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# "Splendid Isolation" as Trade Policy:

## Mercantilism and Crude Keynesianism in "the Capaldo Study" of TTIP

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## Executive Summary

A RECENT STUDY by Capaldo suggests that TTIP would have seriously negative consequences for trade, growth, income and employment in Europe. It has been given a surprising amount of attention, despite the fact that errs on the extreme side of trade estimates. Such serious flaws, however, beset the study, that its results should neither be regarded reliable nor realistic. The paper has been translated into several European languages and influential anti-TTIP campaign groups in Europe particularly distribute it. The use if the study and the flaws of the applied methodology give the impression that the results are constructed.

Capaldo has chosen a model that is by and large a demand-driven model that does *not makes efforts to capture the supply-side effects of trade, which are the effects that are proven to be the core positive effects of trade liberalisation.* Equally problematic, the model is not designed to assess the effect on trade from trade agreements – in fact, the model is profoundly ill suited for such an exercise. No trade economist, regardless what school of thought he or she comes from, has ever used this model to make estimates of trade. The reason is simple: if a model cannot predict the effects on the flows and profile of trade as a consequence of trade liberalisation, it is of no use at all. And yet, to cover up the flaws of the model, Capaldo reinforces the problems and makes the model, and the resulting estimates of TTIP, even less reliable. In addition, despite the ownership of this model by a United Nations agency, access to it is denied and so is the possibility to replicate the model in order to check its predictive power and robustness.

In Capaldo's analysis, *structural change and the emergence of new industries do not play a role at all.* Capaldo implicitly assumes that an economy with its labour and capital does not respond and adjust to new circumstances. New competition only leads to new unemployment. In addition, *the impact of lower barriers on international commerce on product and process innovation is neglected.* Finally, Capaldo does not account for the impact of competition on the cost of production and final consumer prices.

Capaldo's core mercantilist argument is that trade liberalisation would damage the economy *as long as it does not raise net exports*. Capaldo therefore gets trade fundamentally wrong. The U.S., for instance, is showing persistent current account deficits since the 1970s. If economic prosperity would be a function of the net trade balance, as Capaldo proclaims, the U.S. as a whole would have suffered from a significant fall in income and welfare vis-à-vis the rest of the world. None of this has happened.

Capaldo's conclusions are not only based on the decline of net exports, they are also entirely dependent on some crucial side assumptions. As a crude Keynesian model, *the Global Policy Model that Capaldo applies is heavily sensitive to fiscal policy measures. In his analysis, Capaldo assumes constant fiscal austerity for Europe triggering a spiral of falling aggregate demand.* A model that heavily relies on demand-side effects and fiscal stimulus, however, is not suitable to assess trade, especially as it explicitly neglects essential supply-side forces that trigger economic growth.

Capaldo ignores *the positive historical empirical relationship* between low barriers for international commerce, import competition, economic activity, domestic income and welfare. *Following his analysis, it would be better for governments to continue maintaining economic inefficiencies, e.g. the cost of excessive red tape at the border, rather than correcting them.*

If Capaldo's claims were right, Europe should have economically disintegrated as a result of its trade integration with any other part of the world. *The Capaldo reasoning suggests that Europe's trade integration with China*, for instance, would have fractured EU economic integration. In fact, European economic integration deepened considerably even though import competition from the Asia-Pacific increased significantly over the past two decades.

According to the Capaldo reasoning, *economic integration within the European Single Market should have triggered a tremendous fall in wages and employment* due to the greater exposure of EU economies to trade and the proclaimed negative impact on income and aggregate demand. None of this has happened. In fact, *nominal and real wages have risen continuously across countries in Europe.* Moreover, although the EU was exposed to accelerating globalisation, the EU benefited from economic convergence. *Intra-EU trade considerably intensified in a way that all EU members experienced increased in employment over time.*

# 1 Introduction

The Transatlantic Trade and Investment Partnership (TTIP) is a significant trade-policy initiative, but there is no universal story about what it aims to achieve. It is supported or rejected on different grounds – and there is a vibrant discussion on the economic, political and strategic consequences of TTIP. However, for political leaders in both America and Europe, there was one key factor behind the decision to launch TTIP: the desire to support economic growth by an economically meaningful Free Trade Agreement (FTA). Especially so at a time when trade growth is stalling and it is difficult to spur global trade liberalisation. In other words, TTIP is essentially an economic initiative. If the TTIP negotiations reach a positive conclusion, its ratification is likely to be won or lost on its economic merits.

Intelligent people quarrel about the size of the potential economic gains from TTIP. There are many studies estimating on the costs and benefits of TTIP, and the general estimates have spurred studies focusing on specific issues or sectors. These studies almost invariably come to the conclusion that the gains outweigh the costs by a solid margin. The Centre for Economic Policy Research (CEPR 2013), for example, estimates the gains of TTIP to be 0.5 percent of GDP for the EU and 0.4 percent for the U.S. CEPII, another economic research institute producing simulations on the effects of trade agreements, suggests the gains for both the EU and the U.S. to be 0.3 percent of GDP (CEPII 2013).

Generally, the existing studies estimate the *effects of tariff reductions* to be positive but insignificant. Larger gains, however, are associated with those elements of the envisaged agreement that address non-tariff barriers and regulatory divergences in the goods and services sectors. Importantly, improvements in rules are rarely subject to cost-benefit analysis, even if the dominant view is that regulatory convergence can spur international trade. There has been a debate between economists about the quality of various assessments. Some have argued that studies like CEPR (2013) tend to exaggerate the size of the reductions in non-tariff barriers and consequently the economic benefits of TTIP. Others, however, have argued that the same study underestimates the effects on trade costs by reducing NTBs.

Naturally, no one can give an exact prediction on the effects of a trade agreement. What can be said with a high degree of certainty, however, is that simulations generally underestimate the gains from a trade agreement. For the estimate that has been released by the European Commission (CEPR 2013) it is safe to say it likely operates in the lower territories of potential gains.

*First*, the estimate does not cover the full effects of the liberalisation of trade in services. In fact, it covers only one element of such liberalisation – what in trade jargon is called "mode 1" effects (direct cross-border supply of a service). Due to limitations in all existing models, all the other known – and sizeable – effects of liberalisation of services trade do not form part of the estimates of the cost and benefits from TTIP.

*Second*, the estimate is based on scenarios for trade that does not include trade agreements, like the Trans-Pacific Partnership, that most likely will have a trade diverting effect on EU trade with the United States. Similarly, it does not take account of likely trade agreements that the EU will engage in and that also will effect trade between the two TTIP partners. The result is that the baseline scenario for the development of trade in future does not take account of likely trade diversion in EU-US trade and thus exaggerate the volume of trade growth in a world without TTIP.

*Third*, and important, the estimate does not take account of known gains from trade that come through so-called dynamic effects. The model, for instance, does not estimate the positive effect on productivity that most trade economists hold to be an important effect of trade liberalisation. Other core dynamic effects of trade liberalisation that are not part of the estimate include economic variables such as investment, competition, and innovation. Accordingly, the dynamic gains arising from tariff elimination, the partial elimination of non-tariff barriers and the partial

liberalisation of services sectors *are most certainly higher than the static gains*.

