

Productivity Growth

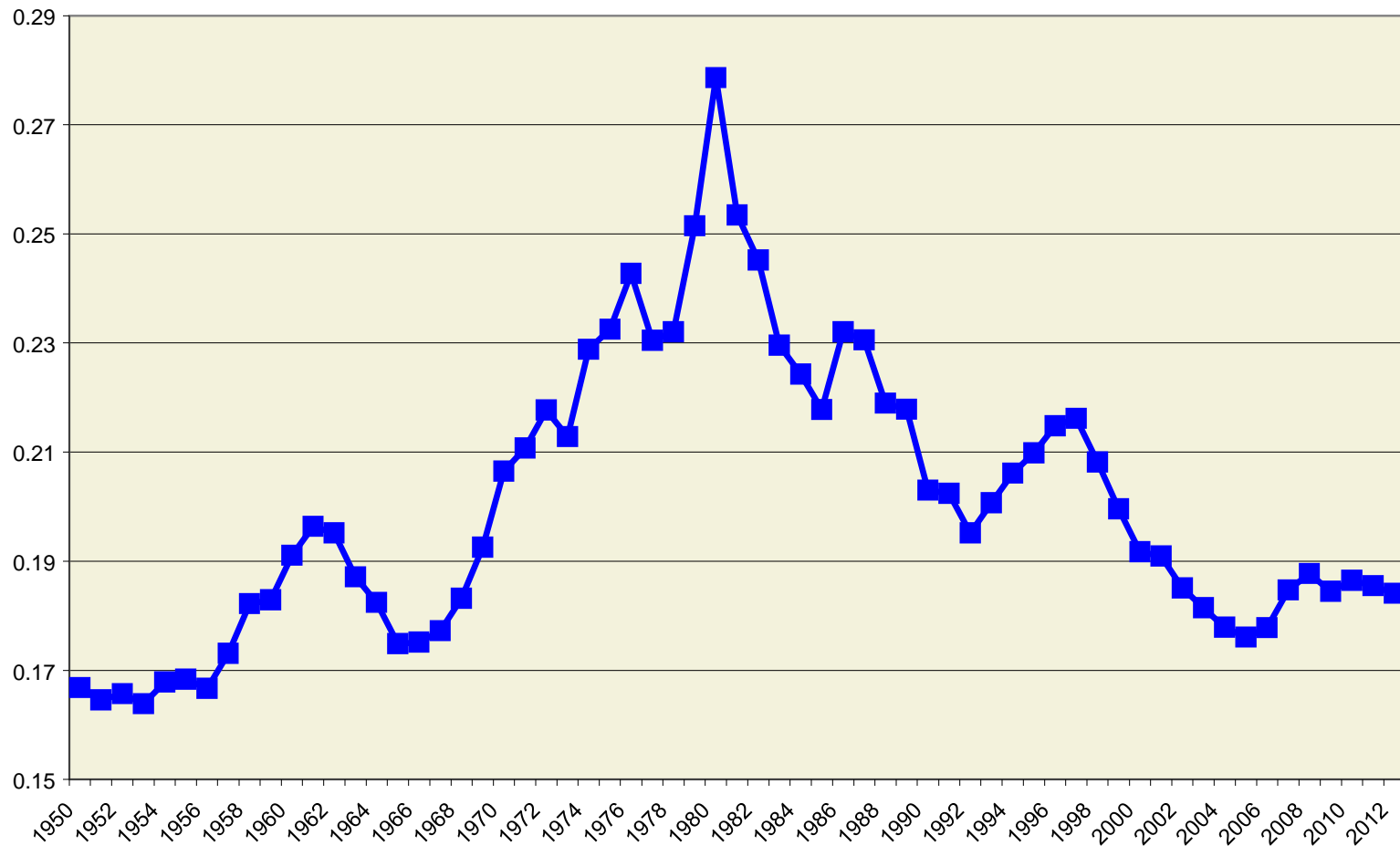
Lessons for Brazil from Other Countries

Dani Rodrik

September 2013

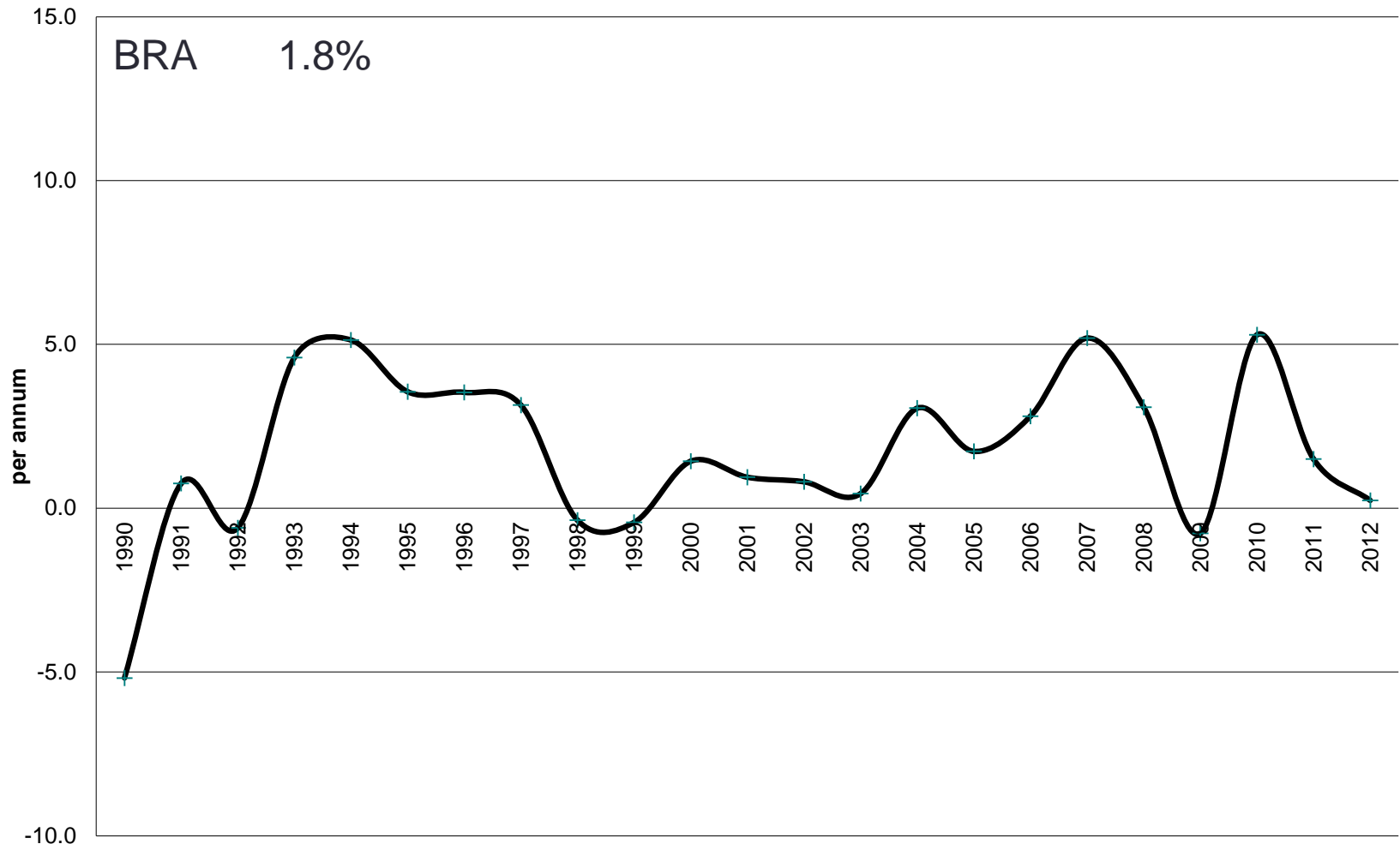
Productivity in Brazil in long-term perspective

Labor productivity in Brazil relative to the U.S. (U.S. = 100)



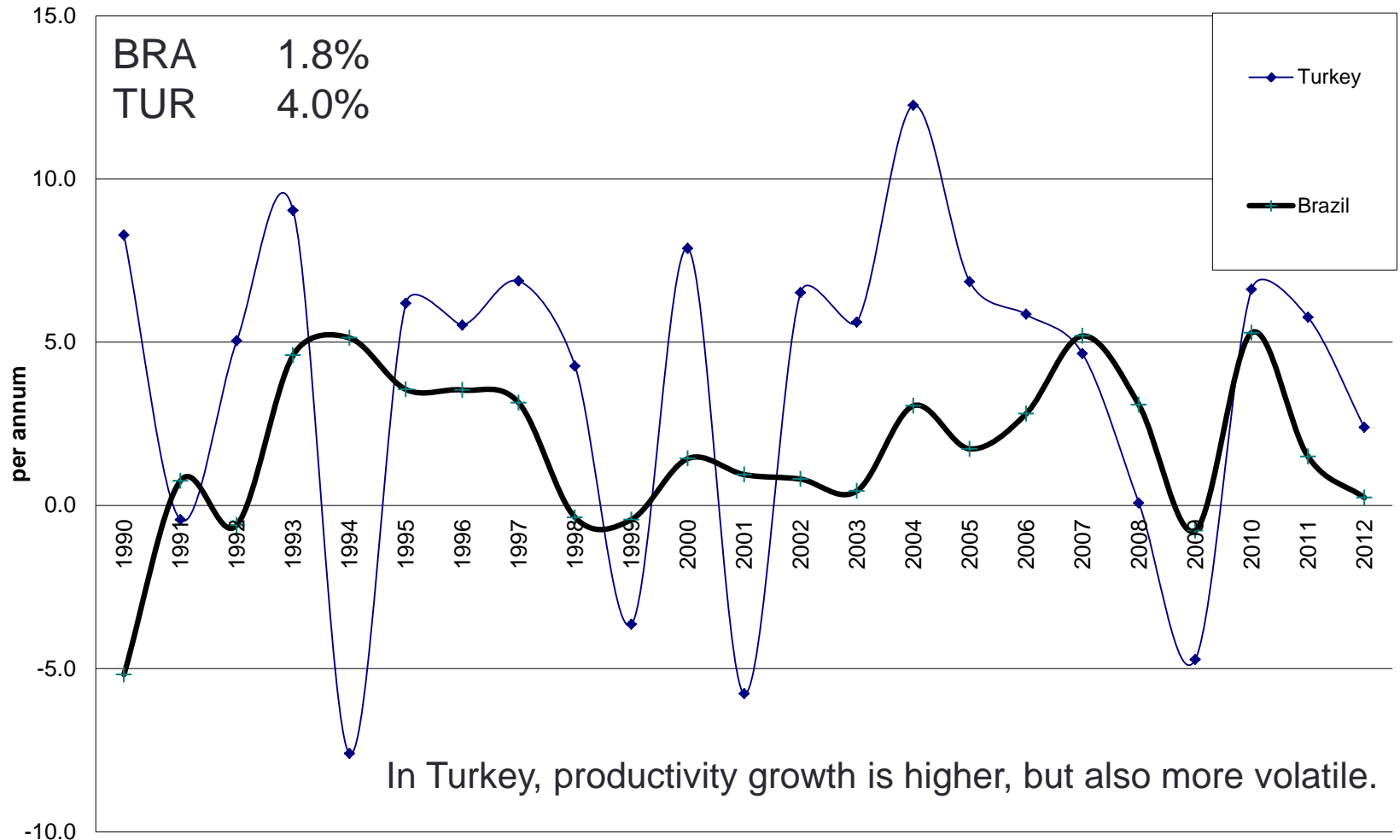
How does recent Brazilian performance stack up against leading comparators?

