The macroeconomic impact of Trump*

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Abstract

Donald Trump was President of the United States from January 2017 to January 2021. During that time, except for the period since spring 2020 when the COVID-19 pandemic took its toll on economic activity, the US economy has been doing very well according to key indicators like the unemployment rate and GDP growth. Does Trump deserve credit for the booming economy? To address this question, we develop a counterfactual scenario for how the US economy would have evolved without Trump—we let a matching algorithm determine which combination of other economies best resembles the pre-election path of the US economy. We then compare the performance of the US economy during Trump's Presidency to this synthetic "doppelganger". There is little evidence for a Trump effect.

Keywords: President Trump, macroeconomic performance, economic growth, counterfactual, synthetic control method, doppelganger

JEL-Codes: E30, E60

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1 Introduction

Donald Trump was elected President of the United States on November 8, 2016. His term as the 45th President ran from January 20, 2017 to January 20, 2021. Before the COVID-19 pandemic hit in March 2020, the US economy was doing very well along many metrics. To pick one indicator, the unemployment rate reached a 50-year low of 3.5 percent in September 2019 and remained very low up until February 2020. Trump did not hesitate to claim credit.[1] In what follows, we ask whether he really deserves credit for the booming economy during his time in office or not.

To answer this question, we must not simply look at the actual performance of the US economy. Instead, we need to develop a counterfactual scenario against which we can benchmark actual developments. In order to do so we employ the synthetic control method (Abadie et al., 2010, 2015; Abadie and Gardeazabal, 2003). We construct a synthetic control unit as a weighted average from a "donor pool" of OECD economies. We determine the weights so that the behavior of the control unit resembles the US economy as closely as possible *prior to the presidential election in 2016*. The economies and their weights are picked by an algorithm in an entirely data-driven way. We then compare the actual developments in the US since the election to that of its "doppelganger" (Born et al., 2019).

We find that the doppelganger tracks the behavior of the US prior to the Trump election very well. Hence, it provides a natural benchmark for assessing the macroeconomic impact of Trump. Our identification assumption is that the doppelganger economy continues to behave in the way the US economy would have behaved in the absence of Trump. On the basis of this assumption we find no evidence for a Trump effect: during the first 3 years of his tenure, economic performance in the US was not systematically different from what we observe for the doppelganger. For the last year, dominated by the COVID-19 pandemic, we observe some differences in the relative economic performance. But across indicators there is no clear-cut picture—so again: there is no compelling evidence for a Trump effect.

[1] For instance, Trump (2018) states: "We've got the greatest economy, maybe, ever—maybe in history. We have the greatest economy we've ever had ... If we didn't win, this economy would be a wreck."

The remainder of our study is organized as follows. Section 2 discusses briefly related the literature. Section 3 describes the construction of the doppelganger that serves as a counterfactual against which we benchmark actual developments in the US. We do so in Section 4. A final section concludes. We provide additional results in the appendix.

2 Related literature

Our analysis provides an assessment of Trump's overall effect on the US economy and does not analyze the impact of specific policy measures. Here we briefly highlight important work which looks at specific measures. For instance, in December 2017 the US congress enacted the *Tax Cuts and Jobs Act*. It brought about a large reduction of tax rates for individuals and businesses. While controversial in many respects, most observers agree that the tax reform provided a boost to output growth, both in the short and the long run (Barro and Furman, 2018; Mertens, 2018; Sedláček and Sterk, 2019). However, the tax reform was not the only policy measure put forward by the Trump administration. Another key item on the agenda is trade policy. While there was no full-blown trade war during the first years of the Trump administration, even the "cold trade war" was likely to be detrimental to economic activity (Handley and Limão, 2017; Handley and Limão, 2017).

There is also a growing literature which evaluates the economic policy response to the COVID-19 pandemic. Policy makers in the US have been particularly quick to implement a large fiscal package, the *Coronavirus Aid, Relief, and Economic Security (CARES) Act*. It was signed into law by Trump on March 27, 2020 and amounted to $2 trillion of federal funds, disbursed to households and firms through various channels. Bayer et al. (2020) perform a model-based analysis of the transfer component of the CARES act and find that transfers that were anticipated to be paid out as people become unemployed were particularly effective in stabilizing economic activity (see also, Castro, 2021). A comparison across a large number of countries by International Monetary Fund (2020) shows that the fiscal response in the US was particularly large. The projected government budget deficit for 2020 amounted to 18.7

percent, the second-largest in the group of advanced economies. Taking a more theoretical perspective, Guerrieri et al. (2020) analyze the effectiveness of economic policies in an economy where the shut-down of specific sectors gives rise to "Keynesian supply shocks". Lastly, we also acknowledge work on the design of optimal mitigation policies in models which consider economic activity and epidemic dynamics jointly (e.g. Eichenbaum et al., 2020). However, at the time of writing, a final assessment of the relative merits of different lockdown policies in different countries appears premature.

More fundamentally, one may ask whether administrations actually can make a difference to the macroeconomy as they come into power? As established by Hibbs (1977), election outcomes do matter for macroeconomic performance, because parties pursue policies that cater to their core constituencies. Alesina and Sachs (1988) provide further evidence for this partisan view. They document, in particular, that US growth is systematically higher during the first half of Democratic administrations. Just like Hibbs, they interpret their findings in the context of a trade-off between unemployment and (surprise) inflation. More recently, Blinder and Watson (2016) observe that the US economy has systematically performed better under Democratic presidents than under Republican presidents. This, they find, is because Democratic presidents have experienced more favorable economic shocks.