Given these types of model limitations it is not surprising that estimates on the cost and benefits of TTIP do not take account of *sequential* economic effects going beyond the bilateral gains for the U.S. and the EU. Yet such benefits are clearly perceived – and behind the favourable view on TTIP taken by quite many observers. The sequential benefits are premised on the capacity of TTIP to change the incentives of other countries by making them more favourable to trade liberalisation. Such liberalisation could happen autonomously or as the result of negotiated efforts to reduce barriers to trade and investment. Unlike most other bilateral trade initiatives, TTIP certainly is an initiative that can have systemic consequences. While most other bilateral agreements on the books have not been systemically important – there is no big-to-big economy FTA – a trade agreement by two of the biggest economies in the world will not pass unnoticed by other countries that may be affected by it.

Even if TTIP will not change the general direction of trade and commerce in the world, which inexorably is moving to the Asia-Pacific region, it is likely to trigger liberalisation in third countries. The size of the EU and the U.S. economies, and their combined role for advancing trade policy, imply for some countries that they no longer can assume that they can maintain their current position in global trade without committing themselves to new trade reforms. Without giving undue credit to TTIP, it can easily be argued that the launch of TTIP negotiations has helped to push the Canada-EU Trade Agreement to a conclusion and motivate China to seek participation in the negotiations over a new, plurilateral trade in services (TiSA) agreement.
So the conclusion then is that the real economic benefits of TTIP are most likely to exceed the estimated benefits? Not so fast. A recent American study (Capaldo, 2014) is challenging the prevailing economic wisdom over TTIP and argues that this agreement would be no less than a grand destroyer of jobs and income in Europe: that it would unleash economic consequences tantamount to an economic depression for some countries. The study is of interest because it has received a surprising amount of attention in Europe, especially from non-governmental organisations (NGOs) and anti-TTIP Members of the European Parliament (MEP) that have sought to torpedo the positive argument about the gains of TTIP. The paper has been translated into French, German and Italian and the author continues to make frequent appearances in the European Parliament and the debate. For quite many anti-TTIP voices, Capaldo's study is seen as more credible than studies suggesting TTIP to deliver net benefits to the European economy.

These voices claim that most of the existing estimates on the gains from TTIP, especially the study on the economic effects of TTIP done for the European Commission (CEPR, 2013), *vastly* underestimate the economic losses of TTIP for the European economy. In the same breath, they make the contradictory claim that TTIP will *not* yield large aggregate gains because there are no big barriers to trade to reduce.

This contradiction is also right at the heart of the Capaldo study: it struggles to make up its mind whether TTIP is a trade agreement that will substantially free up trade – and thus have significant economic consequences (positive or negative) – or if TTIP will not reduce the cost of trade enough to leave a significant imprint on the economy. Capaldo's study largely contends that TTIP lowers net exports in Europe. Consequently, he argues that the EU will experience a fall in the net revenues from trade if it signs up to TTIP. TTIP will expand trade volumes, but the ensuing re-organising of trade and the declining trade surplus it entails is calculated by Capaldo to have a shock effect on the EU economy. In other words, TTIP is argued to expose European economies to such different patterns of trade and competition that it will fracture Europe's economy and economic integration in Europe.

By the standards of trade estimates, or the effects on trade and growth from a trade agreement, Capaldo's calculation significantly errs on the extreme side. He suggests disproportionate and adverse consequences of a free trade agreement that simply cannot be found for any past trade agreement. While a solid case can be made that standard plain-vanilla models of trade rather err on the side of caution, Capaldo's results warrant attention. Big claims, however, require

big evidence. And to derive such evidence warrants a sophisticated methodology that rivals the methodologies used in simulations arriving at opposing conclusions.

In this paper, we argue that Capaldo's paper is lacking both. The methodology applied by Capaldo is prone to confirmation bias; it largely takes into account the factors that confirm the author's beliefs or hypotheses while it turns a blind eye to opposing historical evidence on the impact of trade on economic growth and employment. Capaldo argues that he is using a "different model and more plausible assumptions on economic adjustment and policy trends […]" in order to "simulate the impact of TTIP on the global economy in a context of protracted austerity and low growth especially in the EU and US." (Capaldo 2014, p. 2)

The model and the assumptions of this study, however, seem chosen not for their merits to assess trade agreements but rather because they *a priori* confirm Capaldo's economic worldview. By using a model that is *not* designed to capture the consequences on trade resulting from trade liberalisation, the author gets right from the outset off in the wrong direction. Accordingly, the effects of TTIP generated by Capaldo heavily conflict with real world evidence about the impact of trade agreements on trade, GDP, employment and income.

We will proceed as follows. The main assumptions and results of the Capaldo study are outlined in Section 2. We also discuss the methodological flaws of Capaldo's analysis in the light of alternative approaches. Section 3 provides a reality check for the European Union, in which economic integration advanced over the past 20 years even tough the EU's international trade and investment relations with the rest of the word deepened and competition with the Asia-Pacific region intensified considerably. Section 4 concludes the paper.

## 2 Capaldo's Study: Claims, Assumptions and Flaws

### THE PROCLAIMED IMPACT OF TIPP

Most estimates on the consequences of a future or proposed trade agreement are based on cautious assumptions about the effects on an agreement and how trade ill evolve with or without the proposed agreement. The study by Capaldo, however, goes in the opposite direction and consequently makes a number of extreme claims about the economic effects of TTIP. The most important are:

1. TTIP will lower net exports of all European Union countries.

2. TTIP will therefore lower Gross Domestic Product (GDP) in the EU. After a decade with TTIP, countries in Northern Europe will experience a decline in GDP larger than 2 percent. In other words, these countries will be two percent poorer than compared to a scenario when there will be no TTIP. Germany and France will have a decline of GDP by 1.9 and 1.14 percent respectively.

3. TTIP will consequently increase unemployment – in fact, more so than the rise in unemployment because of the Eurozone crisis – and lower personal income. France, for instance, would experience a fall of labour income equivalent to 5,500 euros per worker. This can be compared to the 545 euros gains to disposable income for an average European *household of four* estimated in the CEPR study.

4. TTIP will lead to trade disintegration in the EU.

5. TTIP will expose the EU to greater systemic financial threats.

6. TTIP will disempower the EU's ability to achieve macro-economic stability.

If some simplification is allowed, the logic of Capaldo's analysis can thus be described as follows. TTIP would increase import competition in the European economy – and as a consequence the economy would adapt by increasing unemployment and lower labour income, which in turn will lower aggregate demand and drive down trade as well as the GDP. There is *no reallocation of resources to adapt to new competition*. Nor are there any efficiency gains that could raise output and demand.

Capaldo's view of the EU after TTIP is a pretty remarkable achievement for a trade agreement. Trade economics indeed allow for a high degree of variation in how scholars view the importance of specific factors of trade and economic adaptation, but no serious trade analysis today come close in adapting such a simplistic view on the effects of trade on the larger economy. Contrary to what can be observed in reality (e.g. NAFTA and the European Single Market), the European economy would stabilise at a significantly lower level of welfare. Capaldo radically contradicts all other known estimates of the economic effects of TTIP and seriously departs from the accumulated knowledge of how trade agreements – multilateral or bilateral – operate and what their consequences are for contracting countries. It begs the question: how did the study arrive to such extreme conclusions?

