

THE MIX OF MONETARY AND FISCAL POLICY IN THE CR: THE ROLE OF OUTPUT GAP

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Abstract

This paper deals with the interaction between monetary and fiscal policy in the Czech Republic in the period 2004 -2019. Even though monetary and fiscal policy as the main pillars of economic policy have specific tasks, both should also have the macroeconomic stabilization role across the business cycle. At the same time, they should also cooperate with each other otherwise their mix is suboptimal. The evaluation whether the fiscal or monetary policy is procyclical or countercyclical is fundamentally based on the estimate of potential product and output gap. The problem is that the institutions responsible for monetary and fiscal policy may vary in their estimates of these unobservable variables, so in fact they may have a different opinion about the current and future position of the economy in the business cycle. This may be one of the reasons for their suboptimal mix. The findings of the paper first indicate higher procyclicality of fiscal policy compared to the monetary one in the Czech economy. The paper also confirms that the problem with different estimates of output gaps is relevant for the Czech Republic contributing to suboptimal mix of monetary and fiscal policy. Further estimates show how the difference between the estimates of output gap using common methodology for both the main actors of economic policy could mitigate this weakness.

Key words: monetary policy, fiscal policy, potential product, output gap

JEL Code: E52, E63, E32

Introduction

The decades of discussion among economists set monetary and fiscal policy as the main cornerstones of macroeconomic stabilization policies. There is a strong consensus among economists that monetary and fiscal policy should act countercyclically and go hand in hand in the same direction as explained e.g. in Canzoneri et al (2011), Oudiz and Sachs (1984). In domestic literature the issue of interactions between monetary and fiscal policy in the Czech economy has been precisely analysed and summarized in Řežábek (2019) where the sub-optimal and non-cooperative interaction of both policies was found.

Proper response of both monetary and fiscal policies to act countercyclically is based on precise assessment of the real time position of the economy within the business cycle as well as correct prediction for the near future. These estimates are mostly based on the potential product and the respective output gap which are unobservable variables estimated by different methodologies, the most frequent ones being production function or different methods of filtering. However, with the advantage of hindsight, the accuracy of the estimates of potential product and the output gap is very questionable.

The reliability of the estimates of the potential product and the output gap in real time have been under question for quite a long time, see e.g. Orphanides and van Norden (2002), ECB (2005). As for latest research, the analysis of IMF Kangur et al. (2019), Aiyar and Voigts (2019) shows that the properties of the estimates are not satisfactory enough in real time, mostly due to the difficulty to predict recessions and also by overestimation of the economy's potential capacity. In the domestic literature similar critical views can be found in CNB (2010). Czech National Bank has accordingly shifted its monetary policy decision making in the direction to paying less attention to the potential product and the output gap in its DSGE model. On the other hand, Ministry of Finance predictions and the setting of fiscal policy remained strongly focused on these unobserved variables. In fact, this setting is determined by EU fiscal rules that are based on the structural balances of the public finance derived from the initial estimates of potential product and the output gap (EC, 2019).

This paper is aimed to discuss whether domestic fiscal and monetary policies do act procyclically or countercyclically and whether their cooperation is set in an appropriate manner to stabilise the business cycle in the Czech economy. The first part is focused on the analysis of the procyclicality or countercyclicality of monetary and fiscal policies within the context of the methodologic assessment of the two respective institutions responsible for the conduct of monetary and fiscal policy. Second part deals with the interaction of both policies while the third part of the paper reveals possible caveats stemming from different estimates of potential product and the output gap. Last section summarizes main findings and conclusions.

