

Baseline matters!

- A case study of EU-US FTA

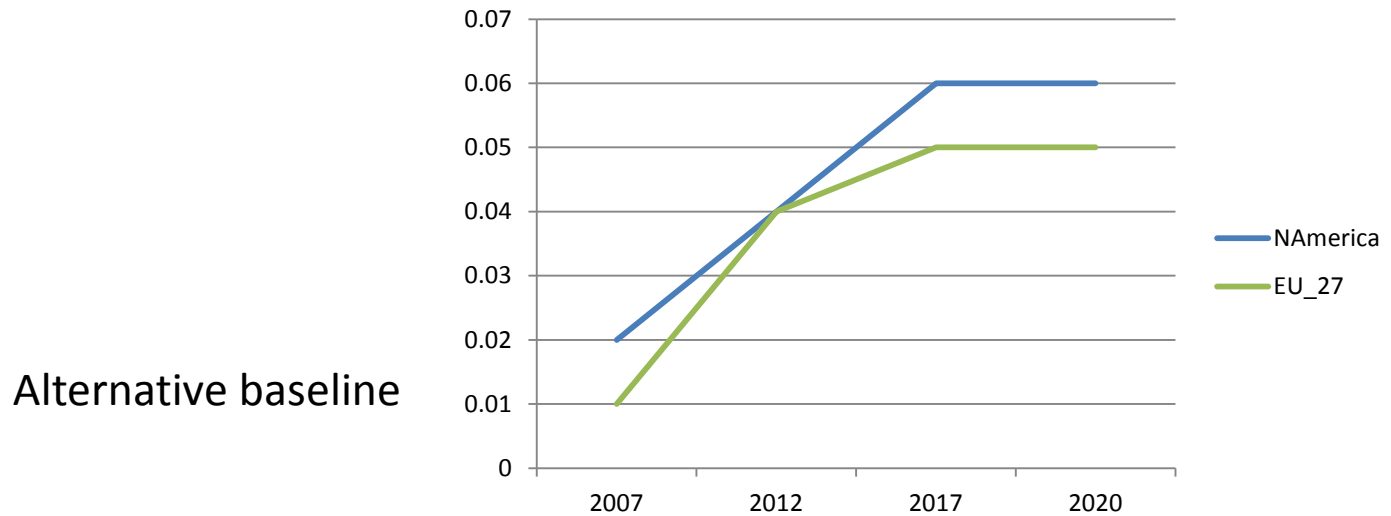
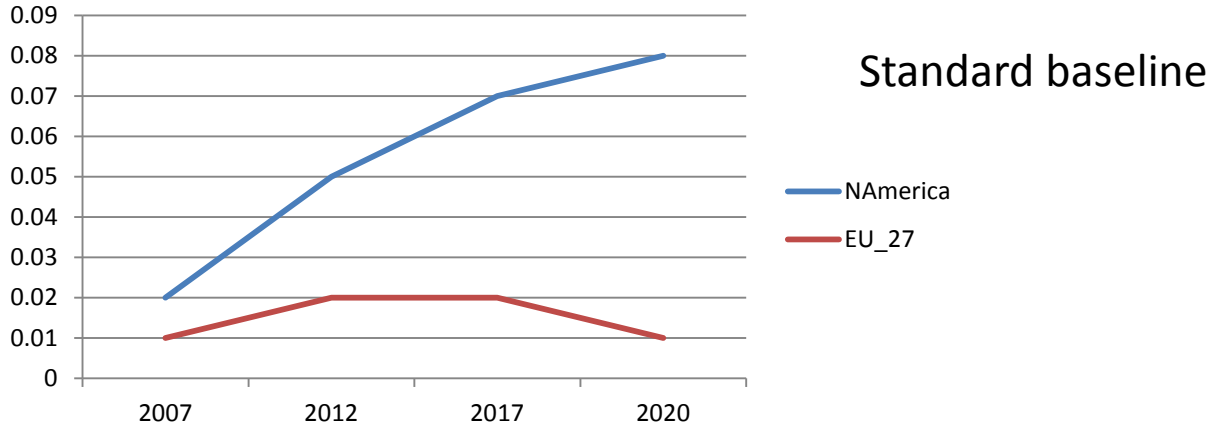
DTAP Short Course in Dynamic Global Trade Analysis
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Why study a baseline?

