

Is there evidence of a quantity-quality tradeoff using subnational NTA estimates from the Philippines?

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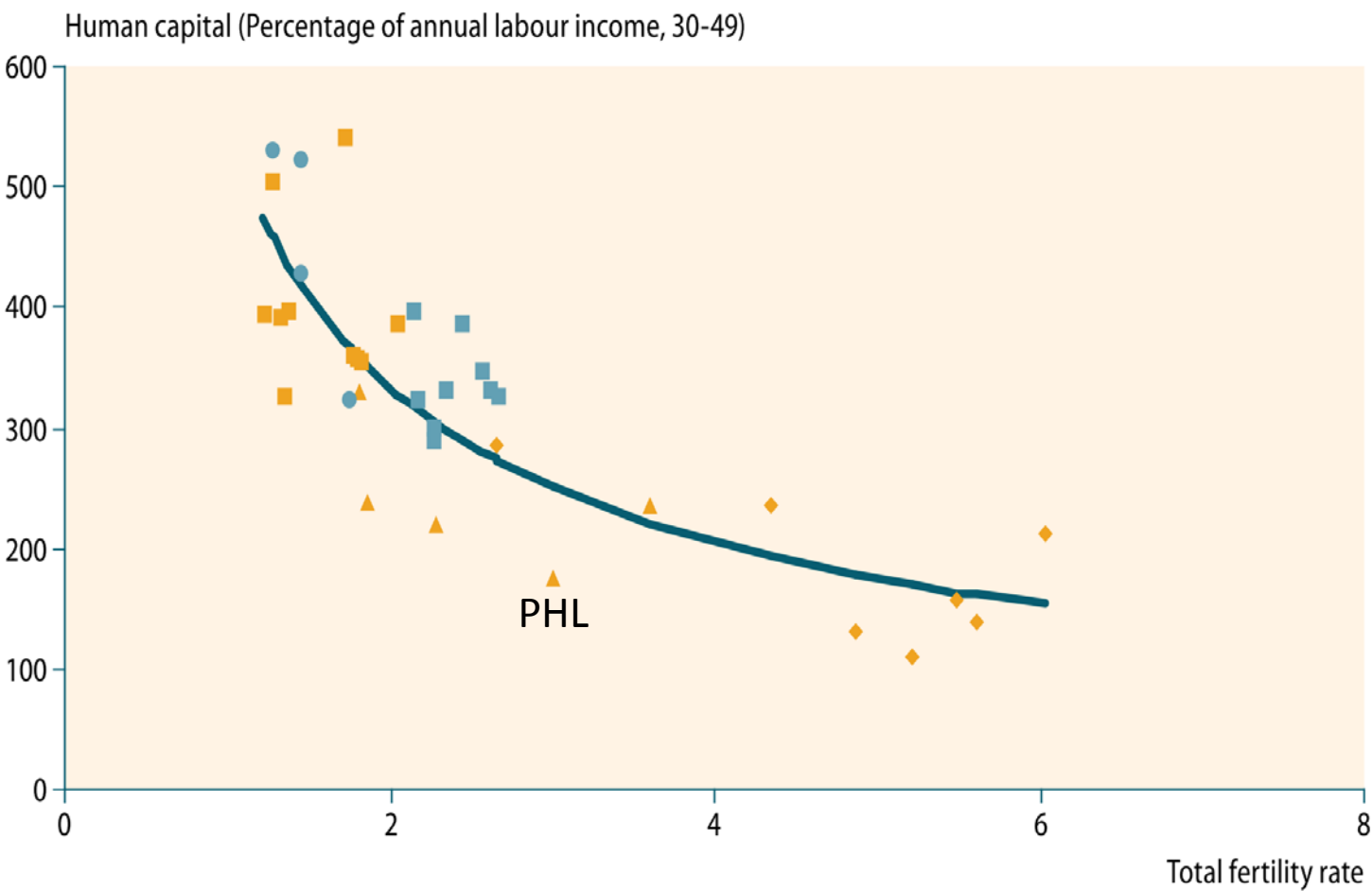
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NTA11, Senegal, 6/22/16

Human capital and the total fertility rate in selected countries



- ◆ Africa
- East Asia
- ▲ South-east Asia
- Latin America
- Europe and US
- Human capital prediction

Source: Lee and Mason (2010) updated using National Transfer Account estimates: www.ntaccounts.org accessed 22 July 2012.

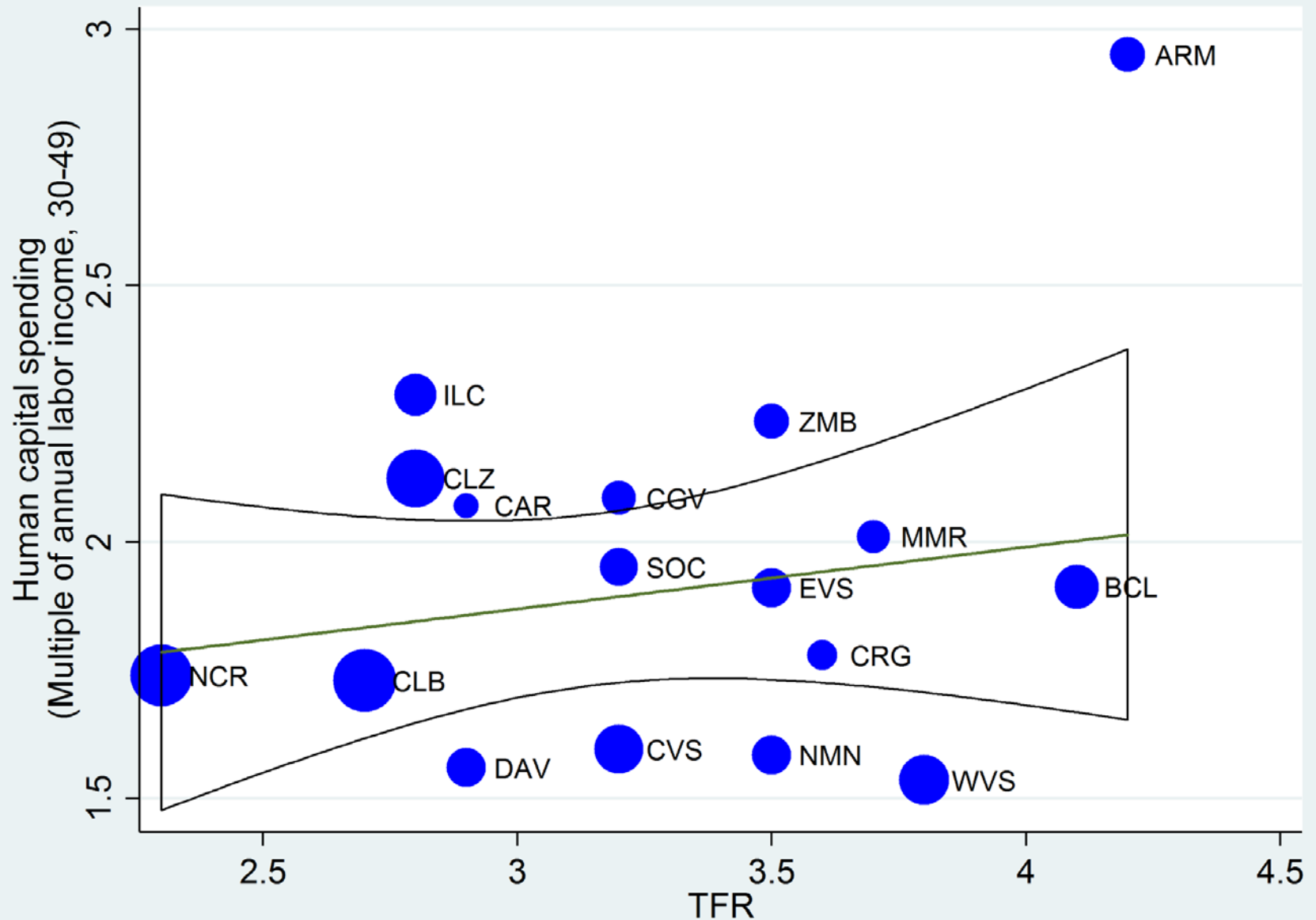
Note: Human capital is a synthetic cohort measure computed as the sum of per capita health spending and per capita education spending by single year of age. Health sums from age 0 to 17 and education from age 3 to 26. Results are normalized on simple average of per capita labour income for persons 30-49.

