Exercises with the HP Filter - Graphs

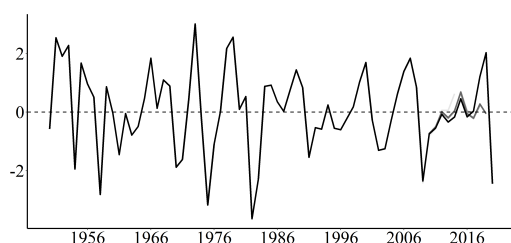Javier Garcia-Cicco   Franco Nuñez
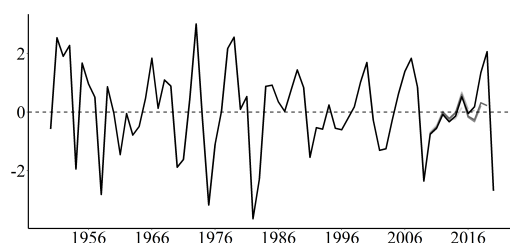
July 2021
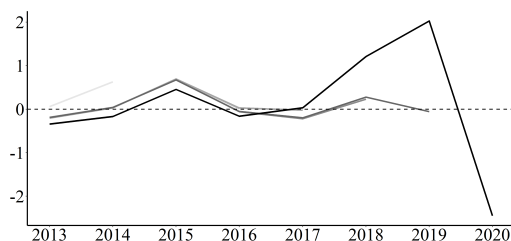
1 Estimated cycles graphs

1.1 United States

Figure 1: Estimated cycles for the Untied States: annual data.

(a) Base exercise, 1950-2020

(b) Exercise with forecasts, 1950-2020

(c) Base exercise, 2013-2020

(d) Exercise with forecasts, 2013-2020

Note: The logarithm of real US GDP (2012 chained billions of dollars) is used. The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. Source: own elaboration based on FRED and various editions of the WEO (IMF).