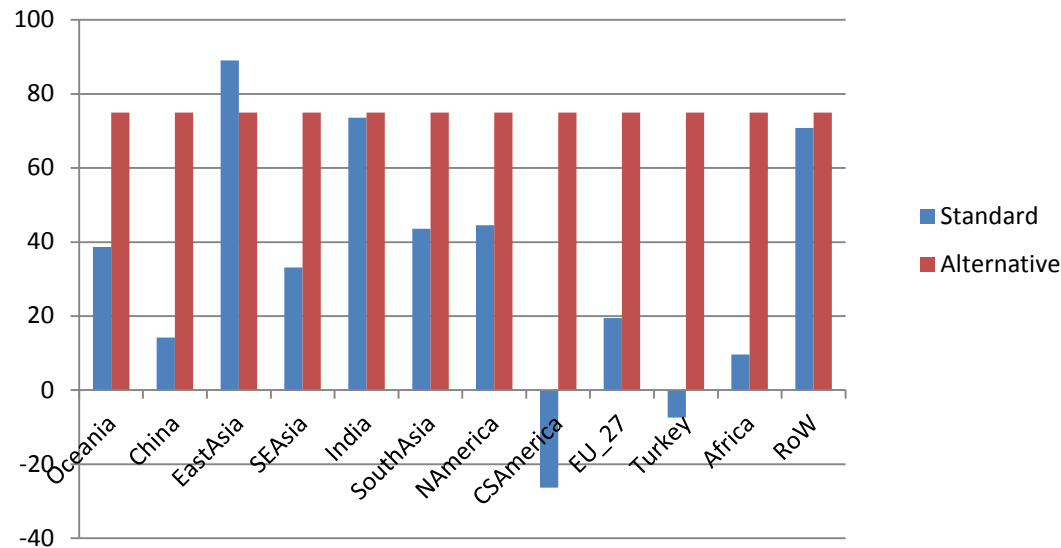
- "A baseline depicts how the world economy might be expected to change, over a given period of time, if the policy were not implemented." (Walmsley, Chapter 5)
- Hypothesis – A baseline affects the outcome of the simulation. The relative extent of the influence depends on the content of the baseline.

A baseline matters!



Two baselines studied

- Standard – based on the outcome of the program App2_SC.
- Alternative – same as standard except that we impose three per cent increase per year in total factor productivity for all regions. This is only a working hypothesis, and would need a further consideration.



Difference of the two baselines - Growth Accounting

- *Simplified production function*

$$Y = AK^\alpha L^{1-\alpha} \quad (1)$$

where Y is GDP, A is total factor productivity, K is capital, L is labor, and alpha is the capital share.

taking logarithm and differentiating

$$\dot{y}/y = \dot{A}/A + \alpha(\dot{K}/K) + (1-\alpha)(\dot{L}/L) \quad (2)$$

- In the standard baseline TFP growth (\dot{A}/A) is endogenous (to achieve forecast GDP), and in the alternative baseline TFP growth (\dot{A}/A) is exogenous and 3%. So GDP growth (\dot{y}/y) is capital accumulation (\dot{K}/K), plus exogenous labor growth and TFP.

Difference of the two baselines - Growth Accounting (continued)

- Ultimately in Gdyn, GDP is determined by two equations, where two variables among the four (Y, A, K, L) are endogenous and the rest are exogenous.

Another equation is,

$$\dot{K} = I - \delta K$$

- "TFP growth varies year by year, but we want constant rate of TFP growth consistent with overall GDP growth target."
(Alla, "Discussion of Limitations")
- A question might be asked, which is easier to predict to make it exogenous, the growth of GDP or TFP? Or which is more stable in the long run?
- If we can introduce an equation on TFP, then we can make three variables (Y, K, A) endogenous. This is a study challenge which could be explored in the future.

