

INTERLOCKED FACTOR MARKET IN AGRARIAN SECTOR: AN OVERVIEW OF THEORETICAL CONCEPT

S. M. Ahamed Lebbe

Department of Economics and Statistics
Faculty of Arts and culture
South Eastern University of Sri Lanka.
smahamed08@gmail.com

Abstract

Informal credit sector plays a vital role in the rural sector in developing countries since formal credit institutions failed to provide access to rural credit to poor farmers. This study is an attempt to analyze various theoretical aspects of interlinked credit transactions in the rural credit market in developing countries. This is a qualitative approach and the relevant information were collected from secondary sources such as books and journals. Furthermore, this study tried to explain positive and negative theoretical concepts in regard to interlinked credit transactions in agrarian sector. The finding shows that the poor farmers in rural sector are exploited by lenders in the form of cash or kind or labour. However, the finding further indicates interlinked credit transactions may cause positive impacts in the rural credit markets. Hence, policy makers should give more focus on it to eradicate the above problem and should have a vibrant plan to give several subsidies to the poor, to make investment in rural areas, to strengthen easy marketing facilities etc.

Keywords: *Interlinkage, Collateral System, Underpricing, Exploitation, Tenant.*

Introduction

The interlocking factor market in agriculture sector is now widely observed. The various exchange systems in the rural factor markets in Less Developed Countries are explained by number of researchers. It has been extensively studied by development economists not only in Asia but also all over the world. The concept of interlinkage has probably been borrowed from anthropology, where the multi-standard nature of relationships in small face-to-face communities has often been emphasized. Such societies have been called multiplex, and multiplex relationships between the same economic agents in a poor agrarian community are often described as interlinked contracts encompassing several markets (Gill, 2003). Interlinked credit transactions can broadly be classified into

four categories, namely those involving linkage of land, labour, inputs and output of farm households (Sarap, 1991). An interlinked transaction is one in which the parties trade in at least two markets on the condition that the terms of all trade between them are jointly determined (Bell and Srinivasan, 1989). According to their definition two parties and more than one market are involved in the interlocked factor market.

Prices of goods and services in the classical competitive markets are determined by the market forces (demand and supply) but, prices of factors of production in agrarian economy are interlinked, thus reward of land, labour and credit are determined by the interlockers. Many theoretical and empirical studies have explained different types of linkages in the

rural sector such as land and labour markets, land and input markets, land and output markets, labour and output markets, input and output markets. The credit linkages between poor borrowers and lenders may be in several forms, namely, cash-to-cash (Cash receipt of the loan by the borrower and cash repayment of loan and interest to the creditors), cash-to-kind (Cash receipt of the loan and kind repayment), cash-to-labour (Cash receipt of the loan and repayment in the form of labour services), kind-to-cash (kind receipt of the loan and cash repayment), input-to-cash (input receipt of the loan and cash repayment), and cash-to-output (Cash receipt of the loan and repayment in the form of output). However, all repayments also include interest with loan amount

It could be proved that interlinked credit transactions between lenders and poor peasant lead to negative impacts to the borrowers while it incurs some advantages among credit market in rural sector.

Objectives

This study examined the impacts of interlinked credit transactions in rural sector. Land-labour market, land-input markets, land-output markets, labour-output markets, input-output markets linkages are seen in the rural credit markets. This study

Main Objective

The main objective of the study is to explore the impacts of interlinked credit transactions in rural economy.

Specific Objectives

- To identify various theoretical concepts of interlinked credit transactions in rural sector.
- To analyze socio – economic structures in rural areas in backward countries.
- To put forward appropriate solution to the policy makers in particular countries.

Methodology

This study is qualitative in nature but descriptive in style. Secondary data was entirely used in this study from the sources reviewing the peer reviewed journal articles and books and documents relating to interlocked factor markets.

Results and Discussion

The impacts of interlocked factor markets may be explained by two ways. One argument says that borrowers are exploited and affected by creditors in many ways. On the other hand, it is to be stated that interlinked transaction is efficient and effectiveness at the market. The word “interlinkage” was first used by Bardhan and Rudhra (1978) that caused to much of the development of recent theoretical work. Their survey examined the interrelationship of the factors in the rural market. According to the results, the landlord quite often gave production loan to the tenants and the tenants very often took consumption loan from the landlords. This survey also suggests that overwhelming majority of tenancy and attached labourers contracts do not display feudalist features. Further, workers are employed in the peak season after being offered consumption loan in the lean season at subsidized rate of interest.