Trump, however, transcends traditional partisan politics to the extent that some of his policies are not conforming well with the traditional orthodoxy of the Republican party. In this regard, it is interesting to observe that national *leaders* as such can matter for economic growth. Jones and Olken (2005) find a sustained change in growth patters in the context of leadership transitions that are caused by death due to natural causes. Such leader effects are particularly pronounced among autocrats that are less constrained in their powers. Easterly and Pennings (2019) look into the growth performance of specific leaders and find it difficult to confirm statistically significant leader effects in terms of economic growth. They emphasize that it is key to consider an appropriate benchmark rather than "giving leaders credit for the raw growth average during their tenures." This insight lies at the heart of our analysis, too.

3 Constructing the doppelganger

In order to measure Trump's impact on macroeconomic performance in the US, we need to define an appropriate benchmark. For this purpose, we construct a doppelganger for the US economy based on synthetic control methods as developed by Abadie et al. (2010, 2015) and Abadie and Gardeazabal (2003). Ideally, the doppelganger behaves just like the US economy, the difference being that it did not get "treated" by the economic policies of the Trump administration.

3.1 Methodology

The doppelganger is a weighted average of C countries in the "donor pool". The weights are determined by minimizing the distance between a selected number I of economic time-series in the US and in the doppelganger *prior to* the "treatment". Let T denote the length of the sample prior to treatment. In addition, following Abadie et al. (2010) and Abadie and Gardeazabal (2003), we require the doppelganger to also match the pre-treatment averages of a number K economic characteristics, so called "covariates".

Formally, we let $\mathbf{x_1}$ denote the $(M \times 1)$ vector stacking the T observations for each of the I variables of interest and the K covariate averages in the US, such that $M = I \times T + K$. Let $\mathbf{X_0}$ denote a $(M \times C)$ matrix with the respective observations in the countries included in the donor pool. Finally, we let $\mathbf{w}$ denote a $(C \times 1)$ vector of weights w_j, $j = 2, \ldots, C+1$. Then, the doppelganger is defined by $\mathbf{w}^*$ which minimizes the following mean squared error:

$$(\mathbf{x_1} - \mathbf{X_0}\mathbf{w})'\mathbf{V}(\mathbf{x_1} - \mathbf{X_0}\mathbf{w}) \ , \tag{1}$$

subject to $w_j >= 0$ for $j = 2, \ldots, C+1$ and $\sum_{j=2}^{C+1} w_j = 1$. In this expression, $\mathbf{V}$ is an $(M \times M)$ symmetric and positive semidefinite matrix.[2]

[2] $\mathbf{V}$ is a weighting matrix assigning different relevance to the characteristics in $\mathbf{x_1}$ and $\mathbf{X_0}$. Although the matching approach is valid for any choice of $\mathbf{V}$, it affects the weighted mean squared error of the estimator (see the discussion in Abadie et al. (2010), p. 496). Following Abadie and Gardeazabal (2003) and Abadie et al. (2010), we choose a diagonal $\mathbf{V}$ matrix such that the mean squared prediction error of the outcome variable (and the covariates) is minimized for the pre-election period. Including the covariates in the optimization differs

3.2 Model specification and data

In order to assess the macroeconomic performance, we focus on GDP, but also on a number of labor market indicators, since these are of particular relevance in the political debate. The US has recently experienced strong employment growth as well as a remarkable increase in the labor force and, last but not least, unemployment rates have reached historically low levels. In our construction of the doppelganger we rely on time-series data for the first three variables—GDP, employment, and the labor force—such that $I = 3$. We make use of the fourth variable—the unemployment rate—as an external validation of the model, that is, we compare the time path of the unemployment rate in the doppelganger economy to the US. If the doppelganger performs well in this regard, even though the time path of unemployment has not been used in the construction of the doppelganger, we feel confident to benchmark the US economy against the doppelganger. We prefer this approach to including the time series for the unemployment rate directly in criterion (1).[3]

As noted in Section 3.1, the estimation matches not only I time series, but also K covariates. In our application, these are average characteristics of the US economy and include the GDP shares of consumption, investment, and net exports, plus labor productivity growth and the average unemployment rate, that is, $K = 5$.[4] We construct the doppelganger on the basis of a "donor pool" of $C = 24$ OECD countries (see also our earlier study on the Brexit vote, Born et al., 2019). This is advantageous as it provides us with a set of relatively homogeneous countries and, importantly, we can also draw on a common data source: the Economic Outlook database of the OECD (issue 108, published in December 2020). In all instances, we use

from Kaul et al. (2018) who have raised concerns about including all pre-intervention outcomes together with covariates when using the SCM. The size of $\mathbf{V}$ is determined by the number of observations to be matched. These include I time series of length T and the K covariate averages.

[3] In fact, the nature of the estimation procedure makes it difficult to combine trending variables (like real GDP) with cyclical indicators (like unemployment). This is because the minimization procedure is then dominated by the more volatile cyclical indicators. While in principle it is possible to define V, the weighting matrix in (1), such that it would assign less weight to unemployment relative to real GDP, this adjustment would necessarily be arbitrary.

[4] In order to best match on "predictors" of growth, we take averages of covariates one year prior to the election, that is, 2015Q3 to 2016Q2.

Table 1: Matching of covariates

	US	Doppelganger
Consumption / GDP	69.0	58.4
Investment / GDP	20.6	21.2
Net Exports / GDP	-4.3	1.5
Labor productivity growth	-0.1	-0.1
Unemployment rate	5.0	6.9

Note: All numbers are in percent. Labor productivity growth is the log difference between quarterly real GDP and quarterly total employment.

quarterly observations for the period 1995Q1–2020Q4.[5] All variables are normalized to unity in 1995. Finally, we assume that treatment takes place in 2016Q4, the quarter of the Trump election. As a result, $T = 87$. In an alternative specification reported in the appendix, we consider 2017Q1 as the treatment date, that is, the time when President Trump actually took office, and find very similar results.