Subnational estimation in the Philippines

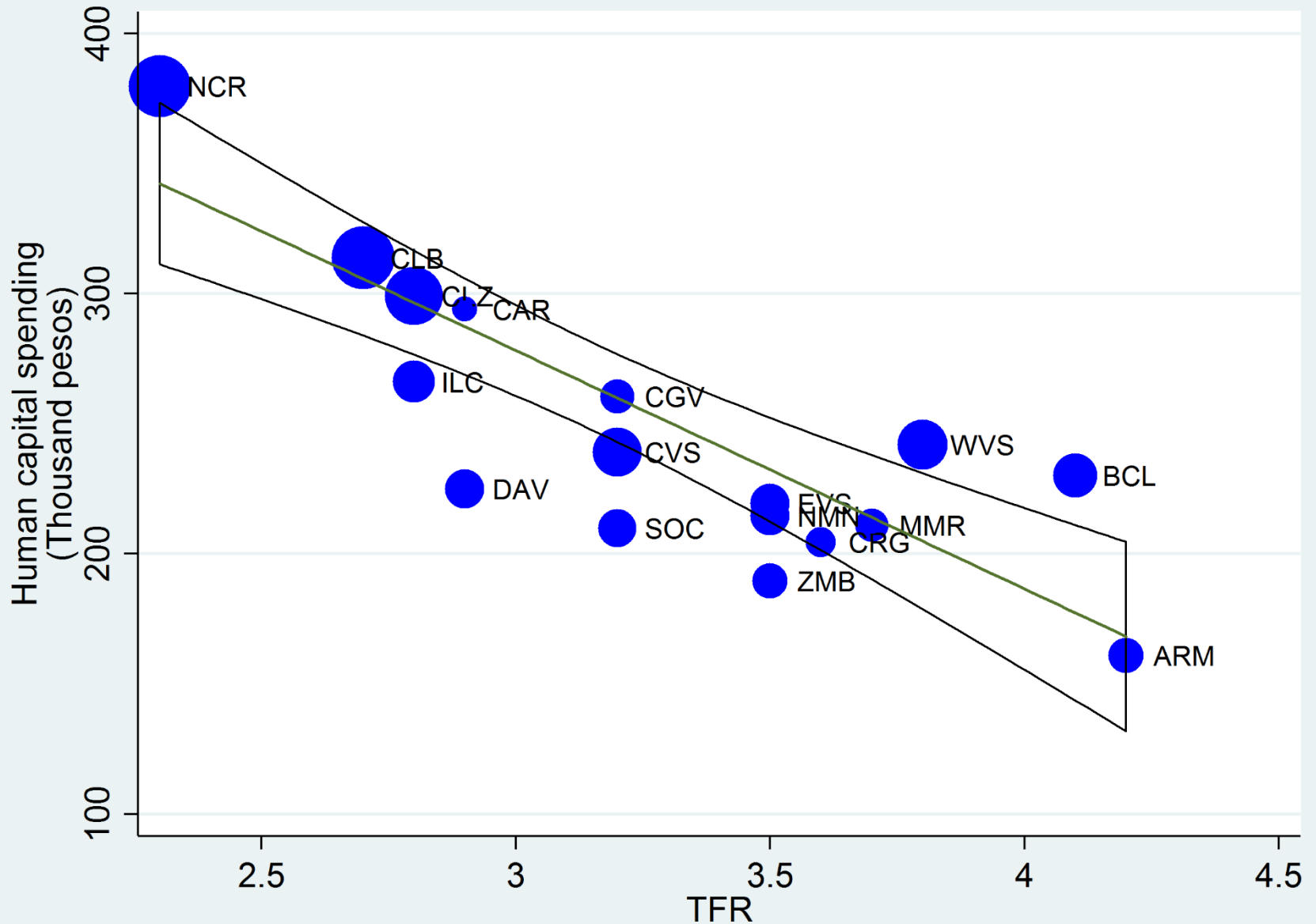
- 17 regions in Philippine NTA 2011
 - Uses 5-year age groups and no “smoothing”
- 4 broad regions in Philippine NTA 1999 and 2011
 - Uses single-year age groups and “smoothing”
- 2010 census: Migration between provinces in past 5 years was less than 3%
- Information available for 17 regions:
 - Mean test scores for students at the final year of elementary and secondary school, 2011-2013
 - Share of children 0–5 with no recent sickness (diarrhea, fever, cough), DHS 2013

Cross-sectional evidence

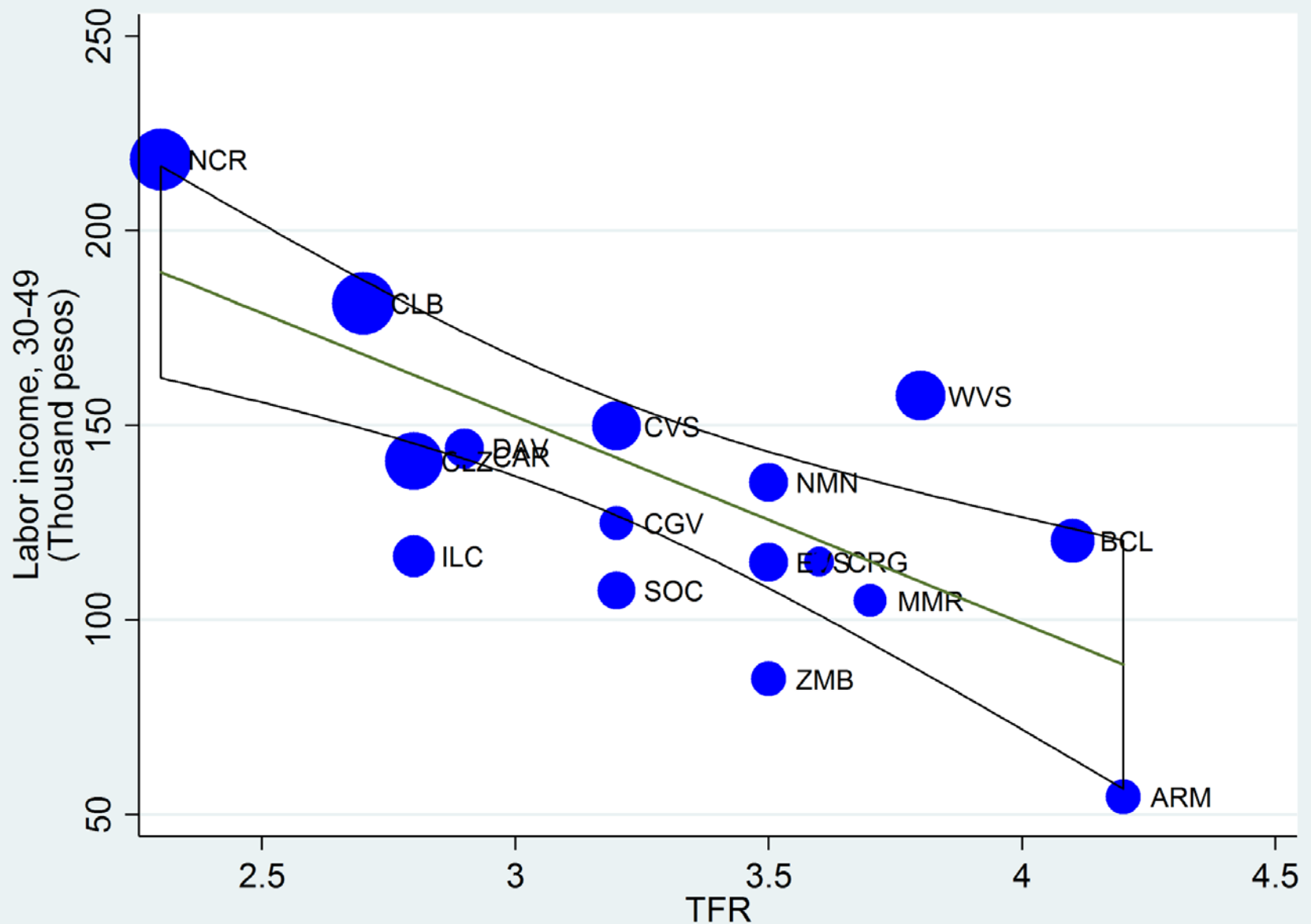
Q-Q tradeoff not apparent using standardized measure of HC investment



