



GED Study

The Forgotten Continent

The effects of mega-regional free trade agreements on Africa

Part 3 of the GED Study Series:

Effects of mega-regional trade agreements

Authors

Fritz Putzhammer (Bertelsmann Stiftung, Gütersloh),
Prof. Felbermayr (ifo and LMU, Munich),
Dr. Rahel Aichele (ifo, Munich)

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Methods box

The Ifo trade model, which is described in Aichele et al. (2014) and which is an extended version of the Caliendo and Parro model (2015), is a multi-sector trade model that features tariff and non-tariff trade barriers, goods and services trade flows and that carefully accounts for global input-output linkages to capture global value chains. The model (like other modern quantitative trade models introduced in Costinot and Rodríguez-Clare, 2014) can be parameterized based on simple econometric equations that emerge as equilibrium relationships from the model itself. In the Ifo trade model, two types of industry-level parameters matter most: the elasticity at which tariff changes affect trade flows and the effect of preferential trade agreements (PTAs) on those same flows. In the latter, we distinguish between shallow and deep agreements, borrowing a detailed classification from Dür et al. (2014). These trade elasticities and the matrix of trade costs are econometrically estimated sector-by-sector.

The model is brought to the data provided by the Global Trade Analysis Project (GTAP), baseline 2007. It covers 17 merchandise industries and 15 services industries (one of which, “dwellings”, is non-traded) as well as 134 countries and regions. The GTAP data provides the input-output tables for each country or region, which indicate how much any industry (domestic or foreign) supplies inputs to the production of other industries (domestic or foreign) and how much primary factors of production (i.e. labor) are used. The database also contains consistent output data and trade flow information on the bilateral industry level.

The effects of mega-deals are simulated in the following thought experiment: in the world as we observe it today, what would sectoral trade flows, industry-level outcomes, and aggregate welfare look like if the respective mega-deal countries had – counterfactually – a deep (TTIP) or shallow (TPP, RCEP, FTAAP) preferential trade agreement of the type observed in the data? Essentially, this means that the TTIP is assumed to have similar effects on trade costs as existing deep agreements; and the TPP, RCEP and FTAAP are assumed to have similar effects on trade costs as existing shallow agreements.

All predicted effects are general equilibrium effects: they take into account the adjustment of incomes in all 134 countries, the reaction of trade flows between those countries in all industries, the changes in value added in all industries and countries, and changes in government revenues that result from a mega-deal. The results can be interpreted as long-run level effects; i.e. they will be realized after 10–12 years.

Executive Summary

The world of global trade is changing in a way we have never seen before. Multilateral negotiations have cleared the way for mega-regional trade agreements and the big players of the global economy are forming up into few powerful trade blocs. While the world is concentrating on agreements with names like TTIP (Transatlantic Trade and Investment Partnership) and TPP (Transpacific Partnership) in the west or the FTAAP (Free Trade Area of the Asia Pacific) in the east, one continent, however, continues to be deliberately ignored.

Africa is the second most densely populated continent and, at the same time, also has the fastest growing population. Furthermore, Africa is by far the world's poorest continent. From an economic perspective, Africa served primarily as the sandbox of natural resources for the developed world in the 20th century. Even though high GDP growth rates have been indicating a definite upward trend for Africa since the start of the new millennium, so far it has been unable to break out of its role as a raw materials supplier.

With this background in mind, the Bertelsmann Stiftung and the IFO Institute have decided to analyze the effects of these new mega-regional trade agreements on Africa's national economies. In this study we will present the results of our latest models and look for the explanations behind the numbers.

We ultimately arrived at two principal findings. First, western agreements like the TTIP and TPP have only minor effects on African income levels. Negative trade diversion effects and positive income effects seem to more or less balance each other out in most cases. A small increase in real income was observed in most countries as a result of the TTIP and TPP. Small negative GDP effects emerge only in a few individual cases such as Mozambique. These could, however, impact the poorest segments of the population. To increase the positive effects of western trade agreements on Africa, we additionally compiled a list of five specific

policy measures that could ensure a more inclusive world trade in the future.

Our second principal observation is the profoundly positive growth in real income that most African nations would experience as the result of a potential FTAAP. These gains can be explained by Africa's close trade relations with China where there is a steadily growing domestic demand for African natural resources for further processing and export.

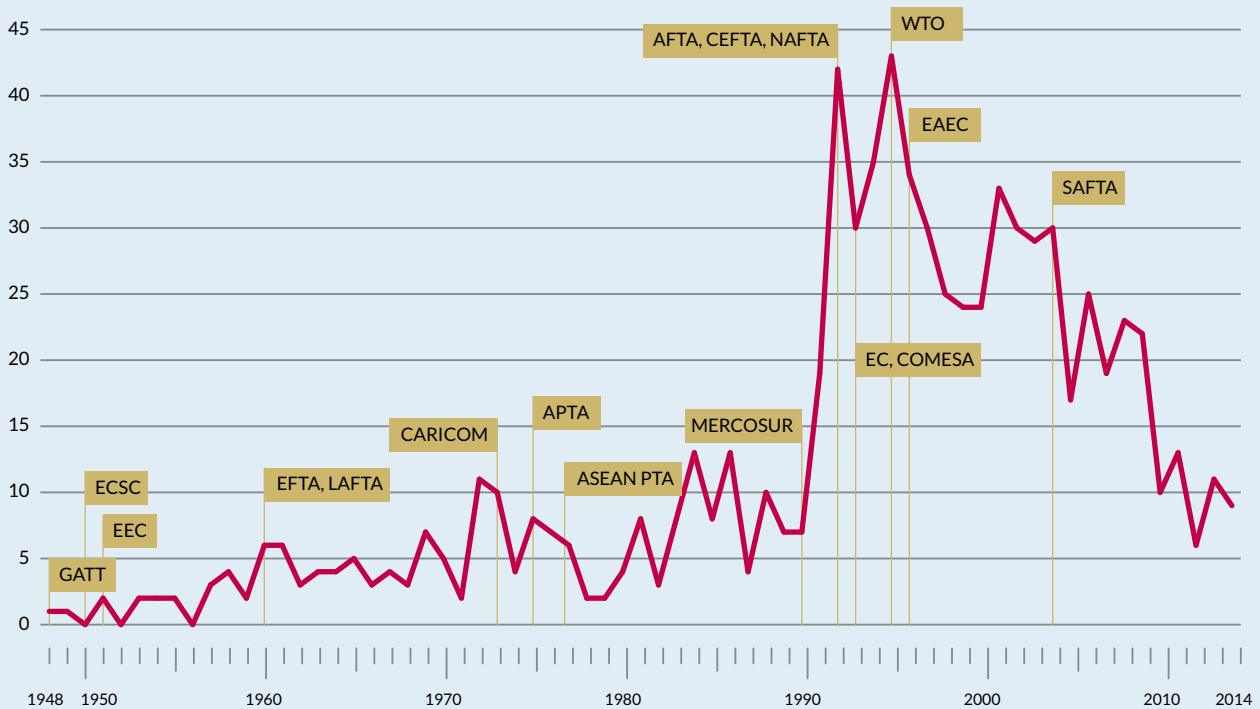
A country like South Africa, once vaunted as Africa's growth driver but whose economy has stalled in recent years, could benefit enormously from such a "China boost." At the same time, however, the long-term sustainability of a system focused on raw materials exports is questionable.

1. Introduction: Mega-regionals and the new world trade order

Free trade increases economic welfare and benefits everyone. This is the credo of free trade proponents who have championed trade liberalization since the days of Adam Smith and David Ricardo. After World War II the time seemed ripe for an International Trade Organization (ITO), which was institutionalized in the Havana Charter in 1948. The initiative failed because the USA refused to ratify the charter. The General Agreement on Tariffs and Trade (GATT) remained as a multilateral framework that concentrated on reducing tariffs and helped lay the groundwork for today's World Trade Organization (WTO). Around the same time the

