

Assignment (Short-Answer and Algebraic Questions): *(The numbers in square brackets give the breakdown of the points for various parts of each question. To receive full credit, please explain your answers. Total of 70 points.)*

1. The US government passed a major tax reform at the end of 2017 and reduced taxes in tangible ways. Assume that in 2017 everyone expected the policy change to be approved in 2018 and to be launched in 2019. So, the congressional action at the end of 2017 was a surprise event that ensured that the tax cut went into effect in 2018 rather than in 2019. Here we want to compare what happened in 2018 as a result of the tax cut compared to what people expected to happen given the view that commonly prevailed until the congressional action at the end of 2017.

Assume that it was common knowledge that there would be no change in the path of the economy in 2019 and beyond as a result of the launch of the tax cut in 2018 rather than in 2019. Also, assume that the tax rate changes only affect household disposable income and have no direct impact on the level of investment, though investment may be affected indirectly via interest rate changes. Further assume that all product, money, and foreign currency markets were in equilibrium. Finally, assume that the money supply and the price level in the US and all policies, incomes, and prices in the rest of the world remained unaffected by the start of the tax cut in 2018 rather than in 2019 (i.e., ignore the possible effects of the policy change in the US on the rest of the world).

- (a) What must have been the effect of the tax cut in 2018 on the IS and LM curves of the US economy in that year and why? [7 points]
- (b) What must have been the effect of the 2018 tax cut on the equilibrium real income and the nominal interest rate in the US economy in that year and why? [5 points]
- (c) What must have been the effect of the 2018 tax cut on the levels of consumption, expected inflation, and investment in the US economy in that year and why? [9 points]
- (d) What must have been the effect of the 2018 tax cut on (1) the real exchange rate and (2) the trade deficit of the US economy in that year and why? [7 points]
- (e) What must have been the negative and positive indirect effects of the tax cut in 2018 on the earnings of the companies that provided local products in the US and were not engaged in exports or import competition? (Examples of such businesses are those in real estate, insurance, healthcare, accounting, education, and legal services. Note that we are assuming that the change in the timing of the tax cut had no direct effect on businesses.). Please explain the mechanism by which the tax cut impacted the earnings. [8 points]

- (f) What must have been the likely effect of the 2018 tax cut on the earnings of the companies that produced tradable products and competed with foreign producers (e.g. companies producing electronic equipment and various types of machinery)? Please explain the mechanism by which the tax cut impacted the earnings. [8 points]
2. This question is based on the article, "[Sweden's economy is thriving, so why is monetary policy so loose?](#)", published by *The Economist* on June 1, 2017. The article points out that in early 2017, the Swedish economy was booming and its inflation rate was on target, yet the Riksbank, Sweden's central bank, "decided not only to maintain the main policy rate at -0.50%, where it has been since February 2016, but to increase the amount of asset purchases under quantitative easing (QE) by a further SKr15bn (\$1.7bn) during the second half of 2017."
- (a) One explanation offered by the article for this decision of Riksbank is that "the inflation figure is deceptive ... some of the increase [in inflation] was driven by one-off factors, such as rises in air fares and energy prices." Assume that the inflation rate was indeed expected to decline and nominal interest rate and nominal exchange rate were expected to remain unchanged.
- If Riksbank had decided not to engage in QE in the second half of 2017, which components of GDP would have been directly affected by the expectation of reduced inflation? How and in which direction? [2 points]
 - Which components would have been indirectly affected due to the induced changes in aggregate income? [4 points]
 - Which components would *not* have been affected directly or through aggregate income change? [2 points]
- (b) According to the article, Riksbank is constrained by the policies of the European Central Bank (ECB).
- What would happen to the Swedish economy if its exchange rate is floating and the Riksbank switches to tighter monetary policy before the ECB does? Why? [4 points]
 - Does the article's analysis of this issue assume that the interest parity (IP) condition holds true or does it assume that the IP is violated? [2 points]
- (c) Given Riksbank's decision to engage in QE in the second half of 2017, what must have happened to its balance sheet (i.e., its holding of financial assets) in that period? Why? [4 points]
- (d) The article points out that Riksbank's QE may cause property prices to continue to rise. Assume that was the case and because of it, very few people take on new mortgages. Also, assume that those who already had mortgages, continue to pay back their loans as they used to do before the QE.

- In this situation, what is likely to have happened to the aggregate private consumption in Sweden following the QE? [5 points]
- If our assumptions were indeed true, is the article correct to conjecture that “rising mortgage payments might lead to a drop in overall demand”? [3 points]