Economic Analysis in Support of Bilateral and Multilateral Trade Negotiation

ECONOMIC IMPACT OF A POTENTIAL

FREE TRADE AGREEMENT (FTA)

BETWEEN THE EUROPEAN UNION AND INDIA

CEPII - CIREM

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Summary

This report proposes an assessment of the outcome of a free trade agreement between India and the European Union, limited to the impact of a FTA in goods and services. Other impacts, such as potential gains in productivity, that should be expected, are not taken into account given the lack of appropriate empirical estimates of such impacts. It is also important to acknowledge that liberalisation of trade in services modelled here is excluding mode 3, by sake of modelling constraints. Accordingly, benefits envisaged in the study should be considered as the bottom line of a rather conservative approach. But even limited to the liberalisation of trade in goods and services, such an agreement would have multiple effects on sectors and factors that need to be addressed using a properly designed methodology. Various scenarios of such an agreement have been assessed using a computable general equilibrium (CGE) model: the CEPII's CGE model, nicknamed MIRAGE. In order to have a realistic approach to the negotiation process, the initial protection level has been calculated at the most detailed level (the HS 6-digit nomenclature of international trade), using the CEPII's database on tariffs: MAcMap.

Two scenarios have been simulated. They are identical with regard to protection in goods: 95% of tariffs are removed on both sides. The difference is in services. In the first scenario, protection in services is cut by 10%, while in the second scenario a 25% cut is considered. In both scenarios, the tariff dismantling begins in 2007 and is fully implemented in 2013, with a shorter transition period for the EU. The impact of trade liberalisation on foreign direct investment is taken into account in the simulations.

Two main conclusions can be drawn from this exercise. The overall impact in terms of Indian real income is sensitive to the inclusion of relevant sectors for India in the negotiation, and in particular the services sector will be important for India to reap the full welfare benefits of a FTA with the EU.. On the EU side, initial bilateral trade with India represents only 0.4% of EU GDP, leading in any case to small, but always positive, income gains in percentage points.

INTRODUCTION

In addition to their commitment to multilateralism, WTO members may contemplate bilateral agreements: this is a way to further or quicker liberalise trade, as well as to negotiate on issues not covered by the multilateral agenda.

The aim of this study is to assess the impact of a free trade agreement between the EU and India. All sectors are concerned: agriculture, industry and services. Two scenarios are computed and compared in order to provide a quantitative assessment of the potential outcomes of this bilateral negotiation. They correspond to different levels of ambition in services liberalisation. Positive impacts on Indian real income are found only when liberalisation in services is largely taken into account.

There are multiple dimensions associated to such agreement. *The advantage of using a multi-country model is to take into account the impact of a changing world environment, as well as the possible feedback associated with the bilateral trade liberalisation*.

However, when considering the results, one has to bear in mind that *such general equilibrium models do not account for two other potential sources of economic gains* namely (i) productivity gains arising from trade integration and (ii) efficiency gains coming from foreign investments in basic services and infrastructure – i.e. transport, telecoms, finance, insurance and distribution.

(i) Most economists agree on the *positive effect international trade exerts on productivity*, which in turn is a major trigger of growth and poverty alleviation. However, it is still not possible to introduce such positive relation in a model like Mirage in a satisfying way. This is why we decided not to include such effects.

(ii) Currently *global economic models fail to give reasonable estimates of global foreign investment liberalisation gains*, notwithstanding that it represents a major part of current negotiations in services. Yet, economists agree to consider that this negotiating field entails major potential gains for developing countries. Liberalisation together with a stable regulatory framework is the key in attracting foreign companies which represent a unique and rapid source of efficiency gains through advanced technology and management skills. Developing countries are particularly in need of a sound financial, telecom, distribution, energy network or transport base for the development of their economy. Efficient functioning of these key service sectors is a necessary condition for other sectors to function and for the whole economy to grow.

These two types of effects are particularly important for developing countries such as India. Developing countries generally lag far behind in terms of productivity and efficiency in many economic sectors. For these countries, there is major room for improvements coming from productivity gains linked to trade liberalisation or from know-how and advanced technology brought by foreign investments. Such gains are hardly quantifiable and for this reason are not factored in the current assessment done through a CGE analysis. Such effects are also not in the figures and the results presented below notwithstanding they can have major structural effects by improving the efficiency of key inputs for the rest of the economy.

Accordingly, *benefits envisaged here should be considered as the bottom line of a rather conservative approach*. In parallel, it is worth remembering that all simulations are done under the assumption of a successful completion of the Doha Round, so the bulk of reduction in tariffs is already taken place.

Model and databases used

In order to evaluate the economic impacts of a bilateral agreement between EU25[1] and India, a CGE assessment is performed. The objective of such a "general" modelling approach is to take into account the intricate relations between markets, prices and incomes.

The advantage of using a multi-country model is to take into account the impact of a changing world environment, as well as the possible feedback associated with the bilateral trade liberalisation. These advantages come however at a price.

The shortcoming of such approach, as compared to a more qualitative one, is to restrict the potential gains to what can be properly modelled; accordingly, eventual positive externalities, or induced productivity gains are not taken into account. It would have been possible to introduce such elements in our exercise, based on ad hoc assumptions, but results would have been ad hoc as well. This does not mean that the productivity is constant overt time in our exercise: total factor productivity gains are calibrated in order to reproduce the expected trajectory of the world economy in absence of the India-EU agreement contemplated here. But there are no additional gains associated to such agreement.

All in all, *the method here is very conservative and sheds light on the minimum gains to be reaped from such agreement, as well as on the associated changes in prices, factor incomes and factor allocation*.

Changes in production and prices have consequences on production factors: e.g. an increase in the agricultural output will translate into additional demand for land and unskilled workers, which in turn will induce a raise of their prices. For the same reasons, any growth in the demand for industrial goods will imply an increase in the return on capital to allow for additional investment.

The model used here is the CEPII's CGE model, nicknamed MIRAGE. It is a dynamic model fitted with imperfect competition (in order to give a more realistic representation of the world economy) in the manufacture and service sectors, allowing for endogenous FDI flows (see the description of MIRAGE in the companion working document).

[1] The study and the results computed are for EU25 due to database constraints. However, the agreement will take place between the EU and its 27 Member States and India.

The model is using the GTAP database. GTAP (Global Trade Analysis Project) is a global network of research teams and institutions in charge of economic policy conducting quantitative analysis of international policy issues. GTAP's goal is to improve the quality of quantitative analysis of global economic issues within an economy-wide framework.[2] The GTAP database is a global database describing bilateral trade patterns, production, consumption and intermediate use of commodities and services.[3] In order to run the simulations, an aggregation of the GTAP sectors and countries or regions according to the kind of issue one is interested in is needed.

In doing so, one must carry out a trade-off between detailed information and computation as well as interpretation constraints. The different simulations are based on an aggregation in 11 regions and 34 sectors.