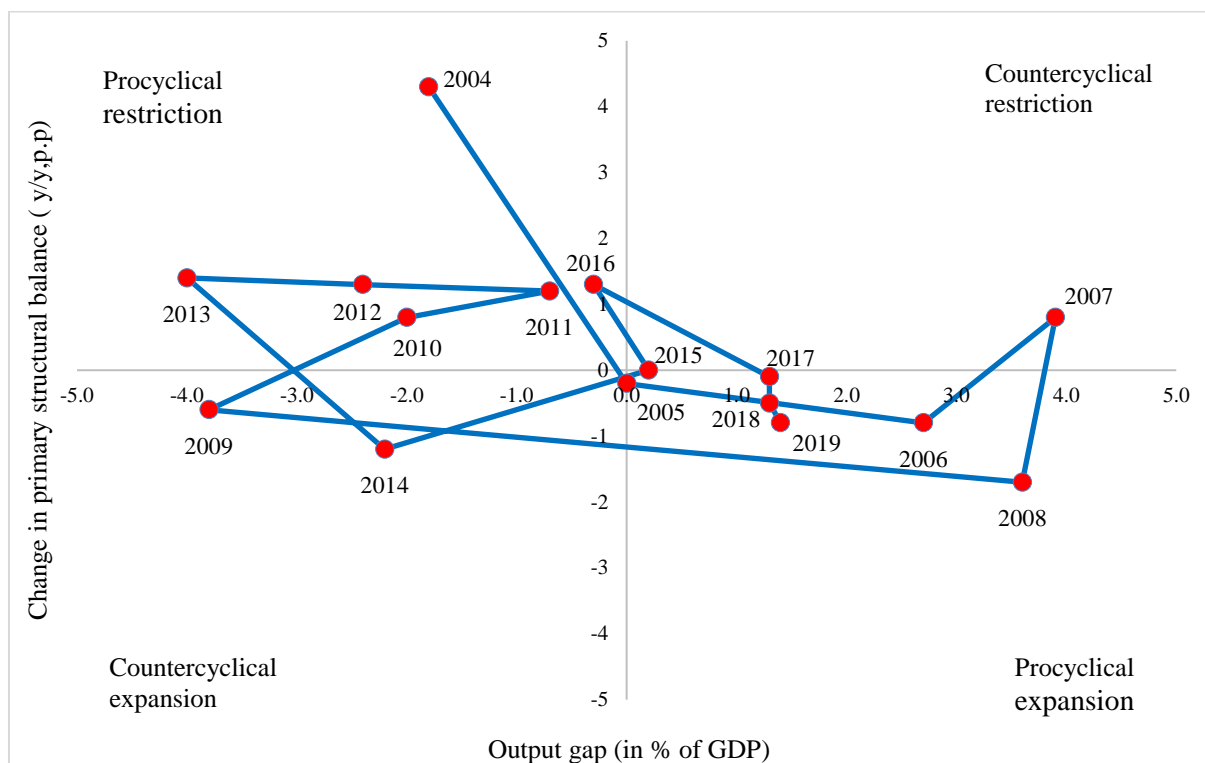
1 Fiscal and Monetary Policy: Procyclical or Countercyclical?

The assessment whether fiscal policy has been procyclical or countercyclical is based on the relationship of the output gap and the change of primary structural balance of public finance over previous two decades. In the case of negative output gap, positive fiscal effort (measured by the year on year change of primary structural balance) means procyclical restriction and is

represented by the first quadrant in Figure 1. At the same time, countercyclical expansion in case of negative output gap belongs to quadrant 3. Second and fourth quadrants indicate setting of fiscal policy under positive output gap. Figure 1 indicates the prevalence of procyclical fiscal policy in previous two decades. While the fiscal policy can be labelled as roughly neutral in 2005 and 2015 and countercyclical in 2007, 2009 and 2014, the remaining years must be assessed as procyclical. In the years before the crisis as well as in last two years, fiscal policy contributed to overheating of the Czech economy, while 2010-2013 the recession was deepened by fiscal restrictions.

It follows from the above that fiscal policy makers do not pay much attention to the business cycle which increases its volatility. Therefore, the fiscal policy in the Czech Republic does not fulfil the stabilization role and the procyclicality has a negative effect on the development of the Czech economy. On the other hand, the problem should not be seen only in the economic development but also the debt dynamics or the sustainability of public finance must be considered as possible risks. Keynesian view of an economic stabilization should provide a sufficient manoeuvring space for a fiscal expansion in times of a negative output gap due to the generation of surpluses in times of a positive output gap. Unfortunately, the high indebtedness of some countries may be an obstacle for creating further budget deficits and pursuing a countercyclical expansionary fiscal policy.