3.3 The doppelganger

Table 1 and 2 and Figure 1 show the results of our synthetic control estimation. We now focus on the estimated weights and the model fit. The next section zooms into the post-election period and assesses Trump's macroeconomic impact.

Table 1 shows how the doppelganger performs in terms of our targeted covariates. The figure displays the time series for real GDP, total employment, total labor force and the unemployment rate in the US (blue solid line) and in the doppelganger economy (red dashed line). We measure the deviation of a variable from its value in 1995Q1 in percent along the vertical axis, except for the unemployment rate which we measure in percent. The horizontal axis measures time in quarters. The shaded area represents two standard deviations of the pre-treatment difference between the respective US aggregate and its doppelganger.

The match is imperfect because our procedure determines $C = 24$ parameters (country

[5]As data for 2020Q4 is not fully available at the time of the OECD Economic Outlook publication in December 2020, we rely on nowcasts included in the same publication.

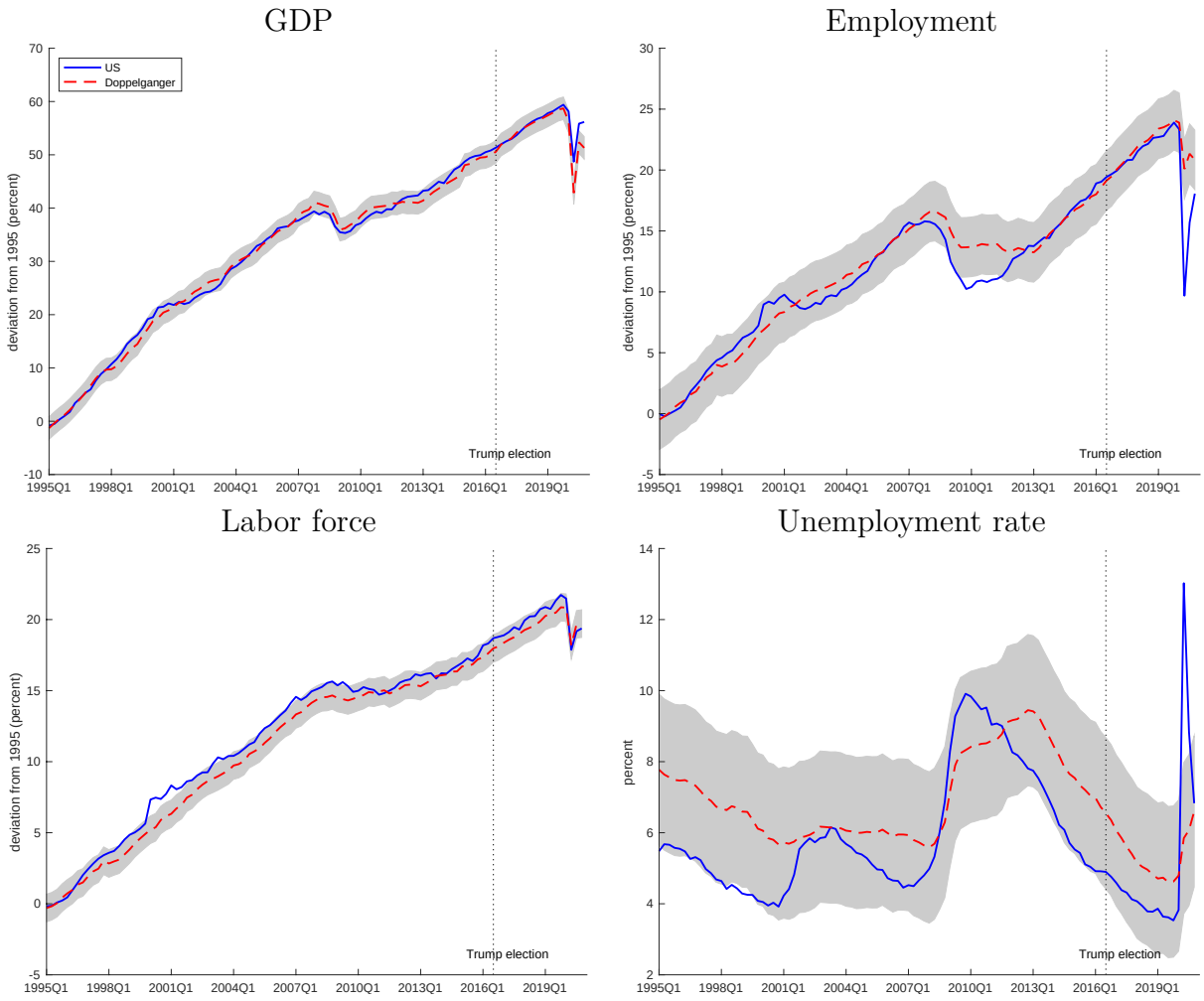

Figure 1: Macroeconomic performance and labor market dynamics in US (blue solid line) and in doppelganger economy (red dashed line). *Note:* shaded areas represent two standard deviations of the difference between the a variable in the US and the doppelganger economy. Dotted line indicates Trump election. Time-series for unemployment rate used for external validation (not used to construct doppelganger). Data source: OECD Economic Outlook 108 (December 2020).