However, instead of relying on modelling tariff cuts at the sector level, we use a detailed database (MAcMap) at the HS6 level (5,100 products); this permits a better handling of the tariff dispersion (which matters as far as the gains to their removal will depend on such dispersion) as well as introducing sensitive products. This also allows analysis to be based on actual, applied tariffs, including preferential provisions (e.g. GSP, FTAs…).

Additional data for FDI has been collected, and the protection in services has been evaluated and modelled in a specific way. Basically, we consider here that regulations affects trade in services, which needs to be modelled differently from the imposition of a tariff: no revenue for the government is associated with such regulations, while firms managing to bypass such regulations will obtain a rent. Alleviating the regulation cuts the rent of the exporter, reduces the price to the consumer and expands trade.

Main features of the study

The study uses a ***baseline*** reproducing expected trajectories of the world economy, in absence of the agreement contemplated here. We choose to make it compatible with long terms World Bank projections of GDP and long term United Nations projections of populations.

The database of trade barriers used has for base year 2001; however, additional liberalisation has taken place since 2001; the EU has enlarged, accessions to the WTO have taken place; trade agreement enforcement in South Asia. All these events have to be considered independently from

[2] https://www.gtap.agecon.purdue.edu/about/project.asp, 03-22-2006

[3] https://www.gtap.agecon.purdue.edu/databases/default.asp, 03-22-2006

the possible FTA between the EU and India we are interested in. Last, the outcome of the DDA matters too. We made here the assumption of a successful Doha Round. These elements are introduced in our central baseline (noted *A hereafter*) in order to have a better description of the world economy in which an eventual EU-India liberalisation would take place. Various proposals are envisaged. Changes in the variables of interest between this baseline and alternative scenarios' outcomes are computed.

The world is changing and so do the variables of the model. The population is growing and the regions' GDP too. These changes have consequences on the world economy. Basically, we use population and GDP projections, and compute the trajectory of the technological progress that is consistent with the assumptions of MIRAGE.

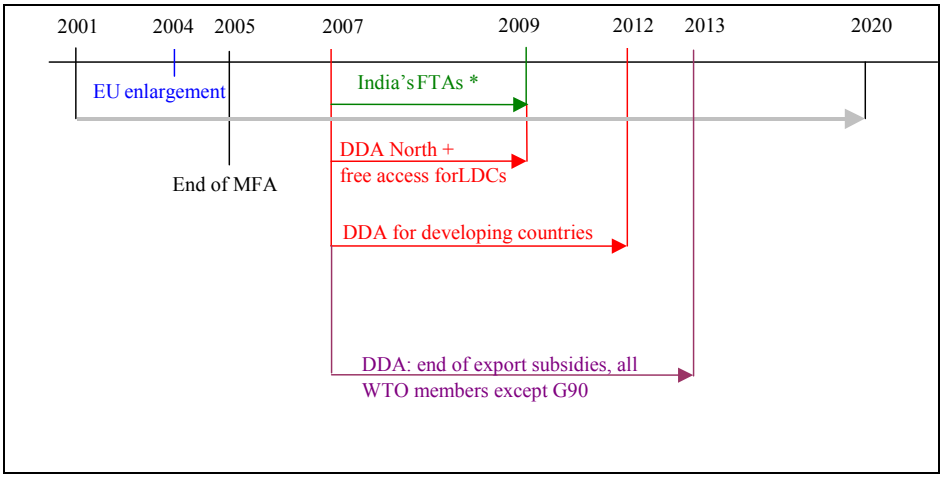
The objective of any baseline is to compute the sectoral technological progress fitting with population and GDP projections, which will then be kept unchanged for all simulations. The baseline is computed on the basis of a likely evolution of tariffs.

Firstly, the actual evolution of tariffs since the base year (2001) is accounted for. It includes EU enlargement to 25 members, the full implementation of the Uruguay Round, China accession to the WTO as well as the end of the Multi-Fibre Agreement. The second trade policy assumption made is the optimistic outcome of the Doha round presented in the companion working document.

In addition to this, we take into account a bilateral agreement between India and the rest of South Asia (SAFTA), covering 70% of the total number of tariff lines which are set to zero. The lines chosen for liberalisation are those with the lowest tariffs. Our baseline also includes a free access for LDCs to all industrialised countries. Both liberalisation processes are completed in three years from 2007 to 2009.

Since the benefits of trade liberalisation are adding up, introducing all these elements in the baseline A will make the bilateral liberalisation at stake between India and the EU relatively less important, since tariff reductions will be applied to tariffs already reduced due to the more general movement towards trade liberalisation.

Figure 1: The environment of the simulated scenarios



Dissimilarities between the EU25 and India

India has a population of approximately 1,100 million people and a GDP of $720 bn (agriculture 20%, industry 30% and services 50%), whereas the European union population amounts to 460 million citizens and its GDP is approximately $13,000 bn. Indian trade represents approximately $150 bn, equally shared between imports and exports, slightly more than one fourth of which with the EU. This large difference in size between the two economies will largely impact the results of any bilateral liberalisation scenario.

Besides this first difference, the very contrasted specialisation of the two economies will determine the impact of the tariff (and regulations) cuts. Table 1 presents the structure of production, for both India and EU25. For readability reasons, we show data only for 11 large sectors in which we aggregated the 34 considered in the study.

Table 1: Structure of production in 2007 according to Mirage baseline (%)

Sectors	India	EU25
Cereals	8.3	0.6
Other crops	4.8	0.4
Products from animal origin	5.7	2.8
Agro-food industry	5.2	3.5
Fisheries	0.6	0.3
Primary products	2.5	1.6
Textile, leather and wearing apparel	4.6	1.8
Other industry and manufactures	22.8	23.7
Vehicles industry	1.2	3.6
All other services	27.9	46.4
Transportation and trade	16.3	15.3

As shown in Table 1, the weight of the agricultural sector is much more important for India than for the EU25. This is particularly true for Cereals and Other crops. The industrial sector, wholly considered, has a similar importance for the two economies. However, in the case of India production is shifted towards the textile, leather and wearing apparel sector, while in the case of the EU25 the same can be said for the vehicles industry. As a consequence of this, the structure of EU25 production is more concentrated on services, with a share of 62 per cent against the non negligible 44 per cent of India. Within the tertiary sector, Transportation and trade is more significant for the Indian than for the European production structure.

