



The economic effect of the Comprehensive Economic and Trade Agreement on EU and Canada

Comparative analysis using Python

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Study Project Objectives:

Import and clean data with Pandas

Visualise data using Matplotlib

Style plots with Matplotlib

Perform exploratory data analysis

Present the findings

Why CETA?

«I have a master's degree in international trade and I enjoy macroeconomic analysis. I wanted to combine my formal education and my training in programming in one project»



The Comprehensive Economic and Trade Agreement

- The free-trade agreement between Canada, the European Union, and its member states.
- CETA has been provisionally applied since 21 September 2017.
- The treaty has eliminated 98% of the tariffs between Canada and the EU.

Trade in Goods: Exports

Fig. 1 Exports of Canada in USD terms

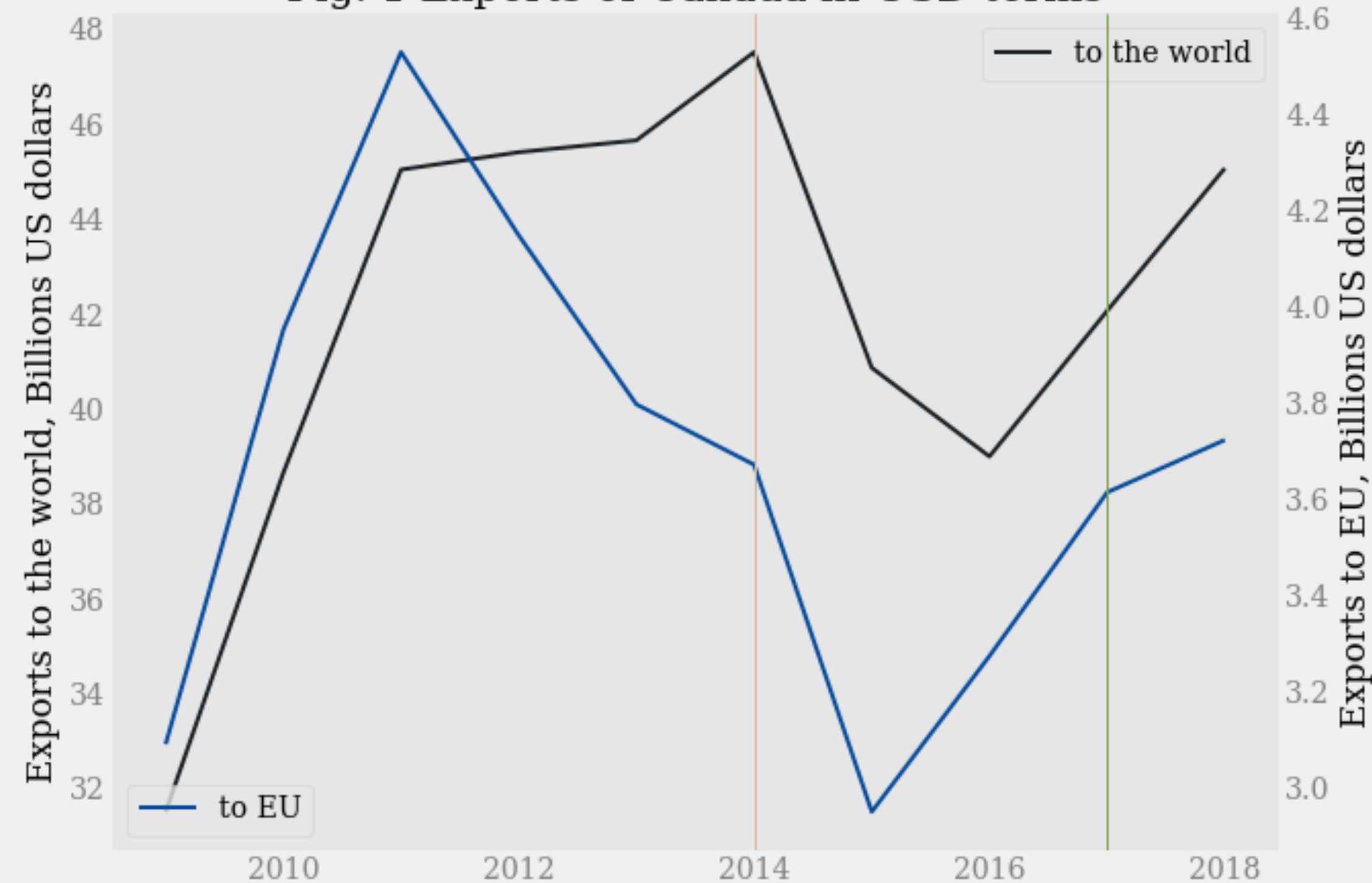
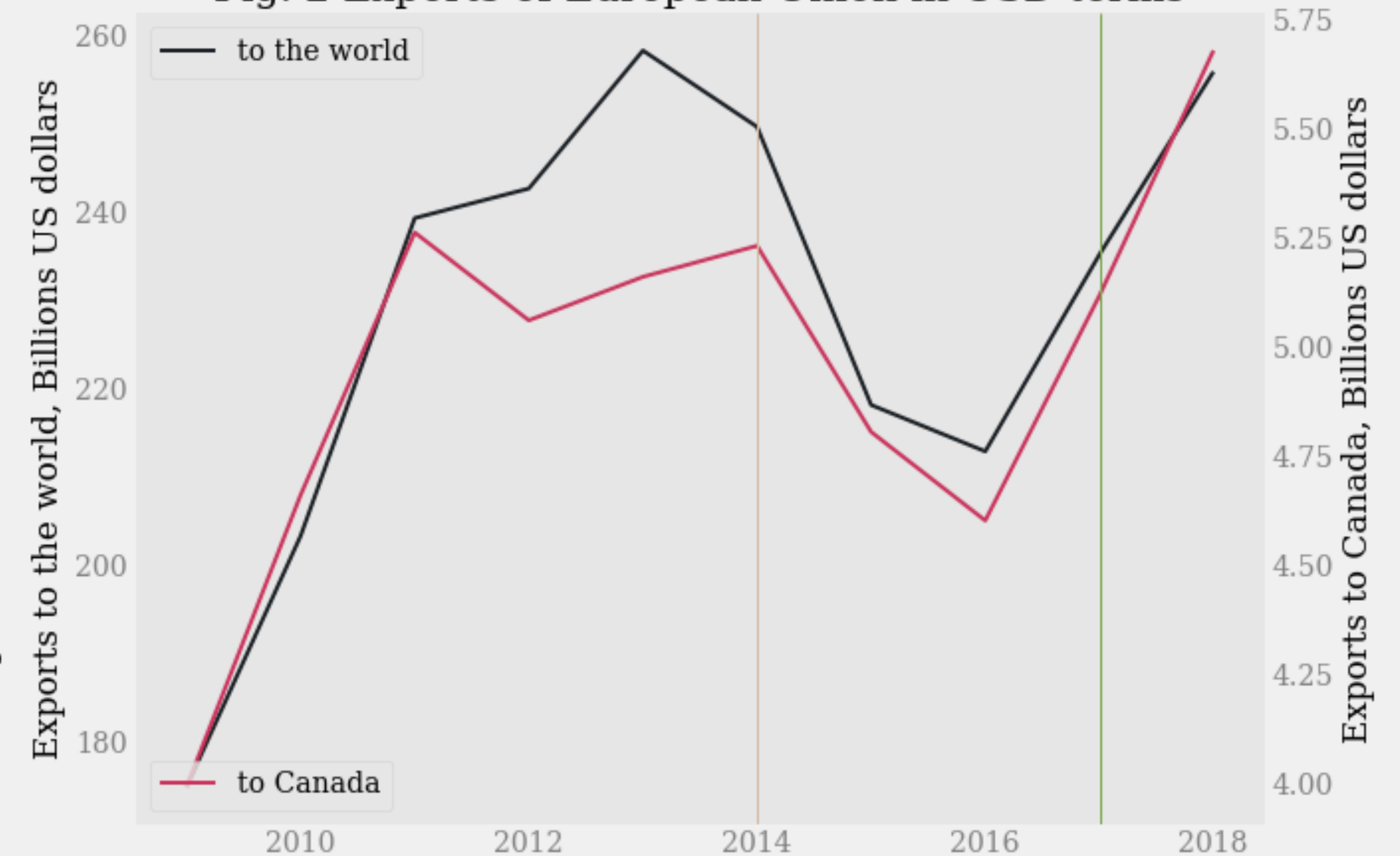
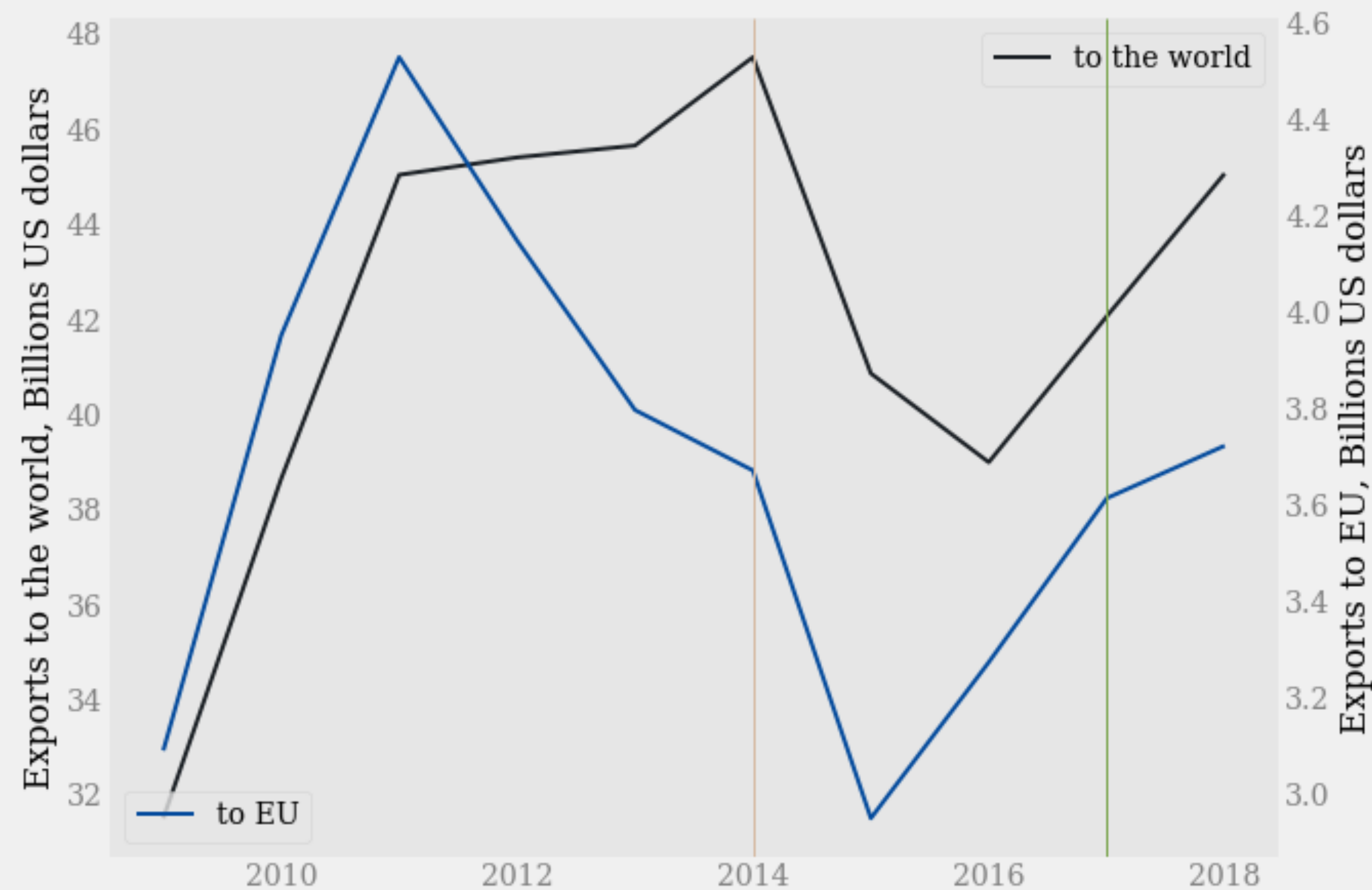