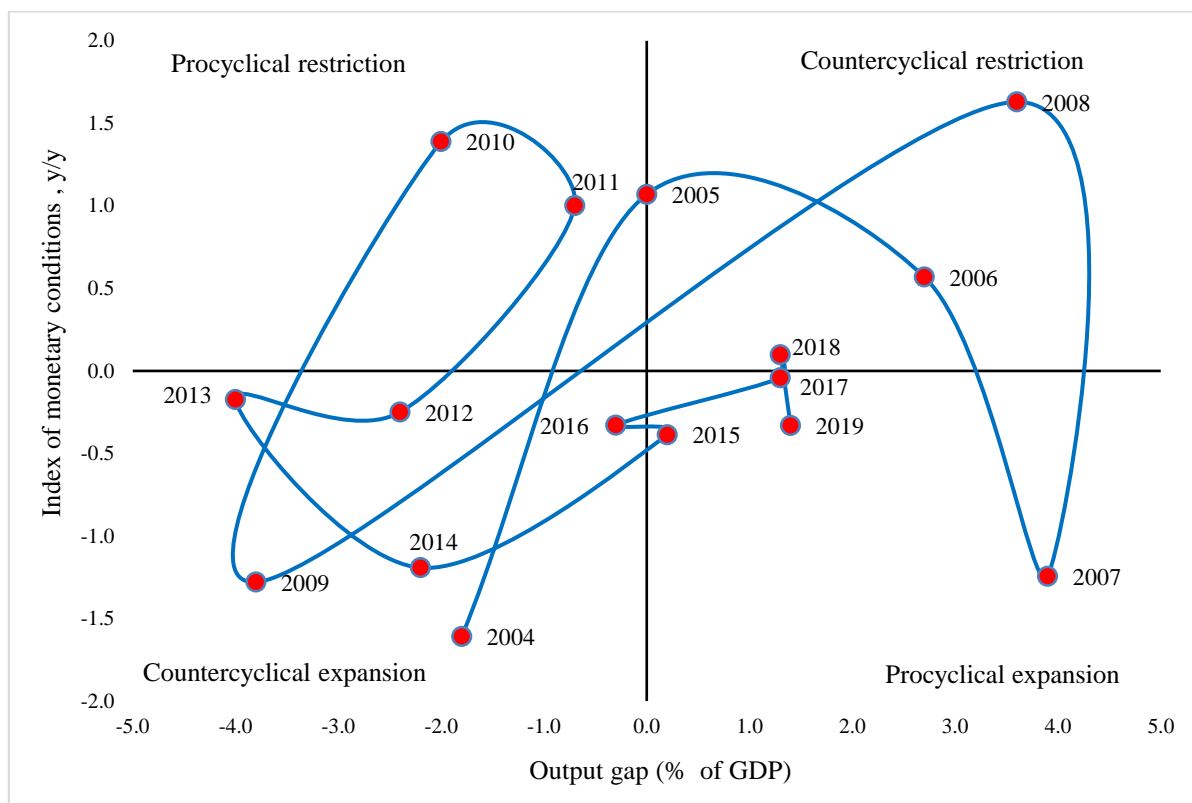
Fig. 1: Output gap and y/y change in primary structural balance



Source: Ministry of Finance of the Czech Republic (2010-2019), own calculations

The procyclicality or countercyclicality of monetary policy is based on the relationship between the index of monetary conditions and the output gap. The index of monetary conditions combines the level of monetary policy interest rates and the exchange rate, see e.g. Čihák and Holub (2000). The decline of this index represents loosening of monetary policy, while its growth relates to tighter monetary policy. Similar to figure 1, four quadrants can be differentiated for further analysis. Figure 2 shows that Czech monetary policy has been restrictive in 2006, 2008 and 2018 when countercyclical restriction was adopted. At the same time was restrictive in 2010 and 2011, however in these years it was a procyclical restriction. Procyclical expansion was the case of 2007, 2015, 2017 and 2019. Countercyclical monetary policy was adopted in recessions in 2009 and 2012-2013. In 2014 was very massive countercyclical expansion due to the exchange rate floor.