Table 2: Share of exports relative to production (%)

Sectors	India	EU25 (including intra-EU trade)	EU25 (exports outside the EU)
Cereals	2.3	23.1	7.6
Other crops	1.5	30.7	4.9
Products from animal origin	0.7	13.4	3.4
Agro-food industry	5.6	18.1	5.9
Fisheries	0.5	8.3	2.2
Primary products	6.7	31.7	10.0
Textile, leather and wearing apparel	28.5	45.4	18.8
Other industry and manufactures	13.6	40.5	16.1
Vehicles industry	6.7	50.1	14.6
All other services	2.6	5.1	2.8
Transportation and trade	2.9	9.1	5.7

A third *important determinant of the results of the contemplated bilateral agreement* is the fact that *India remains a rather closed economy, despite a significant move toward openness in the recent period.*

Table 2 confirms that India does not trade much. In fact its share of exported production ranges from 0.5% in the case of Fisheries to 29% of Textile, leather and wearing apparel, with an average share of 6.5%. Even considered as a single country, the EU trades a more significant share of its production with the outside world.

Table 3: Structure of Indian exports (%)

Sectors	Total export	Exports to the EU25	Share of EU25 in sectoral Indian exports
Cereals	2.9	1.8	17.3
Other crops	1.1	0.6	15.5
Products from animal origin	0.6	0.2	8.6
Agro-food industry	4.5	2.3	14.2
Fisheries	0.0	0.0	10.5
Primary products	2.6	1.7	17.6
Textile, leather and wearing apparel	20.5	27.1	36.1
Industry and manufactures	48.0	35.2	20.0
Vehicles industry	1.3	1.3	27.2
All other services	11.1	17.5	43.4
Transportation and trade	7.4	12.2	45.4

Indian exports represent $ 77 billions f.o.b., spread mainly on Industry and manufactures (48%), Textile goods (20%), Services (18%), and Agro-food products (4%). With $ 21 billions, the EU is the largest export market for India (Figure 2). Indian exports to the EU are concentrated in three sectors, the same as the four mentioned above, minus the agro-food industry, of which the EU market absorbs only 14% of Indian exports (Table 3).

Focusing on the European export side, and as a combined result of the limited size of the Indian economy and its relative closeness, we can see from Figure 3 that India is not yet a significant destination for EU goods and services; it accounts for only 1.6% of total extra-EU exports.

At the sectoral level, the macro sectors for which the Indian market represents a higher share than the average are Other crops, Industry and manufactures, and Services sectors (see Table 4). India is a significant market for the EU in the Industry and manufactures sector (more than 10 billion dollars, without Textile and Vehicles) and in the Services sector (more than 6 billion dollars). All other sectors, Agro-food, Textile and Vehicles, account for very little (a little more than 1 billion dollars).

Figure 2: Indian exports by importers (%)

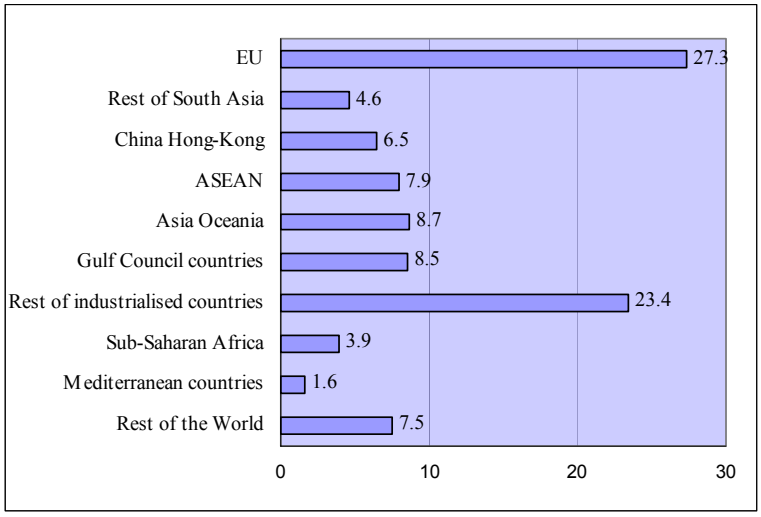


Figure 3: EU exports by importers (%)

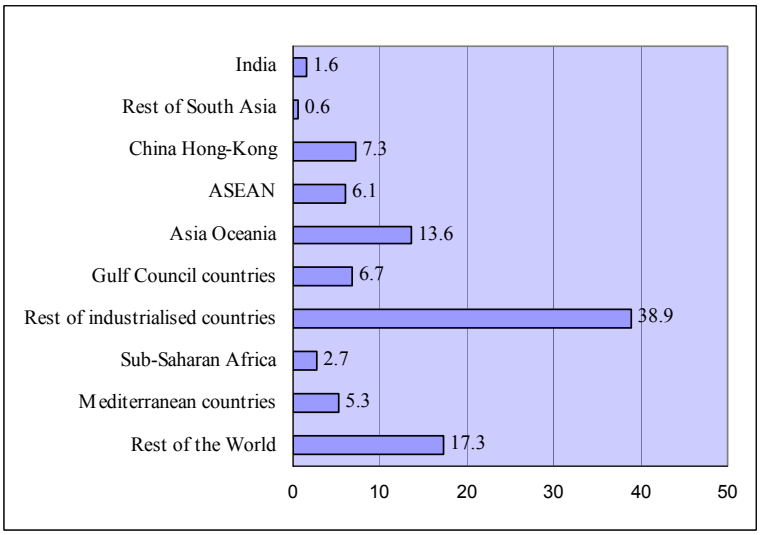


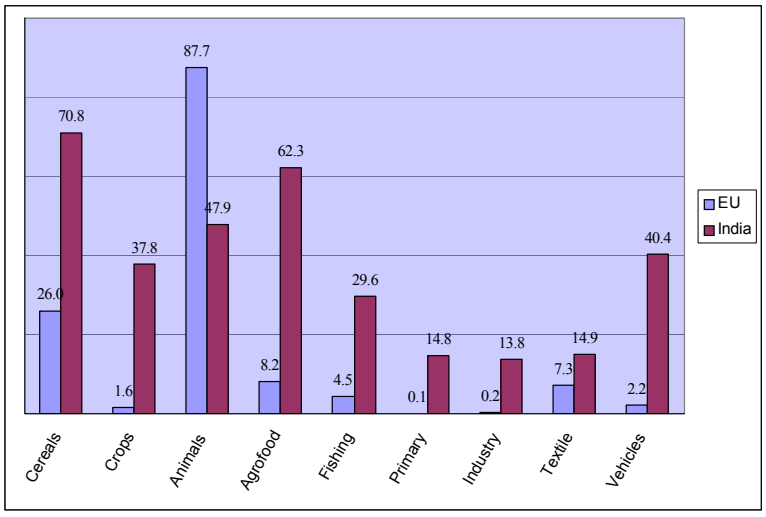
Table 4: Structure of EU exports to non EU countries (%)

Sectors	Total export	Exports to India	Share of India in sectoral EU exports
Cereals	0.6	0.2	0.6
Other crops	0.3	0.6	3.6
Products from animal origin	1.3	0.5	0.6
Agro-food industry	2.8	0.7	0.4
Fisheries	0.1	0.0	0.4
Primary products	2.2	1.4	1.0
Textile leather and wearing apparel	4.6	1.8	0.6
Industry and manufactures	51.4	59.0	1.8
Vehicles industry	7.2	1.3	0.3
All other services	17.8	19.7	1.8
Transportation and trade	11.9	14.7	2.0

Lastly, the initial structure of protection of India and the EU will matter a lot in our exercise: Figure 4 presents the initial tariff barriers applied by the EU to India and by India to the EU. In all goods except Animal products, Indian protection is significantly higher than the EU protection. It is in particular the case in Industry and manufactures, which represents the bulk of bilateral trade between the two partners.