Labor productivity growth in Brazil and comparators



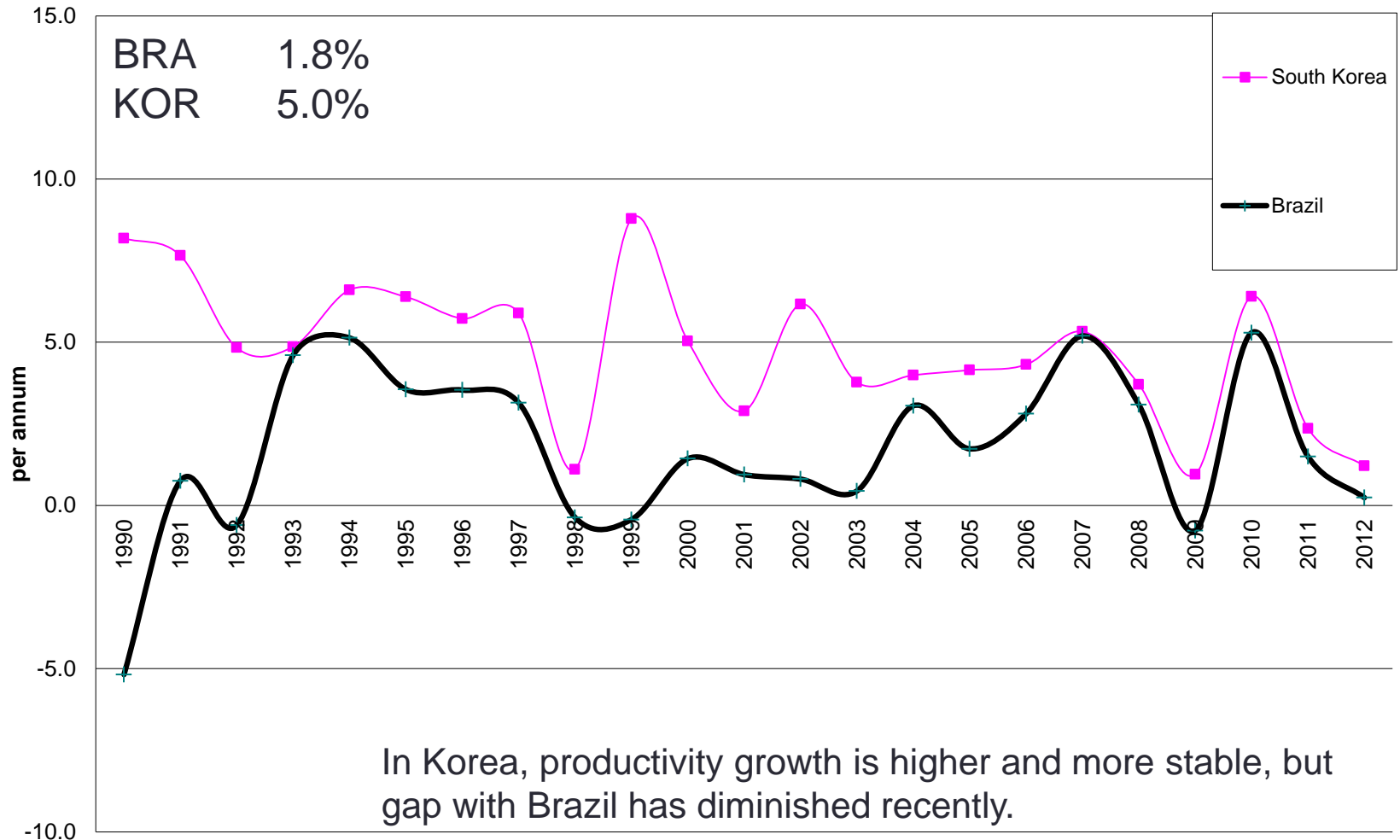
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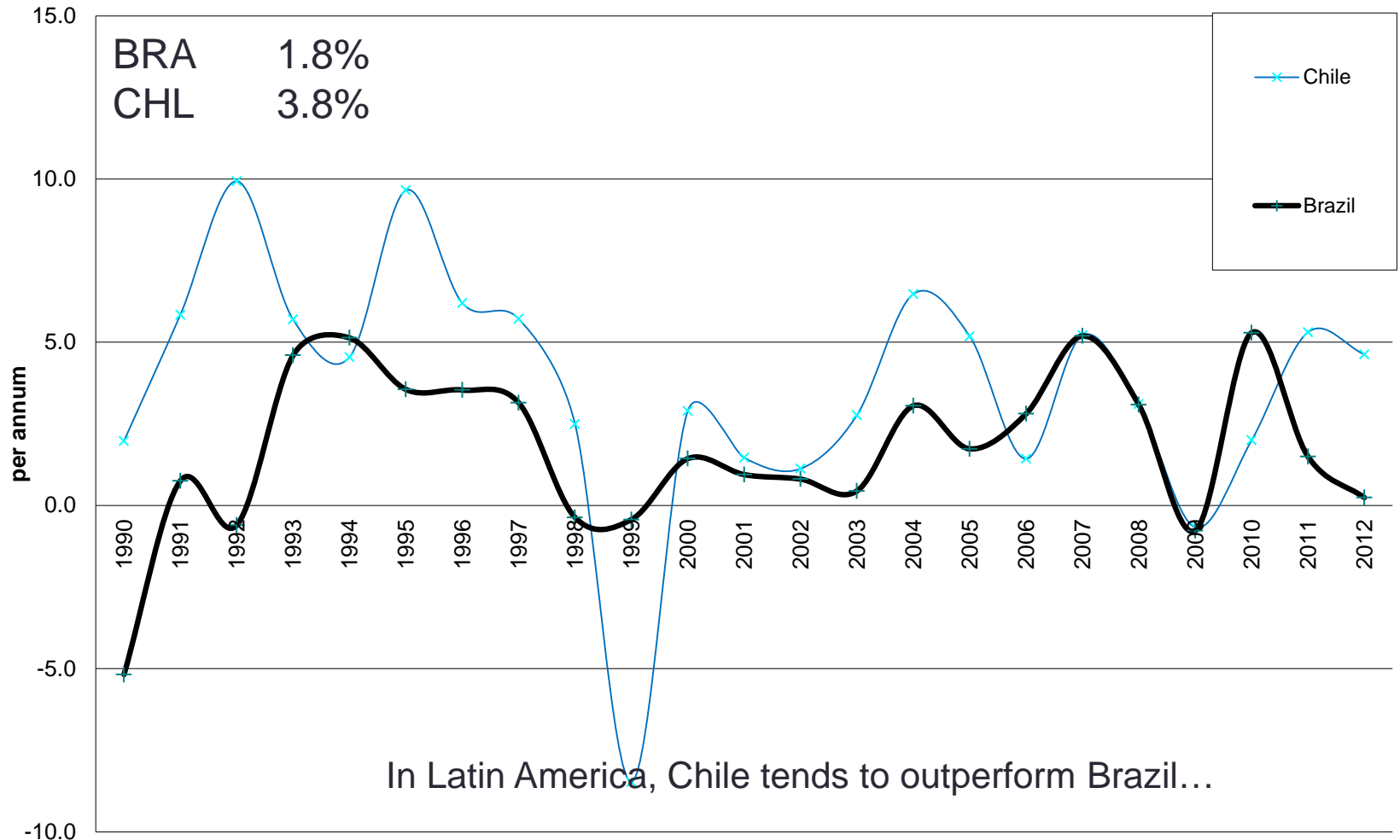
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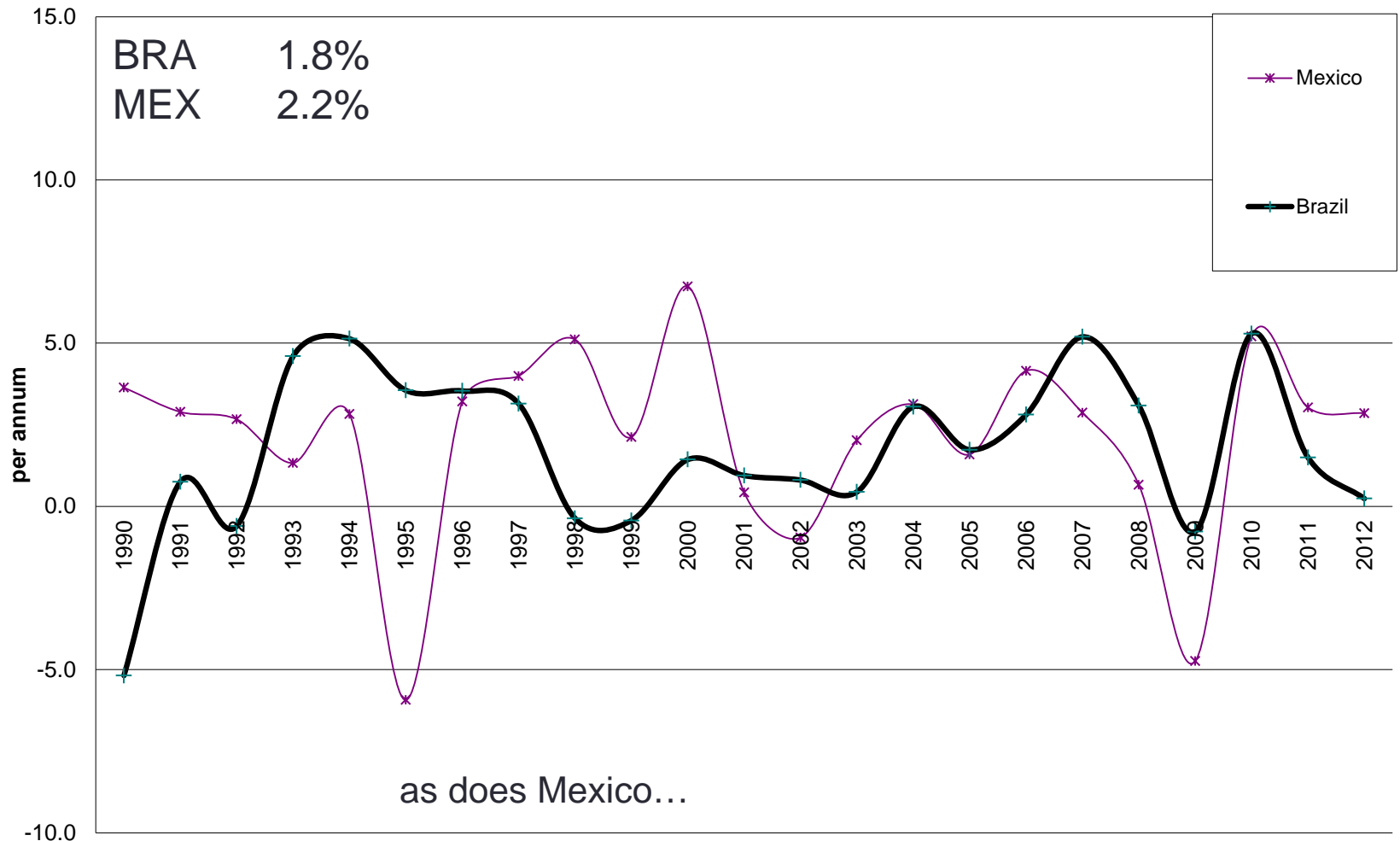
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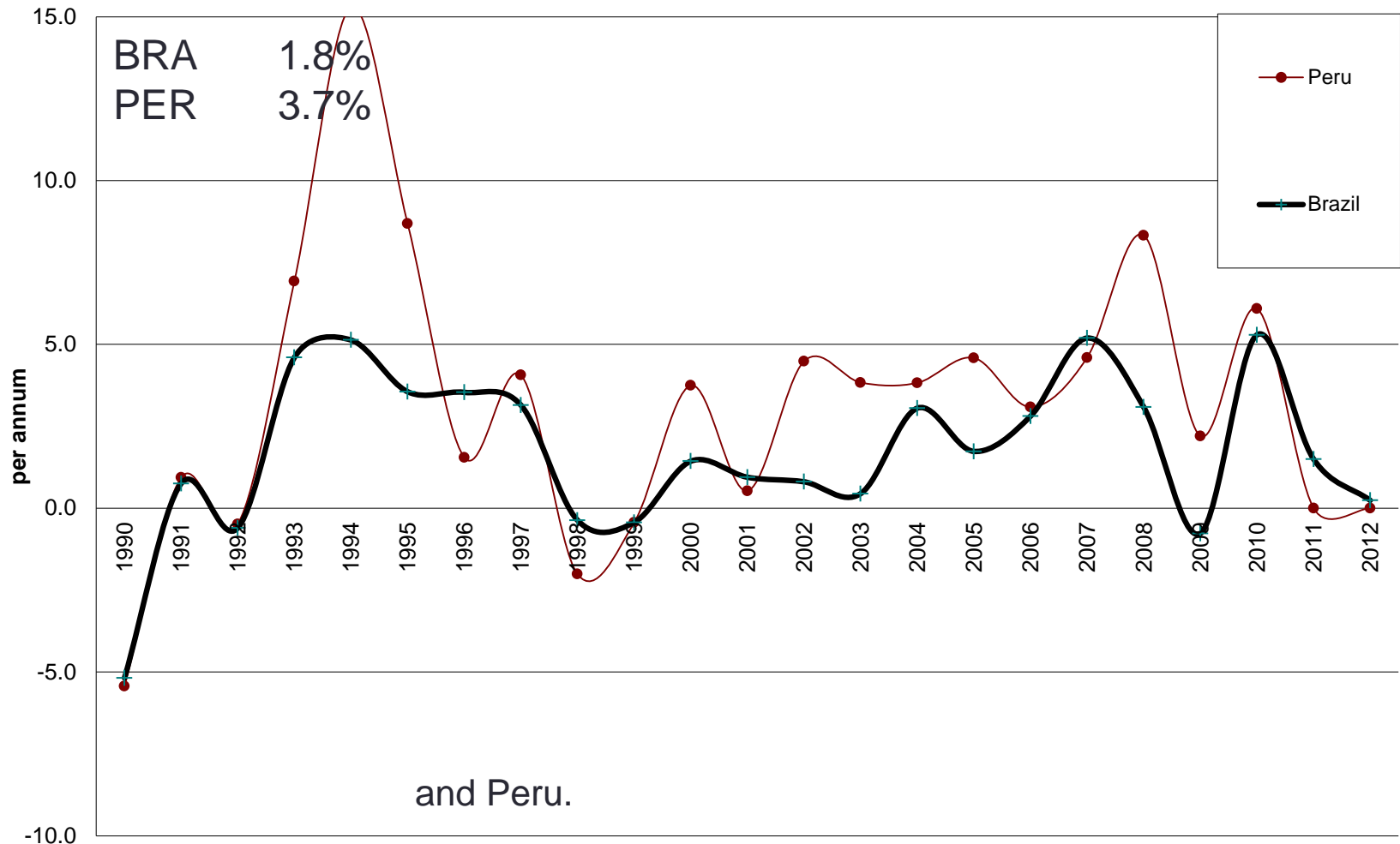
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Proximate sources of productivity growth

