EXPECTED ECONOMIC EFFECTS OF THE EU FREE TRADE AGREEMENT WITH NEW ZEALAND

REPORT

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Findings

The Dutch Ministry of Foreign Affairs (MFA) commissioned SEO Amsterdam Economics (SEO) to assess the potential economic impact of the new Free Trade Agreement (FTA) between the EU and New Zealand (NZ). Our assessment is based on desk research, interviews, and data analysis and econometric estimates.

We estimate a small but positive increase of Dutch real GDP as a result of the EU-NZ FTA. This assessment is based on several complementary pieces of evidence, namely:

- New Zealand is currently a relatively minor trading partner of the Netherlands. Total exports of the Netherlands in 2021 were USD 840 billion, of which around 0.1 percent flows to New Zealand. Total Dutch imports from New Zealand were around 0.08 percent of the USD 757 billion total. Given this basis, we expect NZ to remain a relatively minor trading partner, also after the introduction of the EU-NZ FTA.
- In order to estimate the economic effects of liberalising trade between the EU and New Zealand, we developed a state-of-the art gravity model of international trade and performed a scenario-analysis.
- Our headline estimate for the Netherlands is a positive but very small welfare effect, equivalent to +0.00 percent of real GDP (after rounding; equivalent to EUR 13.4 million). We consider this a lower bound given that the gravity model abstracts from changes in production or sectoral composition (and instead isolates the gains-from-trade-effect), and only covers manufacturing trade and output.
- Our estimate is consistent with previous assessments of the effects of the EU-NZ FTA, which all reported positive but modest welfare effects. SEO (2016) previously estimated that Dutch real GDP would increase, but only by about 0.01 percent. The European Commission (EC 2020) reported a similarly small effect of +0.00 percent (after rounding) for the EU on average.
- Consulted experts and market participants confirmed that they mostly expect only modest effects from the EU-NZ FTA. Interviewees consistently highlighted the geographical distance between the EU and New Zealand and the comparatively modest size of the New Zealand economy. As a result, they only anticipated minor effects on Dutch imports, exports, and GDP.

We estimate a modest increase in NZ real GDP as a result of the EU-NZ FTA. This assessment is based on several complementary pieces of evidence, namely:

- Whilst NZ is only a minor trading partner for the EU, it is running a positive trade balance (exports exceeding imports).
- We estimated a gravity model of international trade on manufacturing data and performed a scenario-analysis to estimate the welfare effects of liberalizing trade between the EU and New Zealand. Our headline estimate for New Zealand is a welfare effect equivalent (after rounding) to 0.19 % of real GDP (equivalent to USD 461.7 million).
- Consulted experts and market participants consider the EU market a significant market for NZ to enter.

We estimate that trade effects are larger than GDP effects, especially for New Zealand and bilaterally. This assessment is based on several complementary pieces of evidence, namely:

- Prior assessments of the EU-NZ FTA report[1] changes in bilateral trade (between the EU/NL and NZ) of at least +10.00%.

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[1]   Prior assessments of the EU-NZ FTA were conducted by the European Commission (2017 and 2020), and SEO Amsterdam Economics (2016).

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- Our gravity model of international manufacturing trade suggests an increase in bilateral trade between the Netherlands and New Zealand of +5.97% for exports (NL to NZ) and +7.07% for imports (NZ to NL). Total NL exports and imports are estimated to change by +0.00% and +0.00% percent respectively, and for NZ by +0.66% and +0.61% respectively.
- Consulted experts and market participants highlight export and import opportunities for specific industries. For the Netherlands, export opportunities could include e.g. horticulture, dairy and maritime services. For New Zealand, export opportunities mainly include agricultural products, in particular dairy.

Headline effects disguise potential differences in impact per sector. These differences are comparatively modest. This assessment is based on several complementary pieces of evidence, namely:
- Certain industries are overrepresented in current patterns of trade. Around 60 percent of NL exports to NZ are accounted for by only three industries (food products, machinery, and vehicles). For NL imports from NZ, the dominant industry is animal products (mostly meat), accounting for almost 50 percent of total Dutch imports from New Zealand.
- Our gravity model of international manufacturing trade estimates different changes in trade for different industries. For the Netherlands and Europe, these differences are small with total export and imports effects ranging between +0.00% and +0.01%. For New Zealand, effects are larger and for exports range between -0.48% and +4.24%.
- A complementary analysis of key gravity model parameters (the direct effect of FTAs on trade and the elasticity of substitution) highlights furthermore that agricultural trade is more responsive to trade liberalisation than mining and energy, manufacturing, and services (in that order). Services trade responds less-than-average to trade liberalisation, on the account of many services being locally supplied. Whilst this complementary parameter analysis cannot be interpreted directly in terms of changes in welfare (real GDP) or trade, it highlights differences in partial/direct responses to trade liberalisation between industries.
- Consulted experts and market participants highlight export and import opportunities for specific industries. For the Netherlands, export opportunities could include e.g. horticulture, dairy and maritime services. For New Zealand, export opportunities mainly include agricultural products, in particular meat and dairy. Whilst NZ export opportunities may imply increased competition for NL producers in this industry, interviewees also highlighted that NZ and NL exporters cater to different markets (Asia and the European mainland respectively). As such, interviewees do not expect large shifts in NZ exports to enter the European market.
- Highlighted export opportunities for NL and NZ exporters by interviewees commonly correspond to established comparative advantages for these economies. For the Netherlands, these comparative advantages include dairy, machinery and vehicles amongst others. For NZ, these comparative advantages include dairy and meat amongst others. Given the comparatively modest impact of the EU-NZ FTA, we deem it unlikely that these comparative advantages are structurally and significantly impacted by the EU-NZ FTA.

We estimate the effect of the EU-NZ FTA on non-treaty-partners to be small. We base this assessment predominantly on our gravity model of trade, which suggests effects between (rounded) -0.00% and +0.00% on the rest of the world (ROW) and Least Developed Countries (LDCs).