The protection faced by India at the European border is higher for agricultural goods than for industrial goods but textile. The sector of products from animal origin (live animals, meat and dairy) is very protected by the EU25 with an average tariff rate of almost 90%. To a lesser extent, cereals is also a very protected sector, mostly because of a very high protection on rice (88%, not shown in the Figure). All other tariffs either in agriculture or industry are below 10% for these aggregated sectors. The highest tariffs on goods are the one on Textile, leather and wearing apparel.

Figure 4: Bilateral applied protection between India and the EU, 2004 (%)



The average tariffs applied by India to the EU25 are also higher in agriculture. Cereals (including rice) is the most protected sector. At this level of aggregation there is not sector with tariffs close to zero. In the industrial sectors, tariffs reach a maximum on vehicles, with an average of 40%.

Description of the simulated scenarios

Two scenarios have been simulated. In both of them, 95% of all trade barriers in goods are removed on both sides. On the Indian side, sensitive products are the most protected agricultural products in 2006. On the European side, a benchmark was needed for sensitive products. We

decided to rely on products excluded from the EU agreement with Chile: they are included in the list of sensitive products, no matter the initial tariffs.

The timing is different for India and the EU. On the European side the agreement is fully implemented in 2010, in two steps. In 2007, the list of sensitive products is larger; it includes 10% of HS6 lines, all chosen in agriculture. On the Indian side, the agreement is fully implemented in 2013, in three steps. In 2007, the list of sensitive products includes 50% of HS6 lines. In 2010, the number of sensitive products is reduced to 25% of all HS6 lines. Since sensitive products are chosen with a priority for agriculture, agricultural liberalisation does not occur in India before the last step in 2013.

Scenario 1 adds a uniform 10% cut of protection in services on both sides. Services liberalisation is implemented in two steps, a first half of the cut is implemented in 2007, the second half in 2010.

Scenario 2 introduces a 25% cut of protection in services on both sides, with the same timing.

Figure 5 and Figure 6 illustrate the impacts of both scenarios in terms of market access on the European and Indian markets. They have little impact on agricultural EU protection: sensitive products are chosen in agriculture and agro-food sectors; due to the concentration of high tariffs on a small number of products in the EU, they lead to almost no reduction of agricultural protection on the EU side, while protection of agro-food products is significantly reduced.

Figure 5: Tariff levels faced by the EU on Indian market, 2013-2020 (%)

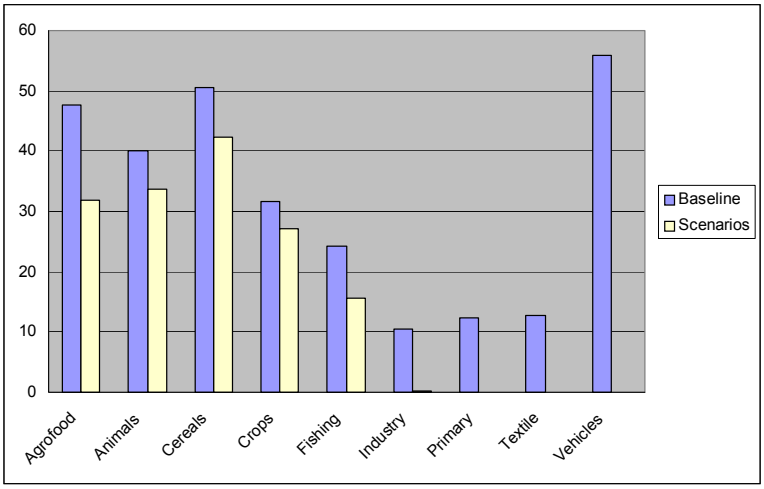
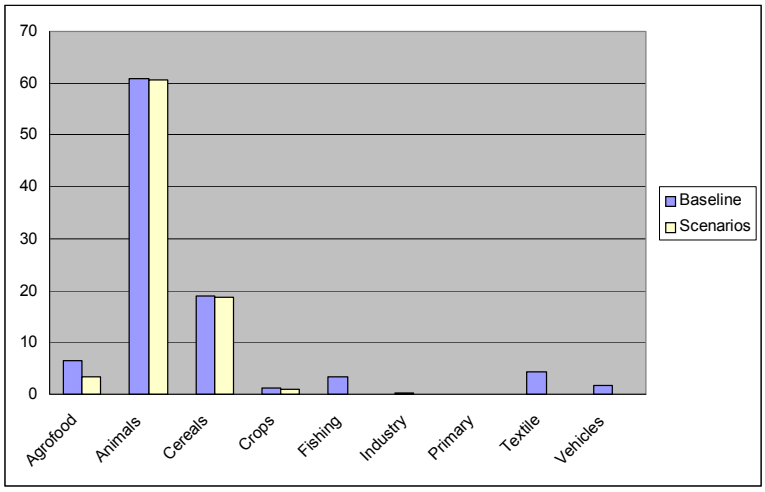


Figure 6: Tariff levels faced by India on the EU market, 2013-2020 (%)



We now present and compare the results of the different simulations. The most relevant indicators are welfare, which is a measure of real income, as well as production and trade. It is necessary to observe that, due to the very structure of the model featuring a fixed labour endowment and fixed unemployment, it is impossible that all sectoral productions increase at the same time.

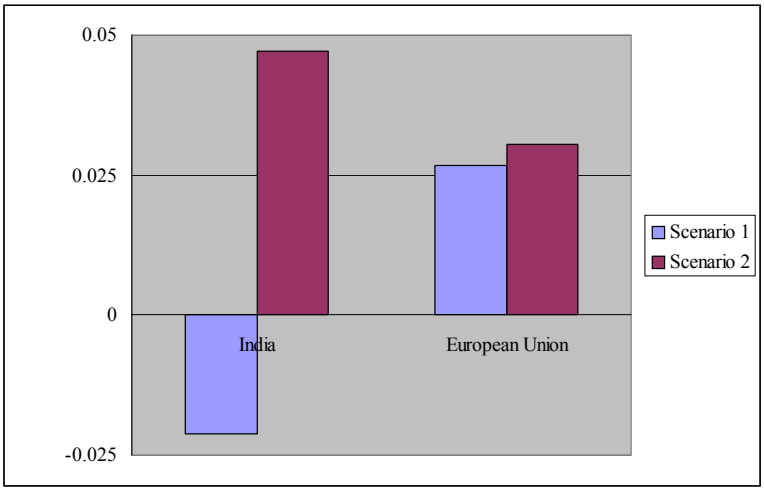
Impact of the FTA in welfare terms

In both scenarios, the EU25 welfare indicator is expected to increase as a consequence of a trade liberalisation agreement. In the case of India, a strong positive result will arise only in the case of a sufficient level of liberalisation in services.