Labor productivity growth =

physical capital investment

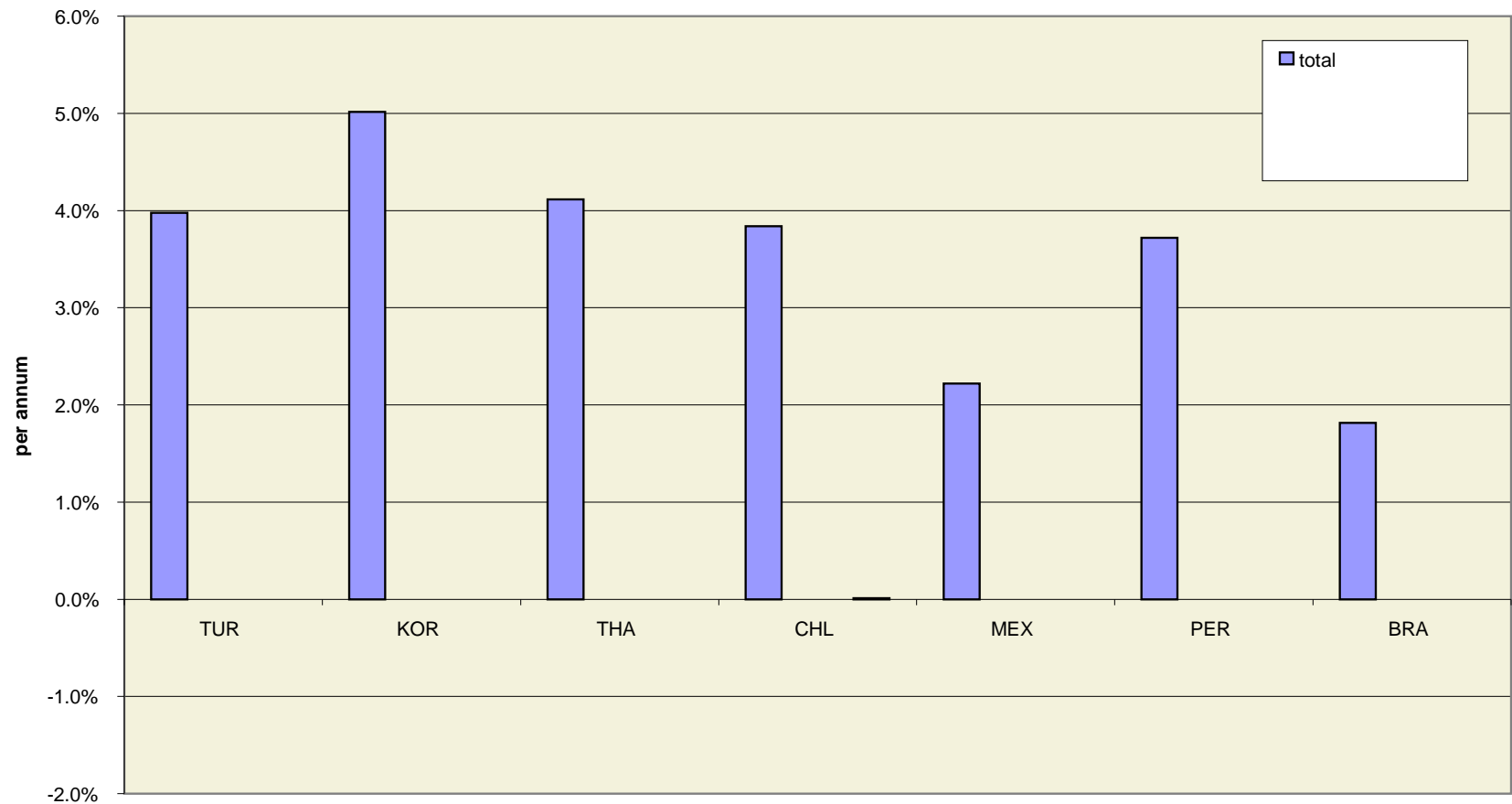
+ upgrading of labor skills

+ total factor productivity (TFP) growth
(which is an amalgam of increased efficiency
in resource use and technological progress)

Note: All data on labor productivity and its sources are from Conference Board, Total Economy Database.

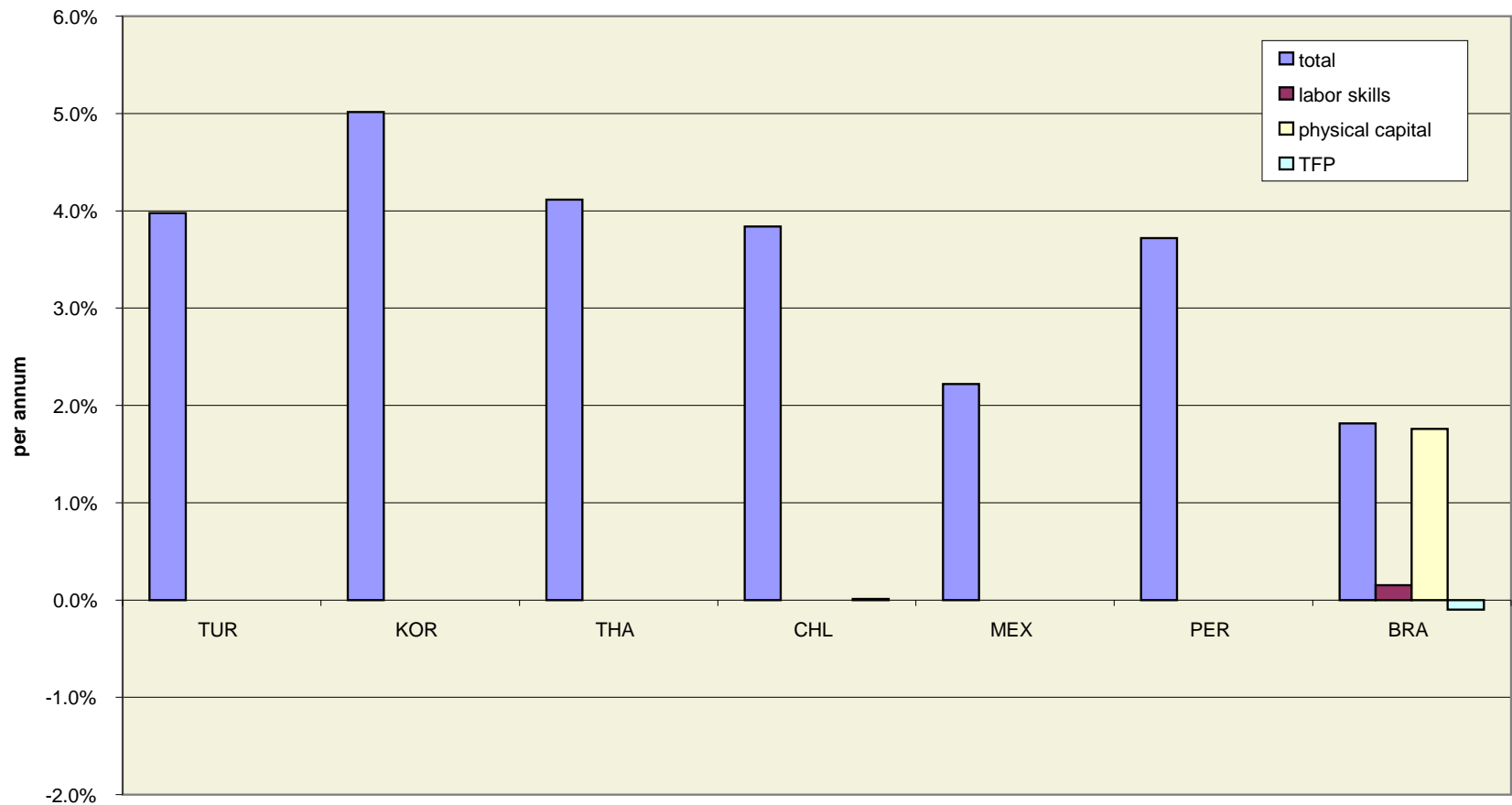
Comparing sources of productivity growth

