

# The National and Global Impacts of Fiscal Deficit Consolidation

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## ABSTRACT

The US government deficit increased in relation to the fiscal responses which were designed to protect people and facilitate recovery. It has been forecasted that the government debt will rise to 160 percent of GDP or even higher by 2030. In response to the high debt, states are planning for deficit reduction strategies. However, there has been a debate on if the United States need fiscal consolidation and if the consolidation should be done through increasing taxation or reducing government spending. This paper uses the G-Cubed model to simulate the national and global implications of a permanent reduction in the fiscal deficit which is caused by a reduction in the government spending of 1% GDP. The results show that the fiscal consolidation strategies have different implications depending on which country undertakes the policy and how quick the country implemented the policy.

**Keywords:** Government Deficit, Fiscal Policy, COVID-19 Pandemic.

## 1. INTRODUCTION

The US government deficit increased in relation to the imposed legislation and other fiscal responses which were designed to sustain the economy and protect people from the Novel Coronavirus Disease (COVID-19) outbreak. In April 2020, President Trump signed Paycheck Protection Program and Health Care Enhancement Act. This is a US\$484 billion law, which aims to provide additional funding for small business loans, health care providers and COVID-19 testing. More recently, the unemployment benefit is extended and the employee social security payroll tax collection is deferred [6]. The increase in government spending and reduce in revenue wider the government deficit. According to the Bureau of the Fiscal Service, the US budget deficit was more than US\$3 trillion by the end of August [2]. It is expected that the government debt will rise to 160 percent of GDP or even higher by 2030 [5].

States are planning to reduce their spending or increase tax to reduce the deficit. New York State is planning to decrease its government spending, while California will raise business taxes [5].

However, whether the United States need fiscal deficit consolidation has been widely debated. Scholars also debate on whether a fiscal consolidation should be

conducted through tax increase or government spending reduction.

The purpose of this paper is to simulate the national and global impacts of a permanent decrease in the US fiscal deficit, brought by a permanent decrease in the government spending on goods and services of 1 percent of GDP.

This paper uses the G-Cubed model to explore three scenarios. The first scenario is that only the US undertakes the reduction policy and this policy is gradually phased in. The second scenario is that only the US undertakes the reduction policy and this policy is completely implemented in year 1. The third scenario is that both the US and the rest of the world undertake the reduction policy.

The paper is structured as follows. Section 2 is a literature review on fiscal deficit consolidation. Section 3 includes a summary of the G-Cubed model and the results. Section 4 is the discussion and section 5 is the conclusion. All figures are listed in Section 6.

## 2. LITERATURE REVIEW ON FISCAL DEFICIT CONSOLIDATION

The first debate on fiscal consolidation focuses on whether there is a need for fiscal reduction policy.

It is argued that government deficit has negative impacts on long term economic growth. People in the United States need to save more or borrow from overseas because less scarce financial capital will be allocated to private sector [11]. As the result, people either reduce their current consumption for saving or reduce their future consumption to payback the debt. In addition, the fiscal deficit may result in a decrease in domestic investment and an increase in current account deficit [12]. The ongoing deficit may negatively influence people's expectations and confidence and may generate a negative cycle 'among the underlying fiscal deficit, financial markets, and the real economy' [12].

On the other hand, some scholars argue that fiscal consolidation is not needed based on the current performance of the United States. It is argued that an increase in federal spending is needed to promote growth and should be financed by putting higher taxation on externalities [13]. A similar argument has been made by the International Monetary Fund. The International Monetary Fund argues that the COVID-19 crisis causes fiscal imbalances in many countries and having fiscal consolidation may sustain debt and reduce the current account gap [4]. However, the private sector saving is expected to offset the 2020 fiscal packages and the current account deficit should be relatively steady in the United States [4]. It is suggested that the United States should use the current considerable fiscal space to increase investment in infrastructure and should have a fiscal consolidation to reduce the debt-GDP ratio over the medium term [4].

Another debate on fiscal deficit focuses on whether the consolidation should be conducted through an increase in taxation or a decrease in government spending.

It is argued that reducing government spending and increasing tax are both needed for fiscal consolidation in the United States. Altshuler and Bosworth argue that although reducing expenditure is fundamental for fiscal consolidation, population ageing and the increasing demand for health care and makes it difficult to reduce government spending [1]. It is concluded that the reduction of spending should be combined with an increase in government revenue to form a better fiscal consolidation policy [1].