Fig. 2 Exports of European Union in USD terms



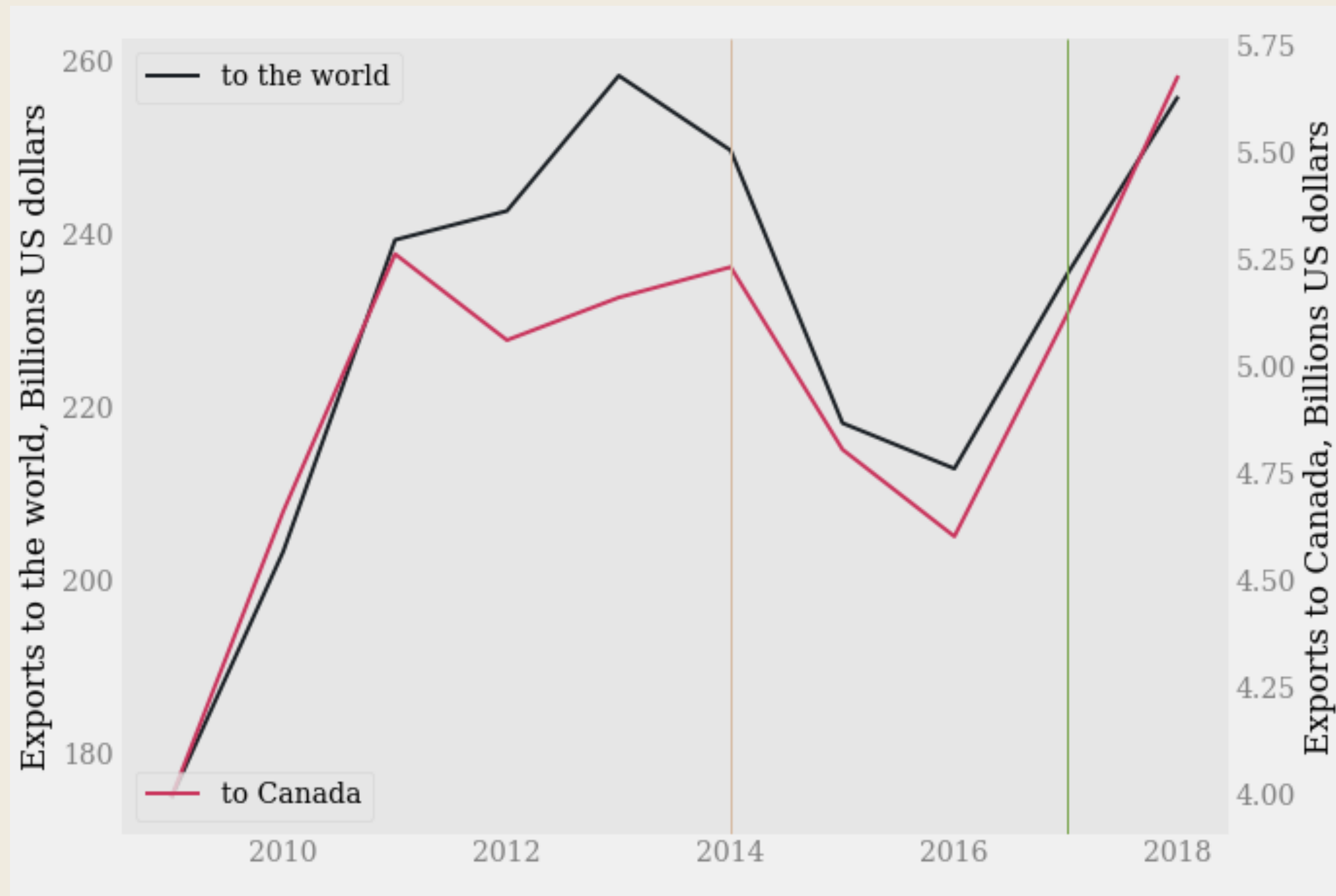
These graphs allow us to compare trade not only to previous years but to overall trend. We can hypothesise that if exports to one country grow faster than all exports to the world, this difference can be attributed to new trade liberalisation measures. A two y-axis graph was used because it allows to compare slopes, since the difference between trade with one country is small to the point it is not visible on the same axis as all the trade.



TRADE IN GOODS

Canadian Exports

- The exports of both Canada and the EU grew between 2017 and 2018.
- However, the increase of Canadian exports to the EU started in 2015.
- After the provisional application of CETA, growth was even slower than in previous years.
- Additionally, it grew even at a slower rate than the growth of Canadian exports to the world during that period.



TRADE IN GOODS

European Exports

- European exports to Canada, on the other hand, grew faster than European exports to the world.
- However, growth was the same as the year before application.