## ASSUMPTIONS

At the beginning of his paper, Capaldo ventures into a critique of the standard model used for estimating the potential effects of a trade agreement, a so-called Computable General Equilibrium (CGE) model. Capaldo is right in his general critique about these models' capacity to predict the precise outcome of a trade agreement. The only problem in his critique is that users of CGE models have never claimed they have developed the perfect model. While the imperfections of every model should prompt any scholar simulating *ex ante* effects of a trade agreement to be cautious, the real choice for serious trade estimates is not really between a CGE model – and a completely different type of model with greater predictive capacity. The choice is rather between using existing CGE models and other – usually less sophisticated – models based on different assumptions of how the economy is affected by a trade agreement or any other attempt to liberalise trade. The question is then a choice about proven predictive capacity of different methodological approaches to trade liberalisation. In effect, serious trade economists have reduced that choice to one between a CGE model or a gravity model. Capaldo has chosen to apply a model that *emerged in the 1970s and has never been applied to trade policy analysis since.*

Contrary to existing studies that primarily focus on the impact of trade agreements on the supply-side of the economy, Capaldo's analysis is based on the United Nations Global Policy Model (GPM). Contrary to supply-side models, the GPM is an aggregate demand-driven model. It was developed in the 1970s and strongly influenced by Keynesian views on the impact of changes in aggregate demand on economic activity and employment. Output growth in each country is determined by aggregate demand, which is represented by domestic government and private spending *plus exports minus imports*. It is assumed that domestic spending is particularly affected by domestic income, fiscal and monetary policies, but also external current account deficits and the accumulation of government debt. In the GPM, the *path of government spending* is particularly important for the development of economic activity (United Nations 2009).

Capaldo argues that the GPM is based on a few *core assumptions* that provide a better fit to the reality of TTIP than traditional CGE models:

1. Changes in the distribution of income are assumed to impact on economic output. Economic activity is determined by aggregate demand in a way that an unemployment-induced fall in labour income causes domestic economic activity to fall. Importantly, Capaldo's argument follows the reasoning that inefficiencies in cross-border trade facilitation and overregulation of goods and services markets create labour income that would be curtailed or even eliminated as a result of a trade agreement. In Capaldo's analysis, a falling relative share in labour income and a corresponding rise in the share of capital income results in lower aggregate demand and less economic output respectively.

2. Capaldo refers to the GPM's capacity to assess whether a chosen trade policy is sustainable or not. Although the characteristics of sustainability are not specified any further, Capaldo's argument is that "export-driven growth may lead to adverse consequences such as a net loss of trade." (Capaldo 2014, p. 10) It is left to the reader to interpret what is actually meant by this statement. In the first instance, by definition, export-led economic growth is going hand in hand with rising national income. In addition, export-driven growth in economic output corresponds to a net gain in trade. Net losses in trade correspond to import-led growth.

Capaldo intentionally neglects a myriad of other factors that drive economic growth beyond (but influenced by) trade. The simplistic view on the role of net trade leads Capaldo to conclusions about income and growth that simply do not stand up to scrutiny. If net exports is such a strong determinant of general income the acceleration of trade deficits in a country like the U.S. in various parts of recent history would have lowered GDP. However, this never happened.

3. Capaldo argues that his model accounts for the relationship between economic growth and employment. The causality between economic growth and (un)employment is considered to vary over time. Capaldo argues that this causality is affected by different factors in a way that these factors cause an economy to grow without creating additional jobs. This observation is indeed backed by some empirical evidence. Yet, it is related to short-run transition periods, business cycle fluctuations and post-economic crises recovery periods. Over the long-term, the impact of economic growth on employment is still valid and not challenged by empirical evidence. Accordingly, Capaldo does not specify the conditions causing jobless growth any further. Nor does he provide examples and relevant empirical literature.

#### FLAW 1: A MODEL THAT CANNOT ESTIMATE THE IMPACT OF TRADE REFORMS

While Capaldo points to the different results and general variations of CGE models, his conclusion is to write such models off lock, stock and barrel. He rather substitutes CGE models with the United Nations GPM. That is a bold choice, because it is a model that has *not* been designed to analyse the effects of changes in trade policies. Trade economists do not use it. Nor do United Nation's agencies use it in their analyses of *changes in trade policy*.

Since the GPM is a purely demand-driven tool, the UNCTAD exclusively uses this model to estimate the impact of national income policies, changes in fiscal policies, industrial policies, and financial market regulation (UNCTAD 2014). In fact, we cannot find any other scholarly attempt to simulate the effects of a trade agreement or trade reform using this particular model. And all that prompts the question: what does Capaldo know about barriers for commerce, trade reforms and their effect on trade, economic activity and national income that the collective of trade economists have neglected?

It is difficult to come to any other conclusion that the answer is: nothing. Capaldo is not even making an attempt to estimate the core element of any simulation of a trade reform – *its effect on real trade flows*. Nor has he chosen a model that is designed to estimate the effects of changes in international trade on economic growth or employment or labour income, which are some of the areas where Capaldo arrives to astonishingly strong results.

Capaldo has chosen a model that is by and large a demand-driven model that does *not* make an effort to capture the supply-side effects of trade, *which are the effects that are proven to be the core effects of trade liberalisation*. Capaldo does not model the movement of persons from one sector to another. He assumes a labour market that does not adapt to trade or other changes in the economy. The impact of lower barriers for international commerce on product and process innovation is neglected. Structural change and the growth of some industries because of trade do not play a role at all. In addition, Capaldo does not account for the impact of competition on the cost of production and final consumer prices. In Capaldo's view, the only thing that happens when consumer prices fall is that labour income goes down and stays down.

The model, like an old and crude Keynesian version of the economy, largely contends that absolute and relative prices in the real product economy do at all not matter for the allocation of resources. It is a model that may have some predictive capabilities of broad macroeconomic aggregates in the short term, but its core focus on "effective demand" prevents it from accommodating how real private sector business activity – the backbone of every real economy - adapts in the medium-to-long term to changes in the barriers to commerce. Needless to say, barriers to commerce always constitute barriers for people to generate personal income.

CGE models are not perfect. Comparative research of the use of *ex ante* trade simulations shows there are substantial differences between the results from various CGE models depending on which data is used and what assumptions are made about the scope of the trade reforms and how they would affect an economy. Similarly, the existing CGE simulations of the effects of TTIP on trade and growth arrive at conclusions that are different from each other. Yet they all suggest a direction of results of TTIP that are similar and positive. Depending on the different parameters used in the simulations, it is the precise results only that differ. In other words, the result that is derived is dependent on different assumptions that any modeller has to make about trade, the economy and the time horizon of the policy adjustment process.