However, a plan which avoids an increase in taxation may be more desirable to sustain the long-term growth. Cogan and colleagues use the New-Area-Wide Model and argue that a fiscal consolidation plan which limits government spending but does not increase taxation may immediately boost the GDP and followed by 'a sustained increase in long-term GDP growth' based on the current deficit level in the United States [3].

### **3. THE UNITED STATES: A REDUCTION IN THE FISCAL DEFICIT**

This section stimulates the impacts of having the United States permanently reduce the fiscal deficit. It is assumed that the permanent reduction is caused by a permanent reduction in the US government spending of 1% of GDP. It is also assumed that the reduction of government spending is on goods and services.

The policy is evaluated using the G-Cubed model, which is 'a multi-country, multi-sector, intertemporal general equilibrium model [9]. It is assumed that saving and investment level is calculated using forward-looking intertemporal optimisation problems. Households 'maximise an intertemporal utility function subject to a lifetime budget constraint' in order to find the optimal level of saving, and 'firm choose investment to maximise the stock market value of their equity' [9].

The model used in this paper is a special version of the G-Cubed model, which consists of two regions: the United States and the rest of the world. It is assumed that the government purchases goods and services, pay interest on government debt, pays investment tax credits and transfers to household [9]. Government spending is financed by various tax revenues and revenue from selling government bonds. The real government spending on goods and services is assumed to be exogenous [9]. Additionally, if a government is running a budget deficit today, it must run a budget surplus in future to accommodate today's deficit [9].

UU represents the implications in the United States, and NN represents the implications in the rest of the world. It is assumed that households demand both energy (labelled as g01) and non-energy goods (labelled as g02).

#### ***3.1. A Cut in The Fiscal Deficit, Rapid Versus Gradual***

The first two scenarios focus on the question: will the implications vary depend on how quick the United States undertake the fiscal deficit reduction policy? If the United States undertake a rapid policy, the government spending reduction is completely implemented in year 1. If the United States undertake a phased policy, the government spending reduces 0.25 percent of GDP in year 1, 0.5 percent of GDP in year 2, 0.75 percent of GDP in year 3 and 1 percent of GDP from year 4 onwards. The results are shown in Figure 1-12.

It is argued that having fiscal consolidation stimulates investment and net export [7]. This argument is supported by Figure 3, 4, 9 and 10, which show that if the United States undertakes the deficit reduction policy, both investment and current account balance increase above the baseline in the longer term.

If the United States takes the rapid policy, which permanently reduces its fiscal deficit in year 1, fiscal deficit reduces by more than 0.9 percent in the first year (Figure 11). Investment falls as capital flow out of the United States to the rest of the world in the short run (Figure 10). The US short run real risk-free interest rate falls followed by investment (Figure 8). This acts as the depreciation of the US exchange rate [8]. The US current account balance increases by more than 0.7 percent in the second year (Figure 9). The long run implication is different from the short run. The real interest rate increases from year 1. The forward-looking firms increase investment above the baseline from the fifth year. As shown in Figure 9, a decrease in fiscal deficit raises the current account balance by about 0.2 percent of GDP deviation in the long run.

On the other hand, if the United States takes the phased policy, fiscal deficit gradually decreases and reaches the lowest point, which is more than 0.8 percent lower than the baseline in the fourth year (Figure 5). The real interest rate increases in the first year and then decreases to 0.1 percent lower than the baseline in the longer term.

Household consumption on both energy and non-energy goods increase more than 1 percent above the baseline in the long run (Figure 6 and Figure 12). The increase in private consumption may be because of the consumers' expectations. It is expected that a cut in the fiscal deficit today will lead to a slower growth in government debt in the future, and lower future taxes [10].

Since both consumption and investment increase above the baseline in the longer-term, the real GDP increases by more than 0.1 percent higher than the baseline in the long run (Figure 1 and Figure 7).

### ***3.2. The World Consolidates, As Well As the United States***

The third scenario focuses on the question: what will happen if both the United States and the rest of the world undertake the same instantaneous fiscal deficit reduction policy? It is assumed that both the United States and the rest of the world undertake the policy which reduces government spending by 1 percent of GDP from year 1 onwards. The results are shown in Figure 13-18.

The implications on the real GDP, real interest rate, investment and fiscal deficit in the United States are the same as in the rest of the world.