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4 Introduction

The Dutch Ministry of Foreign Affairs commissioned SEO Amsterdam Economics to assess the potential impact of a Free Trade Agreement between the EU and New Zealand. Our assessment is based on desk research, interviews, and data analysis and econometric estimates.

In June 2022, the European Union (EU) and New Zealand (NZ) concluded negotiations on a draft Free Trade Agreement (FTA). Negotiations began in June 2018 and took place over twelve negotiating rounds. For the FTA to enter into force it must still be approved and ratified by the Council, European Parliament, and New Zealand. The draft EU-NZ FTA, amongst others,

- eliminates or reduces tariffs on bilateral trade;
- opens both the EU and NZ services market in industries such as financial services, telecommunications, and maritime transport;
- ensures non-discriminatory treatment of EU investors in NZ and vice versa;
- improves access for EU companies to NZ government procurement contracts for goods, services, and works and works concessions;
- reduces compliance requirement and procedures to facilitate faster flows of goods;
- commits NZ and the EU to protect and enforce intellectual property rights; and
- reinforces Paris Climate Accords objectives and buttresses core labor rights including the commitment to respect and promote the principles on core rights at work embodied in the fundamental International Labour Organisation (ILO) conventions.

The Dutch Ministry of Foreign Affairs (MFA) commissioned SEO Amsterdam Economics (SEO) to assess the potential economic impact of the EU-NZ FTA on the Dutch economy. Accordingly, from April to mid-May 2023 we performed desk research, interviews, and data and econometric analysis.

The remainder of this report presents our findings. Specifically, we
- chart current bilateral trade between the Netherlands (NL) and NZ;
- summarise prior assessments of the effects of the EU-NZ FTA on the Dutch and/or EU economy;
- report gravity model estimates on the effects of the EU-NZ FTA on (bilateral) trade and real GDP;
- offer complementary quantitative analyses on the sensitivity of industry-level trade to trade agreements; and
- present qualitative assessments of the effects of the EU-NZ FTA gathered through interviews with embassy staff, industry association representatives, foreign trade chamber representatives, individual firms, and other experts.
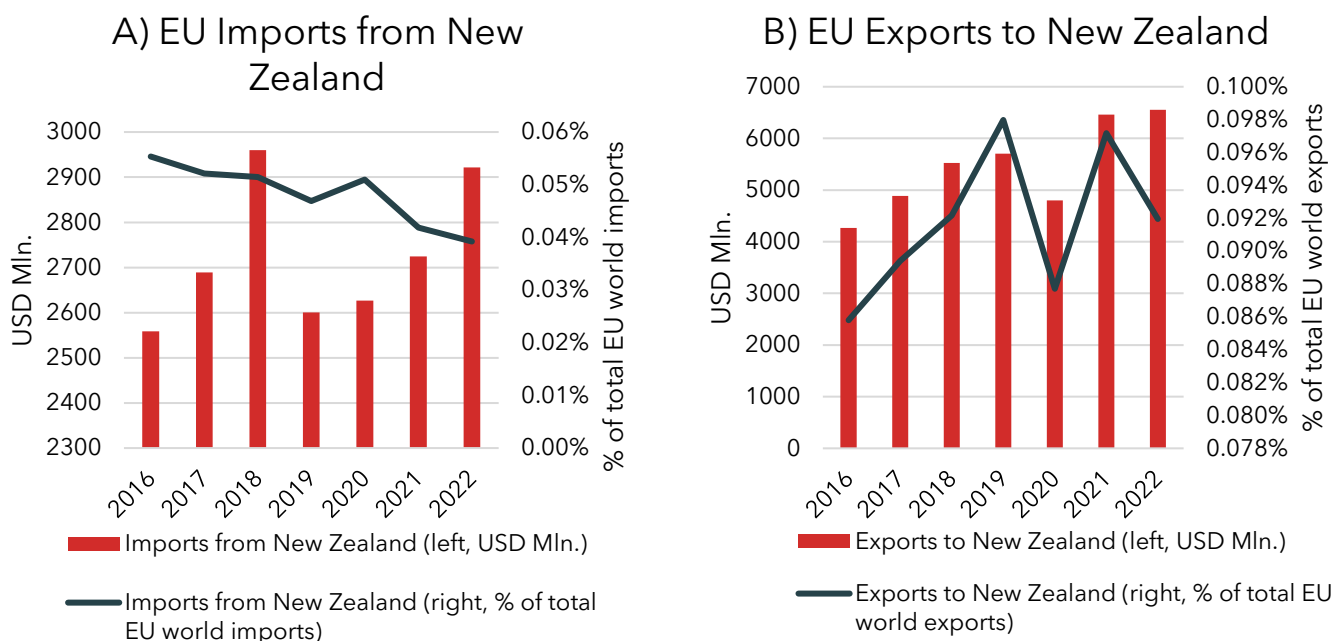
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5   Current bilateral trade between NL and NZ

2022 NL exports to NZ were USD 782 million, or 0.08 percent of total NL exports. 2022 NL imports from NZ were USD 720 million, or 0.08 percent of total NL imports. As such, NZ presently is a minor trading partner for the Netherlands.

Aggregate trade balances

New Zealand is a minor trading partner for the EU, although the EU runs a small, positive trade balance with New Zealand. As Figure 1 shows, the proportion of EU's total imports originating from New Zealand is less than 0.1 percent. Similarly, the proportion of EU's total exports directed towards New Zealand is less than 0.1 percent. Nevertheless, it runs a small, positive trade balance with New Zealand, of around USD 3.6 billion in 2022.

Figure 4   The EU has a small, positive trade balance with New Zealand

Source: SEO Amsterdam Economics based on IMF data

Exports from NL to NZ

Dutch exports to New Zealand made up around 0.1 percent of its total exports in 2021. In 2021, the value of Dutch exports to the global market amounted to 840 billion USD[2], largely exporting to other European countries such as Germany, Belgium, and France. In 2021, the total value of goods exported by the Netherlands to New Zealand amounted to approximately 805 million USD,[3] accounting for around 0.1 percent of its total exports.

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[2]   International Monetary Fund Direction of Trade Statistics (DOTS)
[3]   Based on UN COMTRADE data.