Figure 2: Estimated cycles for the United States: quarterly data.
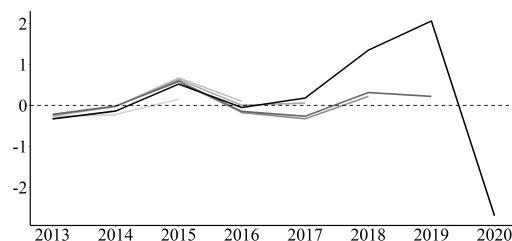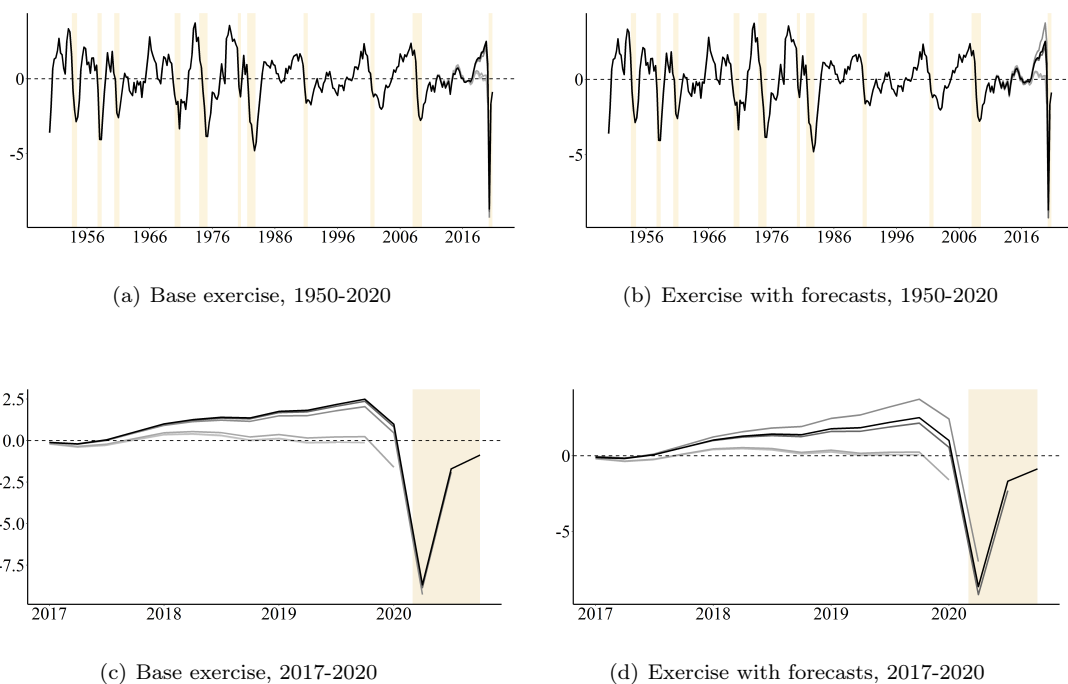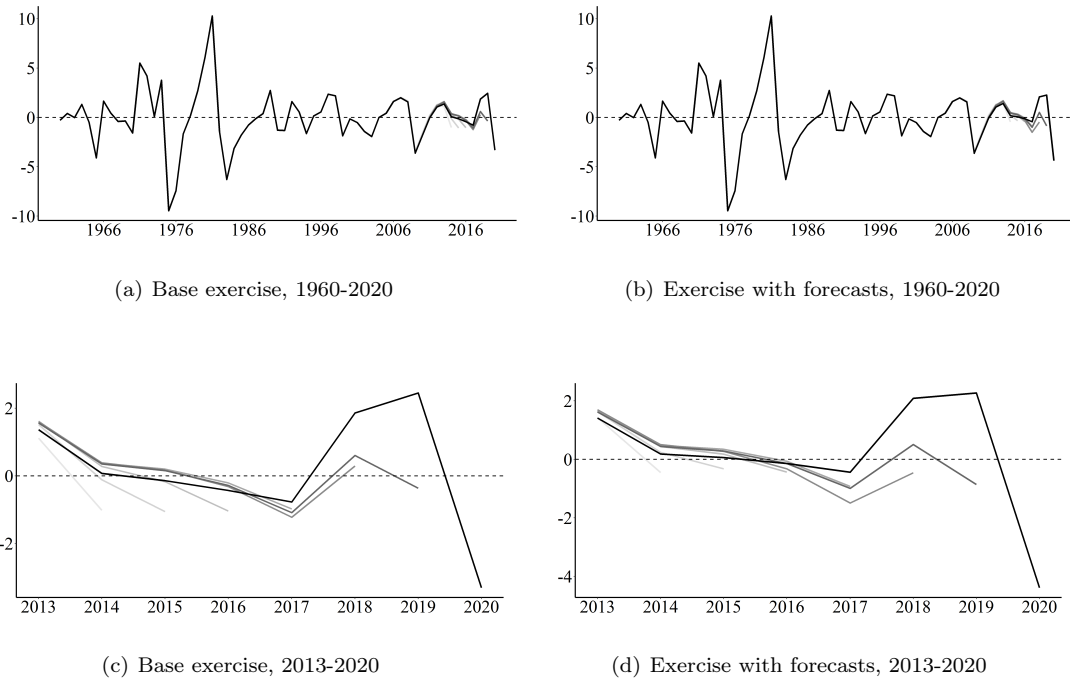

(a) Base exercise, 1950-2020

(b) Exercise with forecasts, 1950-2020

(c) Base exercise, 2017-2020

(d) Exercise with forecasts, 2017-2020

Note: The logarithm of real US GDP is used (seasonally adjusted, in billions of dollars chained from 2012). The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. The shaded recession bars correspond to the dates defined by NBER (2021). Source: own elaboration based on FRED and various editions of the WEO (IMF).

1.2 Chile

Figure 3: Estimated cycles for Chile: annual data.

(a) Base exercise, 1960-2020

(b) Exercise with forecasts, 1960-2020

(c) Base exercise, 2013-2020

(d) Exercise with forecasts, 2013-2020

Note: the logarithm of the Chilean real GDP (billions of Chilean pesos chained) is used. The black line corresponds to the estimation with the full complete sample, the gray lines become lighter as a previously truncated sample is used. Source: own elaboration based on the Central Bank of Chile.