The current account balance does not change significantly compares to the baseline in both the United States and the rest of the world (Figure 15). The real GDP and investment in the United States and the rest of the world increase above the baseline (Figure 13 and Figure 16). The real interest rate and fiscal deficit decrease

below the baseline (Figure 14 and Figure 17). The private consumption of energy goods in the United States is the same as the consumption in the rest of the world. The United States consume the same percentage deviation of non-energy goods as the rest of the world. The total consumption of non-energy goods increases more than the consumption of energy goods (Figure 18).

## **4. DISCUSSION**

The national implications vary depend on how quick the United States undertake the fiscal deficit reduction policy in the short run. If the policy is gradually phased in, the United States will have a larger decrease in the real GDP within the first five years. The real interest rate will increase in the first year and then drop to about 0.4 percent below the baseline in the following years. The investment decreases by a larger percentage compared to the scenario that if the policy is completely implemented in year 1.

The global implications are similar, regardless how quick the United States undertake the fiscal deficit reduction policy in the short run, except for investment and real interest rate. If the policy is completely implemented in year 1, investment increases by a higher percentage in the first year, and real interest rate decreases below the baseline in year 1.

In the longer run, the national and global implications are similar, regardless how quick the United States undertake the fiscal deficit reduction policy. In the United States, the real GDP, the current account balance, investment and household demand for energy and non-energy goods are above the baseline. In contrast, the real interest rate and the fiscal deficit are below the baseline. In the rest of the world, the real GDP, the current account balance, investment, the real interest rate, the fiscal deficit and household demand for energy and non-energy goods are all below the baseline.

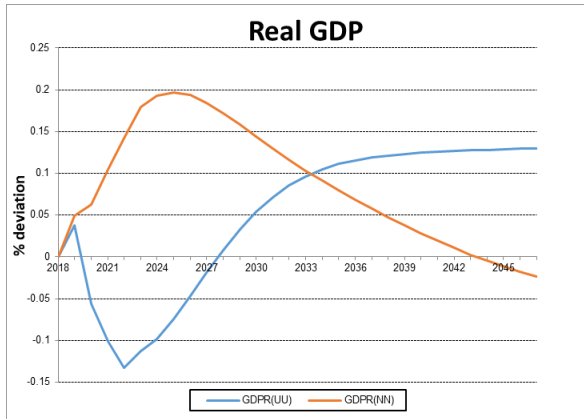
If both the United States and the rest of the world undertake the same instantaneous fiscal deficit reduction policy, the national implications are the same as the global implications over time.

## **5. CONCLUSION**

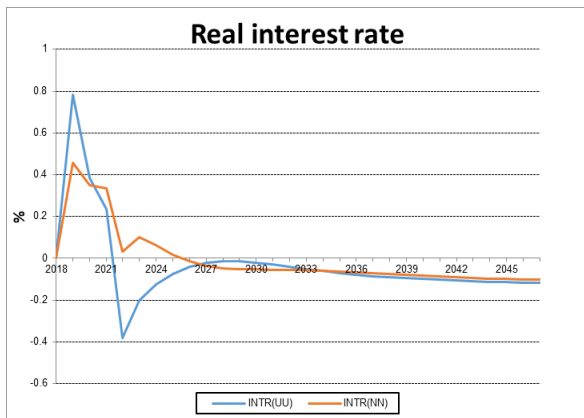
In this paper, I stimulated and compared the national and global impacts of a fiscal consolidation policy in which the government permanently reduces its spending by 1 % GDP to reduce the fiscal deficit. This paper considers three scenarios, which are: only the United States undertakes the policy, and this policy is gradually phased in; only the United States undertakes the policy and the policy is completely implemented in year 1; and, both the United States and the rest of the world undertake the policy and the policy is completely implemented in year 1.

As discussed, the implications of fiscal consolidation vary depending on which country undertake the government spending reduction policy, and how quick the country implements the policy. Whether the United States need fiscal consolidation and the strategies needed are remain debatable.

