POLICY CHANGES AND VOLATILITY IN DAIRY MARKETS

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Abstract

Volatility in dairy commodity markets has become a major concern for many in the dairy supply chain and is likely to remain so in the future. Changes to the Common Agricultural Policy (CAP) over the past decade have more closely aligned European Union (EU) and World prices and their associated volatilities. There are a number of reasons that lead us to expect that Ireland may be more exposed to dairy price risk than other EU countries. These include the highly seasonal nature of production, dependence on third country markets, exposure to currency fluctuation and the grass based nature of Irish milk production which is conditioned by weather variations. Factors which contribute to volatility in agricultural commodity prices include low levels of inventory, inelastic supply and demand responses, climatic shocks and policy changes. The aim of this paper was to measure volatility at farm level in Ireland over time, identify possible reasons for the increased volatility and identify ways of reducing volatility. Price volatility was defined as a directionless measure of the extent of the variability of a price. Statistical measures, coefficient of variation (CV) and annualized standard deviation were used to provide measures of past volatility and its evolution over time. Family Farm Income (FFI) data, input data and farm gate milk prices were used to highlight historical farm level volatility. As farm level prices should be based on dairy commodity returns the links between commodity and the farm gate prices are explored. Monthly wholesale prices for Skim Milk Powder (SMP), whole milk powder (WMP) and butter between January 1997 and March 2012 were used for this analysis. The time period was divided into two sub periods to quantify changes in volatility pre and post the Luxembourg Agreement. Results highlight that commodity volatility has increased dramatically post 2007. This commodity price volatility has translated along the supply chain to farm gate prices, farm input prices and farm income, ultimately leading to greater income volatility. The increased level of volatility and its possible adverse consequences have been acknowledged by EU policy makers, however the shift from commodity to income support continues implying that future measures will be designed to deal with crises rather than "normal" market price fluctuation regardless of their magnitude. It should also be noted that private markets solutions are been explored and developed. In recent years a number of EU based dairy futures have been launched for Butter, SMP and Whey. Finally, the implications of this work highlight that risk assessment and management strategies must be considered in order to cope with adverse consequences of greatly increased volatility. Volatility will become a more inherent part of the dairy industry as policy changes cause prices to become further aligned with world prices.

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