...but present in absolute terms

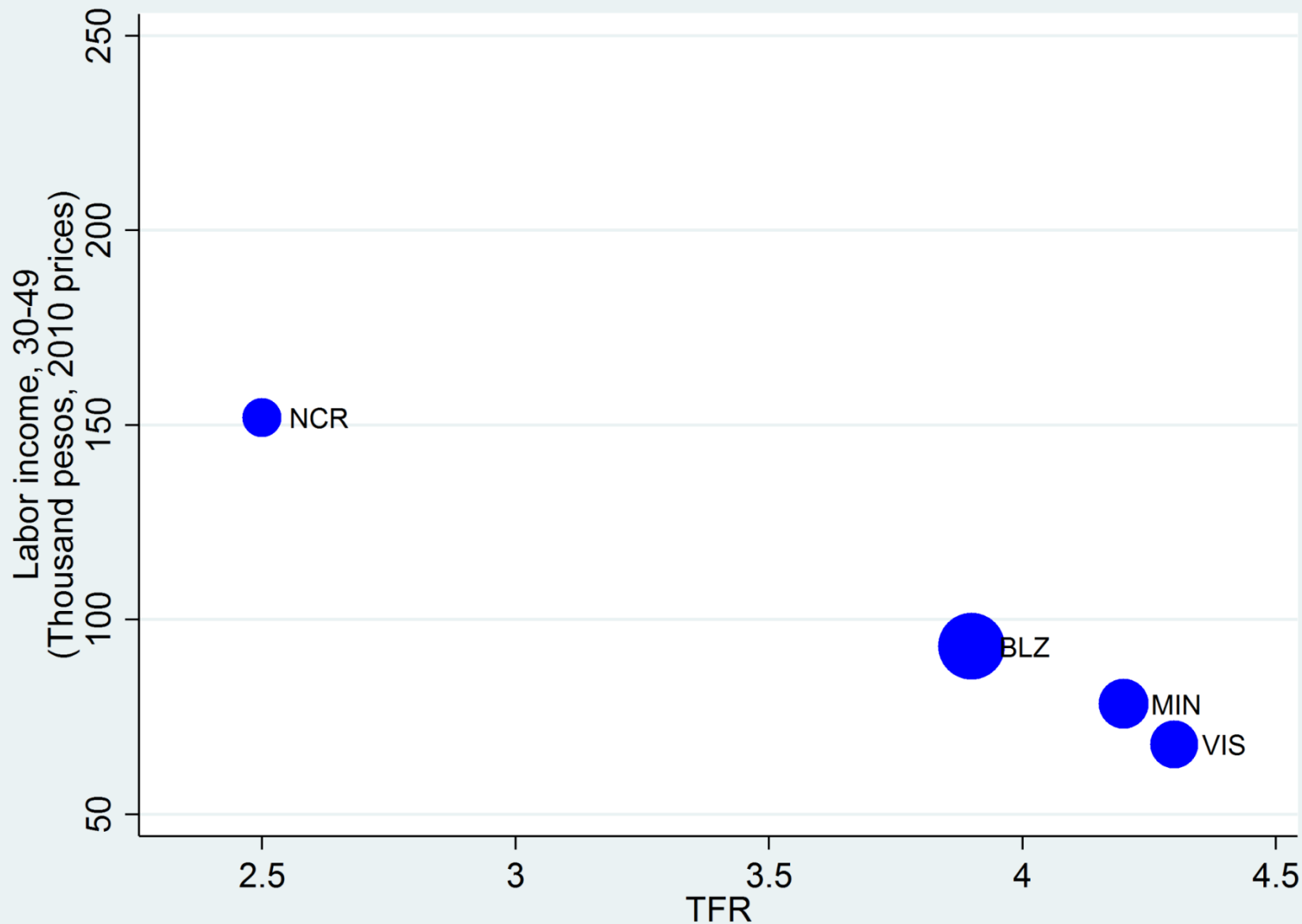


Increase in labor income at age 30–49 associated with lower TFR

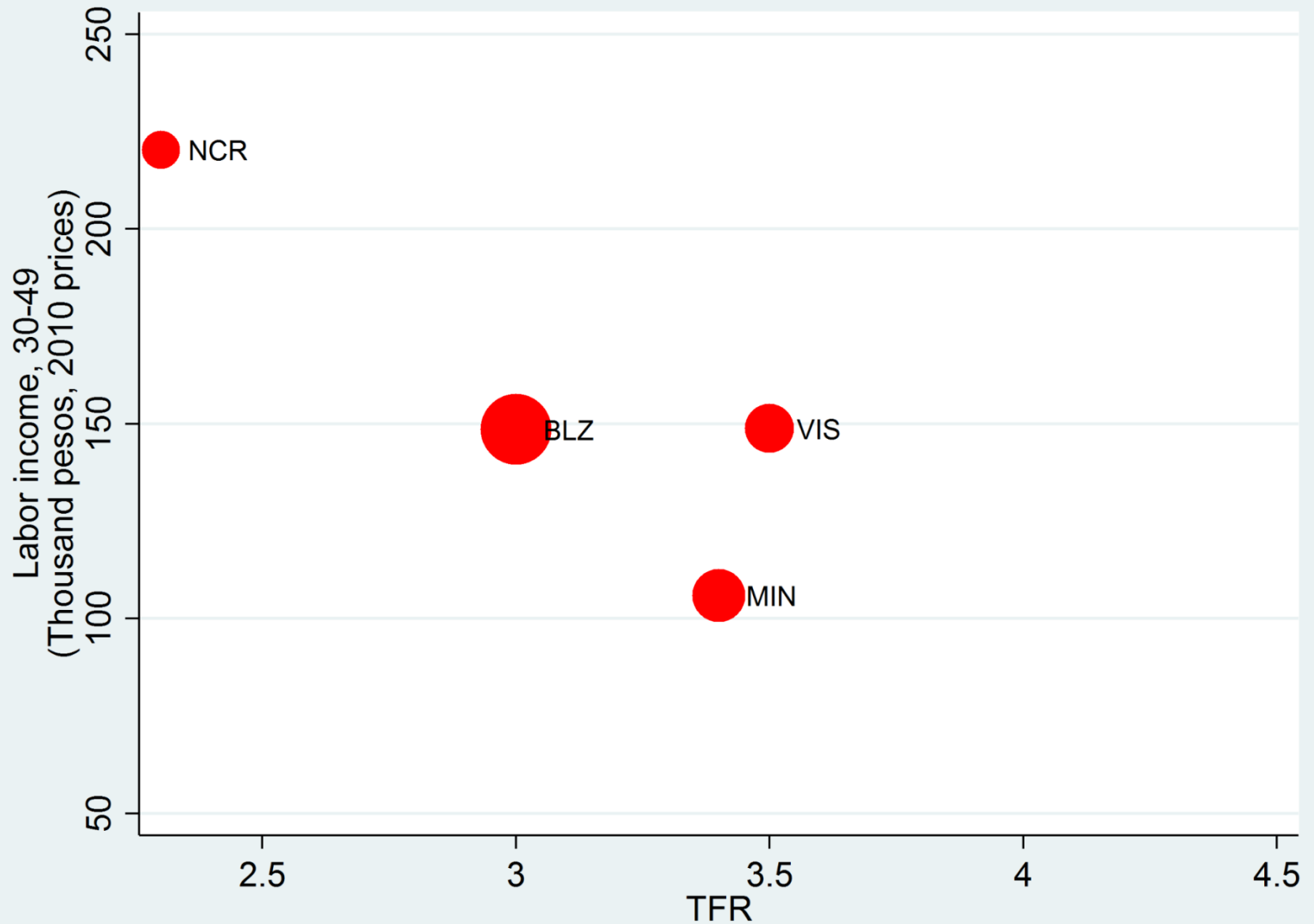