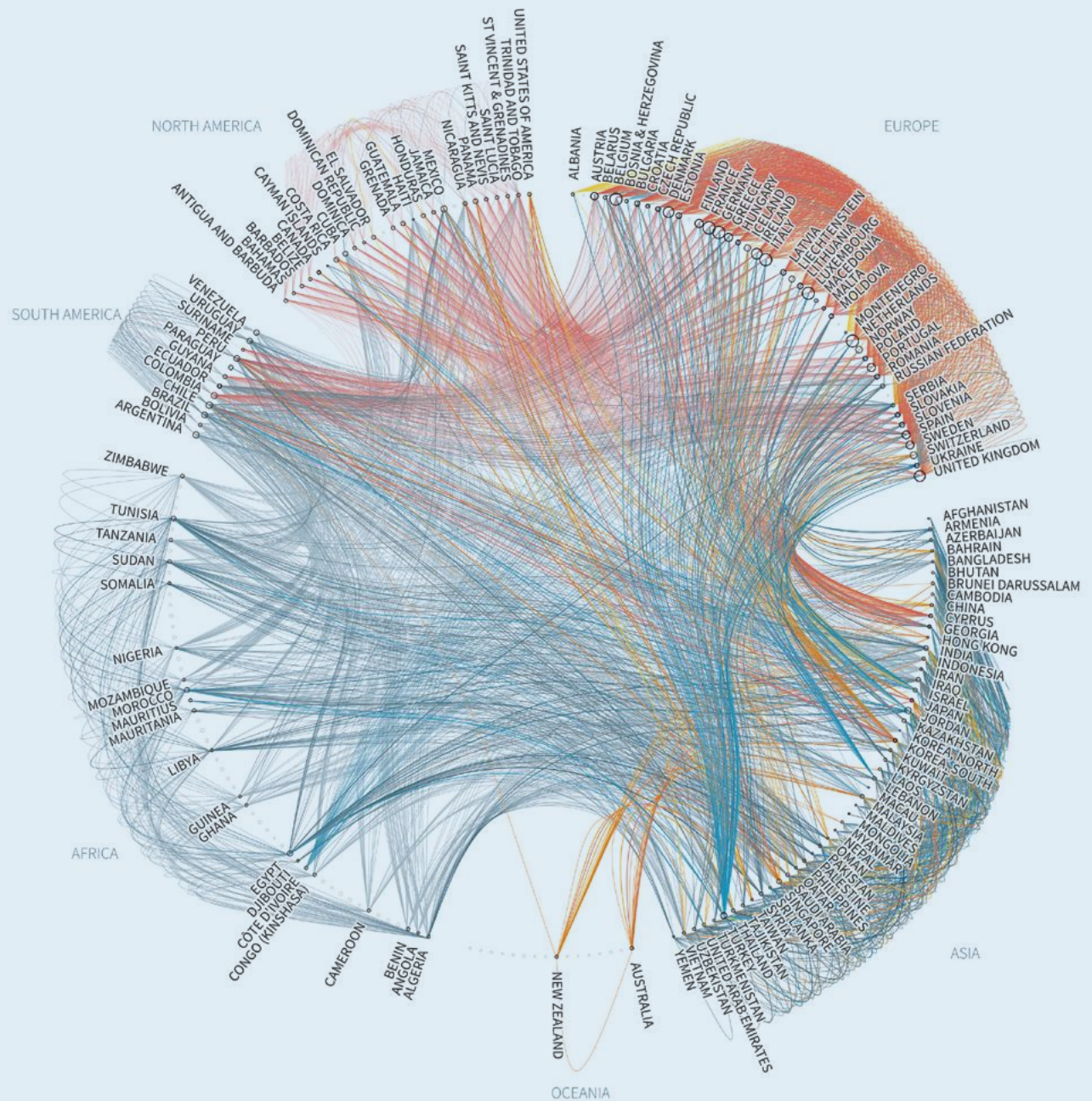
ITO failed, regional trade agreements began to flourish with some regulations that went beyond those in the GATT. Unlike the GATT, the European Coal and Steel Community (ECSC), which was founded in 1951 as one of the earliest (industry-specific) trade agreements, had a supranational entity with authority to create common regulations for all member states: the High Authority for the coal and steel industry. Spheres of integration for greater free trade and free markets were established in other regions as well, including the Latin American Free Trade Area (LAFTA) in 1960, the Caribbean Community and Common Market

Figure 1: Increase in regional trade agreements since 1948



Source: FTA Vis. Access via: <http://ftavis.com> (accessed: April 28, 2016).

Figure 2: The spaghetti bowl phenomenon in regional trade agreements



How to read it?

Depth Index: N.A. ■ 0 Low ■ ■ ■ ■ ■ ■ 7 High

Dot size: Total amount of agreements • 0 • 20 • 40 • 60 • 80 • 100

Source: FTA Vis. Access via: <http://ftavis.com> (accessed: April 28, 2016).

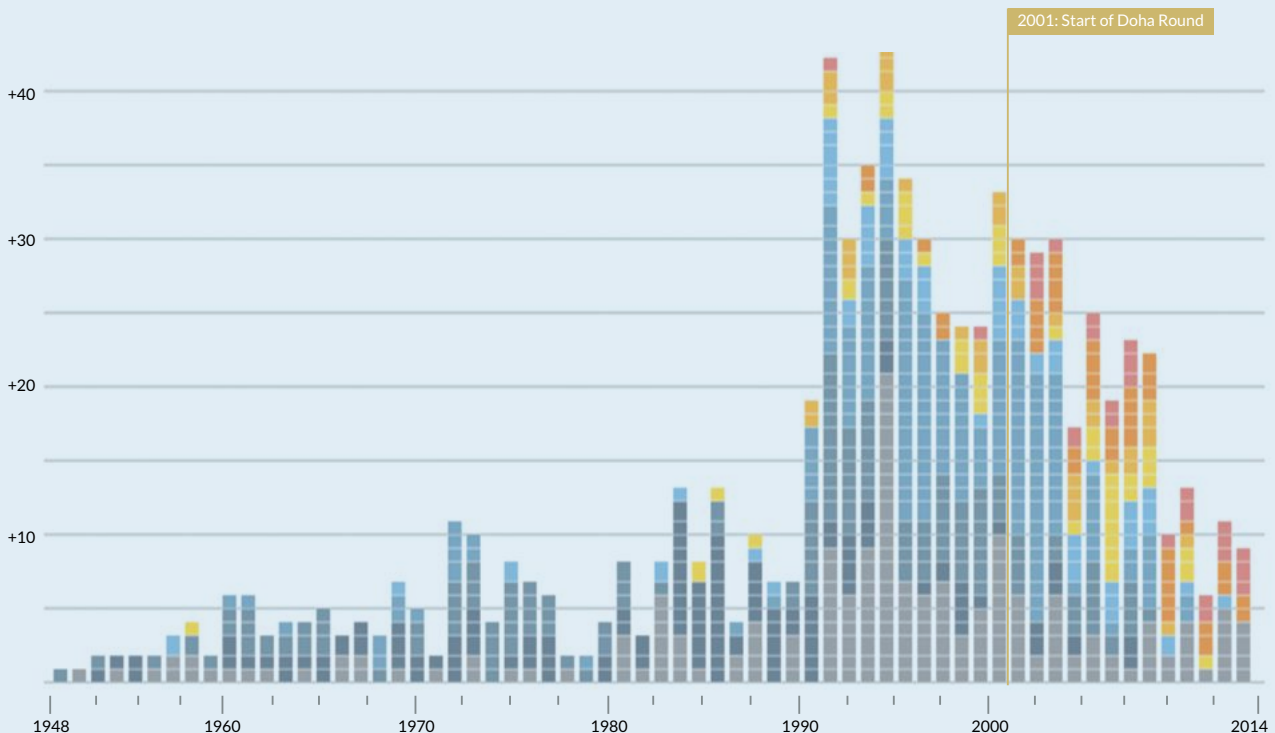
(CARICOM) in 1973, the Asia Pacific Trade Agreement in 1975 and the Economic Community of Central African States (ECCAS) in 1983 (Figure 1).

Parallel to those developments, several GATT negotiation rounds were held in the 1960s and 1970s that resulted in further tariff reductions (including the Kennedy Round in 1964 and Tokyo Round in 1973). The Uruguay Round (1986–1994) gave new life to the idea of a world trade organization, which was partially facilitated by the Eastern Bloc opening up to the West and ultimately by the fall of the Iron Curtain. After the fall of the Soviet Union in particular, the multilateral negotiations were accompanied by a simultaneous boom in regional trade agreements (RTAs). Only 41 RTAs were concluded between 1986 and 1990. That number rose to 126 between 1991 and 1994. Moreover, RTAs have also become slightly deeper since 1991. The depth indicates the extent to which non-tariff barriers to trade are covered by an RTA. This has significantly increased the heterogeneity of the agreements. Economist Jagdish Baghwati (1995) describes this phenomenon as the spaghetti bowl effect (see also Figure 2). Nevertheless, the World Trade Organization (WTO) was finally founded in 1995 after the conclusion

of the Uruguay Round. The WTO was intended to form the foundation for a multilateral world trade order and in this sense to be fair, nondiscriminatory, inclusive and (theoretically) open to all countries that comply with the existing regulations. The different stages of development in the 124 initial signatory countries were addressed through appropriate transitional provisions. At the end of the 20th century, it seemed as though the proponents of multilateralism were a step closer to realizing their vision of a world trade order. The WTO celebrated a key milestone when China, one of the world’s trade powerhouses, joined in 2001. However, since then the multilateral process has stalled yet again. The Doha Round that started back in 2001 also took until 2013 – after 12 years of negotiations that were discontinued many times – to achieve a consensus in Bali (Bali Package). Industrialized nations and developing nations had previously disagreed in particular on issues including mutual market access in the agricultural and industrial goods sectors. The Bali Package hung by a thread for another year because India did not sign on until the end of 2014.

The course of events in the Doha Round once again shows how time-consuming the multilateral negotiation process

Figure 3: Trend of depth in trade agreements, 1948 – 2014



How to read it?
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 Source: FTA Vis. Access via: <http://ftavis.com> (accessed: April 28, 2016).

is and how difficult it is to achieve a consensus within the WTO regarding greater depth in trade regulations. It is no wonder that this topic shifted to negotiations on regional trade agreements during the Doha Round. The depth of RTAs negotiated since 2001 has increased significantly (Figure 3). For that reason, Richard Baldwin (2014) talks about “20th century RTAs,” which were generally shallower and focused primarily on reducing tariffs, and “21st century RTAs,” which aim for great depth in the context of international production processes.

Another concurrent trend emerges here that can be interpreted as an attempt to circumvent the hurdles of multilateralism. The much-discussed Transatlantic Trade and Investment Partnership (TTIP) is representative of a new generation of RTAs that can be described as mega-regional agreements due to their broad geographic range. These include the planned initiatives for transpacific integration, the Transpacific Partnership (TPP) and the Free Trade Area of the Asia Pacific (FTAAP), as well as an intra-Asian initiative, the Regional Comprehensive Economic Partnership (RCEP).

The effects of these developments on the multilateral world trade order represented by the WTO are disputed in the academic literature. While Baldwin (2014) speaks of regional multilateralism that represents an opportunity for global trade, for example, others see it as a risk for the hard-won 20th century principle of multilateralism (see Kawai/Wignaraja 2013, Pg. 3). It is clear that the current world trade order is changing and will have to adapt and reform in the 21st century. The fundamental question arises: Can multilateralism and regionalism peacefully coexist, or are these two phenomena incompatible? Here the key issue is whether the mega-regional trade agreements mentioned above will lead to competing trade blocs or, alternatively, could they have a positive long-term impact on the WTO’s multilateral integration process.