weights) in order to match $M = 3 \times 87 + 5 = 266$ observations. Still, by and large, we consider the fit as satisfactory. In particular, we find that the unemployment dynamics for the US and the doppelganger are remarkably similar, even though we have not included the time series of the unemployment rate in the matching procedure (only the mean unemployment rate in the set of covariates). In order to compute the unemployment rate for the doppelganger, shown in the lower-right panel of Figure 1, we use the weights $\mathbf{w}^*$ that define the doppelganger. We observe

Table 2: Composition of GDP doppelganger: country weights

Australia	<0.01	Austria	<0.01	Belgium	<0.01	Canada	0.15
Denmark	<0.01	Finland	<0.01	France	<0.01	Germany	<0.01
Hungary	<0.01	Iceland	<0.01	Ireland	0.07	Italy	<0.01
Japan	0.10	Korea	0.10	Luxembourg	<0.01	Netherlands	<0.01
New Zealand	0.05	Norway	<0.01	Portugal	0.20	Slovak Republic	0.05
Spain	<0.01	Sweden	<0.01	Switzerland	<0.01	United Kingdom	0.27

that in both economies, the US and the doppelganger, unemployment rose sharply during the Great Recession and declined steadily afterwards. Peak unemployment, was somewhat higher in the US and, because it started to decline earlier, has been lower than in the doppelganger since 2012.[6]

Table 2 displays the country weights (rounded to the second digit) that define the doppelganger economy. The United Kingdom is assigned the largest weight. Since macroeconomic performance in the UK was rather weak following the Brexit referendum, our doppelganger provides us with a conservative benchmark (see Born et al., 2019). In addition, there are significant contributions by Portugal, Canada, Japan, Korea, New Zealand and the Slovak Republic. Overall, this weighting scheme appears plausible, even though our purely data-driven approach allows us to refrain from a structural interpretation of the country weights. We run additional experiments (not reported) and verify that our results are robust to excluding individual countries, such as the UK from the donor pool.

4 Assessing Trump's macroeconomic impact

We are now in a position to quantify the macroeconomic impact of Trump. For this purpose we benchmark key economic indicators for the US under Trump against their counterparts in the doppelganger. This comparison hinges on a number of assumptions which we spell out explicitly before discussing the results.

[6]In the appendix we show results for an alternative procedure where we estimate four separate doppelgangers for each of the four variables. The benefit of this exercise is that we obtain a better fit pre treatment, since each doppelganger needs to match only $T + K = 92$ observations. Importantly, also this alternative procedure gives rise to a very similar picture.

4.1 Identification assumptions

Our identification assumption is that—from a macroeconomic point of view—the doppelganger and the US were equally likely to receive the "treatment" of electing Trump as president. Under this assumption, the difference between the US and its doppelganger after the election is due to Trump. The assumption is plausible because prior to the election there were no *macroeconomic* trends which set the US apart from the countries in our donor pool.[7] Moreover, as the election result took most observers by surprise (see, e.g., Wright and Wright, 2018), it is unlikely that our results are contaminated by anticipation effects.

Still, in order to attribute a possible difference in the economic performance of the US and the doppelganger to Trump, we rely on a number of additional assumptions. First, we assume that during the Trump years the doppelganger economies were affected in the same way as the US economy by external shocks such as, for instance, external shifts in energy prices. We believe this is a reasonable assumption, at least for the largest part of the period under consideration.[8] After all, both the US and the economies which account for doppelganger are advanced economies which are fully integrated into the global economy. More importantly still, in constructing the doppelganger we make sure that it resembles the US in terms of GDP growth during the 20 year period prior to the election of Trump and this period witnessed a fair share of external shocks, notably the integration of China into the global economy.[9] That said, we recognize that Trump's tenure was also characterized by an exceptionally large shock, namely the COVID-19 pandemic and one may reasonably expect it to impact the US and the doppelganger differently—irrespective of whether Trump was in office or not. Therefore, results concerning the majority of his last year in office should be taken with a grain of salt.

[7]The extent to which economic factors affected the election result remains debated (Mutz, 2018). From a macroeconomic perspective, the overall situation at the time of the election appeared relatively benign in the sense that the US economy was not in a recession or in a phase of high unemployment.

[8]The importance of oil price shocks in accounting for the business cycle, notably the relative importance of supply and demand shock remains controversial to date (Kilian and Zhou, 2020). For the US, for instance, Kilian and Vigfusson (2017) find that oil price shocks are less important for real GDP "than widely believed".

[9]Still economies are subject to structural change. For instance, as a far as energy is concerned the US turned from net importer to net exporter in 2019. Still, we believe that these structural changes are taking places at lower frequencies and are thus unlikely to drive our results in a quantitatively important way.

Second, we assume that the doppelganger economies did not introduce the equivalent of what the "Trump treatment" meant for the US economy. This assumption is fairly restrictive and deserves some further discussion. Perhaps the closest equivalent to a Trump treatment in the economies that make up the doppelganger is Brexit. While the UK left the EU only at the end of 2020, the referendum in favor of Brexit took place in June 2016. And the referendum had a sizeable, adverse impact on the UK economy during already before the actual Brexit took place (Born et al., 2019). Since the UK makes up for 27 percent of the doppelganger, we may expect the Brexit referendum to play out in favor of the relative performance of the US economy under Trump as we benchmark it against the doppelganger. This is important to keep in mind when we interpret our results below.

Third, we assume that the Trump treatment only affects the US economy and not the doppelganger. This assumption is also not entirely innocent because Trump's economic policy were often concerned with restricting international trade (Handley and Limão, 2017). To the extent that these policies had an impact on the rest of the world and, more specifically, on the economies that make up the doppelganger we would expect this effect to be negative. Hence, if—contrary to our assumption—there were significant spillovers of Trump's policies on the doppelganger, our results would again be biased in favor of finding a strong relative performance of the US economy.