Although most applied CGE models do not account for the dynamic effects of trade liberalisation either, these models have various merits: CGE models account for all sectors of the economy, including firms, households and the government (Piermartini & Teh, 2005). Also, CGE models capture the structural patterns of production in terms of inputs of labour, capital and intermediate products. In addition, domestic and foreign commodities are not modelled as perfect substitutes and prices flexibly adjust to changes in supply and demand. Finally, CGE models are capable to estimate the impact of domestic regulations, tariffs and quotas on sectoral trade flows, industrial production, economic output and national income. With the exception of its macroeconomic coverage, the GPM lacks all of these features.

In short, the GPM used by Capaldo *cannot capture the impact of trade reforms* – and it should only be seen as the go-to model for anyone who wants to find that any type of trade liberalisation would damage the economy as long as it does not raise net exports. If that was not enough to disrepute the use of this model for simulations of trade reforms, Capaldo has added other assumptions (like constant austerity in the EU – with negative consequences for effective demand) that would erase any positive effect of TTIP if the original model would arrive to them. The GPM is particularly sensitive to fiscal policy measures. A model that relies heavily on demand-side effects and fiscal stimulus would have great difficulties to prove obviously positive things for economic growth (e.g. the introduction of electricity or the expansion of the digital technologies) to actually be positive if they take place under model scenarios of constant austerity or the other assumptions that Capaldo make. In other words, all conclusions that are not based on Capaldo's prediction of a decline in net exports are entirely dependent on some side assumptions that is added, and not on the model properties. For example, the share of labour income is expected to fall or remain constant for all developed countries. In the GPM, a decline in labour income shares corresponds to falling aggregate demand, falling income and negative economic growth.

The theoretical foundation of Capaldo's model thus has more in common with mercantilism than with modern trade economics. It does not make any real significance of the positive effects on GDP from imports and import competition. Nor does it base its structure on the economic effects of specialisation. The core element of the model with relevance to trade is the role it places on net exports the main message is: *If net exports do not rise, output cannot be positively affected*. However, even as an macroeconomic model the GPM would fall short. The view of modern macroeconomics is rather that a trade agreement does not change much the trade balance of an open economy. The trade or current account balance is a function of the savings-investment balance – and in open economies that balance does not alter because of trade agreements. Trade liberalisation rather has microeconomic effects, and specialisation is one core microeconomic effect. The GPM is not designed accordingly and Capaldo's view of the macro economy does not tally with modern macroeconomics.

### FLAW 2: COVERING UP MODEL DEFICIENCIES

A scholar who shares Capaldo's economic ideology would still have great problems accepting his simulation of TTIP. The main problem is the way he treats trade and simulation of trade expansion under a TTIP scenario – and the problem arises from the embarrassing flaw that the model he uses cannot simulate the effect on trade from trade reforms. This forces Capaldo to make assumptions about the effects on trade of trade reforms. And here arise severe problems.

*First, the way the basic baseline scenario of trade is determined is based on incomplete factors of trade.* Capaldo creates a baseline "without TTIP" scenario for trade between 2015 and 2025 on the basis of model assumptions taken from the latest Trade and Development Report by UNCTAD (UNCTAD 2014). However, this report produces neither estimates on trade nor specific data for the European Union. It produces estimates on growth of trade on the basis of assumptions about the development of the broad aggregates used in the GPM: *labour-income share in GDP, government spending on goods and services and private investment.* Regardless the choice of economic ideology, these do not represent a complete list of factors that determine trade.

*Second, the trade data gets distorted by Capaldo's recalculation of trade volumes into trade shares.* As the model cannot simulate the effects on trade resulting from TTIP or any other trade reform, Capaldo needs to find that data elsewhere. Consequently he uses the same data on the "initial" trade expansion as from "existing studies" that are based on CGE models. (Capaldo 2014, p. 12) That is, mildly put, vague, as these studies come to different results on trade expansion under a TTIP scenario. There is no information in the Capaldo study about what numbers find their way into the GPM. In a footnote, Capaldo incidentally states that he expresses "these increases in terms of each country's share in the import market of the others rather than in terms of export and import levels." (Capaldo 2014, p. 12)

This transformation, however, is highly inadequate. It ignores the impact of rising *export volume levels* on the level of economic output. Suppose an export country that is experiencing a 10 per cent fall in the relative import market share vis-à-vis another country after a period of, say, 10 years. The same exporting country will show higher export volumes to the importing country if its trade volume increased over the same period, though at lower growth rates compared to third countries. Due to import competition from the Asia-Pacific region, this is a general pattern that can be observed for both the EU and the US. In addition, the import market share approach implicitly neglects changes in the relative share of third countries since these countries are not taken into consideration. In other words, one exporting country can increase its exports – even its trade surplus – to another country even if it experiences a decline in market share in that country. Following Capaldo's reasoning, a country like the EU can only lose regardless of its trade performance as long as other countries expand exports to another country faster than the EU.

*Third, Capaldo mixes apples and pears.* Besides this conflict in numbers, Capaldo's approach is methodologically inconsistent in another way. The results are derived on the basis of simulations of models that are based on very different behavioural relationships. Every simulation is based on a baseline scenario and a simulated scenario: the difference between them makes up the result of a trade agreement. Capaldo's baseline scenario is said to build on data from the GPM/UNCTAD. Capaldo's simulated scenario is based on data from "existing studies" using other models. On the one hand, Capaldo argues that "existing studies" using CGE models are not reliable. It follows immediately that CGE simulations about trade expansion under TTIP should not be reliable either because the scale and profile of that trade expansion is built on the assumptions in the model. On the other hand, Capaldo treats CGE model results as the starting point for his own analysis. He combines changes in trade that emerged from supply-side adaption and efficiency gains with a simulation that does only account for the contracting effects of changes in net experts on aggregate demand.

*Fourth, Capaldo seems to have accounted for the effect on trade of the model twice.* Capaldo tries to

"repair" the data by correcting them by "the global feedbacks built into the GPM." (Capaldo 2014, p. 12) Capaldo does not share the information about how that is done. "Correcting" the data by the similar factors that later will be used to simulate the effect of the changes of trade on GDP is likely to lead to double-counting – that the model kicks in twice - in the correction of the simulated trade expansion and when this data is used to simulate the general economic effects of the simulated trade expansion.

### FLAW 3: THE MODEL IS HIDDEN FOR OTHER SCHOLARS

A basic requirement for a study to be credible is that other scholars can get access to the same model as well as the underlying database – indeed that other scholars can be provided the opportunity to reproduce the simulation and test it. For the purpose of this paper, we have tried to get access to the Global Policy Model in order to do our own calculations. This has not been possible. It has not been possible to obtain the model or the data it uses, either for free or for compensation.

Despite the ownership of this model by a United Nations agency, we have been denied access to it. The excuses for not providing us with the model have varied. It has been said that *the model has not been updated and that it is not in active use. It has been argued that our efforts to demonstrate flaws in the model would be a futile exercise.* As far as we can understand, a particular institute at the Fletcher School has been granted the right by a UN agency to use this model for their papers. To that end, papers that clearly intend to promote a particular view on TTIP have been produced. But no one can obtain the model in order to test the strength of the results.

