

Abstract

In this study, using VAR model, the techniques dependent to immediate reaction and variance analysis, the relationship between value-added variables of agricultural sector, foreign exchange rate, agricultural products price index, cash flow and the agricultural products export value is studied. The results from cash flow variance analysis show that in short-term, mid-term and long-term, the cash flow has the highest power to explain the fluctuations of this variable. Applying the shock from value-added has a significant effect on agricultural sector value-added, cash flow, price index of agricultural products and export value of them, but no effect on exchange rate and the shock effect vanished during the study period. By increasing the cash flow in long-term, the value-added in agricultural sector increases. In the next section, the non-linear relationship between cash flow and value-added in agricultural sector is studied using STAR model. The results showed that the real exchange rate is selected as the transition variable. Considering this variable, the model used as transition variable for estimation, is STAR model with two regimes (LSTR1). The results of STAR non-linear estimation show that the estimated value of threshold parameter is - 0.0309, and the estimated value of the parameter using STAR non-linear method is 11.7424. The high value of the parameter γ , shows the high value of transition velocity from regime 1 to regime 2. The effectiveness of the variables in regime 1 is different from regime 2. Based on these results, the real exchange rate in both regimes has a positive effect on value-added in agricultural sector. The total coefficient of cash flow variable is 0.2142 in regime 1 and 0.6424 in regime 2. This variable has positive effect on value-added of agricultural sector in both regimes, as the two variables of agricultural products value and real exchange rate. The total coefficient of price index variable of agricultural products, unlike other three variables, does not have the same sign and is - 0.2587 in regime 1 and 0.30722 in regime 2.

Keywords: cash flow; value-added, VAR model; STAR model.



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