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Figure 5   Top Dutch exports to New Zealand are transport and machinery goods and food products
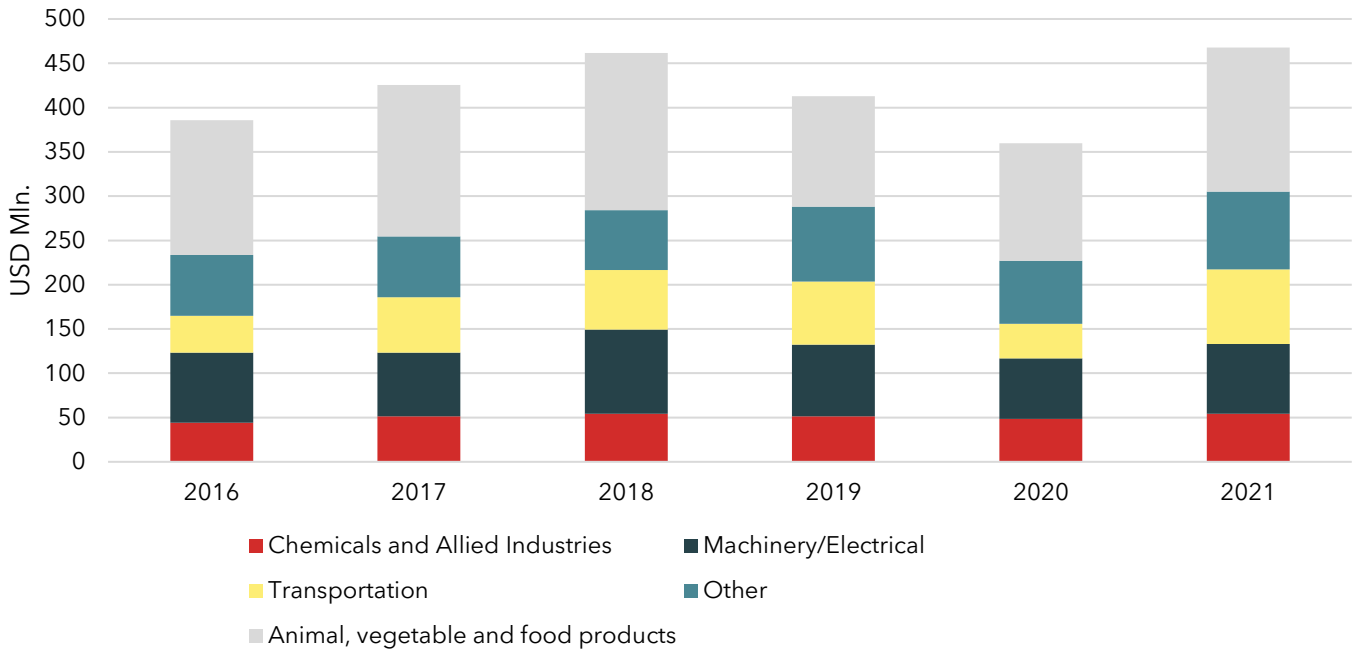
Source: SEO Amsterdam Economics based on UN COMTRADE.

Dutch exports to New Zealand have largely consisted of transport, machinery and food products[4] (see Figure 5). In 2021, the top two Dutch export products to New Zealand were vehicles (USD 80 million) and machinery (USD 67 million). Regarding the former, the Netherlands primarily exports vehicles for transporting goods to New Zealand. As for machinery exports, the Netherlands largely exports food and agriculture-related machinery to New Zealand. Top Dutch machinery exports to New Zealand in 2021 included machinery for manufacturing food and drink, agricultural machinery, and harvesting and threshing machinery. The Netherlands also exports a significant amount of food products to New Zealand, largely consisting of sugar products, dairy and meat products, and beverages.

In 2021, the Netherlands was the fifth biggest exporter of dairy to New Zealand.[5] As mentioned, the Netherlands does not import a significant amount of dairy from New Zealand. However, it plays an important role as a supplier of dairy to New Zealand. Approximately 10 percent of New Zealand's dairy imports come from the Netherlands, primarily in the form of milk and cream products.

The Netherlands has a revealed comparative advantage (RCA)[6] in several of its key export products to New Zealand. The Netherlands has a revealed comparative advantage in the production of dairy, machinery, and several vehicle goods. These are among the top Dutch exports to New Zealand historically. This implies that the FTA could

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[4]   Export figures based on UN COMTRADE data include re-exports.
[5]   Based on UN COMTRADE data.
[6]   Revealed Comparative Advantage (Balassa, 1965) assesses the relative export strengths of a country through the following calculation:

$$RCA = \frac{\frac{Export\ of\ product\ X\ by\ country\ A}{Total\ exports\ of\ country\ A}}{\left/ \frac{Other\ countries'exports\ of\ product\ X}{Other\ countries'total\ exports}\right)}$$

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increase Dutch exports to New Zealand from these sectors due to 1) historical linkages between these sectors in the Netherlands and New Zealand, and 2) the Netherlands having a global comparative advantage in these sectors.

Imports from NZ to NL

In 2021, the value of Dutch imports from New Zealand accounted for around 0.08 percent of its total imports. Total Dutch imports in 2021 were USD 757 billion[7], largely originating from Germany, China, Belgium, and the United States of America. Imports from New Zealand in 2021 reached USD 622 million, accounting for around 0.08 percent of total Dutch imports.