### FLAW 4: CAPALDO'S RESULTS CONFLICT WITH THE UNITED NATION'S GLOBAL REBALANCING ASSESSMENTS THAT ARE BASED ON THE SAME MODEL

If Capaldo's study is stripped of its rhetoric and series of confusing side assumptions, his results are effectively built on one simulation result – which is that all EU countries will suffer from a loss of *net exports* as a consequence of TTIP. This is not just a highly dubious result – it is simply unlikely that trade liberalisation, in the first place, rearranges the trade balance *in absolute terms* as to lower net exports significantly. Capaldo makes the same mistake as disreputed schools of trade from the past; while net exports is a key accounting identity for determining national output, you can raise output while still shifting a trade balance towards the negative. And that can be done without taking account of changes in allocative or efficiency gains.

Most of the other negative predicted consequences from TTIP result from Capaldo's assumption of a decline in net exports. It is the reason behind falling demand, GDP contraction, the increase in unemployment and the decline in personal income. But link between a change in net exports and income and employment is not convincing. Importantly, even if it was true that net exports would change as a consequence of a trade agreement, the model never takes account of the biggest gains from trade – for example, how efficiency of production improves through exposure to competition from abroad. For Capaldo's study to be taken seriously, he should at least have laboured with alternative scenarios on trade expansion under TTIP and tested the robustness of the simulations he generates. That, however, is absent in the study.

It is therefore no surprise that Capaldo's results are *even conflicting with the United Nations' assessment of converging current account balances*. Capaldo claims that U.S. net exports would rise while EU net exports would fall. Given that the EU (and also Germany whose net exports are estimated to fall by 1.9 per cent) is a current-account surplus region while the U.S. for long has been (and still is) a current-account deficit region, Capaldo's estimates on the changes of both regions net exports would contribute to global rebalancing in terms of current account convergence.

Interestingly, according to a United Nations analysis that also is based on the GPM, this type of rebalancing would strengthen economic output and employment growth not only in regions that show higher net exports, *but also in regions that reduce their current account surpluses* (United Nations, 2012). It should be noted that the UN's results are triggered by and highly sensitive

to fiscal measures, which is owed to the structural parameters of the GPM and the modelling approach. It is therefore questionable that the UN makes a convincing case in favour of global rebalancing, but this example should provide good reasons for Capaldo to reconsider the way he has constructed his simulations as the same model produces an opposite result when it comes to the effect on GDP from a reduction in net exports.

Capaldo intentionally ignores the key proven economic benefits that arise from trade. In fact, Capaldo turns a blind eye to the history of trade and the accumulated knowledge about the development of international commerce, economic growth, employment and wages, which convincingly shows *statistically significant and positive* correlations.

Capaldo makes very strong claims about trade creation and trade diversion as a consequence of TTIP. It is *key* for Capaldo's study that Europe's net exports will *not* increase, because, to the extent it is possible to learn from his model specifications, net growth of exports would take away all the negative consequences that he associates with TTIP. None of these assumptions or model predictions stands up to scrutiny. They are also based on a distorted logic that inefficient trade relations are to be preferred to more efficient trade relations from the viewpoint of trade, growth and income and employment. Following the Capaldo reasoning, it would be better for governments to maintain economic inefficiencies rather than correcting them.

#### FLAW 5: CAPALDO'S THESIS DOES NOT FIT WITH HISTORY

Finally, the argument that TTIP would disintegrate Europe because it would expand external trade at the expense of internal trade is flawed. On that logic, Europe should have economically disintegrated as a result of its trade integration with any other part of the world. The analysis would suggest, for instance, that Europe's trade integration with China, have fractured EU integration in the sense that it had substituted some trade that otherwise would have happened internally within the EU. Generally, such views do not just forget that expansion of the EU's external trade drives internal trade in the EU because of densely integrated global value chains – it also neglects the gains on productive efficiency in the EU (driving more trade) that has arisen as a consequence of the EU's integration with the rest of the world (See Erixon et al 2009 for the case of EU-China trade). *Splendid isolation* as a model for the EU may have political appeal for some, but *not* for people that care about the future prosperity of Europe.

Capaldo's views on the effects of trade agreements also conflict with historical developments and accumulated experience. For example, the European Single Market as well as the NAFTA region has *expanded trade within the trade bloc at the same time as trade with external partners has increased*. EU and NAFTA countries have become ever more integrated with the Asia-Pacific region over the past 15 years. Yet neither the EU nor NAFTA countries experienced decreases in national income or economic disintegration despite worse consequences on their net exports than those Capaldo expects from TTIP. In fact, nominal and real wages have risen continuously across countries in Europe. Moreover, although the EU was exposed to accelerating globalisation, the EU benefited from economic convergence. Intra-EU trade considerably intensified in a way that all EU members experienced increased in employment over time.

## 3 Economic Integration, Income and Employment in the EU: A Reality Check

#### EX ANTE PROJECTIONS VS. POST-ACCESSION EFFECTS

Does Capaldo's simulation results correspond with the lessons from past trade initiatives similar to TTIP? The North American Free Trade Agreement (NAFTA) and the European Single Market (ESM) are probably the only economic integration projects the world has seen so far that are comparable to TTIP. Both agreements have been concluded between economically highly developed countries. Although the single market goes substantially deeper than NAFTA, both

frameworks contain provisions that go well beyond the mere elimination of tariffs and quotas.

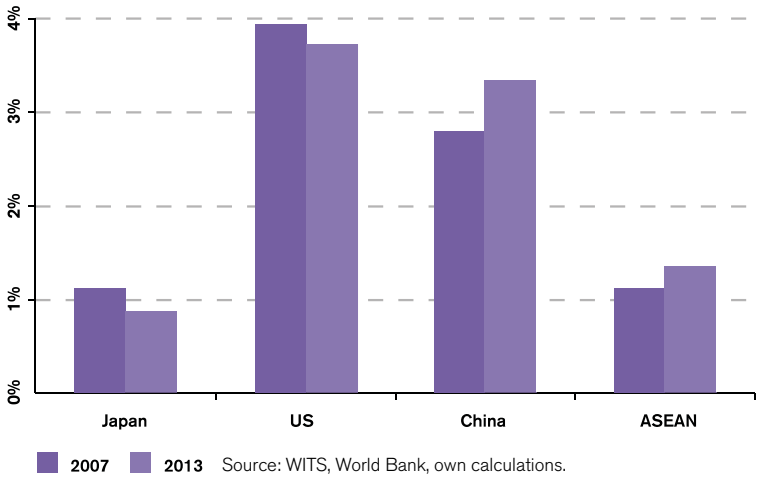
Some critics argue that NAFTA has not spurred the growth rates in jobs and economic activity that were forecasted prior to the conclusion of the agreement (see e.g. KPMG Peat Marwick 1991, Raza et al. 2014, and Piermartini & Teh 2005 for an extensive overview of NAFTA ex ante projections). Similarly, it is sometimes argued that the ambitious Cecchini report forecasts of 1988 on ESM-induced GDP growth and job creation have not fully materialised yet (Vetter 2013).

