

1 Project Proposal

The aim of this project is to design and develop a mathematical model of the most important macroeconomic indicators in the Russian national economy. The model will be mainly inspired from the macroeconomic model designed and used by the Office of Budget Responsibility (OBR) in the UK (OBR 2019b). Such model is important for various reasons. The OBR uses its model for forecasting¹. They prepare and publish economic forecasts for the purposes of forecasting the public finances (OBR 2019a). Examine figure 1 for an example about their forecasting.



Figure 1: UK oil price forecasting by OBR². The yellow part corresponds to the outturn (real) price recorded, while the blue part corresponds to the forecasting (predicted) price. Q_i on the horizontal axis corresponds the i^{th} quarter of the year.

1.1 Project Plan

Table 1 describes the plan that will be used to accomplish this project.

¹<https://obr.uk/forecasts-in-depth>

²<https://obr.uk/forecasts-in-depth/the-economy-forecast/conditioning-assumptions/#oilprices>

Iteration	Week	Tasks
N/A	1	N/A
	2	
1	3	Write project proposal and plan. Review OBR model. Review common macroeconomic indicators.
	4	Design a system of ODEs to provide dynamics for the model. Review macroeconomic indicators in more depth.
2	5	
	6	
3	7	Review and collect Russian economic statistics.
	8	Mid-term presentation.
4	9	Implement the model and numerically solve the ODEs system.
	10	
5	11	Evaluate the model.
	12	Improve the model, or enhance the model (e.g. introduce stochastic terms).
6	13	Iterate between improving and evaluating the model.
	14	
N/A	15	Final presentation.

Table 1: Project plan.

References

- OBR (2019a). *Office of Budget Responsibility: The Economy Forecast*. URL: <https://obr.uk/forecasts-in-depth/the-economy-forecast> (visited on 02/10/2020).
- (2019b). *Office of Budget Responsibility: The Macroeconomic Model*. URL: <https://obr.uk/topics/obr-macroeconomic-model> (visited on 02/10/2020).