4.2 Results

With these caveats in mind, we compare the performance of the US economy to the doppelganger during the Trump years. The main results are shown in Figure 2: the figure zooms in on the time series already shown in Figure 1 above. But now our focus is on the time of Trump's presidency. In each panel we contrast actual developments in the US (blue solid line) and those in the doppelganger economy (red dashed line). We normalize all time series to zero at the time of the election of Trump, both for the US and the doppelganger, to facilitate the comparison. The shaded areas correspond to two standard deviations of the pre-treatment

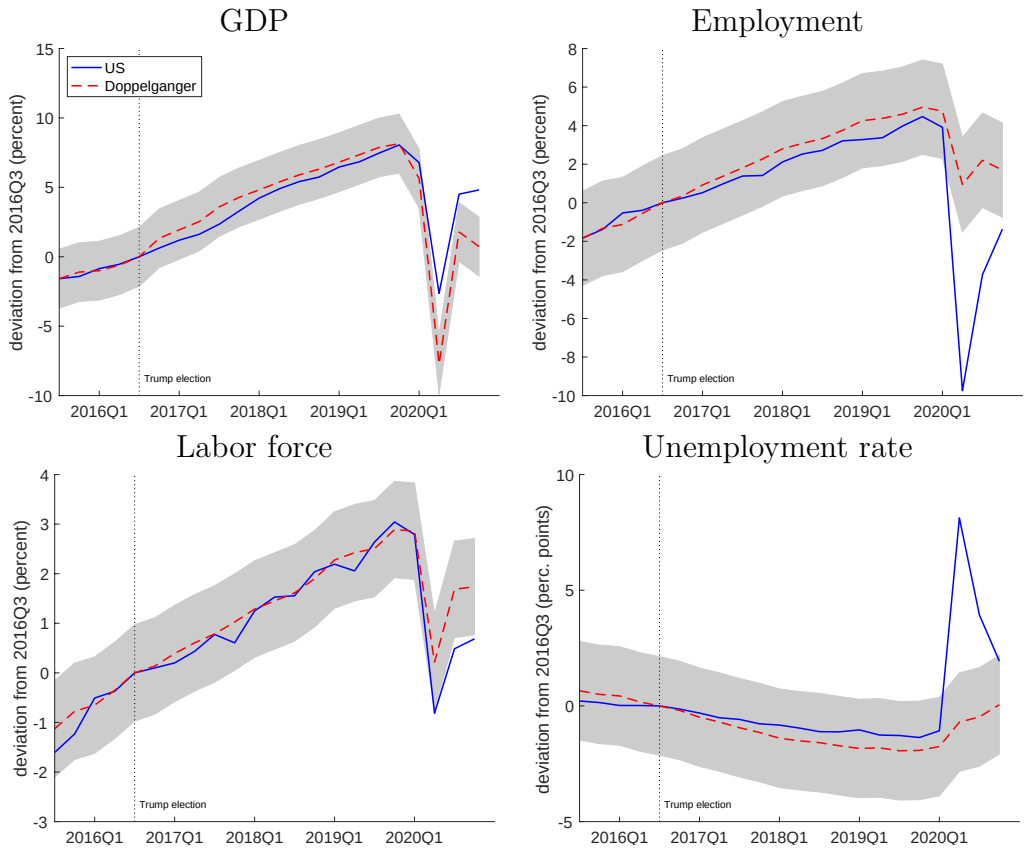

Figure 2: Macroeconomic performance of US economy (blue solid line) and doppelganger benchmark (red dashed line). *Note:* shaded areas are two standard deviations of the difference prior to Trump election. All time series normalized to zero at the time of the election. Data source: OECD Economic Outlook 108 (December 2020).

difference between the variable of interest of the US and the doppelganger.

Real GDP is shown in the upper left panel. The vertical axis measures the deviation from the level at the time of the election in percent. We find that the path of real GDP since the election has been very similar in the US and in the doppelganger economy. In the early phase after the election, the US somewhat underperformed relative to the doppelganger, but caught up over time. By the time the COVID-19 pandemic hit the world economy, the US and its doppelganger are virtually on equal footing in terms of GDP performance since Trump's inauguration. The GDP contraction during the pandemic, however, is considerably stronger in the doppelganger, as is the rebound in 2020Q3. At the end of our sample, that is, in 2020Q4, we observe that the US are doing better in terms of GDP than the doppelganger.

We obtain a similar result for the labor market indicators shown in Figure 2. For all three indicators there is hardly any difference between the US and the doppelganger up until the end of 2019. Things change, however, with the onset of the pandemic. Employment is shown in the upper-right panel. Here the doppelganger somewhat outperforms the US, but also this effect is small and transient. In particular, up until the end of 2019, US employment has been evolving within the two-standard-deviation band around the doppelganger. Once the pandemic set in, employment collapsed much more in the US than in the doppelganger. It is well understood that this reflects a different policy approach towards the labor market implications of the pandemic. Many countries, notably the UK implemented far reaching furlough schemes while the US, instead, opted for a sizeable extension of unemployment benefits (Tetlow et al., 2020).

The lower-left panel shows the evolution of the labor force. Here we obtain a very similar picture. Initially, that is, since the election and up until the end of 2019, the growth of the labor force in the US is very close to what we observe for the doppelganger. During the last year of Trump's tenure, however, the labor force participation drops more in the US than in the doppelganger. These developments are mirrored by the evolution of the unemployment rate, shown in the lower-right panel. Again, after the election the unemployment dynamics in the US are somewhat less favorable than for the doppelganger, but by and large the dynamics are fairly similar and certainly within the two-standard-deviation band around the doppelganger throughout. During the COVID-19 phase, in turn, the rise of unemployment is much sharper in the US. However, we also observe that these developments are largely reversed by end-2020.