No doubt, there have been projections that came to comparatively high up-front gains. However, an *ex post* quantification of the effects of FTA's is generally not much easier to do. As with globalisation in general, FTA's go along with several economic, social and technological developments, which are often difficult to extract from current statistics. It is hard to isolate FTA-induced effects from simultaneous socio-economic developments, e.g. the impact of economic reforms, monetary policy or the advent of economic crises. In addition, is hardly possible to isolate FTA-induced effects from simultaneous socio-economic developments that take place in other parts of the world that are integrated in FTA member's value chains.
The precise economic impact of the Single Market and NAFTA cannot be determined simply by comparing members and non-members. NAFTA, for instance, was not fully completed until 2008, following various stages of implementation. In addition, anticipation effects may have had an impact on members' pre-FTA economic indicators thereby distorting the post-accession effects. Moreover, many non-ESM/non-NAFTA countries have substantially liberalised trade in terms of multilateral tariffs. Finally, international commerce and investment accelerated with the general globalisation of value chains and the rise of the Asia-Pacific region in particular.

While it is difficult to disentangle the precise numerical impact of FTA's, it is much easier ex post to identify common economic trends after an FTA has been enforced. It turns out that Capaldo's claims that TTIP will cause massive unemployment, huge losses in personal income and economic disintegration in Europe are disproven by what actually happened under NAFTA and the ESM over the past 15 years.

During that period, globalisation accelerated and both the EU and the U.S. increased their trade and investment relations with the Asia-Pacific region. Europe and the U.S. experienced an unprecedented integration of the Asia-Pacific region into value chains. From 2007 to 2013, China and members of ASEAN gained relative importance in EU and U.S. commercial relations. The EU's total trade to GDP ratio vis-à-vis Japan and the U.S. decreased by 23 per cent and 5 per cent, respectively. At the same time, the EU's total trade to GDP ratio vis-à-vis China and ASEAN increased by 21 per cent and 23 per cent, respectively (see Figure 1).

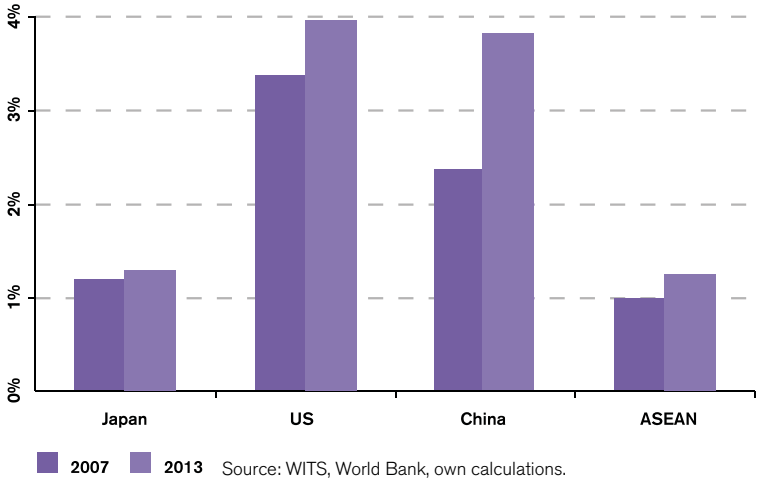
**FIGURE 1: EU - TOTAL TRADE TO GDP RATIO VERSUS**




Source: WITS, World Bank, own calculations.

The U.S.'s total trade to GDP ratio vis-à-vis China and ASEAN increased by 63 per cent and 31 per cent, respectively. At the same time, U.S. economic integration with Japan and the EU continued to increase. The U.S.' total trade to GDP ratio vis-à-vis Japan and the EU increased by 10 per cent and 18 per cent, respectively (see Figure 2).

**FIGURE 2: US - TOTAL TRADE TO GDP RATIO VERSUS**




Source: WITS, World Bank, own calculations.

Clearly, for *some* EU regions and *some* less productive low-tech sectors, growing imports from Asia and increased competition are hard to bear. Although accelerating globalisation continued to exert strong competitive pressure on the EU and the U.S., economic growth rates and the development of employment and wages give *absolutely no cause of concern* that economic integration à la TTIP will have a negative impact on the economies of the EU and the U.S.

## ECONOMIC INTEGRATION, WAGES AND EMPLOYMENT IN THE SINGLE MARKET

The Single Market programme was aimed at removing all the remaining barriers to trade among EU member countries. Similar to TTIP, the merits of the ESM comprise increases in EU-wide competition, industrial modernisation and reallocation of economic activities. The ESM is not completed yet. Key challenges for the EU remain in the areas of integrated networks, public procurement, the recognition of professions and the digital economy. There is, however, broad consensus among researchers that the ESM has stimulated intra-EU trade, investment and general business activity (see, e.g., Bertelsmannstiftung 2014, Vetter 2012, Straathof et al. 2008). It is well documented that trade diversion is a consequence of FTA's. Accordingly, most ex ante studies find that trade diversion will be a feature of TTIP even if the effects are not likely to be significant. However, claims that TTIP will cause economic disintegration in Europe ignore that *European economic integration substantially deepened over the past 15 years despite accelerating globalisation* and stronger import competition from major emerging market economies.

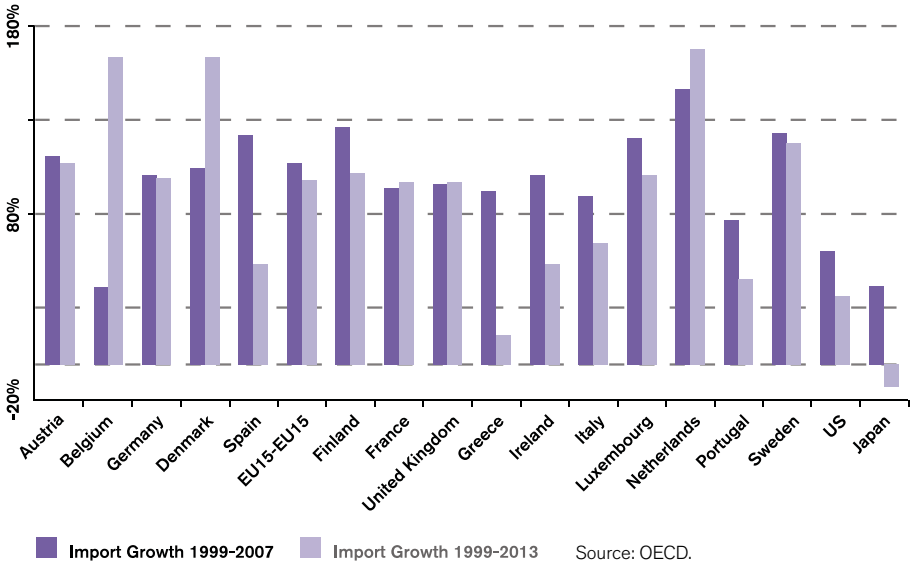
Intra-ESM economic integration has not at all suffered from accelerating globalisation over the past decade. In fact, EU economic integration advanced at a time when liberalisation of global trade and investment spurred at unprecedented growth rates. In addition, European employment increased in all EU-15 economies, while nominal and real (minimum) wages improved in almost all EU-15 countries during the same time.