Labor productivity growth and its sources, 1990-2012



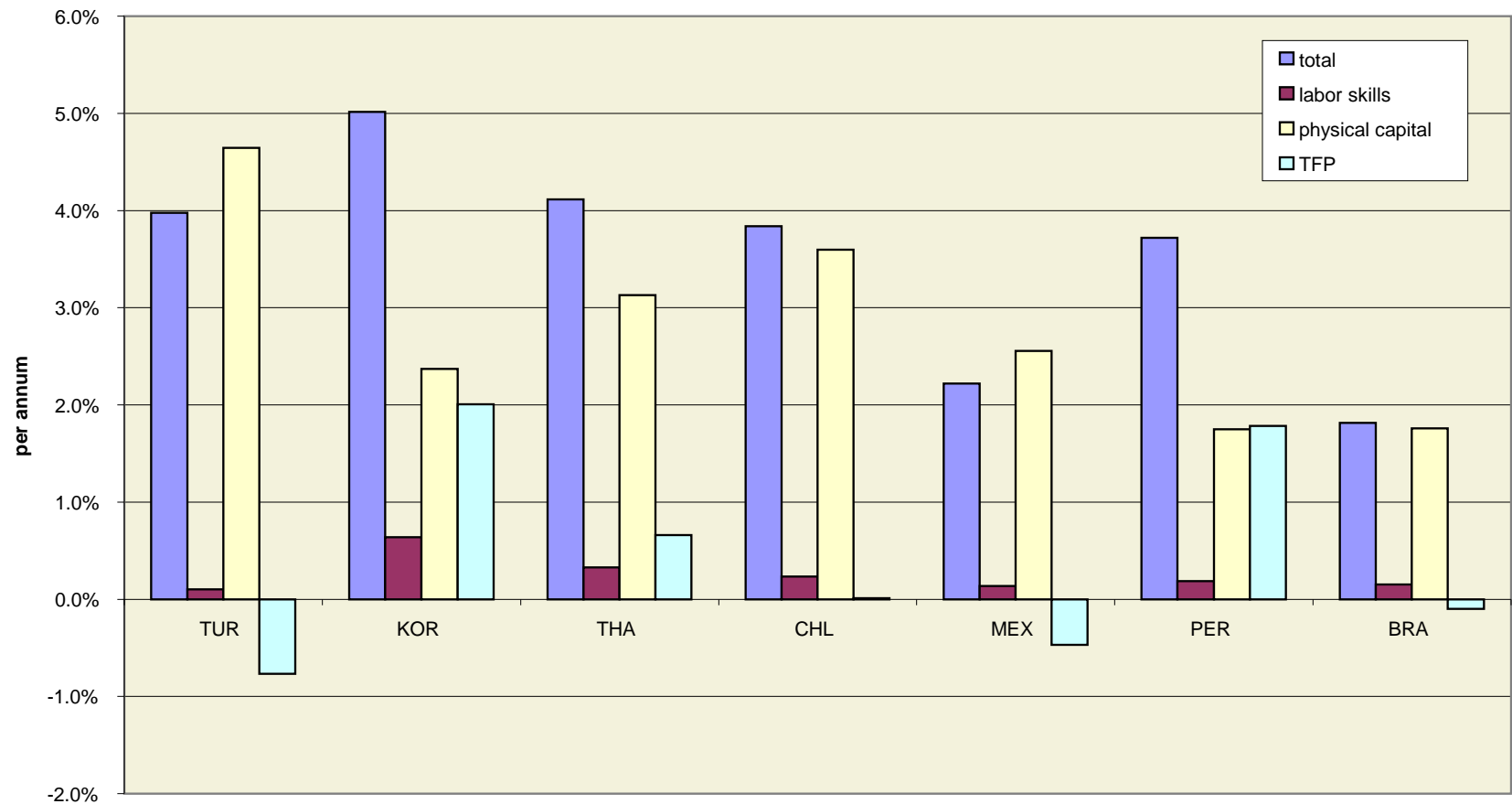
Comparing sources of productivity growth

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Comparing sources of productivity growth

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A structural interpretation of productivity growth

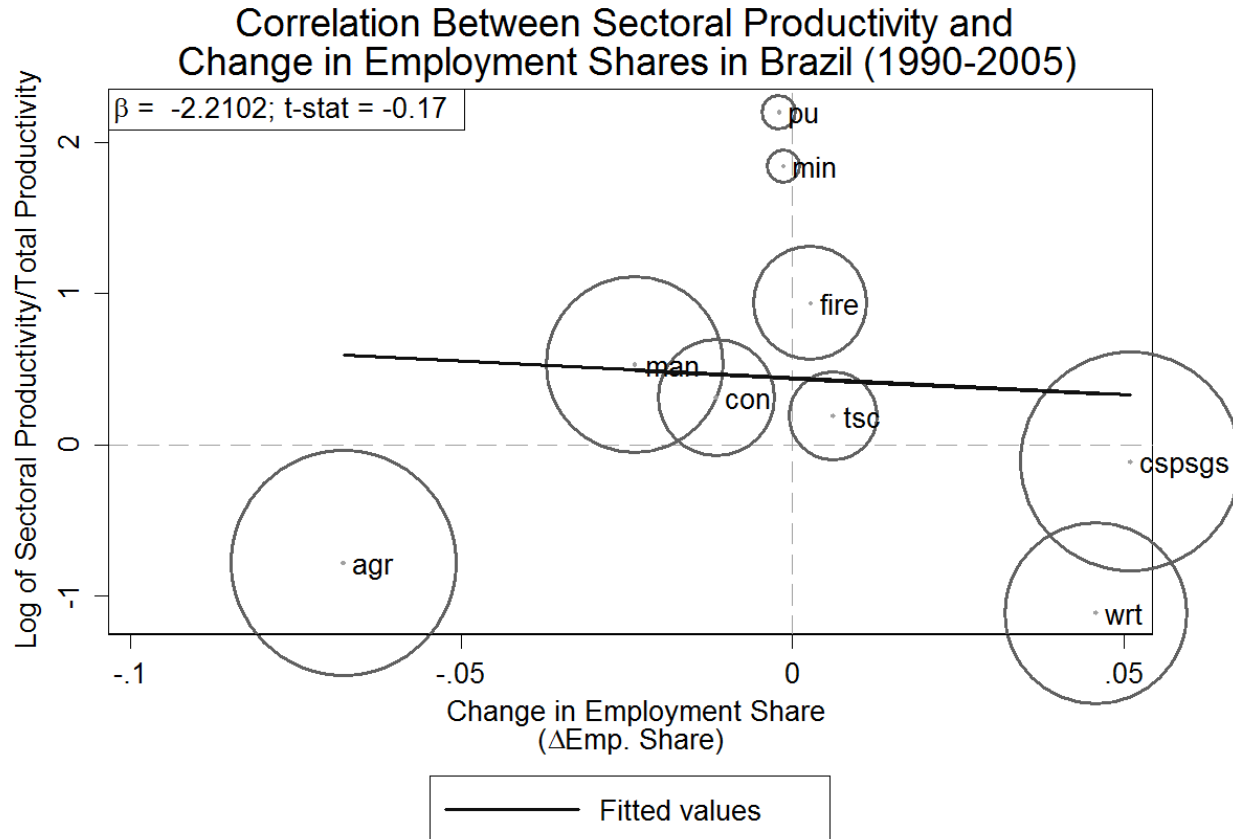
Economy-wide productivity growth =

labor reallocation from low- to high-productivity sectors (structural change)

+ productivity growth within sectors

Note: All data on sectoral labor productivity and employment are from Timmer and de Vries (2007) and McMillan and Rodrik (2011).

Structural change was not growth promoting in Brazil



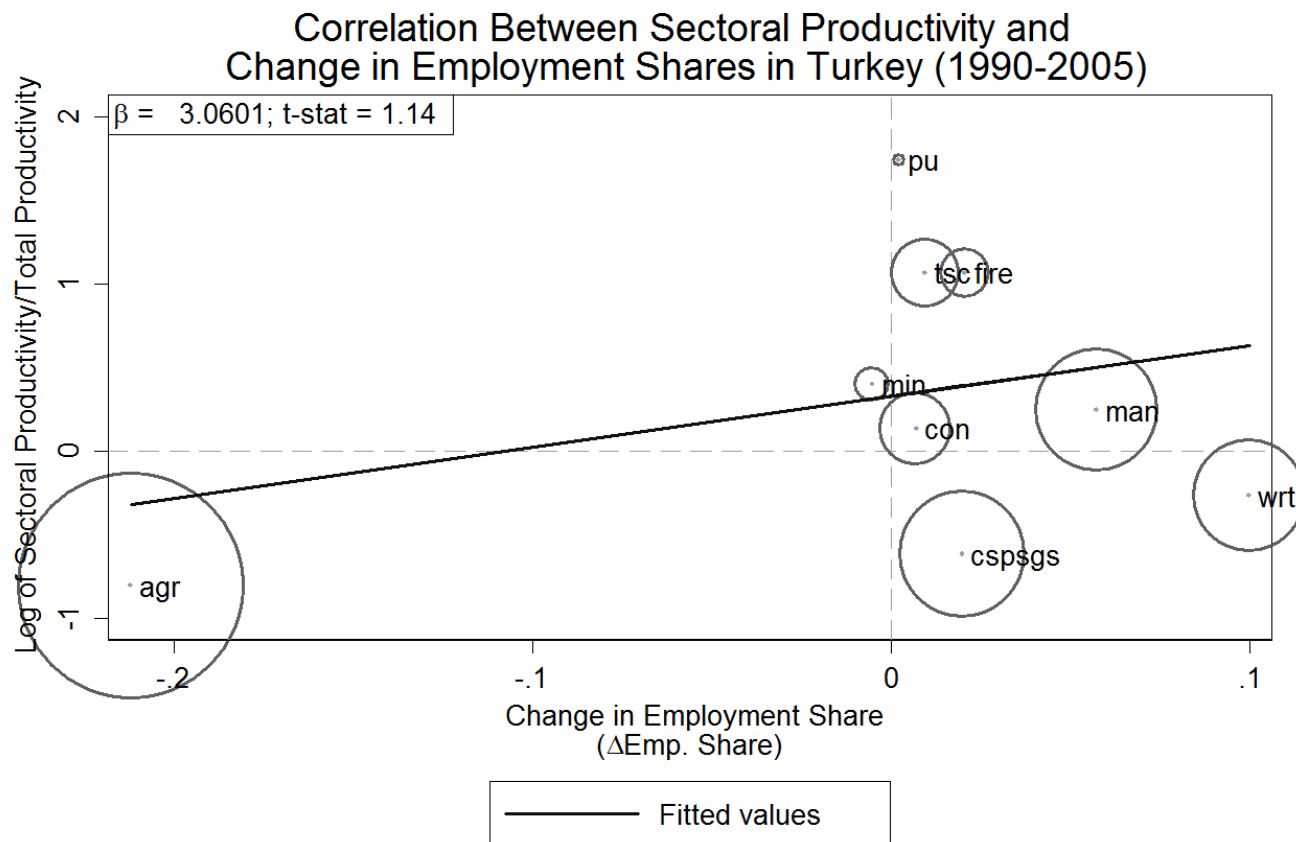
*Note: Size of circle represents employment share in 1990

**Note: β denotes coeff. of independent variable in regression equation:

$$\ln(p/P) = \alpha + \beta \Delta \text{Emp. Share}$$

Source: Author's calculations with data from Timmer and de Vries (2009)

Unlike Turkey...