Figure 6   The largest Dutch imports from New Zealand are animal products
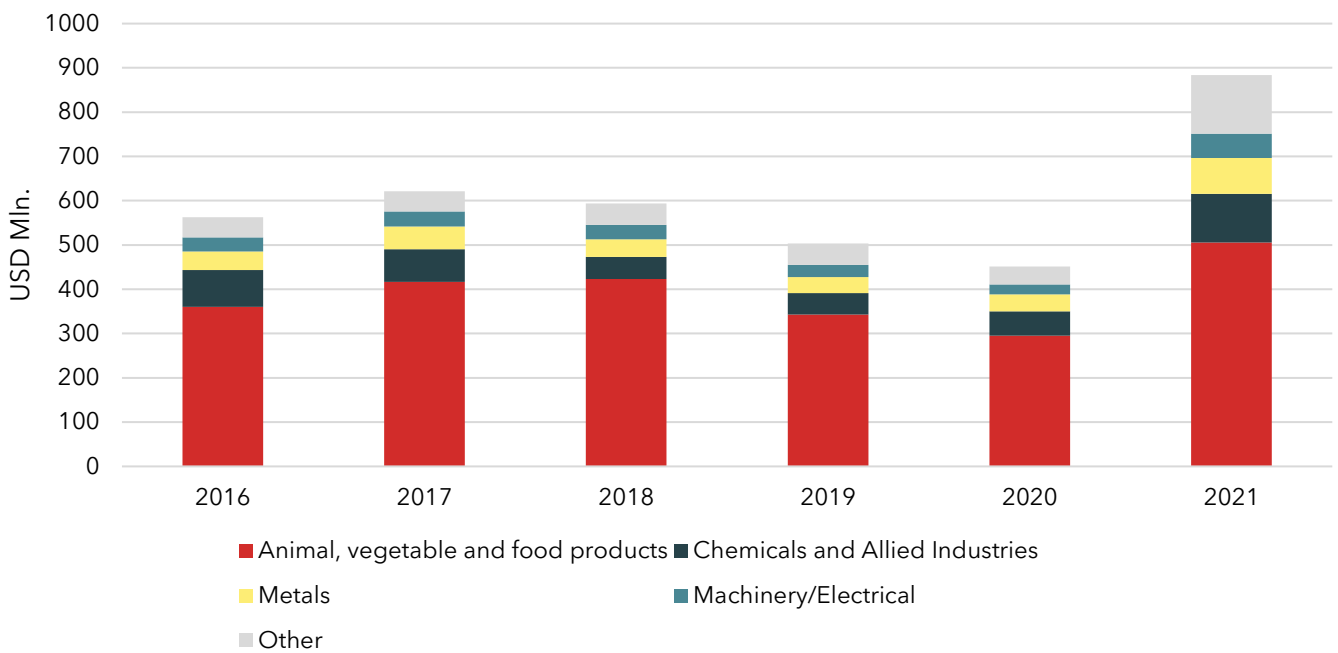
Source: SEO Amsterdam Economics based on UN COMTRADE.

Almost half of Dutch imports from New Zealand consisted of animal products, largely meat. As Figure 3 shows, Dutch imports from New Zealand historically consisted of vegetable products, chemical and allied industries products, and metal, but largely consisted of animal products. In 2021, 34 percent of Dutch imports from New Zealand consisted of meat products, primarily sheep meat. New Zealand is an important provider of sheep meat to the Netherlands, as 72 percent of Dutch sheep meat imports came from New Zealand in 2021. This is probably because New Zealand has a revealed comparative advantage in the export of meat, with (sheep) meat comprising a large part of New Zealand's trade with the world.

While New Zealand is an important world supplier of dairy products, the Netherlands has not historically imported much dairy from New Zealand.[8] New Zealand is the largest exporter of dairy to the world and has a revealed comparative advantage in the export of dairy. Nevertheless, less than 1 percent of Dutch dairy imports thus far originates from New Zealand. Despite the Netherlands and New Zealand being major producers and exporters

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[7]   International Monetary Fund Direction of Trade Statistics (DOTS)
[8]   Based on UN COMTRADE data.

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of dairy, they largely specialize in the export of different dairy products. New Zealand largely exports milk and cream products, especially whole milk powder,[9] while the main dairy export of the Netherlands is cheese[10].

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[9]   Statista. Dairy industry in New Zealand – statistics and facts. https://www.statista.com/topics/6069/dairy-industry-in-new-zealand/#topicOverview
[10]   UN COMTRADE data

6   Summary of prior assessments of the effects of the EU-NZ FTA on the Dutch and/or EU economy

Prior assessments of the effects of the EU-NZ FTA on the Dutch and/or EU economy all report small but positive effects of the EU-NZ FTA on real GDP.

Prior assessments of the effects of the EU-NZ FTA on the (Dutch or EU) economy all suggest positive but small increases in real GDP. Table 1 reports the estimates presented in SEO (2016), EC (2017) and EC (2020).

Table 1   Prior assessments report small put positive increases to real GDP in response to the EU-NZ FTA

		Treaty partners		
		NLD	EU	NZ
Real GDP	EC (2020)		+0.00%	+0.00%
	EC (2017)		+0.01–0.02%	+0.28-0.52%
	SEO (2016)	+0.01%		
Bilateral exports	EC (2020)		+13.5%	+10.2%
	EC (2017)		+14.2%	+10.5%
	SEO (2016)	+62.6%		
Bilateral imports	EC (2020)		+10.2%	+13.5%
	EC (2017)		+10.5%	+14.2%
	SEO (2016)	+21.0%		

Source: SEO Amsterdam Economics based on EC (2020), EC (2017) and SEO (2016).

SEO (2016) predicted that an EU-NZ FTA would boost Dutch-New Zealand trade. The previous study predicted that an NZ-EU FTA would increase Dutch exports to New Zealand by 62 percent and Dutch imports from New Zealand by 21 percent. However, it predicted a near zero percentage impact on real GDP and domestic price levels. Published in an earlier stage of the FTA negotiations between EU and NZ, this report estimated significantly larger real GDP effects of the FTA than the 2017 and 2020 EC impact assessments.[11]

According to a European Commission (2017) impact assessment carried out by LSE, bilateral exports from the EU to New Zealand was expected to increase by 14.2 percent following the FTA. This impact assessment predicted EU exports to New Zealand to increase by 14.2 percent in a conservative scenario. New Zealand bilateral exports to the EU were expected to increase by 10.5 percent following the FTA. EC (2017) also predicted a positive impact on EU exports for several sectors, including several that the Netherlands is strong in: dairy, machinery, and motor vehicles. For example, it predicted that EU dairy exports to New Zealand would increase by around 27

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[11]   The previous SEO gravity model analysis of the impact of an NZ-EU FTA estimated a larger bilateral effect than our current analysis due to methodological differences. The previous SEO analysis used a different trade dataset, a simpler depth index for the FTA as opposed to the more specific FTA depth variable used in this study, a more liberal FTA counterfactual, and a different gravity model / econometric model.

percent, and in the machinery sector by 20 percent. Given that the Netherlands is among the top dairy producers in the EU, such an increase in EU dairy exports could be expected to benefit Dutch dairy exporters.

