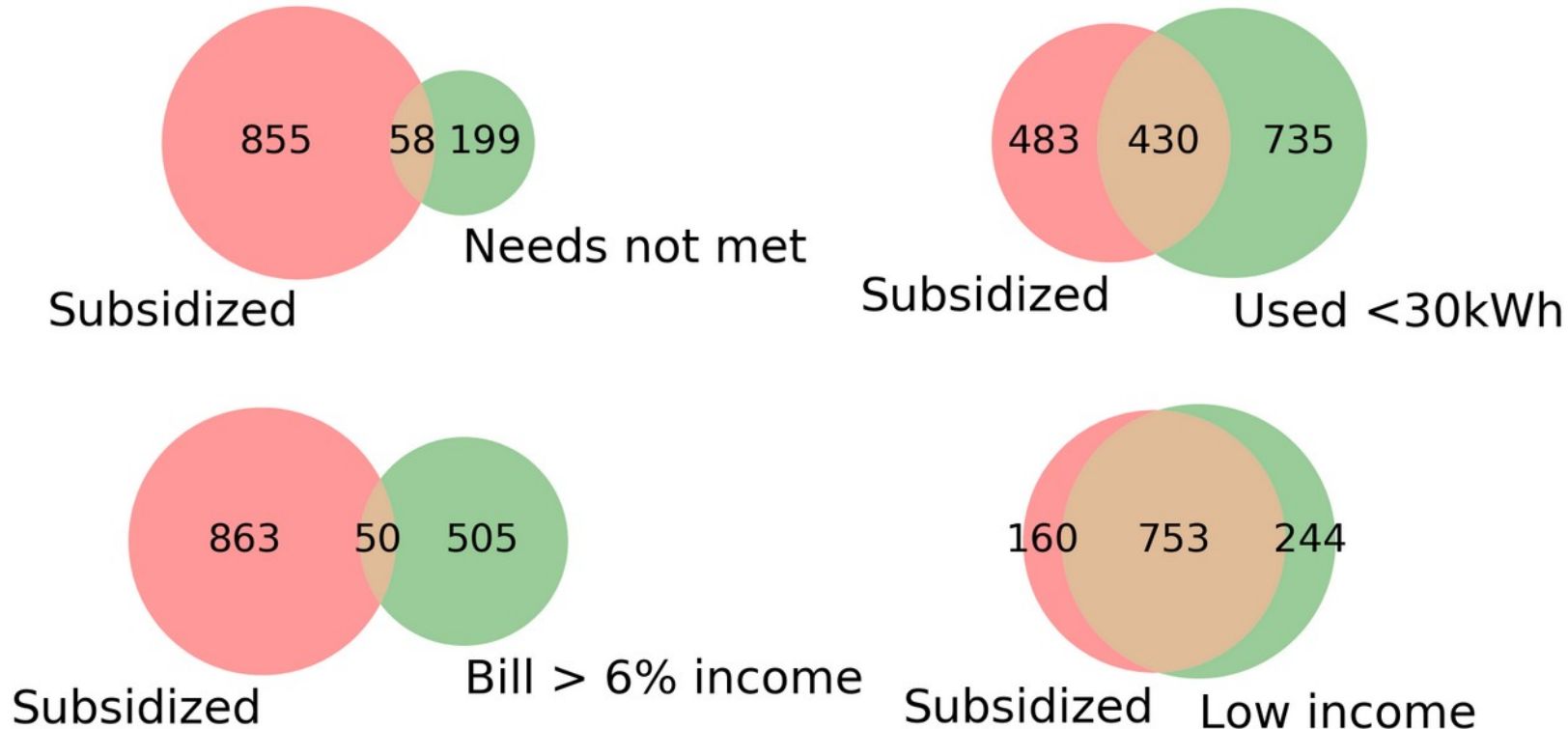
Needs not met



All other: 7568 replies

Bill > 6% income

The electricity subsidy is... an income subsidy



Conclusion

Electricity poverty is a human issue as much as an engineering and economic problem.

Out of 232 Sustainable Development Goal indicators, only two are subjective (SDSN 2015).

Working paper at <https://hal.archives-ouvertes.fr/hal-03160911>