



SDI Review Form 1.6

Journal Name:	British Journal of Mathematics & Computer Science
Manuscript Number:	2014_BJMCS_14892
Title of the Manuscript:	Maize Price Stabilization in Ghana: An Application of Continuous-Time Delay Differential Model with Buffer Stock
Type of the Article	Original Research Article

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	(1) Estimated results summarized in Table 3 are problematic. Price data given in table 1 is thought to be "equilibrium" price (see, for example, William H. Greene, Econometric Analysis, 5th edition, p.386). So it might be inappropriate to use these data for estimating the supply and demand functions. Using the following estimation formulas is one idea, Demand= $A+B \times \text{price} + C \times (\text{shocks that affect only demand}) + D \times \text{trend}$, Supply= $a+b \times \text{price} + c \times (\text{shocks that affect only supply}) + d \times \text{trend}$ (2) At line 279, it is pointed out that price data is non-stationary. However, it is wrong to use non-stationary data for estimation. (3) Provide value of DW and R^2 (4) It is not clear why the length of delay is assumed to be unity at line 302. (5) Setting $P=P(t)=P(t-1)$, $P'(t)=0$ and solving equation 7 yield two stationary values, $P=0$ and $P=156$. If the stationary values are equal to the equilibrium values, then it does not seem to me that "the solution oscillates between two equilibrium points." (lines 309-310)	The data is not equilibrium data. They are rather average data points from 17 different markets. However, they are assumed to be used in a single market which in that case makes it different data all together. This we did for it to be conformed to concept of cobweb theory. It's all because we are limited to only these data and nothing else not even inflationary data that matches the period considered. No data on shocks as suggested but we appreciate it. We would try and search for data of the type so that we consider it in the next issue. Thanks Line 279-that was the essence of using the order of differencing so that we can remove non-stationarity. Check fig. 1 Lime 302-is the starting point which also confirms the fact that, the more the delay, the more the fluctuations increase. And this what I want to emphasize Line 309-310-this was considered in the discrete time model and published earlier but we realised that in Ghanaian context supply response even to change in price of



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	(6) The delay equation has only one delay in equations 7 and 8. It is possible to detect time varying effect analytically by considering linearized equations. The stability switching values of the delay can be obtained.	fuel, transport fares at anytime. Inflation is also volatile. We also realised that change in supply is not affected by only the present but also previous circumstances. (6)-by changing it to linear form you risk losing a lot of in the real state of the market. However, the linear part that was compared with its nonlinear counterpart has also been published using the same. data. those ones did not have the buffer
<u>Minor</u> REVISION comments	(1) Assumption of no exogenous shocks (at line 244) is very strict. (2) From lines 249 to 251, the minimum price policy of the government is assumed. It is not clear why this assumption is imposed and how it works. (3) Introduction is too long. Shorten it.	Line 244-It's all because we are limited to only these data and nothing else not even inflationary data that matches the period considered. (2)-Considered – we have changed it to only the average price to reflect the results in the research (3)-Considered
<u>Optional/General</u> comments	N.A. Clarify essential differences between Anokye et al. (22), (24) and this study.	One is discrete time and the other continuous time. Mentioned in response to the Line 309-310 above