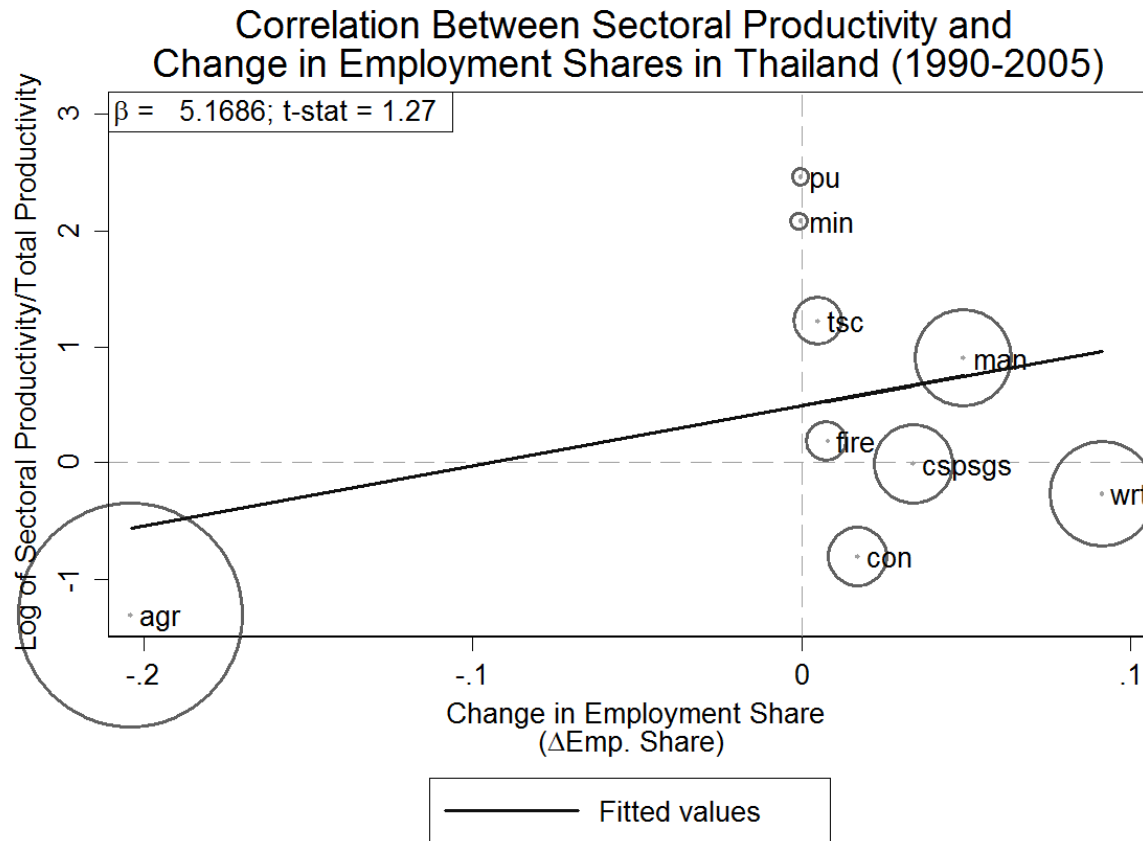
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Source: Authors' calculations with data from the Turkish Statistical Institute

Thailand...



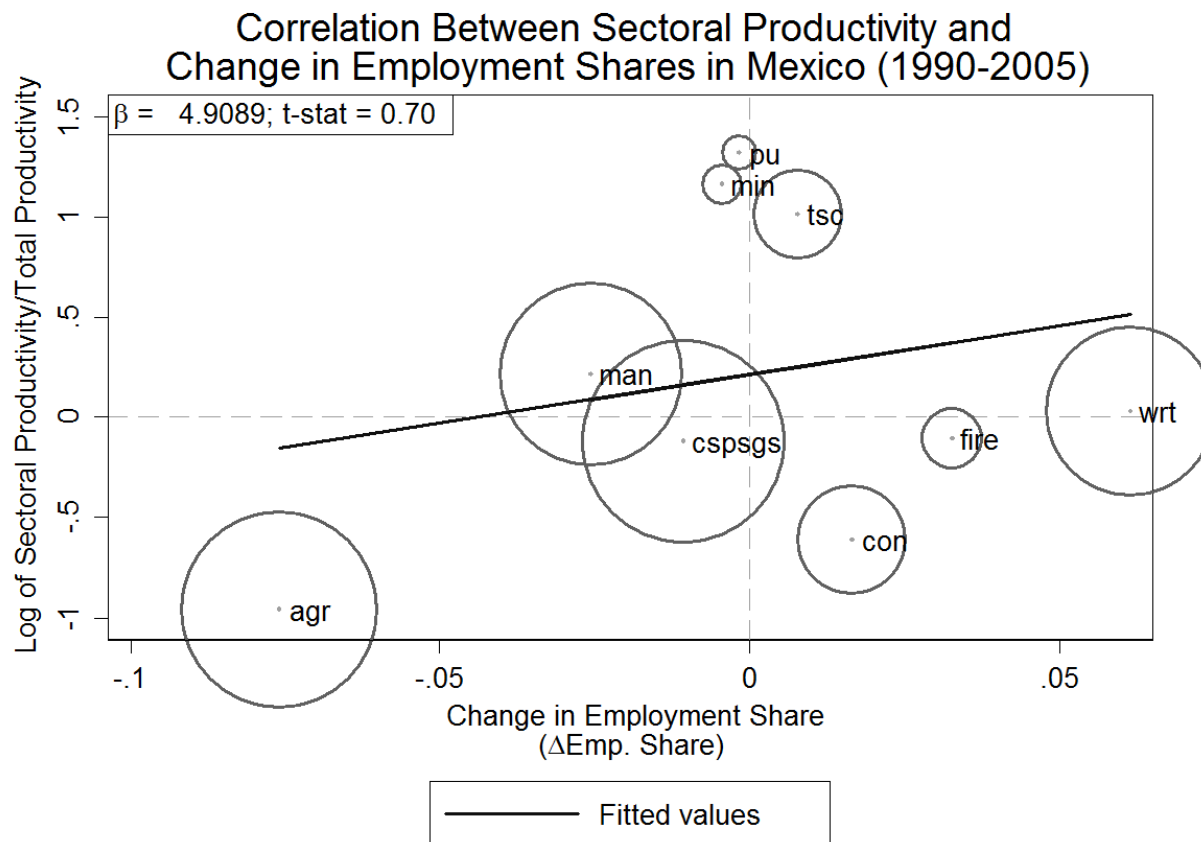
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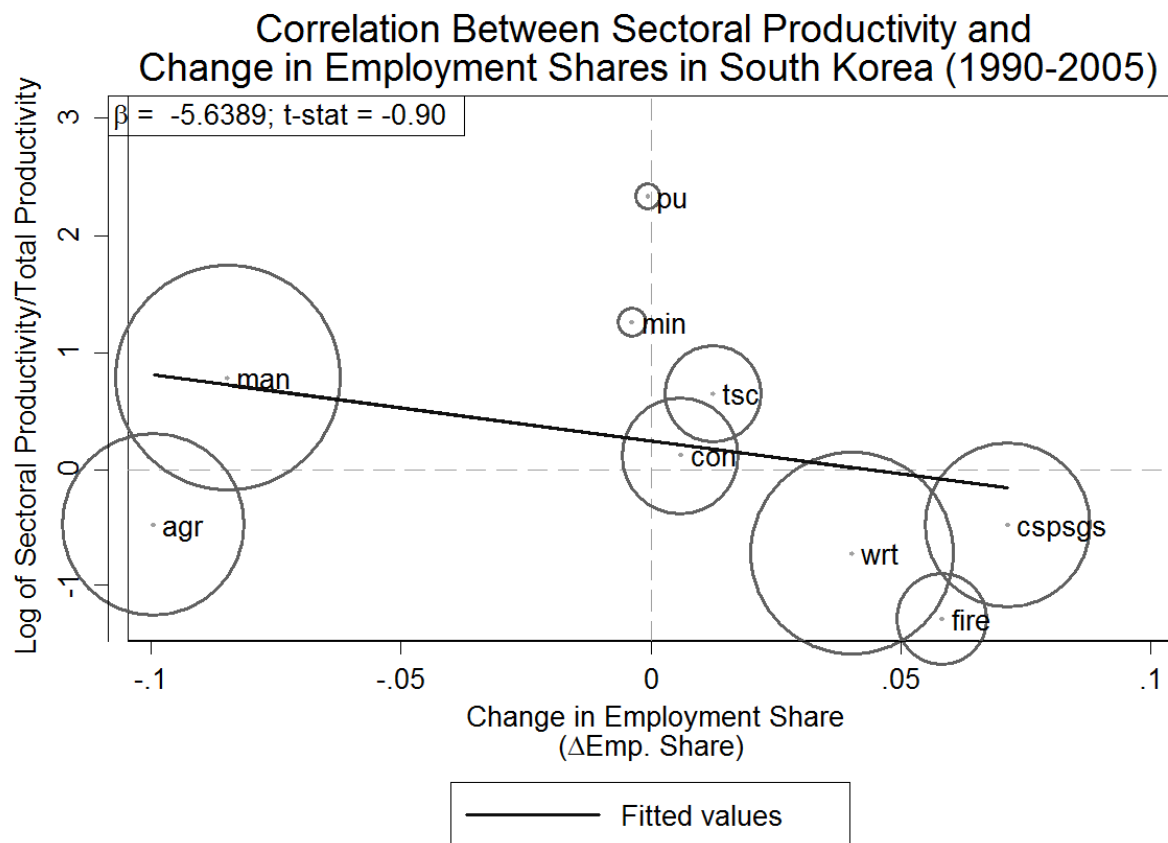
Source: Author's calculations with data from Timmer and de Vries (2009)

or Mexico



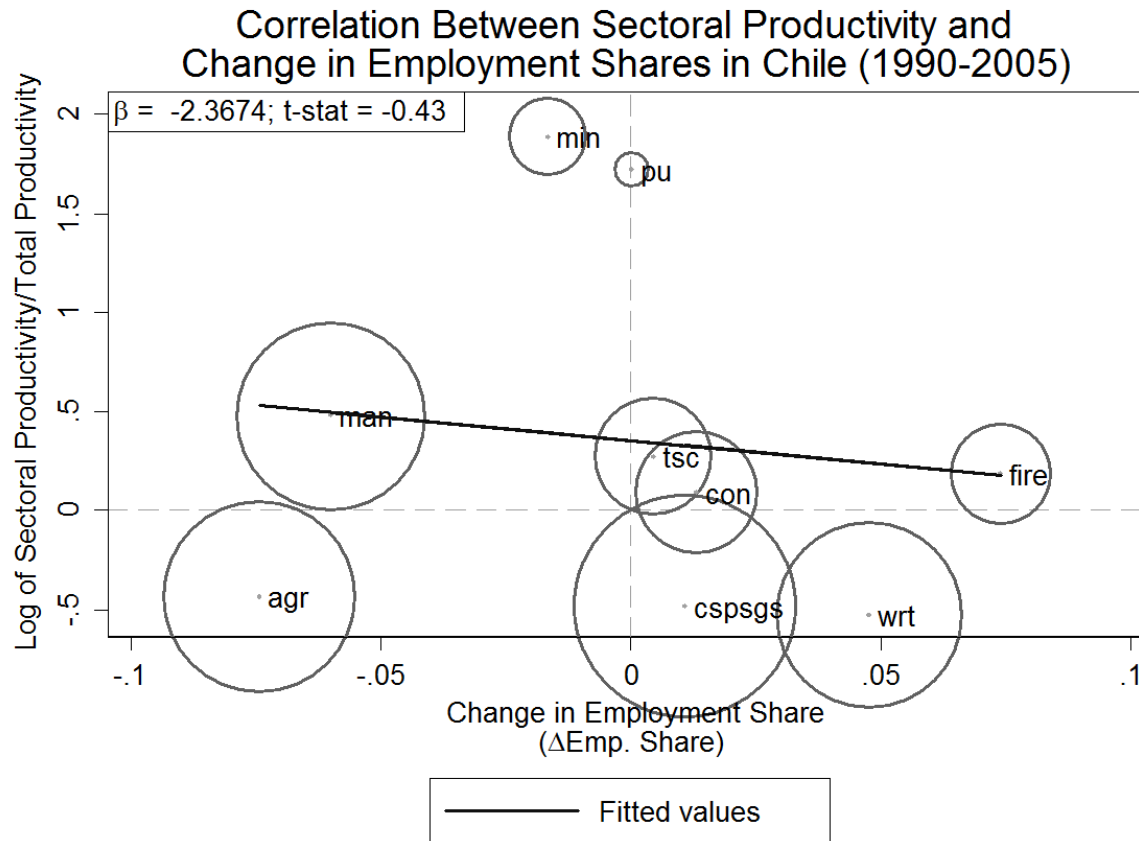
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But picture is not better in South Korea...



