Commodities prices have a very significant impact on economies. They influence inflation and economic activity. They are also related to the prices of other commodities, exchange rates and financial markets. So it is a very important issue from the standpoint of economic policy. Moreover, commodity prices have a direct impact on manufacturers, and thus also for consumers - the purchasers of final products. In the case of energy commodities, such as oil or gas, the relationship is even more direct for the common citizen.

For example, when it comes to the price of oil, the most popular method of forecasting prices in the short term is based on futures contracts. Indeed, this method is used by many central banks and the International Monetary Fund. This method has significant shortcomings. On the other hand, most of the other currently proposed, more advanced, predictive models (e.g. VAR, ARIMA-GARCH, etc.) also have a major drawback. Namely, they do not care how the quality of predictions vary in time. Indeed, it turns out that the prices of commodities can be determined by different predictors in different time periods. So we can talk about ”structural changes”.

It turns out, however, that the market for commodities can be much more complicated. Now both a set of appropriate predictors may vary over time, and even coefficients for every model can also vary in time. There exists a number of studies demonstrating that certain models are good in selected periods, while at other times other models turn out to be better.

For example, when it comes to the price of oil, the supply had a very strong impact at the end of the twentieth century, but at the beginning of the twenty-first century the economic growth in India or China might be more important.

One interesting attempts to solve this problem is the use of weighted-average forecasting. The first key element of the study thus becomes the search for a large collection of potentially relevant regressors.

If there is uncertainty both about the model itself and its coefficients, then Bayesian methods seem to be very useful. Recently a dynamic model averaging has been proposed. This method, however, requires estimation of each potential model in every moment of the analysed period. If there are k potential predictors, this leads to 2^k models - which is a major computational problem. Even for $k = 10$ we get 1024 models. If we have monthly observations from 20 years, then it is required to make at least 245 760 calculations! However, the dynamic model averaging is based on some approximation that allows to simplify calculations, and therefore, make them feasible in a reasonable time. This method allows for the uncertainty in a very broad sense.

In the initial moment each of 2^k models can be regarded as equally “good”. On the other hand, assuming that each of these models at time t is assigned some weight, we can make forecasts for the time $t + 1$ on the basis of data available up to time t. At the time $t + 1$, we can verify whether the forecasts of each of the 2^k models and depending on the compatibility of the predictions with the actual data “reward” or “punish” each model by modifying its assigned weight. The final forecast is formulated as a weighted average of all the forecasts from 2^k models involved.

Although this method is based on the simple regression models, it results in a non-trivial methodology. Finally, this method allows to formulate the following question: which variables and to what extent in different time periods affect the prices of commodities. Of course, it would be interesting to develop this method also for more complex (than linear regression) models. Moreover, it is interesting to look more closely (and to propose possible modifications) on the procedure of choosing the weights.