Fig. 2: Monetary conditions and the output gap



Source: The Czech Fiscal Council (2019)

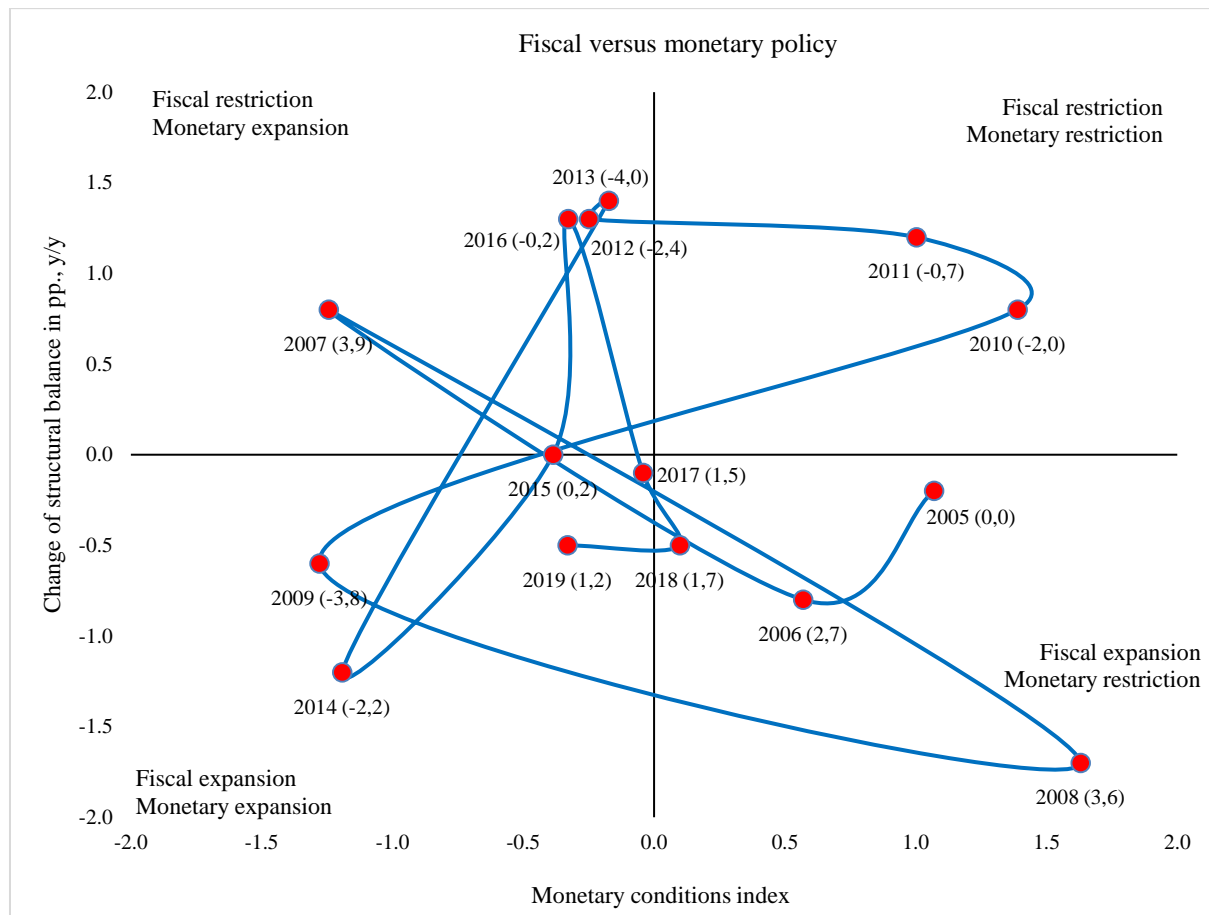
The time series disposable to the assessment of monetary policy is not that long as is the case for fiscal policy, however, monetary policy seems to act better if the stabilization role is discussed.