Trade in Goods: Imports

Fig. 3 Imports of Canada in USD terms

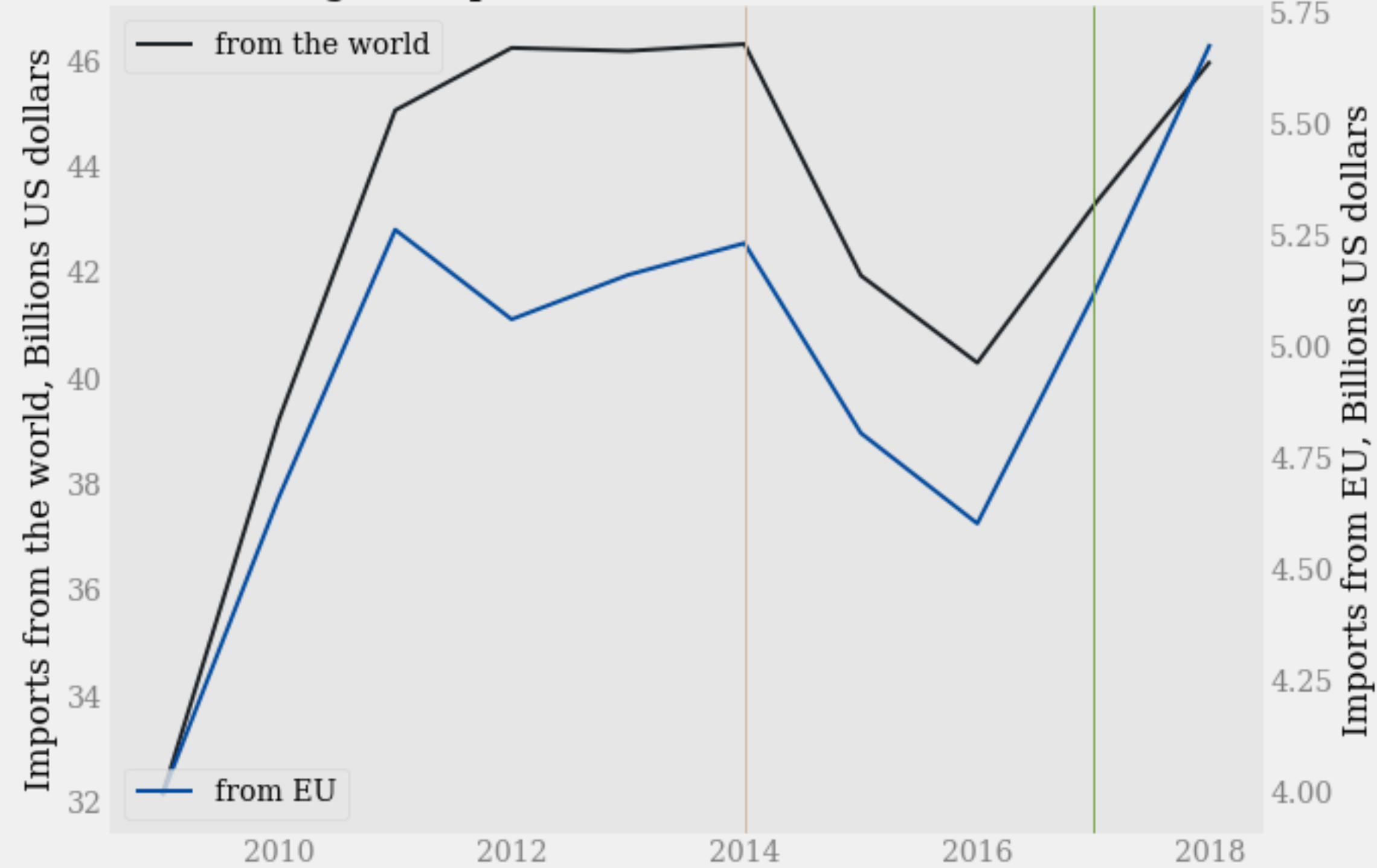
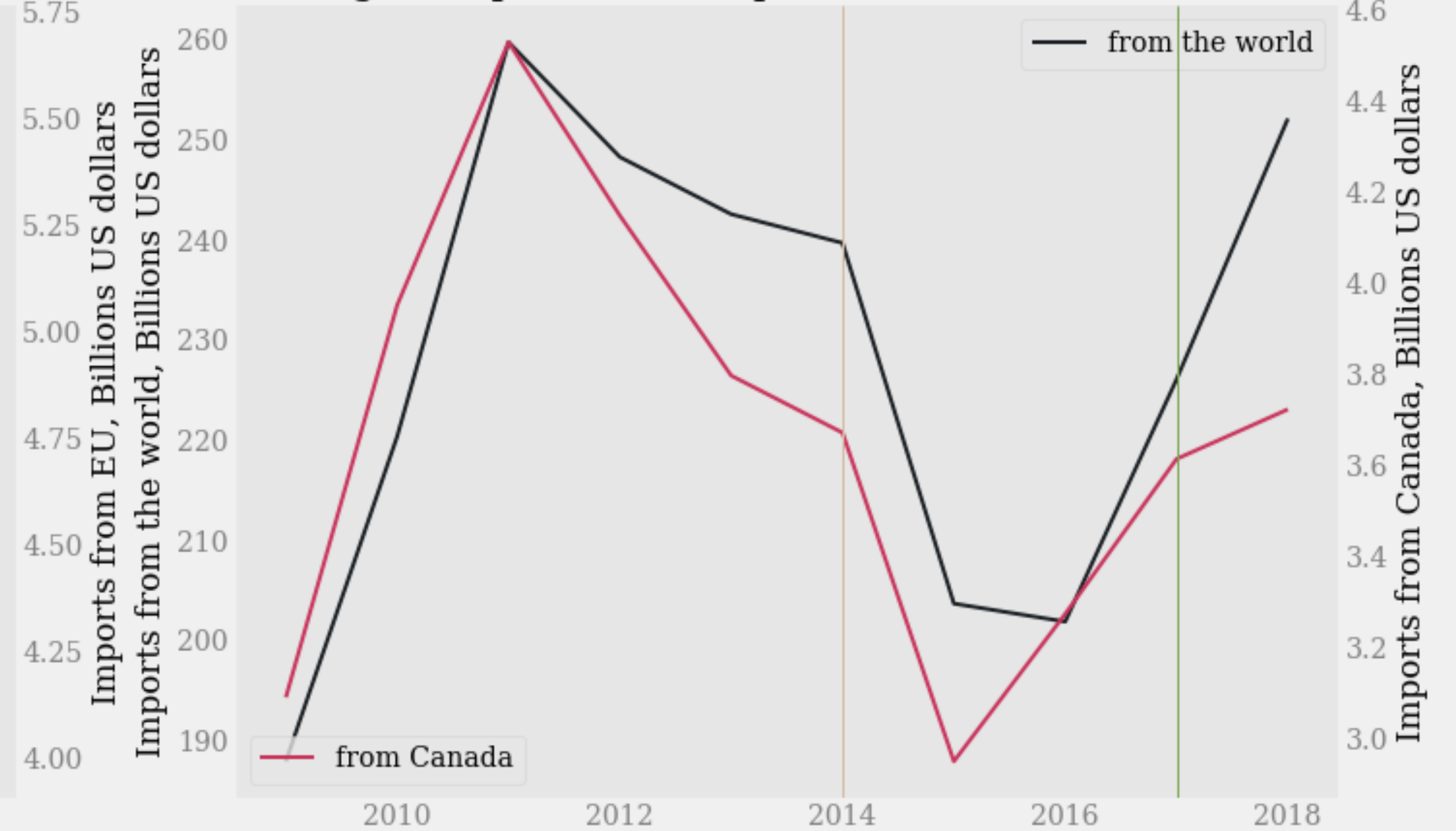
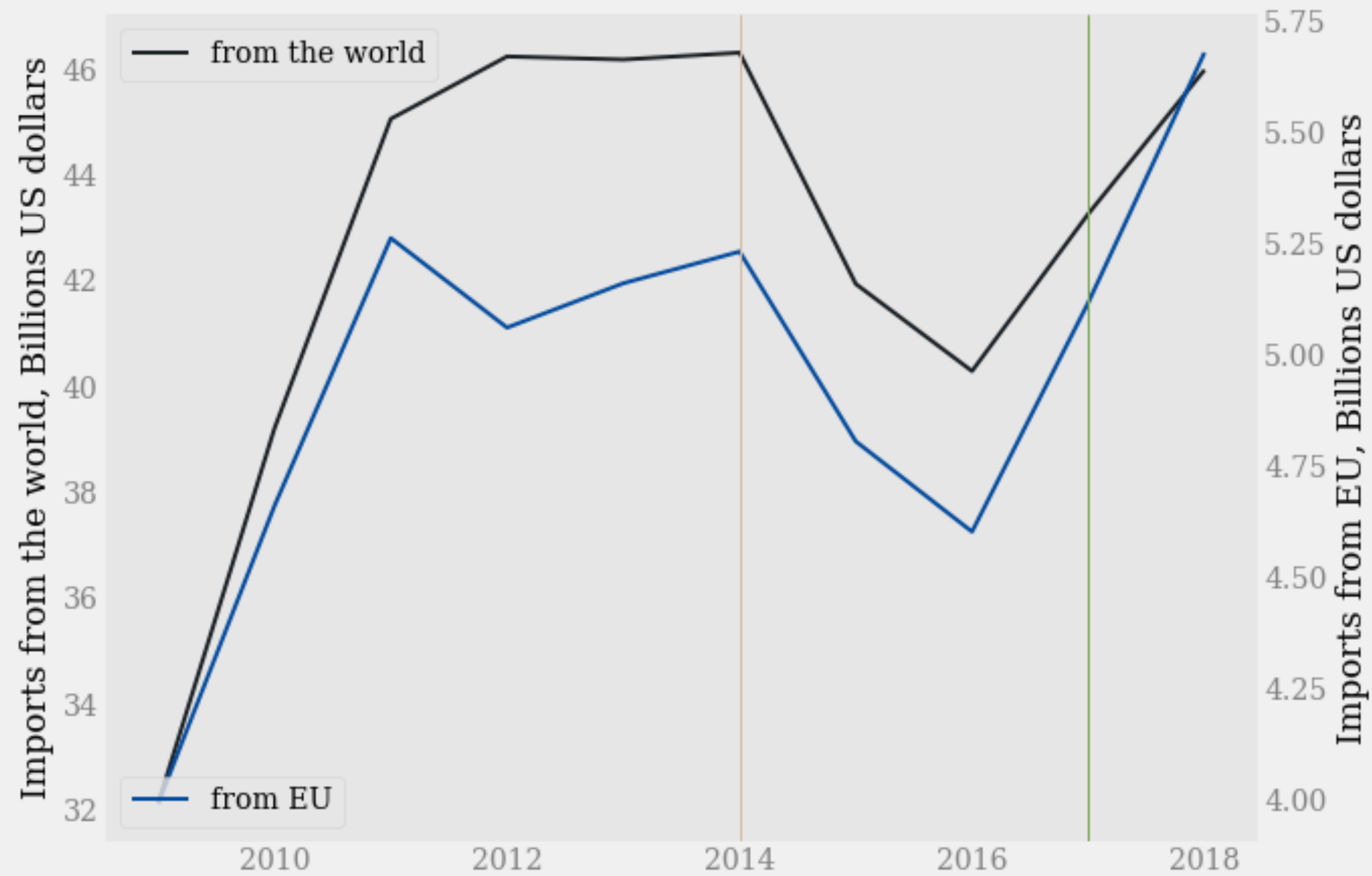