The trade sustainability impact assessment prepared by BKP for the European Commission (2020) predicted a 13.5 percent increase in EU bilateral exports in a conservative scenario. In a conservative scenario,[12] the impact assessment predicted a 13.5 percent increase in EU bilateral exports and a 10.2 percent increase in New Zealand's bilateral exports. Percentage changes in GDP were predicted to be near zero. This report confirmed the sectoral findings of the 2017 EC report - predicting an approximate increase of 27 percent in EU dairy exports, 19.5 percent increase in EU machinery exports and 22 percent increase in motor vehicle and transport equipment exports. The impact assessment also predicted that EU exports of financial, communication and other services would increase because of the FTA.

The 2020 EC report predicted a limited social and human rights related impact and a mixed environmental impact. Employment effects of the FTA were expected to be limited in most sectors. However, employment in the EU was expected to shift from some agricultural sectors (vegetables, fruits and nuts, ruminant meat etc.) and the coal sector to motor vehicles, transport equipment and gas. Additionally, under a conservative scenario, a net decrease in non-CO2 greenhouse gas emissions was expected. However, the expected increase in New Zealand production of meat, fruits and vegetables as a result of the FTA was predicted to have a negative impact on land use in New Zealand.

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[12]   The conservative scenario in this impact assessment refers to full liberalisation by the EU for all industrial products and most agricultural products, apart from selected sensitive products (rice, cereal, sugar, fruit and vegetables, ruminant meat and dairy), full liberalisation by New Zealand for all products, and no change in NTBs. This scenario (as opposed to the ambitious scenario) seems to be most in line with the latest proposed FTA. Accordingly, all the numbers presented from the EC reports are those that align with the conservative scenario.

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7   Gravity model estimates

We estimate welfare gains equivalent to +0.0 percent of NL's real GDP and 0.2 percent NZ's real GDP resulting from the EU-NZ FTA. This estimate is likely a lower bound. NL exports to NZ increase by 9.6 percent and NL imports from NZ by 11.0 percent. The NL trade balance with NZ increases with 4.4 percent.

Methodology

We estimate the welfare gains from the EU-NZ FTA with a gravity model of international trade. The gravity model of international trade is a standard model in international economic. It is used extensively and frequently to estimate and assess the effects of FTAs and other trade policies (see e.g. Yotov et al., 2019), including by the CPB Netherlands Bureau of Economic Policy Analysis (see e.g. CPB, 2020). For a detailed exposition of the gravity model of international trade, see e.g. Anderson (2011), Head & Mayer (2014) or Yotov, Piermartini & Larch (2016).

The gravity model of international trade relates bilateral trade to country-level characteristics ("GDP") and bilateral trade costs ("distance"). As a shorthand, the gravity model typically implies that nominal bilateral trade is increasing with the size of either trading partners' economy ("GDP"), but decreasing with bilateral trade costs (resulting from e.g. countries being far away from each other; or "distance" resulting from other trade barriers). FTAs have the potential to reduce bilateral trade costs (i.e., reducing the "distance" between countries). Our gravity model then first estimates the trade cost reduction of the EU-NZ FTA, and then estimates the resulting change in trade.

Our gravity model accounts for both trade creation and trade diversion in response to the introduction of the EU-NZ FTA. A reduction in bilateral trade costs between the EU and NZ could spur bilateral trade between the EU and NZ (trade creation). However, some of this increase in bilateral trade may reduce trade between the EU and other trading partners as it becomes more favorable to trade with NZ relative to other trading partners (trade diversion). Our gravity model corrects for this counterbalancing trade diversion effect.

The balance of trade creation and trade diversion implies welfare effects. Welfare effects are measured in terms of real GDP. Our gravity model estimates such welfare changes subject to several assumptions, including that there is no (immediate) change in output or reallocation of factors of production, consumers consider goods imperfect substitutes, industries are separable (no spillovers between industries or countries). Whilst gravity models then yield consistent estimates of welfare effects, these effects typically are smaller than the effects estimated by models that include e.g. include reallocation of factors of production, capital investments, or sectoral spillovers (see CPB 2020 for an example).

To consistently estimate trade creation, trade diversion, and welfare effects, the gravity model requires data on both bilateral trade, as well as domestic output. Data on domestic output is needed to fully account for trade diversion, as not all output is exported. It is possible, for instance, that some of the newly traded goods originated from domestic production prior to a trade agreement. We leverage the CEPII's TradeProd dataset on manufacturing trade and output. Like CPB (2020) then, our gravity model estimates trade and welfare effects associated with changes in manufacturing trade. For trade other than manufacturing trade, no similarly comparable and balanced (including all bilateral observations) dataset is readily available. This limits the scope of our main specification to manufacturing trade. As an auxiliary specification, we manually construct a secondary sample covering trade in non-manufacturing animal products based on FAOSTAT agricultural export and production data.

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We estimate the effects of the EU-NZ FTA as follows. First, for every industry in our dataset, we estimate the effect of historical FTAs on bilateral trade. Our data on FTAs is due to Hofmann et al. (2017). Hofmann et al. (2017) provides data on 381 FTAs, disaggregated into 52 provisions (topics covered by trade agreements). We construct an FTA-index to capture differences in trade agreement depth. We estimate the effect of FTAs on trade using a standard Poisson Pseudo Maximum Likelihood-estimator that includes country-year and country-pair fixed effects. Second, together with the MFA we determine a counterfactual EU-NZ FTA. The counterfactual represents a scenario in which countries have already implemented any proposed (changes to) trade agreements. The estimated effects then illustrate what trade would look like in a given year if the counterfactual policies had been in place. We estimate effects based on the last year available in our dataset. This estimated effect is based on our own estimate of the effects of historical FTAs on bilateral trade (see above), combined with a default trade elasticities derived from the literature (specifically Figure 4). For an outline of technical details on the estimation strategy, we refer to e.g. CPB (2020).

