

# MASTER – T H E S I S



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## **The impacts of globally fluctuating food prices on the Bolivian price level:**

*Market Integration Analysis and Policy Evaluation against the  
Background of globally soaring Food Prices in 2007/08.*

**submitted by**

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## Summary

The food crisis 2007/08 arose many concerns how developing countries and its population groups would be affected by extreme short-term fluctuations in international agricultural/food commodity prices. The present study analyzes this question for Bolivia from a macro-economic point of view. Principal research objective herein is to clarify whether and to which degree the Bolivian price level was reached by price signals from the world market before, after and during the international food price boom 2007/08.

Central element is a market integration analysis which examines the price transmission from the international market to the Bolivian price level and among different inner-Bolivian markets. Cointegration/error correction modeling techniques are applied to price series data of three key products for which Bolivia is: (a.) a clear net-importer (wheat flour), (b.) a clear net-exporter (sunflower oil and soy extraction cake as products from the oilseed complex) and (c.) neither an importer nor a large exporter (chicken meat).

Firstly, an overview on the trends in the national price level and the changes of the agricultural trade and policy situation during the food crisis 2007/08 in Bolivia is provided. In this context, the government's trade-, producer- and consumer-oriented interventions and their impacts upon the markets for wheat, chicken meat and vegetable oil are descriptively analyzed.

The price transmission testing confirmed a strong comovement between the Bolivian prices for wheat flour (wholesale prices for wheat flour originating from Argentina) and the Argentinean export price for wheat as grain for the period 2007 to 02/2010. Shocks in the Argentinean export market during the food crisis 2007/08 were fully transmitted to the Bolivian price level. This result is not self-explaining *a priori* since the Bolivian government was strongly trying to control the consumer price level of wheat and wheat flour via state-imports and active participation in the national production and commercialization chain.

Prices for sunflower oil and soy extraction cake (in both cases ex-factory prices from Santa Cruz, Bolivia) were comoving with the respective Argentinean reference prices during 2003 to 2009. Signals from the Argentinean export market were completely transmitted into the national price level. Given the results from price transmission analysis and the fact that only 20 % to 30 % of Bolivia's annual soy and sunflower oil production volume is consumed domestically, a temporary export-ban in March/April 2008 seems to be a questionable trade intervention.

In case of chicken meat a comovement between the Bolivian reference price (wholesale price from Cochabamba) and the international reference prices from Peru (wholesale prices at Arequipa and

Trujillo) was confirmed for the period 2004 to 2009. Out of the two temporary export-bans on chicken meat from February/March and May/June 2008, only the second one caused a brief period of instability in the long-run relationship between the price at Cochabamba and Arequipa. Nevertheless, the chicken exporting companies are concerned about future interventions that could threaten an infant export market being developed in Southern Peru.

The results of the sub-national price transmission analysis in case of wheat flour indicate well-defined and direct trade flows from the Argentinean border towns to the inner-Bolivian wholesale markets. Altogether, they confirm the findings from the international price transmission analysis. In the price transmission analysis for the inner-Bolivian chicken meat market, the inflation-adjusted series were found to be stationary during the period of analysis 04/2003 to 10/2009. Therefore, no boom or peak can be diagnosed for these real prices during the food crisis 2007/08.

Altogether, the study reveals that the food crisis entailed a change of the agricultural trade and policy situation in Bolivia. This also lead to conflicts between Government and the private agroindustrial and exporting companies. Improvements of the agricultural policy are essential if in the long-run food security shall be reached together with the private sector. The high level of integration with the international market should be seen as a chance for Bolivia as clear net-exporter of agricultural products.