It is worth noticing that overall evolutions of welfare are rather small in this experiment, as it is common with this kind of models. This is mainly due to the choice to ignore the effect of liberalisation on productivity and efficiency, as explained in the introduction.

It is also important to mention that these results are affected by the assumption of a successful Doha outcome in the pre-experiment scenario. This pre-experiment scenario erodes the baseline level of European protection from Indian exports, particularly in the Textile sector, while it does not affect Indian protection much, because of a high level of binding overhang in this country.

Figure 7: Welfare variations in 2020 (percentage deviation from the baseline)



The negative welfare impact of the first scenario is firstly due to an adverse terms of trade impact for India, since Indian initial protection is by far the higher of both partners. This impact is partially compensated by the positive allocation effect and can be completely compensated if it is accompanied by a sufficient improvement of Indian access to European service markets. Yet, these negative terms of trade impacts for India would be lower in a scenario without any Doha tariff cut, and the potential gains for the Indian Textile, clothing and leather industry in gaining access to the EU market would also be greater. In addition to adverse terms of trade, trade diversion effects arise due to the highly protected nature of the Indian economy.

In the case of the EU both impacts add up and lead to positive results in terms of welfare.

Trade impacts of the FTA

Exports from India to the EU increase in all sectors. More than EU tariff reduction, this is the depreciation of the real exchange rate (linked to adverse terms of trade effect) which allows this country to gain in competitiveness. This is true toward EU market but also to the rest of the world. Total increase of Indian exports to the world in 2020 would be approximately 9 $ bn under both scenarios (+ 5% under scenario 1, + 6% under scenario 2), of which 5 $ bn to the EU (+ 13% under scenario 1, + 14% under scenario 2). It is worth noticing that Textile, leather and wearing apparel is by far the main component of this export increase, with a 3.6 $ bn export increase to the EU alone, while Indian Textile exports to the world would increase by 5.6 $ bn.

European exports increase also, but the reason is different: this is the simple consequence of a better access to the Indian market. Total increase of EU exports to the world would be approximately 11 $ bn under scenario 1 (12 $ bn under scenario 2). Increase to the Indian market

would be larger: 17 $ bn under scenario 1, 18 $ bn under scenario 2. As the EU real exchange rate would appreciate, exports to the rest of the world apart from India would slightly decline.

Unsurprisingly Figure 8 and Figure 9 show that countries shares in each other markets would increase as a consequence of a bilateral agreement. Since the economic relative size of the EU in the world is expected to be slightly reduced by 2020 while Indian relative size will rise, Indian share on the EU import market, as well as the share of Indian market in EU exports, would rise even in the absence of any agreement between 2007 and 2020, while the EU share on Indian import market and the share of the EU market in Indian exports would conversely be smaller in 2020. Another expected outcome is the fact that the EU share on Indian market will rise more than the Indian share on EU import market, since the EU is expected to reduce its protection less than India in absolute terms, starting from a much lower level of protection.

Figure 8: Indian market shares (%)

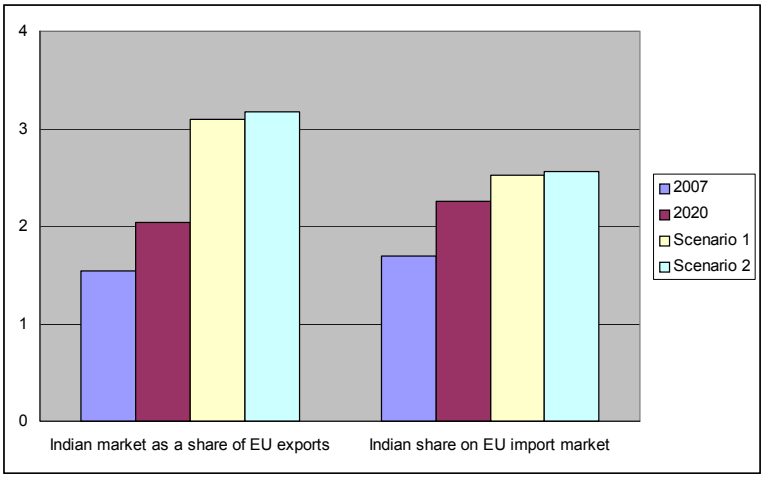
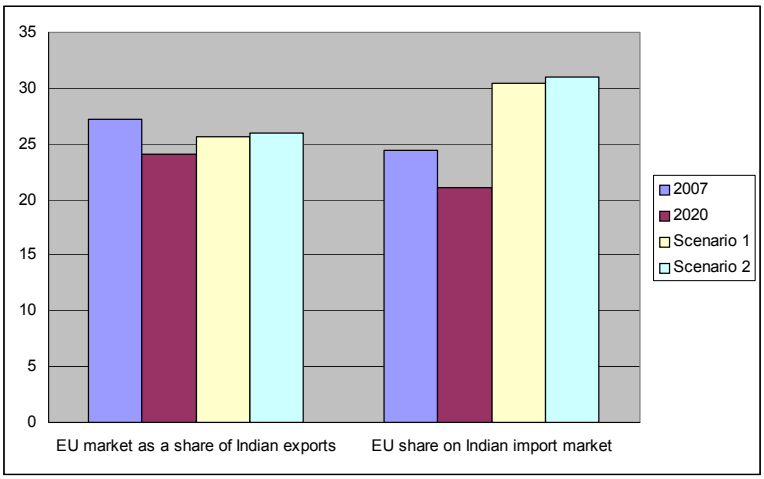


Figure 9: EU market shares (%)



Sectoral impacts on goods markets

Since there is no difference on the goods markets under the two scenarios, results are very similar. We present and comment only the one obtained under scenario 1. Exports from the EU do not include intra-EU trade.

Figure 10 explores the impact of scenario 1 on *bilateral* trade in goods between India and the EU. Due to the initial high protection levels in India, they are much more significant for EU exports. Trade creation in Primary products originating from the EU is significant. This aggregate sector includes Forestry and Wood products, as well as Other primary products. The latter is the more significant, with initial exports from the EU to India accounting for 184 million dollars, to be quadrupled under both scenarios.

Even though EU bilateral exports to India increase more than Indian bilateral exports to the EU, the converse holds as regards total exports of both countries, as is shown in Figure 13. Again, this is due to the fact that Indian exports also increase on other markets.