In general, it is stated that two parties involving in the interlocked factor market are identified as weaker party and stronger or dominant party. Interlinking of transaction in different markets is also very effective way for the dominant party to avoid social or legal controls on charging higher prices in some markets and to select criteria for rationing scarce resources (like credit and land) when prices are inflexible or sluggish in adjustment (Bardhan, 1980). Interlinked transactions bring this type of market under the control of dominant party. Bardhan (1973), Basu (1983), have explained about the various kinds of control exercised by the money-lenders over landless borrowers which strengthen the segmented and personalized character of these markets. Loans are given by money

lenders under certain conditions. Duration of the loan, underpricing collateral system, deduction of the interest payments at the beginning of the loan and control over the borrowers are common practice at this market.

Weaker party is always identified as peasant and poorer than stronger party. The dominant party would have a sufficient power at this market. Hence, this situation leads to exploit the weaker party. It has been argued that because of the imperfection in the land and credit markets where the landlord/ money-lender poses localized monopoly, interlinking of credit with tenancy transactions increases the power of the landlord which leads a greater exploitation of the tenant (Bardhan, 1983). These factor markets involving different parties do not operate under competitive conditions. This imperfection is that access to factors of production is far more difficult for the weaker parties than other parties (Baradwaj, 1974, 1980). In the rural sector quite often credit is paid or repaid in kind, quite often interest is not explicit but implicit in the terms of the transaction (Bardhan, 1983). Since the interest payments are implicit at the market, the rate of interests is higher than the normal market interest rate. Hence, poor borrowers happen to pay more than actual payments.

The main manifestation of this imperfection is that access to factors of production is far more difficult for the weaker parties than for others. Besides, inadequate information which is caused by short supply of these factors, which in turn, lead to a rationing of them, can result in the stronger party exploiting the weaker party in the process of exchanging goods and services. Thus, it has been generally recognized that agrarian markets are highly fragmented and different parties in a given sub-market may have unequal access to the other markets (Sarap, 1991).

Basu (1984) explained the concept of interlinkage in the light of lender's risk hypothesis while Bardhan (1984) described employer's risk hypothesis. Under the

model of Basu (1984) the under pricing of collateral, the existence of high interest rate, and the multiplicity of interest rates are clearly indicated. All these features are widely prevalent in backward agriculture. Basu (1984) further says that interlinkage is a form of insurance against risk and moral hazard. On the other hand, Bardhan (1984), in his theory, explained that the landlord presumes that there may be excess demand for labour at the agricultural peak season (sowing and harvesting) and hence he provides consumption loan to the workers on the basis of their pre-commitment to work in his field in the next peak season. It is to be noted that pre agreements are done by both groups. Hence, Poor peasants are controlled by landlords or other lenders.

Interlinked transactions bring this type of market under the control of dominant party. Bardhan (1973), Basu (1983), have explained about the various kinds of control exercised by the money-lenders over landless borrowers which strengthen the segmented and personalized character of these markets. Interlinking of transactions in different markets is also an effective way for the dominant party to avoid social or legal controls on charging high prices in some markets and to select criteria for rationing scarce resources when prices are inflexible or sluggish in adjustment (Bardhan 1980).

Further, Baduri (1986) argues that a trader or money lender having a monopoly on one market of the interlinked transaction can gradually extend his control to the other market implied in the transaction. Lenders exercise monopoly power over these borrowers (Hoff and Stiglitz, 1990). Studies of informal credit market suggest that it is extremely important to understand the nature of dependence of poor households and the social character of the control mechanism exercised by the lenders (Subbarao, 1989). Stiglits (1992) also explains the general theory of interlinkage of agriculture in LDCs. According to him the landlord may also supply credit to workers to induce them to work hard.

Interlinked transaction is a major barrier for poor farmers and labourers to take collective action. Bardhan and Rudra (1981) clearly showed this in their case study in West Bengal in 1979. According to them where some workers failed to participate in a collective social movement for income negotiation, the reason was later identified as a commitment to interlinked transaction (labour/credit) with landlord. The producers' relative dependency of the debt trap, give reason to think that these interlinked transactions could prove to be one of the significant barriers to collective action (Lemeilleur, et al., 2005).

Another type of interlocking relates to credit and product markets where the landlord serve as a trader in buying that part of his share of output in case the borrower is a tenant, or, in case the borrower is a small farmer, the output equivalent in value to the loan plus interest. It is possible that both small farmers and tenants sell their output immediately after the harvest to the landlord-cum-trader when prices are low (Subbarao, 1989). The medium and large farm households are relatively free in the product market due to their superior bargaining status compare to small farmers and agricultural labourers (Narayana Reddy, 1992). Interlinkage of the produce and credit markets and underpricing of collateral may occur because of interest rate ceilings and also underpricing of collateral and underpricing of product interlinked with credit and low interest rates should be observed together (Gangopadhyay and Sengupta, 1987). All these literatures indicate the exploitation of borrowers in the rural credit market.