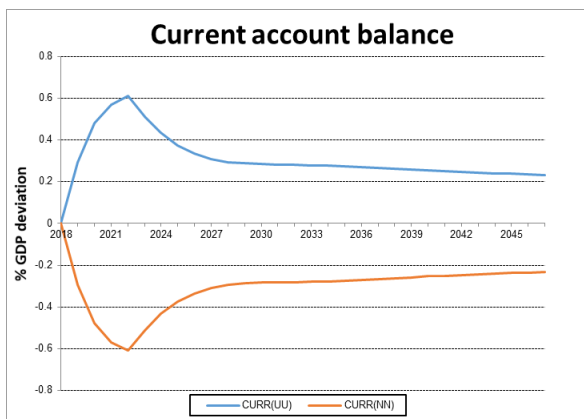
**6. FIGURES**



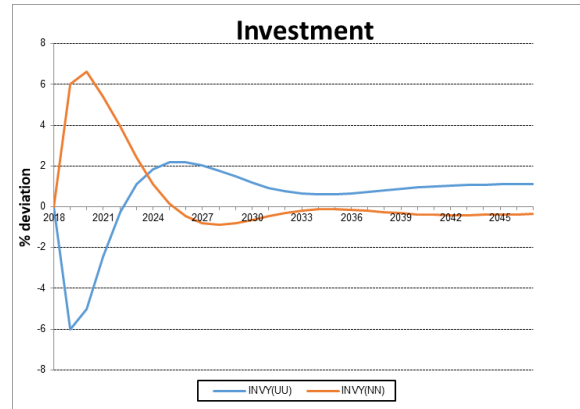
**Figure 1 Real GDP**



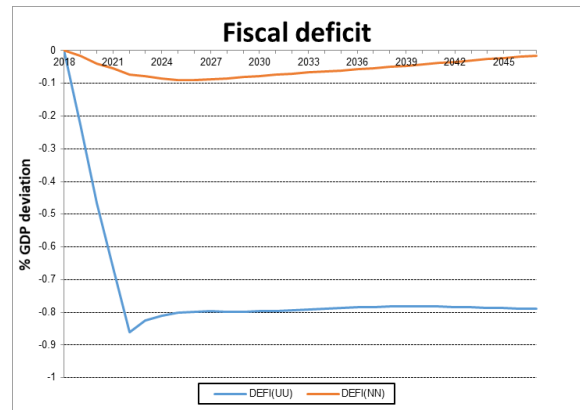
**Figure 2 Real interest rate**



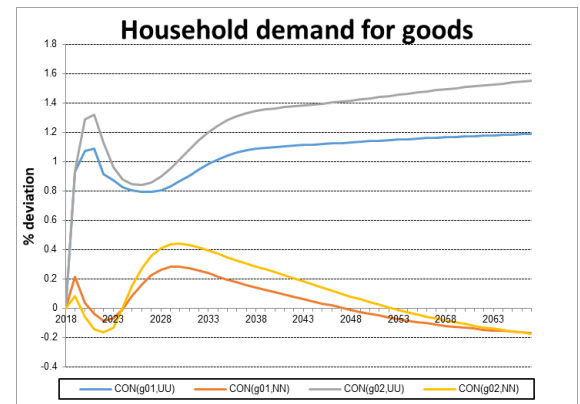
**Figure 3 Current account balance**



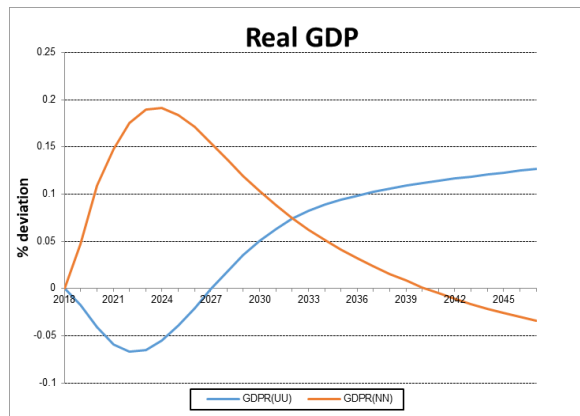
**Figure 4 Investment**



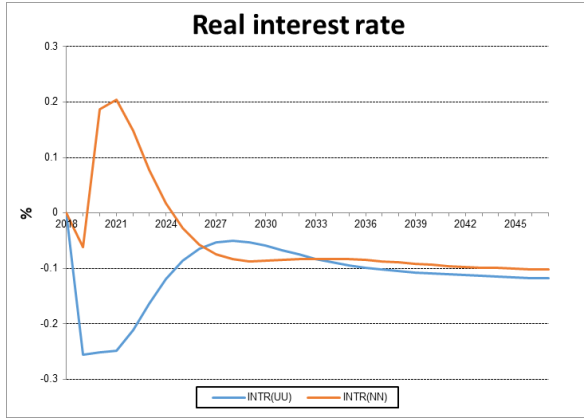