Fig. 4 Imports of European Union in USD terms

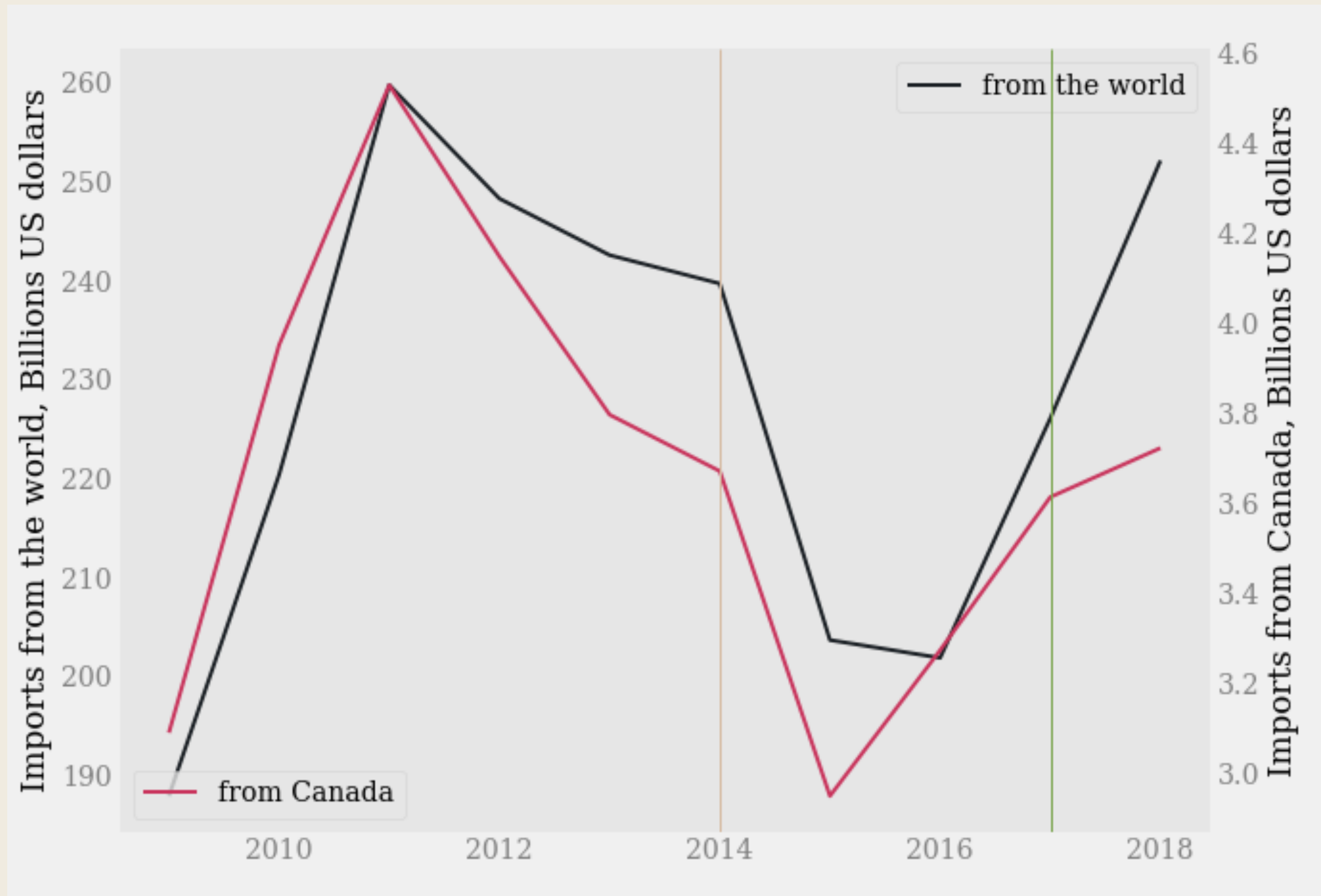




TRADE IN GOODS

Canadian Imports

- Canadian imports from the EU grew faster than Canadian imports from the world, which can indicate a positive impact of CETA.



TRADE IN GOODS

European Imports

- Since 2016 European imports from the world grew considerably faster than imports from Canada.
- After the provisional application of CETA, growth of imports was even slower than in previous years.

Trade in Goods: Growth Rate



The growth rate of exports decreased after the provisional application of CETA.