But, the study of Braverman and Stiglitz (1982) explains the relation between the landlord and tenants with another perspective. According to them, the activities of landlord may be in certain circumstances lower agrarian output and make tenants worse off. In other circumstances, total agriculture output might increase and tenants could be better off and only the landlord suffers. This

theory further says that interlinkages have both distributive as well as allocative effects.

All the above theoretical based concepts show the negative sight of the interlocked factor market in rural sector. However, a number of studies indicate the benefit of interlinked credit transactions is an efficient way to reduce the excessive cost of acquiring information between transistors in imperfect market. Economists have not failed to show the advantages of interlinked credit transaction among markets. Brawerman and Stiglitz (1982) pointed out that it is an efficient response to information asymmetry and uncertainty. Brawerman and Guasch (1984) stated that this transaction plays as a screening device in the selection of consumers. On the other hand, Bell and Srinivasan (1989) said that interlinked transaction is a flexible market response in the growing commercialization. They further pointed out that this transaction can increase economic efficiency in certain context. The study of Lemeilleur at al, (2005) explained the interlinked transactions between rice millers and producers. According to them "the coupling with credit access (particularly if there is a zero interest rate) is an effective incentive to discipline producer efforts toward the optimum". Thus, this transaction between rice millers and producers would appear to be an effective contractual arrangement to reduce transaction costs and to counteract market failure. The tradesman decreases the loan risks thanks to better screening. Moreover, an interlinked transaction is an incentive mechanism to guarantee loan refunding (Ray and Sangupta, 1989).

Conclusion and Recommendation

This study has demonstrated the actual meaning of interlinked credit transactions and many theoretical explanations of several economist or authors. Imperfection is common features of backward agrarian sector. This paper examined the impacts of interlinked credit transactions in rural sector. Land-labour market, land-input

markets, land-output markets, labour-output markets, input-output markets linkages are seen in the rural credit markets. This study further identified the types of linkages between lenders and poor farmers, which are Cash-to-Cash, Cash-to-Kind, Kind-to-Cash, Kind-to-Kind, Cash-to-Labour and Kind-to-Labour. At least two parties, identified as weaker and dominant party, are involving in interlinked credit transactions at this market. Since the dominant party has a monopoly power, the landless labourers, tenancy farmers and other poor farmers (weaker party) are exploited by the lenders at this market. Higher implicit rate of interest, under pricing of collaterals and working more time in the field are the ways of exploitation. However, the interlinked credit transactions lead to economic efficiency and an effective way to reduce the cost of transactions among transactors in the rural credit market.

In general, weaker parties are severely exploited by dominant parties through interlinked credit transaction. In particular, inter-locking factor market still exists in under developed countries, especially in rural areas. The elimination of above situation would be helpful to reduce exploitation of dominant parties and it would also be a constructive way to assist weaker parties in terms of inter-locking factor market. Hence, policy makers should give more focus on it to eradicate the above problem and should have a vibrant plan to give several subsidies (Eg:- fertilizer subsidy) to the poor, to make investment in rural areas, to strengthen easy marketing facilities etc.

References

- Aleem, I. (1990), "Imperfect Information, Screening, and the cost of Informal Lending: A Sumanya Sumanya SumanyaSuma study of a Rural Credit Market in Pakistan", *World Bank Economic Review*, Vol.4, No.3, pp.329-349.
- Bandyopathiyay, A. K. (1984), *Economics of Agricultural Credit: With Special Reference to Small Farmers in West Bangal*, Agricole Publishing Academy.
- Bardhan, P.K. (1973), "On the Incidence of Poverty in Rural India in Sixties", *Economic and Political Weekly*, Vol.8, Nos. 4,5,6, 245-54.
- Bardhan, P.K. (1980), "Interlocking Factor Market and Agrarian Development: A Review of Issues", *Oxford Economic Papers*, Vol. 35, No. 2, pp.262 -280
- Bardhan, P.K. and Rudra, A. (1981), "Terms and Conditions of Share Sharecropping Contracts: Results of a Survey in West Bengal, 1979", *Oxford Bulletin of Economics and Statistics*, Vol.43, No.1, February, pp. 89-111.
- Bardhan, P.K. (1984), "Land, Labour and Rural Poverty: Essays in Development Economics", *Oxford University Press*, Delhi.
- Bardhan, P. (1989), *The Economic Theory of Agrarian Institutions*, Oxford: GP: Clarendon Press.
- Bardhan, P.K. and Rudra, A. (1978), "Interlinkage of Land, Labour and Credit Relations: An Analysis of Village Survey Data in East India", *Economic and Political Weekly*, Vol.13, Annual Number, February.
- Basu, K. (1983), "The Emergence of Isolation and Interlinkage in Rural Market", *Oxford Economic Papers*, Vol.35, No.2, pp.262 -280.
- Basu, K. (1984), "Implicit Interest Rates, Usury and Isolation in Backward Agriculture" *Cambridge Journal of Economics*, Vol. 8, No. 2, pp.145-159.
- Basu, K. and Bell, C. (1991), "Fragmented Duopoly: Theory and Application to Backward Agriculture", *Journal of Development Economics*, Vol.36, pp.145-165.
- Bell, C. (1990), "Interaction between Institutional and Informal Credit Agencies in Rural India", *World Bank Economic Review*, Vol.4. No.3, pp.247-327.
- Bell, C. and Srinivasan, T.N. (1989), "Interlinked Transactions in Rural Markets: An Empirical Study of Andhra