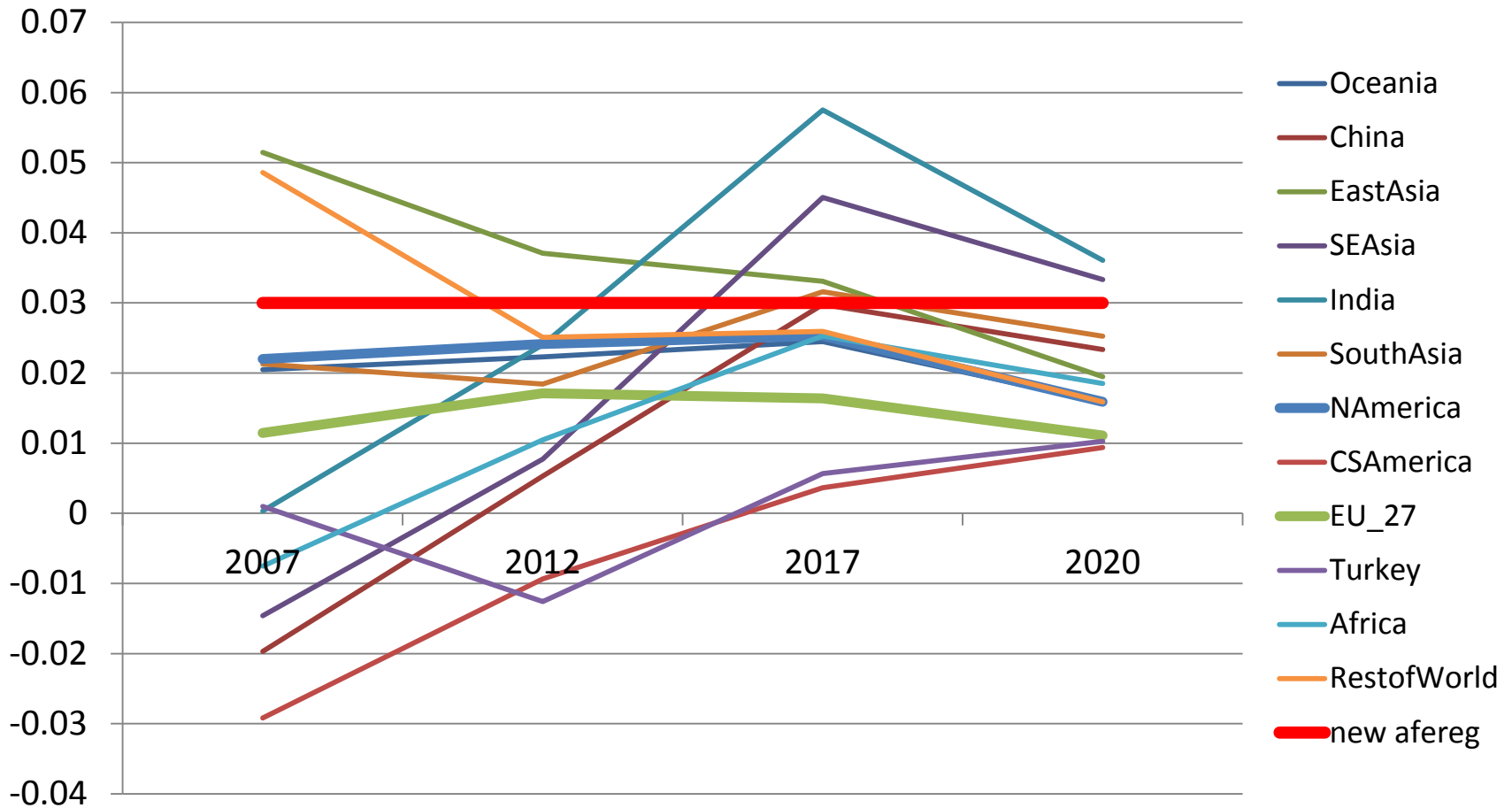
Policy shock

- EU-North America FTA

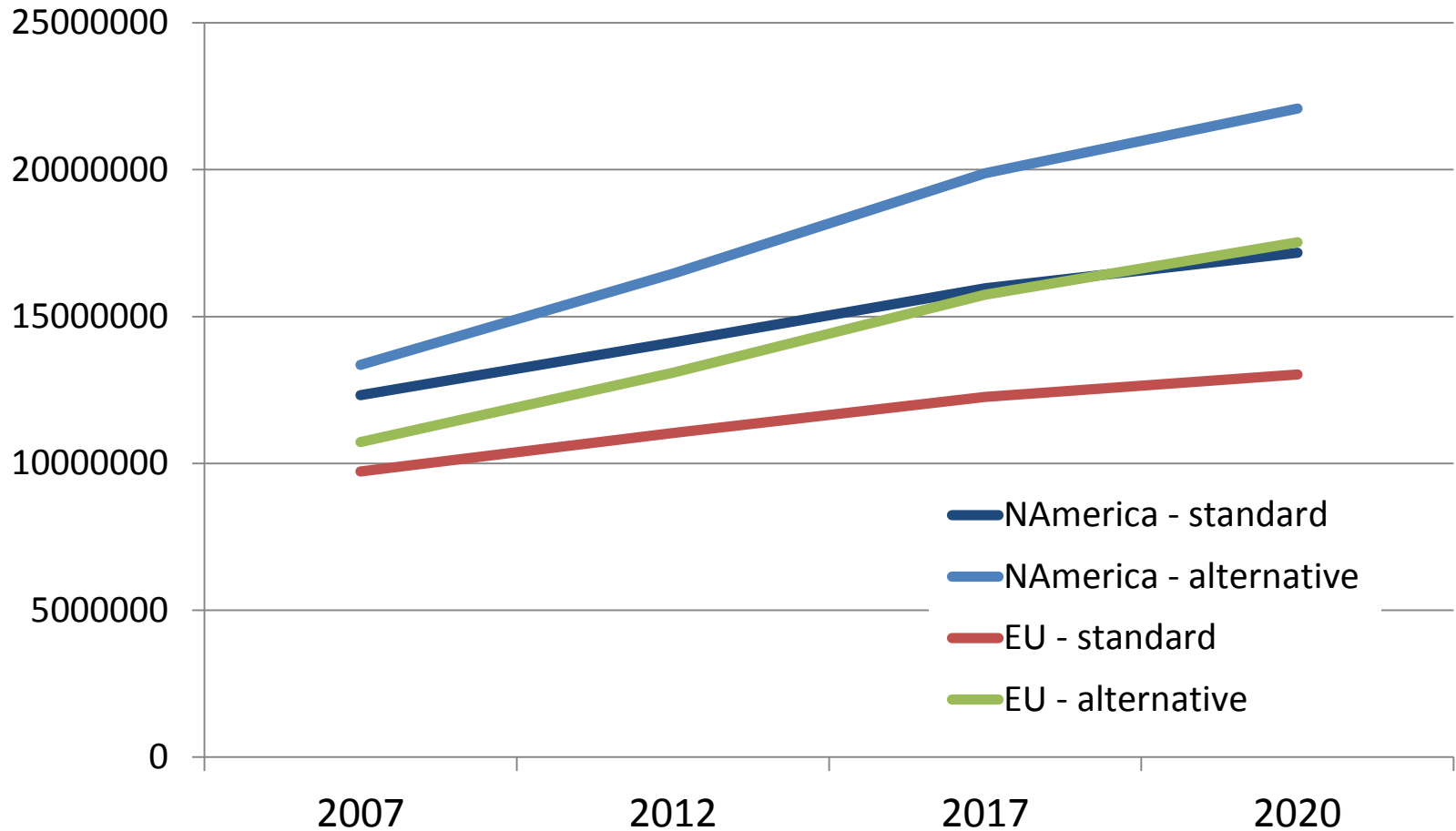
The negotiation has not started, but the possibility is recently reported. In any case this is a hypothetical shock.

Some people say that this is the last piece of a puzzle the European Union might solve in the near future.