In taking stock, we have to distinguish two periods. For the first three years under Trump there is clearly no Trump effect: as far as our indicators are concerned, the US and the doppelganger economy were no different—both economically and statistically. In all instances we perform the end-of-sample instability test by Andrews (2003) and cannot reject the hypothesis that the performance in the US and the doppelganger economy has been the same by end-2019.[10] This is particularly remarkable because, to the extent that the

[10]More formally, we follow Hahn and Shi (2017) and test whether the post-election doppelganger gap and all the pre-election doppelganger gaps of the same length can be considered to come from the same distribution. We cannot reject this hypothesis.

identification assumptions discussed in the previous section are not fully satisfied, we bias our results towards finding a relatively strong performance of the US economy. And yet, we find no evidence of this.

The last year of Trump's presidency has been shaped by the COVID-19 pandemic, not only because of its immediate implications for public health, but also for the economy. Here we find sizable differences between the performance of the US economy and the doppelganger economy, but the overall picture is mixed across indicators: the US has outperformed the doppelganger in terms of GDP developments, but did worse in terms of labor market outcomes. Against this background it seems fair to argue that also here there is no obvious Trump effect.

5 Conclusion

The US economy has been doing very well up until the COVID-19 pandemic and, being the president in office, Donald Trump has naturally claimed credit for the good economic performance. Our formal assessment shows that this is not justified. Neither do we measure an exceptional output performance, nor do important labor market indicators suggest that the US economy has been doing better than before because of Trump. However, it is also true that there is little in the data to suggest that the policies of the Trump administration have hurt American growth.

The key to this finding is the choice of an appropriate benchmark: we use the synthetic control method to construct a doppelganger economy that serves as a counterfactual for what would have happened in the US in the absence of Trump. We find that key economic indicators of the doppelganger evolved strikingly similar to their US counterparts—from the time Trump took office until the end of 2019. For the Corona period, that is, basically during Trump's last year in office, we do find some differences for the US and in the doppelganger, but there is no coherent picture emerging across the indicators that we consider. Hence, in this sense, our finding—that there is no Trump effect on macroeconomic performance—holds for the entire presidency.

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Appendix
to "The macroeconomic impact of Trump" by Benjamin Born, Gernot J. Müller, Moritz Schularick, and Petr Sedláček

A Inauguration treatment

The main text uses the Trump election, i.e. the fourth quarter of 2016, as the treatment date. In this appendix, we show that our results are robust to considering the Trump inauguration, i.e. the first quarter of 2017, as the treatment date instead. We thus now match observations for the period 1995Q1–2016Q4.

Table A.1 shows how the doppelganger matches the covariates, Table A.2 shows the estimated country weights and Figure A.1 depicts the four variables of interest in the US and in the doppelganger economy. Importantly, our conclusions from the main text remain the same. There is no evidence of a Trump effect, even when we consider the inauguration date as the treatment.

Table A.1: Matching of covariates

	US	baseline	inauguration-based
Consumption / GDP	69.0	58.4	59.6
Investment / GDP	20.6	21.2	20.6
Net Exports / GDP	-4.3	1.5	0.8
Labor productivity growth	-0.1	-0.1	0.0
Unemployment rate	5.0	6.9	0.73

Note: All numbers are in percent. Labor productivity growth is the log difference between quarterly real GDP and quarterly total employment. Values shown for the baseline doppelganger in the main text and the alternative using the Trump inauguration as the treatment.

Table A.2: Composition of GDP doppelganger: country weights

	baseline	inauguration-based
Australia	<0.01	<0.01
Austria	<0.01	<0.01
Belgium	<0.01	<0.01
Canada	0.15	0.06
Denmark	<0.01	<0.01
Finland	<0.01	<0.01
France	<0.01	<0.01
Germany	<0.01	<0.01
Hungary	<0.01	<0.01
Iceland	<0.01	<0.01
Ireland	0.07	0.08
Italy	<0.01	<0.01
Japan	0.10	0.07
Korea	0.10	<0.01
Luxembourg	<0.01	<0.01
Netherlands	<0.01	<0.01
New Zealand	0.05	0.15
Norway	<0.01	<0.01
Portugal	0.20	0.21
Slovak Republic	0.05	0.13
Spain	<0.01	<0.01
Sweden	<0.01	<0.01
Switzerland	<0.01	<0.01
United Kingdom	0.27	0.30

Note: Country weights for the baseline doppelganger in the main text and the alternative using the Trump inauguration as the treatment.