- Pradesh, Bihar and Punjab”, *Oxford Bullatien of Economics and Statistics*, Vol.51, No.1, pp.73 -83.
- Bell, C., Srinivasan, T.N. and Udry, C. (1997). “Rationing, Spillover and Interlinking in Credit Markets: The case of rural Punjab”, *Oxford Economic Papers*, Vol.49, pp.557- 585.
- Bhaduri, A. (1977), “On the Formation of Usurious Interest Rates in Backward Agriculture”, *Cambridge Journal of Economics*, Vol.1, No.4, pp.3412-52.
- Bhattacharyya, S. (2005), “Interest Rate, Collateral and Interlinkage: A micro study of rural credit in West Bengal”, *Cambridge Journal of Economics*, 29(3): 439-462.
- Braverman, A. and Gausch, J.L. (1984), “Capital Requirements, Screening and Interlinked Sharecropping and Credit Contracts,” *Journal of Development Economics*, Vol. 14, pp.359-74.
- Braverman, A. and Stigliz, J.E. (1982), “Sharecropping and Interlinking of Agrarian Markets,” *American Economic Review*, Vol. 73, No. 4, pp.693-715.
- Braverman, A. and Srinivasan, T.N. (1984), Agrarian Reform in Developing Rural Economics Characterized by Interlinked Credit and Tenancy Markets, in Binswanger and Rosenzweig.
- Gangopadhyay, S. and Sengupta, K. (1986), “Interlinkages in Rural Markets”, *Oxford Economic papers*, Vol. 38, March, pp.112-121.
- Gil, Anita (2004), ‘Interlinked Agrarian Credit Markets: Case Study Of Panjab’, *Economic and Political Weekly*, Vol. 39, No.33, pp.3741-3751.
- Hoff, K and Braverman, A. and Stiglitz, J. (1993), *The Economics of Rural Organization: Theory, Practice and Policy*. Oxford University Press. London.
- Hoff, K and J.E.Stiglitz (1990), “Imperfect Information and Rural Credit Markets-Puzzles and Policy Perspectives”, *World Bank Economic Review*, Vol.4. No.3, pp.235-250.
- Lemeilleur at al, (2005), ‘Interlocking Transaction: Do they restrain the emergence of rice producer’s organization in Cambodia? Paper presented at the ISNIE Conference, The Institutions of Market Exchange, Barcelona, MOI SA, 2, Place Viala. 34 060 Montpellier Cedex 1, France.
- Narayana Reddy, M.V. (1992), “Interlinkages of Credit with Factor and Product Markets: A study in Andhra Pradesh”, *Indian Journal of Agricultural Economics*, Vol.47, No.4, pp.618-630.
- Ray, T. (1999), “Share Tenancy as Strategic Delegation”, *Journal of Development Economics*, Vol.58, pp.45-60.
- Rudra, A and Bardhan, P. (1983), *Agrarian Relations in West Bengal-Results of two surveys*, Sumaiya Publication (Pvt) LTD.
- Sarap, K. (1991), *Interlinked Agrarian Markets in Rural India*, Sage Publication, New Delhi.
- Subbarao, (1989), *Agricultural Marketing and Credit*, Indian Council of Social Science Research, New Delhi.
- Stiglitz, J.E. (1992), *The New Development Economics, Agriculture in Economic Development, The Political Economy of Development and Under Development*, McGraw-Hill, Inc, Economic Series (Fifth edition).
- Stiglitz, J.E (2001), “Redefining the role of the state”, *World Economy*, Vol.2, No.3, pp.45-86.
- Swaminathan, M. (1991), “Segmentation, Collateral Undervaluation and the Rate of Interest in Agrarian Credit Markets: Some Evidence from Two Villages in South India”, *Cambridge Journal of Economics*, Vol.15, pp.161-178.
- Yotopoulos, P. A. and Floro, S. L. (1992), “Income distribution, transaction costs and market fragmentation in informal credit markets”, *Cambridge Journal of Economics*, 16, pp.303-326.