In order to address Capaldo's "disintegration claim", it is not necessary to disentangle the ESM-induced impact from non-ESM effects. It is sufficient to study the *actual development of intra-EU trade* over the past 15 years. In fact, over the period 1999 to 2007 intra-EU-15 exports and imports more than doubled. Total intra-EU-15 trade growth amounted to 109 per cent. On the basis of these data, the literature hardly contests that the ESM contributed to strong increases in intra-EU and EU external trade (see, e.g., Vetter 2012).

Intra-EU trade flows have shown stronger increases than EU-15 trade growth vis-à-vis the U.S. and Japan. In addition, intra-EU-15 trade continued to grow even though trade with the emerging Asia-Pacific region gained unprecedented momentum. From 1999 to 2007, EU-15 trade with China alone increased by over 500 per cent. *The key point is that every single EU-15 country continued to expand trade with other EU economies over the past 15 years* (see Figures 3 and 4).

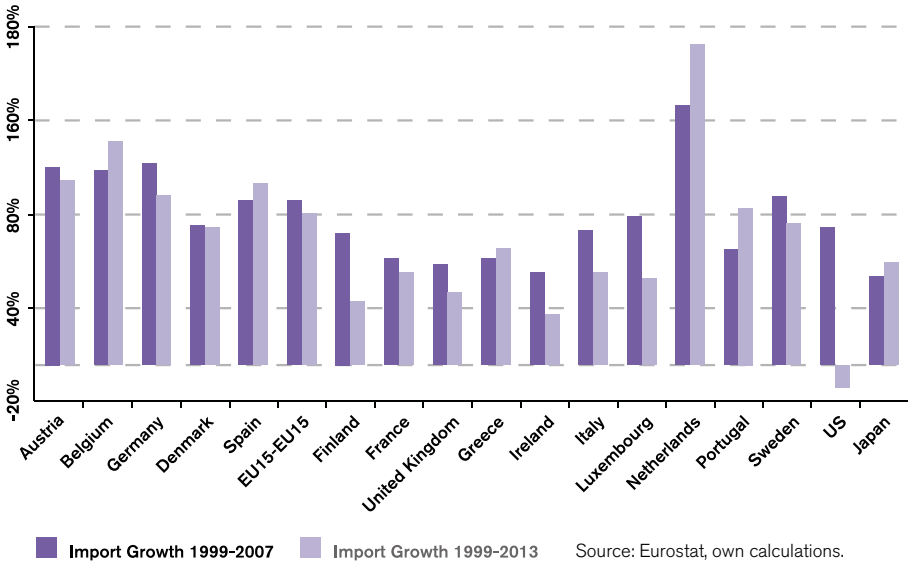
Although intra-EU trade as well as EU external trade decreased in the aftermath of the sovereign debt and financial market crisis, intra-EU trade has not fallen back to levels of 1999. Moreover, Greece, Portugal and Spain – some of the countries that suffered most from the crisis – even show increases in exports to other EU countries. In fact, even though the EU faced an unprecedented fall in aggregate demand due to the crisis, intra-EU economic integration has not at all reversed and even offset declines in national aggregate demand.

**FIGURE 3: INTRA-EU ECONOMIC INTEGRATION, GROWTH OF IMPORTS FROM EU-15**




Source: OECD.

**FIGURE 4: INTRA-EU ECONOMIC INTEGRATION, GROWTH OF EXPORTS TO EU-15**




Source: Eurostat, own calculations.

For the period 1999 to 2007, all EU-15 countries except Germany and Sweden, experienced increases in employment (Figure 5). Obviously, greater cross-border trade and investment in the EU contributed to the employment growth expected as a consequence of the ESM. It is worth noting that with the exception of Greece, Italy, Portugal and Sweden, EU employment ratios did not drop below the levels of 1999 in the aftermath of the sovereign debt and financial market crisis. Compared to levels of 1999, EU-15 employment ratios increased despite the acceleration of globalisation and stronger import competition from Central and Eastern European (CEE) countries, China, and other Asia-Pacific countries. Notwithstanding the precise differences between estimates and final outcomes, CGE models indeed do a good job in projecting long-term FTA-induced job creation. On the contrary, the long-term projections offered by Capaldo appear ragged and delusive in the light of real world developments. According to the Capaldo analysis, none of this should have happened as the greater exposure to trade would have tremendously lowered effective demand.

**FIGURE 5: EMPLOYMENT RATIO, IN PER CENT OF 15+ TOTAL POPULATION**

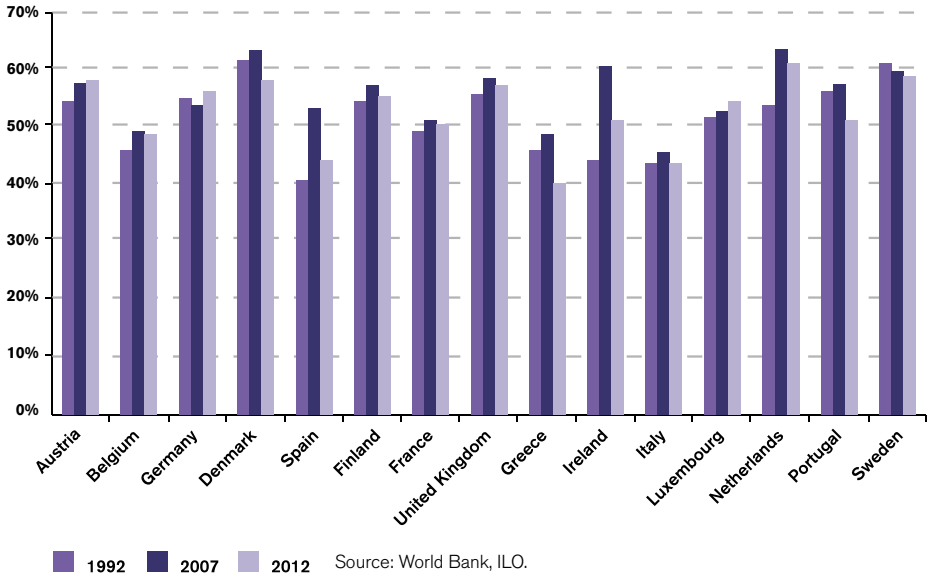
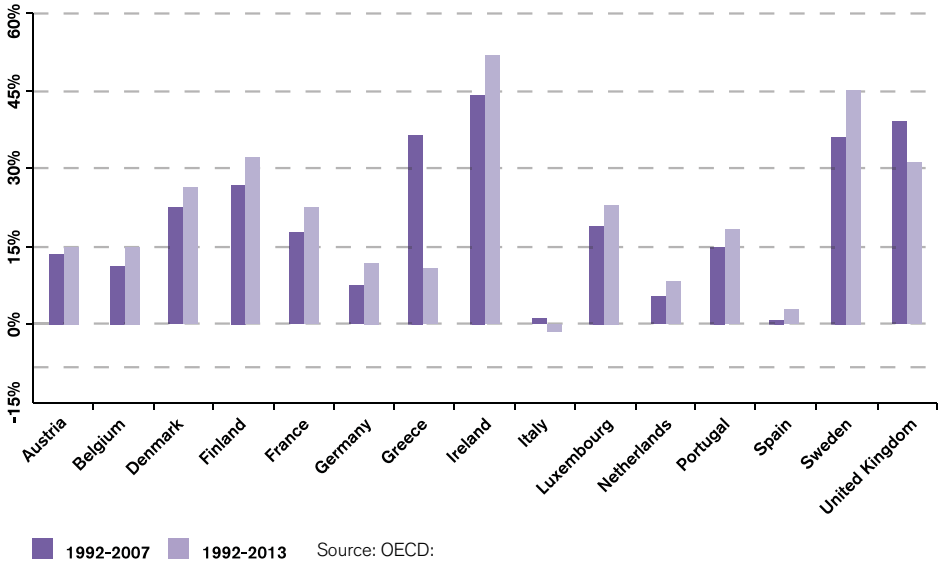