Trade in Goods: Growth Rate

Fig. 9 Share of EU in Canadian imports

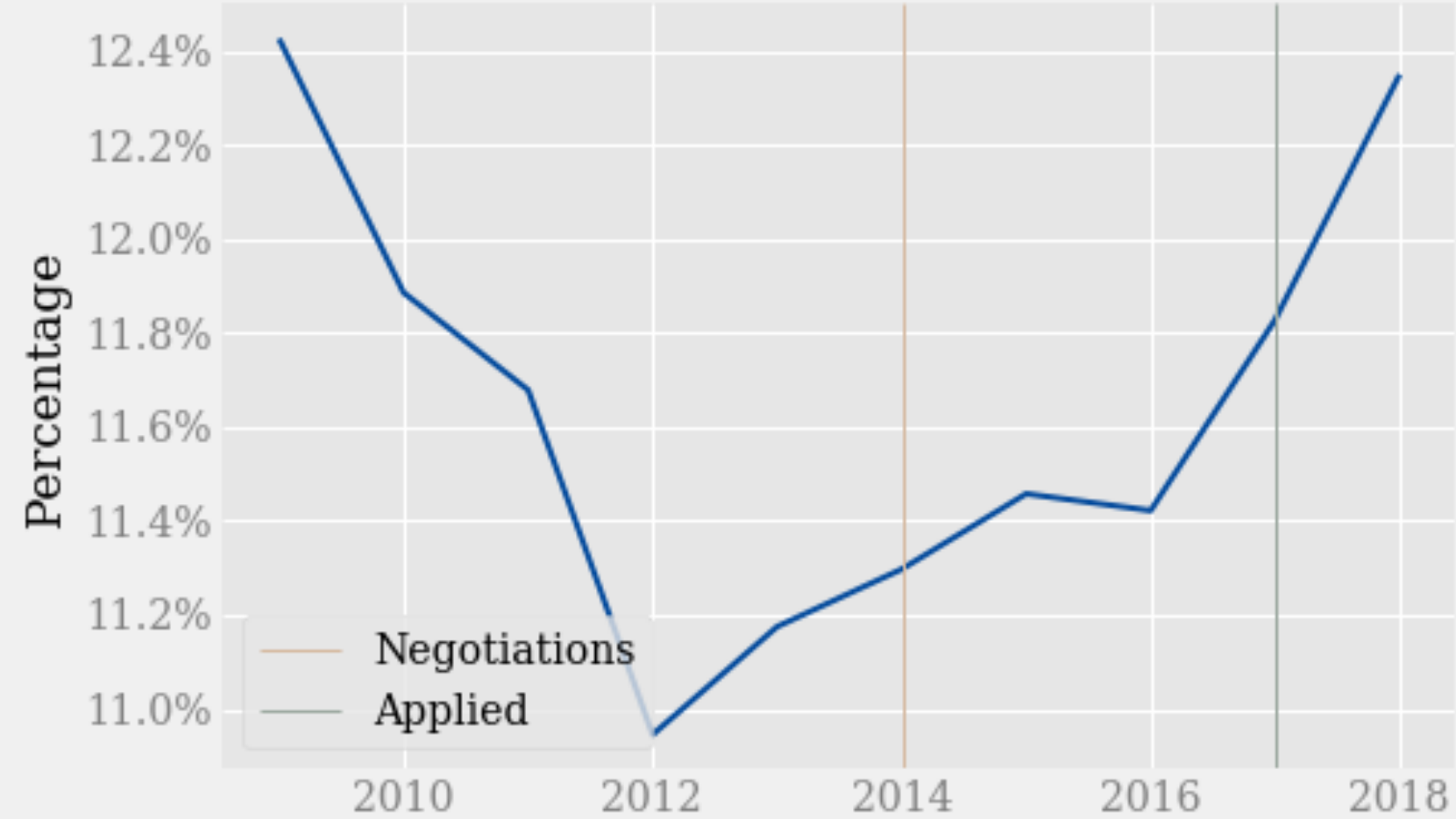


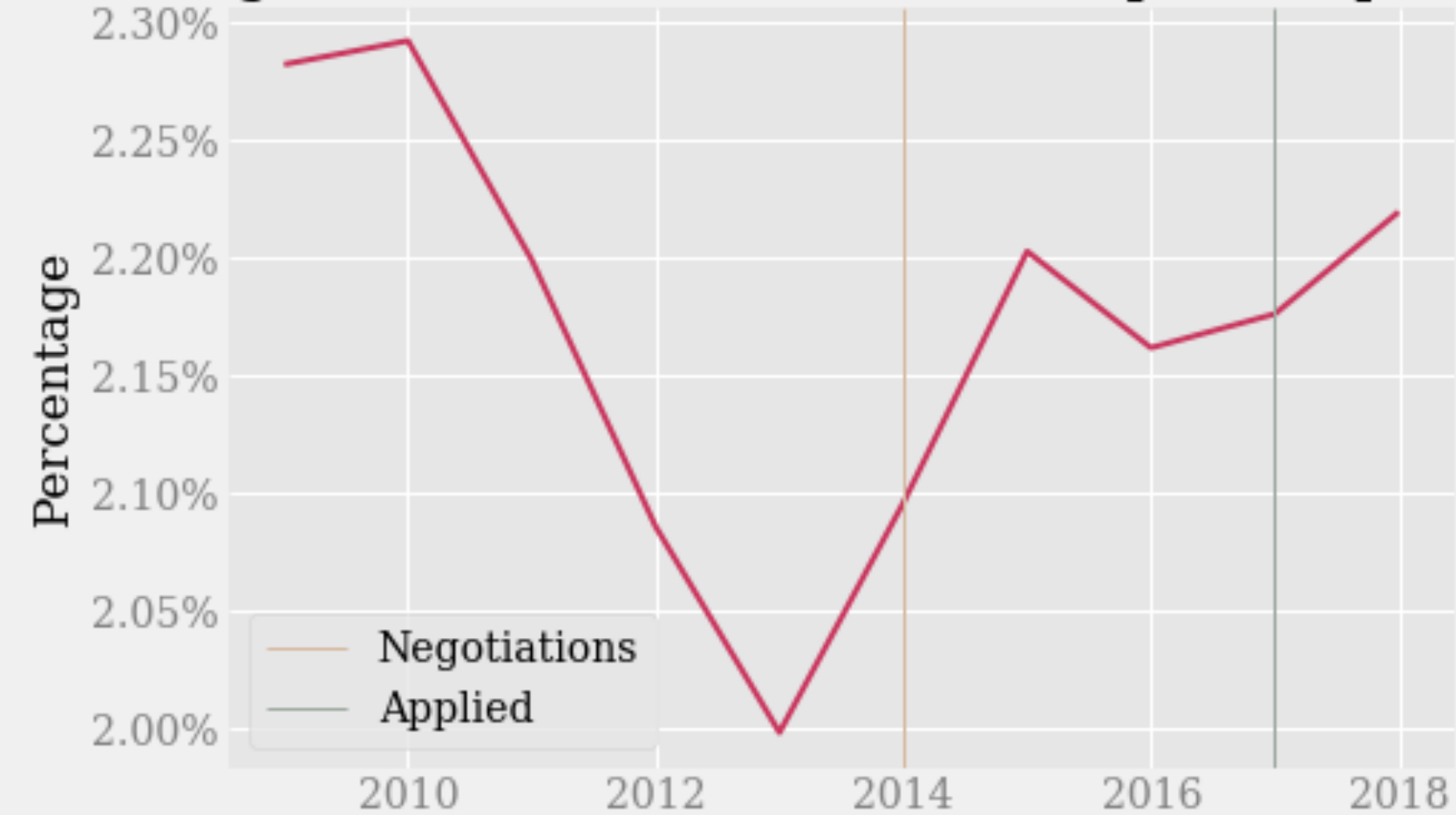
Fig. 10 Share of Canada in European imports