2 The Interaction of Fiscal and Monetary Policy through the Lens of Business Cycle

This part of the paper is focused on the comparison of procyclical or countercyclical impacts of monetary and fiscal policies. Figure 3 indicates the distribution of the impacts into four quadrants according to procyclicality and countercyclicality of both policies in the years 2005 – 2019. The first quadrant combines fiscal restriction and monetary expansion which took place in 2007, 2012, 2013 and 2016. In the second quadrant, which covers the common restrictive position of both economic policies, the Czech economy was only in 2010 and 2011, even though the economy was running above its potential in 2017 – 2019. On the other hand, both policies went expansionary hand in hand in 2009, 2014, 2015 and 2019. With the advantage of hindsight, it was desirable in 2009 and 2014 while under question in 2015 and

2019. The fourth quadrant combines fiscal expansion with monetary restriction which was the case of 2005, 2006, 2008 and 2018.

Fig. 3: Interaction of fiscal and monetary policy



Source: The Czech Fiscal Council (2019)

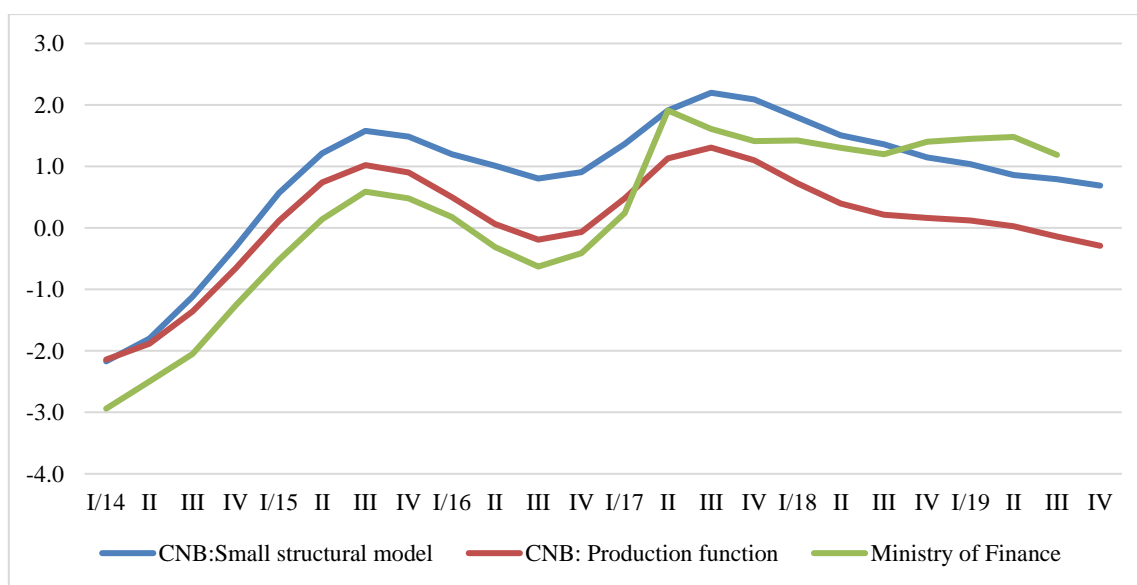
Obviously, the main weak point in the Czech economy can be labelled as strongly procyclical fiscal policy. The empirical studies e.g. Alesina, Tabellini, Campante (2008) point out the role of political cycle. This put even more emphasize on the role of monetary policy for the stabilization of the economy throughout the business cycle. Strongly procyclical fiscal policy would become a very serious problem would the Czech Republic eventually adopt Euro. The absence of monetary policy and exchange rate should pose a strong burden for the stabilization role of fiscal policy which is obviously not prepared to take over this responsibility. Along to the recommendations posted by Mundell (1961), the incapability of fiscal policy to stabilize the business cycle is also stressed in CNB reports on Alignment Analyses, e.g. CNB (2019). Therefore, as for the long-term macroeconomic stability of the

country, it would be risky to enter the EMU before fiscal policy will not have been able to act countercyclically.

