INSTITUTIONALIST PERSPECTIVES ON AGRICULTURAL POLICY REFORMS IN WEST AFRICA

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1. Introduction

The goal of this paper is to examine the usefulness and limitations of the transaction-cost approach to analyzing agricultural policy reform issues in West Africa. The transaction-cost approach lies at heart of the "new institutional economics," as typified by the work of Coase, Williamson, and North. In examining the usefulness of the transaction-cost approach to policy analysis in West Africa, the paper also compares this approach with the questions raised by those economists having their intellectual roots closer to the old "American institutionalism" of Commons, Veblen, and Parsons. In so doing, the paper attempts to show points in common between these institutional approaches, on the one hand, and methods frequently used by French researchers studying development issues, on the other hand.

2. What Do We Mean by "Institutionalism"?

The term "institutional economics" covers a very heterogeneous body of analytic approaches in the economics profession in the U.S. All institutionalists are interested in analyzing the impact on economic performance of "rules of the game" under which an economy operates (law, custom, standard business practices, etc.). Yet the range of philosophic approaches and definitions of performance these scholars use is so vast that one can ask whether it really makes sense to include them all under one heading.

2.1. Defining Institutions

Perhaps the most basic point of contention is how to define institutions. Most institutionalists define institutions as the basic rules under which an economy operates. These include constitutions (the rules for making new rules--an area stressed by Buchanan), statutory law, custom, standard operating procedures of businesses, etc. In this view, institutions refer only the "rules of the game" and not the organizations (research institutes, firms, cooperatives, etc.) that

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1In developing this paper I have benefitted greatly from discussions with two colleagues at Michigan State University, James Shaffer and A. Allan Schmid. Some of the observations in this paper also draw from research carried out in West Africa under the Food Security in Africa Cooperative Agreement between USAID and Michigan State University. That support is gratefully acknowledged. Neither my colleagues nor the funding agency, however, are responsible for any errors of logic or interpretation that appear in this paper.
arise in response to those rules. In the words of North (p. 5): "Separating the analysis of the underlying rules from the strategy of the players is a necessary prerequisite to building a theory of institutions." (See also Bromley).

Yet recently Johnson et al. have argued that because they are so tightly interrelated, it is impossible conceptually and in practice to separate analysis of the basic rules of the game, the organizations that arise in response to those rules and the fixed capital investments made by those organizations. For example, a law may set particular goals for the state in helping assure the food supply of a particular country. In response, the state may create an organization, such as the Office du Niger in Mali, to be directly involved in food production. The organization in turn creates fixed investments (irrigation infrastructure, large rice mills, etc.), which it tries to protect by lobbying for new rules that limit competition, both from the world market and from private traders in the domestic economy. Hence, these authors argue, one cannot understand the evolution of the rules of the economy without at the same time considering the manifestations of those rules in the form of organizations and fixed investments.

2.2. New vs. Old Institutionalism

Although there is great diversity in institutionalist thought, for many purposes it is useful to place American institutionalists into one of two broad categories. The first is the "new institutionalists," who have their roots in neoclassical economics but who seek to broaden the neoclassical model to include an analysis of the institutional structure of the economy. This is the group that has received the greatest public attention lately, especially since awarding of the Nobel Prize in Economics to Buchanan and Coase.

The basic argument in much of the "new institutionalist" literature is that institutions arise and change as part of society's effort to use scarce resources effectively. Specifically, at any given time, certain institutions or "governance structures" will be more efficient in reducing the costs of production and distribution in specific economic domains (such as grain marketing) and hence will tend to dominate economic activity in those domains. However, with technological change, the structure of costs and benefits of the activity change and may induce the emergence of new institutional forms. Hayami and Ruttan hypothesize that new technologies may create demands for institutional changes, as the old institutions prevent members of society from capturing the economic benefits of the new technology. For example, they argue that the Enclosure Movements in Britain (the enclosing of village common grazing areas and the attribution of those lands to private individuals) was an attempt by society to capture the potential benefits from expanding world markets for wool (the First Enclosure Movement) and development of the new crop husbandry techniques based on the introduction of crop rotations in place of a fallow system (the Second Enclosure Movement).

Therefore, in this perspective, the design of institutions is seen as part of the economic optimization process, similar conceptually to cost minimization within a given institutional setting. Whereas standard neoclassical analysis looks at issues of cost minimization and economic efficiency within a given institutional framework, this approach looks at how society attempts to change institutions to gain economic efficiency and minimize costs more broadly. This group of analysts therefore place considerable emphasis on how various institutions affect the structure of transaction costs in society (the costs of engaging in exchange). The applications of this approach to development policy emphasizes identifying and removing
institutional constraints to the adoption of new, more productive technologies based on economies of scale, specialization and trade. (See, for example, North.)

The idea that the institutional structure of the economy is a function of the underlying productive forces (technology) is, of course, not new—it goes back at least to Marx. But here it is applied on a much more micro basis, rather than in terms of modes of production writ large (capitalism vs. feudalism, etc.). The direction of causality here is: economic efficiency determines institutional setting (although some interaction is allowed). Because this group, at least at its most extreme form, sees technology as the main determinant of institutional structure, it places relatively little emphasis on the role of power in determining economic performance.