Panel data evidence

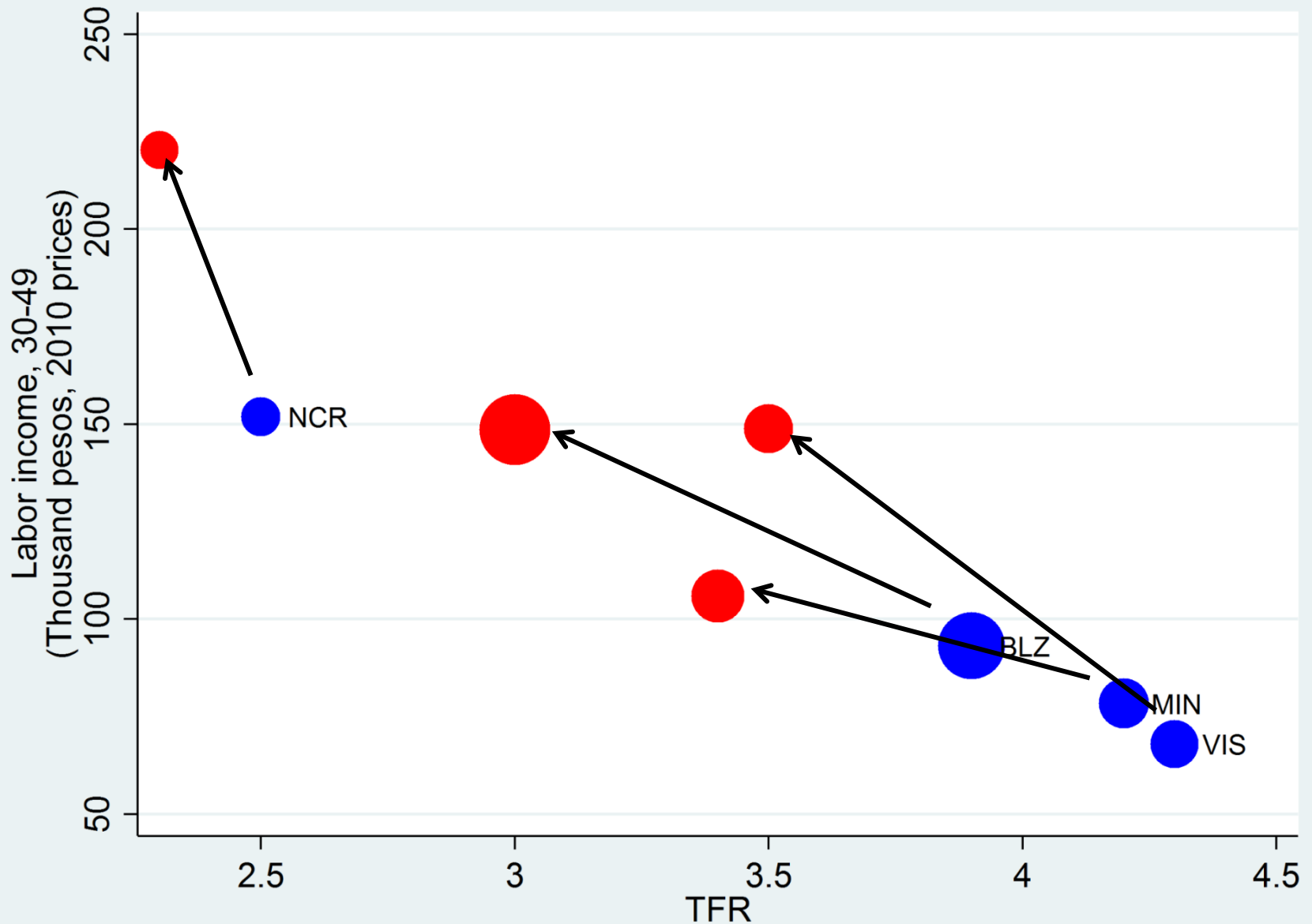
Labor income in 1999



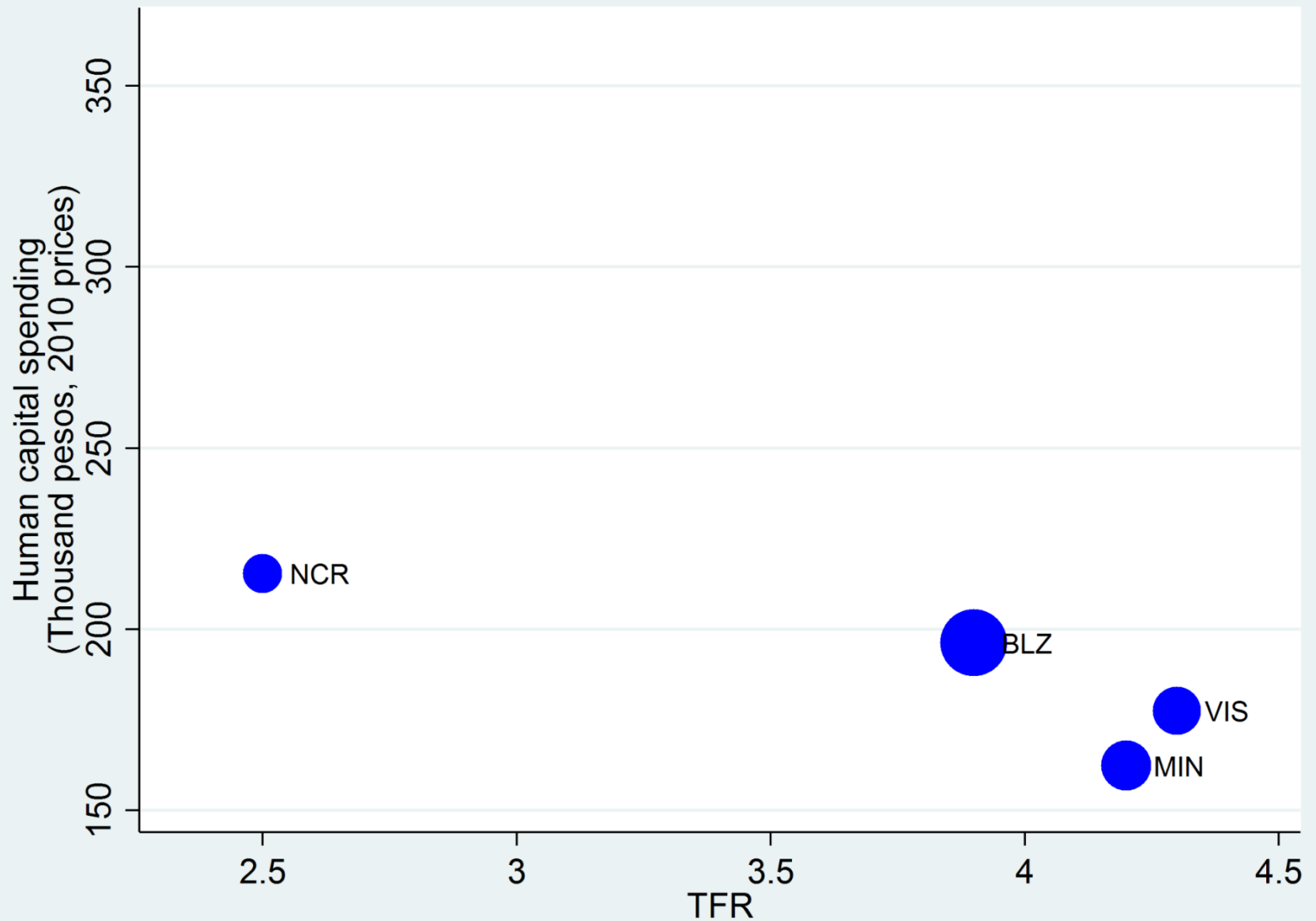
Labor income in 2011



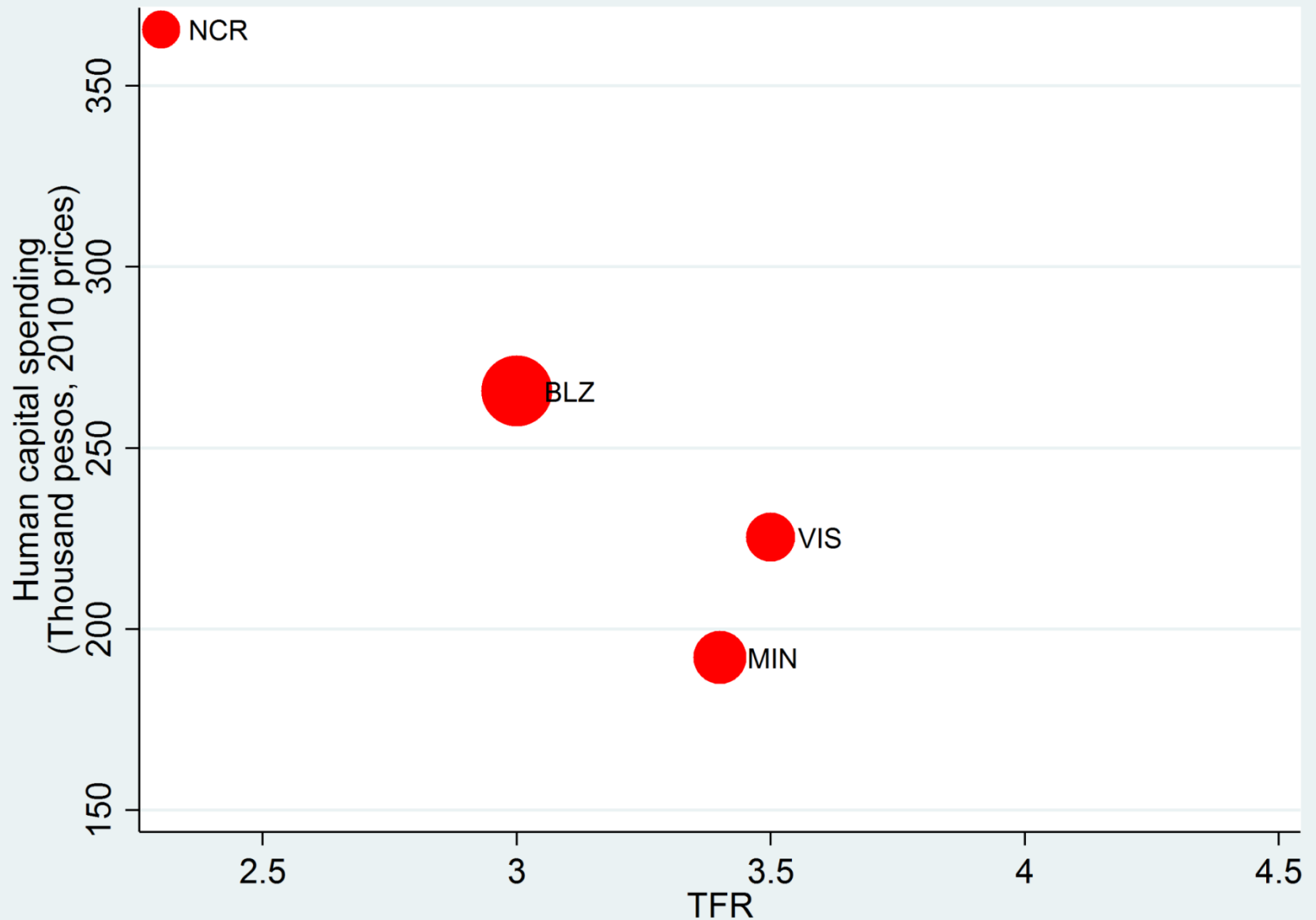