Results

The EU-NZ FTA slightly increases Dutch GDP, total exports and total imports. The rounded effect on Dutch GDP is + 0.00% (equivalent to EUR 13.4 million), the effect on total exports is +0.00% and the effect on total imports is +0.01%. As a result of the FTA, New Zealand experiences a positive impact on its GDP, estimated at 0.19 percent. (equivalent to USD 461.7 million). Additionally, the FTA results in a growth of 0.66 percent in total exports and a 0.61 percent increase in total imports for New Zealand. For the EU, the rest of the world and least developed countries, the effects on GDP, exports and imports are 0 percent (rounded). This shows that in terms of economic gains, New Zealand benefits most from the FTA, but this gain is not offset by losses in other countries or regions. In terms of bilateral trade between the Netherlands and New Zealand, Dutch exports increase by 5.97 percent and Dutch imports increase by 7.07 percent. Although imports increase at a higher rate than exports, the trade balance (exports minus imports) improves by 1.86 percent for the Netherlands. This is because exports exceed imports, and a smaller percentage increase may still mean a larger absolute increase in exports than in imports, resulting in an improved trade balance.

Table 1   GDP and trade effects of EU-NZL FTA

	Treaty partners			Rest of the world	
	NLD	**EU**	**NZ**	**ROW**	**LDC**
Real GDP	**+0.00%**	**+0.00%**	**+0.19%**	**-0.00%**	**-0.00%**
Total exports	**+0.00%**	**+0.01%**	**+0.66%**	**-0.00%**	**-0.00%**
Chemicals	+0.00%	+0.01%	+2.54%	-0.00%	+0.00%
Food	+0.00%	+0.01%	+0.31%	-0.00%	-0.01%
Machines	+0.00%	+0.00%	-0.48%	+0.00%	+0.00%
Metals	+0.00%	+0.01%	+2.22%	-0.00%	+0.00%
Minerals	+0.01%	+0.01%	+2.84%	-0.00%	-0.00%
Textiles	+0.00%	+0.02%	+4.24%	-0.00%	-0.00%
Vehicles	+0.01%	+0.00%	+2.22%	-0.00%	-0.00%

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	Treaty partners			Rest of the world	
	NLD	**EU**	**NZ**	**ROW**	**LDC**
Wood-Paper	+0.00%	+0.00%	+0.33%	-0.00%	-0.00%
Other	+0.00%	+0.00%	+1.20%	-0.00%	+0.00%
Total imports	**+0.01%**	**+0.01%**	**+0.61%**	**-0.00%**	**-0.00%**
Chemicals	+0.01%	0.01%	+1.00%	-0.00%	+0.00%
Food	+0.01%	0.01%	+1.77%	-0.00%	-0.00%
Machines	+0.00%	0.00%	-0.13%	+0.00%	+0.00%
Metals	+0.00%	0.01%	+1.47%	-0.00%	+0.00%
Minerals	+0.01%	0.01%	+0.37%	-0.00%	-0.00%
Textiles	+0.00%	0.01%	+1.56%	-0.00%	-0.00%
Vehicles	+0.01%	0.01%	+0.12%	-0.00%	-0.00%
Wood-Paper	+0.00%	0.00%	+0.64%	-0.00%	-0.00%
Other	+0.00%	0.01%	+0.19%	-0.00%	+0.00%

Source: SEO Amsterdam Economics. The industries correspond to ISIC3. Specifically, for Food ISIC3 15-16, for Textiles 17-19, for Wood-Paper 20-22, for Minerals 26, for Metals 27-28, for Machines 29-33, for Vehicles 24-25, and for Other 36. Note that Food here is food considered manufacturing. In ISIC3, this is a broad category, ranging from the production, processing and preservation of meat, to the manufacture of e.g. cocoa products, pasta, and soft drinks.

Box 1   Auxiliary estimates for non-manufacturing animal products

Our headline estimates cover manufacturing industries, but exclude e.g. (non-manufactured) agriculture, mining, and services. This is the result of a scarcity of comparable and balanced (i.e., including all [bilateral] country-industry pairs per year) data in non-manufacturing trade and output. Specifically, such data is not readily available for a wide range of countries. In response as a robustness exercise, we collect data on trade and output in non-manufacturing animal products from FAOSTAT. Non-manufacturing animal products are animal products not covered by the category Food in Table 1. Products included here in non-manufactured animal products are for instance milk, eggs, and honey. Manufactured animal products such as meat, butter and cheese are included in Food in Table 1. The dataset based on FAOSTAT is significantly smaller than the TradeProd dataset employed in our headline estimates. As such, we report the estimated effects for non-manufacturing animal products as an auxiliary exercise. We base this exercise on estimated coefficients for the effect of FTAs in agriculture due to Weidner & Zylkin (2021).

The estimates for welfare changes in response to trade liberalization in non-manufactured animal products are small, namely -0.00% for the Netherlands and +0.01% for New Zealand. These effects on the aggregate will be smaller due to the fact that non-manufactured animal products are only a component of total trade and output. Trade effects are somewhat larger, with total effects amounting to -0.04% for the Netherlands and +0.18-0.20% for New Zealand.

Source: SEO Amsterdam Economics.