Figure 4: Estimated cycles for Chile: quarterly data.
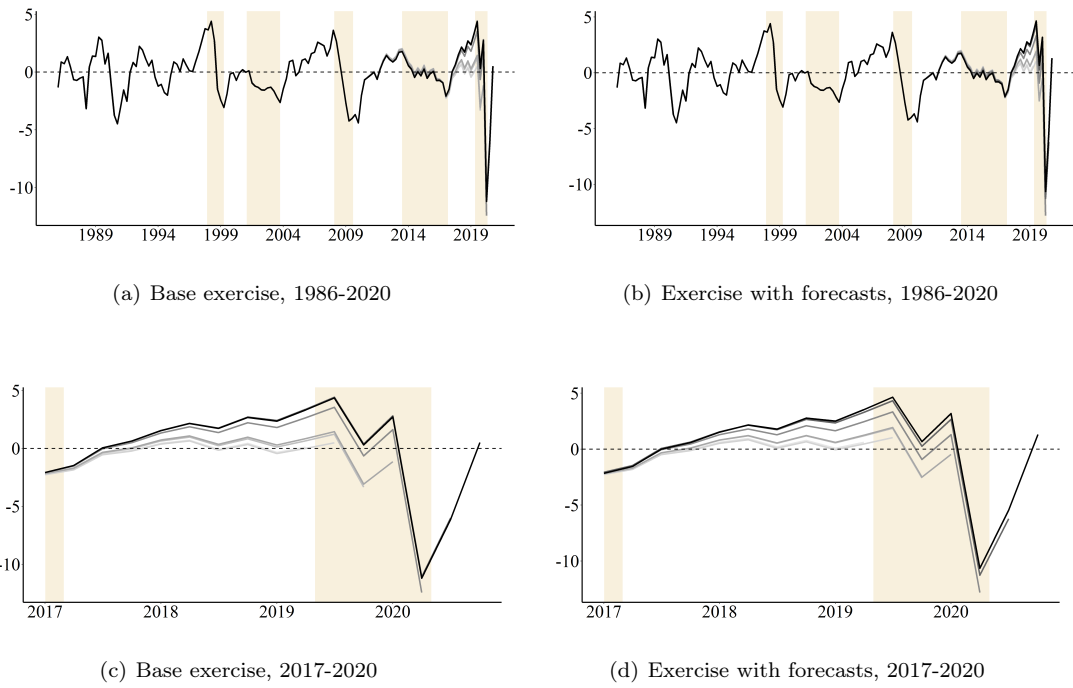
(a) Base exercise, 1986-2020

(b) Exercise with forecasts, 1986-2020

(c) Base exercise, 2017-2020

(d) Exercise with forecasts, 2017-2020

Note: the logarithm of the Chilean real GDP (billions of Chilean pesos chained) is