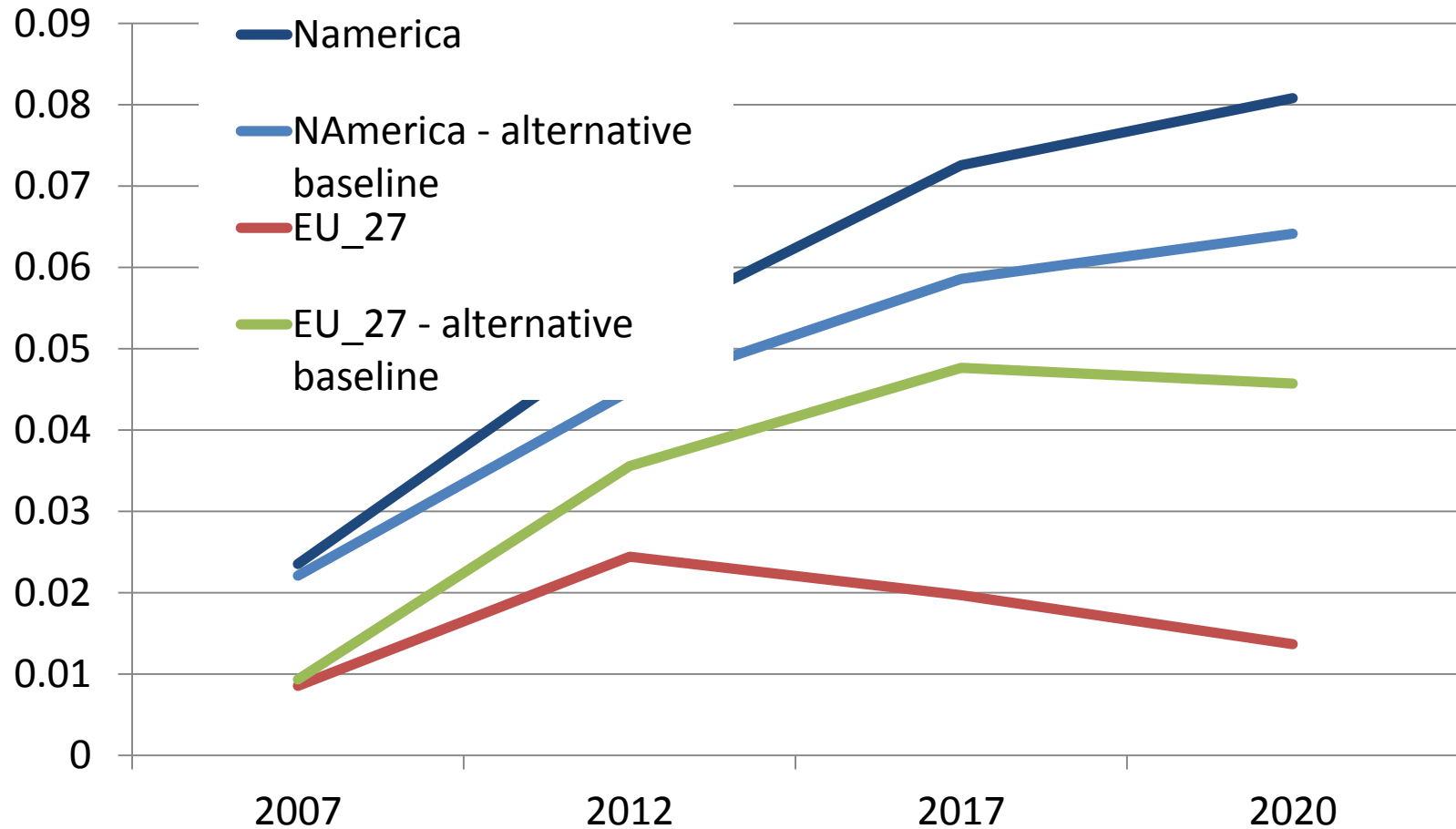
Differences in total factor productivity