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Box 2   Sensitivity of industry-level trade and welfare to trade liberalisation

Whilst our gravity model can only assess the general equilibrium welfare effects for manufacturing trade and output, we can get a feeling for the relative responsiveness of industry-level trade liberalization by investigating two key parameters of our gravity model – the direct effect of FTAs on bilateral trade and the elasticity of substitution. The direct effect of FTAs reflects the changes in bilateral trade resulting from trade liberalisation, without accounting for trade diversion or price adjustments. The higher this effect, the higher the *impetus* for trade to increase (decrease) when the depth of an FTA increases (decreases). The depth of an FTA is determined by e.g. the number of issues and industries addressed. The elasticity of substitution captures to what extent consumers are willing to swap between different varieties of a product (e.g. the same kind of product from different countries). When this elasticity is high, consumers view products from different countries as interchangeable, due to which they are willing to switch between different sources. Notice, however, that this also means that consumers are willing to swap out domestic products in favor of imports from abroad. If there is a new FTA with greater depth, it results in increased access to foreign products, thereby increasing demand. If supply cannot or does not immediately change accordingly, prices must increase to bring supply and demand back into equilibrium. The lower the elasticity, the less sensitive demand is to changing prices. A low elasticity of substitution therefore suggests that prices must change more after trade liberalisation to restore equilibrium between supply and demand than if the elasticity were high (CPB, 2020).

Figure 4   Services less responsive to trade liberalisation
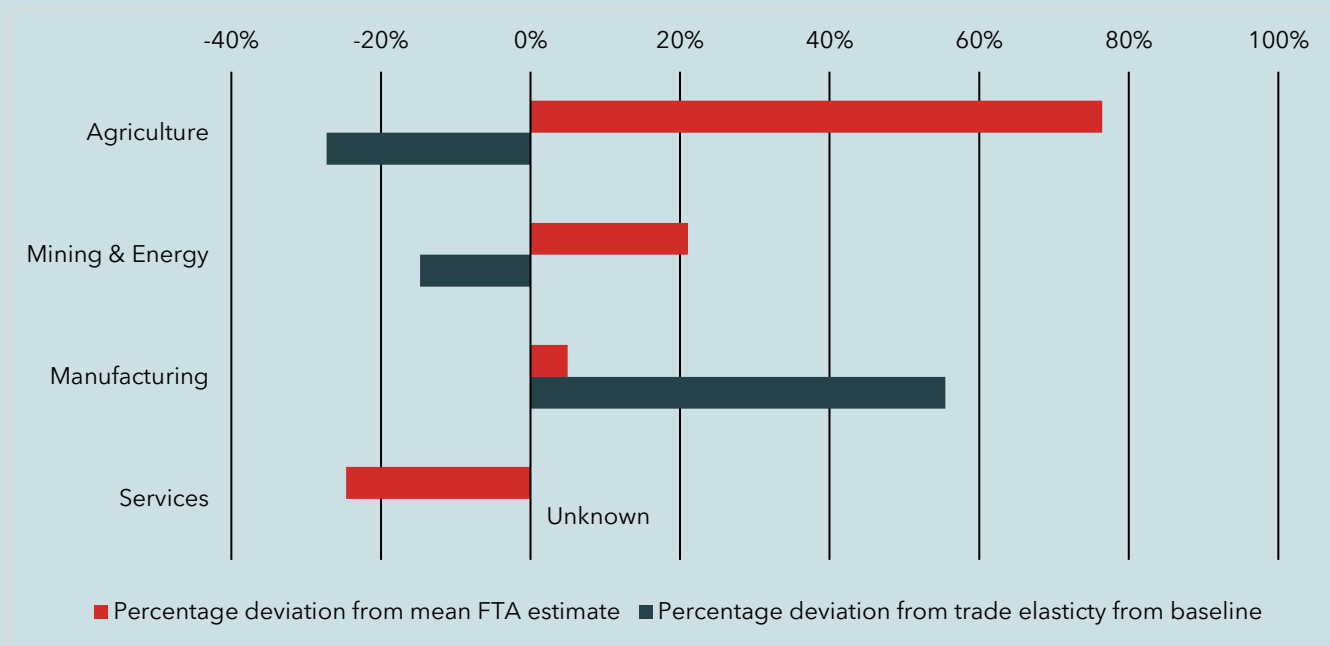
Source: SEO Amsterdam Economics based on Borchert et al. (2022) and Fontagné et al. (2022). Our baseline trade elasticity is 4, which is a default value in the literature (see also CPB, 2020).

Compared to the average effect, the direct effects from FTAs are larger than average (in decreasing order) for agriculture, mining & energy and manufacturing, and less than average for services (see Figure 4). Borchert et al. (2022) estimates direct FTA-effects for 170 industries and summarise their estimates by broad industry groups (agriculture, mining & energy, manufacturing and services). Figure 4 reports these broad industry estimates relative to the estimate for the average (across all industries) direct effect of FTAs. This suggests that agriculture is the most sensitive to trade liberalisation, having the highest direct effect of FTAs on bilateral trade. This means that bilateral trade can be expected to increase the fastest for agriculture (compared to other industries). Mining and manufacturing trade also increase faster than average, but not as fast as agriculture. Trade

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in services increases less than average. This sluggish direct effect of trade liberalisation on services trade matches the insights from the literature that services typically are less tradable. Services are generally less tradeable than goods, due to often being location-bound. Note that these direct effects cannot be directly interpreted as total effects. Trade diversion effects could strengthen or dampen these direct effects, but without an explicit (gravity) model, we cannot say in what direction and to what extent.

Substitution elasticities are lower for agriculture, than they are for mining & energy, and manufacturing (in that order). Fontagné et al. (2022) estimates elasticities for disaggregated products and product groups. We manually match and/or average product group estimates to the direct FTA effect industry groups. Fontagné et al. (2022) reports comparatively low elasticities for agriculture, and mining & energy, and comparatively high elasticities for manufacturing trade. A lower elasticity of substitution then suggests that prices must change more after a trade liberalisation to restore equilibrium between supply and demand (CPB, 2020). This means that agriculture is more sensitive to trade liberalisation than mining & energy industries, or manufacturing industries (in that order). Fontagné et al. (2022) generally exclude services from their estimations. However (and once more), given that services are commonly supplied locally, we would expect relatively high elasticities.