3 The Case of Potential Product and Output Gap Estimates

Figure 4 outlines three different estimates of the output gap: two different estimates of the Czech National Bank and the estimate of Ministry of Finance. The time series covers the period for which the data are comparable and produced in the same moment which was the beginning of 2020. Obviously, the estimates differ quite significantly, and it is worth mentioning that while from 2014 until 2017 the output gap estimates of Ministry of Finance were lower than the estimates of Czech National Bank, the discrepancy has reverted since the second quarter of 2018. Therefore, the institutions responsible for the main parts of economic policy differ in their assessments as for the position of the economy in the business cycle.

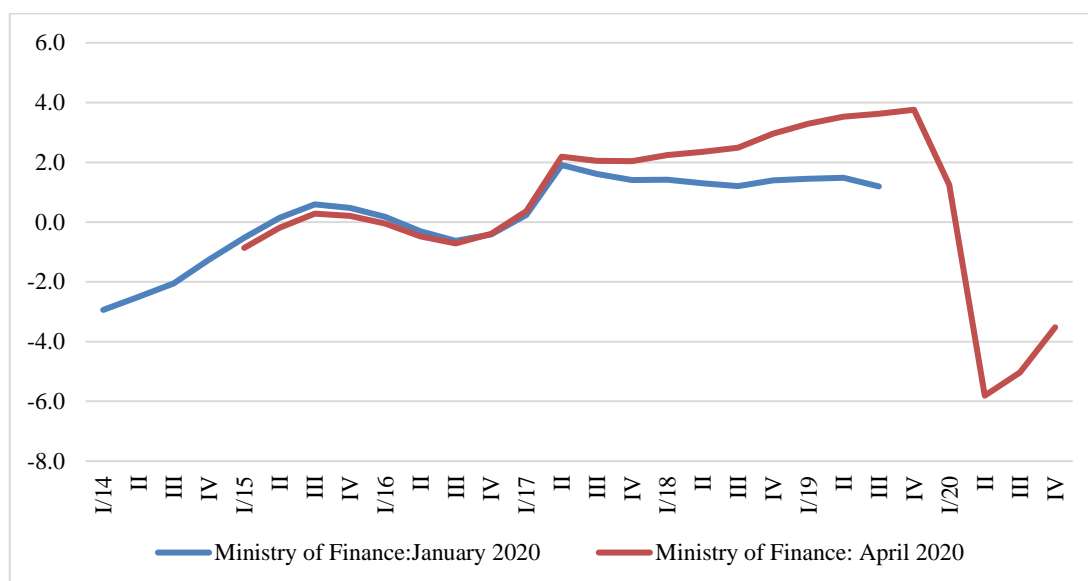
Fig. 4: Different estimates of output gap



Source: Czech National Bank (2020); Ministry of Finance of the Czech Republic (2020)

Figure 5 presents the change of the estimate of the output gap that was made by Ministry of finance in April 2020 due to different GDP forecast for the year 2020. The difference is attributable to “the end point bias” discussed in literature (ECB, 2005). However, such a huge difference affecting the estimate of output gap for three previous years reveals the weak points in the methodology serving for setting the fiscal policy in short and mid-term horizon.

Fig. 5: The Ministry of Finance estimates of output gap before and after coronavirus



Source: Ministry of Finance of the Czech Republic (2020)

Conclusion

Our analysis has confirmed that the problem of different setting of monetary and fiscal policy as for its stabilization role over the business cycle is quite serious for the Czech Republic. Firstly, we have found that the same direction of performance of these main components of economic policy has been rather an exemption than a rule. Secondly, fiscal policy has been procyclical in majority of the previous two decades, with only three years of countercyclical performance. At the same time, the estimate of the output gap seems to be suspected if there is to be explained while the fiscal policy has been acting procyclically. The changes of the estimates over time correspond well with the criticism observable in literature. It goes beyond the scope of this paper to evaluate the role of the political cycle. At the same time, it must be noted that the Ministry of Finance is obliged by EU settings to adhere the fiscal policy to the unobserved variables like potential product, output gap and structural balance.

The independence of the central bank thus may be one of the reasons why monetary policy has been released from these unobserved indicators that have been playing only a minor role in current monetary policy settings.

The way out how to make fiscal policy countercyclical may consist in two directions. The first is to change the EU fiscal rules in a way that would limit the role of structural balance, the second consists in more robust estimates of potential product.

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