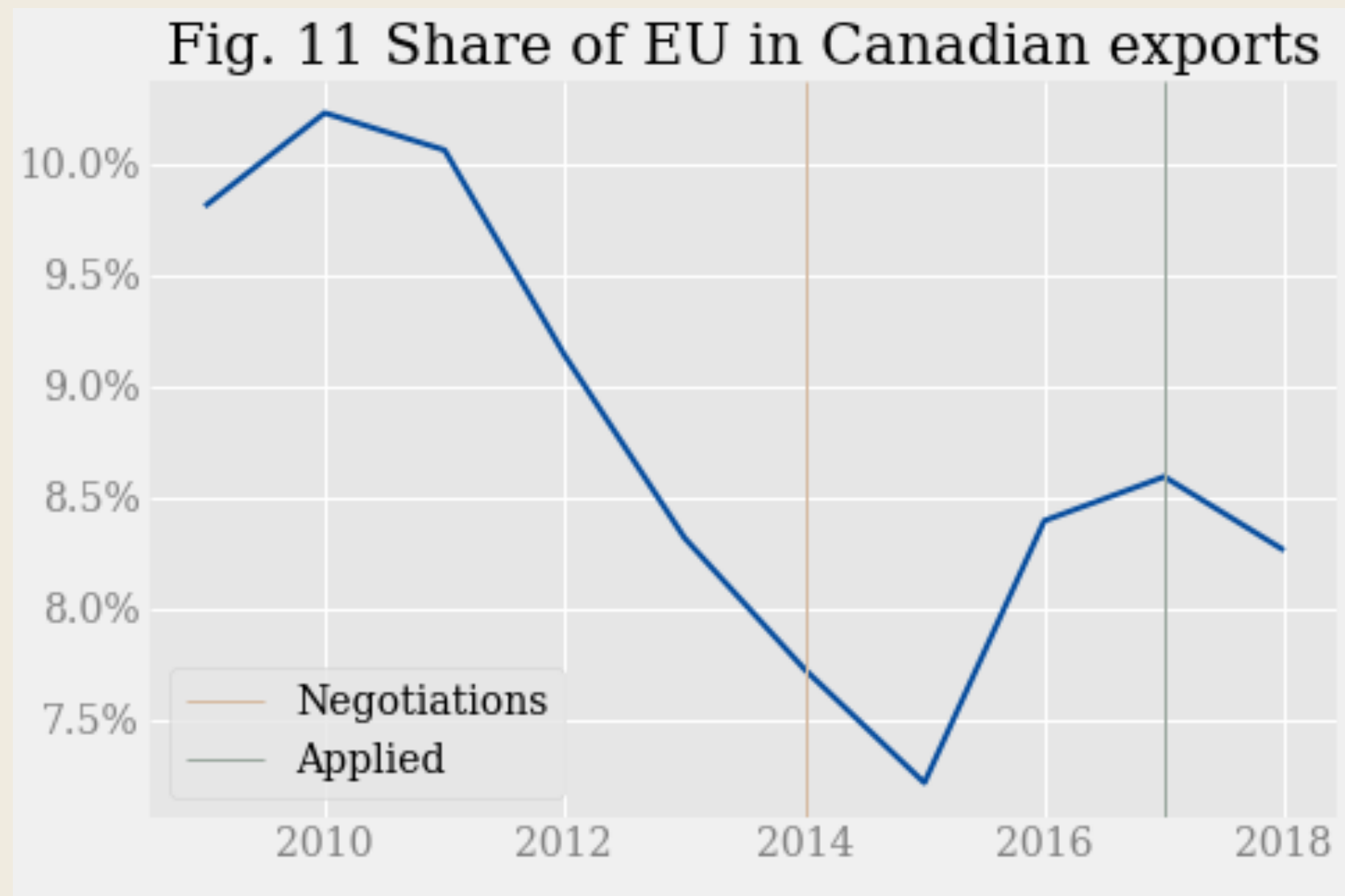
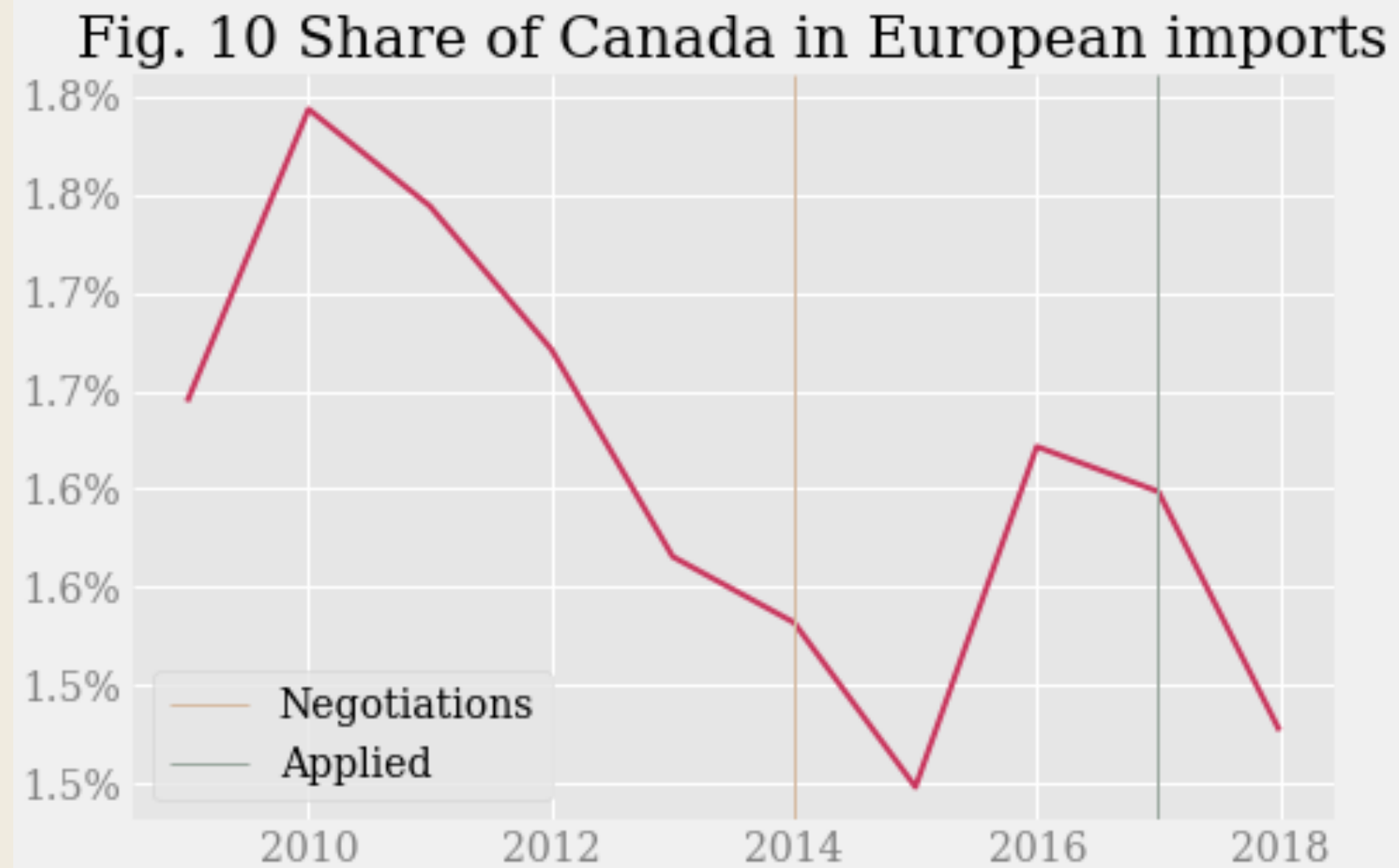


Fig. 11 Share of EU in Canadian exports