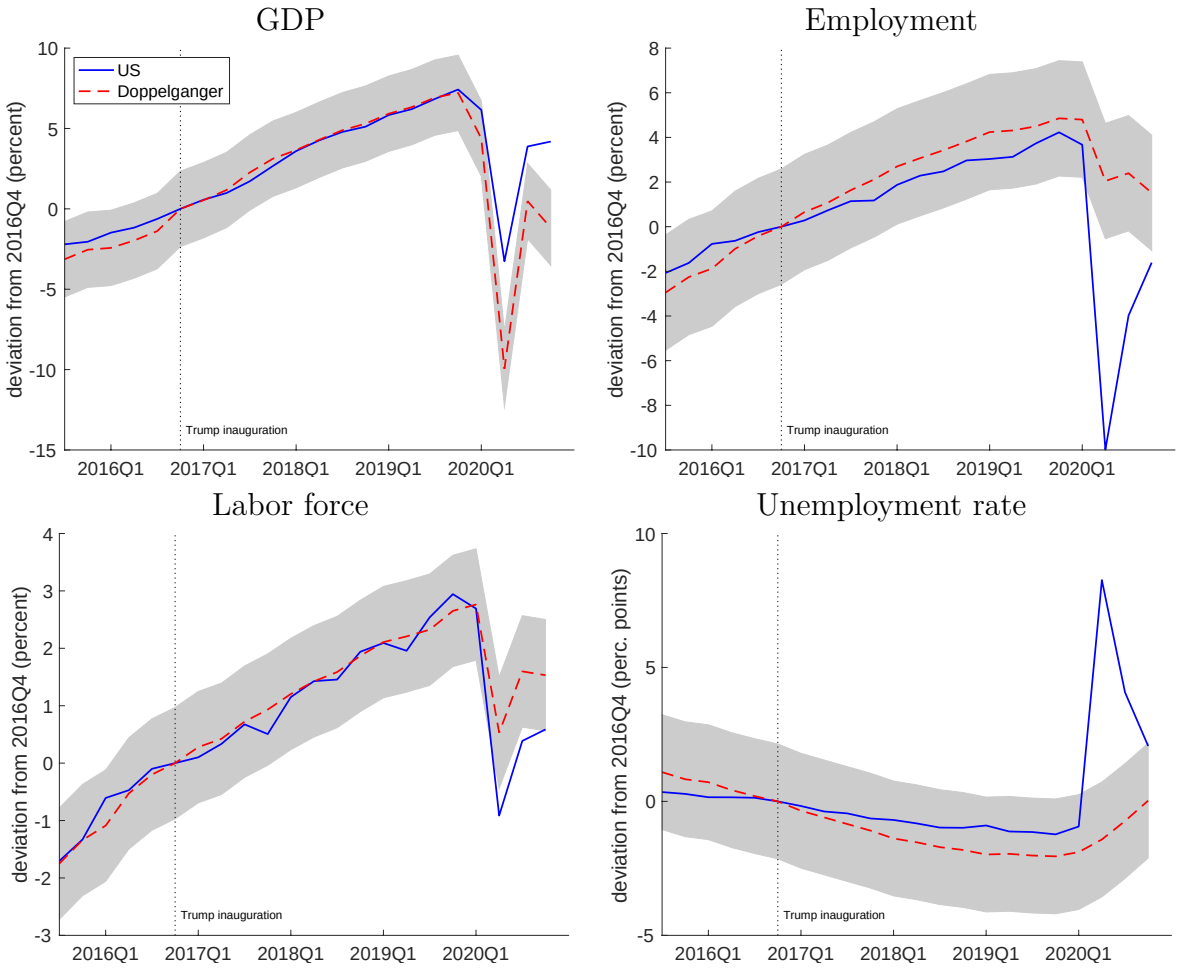

Figure A.1: Macroeconomic performance of US economy (blue solid line) and doppelganger benchmark (red dashed line) with Trump inauguration (2017Q1) taken as the treatment date. *Note:* shaded areas are two standard deviations of the respective difference between the aggregates in the U.S. and in the respective doppelganger economy prior to Trump inauguration. Data source: OECD Economic Outlook 108 (December 2020).

B Alternative doppelganger construction

The main text constructs a single doppelganger to jointly match the time paths of real GDP, total employment, total labor force and five covariate averages in the US economy. Using these estimates, we then also compute the doppelganger unemployment rate.

In this appendix, we provide an alternative approach. Instead of estimating a single doppelganger, we estimate four separate doppelgangers. One for each of the variables of interest. The benefit of this approach is that each of the four doppelgangers is characterized by a much tighter fit to the US economy. This is simply because each needs to match "only" 92 observations, as opposed to the 266 observations matched by the single doppelganger in the main text.

Table A.3 shows how the different doppelgangers match the covariates, Table A.4 shows the estimated country weights and Figure A.2 depicts the four variables of interest in the US and in the four doppelganger economies. Importantly, our conclusions from the main text remain the same. There is no evidence of a Trump effect, even when using separate doppelgangers which match each variable much more tightly than the single doppelganger in the main text.

Table A.3: Matching of covariates

	US	baseline	GDP-based	E-based	LF-based	U-based
Consumption / GDP	69.0	58.4	61.8	62.5	62.7	49.2
Investment / GDP	20.6	21.2	19.6	18.4	19.0	21.9
Net Exports / GDP	-4.3	1.5	-0.0	-0.4	-0.4	7.8
Labor productivity growth	-0.1	-0.1	-0.1	-0.1	-0.1	0.18
Unemployment rate	5.0	6.9	5.6	6.0	8.2	4.2

Note: All numbers are in percent. Labor productivity growth is the log difference between quarterly real GDP and quarterly total employment. The table shows values for the US data, those for the baseline doppelganger in the main text and for four alternatives based on matching only real GDP (GDP-based), employment (E-based), labor force (LF-based) and unemployment rate (U-based).