To be able to estimate the consequences that these agreements bring, it is essential to examine in an initial step the economic effects that they have on the different regions of the world. Furthermore, the question arises of how the exclusivity of the agreements – in contrast to the WTO – impacts non-members and what the parallel existence of several of these mega-agreements would mean. This focus paper series from the Bertelsmann Stiftung and Ifo Institute on the effects of mega-regional trade agreements sheds light on these aspects. Part two of the series concentrates on the effects on African nations and the question of which effects should be expected for third and developing countries.

In the following chapter we will briefly examine RTA trends in Africa and then concentrate on the backgrounds and economic effects of the TTIP, TPP and the FTAAP on African nations.

2. Africa's place in global trade – The forgotten continent

With slightly more than 1.1 billion people, Africa is the world's second most densely populated continent after Asia. Africa is also growing more than twice as fast as the second fastest growing region in the world. Africa's annual growth rate is 2.6 percent, while Latin America and the Caribbean are only at 1.2 percent. At the same time, Africa is by far the poorest continent. According to IMF data, its per capita GDP of US\$1,576 is not quite one-twelfth of the global average (US\$18,351). Of the 20 poorest countries in the world, 17 are in Africa. The nine poorest countries are exclusively African, with the Democratic Republic of the Congo as a sad frontrunner. The factors behind this widespread poverty and weak development are political instability, corruption and in many cases an extremely inadequate infrastructure, which makes trade significantly more difficult between African nations, as well as with the rest of the world.

Yet Africa certainly has economic potential. Many of the countries are rich in natural resources such as diamonds, gold, oil and rare earth elements. However, this wealth of raw materials also can be seen as the downfall of many of the countries mentioned here. Too often the promise of quick profits leads to excessive capital investment in mines and processing facilities while other industries are criminally neglected as a result. Such one-track economies are seldom sustainable over the long term and these countries land in a developmental dead end. The profits from raw material wealth are generally distributed extremely unequally, with governments and mine owners (usually foreign) on one side and the rest of the population on the other.

Accordingly, Africa's role as a raw material supplier for the rest of the world has changed very little since the days of colonization. Raw materials comprise the vast majority of Africa's exports to this day; other main exports are textiles and agricultural products.

Africa's main trading partners are the EU, China and the USA, whereby China in particular has shown growing interest in the continent over the last 15 years. In 2009, it overtook the USA as the country with the largest trade flow with Africa.

Figure 4 shows how trade flows between Africa and the rest of the world have developed since the beginning of the millennium. Trade relations have meanwhile overcome the global economic crisis of 2009 fairly well and trade has significantly increased overall in the last 15 years. Africa's GDP growth rate has also increased impressively with the beginning of the millennium, as illustrated in Figure 5.

A growth rate of 4.6 percent is expected for Africa for 2015, which comes in above the global average of just under 3 percent. But continued high growth rates and increasing trade seem to do nothing to change the impression that Africa has been forgotten by the rest of the world in global trade. In 2013, Africa's share in world trade was still only 3 percent, a disproportionately small number, which can be explained by the fact that other developing nations – in Asia, for example – have invested more in infrastructure and diversified their economies to a greater extent, making them relatively more appealing for potential trade partners and investors.

The development of free trade agreements on the African continent is interesting because it differs greatly in some ways from concurrent developments in other parts of the world. Here we need to distinguish primarily between agreements among African countries and agreements with countries on other continents. While most treaties in the first global wave of free trade agreements from 1950–1980 in the rest of the world primarily served to cement alliances with the two competing superpowers, the USA and the USSR, developing nations such as those in Africa reached agreements among themselves with the intention of reducing their dependence on developed nations while avoiding

Figure 4: Africa's trade with selected partners in US\$ billions (2000-2013)

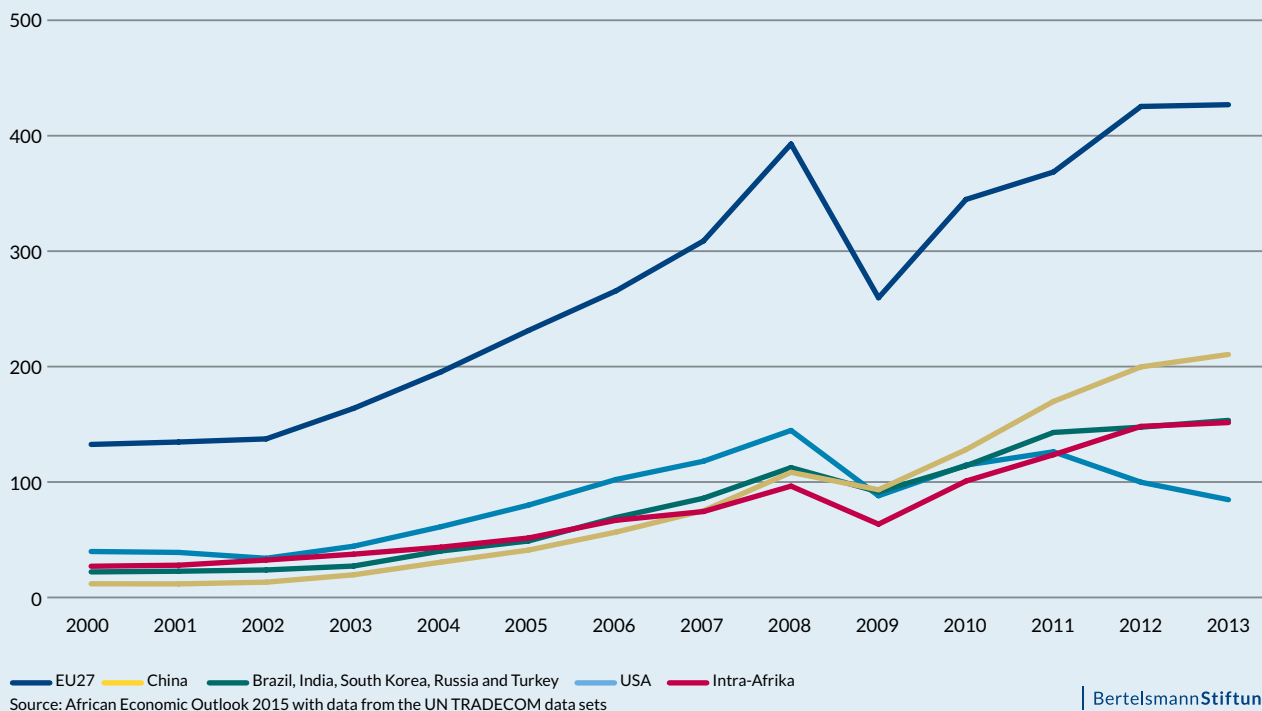
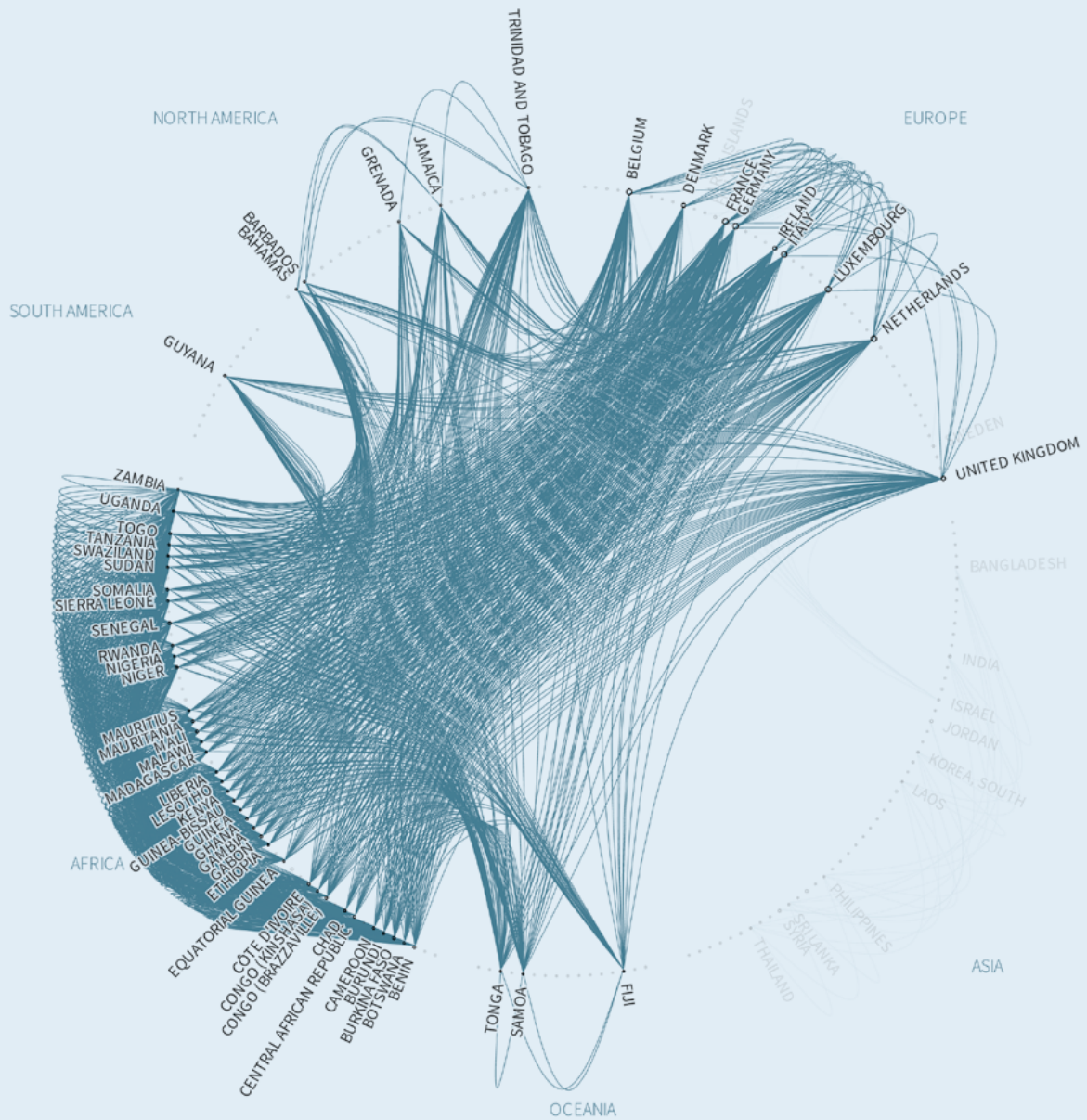


