Title: **Investment and Capital Accumulation in Agriculture**

Abstract (original)

The issue of agricultural investment and capital accumulation has not attracted enough attention it deserves. The causes of agricultural investment and the mechanism of agricultural capital accumulation are not well explained. This article proposes a developed q-theory of investment to examine the conditions for agricultural investments and the process of its capital accumulation. This analytical framework distinguishes two situations where there is no agricultural surplus and there is agricultural surplus. In the former case, since there is no agricultural surplus, peasants borrow to invest. In the latter case, peasants use the agricultural surplus to invest. The theory highlights that investment viscidity and profitability are the two fundamental reasons for agricultural investment in both cases. Under these two premises, profit maximization characterizes the investment behavior and the capital accumulation path in agriculture. The model displays that the marginal productivity of agricultural capital, the price of agricultural products, and the price of industrial products determine the optimal path of agricultural capital accumulation. But the interest rate does not display the expected effect as traditional theory explains. The model shows that once agricultural surplus appears the negative effect of the interest rate becomes weaker. The empirical work exploits China's stylized facts of agricultural investment and capital accumulation from 1952 to 2017 and verifies the predictions of this theory.

Key words: Cost of Capital, q-theory, Agricultural Surplus, Agricultural Capital Investment
JEL Codes: G31, O16, Q14,

Abstract (with correction)

The issue of agricultural investment and capital accumulation has not attracted the attention it deserves. Moreover, the causes of agricultural investment and the mechanism of agricultural capital accumulation are not yet well explained. This article proposes a developed q-theory of investment to examine the conditions for agricultural investments and the process of its capital accumulation. This analytical framework distinguishes two situations, one without agricultural surplus and one with agricultural surplus. In the former case, since there is no agricultural surplus, peasants borrow to invest. In the latter, peasants use the agricultural surplus to invest. The theory highlights that investment viscidity and profitability are the two fundamental reasons for agricultural investment in both cases. Under these two premises, profit maximization characterizes the investment behavior and the capital accumulation path in agriculture. The model displays that the marginal productivity of agricultural capital, the price of agricultural products, and the price of industrial products determine the optimal path of agricultural capital accumulation. However, the interest rate does not display the expected effect as traditional theory explains. The model shows that once agricultural surplus appears, the negative effect of the interest rate becomes weaker. The empirical work exploits China's stylized facts of agricultural investment and capital accumulation from 1952 to 2017 and verifies the predictions of this theory.

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In addition, the effects of the interest rate vary from those explained in traditional theory.

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The model illustrates that once agricultural surplus appears, negative effects of the interest rate weaken

Abstract (JES version)
The issue of agricultural investment and capital accumulation has yet to garner the attention it deserves. Moreover, neither the reasons for agricultural investment nor the mechanism behind agricultural capital accumulation are well explained. This article proposes a developed q-theory of investment to examine the optimal conditions for agricultural investments and the process by which capital is accumulated. The analytical framework applied distinguishes two situations. In the first, there is no agricultural surplus, thus peasants borrow to invest. The second assumes agricultural surplus, and peasants invest this excess. The theory highlights that investment viscidity and profitability are the fundamental reasons for agricultural investment in either case. Under these two premises, profit maximization characterizes the investment behavior and capital accumulation paths in agriculture. The model demonstrates that the marginal productivity of agricultural capital, the price of agricultural products, and the price of industrial products determine the optimal path of agricultural capital accumulation. Furthermore, the effect of the interest rate varies from that explained in traditional theory. The model illustrates that once agricultural surplus appears, negative effects of the interest rate weaken. The empirical work exploits China's stylized facts of agricultural investment and capital accumulation from 1952 to 2017 and verifies the predictions of this theory.