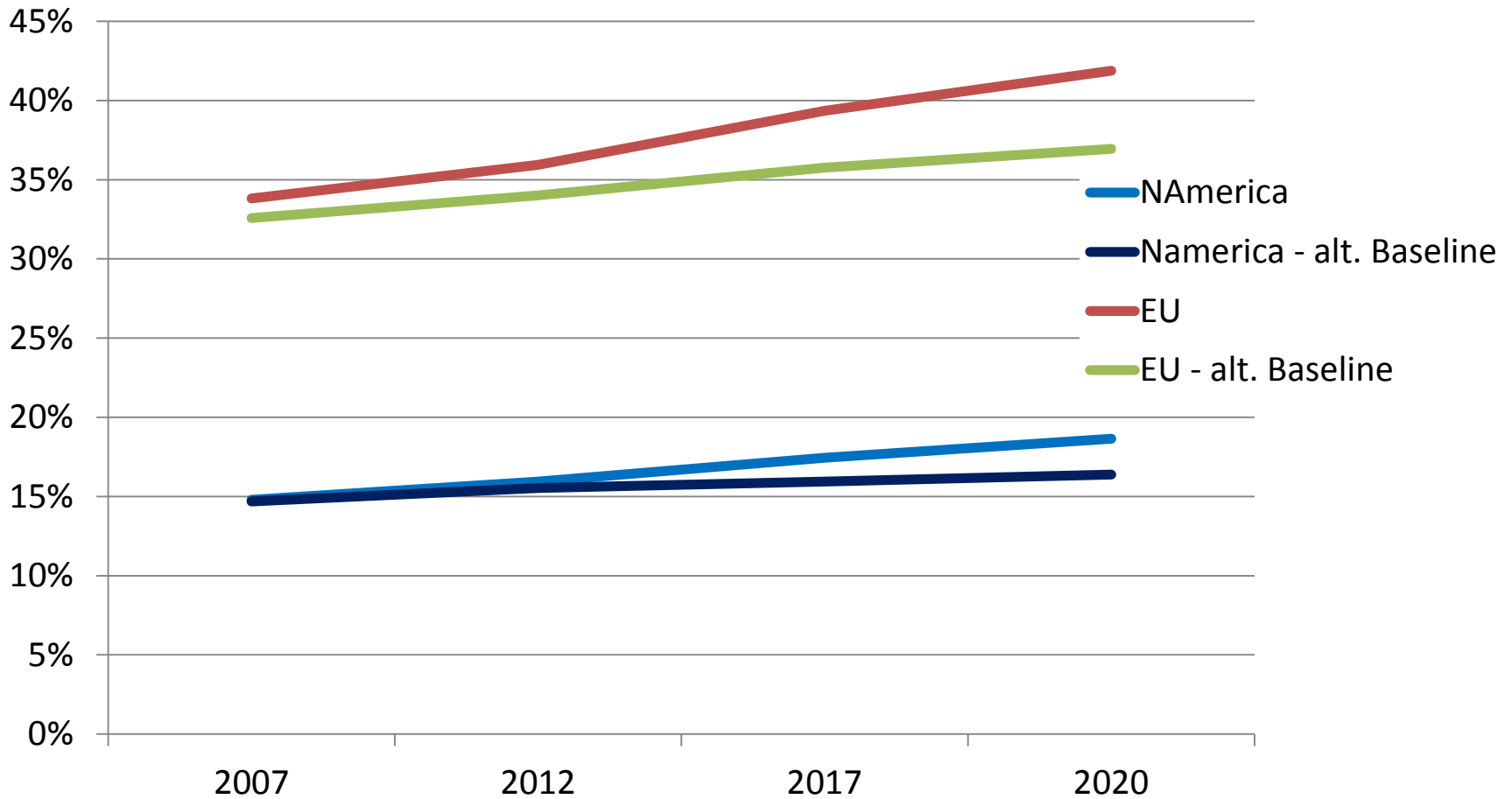
Startingpoint: GDP in baseline (Mio US\$)