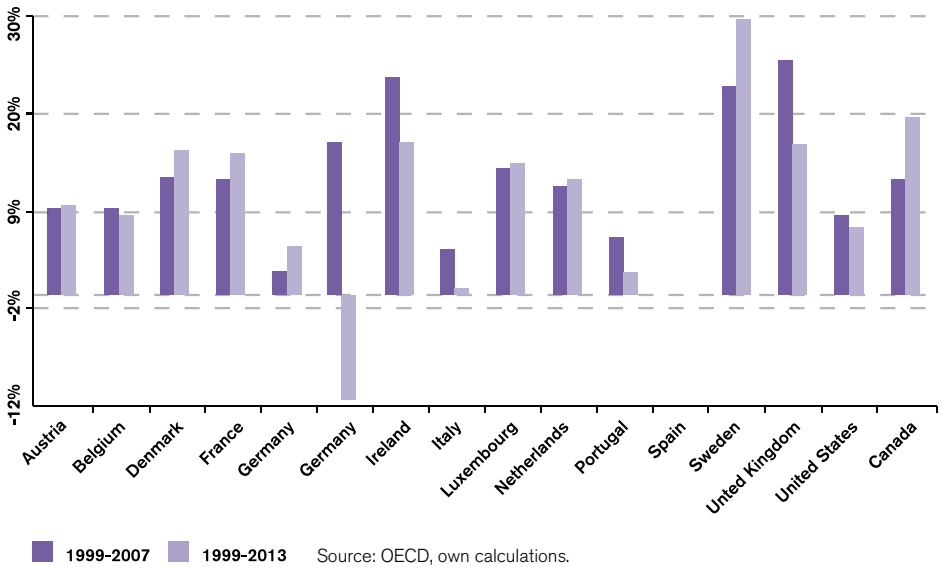

**FIGURE 6: GROWTH IN AVERAGE NOMINAL WAGES, BASED ON NATIONAL CURRENCIES**



The development of average nominal wages shows similar patterns. Over the period 1999 to 2007, all EU-15 countries, except Italy and Spain, experienced increases in average nominal wages (see Figure 6). Some of these developments can be attributed to credit-bubble-induced upward pressure on wages in some countries like Greece and Ireland. However, 2013 data suggest that post-crisis wages of all EU-15 countries are still significantly higher compared to their pre-crisis level.

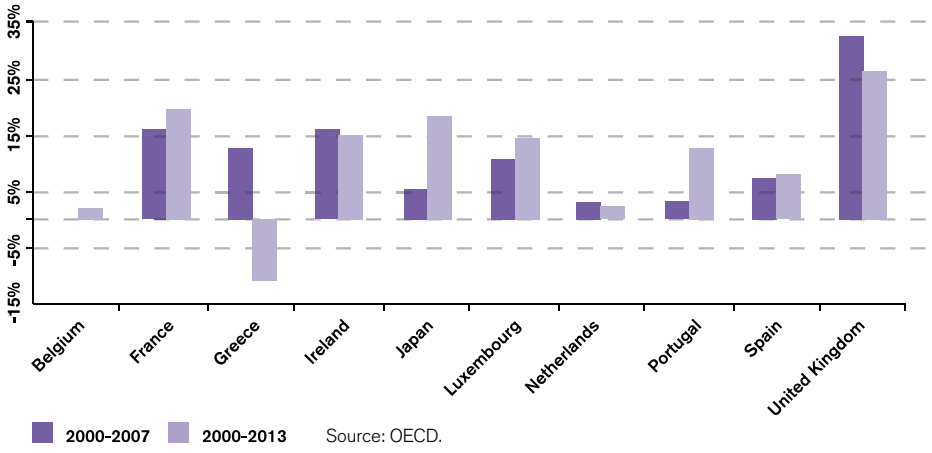
As concerns real wages (see Figure 7), all EU-15 countries except Greece and Spain experienced positive growth in real wages over the periods 1999 to 2007 and 1999 to 2013. The key fact is that European real wages rose at a time when Europe became even deeper integrated in global value chains. Globalisation in terms of deeper economic integration with the rest of the world has not put pressure on workers real income.

**FIGURE 7: GROWTH IN REAL AVERAGE NOMINAL WAGES, BASED ON NATIONAL CURRENCIES**




Capaldo's propositions of trade-induced cuts in workers wage bills are not backed by real world EU observations for the past 15 years and beyond. Not even EU minimum wages followed the patterns projected by Capaldo. According to OECD data available for 10 EU countries for the period 2000 to 2013, growth in real minimum wages has been positive for all countries, except Greece after the sovereign debt crisis (see Figure 8). Obviously, real world developments show that neither deeper intra-EU nor advanced EU economic integration with the rest of the world put pressure on European wages.

**FIGURE 8: GROWTH IN USD PPP REAL MINIMUM WAGES (BASED ON USD-PPP)**



## 4 Concluding Remarks

Most of Capaldo's extreme results are based on a simplistic view of economic relationships that lacks required soundness to be considered reliable. It is a pity that a grand challenge to standard plain-vanilla trade estimates, receiving a lot of attention among policy makers and civil society groups, is so flawed. Standard estimates by official bodies should be challenged because they too rest on ex ante assumptions about a trade agreement that often underestimate the effects on trade from a trade agreement. While it is prudent for trade estimates produced by or for government or official bodies to avoid exaggeration, the real problem in the debate around TTIP is rather that the official estimates tend to err too much on the side of caution.

Capaldo's paper has been translated into several European languages and it is particularly distributed by influential anti-TTIP civil society organisations in Europe. The use of the study and the flaws of the applied methodology give the impression that the results are constructed. The results are direct reflections of Capaldo's choice of a model and the flawed attempts to compensate for the simple fact that he is not using a model that can simulate the effect on trade from trade reforms. The Capaldo study is associated with such serious flaws that its results should neither be regarded reliable nor realistic. It fundamentally contradicts all other existing studies of the effects of FTA's and the reality of what liberalised trade actually brings about.

If critics of TTIP want to continue challenging the economic narrative of TTIP, they have to find other studies. A model that largely espouses a mercantilist view of trade does not fit with the modern realities of international commerce, especially not in such a densely integrated trade relation as the one between the EU and the U.S. A view of TTIP that does not take into account modern global value chains and the international division of labour will not stand a remote chance of capturing the direction of the economic effects of the trade agreement.

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