Figure 5: Africa's GDP growth rates in percent (2001-2015)



Figure 6: First Lomé Convention, 1975



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 Dot size: Total amount of agreements - 0 ○ 20 ○ 40 ○ 60 ○ 80 ○ 100
 Source: FTA Vis. Access via: <http://ftavis.com> (accessed: April 28, 2016).

involvement in the Cold War in the process. Equally noteworthy is that such agreements in Africa were almost never of a bilateral nature. Instead they usually consolidated an entire small region into a free trade zone or customs union. Examples of early intra-African regional economic alliances include the West African Customs Union of 1959 and the African Common Market of 1963.

This trend of having economic zones within Africa instead of bilateral trade agreements continues to this day. There are currently eight official regional economic communities, all of which are registered with the African Economic Community (AEC), an organization of the African Union. The ultimate goal of the AEC is to create a comprehensive African free trade zone by eliminating all tariffs and introducing a currency union. At the moment the continent seems to be moving at least a little bit closer to this objective. Three of the largest zones – the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA), and the East African Community (EAC) – have been negotiating for years on merging the individual communities into one single free trade zone, and it now seems that this vision will become a reality in 2016 as the Tripartite Agreement, or the African Free Trade Zone (AFZT). The introduction of the AFZT will unite 26 African countries and combine a good 58 percent of Africa's GDP. With over 600 million people it will be more highly populated than NAFTA or even the European Union.

On the other side are the free trade agreements between African countries and the rest of the world, and these, too, have their own unique characteristics. Unlike other regions of the world, African countries have previously always avoided establishing any type of deep trade agreement with outsiders. Once again, as a general rule there are almost no bilateral agreements, meaning an agreement between a single African country and a single non-African country. Agreements with countries outside of Africa are usually one-sided development aid agreements. One example of this is the series of Lomé Conventions. The first agreement was signed in 1975 and was in force until the year 2000 when it was replaced by the Cotonou Agreement.

The Lomé Convention was an initiative of the European countries to ensure unilateral tariff-free access to European markets for developing nations in Africa, the Caribbean and the Pacific region. However, in the follow-up agreement to the Lomé Convention, the Cotonou Agreement, the decision for the new millennium was to gradually transition this unilateral elimination of tariffs into a mutual free trade agreement to rule out discrimination against other coun-

tries. By introducing the Economic Partnership Agreement (EPA) last year, Africa has started harmonizing tariff regulations with the EU states.

There are currently no plans to include Africa in one of the planned mega-regional free trade agreements. Nevertheless, we can assume that agreements like the TTIP, TPP or the ambitious FTAAP will have significant effects on the African community of nations in one way or another. In the following section we will take a closer look at these agreements and calculate the potential economic consequences for African countries.

3. Mega-regional trade agreements and their effects on Africa

3.1 TTIP – Price effects vs. income effects and the potential of spillovers

TTIP – Background and status quo

Negotiations for a Transatlantic Trade and Investment Partnership (TTIP), which would unite the USA and EU in a free trade zone, began in the summer of 2013 after an official announcement by US President Barack Obama and EU Commission President Manuel Barosso at the G8 Summit meeting on June 17, 2013. After earlier discussions on a transatlantic free trade agreement were unsuccessful,

the failure of the Doha Rounds as well as the relative loss of global market share for the EU and USA (down from 60 percent in 2003 to only 45 percent currently) seem to have tipped the scales toward a serious effort to establish a free trade zone between the two economic powers. Thus far, there have been 12 individual rounds of negotiations since they began, but after several delays and conflicts in the talks it is questionable whether the negotiations can be concluded as intended, before the upcoming 2016 presidential election in the US.

With a scope of 45 percent of the global GDP (US\$34 trillion) and 30 percent of world trade (US\$7.1 trillion), the TTIP

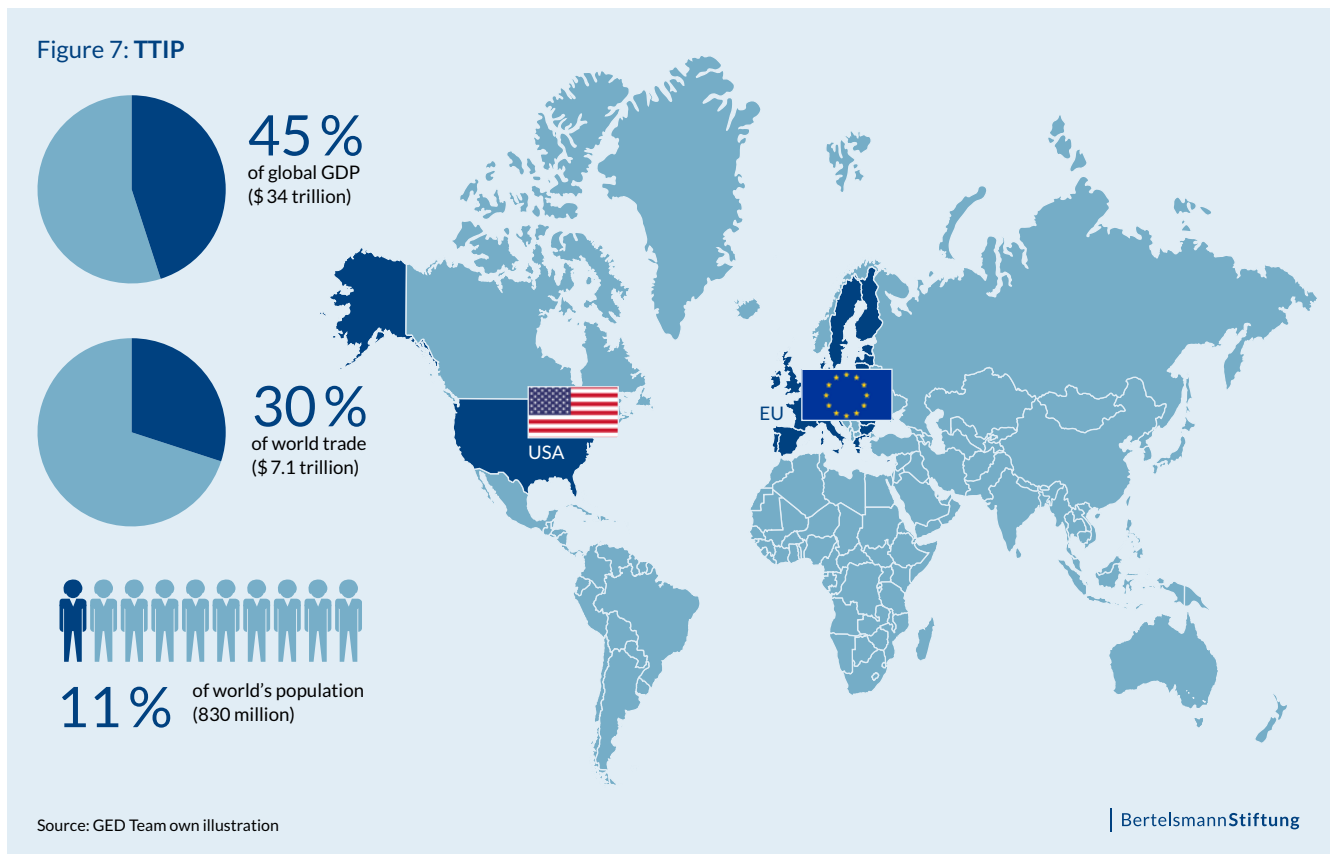
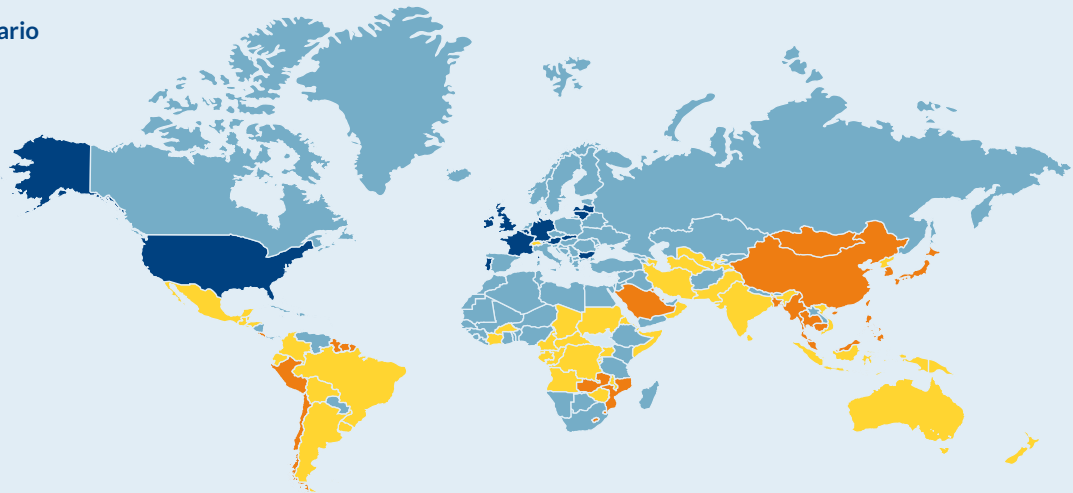
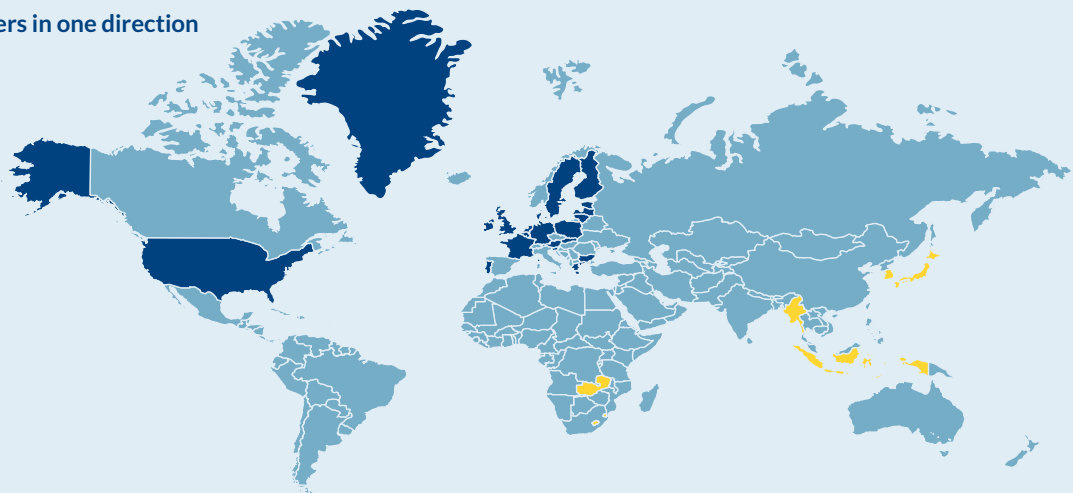