On the Indian side, considering the market shares on the EU import markets as well as the variation in value confirms that the only significant variation for India concerns the Textile industry, and to a lesser extent Industry and manufactures (Figure 11).

Figure 10: Variation of bilateral trade by sector (Goods, Scenario 1, Value, %)

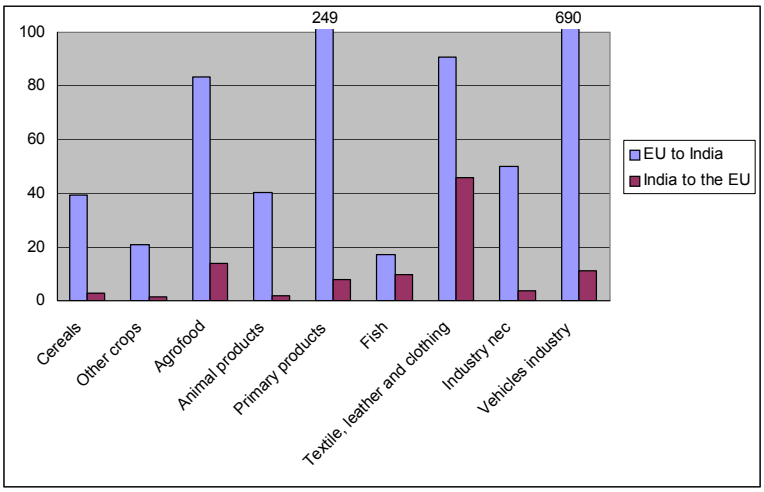


Figure 11: Indian market shares on the EU goods import markets (Scenario 1, %)

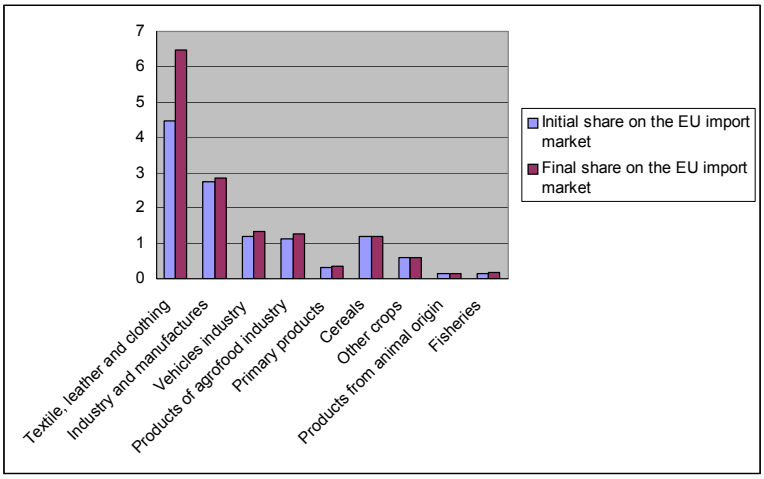


Table 5: India initial and final EU market share

	Initial share on the EU import market (%)	Final share on the EU import market (%)	Variation in value ($ mn, 2020)
Textile, leather and clothing	4.5	6.5	3573
Industry and manufactures	2.8	2.8	807
Vehicles industry	1.2	1.3	87
Products of agrofood industry	1.1	1.3	83
Primary products	0.3	0.3	39
Cereals	1.2	1.2	7
Other crops	0.6	0.6	2
Products from animal origin	0.1	0.1	1
Fisheries	0.2	0.2	0

Table 6: EU initial and final market share in India

	Initial share on Indian import market (%)	Final share on Indian import market (%)	Variation in value ($ mn, 2020)
Industry and manufactures	31.9	43.0	7947
Primary products	4.9	16.7	5128
Vehicles industry	26.0	82.5	1802
Textile, leather and clothing	10.0	18.4	783
Products of agrofood industry	2.9	5.3	321
Products from animal origin	7.5	10.4	150
Cereals	17.6	23.5	133
Other crops	4.8	5.7	80
Fisheries	28.3	32.0	2

On the EU side, large variations on the Indian markets concern Industry and manufactures, Primary products and the Vehicle industry. In the latter, the EU would almost become the only foreign supplier on the Indian market (Figure 12).

Figure 12: EU market shares on Indian goods import markets (Scenario 1, %)

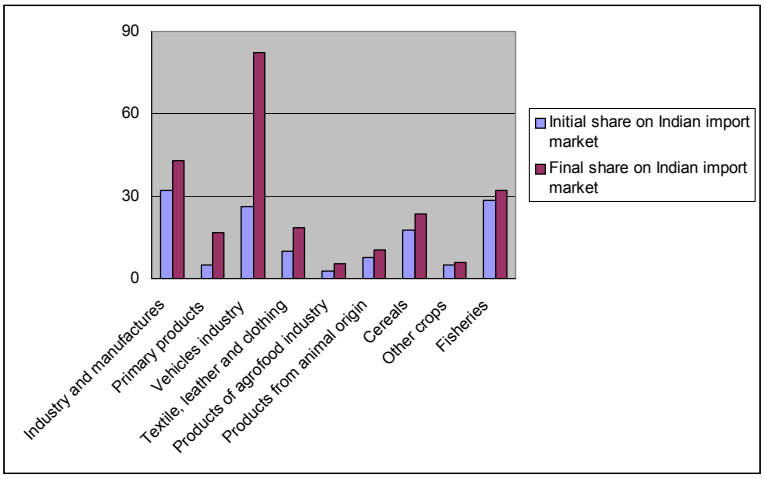


Figure 13: Variation of total exports by sector (Goods, Scenario 1, Value, %)