**Figure 5 Fiscal deficit**



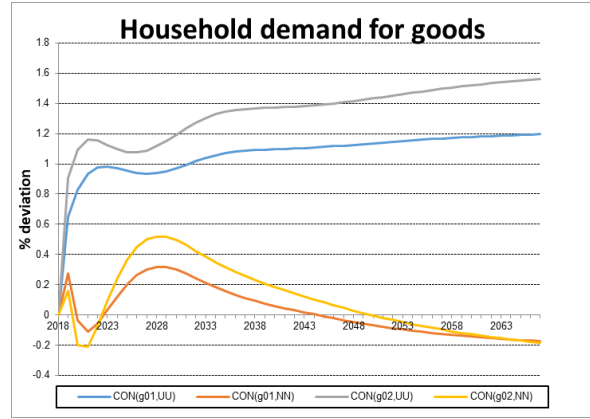
**Figure 6 Household demand for goods**



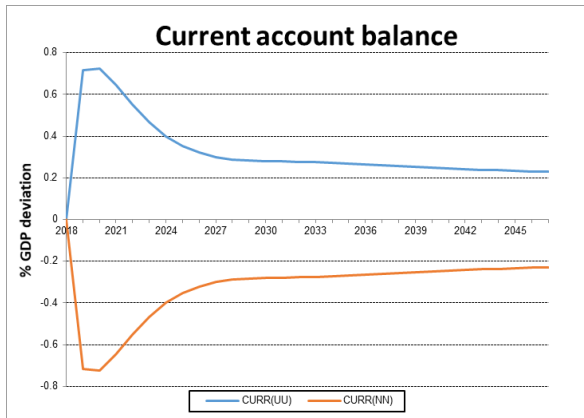
**Figure 7 Real GDP**



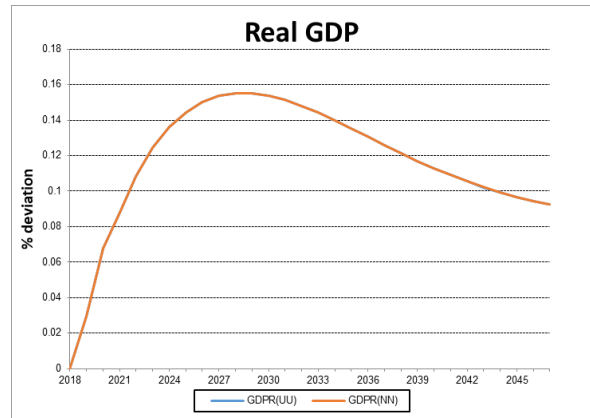
**Figure 8** Real interest rate



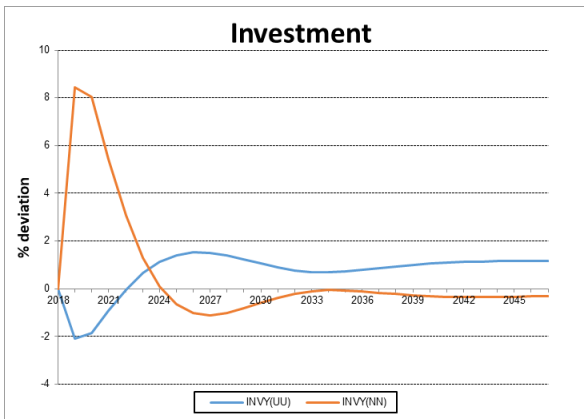
**Figure 12** Household demand for goods