Figure 8: Comparison of TTIP income changes with and without spillover effects in percent

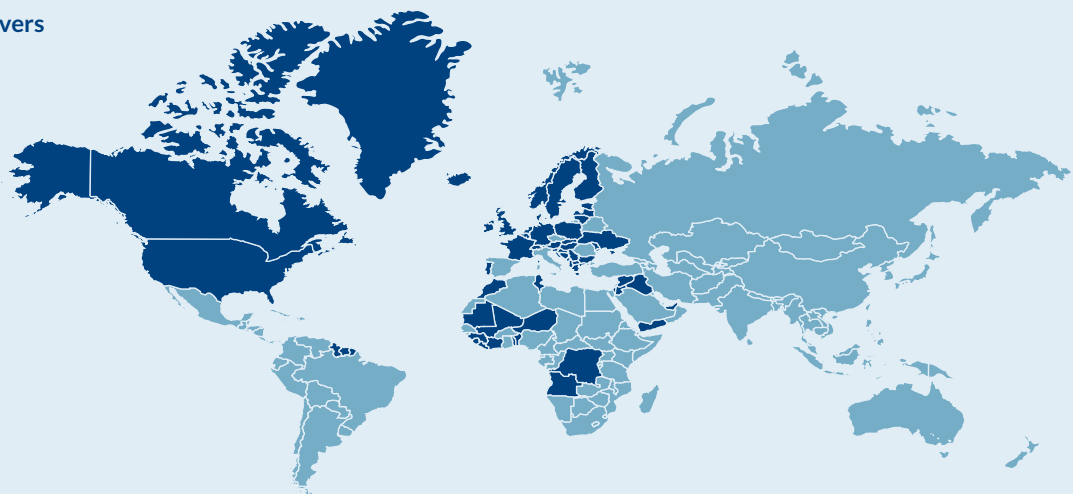
Baseline scenario



Direct spillovers in one direction



Indirect spillovers



■ -2.0 to -1.0 ■ -1.0 to -0.1 ■ -0.1 to 0.1 ■ 0.1 to 2.0 ■ 2.0 to 11.0
 Source: Felbermayr, ifo Munich, 2015

represents the largest mega-regional trade agreement currently in the planning stage. Due to the relative homogeneity of the two negotiation partners, we can expect the TTIP to be the deepest agreement, meaning it will extend beyond the simple elimination of tariffs and into the range of non-tariff barriers to trade.

At the same time, the TTIP is the most heavily discussed agreement of its kind in the European – and especially German – media. While there is a very broad consensus on the positive economic effects that the agreement can have on the USA and countries within the EU, possible third country effects are stirring up debate. Above all, critics are warning about the effects of a TTIP on the poorest developing nations, for example in Africa.

In truth, the sheer scope of a transatlantic free trade zone will unavoidably have an impact on third countries. However, the magnitude of these effects and how they would manifest is less intuitively obvious. An agreement like the TTIP can impact third countries in different ways. There would be an effect on prices as well as one on income, but these effects would impact the welfare of third countries in opposite ways. The price effect, also called the trade diversion effect, arises when imports from third countries become relatively more expensive than the cheaper imports from partner countries in an agreement like the TTIP. This loss of price competitiveness can result in a lower trade volume and therefore reduce the gross domestic product of the third country.

However, at the same time a trade agreement like the TTIP leads to higher income and therefore to increased buying power in the TTIP member states. Greater purchasing power stimulates increased demand – also for imports from third countries. That enables these third countries to increase their export volume at higher prices. Whether a TTIP has a direct positive or negative impact on the welfare of an African nation depends on which of the two effects has a greater influence on the third country's balance of trade.

In addition to the effects of trade diversion and increased demand for third country products, spillover effects can emerge with deep trade agreements like the TTIP. These can have a positive effect on the welfare of a third country. The idea here is based on the extensive elimination of non-tariff barriers to trade that should be associated with the deep character of a TTIP. We are speaking of direct spillovers when we assume that simplified and adjusted trade regulations within TTIP partner countries also reduce the trade costs of third countries that export to the EU and US and can

thereby benefit from uniform regulations. When we speak of indirect spillovers, we assume that third countries will adapt their own regulations to a certain degree to the new standards of a TTIP regulation. This would reduce not only the costs of trade between TTIP partner countries and third countries in both directions, but also the costs of exporting and importing between third countries with adapted regulations.

Since deep mega-regional agreements like the TTIP represent an entirely new form of international free trade, the actual existence of such potential spillover effects has not yet been conclusively proven empirically.

Quantitative results

In the following section we will assume four different TTIP scenarios as we look at the effects of the agreement on African nations. Our baseline scenario assumes a complete elimination of tariffs as well as an extensive reduction of non-tariff barriers to trade. Our scenario of a “shallow” TTIP still assumes a complete elimination of tariffs, but only a minimal reduction of non-tariff barriers to trade. Due to the relatively high degree of homogeneity between the US and EU markets and also the official ambitions announced by the US and EU, we can assume that the baseline scenario is the far more probable scenario of the two. In scenarios three and four we will also successively add the effects of potential direct and indirect spillovers to the results of the baseline scenario. All effects manifest over a period of 10 years, and then they become annually recurring, permanent effects on the real income of the individual country.

A look at Table 1 shows that, for the most part, both the TTIP in our baseline scenario as well as a shallow TTIP agreement have only insignificant effects on African countries. All the values lie within a range of +1 percent to -1 percent. The effects of a TTIP on the welfare of the third countries are positive with the exception of three countries (Côte d'Ivoire, Zambia and Mozambique). The income effect therefore generally seems to override any trade diversion effects even if both effects are only minimal. Our TTIP baseline scenario has the most positive effect in Benin and Togo with approx. +0.80 percent and +0.77 percent respectively (+0.53 percent and +0.44 percent with a shallow TTIP). A TTIP shows the most negative effects in Mozambique and Zambia with -0.17 percent and -0.10 percent respectively (-0.23 percent and -0.05 percent with a shallow TTIP). Moreover, in the vast majority of cases we see that the deeper variations of the TTIP in our baseline sce-

Table 1: TTIP effects on real income in Africa in percent, different scenarios

Country	TTIP Baseline (Deep)	TTIP Shallow	Dir. Spillovers	Indir. Spillovers
Benin	0.803	0.534	3.042	3.767
Togo	0.774	0.440	2.842	5.729
Guinea	0.397	0.285	2.414	2.572
Senegal	0.268	0.197	1.963	2.158
Namibia	0.264	0.217	1.581	2.674
Botswana	0.256	0.135	0.707	1.601
Morocco	0.216	0.209	2.856	2.555
Ghana	0.204	0.133	1.511	1.956
Kenya	0.189	0.183	1.575	2.061
Tunisia	0.184	0.201	3.790	3.172
Ethiopia	0.183	0.120	1.017	1.302
South Africa	0.155	0.144	1.703	1.842
Egypt	0.155	0.117	1.651	1.853
Tanzania	0.136	0.090	1.136	1.732
Rwanda	0.112	0.078	0.829	1.172
Nigeria	0.105	0.108	1.267	1.408
Madagascar	0.102	0.145	1.683	1.874
Cameroon	0.095	0.093	1.398	1.283
Burkina Faso	0.092	0.091	0.931	1.221
Uganda	0.076	0.048	0.799	1.324
Malawi	0.058	0.065	1.136	2.301
Zimbabwe	0.027	0.050	1.469	3.554
Ivory Coast	-0.041	0.000	1.759	1.970
Zambia	-0.101	-0.056	0.287	1.171
Mozambique	-0.168	-0.226	1.172	2.357
Rest of West Africa	0.469	0.369	3.955	6.871
Rest of North Africa	0.111	0.131	1.577	1.601
Rest of East Africa	0.086	0.099	1.214	1.723
Central Africa	0.084	0.174	1.975	1.708
South-Central Africa	-0.079	0.118	2.058	2.226

Source: Ifo calculations

Note: Countries are listed according to the most likely scenario (baseline)

nario have a more positive effect on the welfare of African countries than the version with a shallow TTIP, which can be explained by the positive impact of a stronger income effect from a deeper agreement. However, as a rule, the differences between the two scenarios are insignificant here as well.

