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Summary

Problem definition

During 2007 and 2008, the price of many agricultural commodities increased so dramatically that a worldwide food crisis occurred. At the same time, the volume of dollars invested in agricultural commodities was also climbing and the commodity price peak in the second half of 2008 directly coincided with the peak in the volume of investment. The dramatic increase in the volume of investor dollars in commodity markets can be attributed to the invention of a new form of speculation whereby commodity indices are replicated using a portfolio of futures contracts which are rolled continuously so as to earn a return equal to the index return. This new form of speculation is generally referred to as index investment.

The strong correlation between food prices and the volume of index investment was, and still is, a cause for serious concern. In particular, civil society organizations have accused financial institutions of having a *causal* influence on prices via their index investment activities. However, the evidence available to date has not supported the veracity of this accusation. Nonetheless, the statistical investigations on the issue are severely constrained by a lack of data and hence, many sources of complexity and uncertainty must be accounted for in an effort to reach a balanced conclusion on the ethicality of index investment in agricultural commodities.

Objective of the research

Approximately 75% of the population at the Bottom of the Economic Pyramid cite agriculture as their main source of employment. On the one hand, this means that an increase in the productivity of the agricultural sector is likely to have a positive effect on the food security of the Bottom of the Pyramid and increasing output prices incentivise increases in productivity. On the other hand, investment is required in order for productivity to be increased and the Bottom of the Pyramid are severely constrained in their ability to invest - particularly in the face of rising food costs. Hence, the aim of the thesis was to apply economic ethics theory to analyse the current developments on agricultural commodity markets and ideally, find a way to harmonise the interests of the population at the Bottom of

the Pyramid with the interests of financial investors.

Methodological approach

A cornerstone of the specific school of economic ethics theory which was applied in the thesis is the understanding that the market economy has 'moral quality' in that, as an efficient form of societal organization, it contributes to citizens being empowered to lead a good life. However, the theory also recognizes that markets require a solid institutional framework in order to ensure that their functionality is maintained. Hence, Chapter 2 - Theoretical Background outlines the societal function of prices and speculation. This clarification is necessary to understand firstly, how a market-based price mechanism communicates information about scarcity to producers and consumers so that they can make their production and consumption decisions appropriately and secondly, how speculators can contribute positively to this process. A theoretical discussion of the role of institutions follows and in this way, a second integral aspect of the economic ethics theory underpinning the thesis is introduced - namely, the "Golden Rule" that economic actors ought to invest in the conditions of social cooperation to mutual advantage. In this case, "conditions' refers to the institutions which are necessary for ensuring that markets function in a socially desirable way. The theoretical section of the thesis then concludes with a discussion of commodity markets. Needless to say, knowledge of how physical and derivative markets for commodities function is integral to the ethical analysis of the (potential) role of index investors in these markets.

Chapter 3 - Detailed Description of the Situation constitutes the transfer from theory to practice. Firstly, facts on the rise of index investment as an investment strategy are given before a detailed example of a single agricultural commodity fund is presented. Secondly, an overview of the academic discussion on ethics in financial markets and on the ethicality of speculation is given so as to exemplify the academic context of the thesis. Thirdly, the academic literature featuring statistical analysis on the effects of index investment is discussed. The status-quo of the academic literature at the time was that there was no significant evidence of index investors having a causative effect on the price level. However, some evidence of index investors having a significant, positive effect on price volatility was available. Finally, given the limited reliability of the empirical literature on the issue (due to data constraints) a discussion of the potential means by which index investors could affect price level and volatility is provided. Accordingly, the section culminates in the interim conclusions being drawn that the possibility that index investors have a positive effect on both price level and price volatility cannot be discounted.

In this light, Chapter 4 - Implications considers, on the one hand, that if an increase in prices can incentivize a productivity increase on behalf of the 75% of the population at the Bottom of the Economic Pyramid who are employed in the agricultural sector, index investment ought to be considered to make a highly positive contribution to commodity markets. This discussion draws on the theoretical discussion of the societal function of prices. On the other hand, by increasing price volatility and thereby, uncertainty, the likelihood that commodity producers at the Bottom of the Economic Pyramid are able to invest in their production is decreased and index investment ought to therefore be considered to make a detrimental contribution to commodity markets. This discussion draws on the theoretical discussion of the societal function of speculation. In order to ground this discussion in the real world, section 4.3 presents a discussion of the current impediments to investment which have resulted in the population at the Bottom of the Pyramid being constrained to the poverty which they are in. This reflection is vital for considering how index investors may be able to apply the Golden Rule, i.e. invest in the conditions of social cooperation to mutual advantage. Given that index investors have funds to invest in agricultural commodities in the agricultural sector are desirable, it seems that an opportunity to cooperate to mutual advantage is present. However, at present, commodity producers at the Bottom of the Economic Pyramid are not benefitting from index investment - if anything they are suffering due to the increases in price level and volatility which index investment may play a role in.

Results

Section 4.4 draws on the theoretical discussion of the role of institutions to consider what institutions are necessary to ensure that the Bottom of the Pyramid profits from index investment and that index investment can therefore be considered ethically desirable. Firstly, it was found that the potential for index investors to introduce undue price volatility to the market is directly related to the fact that they are not incentivized to only transact at prices which reflect physical market fundamentals - the retail investors bear all the price risk and the fund providers simply collect transaction fees. Hence, it is suggested that an institution mandating fund providers to hold a certain percentage of their own fund be introduced. Secondly, the possibility that index investment funds could be structured differently so that they make a direct contribution to improving the productivity of the agricultural sector is discussed. Specifically, Figure 8 depicts an arrangement whereby the dollars invested in index funds could, via risk sharing arrangements, effectively be used to incentivize the provision of harvest insurance to agricultural commodity producers. This is particularly important for small, highly risk averse producers such as those at the Bottom of the Economic Pyramid. As discussed, it is currently the case that Bottom of the Pyramid producers suffer from rising food prices before they can benefit from the potential to sell their output at higher prices.

The focus of the thesis was to consider what index investors could do to ensure the ethicality, and hence, the long term viability of their business. These two considerations go hand in hand because if the societal desirability of index investment in agricultural commodities cannot be proven, it is likely to be banned. Given the potential for index investment to make a contribution to improving food security in the long term (e.g. if the institutional arrangements outlined above were to be implemented), this could constitute a lost opportunity.

Nonetheless, due to the fact that the potential for index investment to improve food security is strictly limited to its long-term effects via the increased investment in production, the acknowledgement of the role that charitable organizations can play in the short-term to improve nutritional security is presented in section 4.4.2. This is also an integral result of the thesis. It is emphasized that cash donations for food purchases in times of crisis are preferable to direct donations of food. By donating food from abroad, local market mechanisms are interrupted and those producers who were able to invest in their production in previous periods are not rewarded for their investment and are, therefore, likely to be less able to invest in future periods.