Labor income increased as TFR went down



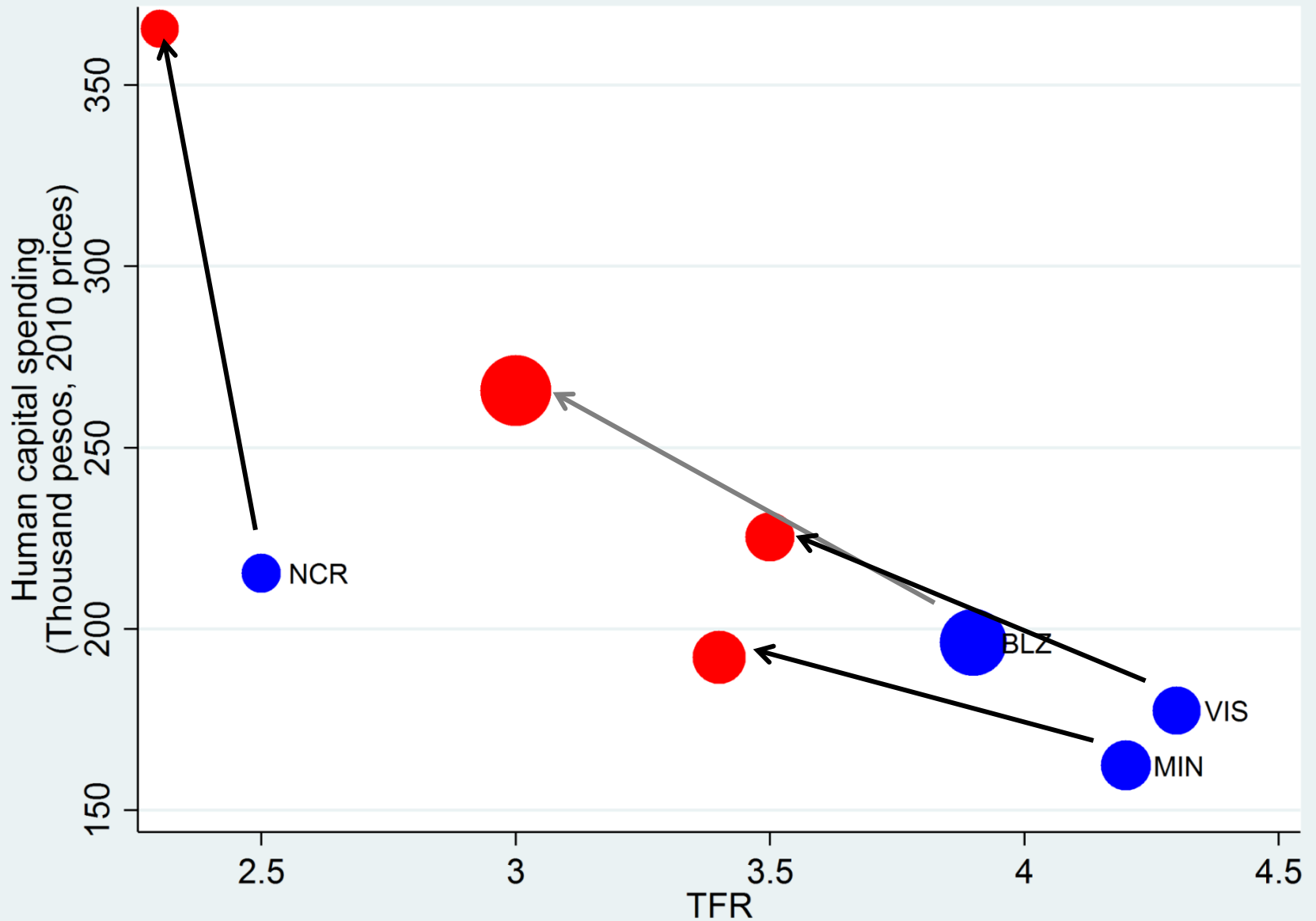
HC spending in 1999



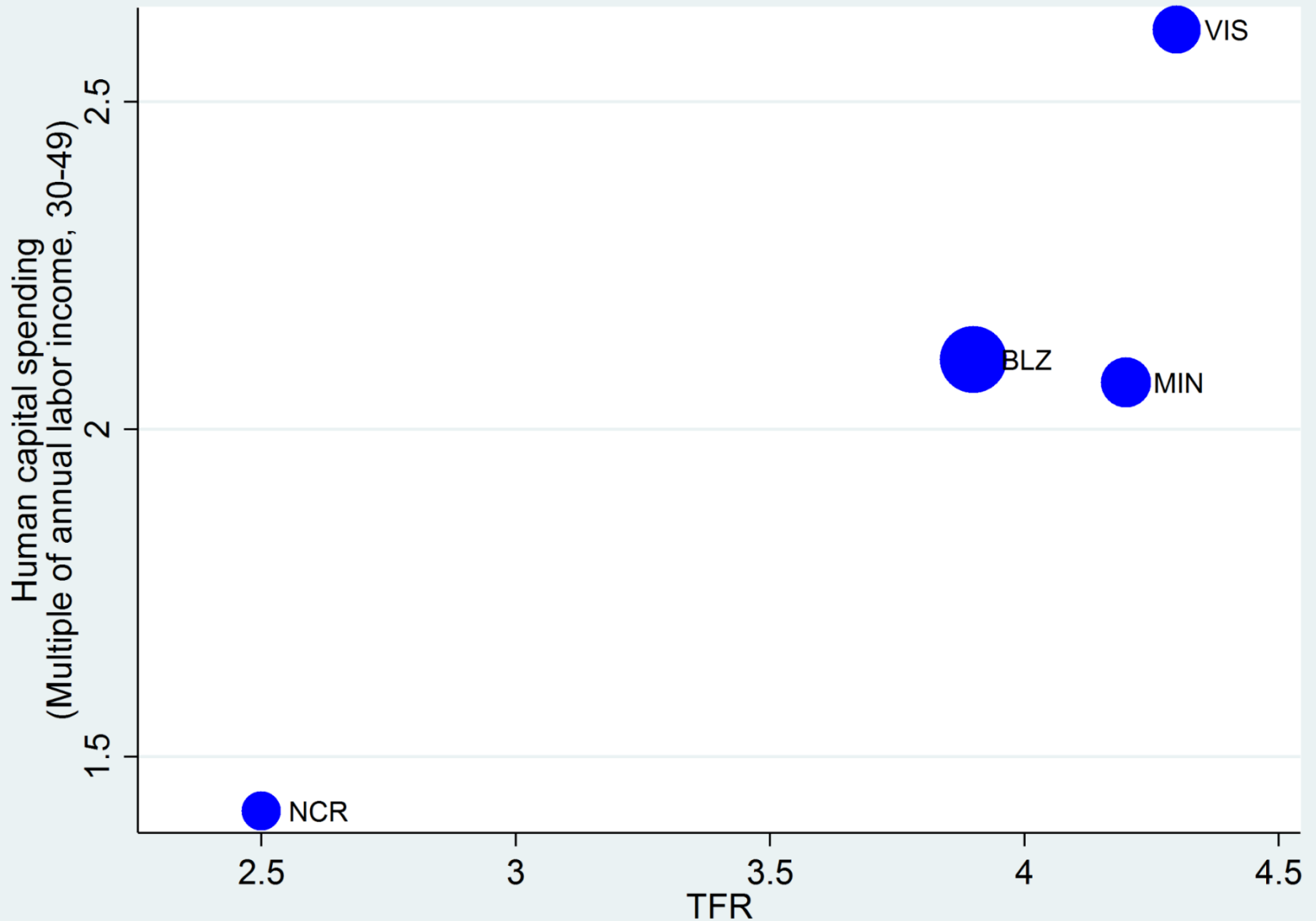
HC spending in 2011