Fig. 12 Share of Canada in European exports

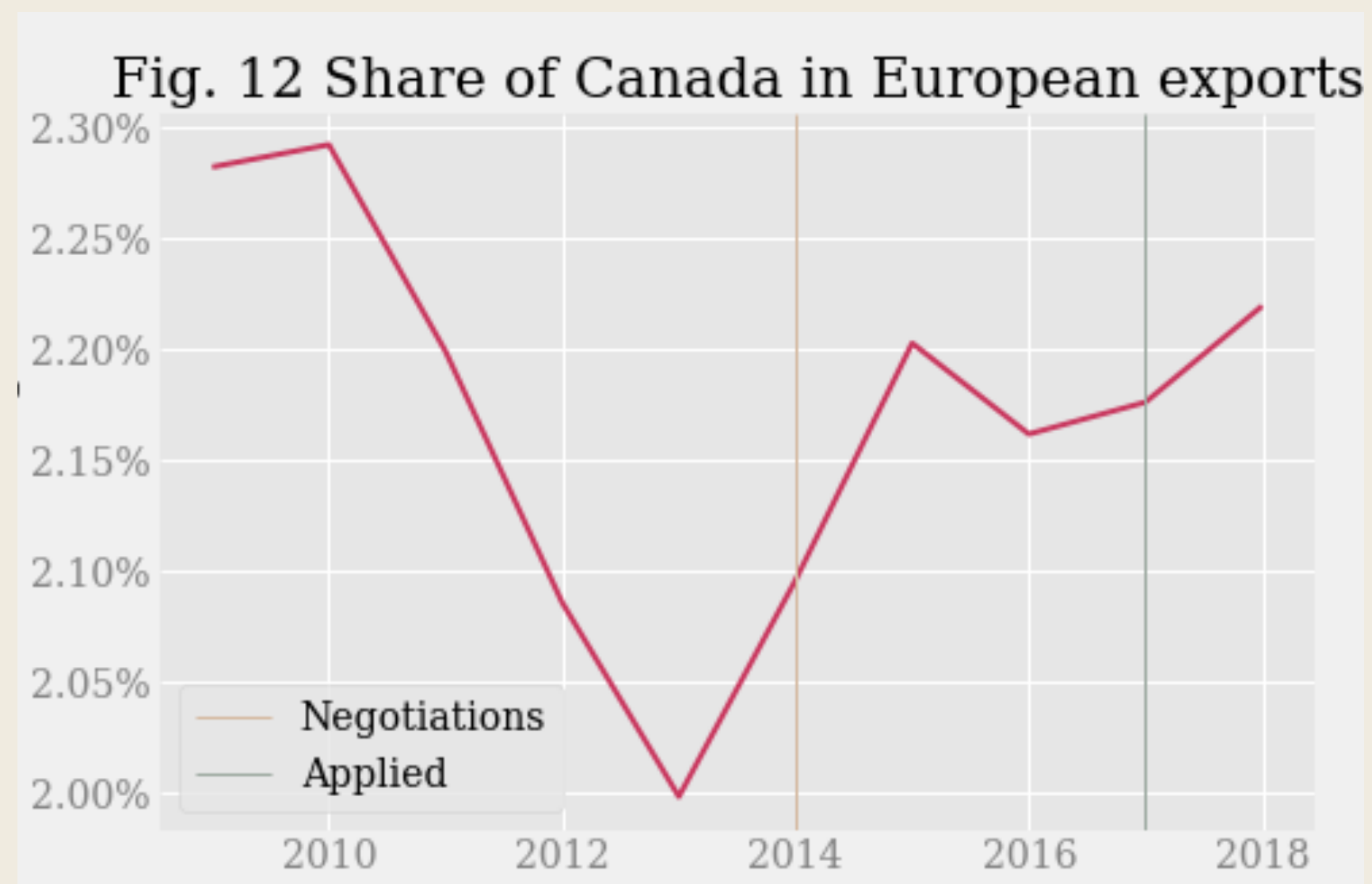
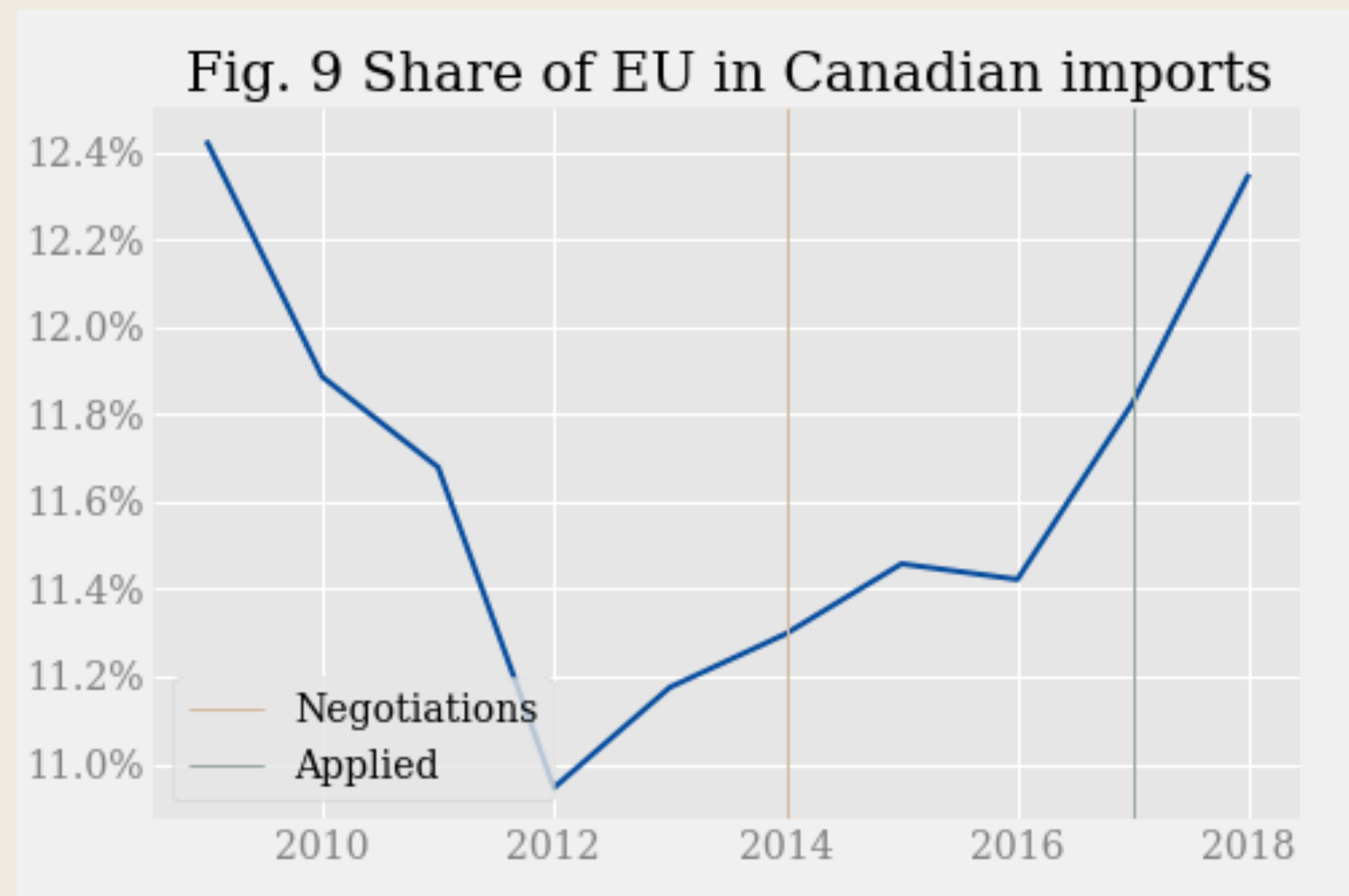