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Source: Author's calculations with data from Timmer and de Vries (2009)

Chile...



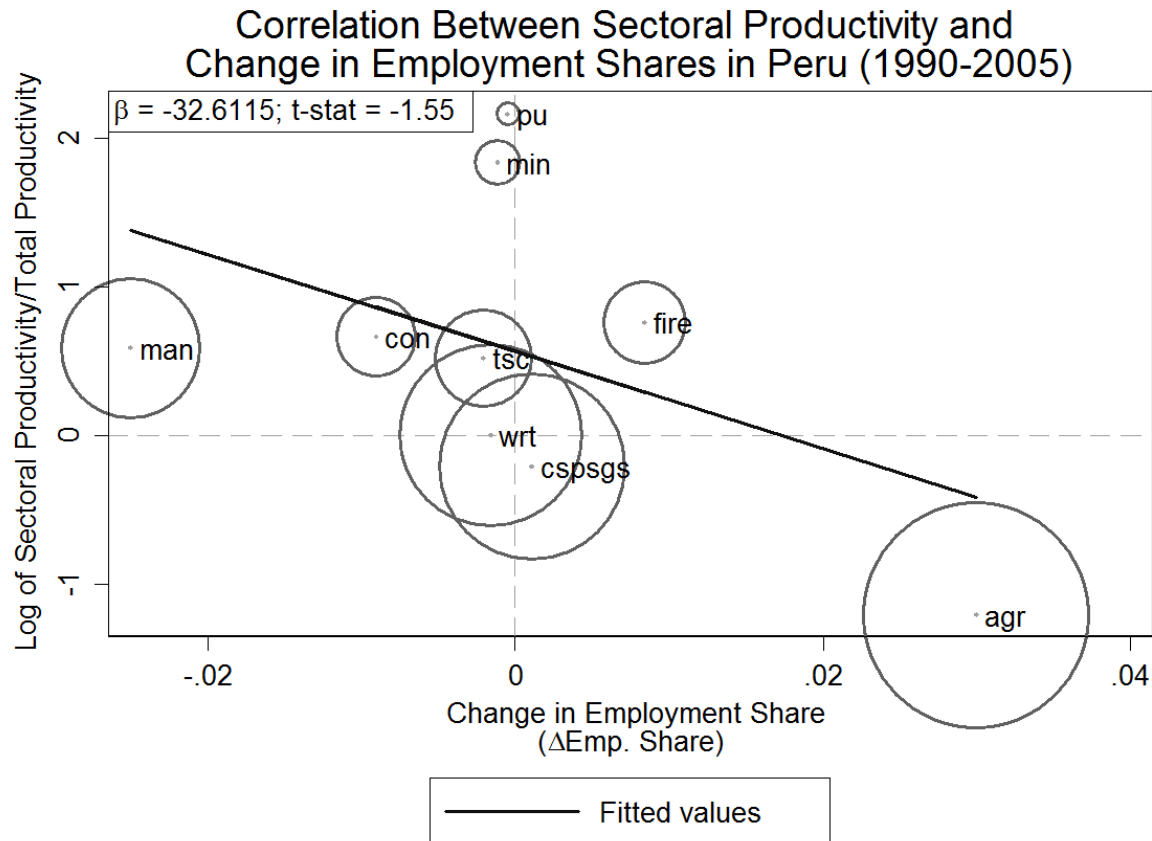
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Source: Author's calculations with data from Timmer and de Vries (2009)

and certainly not in Peru



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Source: Author's calculations with data from Timmer and de Vries (2009)

But countries that experienced growth-reducing structural change compensated through high productivity growth within sectors

Contributions of the within and structural-change components of labor productivity, 1990-2005



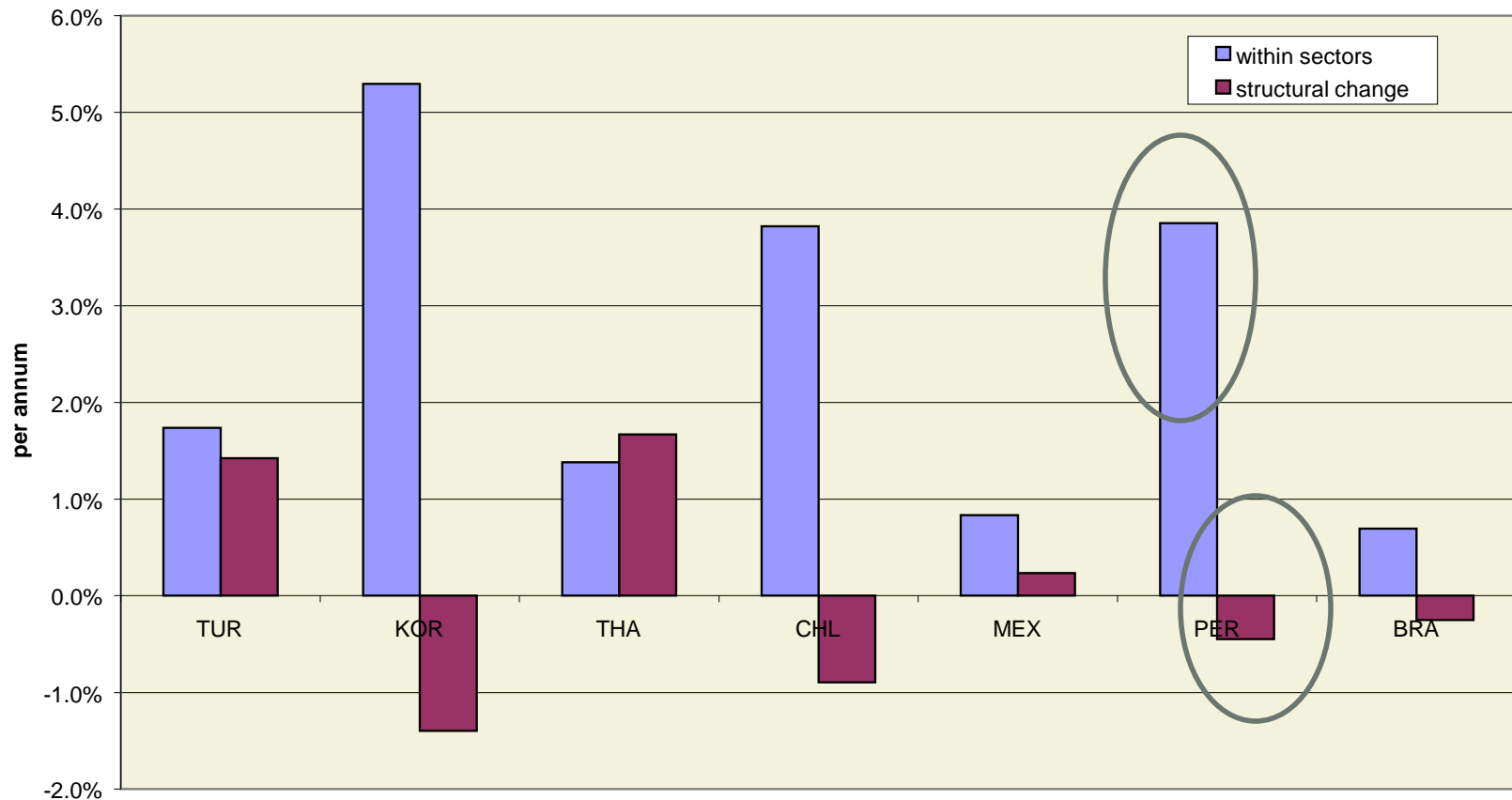
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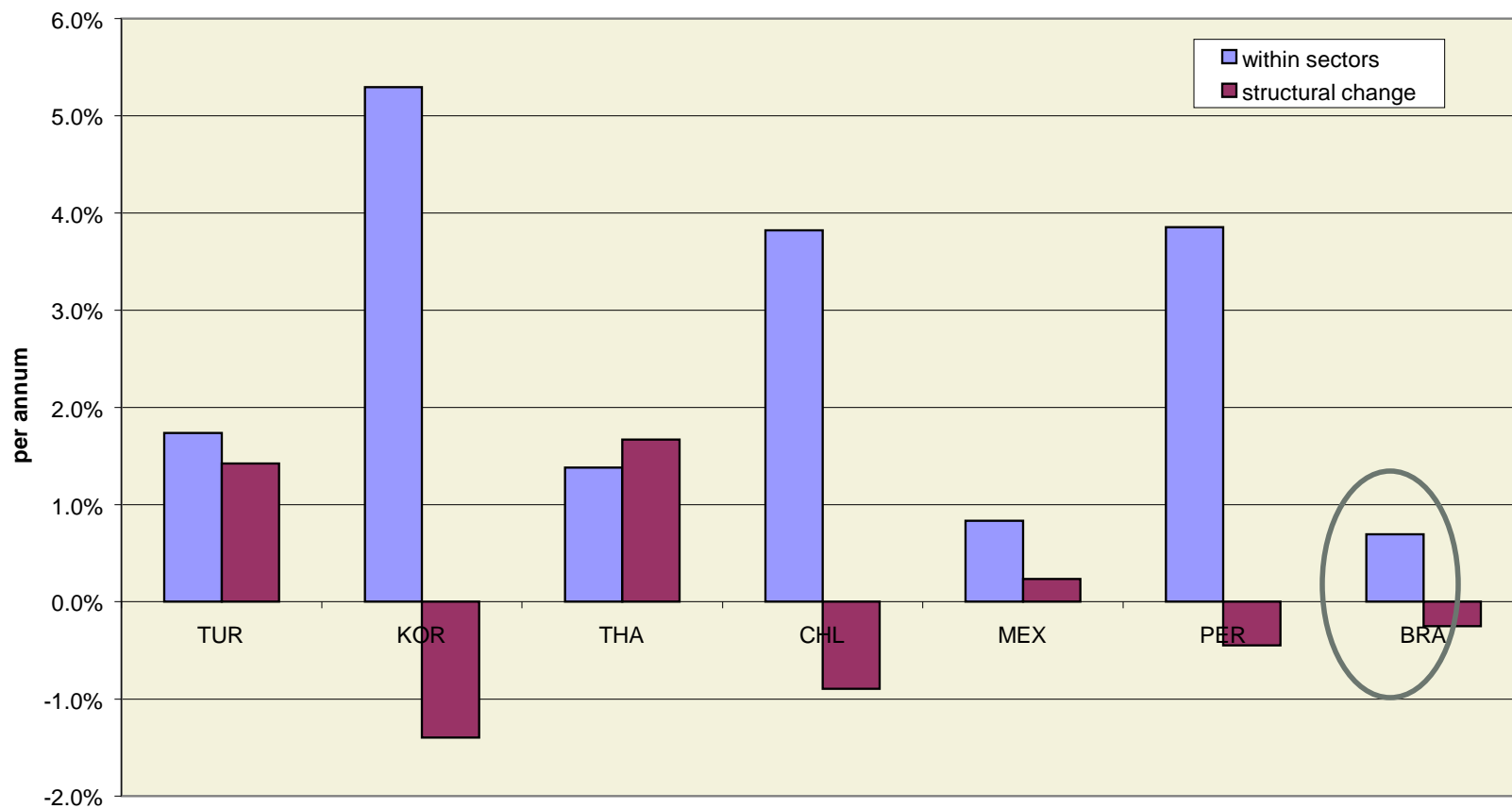
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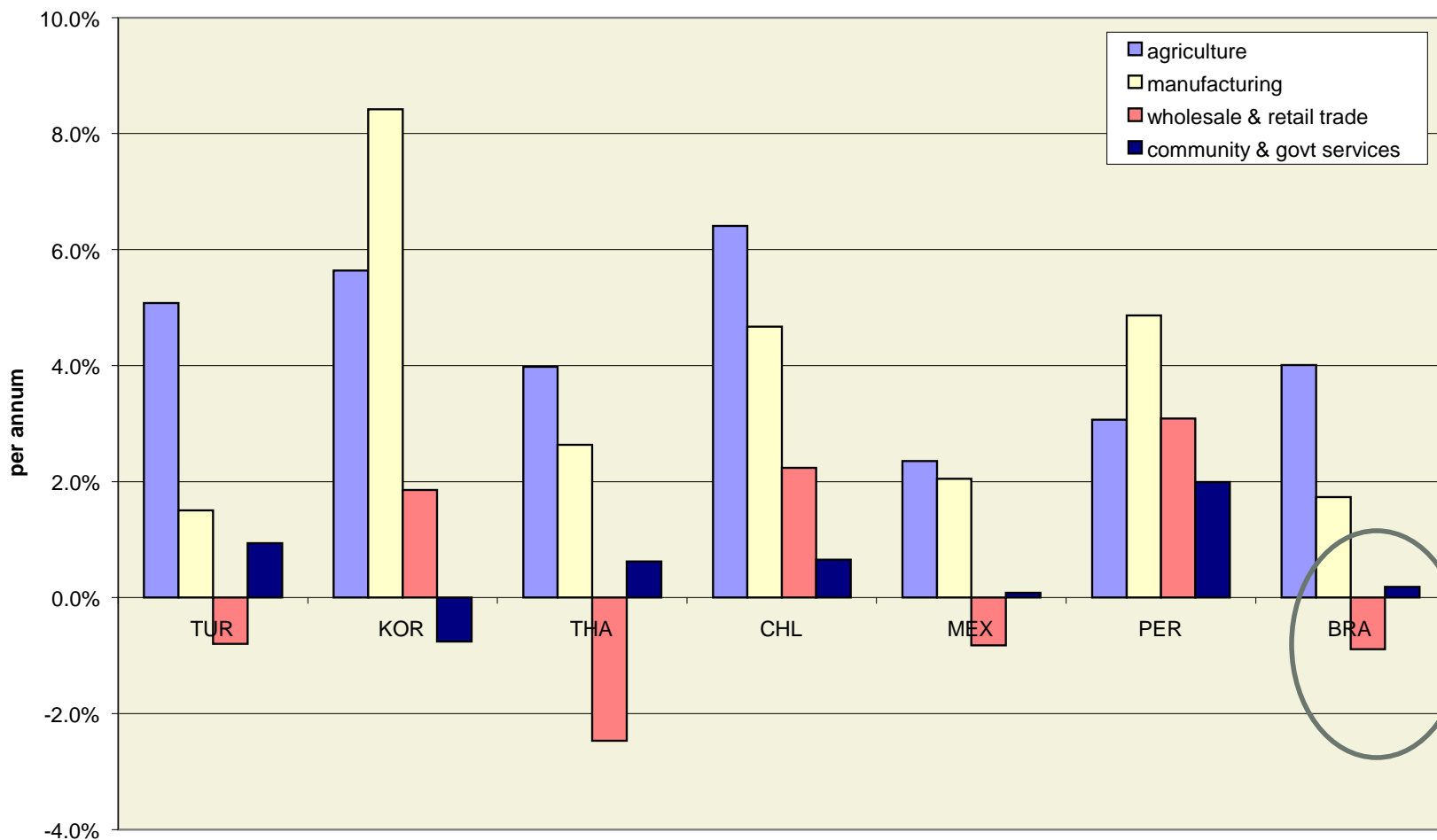
Whereas Brazil lagged badly behind in within-sector productivity growth