We emphasise that without an explicit model of bilateral trade and retained output, the relative differences in the direct effects of FTAs on trade or the elasticities of substitution cannot be interpreted as welfare effects or total effects on (bilateral or total) trade. We leave the extension of our gravity model to structurally incorporate agriculture, mining & energy, and services for future research. We would expect that such an extension would yield sectoral estimates for agriculture and mining & energy (somewhat) larger than those reported in Table 1 for manufacturing trade. For trade in services, we would expect (somewhat) smaller sectoral estimates than those reported in Table 1.

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8   Qualitative assessments of the effects of the EU-NZ FTA gathered through interviews

Interview partners do not expect substantial changes in trade between the Netherlands and New Zealand, mostly due to the large geographical distance and the relatively small markets.

Introduction

SEO conducted two rounds of interviews to complement the quantitative analysis. The first interview round included conversations with the Dutch embassy in New Zealand and associations representing Dutch businesses in the country. This round served two primary purposes: a) acquiring a general view on the expected impact of the EU-NZ FTA, and b) identifying specific sectors and interview partners for a further in-depth analysis in the second round. As a result, the second round of interviews targeted Dutch sectors and companies that heavily trade with New Zealand, sectors highlighted as important by the gravity model, and other sectors as highlighted by first-round interviewees.

The evaluation team conducted interviews with the following stakeholders:
● Dutch embassy in New Zealand
● Dutch employer organisations and business associations with links in New Zealand
● Sector organisations and companies in the areas of agricultural machinery, dairy and horticulture

In these interviews we aimed to validate and further explore the impact of the EU-NZ FTA. We extensively discussed the trade barriers currently encountered by exporters when exporting to New Zealand, and the potential opportunities and competition arising from the FTA. Through these discussions, we also gained a greater understanding of the mechanisms through which the FTAs are expected to impact the Dutch economy.

We also supplemented and validated our interview findings with desk research. We conducted desk research on the key sectors identified to 1) explain gravity model results, 2) prepare questions for interviewees, 3) expand on insights provided by interviewees, and 4) uncover alternative views (in the media or by other studies) on the potential sector impacts of the FTAs.

Main findings

Exports to New Zealand
Interview partners do not perceive New Zealand as a compelling market for exporting goods and services, due to the large geographical distance and its relatively small size. Opportunities for exporting to New Zealand are therefore limited. Depending on the size of Dutch companies, the small market size of New Zealand may also serve as a deterrent for establishing local subsidiaries, as the limited potential for turnover could fail to justify the start-up and operational costs.

Horticulture, dairy and maritime services are a few examples of sectors in which Dutch companies have a comparative advantage over New Zealand companies, yet many interviewees also highlighted the

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importance of other barriers in preventing Dutch companies from exporting to New Zealand. Representatives of the flower bulb sector cite stringent safety requirements as a significant factor influencing their exporting decisions. In addition, representatives from the dairy sector mention the conservative production practices in New Zealand, and the lack of innovation-fostering subsidies from the government. The interest of Dutch firms in becoming a supplier to the New Zealand dairy sector, is hindered by these existing limitations within the enabling environment. It is important to note that these limitations fall outside the scope of any FTA.

Interview partners do not expect the FTA to have much impact on trade within the horticulture sector. In this sector, the trade relationship between the Netherlands and New Zealand is primarily marked by Dutch enterprises establishing subsidiaries in New Zealand to leverage the advantages of year-round production. Due to the opposite seasons, tulips and flower bulbs are already produced in NZ by Dutch subsidiaries and re-exported to third countries. The Netherlands already accounts for the majority of the flower bulbs produced for international trade, and although transit times and import duties will be reduced, interview partners do not expect a noteworthy increase in demand from New Zealand. Furthermore, the stringent safety measures, such as biosecurity and phytosanitary requirements, make exporting to New Zealand less appealing for Dutch companies.

In the transport and machinery sectors Dutch businesses could explore additional opportunities through the FTA. This agreement will lead to a reduction in duties on machinery imports from 5 to 0 percent, creating a more favorable trading environment. Furthermore, there is already a significant volume of machinery exports from the Netherlands to New Zealand, indicating the presence of established trade networks and existing demand. Additionally, the Netherlands has a technological advantage over New Zealand in terms of harvesting and agricultural equipment, presenting an opportunity for Dutch businesses to export their advanced technologies to the New Zealand market. Similarly, Dutch companies already export a large volume of vehicles (e.g. trucks and ships) to New Zealand, implying existing trade relations and local demand. These firms will also face lower import barriers and can be more competitive in New Zealand because of the FTA.

Imports from New Zealand

The EU is an interesting market for New Zealand dairy exporters. The EU and New Zealand are significant players in the global dairy industry, with both regions having a prominent role in dairy production. New Zealand, in particular, relies heavily on dairy as its main exporting sector. Yet, the current volume of dairy exports from New Zealand to both the EU and the Netherlands remains relatively low, accounting for less than 2 and 1 percent of total dairy imports, respectively. Hence, there is considerable room for expansion in this regard. In addition, New Zealand is also known for producing high quality products, and especially butter imports can be a disadvantage to Dutch companies. When considering dairy, the FTA mostly also focused on reducing the rates for butter, milk and milk powders. With the implementation of the FTA, it is anticipated that New Zealand's competitiveness in the EU dairy market will strengthen, therewith potentially affecting the Netherlands and other dairy-producing countries within the EU.

However, the entry of New Zealand exporters is limited by the quota regulations outlined in the FTA, according to interviewees. Interviewees do not anticipate a significant impact from these tariff reductions as the tariff rate quotas limit the potential imports from New Zealand. Interviewees also described the FTA as one with 'mixed emotions' when it comes to dairy. Whilst some interviewees reflect on concerns about increased competition, others highlight the benefits of market access. Interviewees suggest (and data show) that the existing dairy quotas already often remained underutilised. Furthermore, while Dutch dairy exporters primarily cater to the European mainland, New Zealand predominantly targets the Asian market, particularly China. The elimination of trade barriers

will enhance the appeal of exporting to the European Union for New Zealand dairy exporters. Also, Dutch dairy is also being exported to Asia and China, so the Netherlands and New Zealand are partly catering the same market.

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