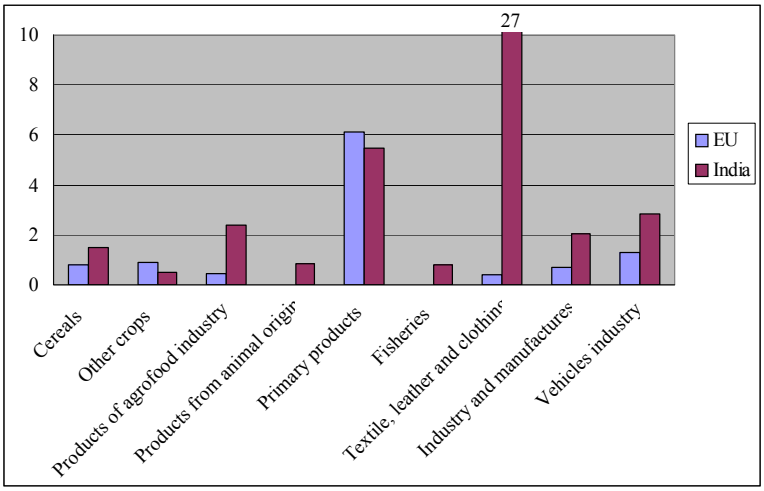
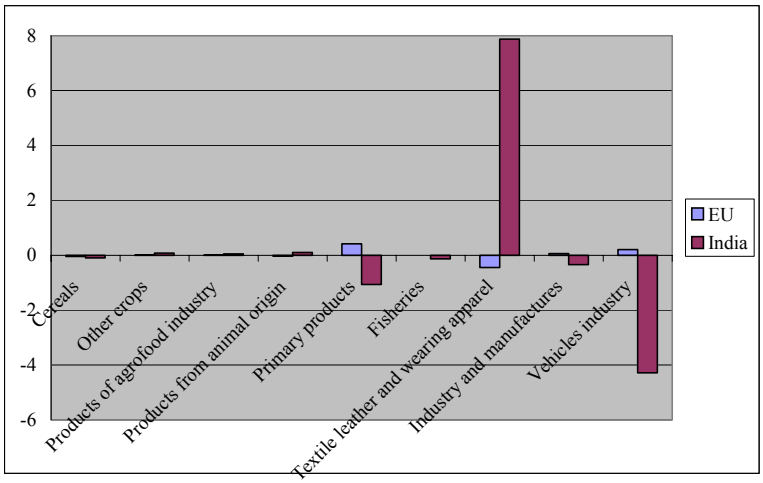


Figure 14: Variation of production (Scenario 1, %)



The structure of EU production would not be largely affected by an agreement with India, as illustrated by Figure 14. Production increases would be found in Primary products (+ 0.42%, + 1.4 $ bn) and Vehicles (+ 0.20%, + 1.5 $ bn). Conversely there would be a small decrease in the Textile and clothing industry production (- 0.45 %, - 1.5 $ bn).

Changes in the Indian production structure would be more significant. The most striking observation is that all the benefits of the agreement in terms of production will concentrate in the textile industry. Due to constraints in terms of factor endowments, some sectors which exports rise a lot, like the animal sector, would not be able to increase their production significantly. It means that they would just serve more the international market and less the domestic one. Other sectors like Vehicles would face a significant production decrease, by a little more than 4% (- 1.3 $ bn). However in this sector, the current strong dynamic of European investments in India which will be boosted by an FTA is imperfectly taken into account in this study. The current trade of bilateral investments and past experiences show in particular that it is very unlikely that the Indian production of cars will diminish. On the contrary, thanks to foreign producers' investments and technology, local producers will most probably gain enough competitiveness to start exporting.

Sectoral impacts in services

Our two scenarios differ by their level of ambition in the services sectors. It is therefore interesting to focus on this aspect at a more detailed level.

EU exports *to India* increase in all services sectors and in both scenarios. Overall, they increase by 5% and 16% in scenarios 1 and 2 respectively (+ 0.5 $ bn, resp. + 1.6 $ bn). Yet, India still represents a small market and bilateral trade flows increases will not translate for the EU in major positive impact at the level of its domestic economy. It is worth noticing that services liberalisation is not sufficient to counteract the appreciation of the EU real exchange rate caused by goods liberalisation, so that total exports outside the EU decreases, except in the Business services sector.

Figure 15: Variation of EU25 services exports to India (Value, %)

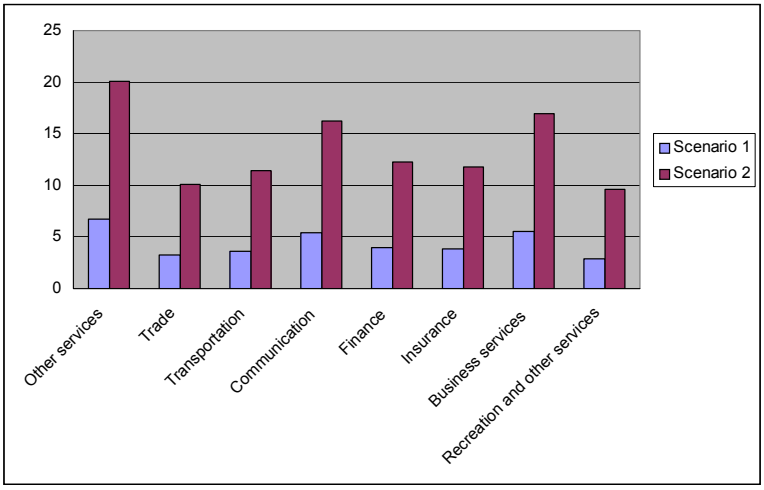


Figure 16: Variation of Indian services exports to the EU25 (Value, %)

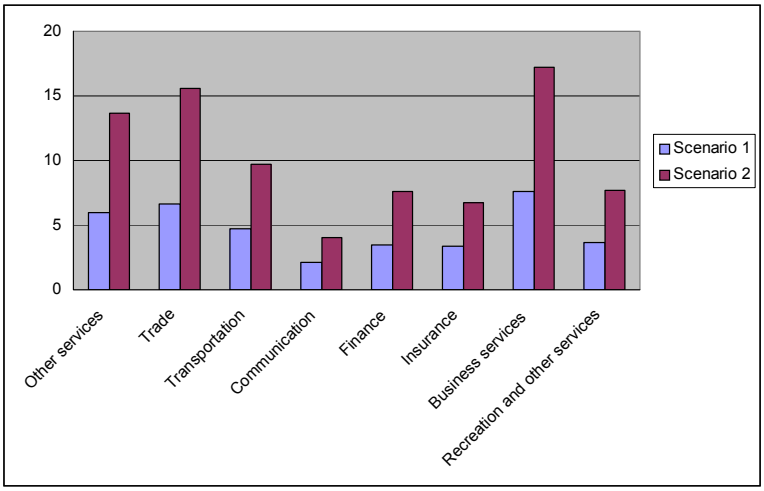


Figure 17: Variation of EU25 total exports in services (Value, extra-EU, %)