The impact of a TTIP becomes more interesting when we look at the effects of direct and indirect spillovers. In both of these scenarios none of the African countries or regions are negatively affected by a TTIP. The countries and regions that see the most positive effects resulting from direct spillovers are Tunisia, Benin and the rest of West Africa (+3.79 percent, +3.04 percent and +3.96 percent). The effects from indirect spillovers are even more positive and are strongest in Togo, Benin and the rest of West Africa (+5.73 percent, +3.77 percent and +6.87 percent). In the category of indirect spillover effects, all of the effects are above +1 percent; in the category of direct spillover effects, all but five are above that (Botswana, Rwanda, Burkina Faso, Uganda and Zambia).

By exploiting potential spillover effects, the African nations could achieve very significant positive welfare effects through a TTIP. Unfortunately, the empirical verifiability of these effects is inadequate as mentioned above. A potential yield of such effects will be determined primarily from the degree of inclusivity with which a TTIP is created. On this subject, we argue in favor of a series of specific policy guidelines that should maximize inclusivity and thereby maximize the positive effect and probability of possible spillover effects of a TTIP for African countries.

Five specific policy options for an inclusive TTIP for Africa

To shape the effects of a TTIP on African nations as positively as possible, we must strive to create a fair and inclusive TTIP right from the start. For that reason, the following five policy options pursue two clear objectives. Possible trade diversion effects should be cushioned and the impact on demand from positive income effects should be maximized. At the same time, we should promote future options for African countries to adapt their regulations, in order to achieve potential spillover effects.

1. Complex rules of origin should be reduced or eliminated entirely

In a free trade agreement, rules of origin determine what percentage of a product must actually be produced in one

of the partner countries so that the agreement's reduced tariffs will apply to this product. The more complex and tougher these rules are, the more likely it is that a domestic exporter will reduce deliveries from third countries in order to replace these with providers inside the RTA area. However, this can be doubly harmful. For the third country, important export shares disappear, while the exporter from the TTIP country must switch to a more expensive supplier inside the RTA area to comply with the rules of origin. Therefore, a reduction or elimination of these rules in favor of an open-market principle could significantly cushion trade diversion effects for third countries in Africa.

2. The mutual recognition of standards must be promoted with African countries as well.

One key point of a TTIP is the mutual alignment or recognition of different production standards. Just how far this recognition also extends to third countries in Africa will determine the effect that the TTIP would have on the continent. Mutually recognizing products only if the manufacturer is from one of the partner countries should be avoided. Instead, the origin of the provider should be irrelevant as long as USA or EU standards are maintained. Ideally there should be an independent international center for inspecting compliance, which would prevent any discrimination against third countries at the same time. This step would be essential for Africa to reap the benefits of possible spillover effects.

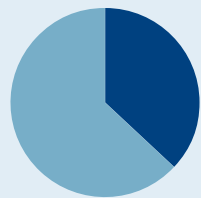
3. Greater inclusion of African countries in EU/US supply chains should be promoted

General trade diversion effects reduce imports from third countries in favor of imports from partner countries. However, imports from third countries, such as raw materials, that are used for further processing and then for the country's own exports benefit from increased EU-US trade. Greater inclusion of African countries in such global supply chains can increase trade in countries rather than reduce it. Our next chapter shows impressively how successful such a step could be for the affected African nations.

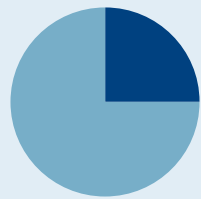
4. Existing trade agreements between the EU and African nations must be improved

Old agreements between the EU and African countries are often too narrow and limited to customs barriers. They would lose relative value in the face of a similar elimination of tariffs with the USA and a deeper TTIP. In order to counter this type of "preference erosion," these old agreements

Figure 9: TPP



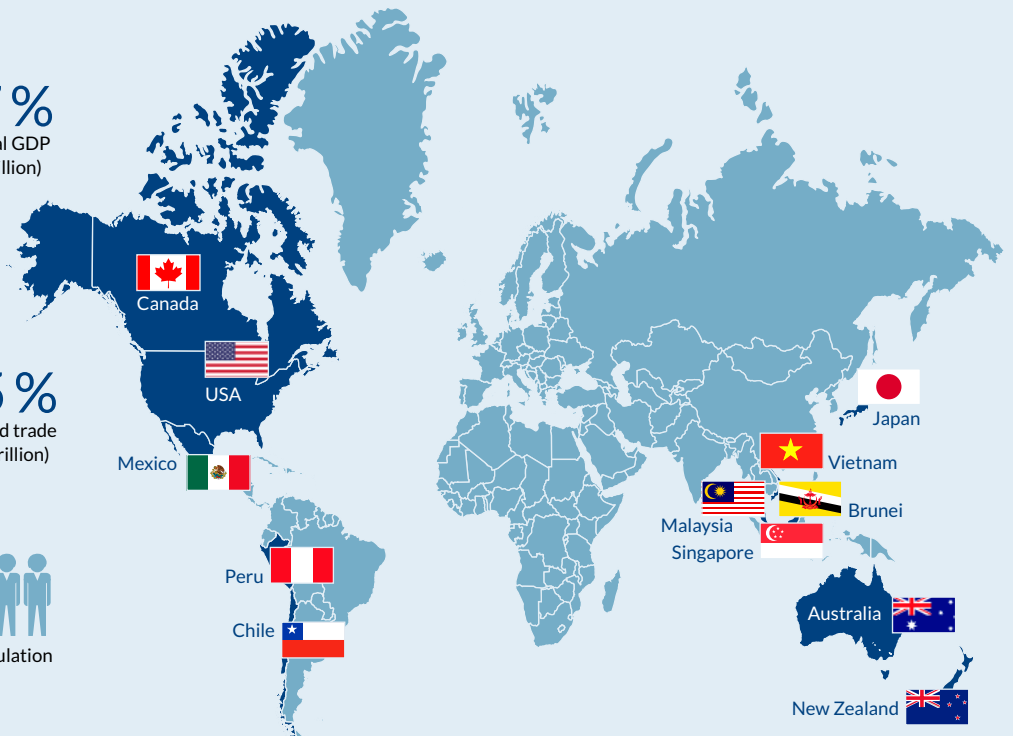
37%
of global GDP
(\$28 trillion)



25%
of world trade
(\$5.9 trillion)



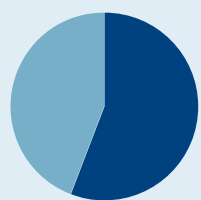
11%
of world's population
(802 million)



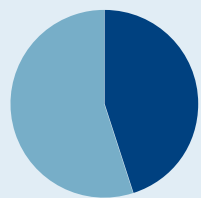
Source: GED Team own illustration

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Figure 10: FTAAP



56%
of global GDP
(\$42 trillion)



45%
of world trade
(\$10.6 trillion)



39%
of world's population
(2.8 billion)



Source: GED Team own illustration

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as well need to be revised and deepened. The agreement should extend beyond just trade in goods and cover trade in services and investments, etc. In addition to eliminating tariffs, regulatory components should also be incorporated. Like the above options, such a step would reduce the relative trade disadvantage of third countries and diminish future trade diversion effects, as well as prepare the way for potential spillover effects.

5. The WTO must be strengthened in its role as the protector of developing nations

The WTO has an essential role to play as a mediator and middleman on the international trade stage. It can look after the interests of smaller and poorer countries in Africa on an international level and promote a global dialogue. The WTO must be strengthened in this role and despite the attention that mega-regional trade agreements like the TTIP have been getting, the Doha talks must be continued under the auspices of the WTO.

3.2 TPP & FTAAP – Trans-pacific trade and Africa

TPP & FTAAP – backgrounds and status quo

If we are dealing with the scale and magnitude of a TTIP, two additional mega-regional free trade initiatives fall under our focus. These are the recently negotiated and concluded Trans-Pacific Partnership (TPP), as well as the Free Trade Area of the Asia Pacific (FTAAP), a proposal still in its infancy.

Negotiations for a TPP that was promoted in particular by the US began in 2010, building on an earlier free trade agreement, the Trans-Pacific Strategic Economic Partnership (TSEP). Negotiations were successfully concluded by the 12 represented member states in Atlanta on October 5, 2015.¹ This makes the TPP the largest established free trade zone in the world. The agreement covers almost 40 percent of the global GDP as well as almost 20 percent of world trade, making it only slightly smaller than the planned TTIP.

In contrast to that agreement, China's newest vision for a free trade zone, the FTAAP, includes all APEC countries. Although the idea of a comprehensive transpacific zone has

existed for almost 50 years, actual planning only got underway after China's prodding at the 2014 APEC Summit meeting in Beijing. This can be viewed as China's direct alternative proposal to the US-focused TPP, which intentionally excludes China. An FTAAP of all APEC countries would leave a TPP – and even a TTIP – far behind. However, since it is in the early planning stages,² very few details are known about the zone. In addition, it remains to be seen whether all APEC countries would actually come together at the negotiating table, much less reach a consensus. The latter in particular seems questionable with partners like the USA and Russia or China with the current geopolitical circumstances. But if we start with the assumption of a comprehensive FTAAP with all 21 APEC member states (almost 40 percent of the world's population), then we have an agreement that contains at 56 percent more than half of the total global GDP.