Table A.4: Composition of GDP doppelganger: country weights

	baseline	GDP-based	E-based	LF-based	U-based
Australia	<0.01	0.16	<0.01	<0.01	<0.01
Austria	<0.01	<0.01	<0.01	<0.01	<0.01
Belgium	<0.01	<0.01	<0.01	<0.01	<0.01
Canada	0.15	<0.01	<0.01	0.16	<0.01
Denmark	<0.01	<0.01	<0.01	<0.01	<0.01
Finland	<0.01	<0.01	<0.01	<0.01	<0.01
France	<0.01	<0.01	<0.01	<0.01	<0.01
Germany	<0.01	<0.01	<0.01	<0.01	<0.01
Hungary	<0.01	<0.01	<0.01	<0.01	<0.01
Iceland	<0.01	<0.01	<0.01	<0.01	0.48
Ireland	0.07	0.04	0.06	<0.01	0.12
Italy	<0.01	<0.01	<0.01	<0.01	<0.01
Japan	0.10	<0.01	0.04	<0.01	0.33
Korea	0.10	<0.01	<0.01	<0.01	<0.01
Luxembourg	<0.01	<0.01	<0.01	<0.01	0.07
Netherlands	<0.01	<0.01	<0.01	<0.01	<0.01
New Zealand	0.05	0.07	<0.01	0.25	<0.01
Norway	<0.01	<0.01	<0.01	<0.01	<0.01
Portugal	0.20	0.03	0.12	0.43	<0.01
Slovak Republic	0.05	<0.01	<0.01	<0.01	<0.01
Spain	<0.01	<0.01	<0.01	<0.01	<0.01
Sweden	<0.01	<0.01	<0.01	<0.01	<0.01
Switzerland	<0.01	<0.01	<0.01	<0.01	<0.01
United Kingdom	0.27	0.70	0.78	0.17	<0.01

Note: Country weights for the baseline doppelganger in the main text and four alternatives based on matching only real GDP (GDP-based), employment (E-based), labor force (LF-based) and unemployment rate (U-based).

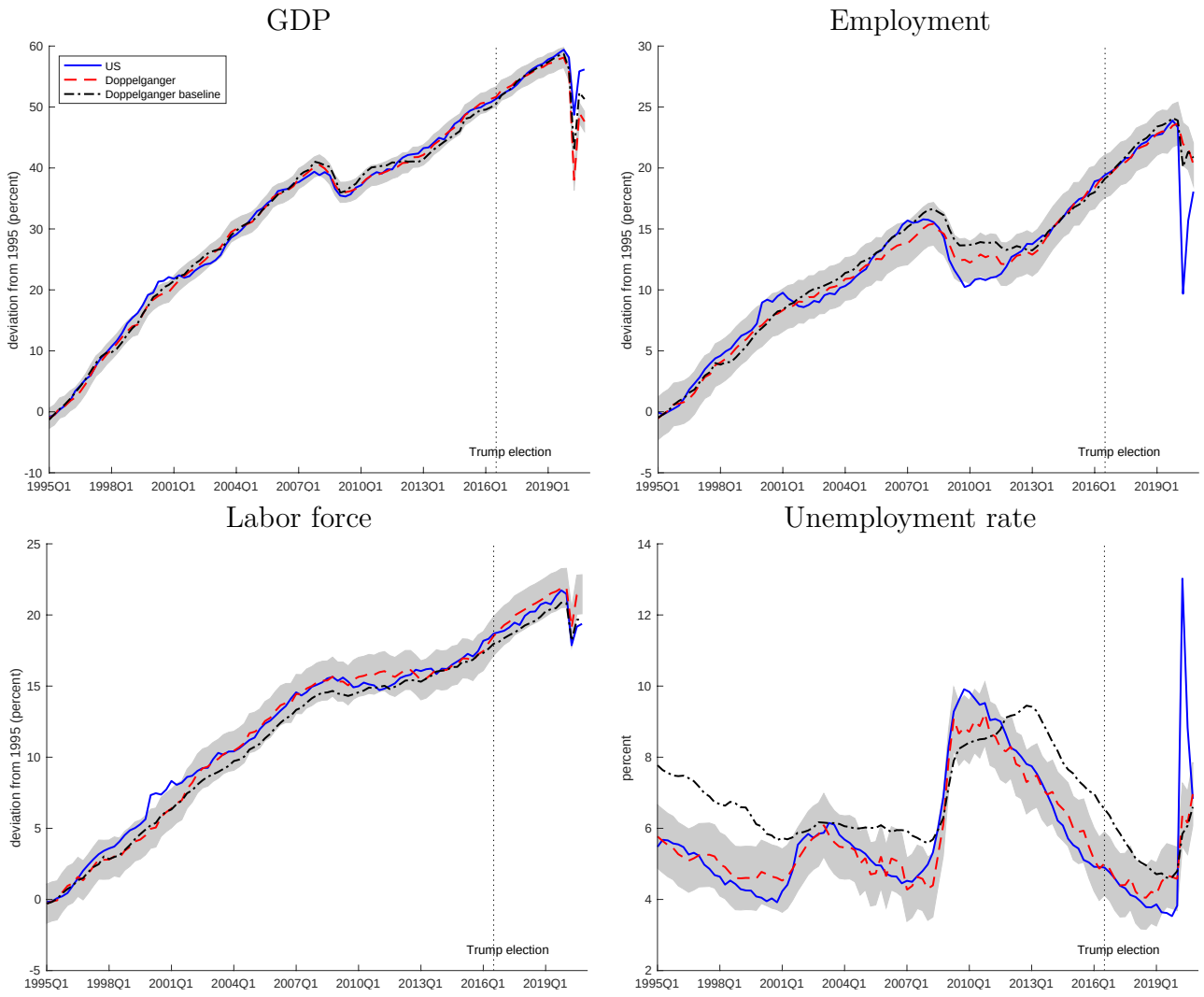

Figure A.2: Macroeconomic performance of US economy (blue solid line) and four separate doppelgangers (red dashed line). *Note:* shaded areas are two standard deviations of the respective difference between the aggregates in the US and in the respective doppelganger economies prior to Trump election. Black dash-dotted line depicts baseline doppelganger, see Section 3.3. Data source: OECD Economic Outlook 108 (December 2020).