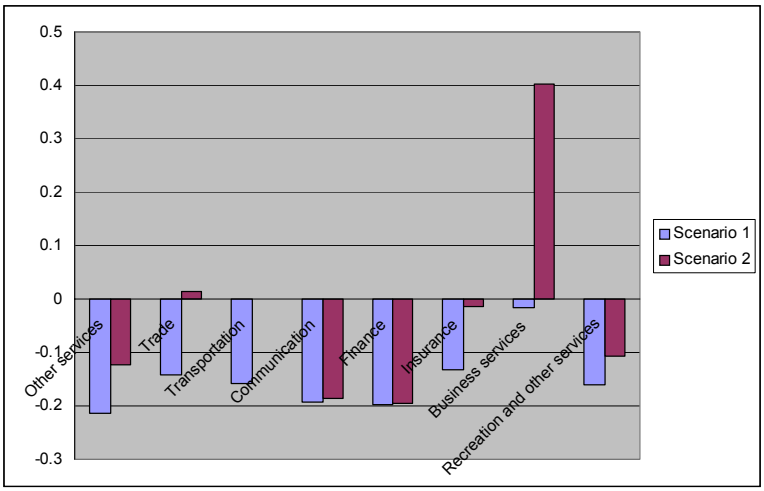
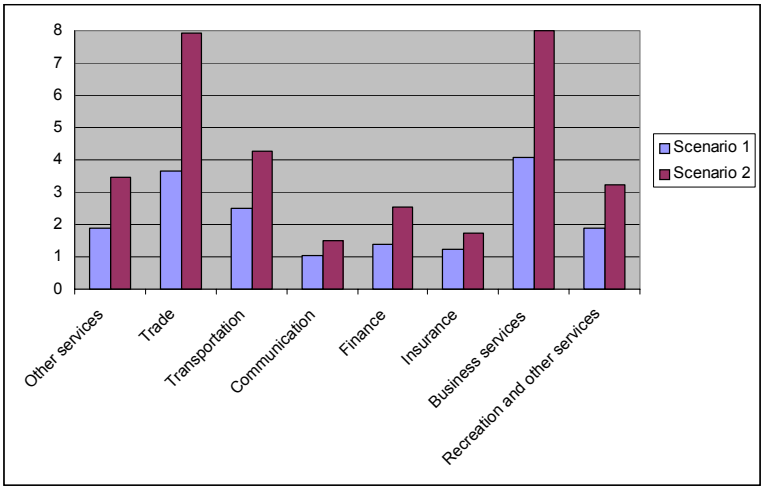


Figure 18: Variation of Indian total exports in services (Value, %)



Conversely, India increases its export of services in all sectors, in both scenarios. This is the consequences of the overall gain in competitiveness of the Indian economy due to a depreciation of the real exchange rate. Overall, total Indian exports of services increase by 0.6 $ bn following scenario 1, 1.2 $ bn in scenario 2 (+ 3.3% and + 6.5% respectively). As shown in Figure 18, the highest export increases have to be found in Trade and Business services (+ 201 $ mn and + 291 $ mn in scenario 1, + 434 and + 570 $ mn in scenario 2) but significant increases are to be expected in transport, communication, other services, finance and insurance with an increase between 1% and 4% of Indian exports in each of these sectors.

A slight reduction of EU total exports in services in scenario 1 translates into an even smaller reduction of production in service sectors (- 0.002%). The more ambitious scenario 2 leads to a slight increase in services production for the EU (+ 0.005%).

Indian production in the services sector would increase by 0.05% (0.5 $ bn) in scenario 1 and 0.06% (0.6 $ bn) in scenario 2. Even though India has a comparative advantage over the EU in Transportation, Trade and Business services, as measured by initial bilateral trade flows, this advantage remains modest whereas its protection level is estimated as far higher than the EU's. This is to be put in relation with the higher welfare impacts allowed by liberalisation in services for India. With our modelling of services protection, a trade liberalisation mostly benefits to the liberalising country.

Figure 19: Variation of EU25 production in services (%)

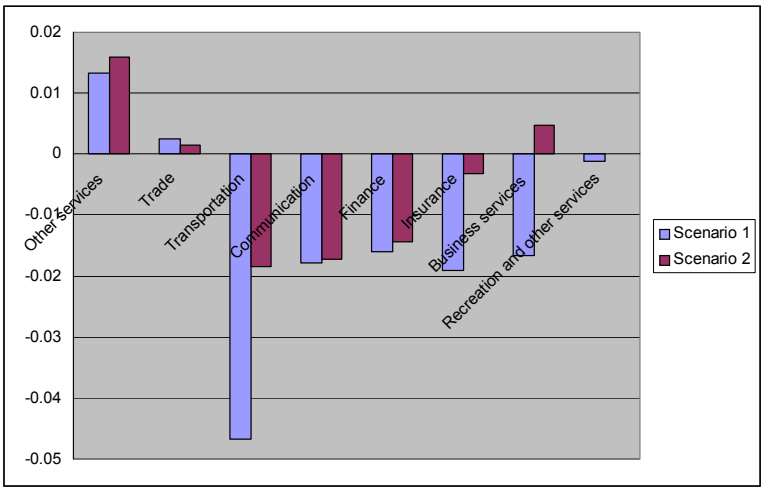
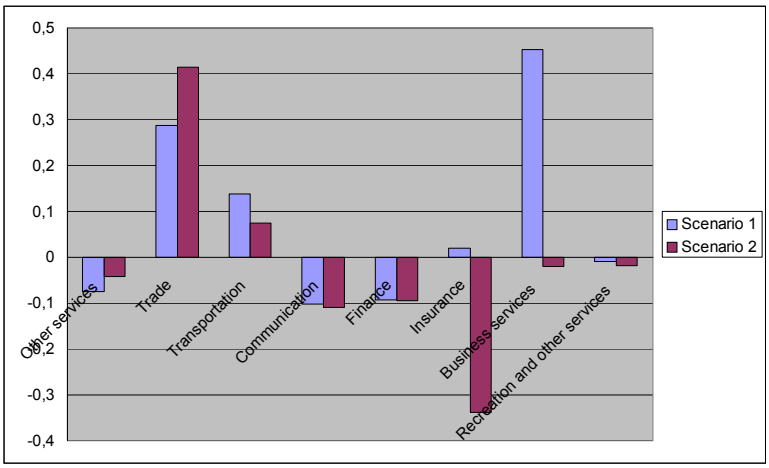


Figure 20: Variation of Indian production in services (%)



CONCLUSION

Before presenting our conclusions it is worth stressing that results presented have to be considered as the bottom line of a rather conservative approach. In fact, due to the lack of reliable estimates, the study neglects some impacts, such as potential gains in productivity, that should be expected when liberalising, as well as other dimensions of an agreement different from tariffs or barriers to trade in services.

Under both scenarios a FTA between the EU and India would have a positive impact on European exports. Increase to the Indian market would be 17 $ bn under scenario 1 and 18 $ bn under scenario 2. A FTA between the EU and India would also have positive impacts on the EU economy, thanks to terms of trade gains adding up with a better allocation of resources. However, given the initial limited role of India as trade partner for the EU, such gains remain relatively small for the European economy. In all simulated scenarios India's opening is more pronounced than the EU one, simply because of an initially very large Indian protection. This explains why EU terms of trade are improving under all the alternative proposals.

The overall trade impacts on India are positive under both scenarios and exports from India to the EU would increase in all sectors. Total increase of Indian exports to the world in 2020 would be approximately 9 $ bn under both scenarios, of which 5 $ bn to the EU. The overall impact in terms of Indian real income is sensitive to the inclusion of relevant sectors for India in the negotiation, and in particular the services sector will be important for India to reap the full welfare benefits of a FTA with the EU.