Contributions of the within and structural-change components of labor productivity, 1990-2005



Brazil does particularly badly in services

Labor productivity growth within selected sectors, 1990-2005



Two possible paths for Brazil

- More rapid structural change (as in Thailand or Turkey)
 - seems the harder path for Brazil going forward, in view of:
 - much smaller reserve pool of labor in agriculture
 - less hospitable macro/global environment for industrialization
- Higher productivity growth in services (as in Korea, Chile, and Peru)
 - seems inevitable path going forward

A closer look at retail trade

Productivity differences across different retail segments are very large

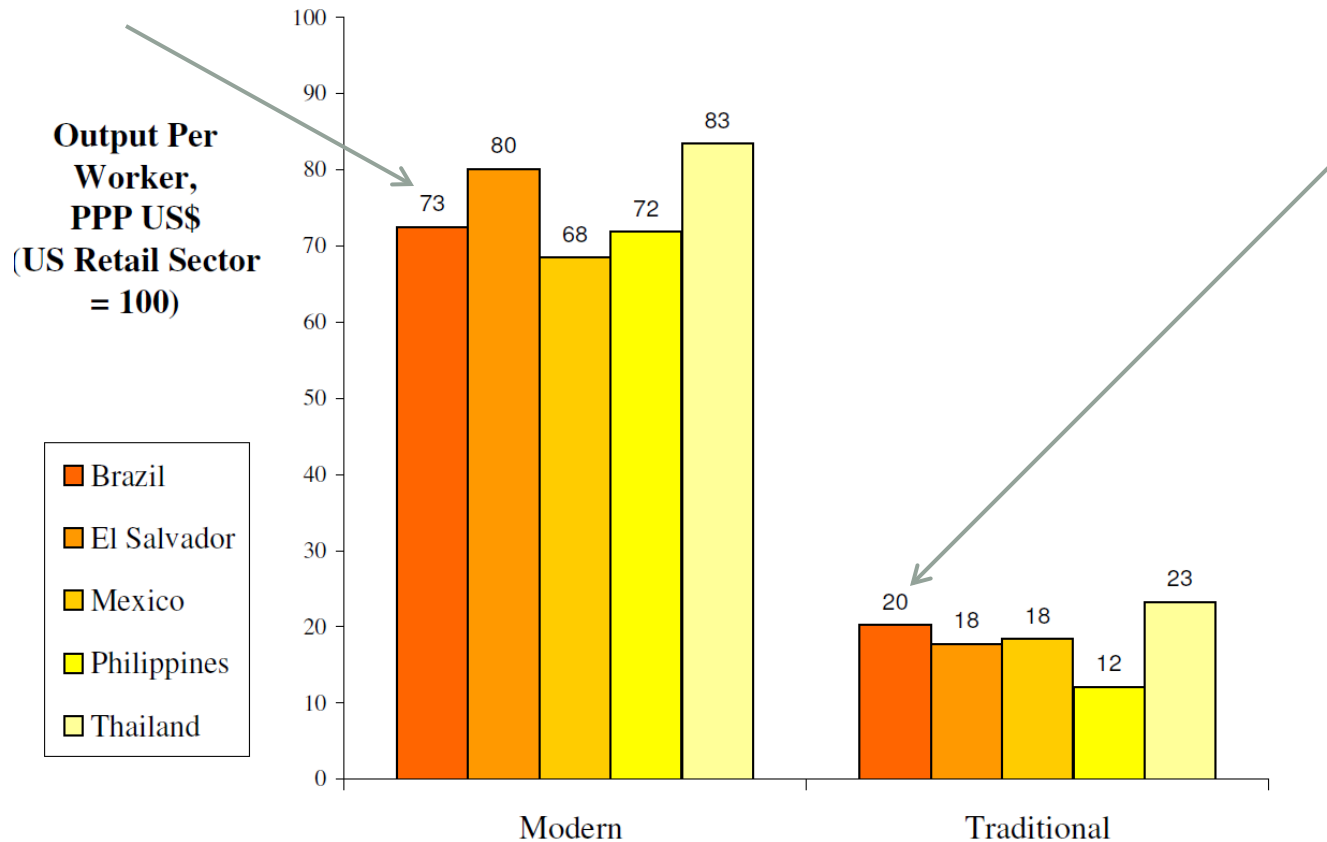
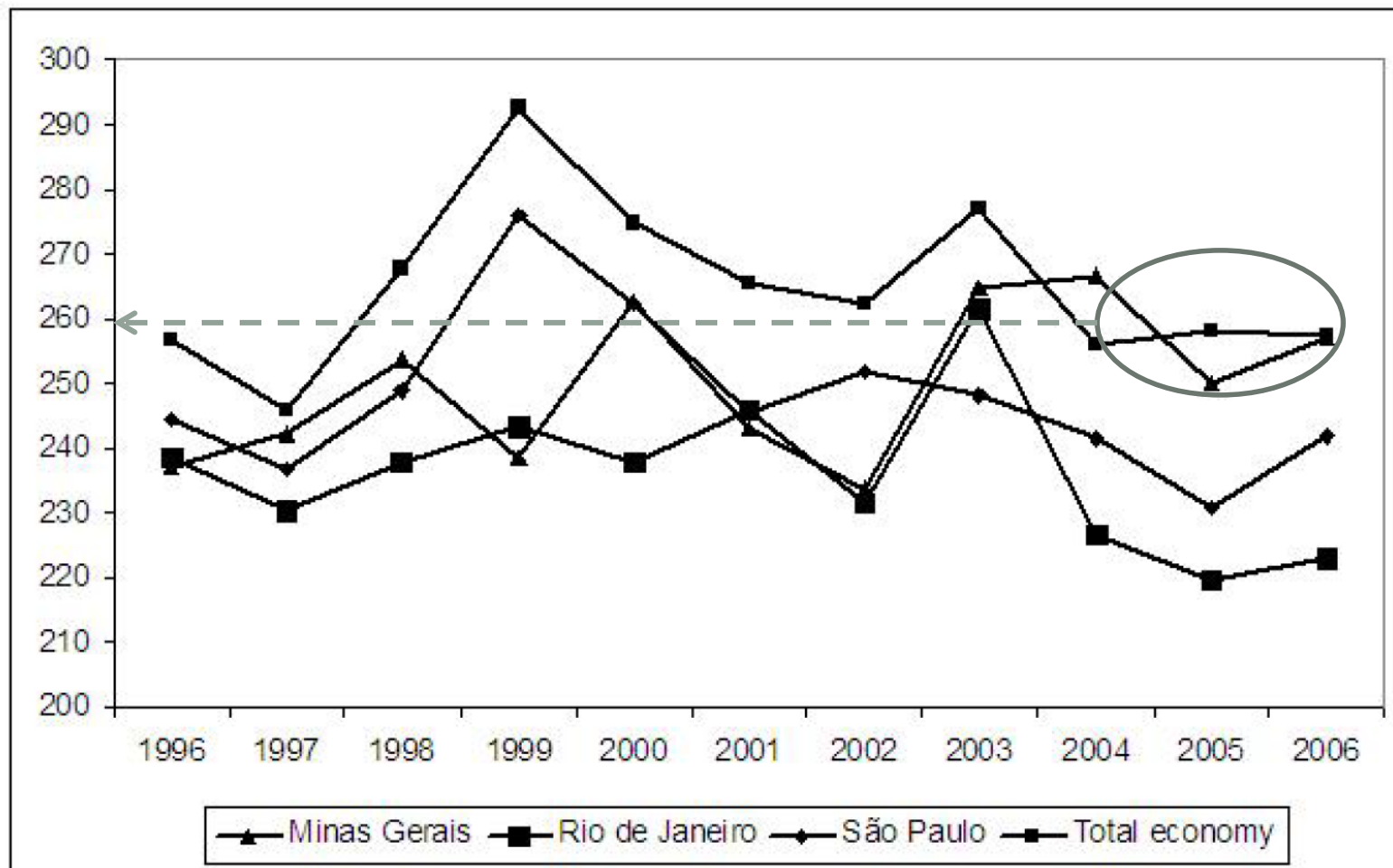