Theoretical effects of trans-pacific free trade zones on Africa

In theory, both a TPP and an FTAAP affect African third countries through the same channels as the TTIP described above. Trade diversion effects have a negative impact, while income effects have a positive impact on the welfare of non-member countries. Only the spillover effects channel is largely eliminated with both agreements due to the very high degree of heterogeneity and therefore the anticipated shallower character of the free trade zones in comparison to a TTIP. Nevertheless, it is worth taking a closer look at the theoretical method of how the agreement works – in particular with regard to an FTAAP. While the scope and effect of a TPP differs only slightly from a TTIP, a potential FTAAP – because of its even more immense scope, and particularly because of China's special relationship with Africa – yields new, interesting angles on the topic of free trade.

In point 3 of our policy proposals for an Africa-friendly TTIP we explained how strengthening Africa's inclusion in European and USA supply chains can increase demand for African exports through the income effect. This impact channel is key, so let us examine the effect of a Chinese free trade agreement on Africa. China is Africa's largest trade partner in the world by far, even ahead of the USA and EU. If China has its way, this dominance will continue to grow in the future. According to China's Premier Li Keqiang, the People's Republic's current trade volume with the African continent of almost \$200 billion per year should be doubled

1 In addition to the USA, member states include Australia, Brunei, Chile, Canada, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam.

2 Planning for an initial strategy study was initiated at the APEC meeting with the results to be presented at the end of 2016.

Table 2: TPP and FTAAP effects on real income in Africa in percent, different scenarios

Country	TPP Deep	TPP Shallow	FTAAP Deep	FTAAP Shallow
Togo	0.774	0.321	39.314	8.648
South Africa	0.155	0.084	12.021	7.861
Benin	0.803	0.462	23.855	7.507
Zimbabwe	0.027	0.064	12.824	7.024
Egypt	0.155	0.122	13.867	6.801
Kenya	0.189	0.216	10.592	6.439
Namibia	0.264	0.094	8.021	5.618
Nigeria	0.105	0.008	8.692	5.611
Senegal	0.268	0.120	10.587	5.591
Morocco	0.216	0.131	10.123	4.791
Tunisia	0.184	0.047	8.993	4.787
Guinea	0.397	0.033	13.392	4.633
Tanzania	0.136	0.103	9.821	4.337
Uganda	0.076	0.078	7.781	4.330
Ivory Coast	-0.041	-0.024	6.875	4.037
Malawi	0.058	0.058	7.581	3.705
Ethiopia	0.183	0.049	7.978	3.683
Madagascar	0.102	0.065	7.849	3.518
Ghana	0.204	0.090	8.944	3.510
Mozambique	-0.168	0.052	7.268	3.470
Rwanda	0.112	0.086	6.484	3.279
Burkina Faso	0.092	0.042	4.524	2.669
Botswana	0.256	-0.024	3.396	2.560
Cameroon	0.095	0.012	5.004	2.230
Zambia	-0.101	0.001	3.772	1.606
Rest of Western Africa	0.469	0.566	86.816	77.372
South-Central Africa	-0.079	-0.039	14.715	9.943
Rest of East Africa	0.086	0.119	12.363	6.505
Central Africa	0.084	0.063	9.601	5.887
Rest of North Africa	0.111	-0.078	8.448	5.703

Source: Ifo calculations

Note: Countries are listed according to the most likely scenario for an FTAAP (shallow)

to \$400 billion by 2020. From African exporters, China primarily procures raw materials and natural resources such as various metals, rare earth elements and crude oil, which are further processed in China and then commonly exported by China to the global market in a different form. In return, China invests in African infrastructure and mining facilities in order to secure its role as the dominant buyer of African raw materials in the future as well.

In this regard Chinese-African trade is ideally set up for any demand-boosting effects of an FTAAP. Since most of the raw materials that China imports from Africa are only traded on a small scale within the FTAAP, the trade diversion effects in these sectors are minimal. Increased Chinese trade has an enormously positive effect on demand for African raw materials, especially when we consider that the three largest customers for Chinese exports (USA, Hong Kong and Japan) are all FTAAP member states as well.

Quantitative results

Let us now take another look at deep and shallow scenarios for a free trade agreement for both the TPP as well as the FTAAP. As with a TTIP, the baseline scenario illustrates comprehensive elimination of both tariff and non-tariff barriers to trade. Although a shallow scenario includes extensive elimination of tariffs, we assume only minimal limits on non-tariff barriers to trade. However, unlike the situation with a TTIP, we assume here in both cases that the shallow scenario is far more likely, due to the much higher degree of heterogeneity among the individual member states.

As expected, the income effects of a TPP on African countries, like those of a normal TTIP, are extremely negligible. All the effects fall within a range of -1 percent to +1 percent, and in the case of our more-likely shallow model it does not even exceed the 0.1 percent mark in most instances. And as with a TTIP, the positive income effects slightly outweigh the negative trade diversion effects in almost every case. Benin, Togo and the rest of West Africa would see the greatest positive total effects at approx. 0.5 percent, 0.3 percent and 0.6 percent (0.7 percent, 0.6 percent and 0.8 percent for the deeper baseline scenario). The only losers in Africa with a TPP are the Ivory Coast, Botswana, South-Central Africa and the rest of North Africa. Nothing goes below the -0.1 percent limit in either the shallow or the baseline scenarios.

By contrast, a potential FTAAP clearly shows more significant effects. Similar to a TTIP scenario with spillover

effects, none of the countries lose out here. In fact, the positive effects are somewhat stronger than in any of the scenarios considered previously. If we once again assume a more realistic shallow scenario here, an FTAAP would affect the welfare of African countries in a range from approximately 2 percent to 9 percent. South Africa and Togo would be the biggest winners with 7.9 percent and 8.6 percent growth in real income; the smallest beneficiaries would be Cameroon and Zambia with 2.2 percent and 1.6 percent growth in real income. The collective region designated as the rest of West Africa represents an extreme outlier, which according to calculations for our model would see a whopping 77 percent growth due to a shallow FTAAP. These extreme figures might be explained by the fact that previously mentioned channels are encountering extremely poor or small national economies for which an average absolute increase in GDP represents a disproportionately high relative percentage increase. Like the rest of West Africa, some collective regions also have issues with data quality of the raw data because data collection can be difficult in some smaller countries.

The effects of an FTAAP are heightened yet again if we assume a more comprehensive scenario that also includes the elimination of non-tariff barriers to trade. The effects on the welfare of the individual countries range from 3.4 percent (Botswana) up to 39.3 percent for Togo. The collective rest of West Africa region once again shows an extreme result with a record welfare gain of nearly 87 percent.

This clearly illustrates that on the transpacific side, a potential FTAAP would have a far more positive impact on the economic welfare of African countries. However, we must emphasize that these are purely economic analyses. Other consequences of a “monopolization” of Africa by China are not considered here, nor is it a given that a higher GDP will necessarily reflect positive, sustainable growth in the affected countries.

4. Case Studies

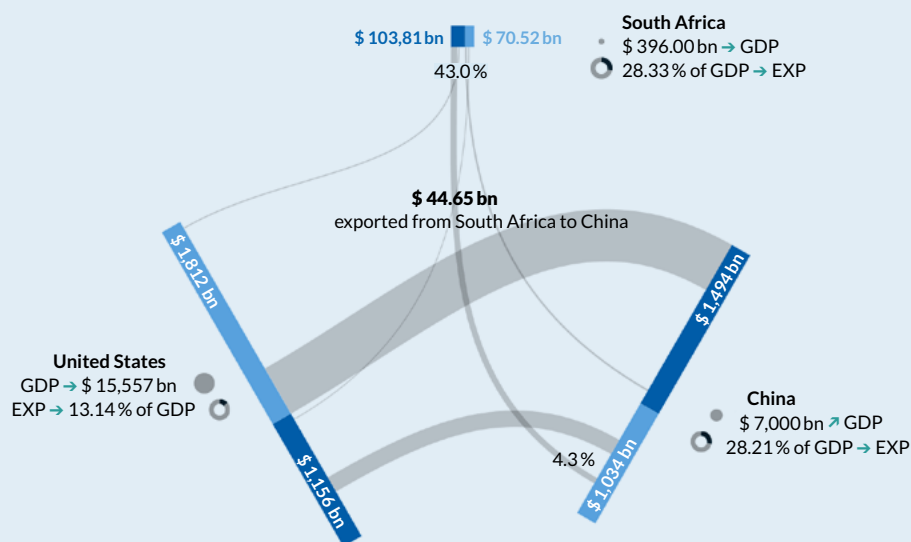
4.1 South Africa – Africa’s sputtering growth engine

For a long time, South Africa was considered Africa’s model economy. As one of the BRICS countries, it is considered one of the most powerful emerging economies along with Brazil, Russia, India and China. Even today, the country represents one of the continent’s largest and most open national economies. But South Africa’s growth has faltered. Since the economic crisis of 2009, its GDP growth rate has never rebounded to its pre-crisis levels and in 2014 its growth rate was a mere 1.5 percent. Thus, South Africa’s growth that

year was less than half of Africa’s GDP growth (3.9 percent) and also less than half of the average global GDP growth rate (3.3 percent). Meanwhile South Africa is no longer leading the continent in absolute numbers either. In 2015, Nigeria surpassed South Africa as the country with the largest gross domestic product in Africa.

South Africa’s previous growth came largely from its huge mining sector and trade in products from this sector. The country’s three main exports are gold at 16.6 percent of total exports, iron ore at 9.9 percent and platinum

Figure 11: South Africa and its two main trade partners, China and the USA



How to read it

■ 2012 Merchandise exports/imports to/from all available countries in billion US-\$ (current prices) as reported by import countries' statistics.