TRADE IN GOODS

Growth Rates

- Share of EU in Canadian exports and share of Canada in European imports declined, which implies
 - that European consumers purchased fewer Canadian goods,
 - and Canada sold fewer goods to the EU.
- However, there is insufficient evidence to imply causation.



TRADE IN GOODS

Growth Rates

- The share of European goods in Canadian imports rose as well as the share of Canada in European exports.
- Data shows that Canadian consumers bought more European goods, and the EU sold more goods to Canada.
- We can hypothesise that European goods displaced other imports due to the trade liberalisation.
- Again, the conclusion of causality can not be made.

Foreign Direct Investments: Stocks

Fig. 13 Canadian direct investment abroad, stocks

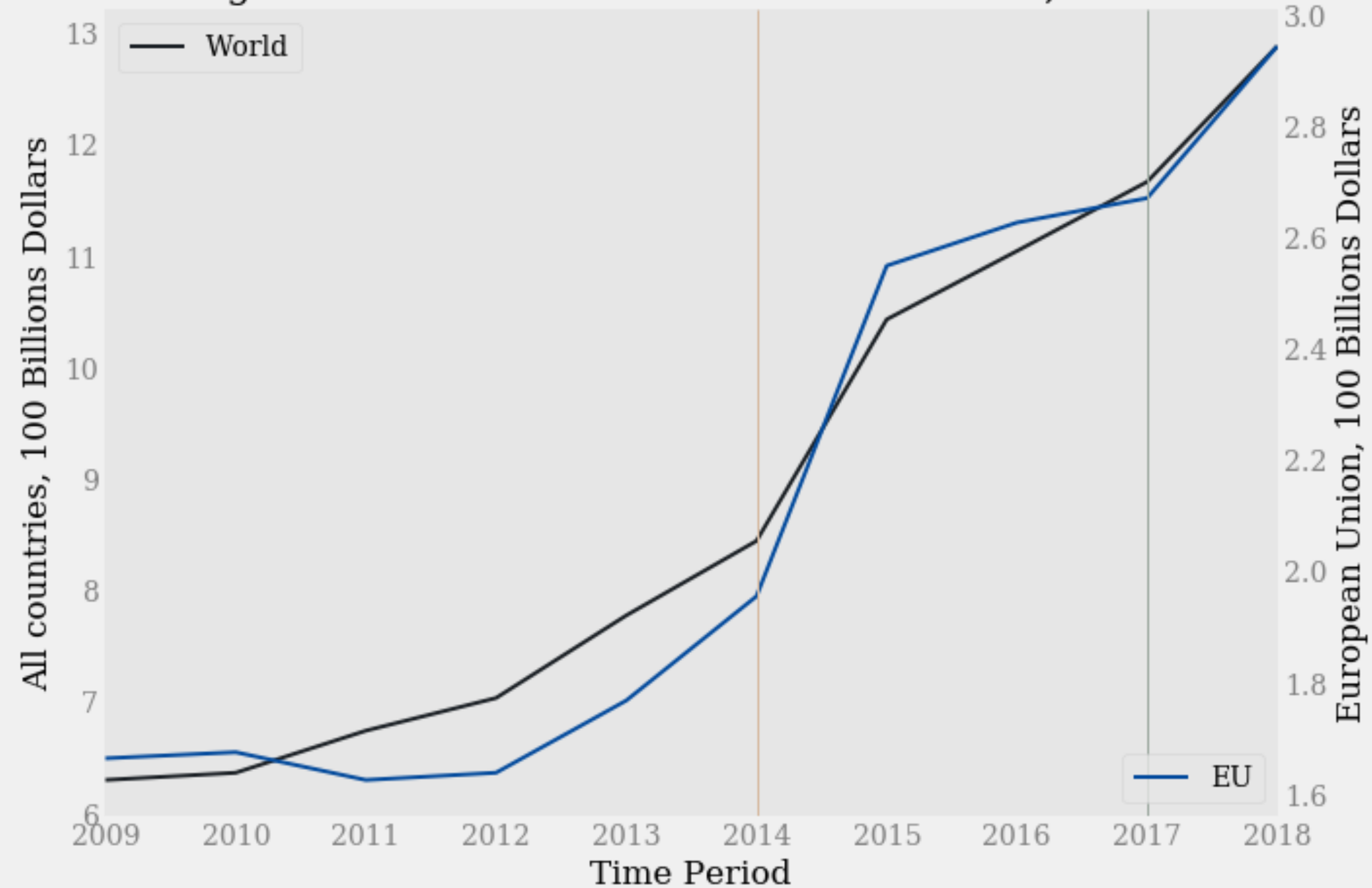
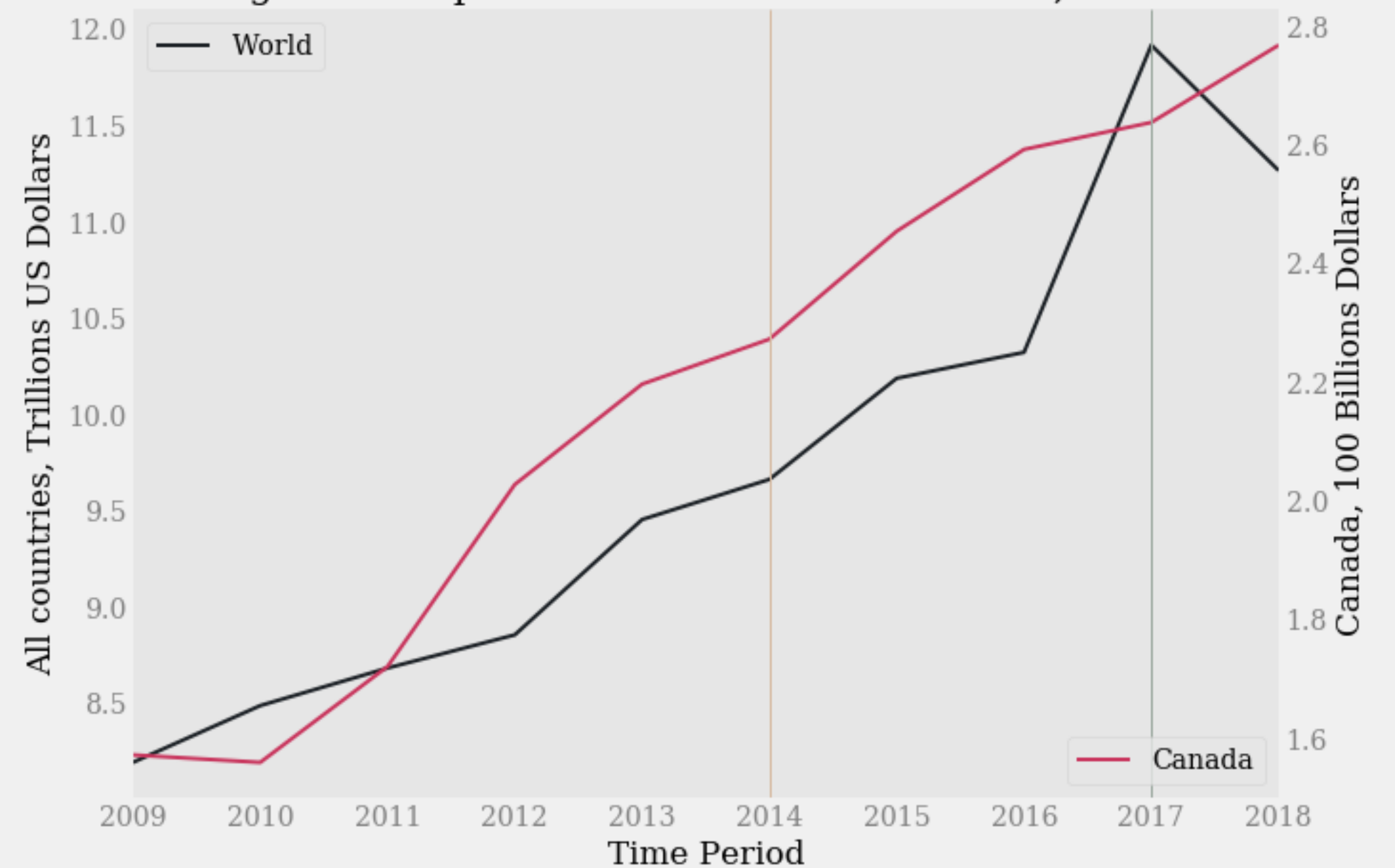
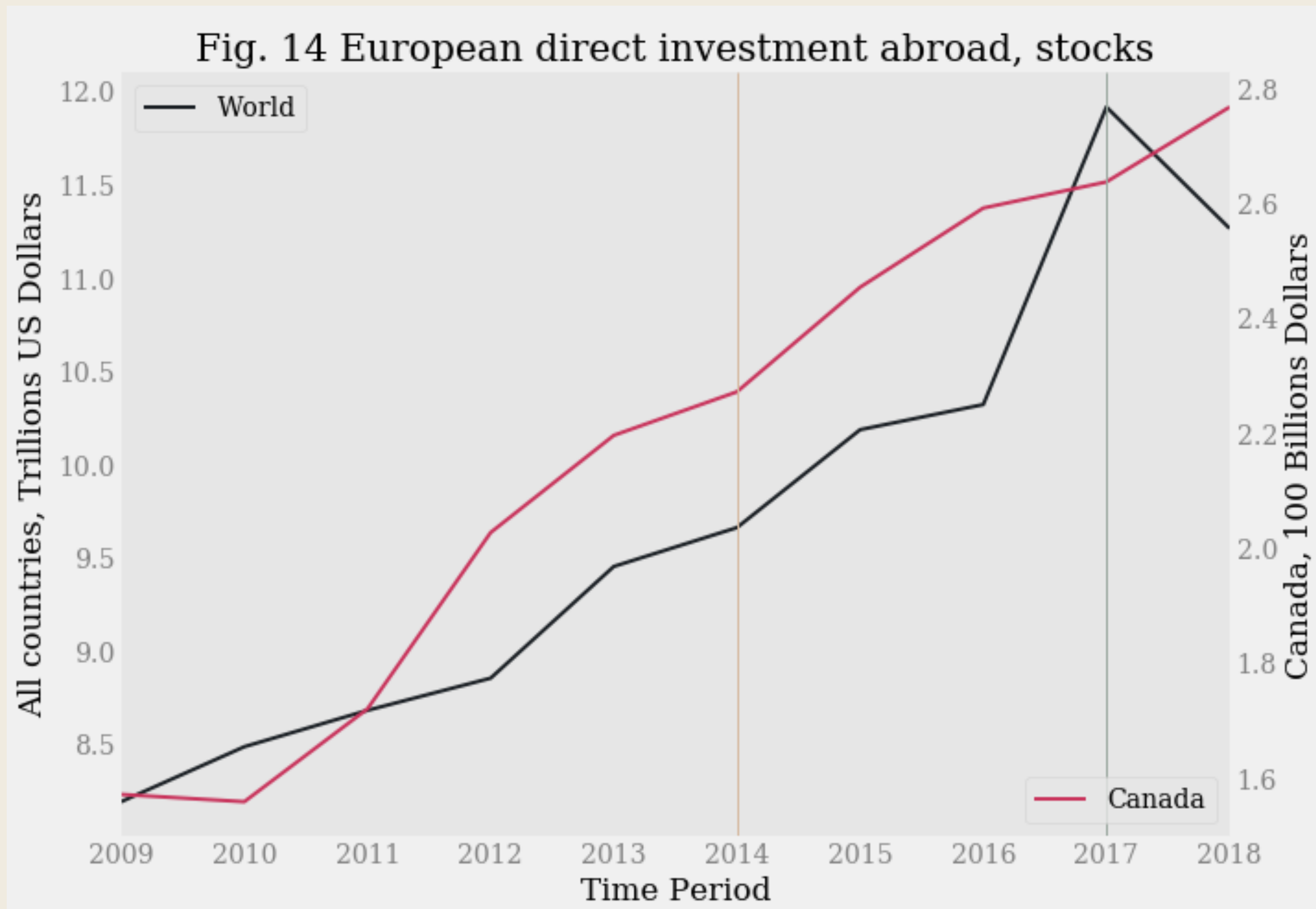


Fig. 14 European direct investment abroad, stocks





TRADE IN GOODS

European FDI

- While EU experienced foreign direct investment retrenchment and portfolio investment slowdown, according to European Central bank, investment to Canada grew.
- It is the most visible positive difference in economic relationships between the two countries before and after CETA.



TRADE IN GOODS

Canadian FDI

- We see a slightly faster growth rate of Canadian investments in the EU than in the world as well as faster growth rate compared to previous years.

Conclusions

- The trade in goods between the EU and Canada **continued to grow** in absolute terms, as well as trade of both countries with the rest world
 - **Increase in trade** in good was **little or none-existent** or even lower than in previous years.
 - Positive difference was visible only in **Canadian imports from EU**, they **grew faster** than the imports from the rest of the world and they took up larger share in Canadian imports.
 - However, it can **not** be stated with certainty whether this growth is **attributed to** trade liberalization because of **CETA**.
 - The most prominent difference was observed in changes in FDI stocks: **European investments** to Canada continued to **grow despite** overall investment **slowdown**. Canadian investments showed faster growth rate as well.
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Further Questions

- What has change in 2019?
 - What is the commodity composition of exports and has it changed after CETA? Is there industries that benefitted or suffered from the agreement more than others?
 - Is changes in economic indicators visible when analysis is accounted for economic growth, price changes and other confounding factors?
 - What are the differences in effects on countries of the European Union?
 - Has CETA weakened European consumer rights and brought unemployment and environmental damage, as CETA opponents predicted?
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