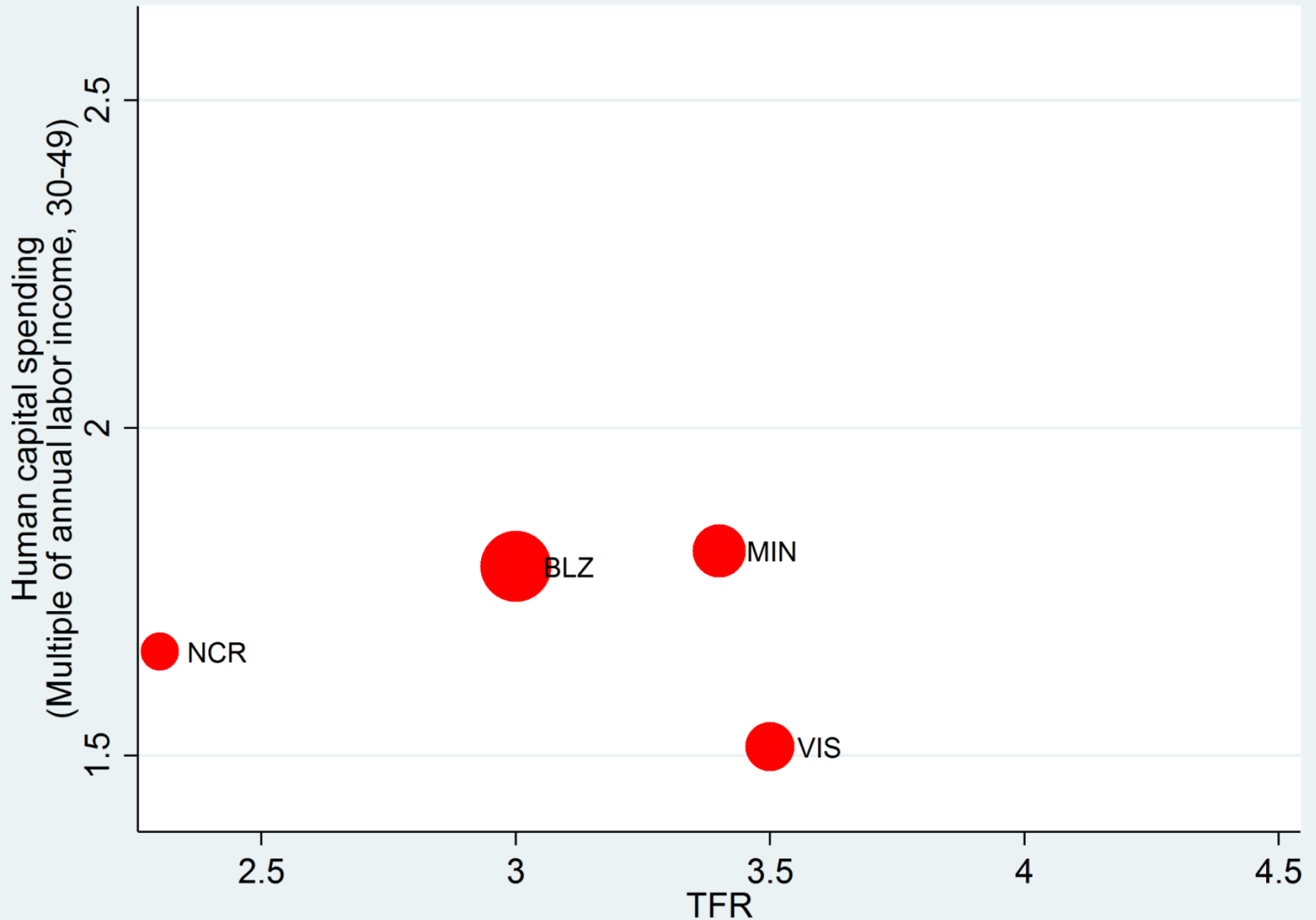
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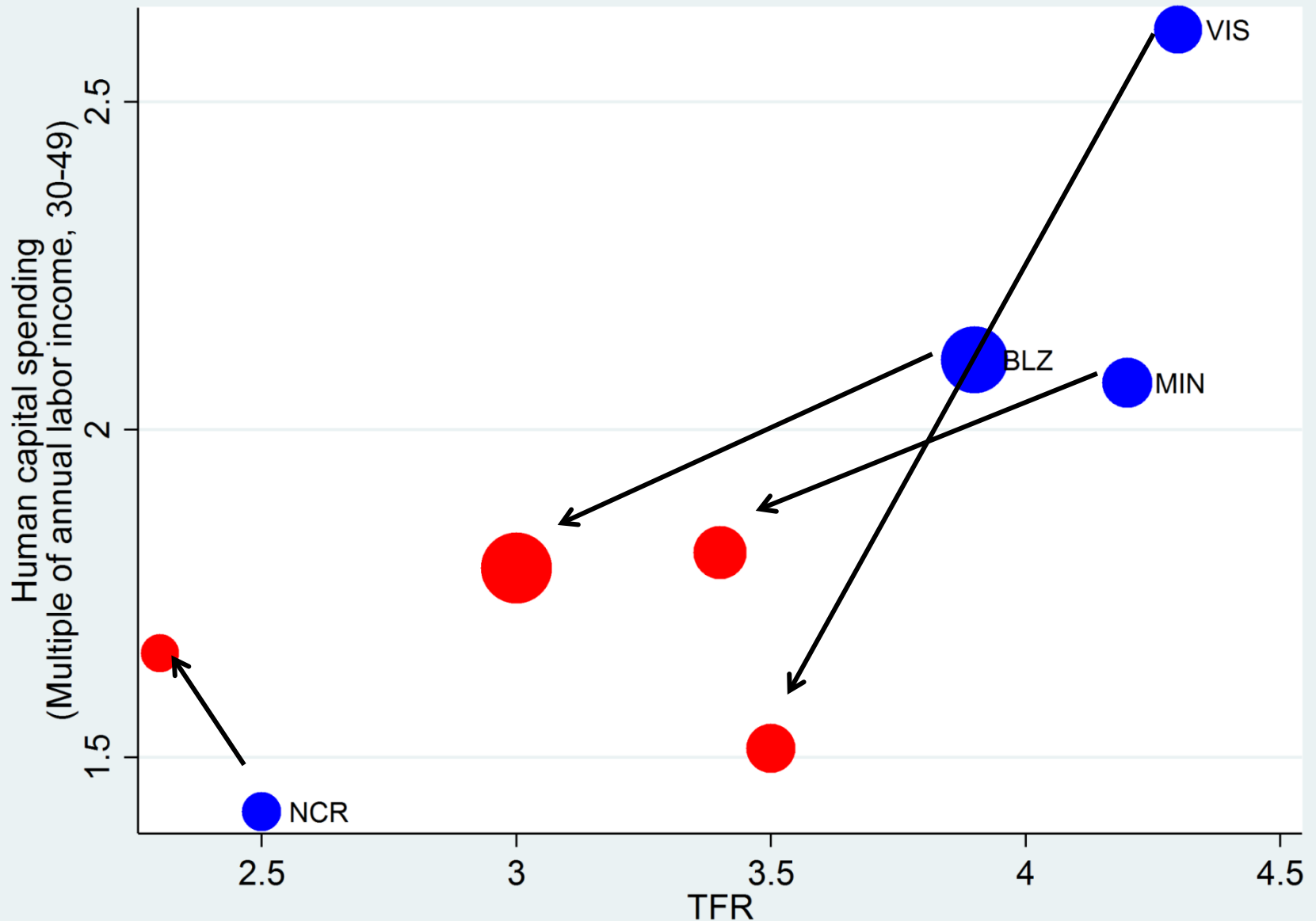
Standardized HC spending in 1999