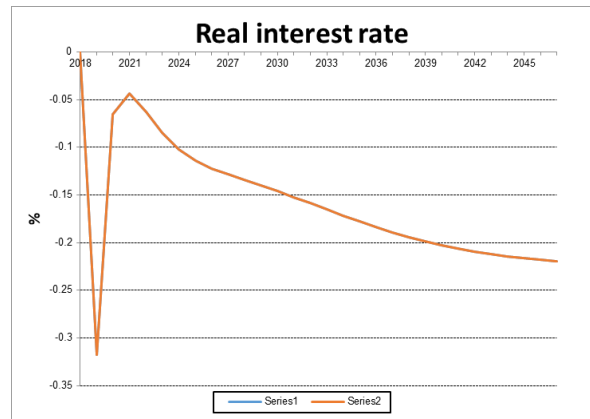
**Figure 9** Current account balance



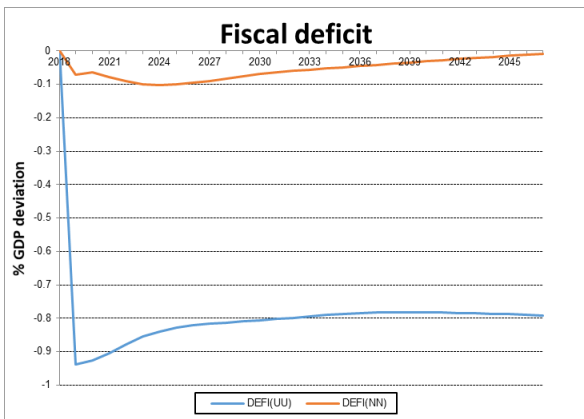
**Figure 13** Real GDP



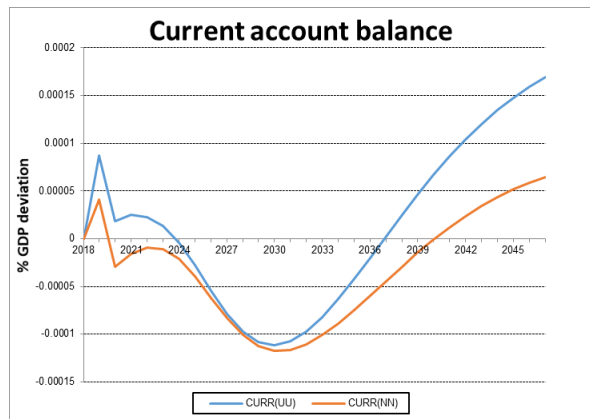
**Figure 10** Investment



**Figure 14** Real interest rate



**Figure 11** Fiscal deficit



**Figure 15** Current account balance

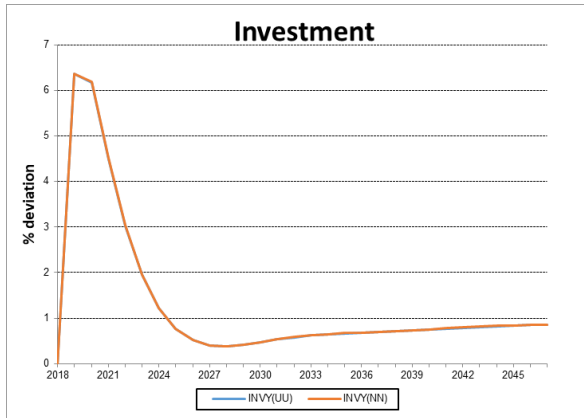


Figure 16 Investment

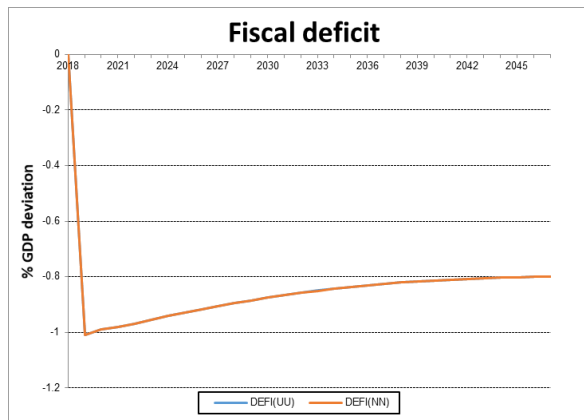


Figure 17 Fiscal deficit

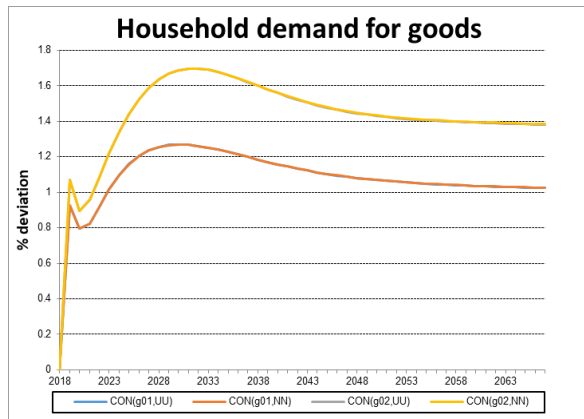


Figure 18 Household demand for goods

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