used. The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. The shaded recession bars correspond to the dates defined by OECD (2021). Source: own elaboration based on the Central Bank of Chile.
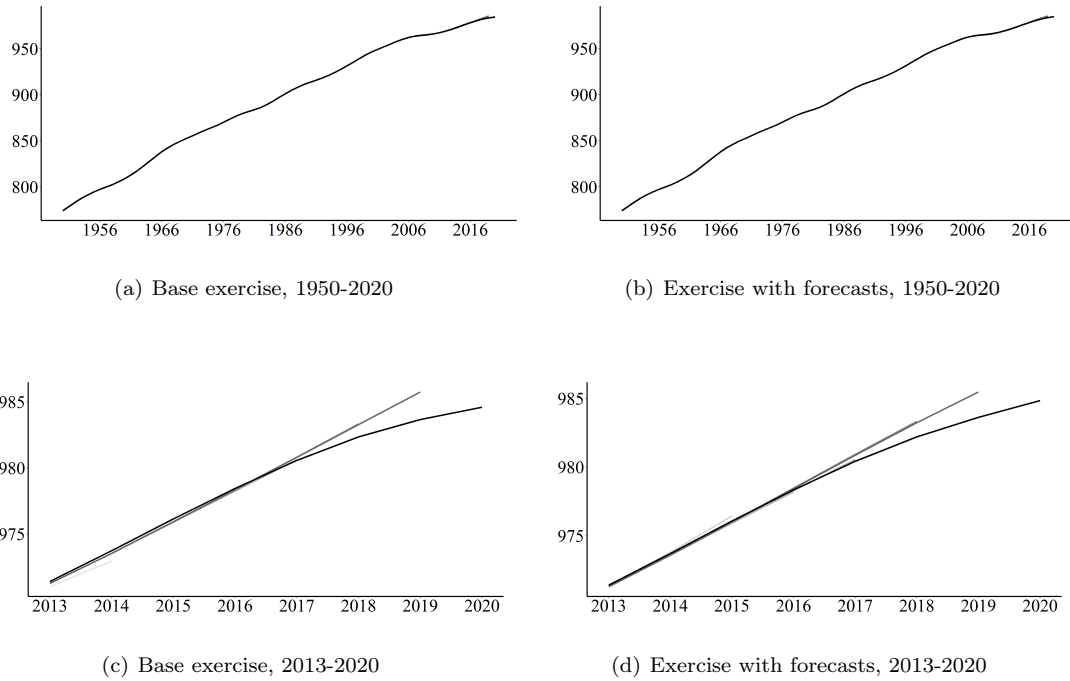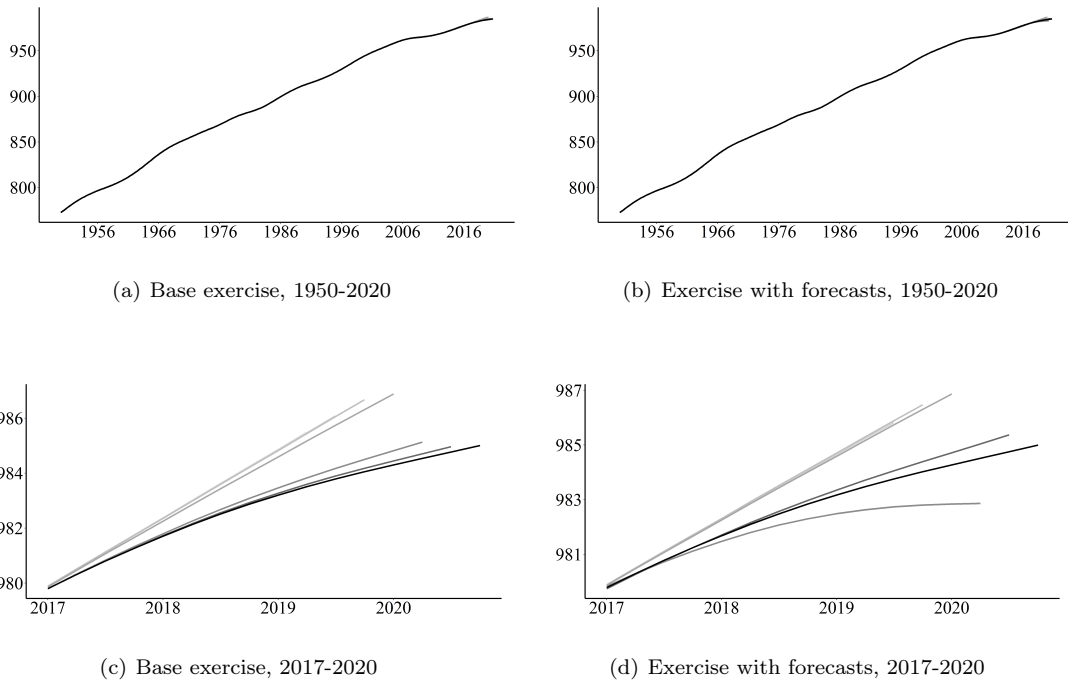
2   Estimated trends graphs