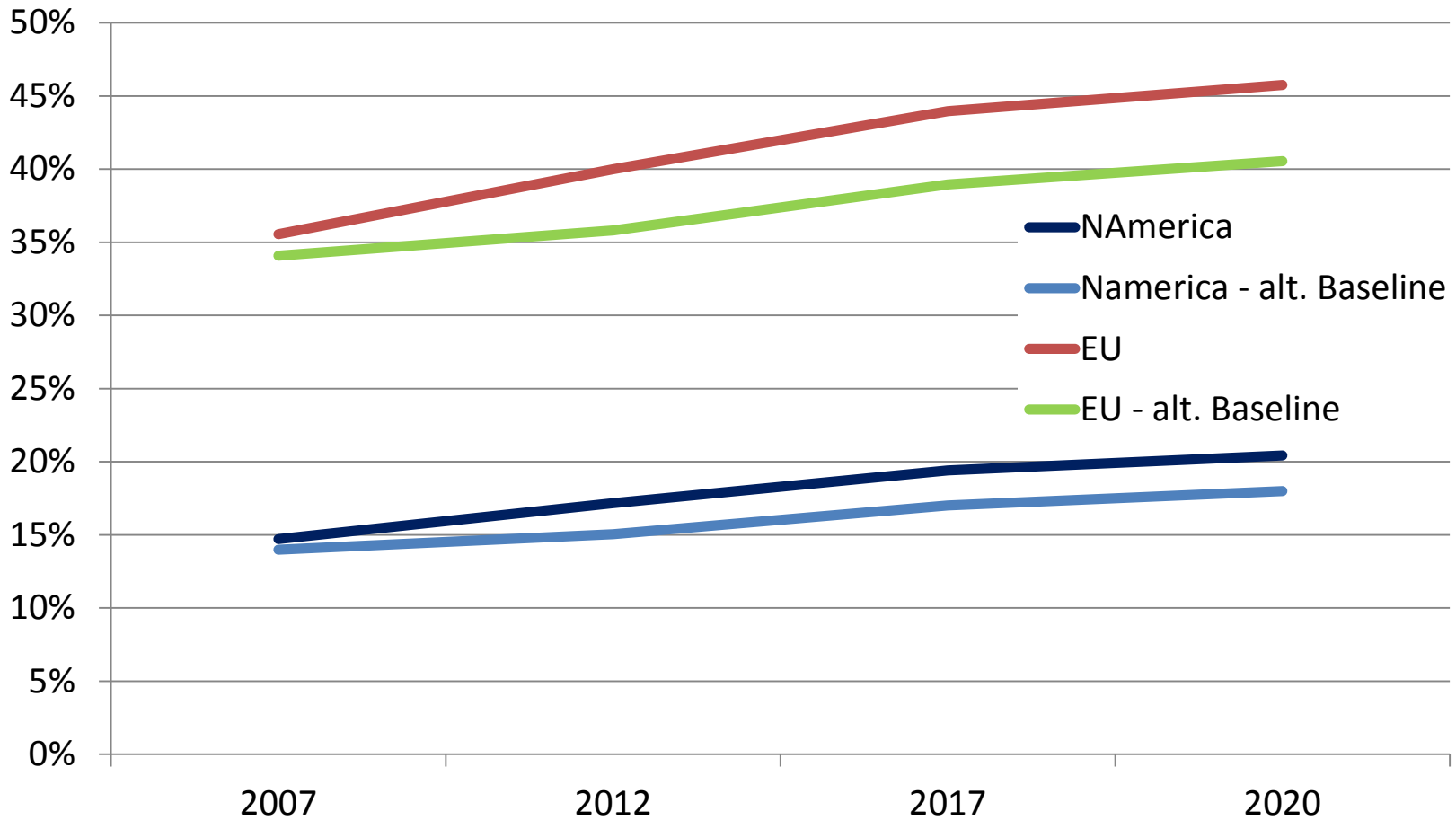
Effects from Trade Policy: on GDP (change in qgdp)



Startingpoint for analysis: Exports as Share of GDP



Startingpoint for analysis: Imports as Share of GDP



AND NOW ???

Ideas

- What is driving effects on GDP? (Imports, Exports, other?)
- EU and NAmerica export less, what happens in other countries?