Bar lengths relative to largest sum of imports and exports (among displayed countries for all years).

— Merchandise exports/imports in billion US-\$ (current prices)

● Bubble size relative to largest indicator value. GDP: Gross Domestic Product, in billion US-\$ (constant prices, base 2010) max. size \$ 15,902 bn

● Ring segment indicates percentage. IMP: Total Imports, in percent of GDP max. size 26.09 percent of GDP. EXP: Total Exports, in percent of GDP max. size 32.80 percent of GDP

→ Tendency arrows indicate change to previous year's value (i) for absolute values: relative change; (ii) for percentage values: difference in percent points.

Source: GED Viz. Access via: <https://viz.ged-project.de> (accessed: April 28, 2016).

at 8.2 percent. Its biggest export customers are China and the USA. In 2012 South Africa exported goods valued at US\$44.7 billion to China alone; its total exports came to US\$103.8 billion (See figure 11).

If we combine South Africa’s dependence on raw materials exports to China and the USA as the main customers for these exports, it quickly becomes clear what potential that country could envision from an Asian-Pacific free trade zone. A closer look at our data confirms this assumption. Neither a shallow TPP nor a deep TTIP will bring South Africa more than 0.08 percent or 0.16 percent growth respectively. However, a shallow FTAAP with China and the USA involved would lead to a growth in real income of 7.86 percent for South Africa.

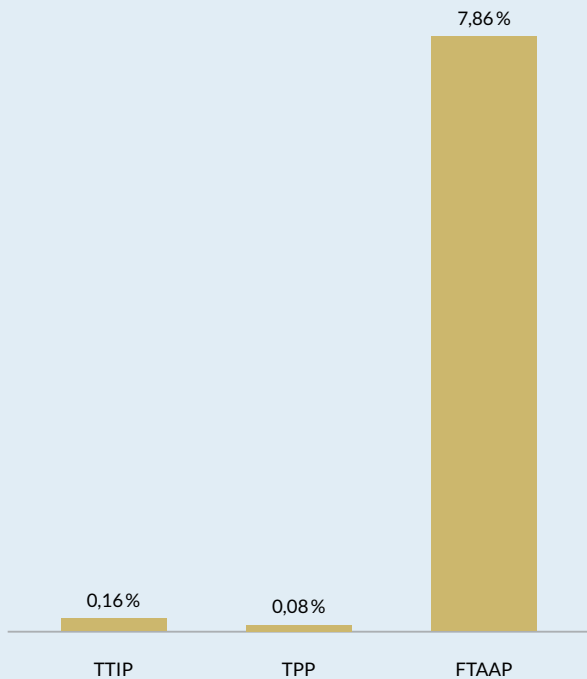
If we take a look at the effects of an FTAAP for the individual sectors, we find our assumptions are confirmed even further. For example, in the agricultural products sector we see a value added reduction of 13.7 percent due to trade diversion effects. However, this has an insignificantly low effect alongside the rise in value added in the mining sector, which would grow by 62.4 percent. Other raw material sectors like minerals and oil would experience similar effects.

An Asian-Pacific free trade zone could actually jumpstart South Africa’s growth again. However, it remains questionable whether this combined with an ongoing fixation on raw materials exports is the smartest long-term strategy for a country that is already struggling mightily with extreme income inequality and poverty.

4.2 Mozambique – will a TTIP make the poorest even poorer?

With a real gross domestic product of €780 per person, Mozambique is one of the poorest countries in the world. Almost half of its residents (43 percent) earn less than US\$2 per day and therefore are considered to be living in absolute poverty. After a 16-year civil war the country today still lacks important infrastructure and industrial capital. Nevertheless, the trend for Mozambique is a positive one. The national economy has been growing at an annual rate of 6 percent – 7 percent since the start of the new millennium. The mining and export of aluminum, which has become the greatest contributing element to Mozambique’s GDP in recent years, is bringing healthy profits for those who control the mines. However, based on employment

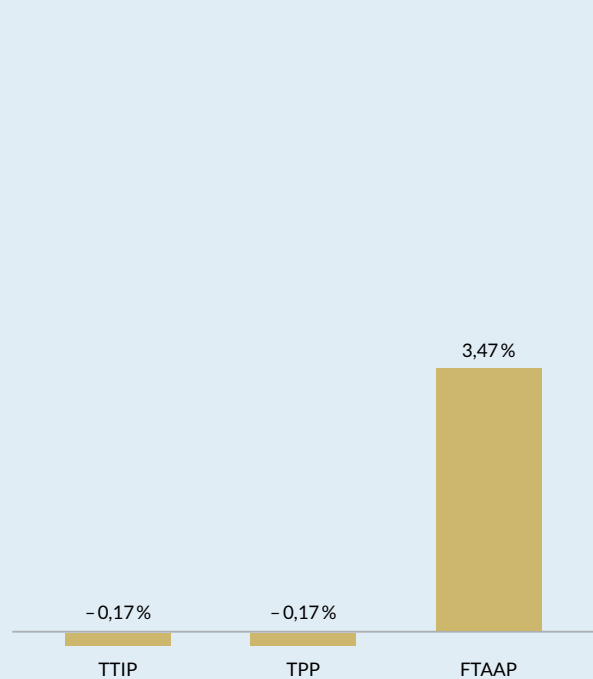
Figure 12: Real income growth in South Africa



Source: Ifo calculations
 Note: TTIP – deep, TPP and FTAAP – shallow

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Figure 13: Real income change in Mozambique



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numbers, agriculture remains the core of Mozambique's national economy. Around 80 percent of employed persons work in this sector, but they only earn 24 percent of the gross domestic product.

At first glance, the mega-trade deals considered in our model only have a minimal effect on real income in Mozambique.

Both a TTIP and TPP show a negative effect on real income in the small country on the African coast. Both effects fall in the range of barely -0.2 percent. The theoretical FTAAP dominated by the Chinese would mean a positive 3.5 percent growth for its national economy. Let us take a closer look at these numbers.

As in previous examples, the relatively strong growth resulting from an FTAAP can be quickly explained. Mozambique's aluminum deposits are a found opportunity for Chinese production needs and the resulting demand for all types of raw materials, metals and minerals in particular. Our model confirms this and calculates growth of more than 40 percent for the mining sector with an FTAAP. However, considering the small percentage of the population participating in the mining industry, we can assume that such an FTAAP push has little potential of being a long-term solution to Mozambique's poverty problem.

The TTIP and TPP are also associated with positive value adding effects in the mining sector, but these effects are lower than in the scenario with an FTAAP. Here the - in some cases - heavy losses in added value are dominant in the agricultural and fishing sectors. The agricultural sector, which in Mozambique is still comprised almost exclusively of small independent farmers, lacks the means to keep pace with international competition, which is now cheaper. This results in trade diversion effects. In addition, the harmonization of European and US standards can lead to a required global market standard that would be difficult if not impossible for Mozambique's fishermen to meet, for example. The elimination of unilateral customs advantages for African countries through the planned EPA agreement with the European Union could ultimately take away the last remaining relative advantage in the modern world of trade from the poorest of the poor.

If we compare the annual losses in real income of 0.2 percent that would accompany both a TTIP and a TPP with a projected total growth rate of 6 percent-7 percent, the losses seem exceptionally small at first. However, this is quickly put into perspective when we consider that the total

effects of -0.2 percent were composed of a positive gain in the mining sector, which is distributed among a small minority of the population, together with in some cases heavy losses in the agricultural and food sectors, which employ the majority of the population - and the poorest members of the country's population. Therefore, Mozambique is an example of the fact that mega-trade deals do not solely bring positive effects for third countries. For Mozambique, not only would a TTIP and TPP yield negative results overall, the main burden of income losses would fall on the poorest members of the population, while potential gains would land in the laps of a fortunate few.

5. Conclusion

Going into the future, Africa will have some fundamental choices to make. Does it want to hold on to its isolationist policy or does it want to strive towards a more active participation on the global stage of world trade? The current African focus on the African Free Trade Zone seems to suggest a continued inward facing approach. Yet our study has shown that more trade with the outside, especially with China and the east could have enormous positive income effects on many African countries. A harmonization of standards with the west, too, could prove fruitful for the forgotten continent.

Still, it cannot be denied, that there are still many structural problems and burdens to trade in most African countries, which at this point could just as well turn an increase in more external trade from a blessing into a curse. Barriers like corruption and an unproportionally high sector focus on the extraction of minerals and raw materials in general, could lead to an extremely uneven distribution of any positive money influx through more foreign trade. Worse even, raised profits from those sectors would likely mean a continued neglect of other important sectors, reducing overall innovation and progress on the continent and damaging development in the long run. Seen under this point of view, Africa's focus on itself, for now, might not be a bad decision, given it is open to change from within before opening up more to the outside.

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Imprint

© 2016 Bertelsmann Stiftung
Bertelsmann Stiftung
Carl-Bertelsmann-Straße 256
33311 Gütersloh
Phone +49 5241 81-0
www.bertelsmann-stiftung.de

Responsible

Dr. Ulrich Schoof

Autors

Fritz Putzhammer, Prof. Felbermayr,
Dr. Rahel Aichele

Design

Dietlind Ehlers, Bielefeld

Photo

Shutterstock / donvictorio

Address | Contact

Bertelsmann Stiftung
Carl-Bertelsmann-Straße 256
33311 Gütersloh
Phone +49 5241 81-0

GED-Team

Programm Nachhaltig Wirtschaften
Phone +49 5241 81-81353
ged@bertelsmann-stiftung.de
www.ged-project.de

www.bertelsmann-stiftung.de