2.1   United States

Figure 5: Estimated trends for the United States: annual data.

(a) Base exercise, 1950-2020

(b) Exercise with forecasts, 1950-2020

(c) Base exercise, 2013-2020

(d) Exercise with forecasts, 2013-2020

Note: The logarithm of real US GDP (2012 chained billions of dollars) is used. The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. Source: own elaboration based on FRED and various editions of the WEO (IMF).

Figure 6: Estimated trends for the United States: quarterly data.

(a) Base exercise, 1950-2020

(b) Exercise with forecasts, 1950-2020

(c) Base exercise, 2017-2020

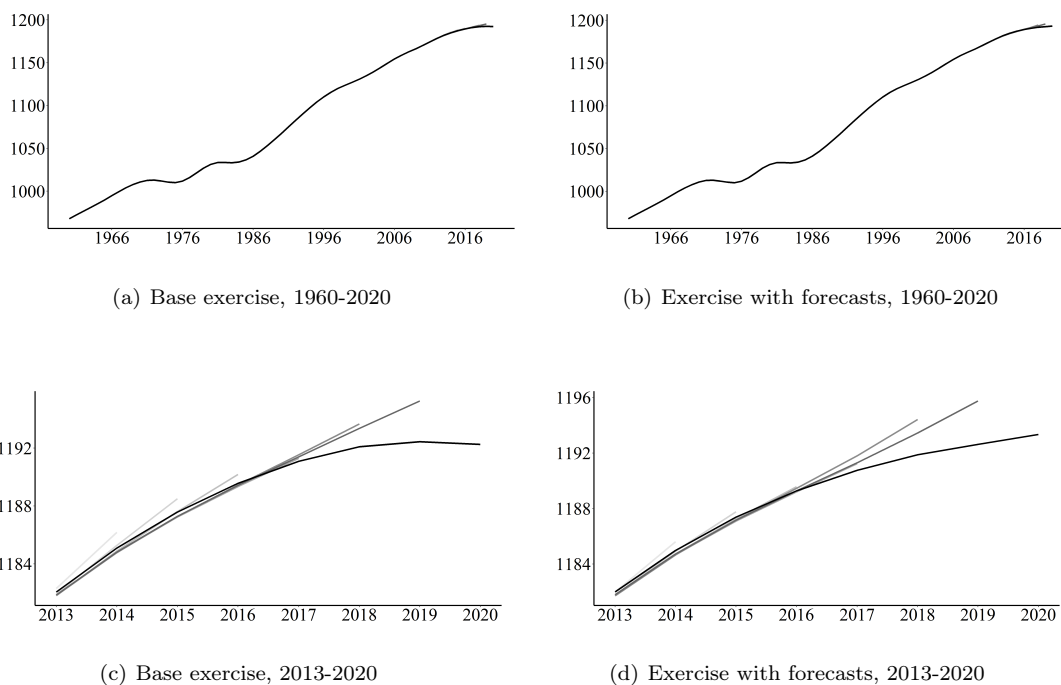(d) Exercise with forecasts, 2017-2020

Note: The logarithm of real US GDP is used (seasonally adjusted, in billions of dollars chained from 2012). The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. Source: own elaboration based on FRED and various editions of the WEO (IMF).
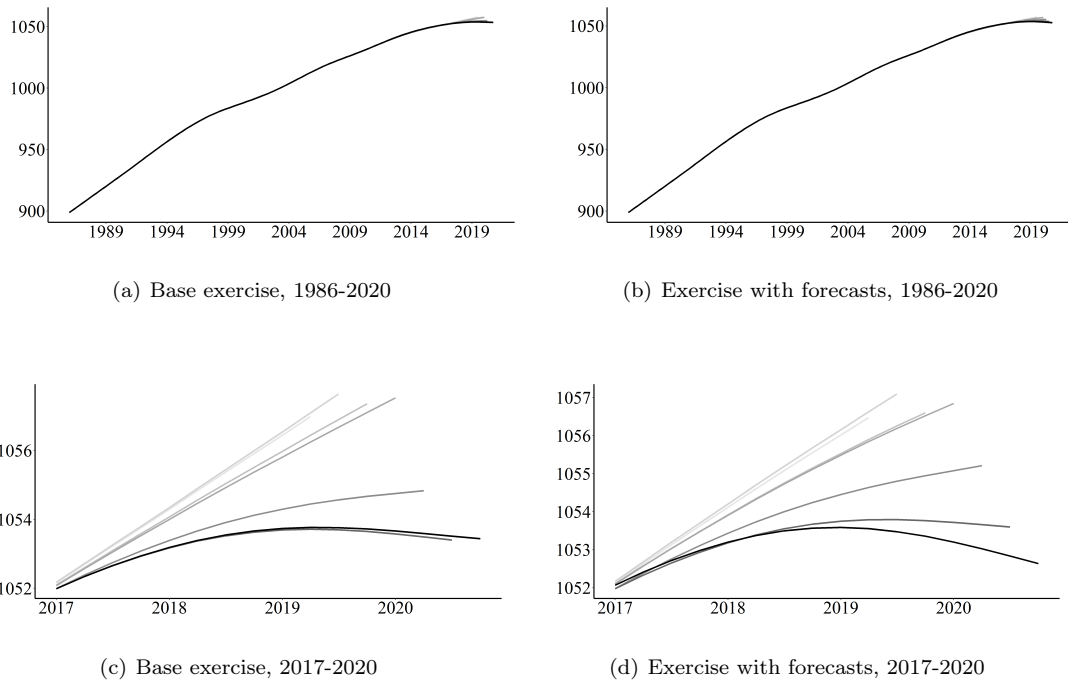
2.2 Chile

Figure 7: Estimated trends for Chile: annual data.

(a) Base exercise, 1960-2020

(b) Exercise with forecasts, 1960-2020

(c) Base exercise, 2013-2020

(d) Exercise with forecasts, 2013-2020

Note: the logarithm of the Chilean real GDP (billions of Chilean pesos chained) is used. The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. Source: own elaboration based on the Central Bank of Chile.

Figure 8: Estimated trends for the United States: quarterly data.

(a) Base exercise, 1986-2020

(b) Exercise with forecasts, 1986-2020

(c) Base exercise, 2017-2020

(d) Exercise with forecasts, 2017-2020

Note: the logarithm of the Chilean real GDP (billions of Chilean pesos chained) is used. The black line corresponds to the estimation with the full sample, the gray lines become lighter as a previously truncated sample is used. Source: own elaboration based on the Central Bank of Chile.