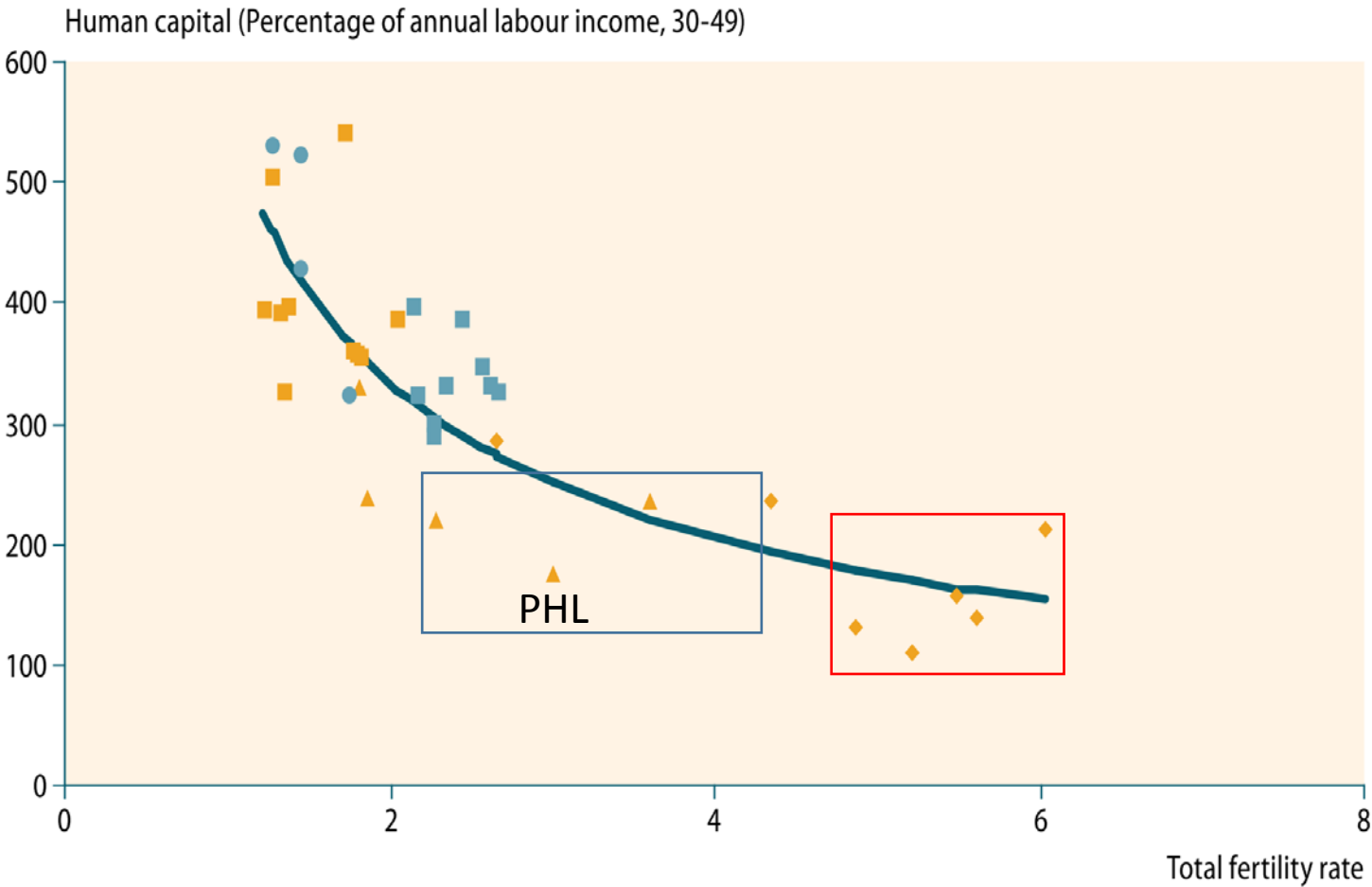
Standardized HC spending in 2011



As TFR went down, standardized HC spending decreased, except for NCR



Human capital and the total fertility rate in selected countries



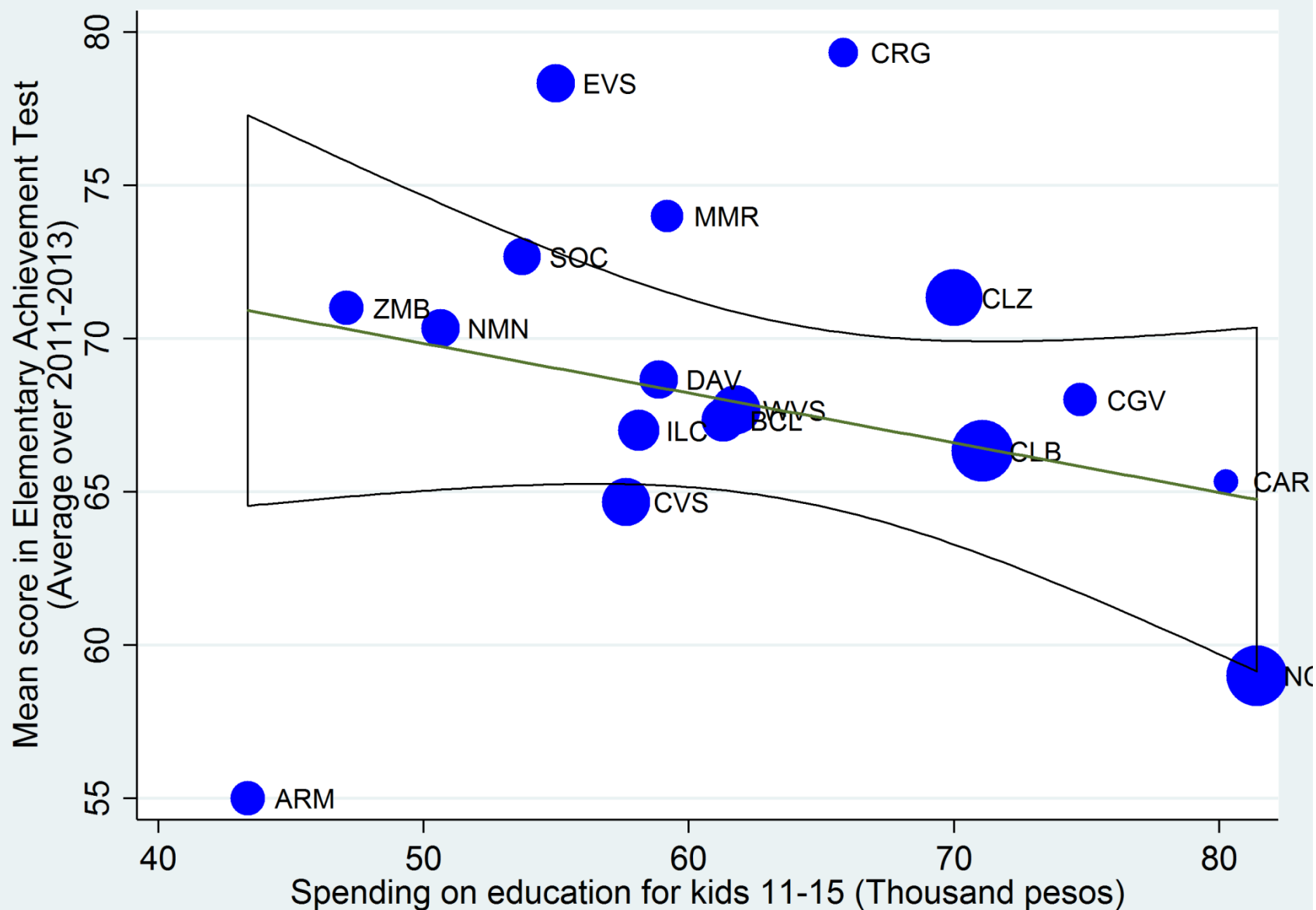
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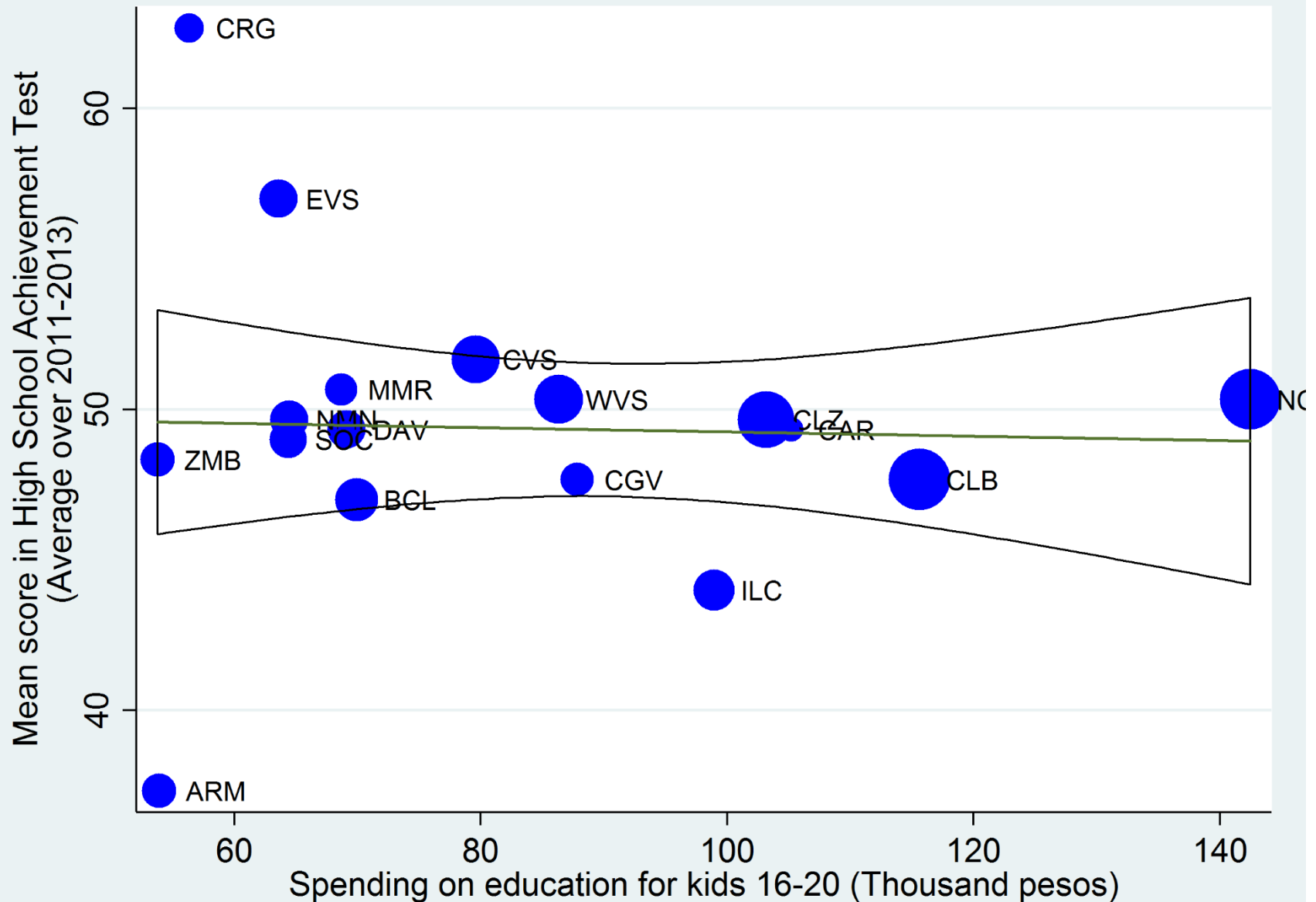
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Cross-sectional
validation of HC
investment measures

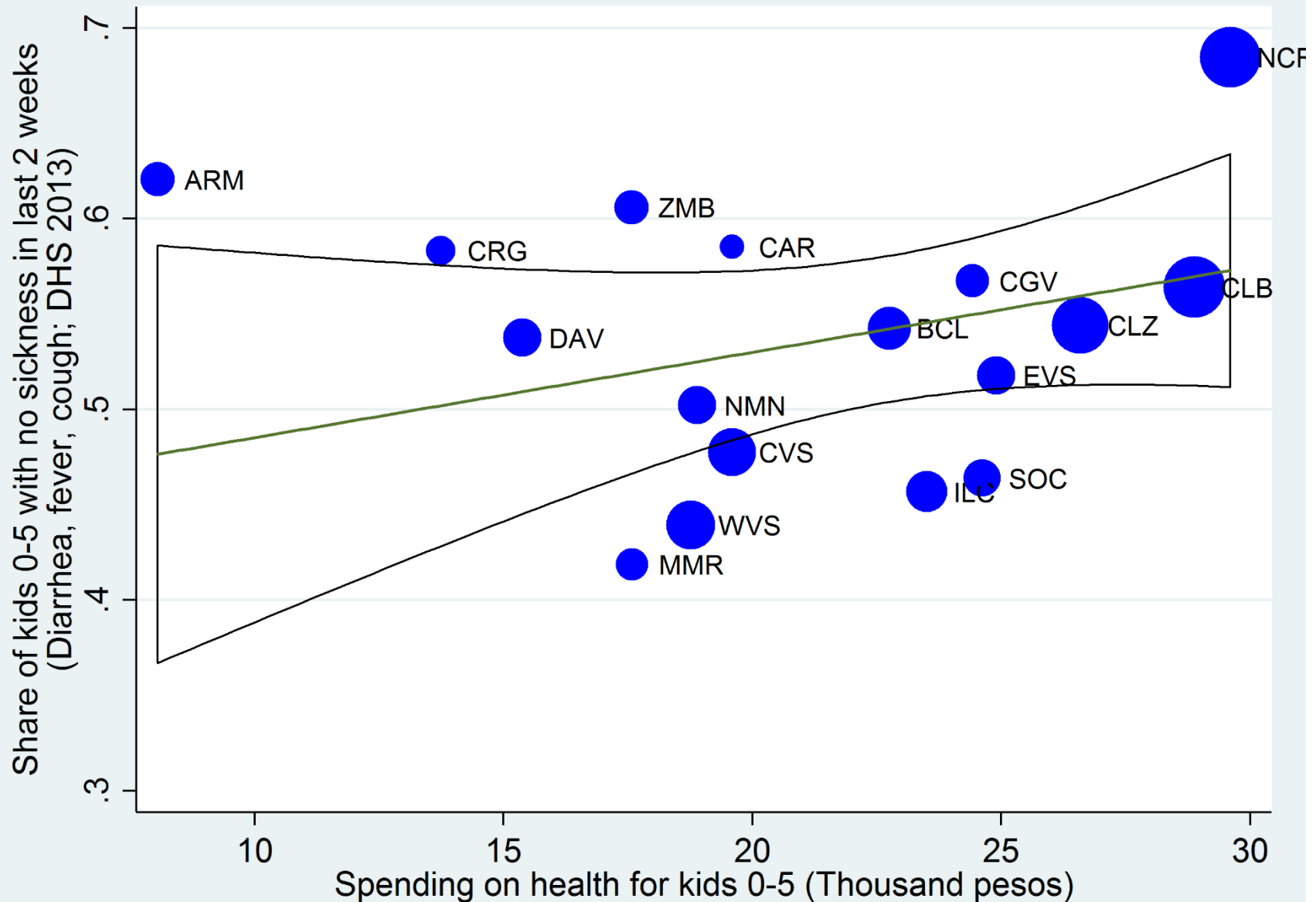
Elem scores and education spending



HS scores and education spending



Child morbidity and health spending



Some observations

- Evidence for quantity-quality tradeoff found using absolute levels of human capital spending
- Human capital spending relative to labor income may not show a quantity-quality tradeoff until a TFR close to 2 is reached
- Validation exercise suggests that higher health spending translates into better child health, but higher education spending does not translate into higher test scores