The Future of Cereal Prices

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December 18, 2021

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This document is part of a series of short papers on “The Future of X”, produced as part of foresight-related research supported by the CGIAR Research Program on Policies, Institutions, and Markets, and edited by Keith Wiebe (IFPRI) and Steven Prager (Alliance of Bioversity and CIAT). These short papers are intended to provide a focused, forward-looking perspective on key issues to support discussion on food, land, and water systems transformation. We thank two anonymous reviewers for their comments on an earlier draft.

This is an accepted version presented as a pre-print. It is currently undergoing final revision, editing, and production. A final version will be made available at <http://foresight.cgiar.org>.

What is the issue?

Understanding the future trends in cereal prices is important to inform food system policies and identify opportunities for targeted programs, particularly for the poor and food insecure. Since the food price spikes of 2007-2008 and 2010-2011, there have been various efforts to predict long-term food prices. The current literature includes three types of projections based on declining, steady, and rising food prices. An example of the former is the projection by [1] who predicted a long-term decline in the global crop prices. In contrast, [2] predicted that food prices will be more-or-less stable over the next decade, while [3] showed that prices will increase over the longer term.

While most of the past century has seen a regular decline in the real food prices, there are reasons to argue that this trend could be slowed and/or reversed in the long-run, as projected by [2] and [3]. The main reasons for the reversal could be related to the growing pressure on land and other resources, the inevitable upward trend in fuel prices, and the pressing social demands in most countries to incorporate health and environmental externalities in the agriculture production costs. Thus far, previous food price projections have mainly focused on key drivers such as population, income, agricultural productivity, and climate change. However, they have not previously connected these projections to agricultural support policies. This note aims to fill this gap in the literature by focusing on cereal price outlook and providing comments on further critical drivers of change that merit greater attention in the future.

What research has been done?

Existing foresight works include projections and model scenarios on cereal prices for different time horizons. [1] projected global crop prices to 2050 using the Simplified International Model

of agricultural Prices, Land use and the Environment (SIMPLE) model. Using the Aglink-Cosimo model, [2] projected wheat, maize, rice, and other grains prices over the period 2021-2030. The impact of climate change scenarios to 2050 on prices for the same set of cereals were analyzed based on the International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) model [3].

What has the research found?

Figure 1 combines the historical data on real prices for maize, rice, and wheat with future projections from [2] and [3]. According to the projections by [2], the trends in real prices for those cereal crops appear to be more-or-less steady in the next decade. The global production for those three cereal crops could increase by 306 metric tons by 2030 [2]. This increase in production and a lower demand due to stagnated per capita consumption of cereals could drive down cereal prices. In terms of long-term changes, [1] projected that the downward trend in crop prices would continue in the upcoming decades until 2050, though at a slower pace. In contrast, [3] projected that over the 50 year-period, cereal prices would decline under various scenarios due to multiple factors. These include increases in yields and productivity brought about by efficient water management, increased R&D investments, and infrastructural arrangements. Some new work in progress suggests that cereal prices would increase under the removal of output and primary input subsidies scenarios [4].

What gaps deserve further work?

For future work, considerable attention needs to be given to additional major drivers of change that were missing in past studies. First, the potential impact of the expected reform on agricultural support policies remains to be seen when projecting cereal prices in the long-run. For example, a potential shift in the \$540 billion worth of global subsidies [5] away from cereals and dairy, to rebalance policy support toward healthier and more sustainable food systems, might drive an increase in food prices. The potential impacts of these types of policies deserve greater attention. Food price policies and market price distortions that typically support only a few food groups can lead to important cost-disadvantages for other food groups. Thus, a better understanding of how agricultural support schemes can be repurposed to fit into the agri-food systems transformation is of crucial importance for improving long-term projections for food prices. Second, we observe that the predicted impacts of climate change are missing when analyzing uncertainty in future cereal prices. Future studies need to factor in the potential effects of climate change on yield due to increased rains/droughts, as well as risks in terms of land availability, particularly in coastal regions. These changes may affect the supplies of cereals, thereby influencing their prices. Third, a better understanding is needed in terms of the impact of natural disasters and pandemic on food prices coming from disruptions in both the supply and logistics side and demand-side, in the short, medium, and long term. These events in turn have implications on outcomes of income growth, poverty, food security and nutrition. While there have been country-specific studies in this area focusing on COVID-19, there is an opportunity for global-scale research in this area, looking comprehensively at a wide range of disasters across the world, for example. Finally, the existing studies on the impact of the

increase in demand from population expansion and income growth are outdated and need a fresh look.

Figure 1. World cereal prices projections. Sources: 2018-20 estimate and 2021-2030 projections are from OECD-FAO (2021); 2030 and 2050 projections are from Rosegrant et al. (2017).

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