Figure 2: Labor Productivity in Modern and Traditional Stores

Source: Lagakos (2009)

There are significant gains from reducing resource misallocation within retail sector

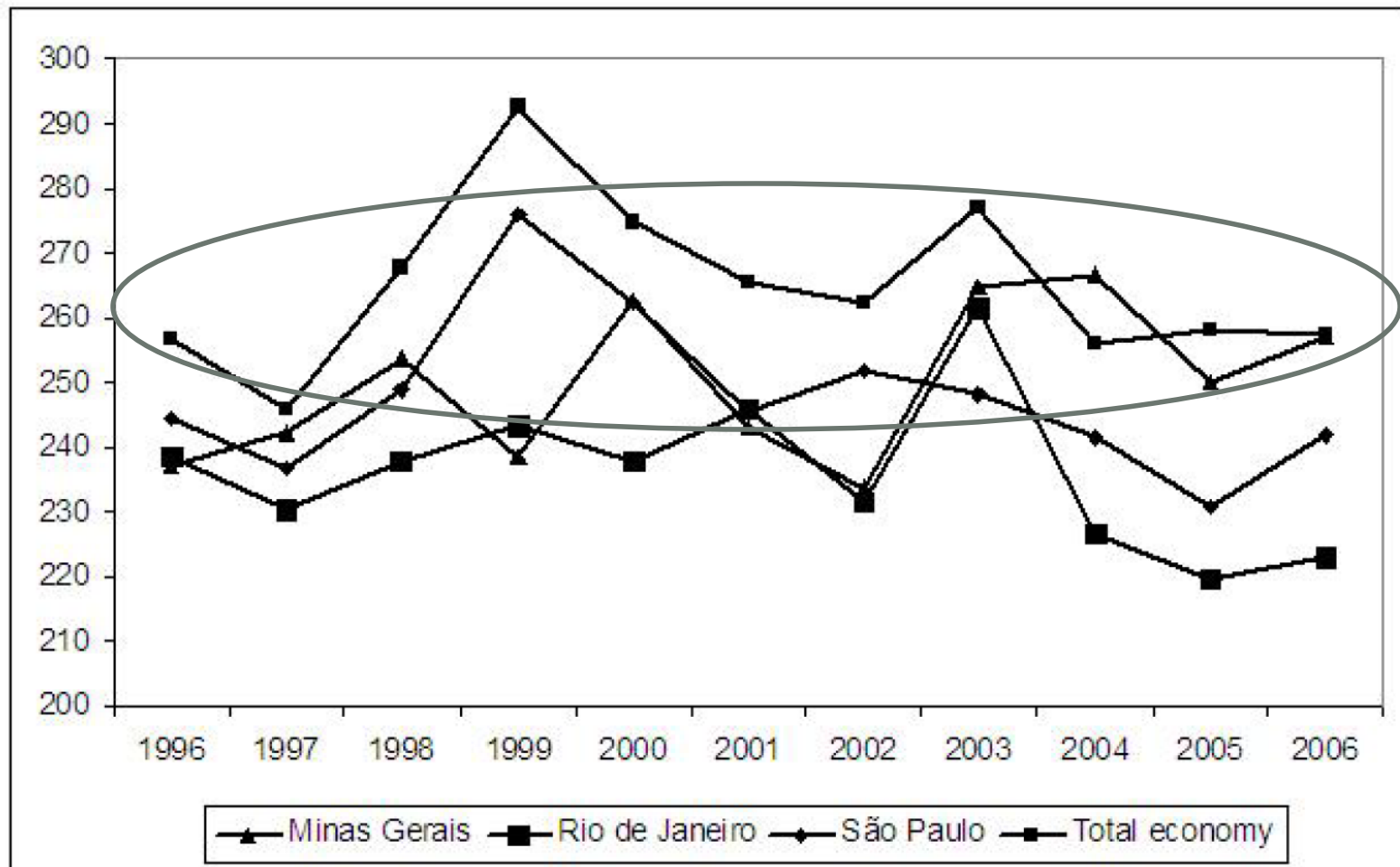
Figure 1: Potential aggregate productivity gains from resource reallocation



Source: de Vries (2012)

There has not been much improvement in allocative efficiency since mid-1990s

Figure 1: Potential aggregate productivity gains from resource reallocation



Source: de Vries (2012)

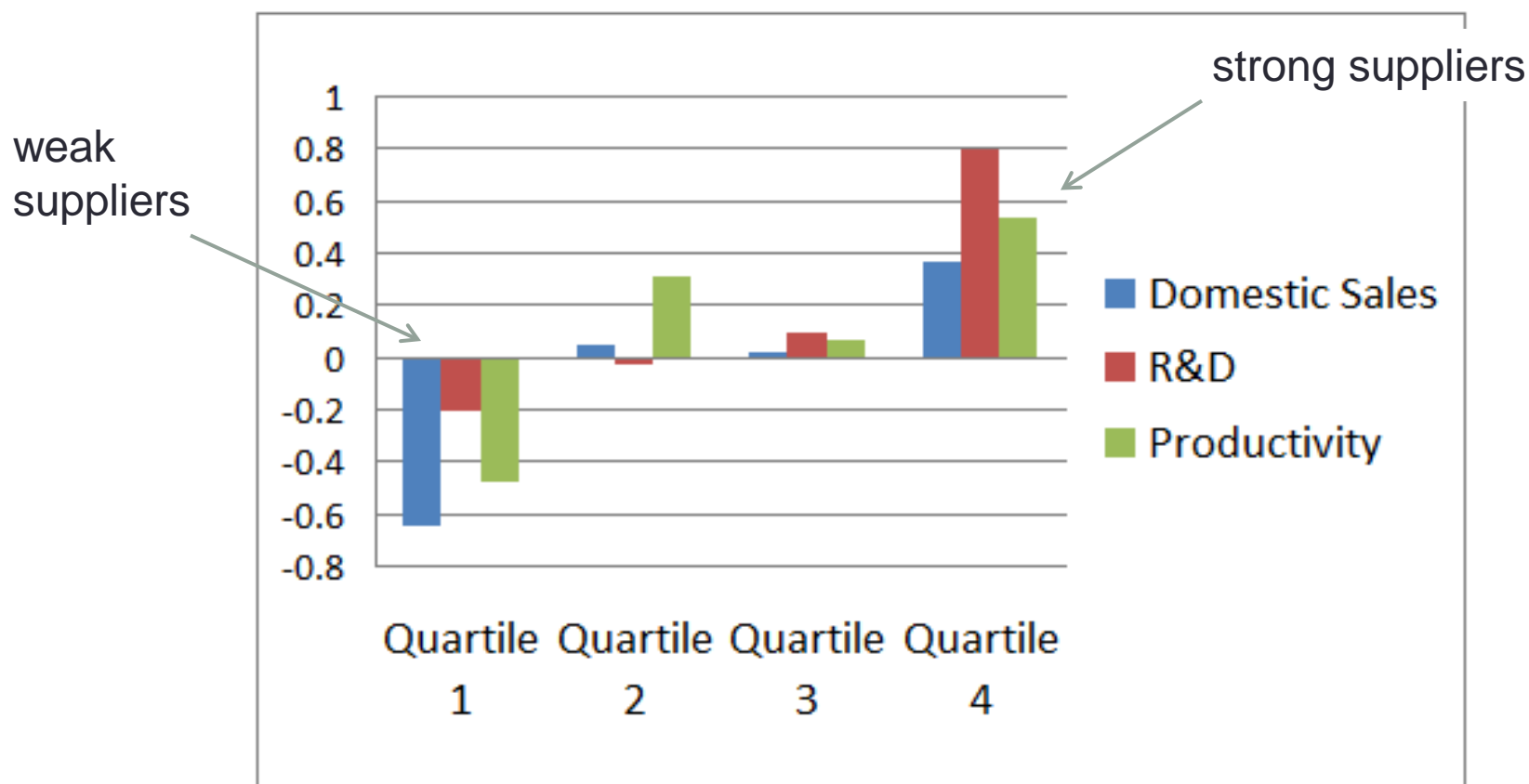
Recent reports are bullish

“As international players continue expanding in Sao Paulo and Rio de Janeiro, modern retail is also spreading in Brazil’s north and northeast and to larger interior cities. Many international funds are showing confidence in the market.... Major players such as Wal-Mart ... are investing billions to open new stores, expand current ones, and improve technology.”

AT Kearney 2013 Global Retail Development Index

But foreign investment is no panacea

Wal-Mart's unequalizing effect in Mexico



A closer look at retail trade

- Big productivity differences across firms of different size
 - larger, modern establishments versus smaller, traditional stores
- Significant productivity losses due to inefficient allocation of resources
 - modern segment too small
 - TFP could more than double with feasible reduction in resource misallocation
- Very limited gains in reducing resource misallocation within sectors since mid-1990s
 - despite service-sector liberalization in 1990s
- Entry of modern firms has asymmetric effects
- Policies also have differentiated effects
 - credit constraints hurt smaller firms, profit taxes larger firms

Summing up, the problem is not...

- bad macroeconomic management (fiscal, monetary policy)
- lack of skills, education
- too little physical capital accumulation
- deindustrialization
- performance of tradable sectors (manufacturing, agriculture)
- bad infrastructure
- inadequate technology, innovation, R&D

It's...

- Specific productivity blockages in non-traded services
 - such as public administration and wholesale & retail trade
- There is no magic or quick solution to these blockages
- Will require ongoing, fine-grained reforms in regulatory systems and institutional arrangements
- Sustainable levels of growth will remain moderate

The (relative) good news

- Compared to most emerging markets, Brazil has a number of strengths
 - robust democracy
 - Dilma Rousseff vs. Tayyip Erdogan's reactions to protests
 - investments in education, social programs
 - reduction in inequality
 - cooperation between government and private sector
- Ultimately, the quality of growth is as important as its rate