The second group, which has its roots in the "old institutionalism" of Commons (itself an offshoot of the German Historical School of the 19th Century) is less unified in its analytic approach. The main common element in this group is its desire to go beyond basic neoclassical economics in investigating the basic structure of property rights in society and how that structure determines whose interests get counted in the economic calculus and hence what the market measures as an "efficient" outcome. This concern stems from the recognition since time of Pigou that there are many different "efficient" outcomes in a given market situation, each corresponding to a different initial endowment of rights, and that it is beyond the scope of neoclassical economics to say which state is preferable. The direction of causality in this analysis is: institutional setting (property rights) determines what is counted as efficiency. Hence, for this group, the analysis of the role of power in the economy is a central element in explaining economic performance.²

3. Applications to Analysis of Agricultural Policy Issues in West Africa³

This section examines the contributions of both the "new" and the "old" institutionalism to agricultural policy issues in West Africa. Special attention is paid to the use of transaction-cost analysis. Despite their divergences, the two approaches have some common elements in their diagnosis of development problems.

3.1. Policy Reform: "The State vs. the Market"

With their emphasis on the interdependence between law and economics, both the new and the old economics recognize that the state and the market are inseparable. Because the state, through the political process, establishes the basic rules and property rights under which the market operates, the state is always present in the market. In the words of Shaffer et al., "The market simply validates prior political decisions" concerning property ownership and rules of exchange.

²Shaffer would include a third category, which includes scholars such as Stiglitz, who work in the area of the economics of information. This group, while accepting much of the neoclassical model, rejects its basic assumptions concerning the nature of information in the economy.

³For an expanded treatment of some of these issues, see Schmid.
In this view, it makes no sense to discuss "getting the state out of the market", as some structural adjustment enthusiasts advocated during the early 1980s. The state is an inseparable part of the market because some collective action is always necessary for an economy based on private initiative to function. The question is not "the state vs. the market" but what sort of market one wants to foster. The detailed design of specific rules of the game makes enormous difference in the type of economic performance that emerges.

For example, what degree of market concentration is allowed in a "free market?" Much of the economic debate in the U.S. currently focuses on whether the laws forbidding firms from colluding put U.S. industries at a competitive disadvantage compared to their European and Japanese competitors (Thurow).

Because of their focus on how the details of institutional design affect economic performance, institutionalists are by nature "meso-economists" rather than macro-economists. While changes in macro-economic variables such as the exchange rate are judged important, their impact cannot be accurately predicted without knowing the details of the institutional environment in which these macro variables operate. Therefore, institutionalists expend considerable effort trying to understand how these details affect individuals' responses to changes in macroeconomic variables. As described below, there are some striking similarities between these types of meso-economic analyses and those of French researchers conducting filière (subsector) studies.

The main area of disagreement between the "new" and the "old" institutionalism in this area is over the degree to which the state should be involved in specifying market outcomes. For some, such as Buchanan, the basic role of the polity is to establish the constitution. Once that is established, whatever results the economy generates is acceptable performance, as it is a logical consequence of the political decisions embodied in the constitution. Others, such as Williamson, emphasize the role of the state as that of removing the constraints to private governance of transactions. In these authors' view, the state should remove impediments to buyers and sellers bargaining with one another and reaching private agreements, but it should not interfere with the execution of whatever contractual arrangement results. Thus, for example, the state should not dictate what sort of contract should exist between landlord and tenant. They should be left free to reach whatever arrangement they find mutually acceptable. The "old institutionalist" response is to ask why one person is the landlord and one is the tenant in the first place. As Schmid argues, the history of development policy has often been one of deciding whose interests to favor at the expense of someone else.

3.2. Diagnosis of the Basic Causes of Poverty: The Role of Transaction Costs

Many analysts who build on the work of Coase see the basic causes of poverty in low-income countries as institutional constraints that restrict the scope for trade, thereby limiting the adoption of more productive technologies. The basic argument is that economic development involves movement away from small-scale autarkic subsistence production towards greater specialization and trade. This transformation requires investment in more specialized assets and a movement from highly personalized exchange on local level to more impersonal, wide-scale exchange.

See Schmid for a detailed discussion of this point. See also Staatz, Dioné, and Dembélé for empirical examples from Mali.
The movement away from autarky has at least three advantages (Bromley and Chavas). First, the household and the economy as a whole benefit from economies of size that come from specialization. Second, exchange allows the household to broaden its scope for consumption choices beyond what it can produce itself. Third, exchange allows the household and local community to spread risks (of crop failure, etc.) over a broader geographic area.

However, as Adam Smith pointed out, the ability capture the benefits of specialization depends on the size of the market. The size of the market in turn is a function of the costs of exchange (transaction costs). For a given potential benefit from exchange, the higher the costs of carrying out the exchange, the less likely the exchange is to take place.

Transaction costs include both the ex ante and ex post costs of exchange (Williamson). The ex ante costs involve:

1. Gathering the information necessary to decide whether to trade. E.g.,
   a. What products are available at what terms of exchange?
   b. What is the quality of the products being offered?
   c. What transport services are available to move the product?
   d. What other things are going on in the market that may affect the profitability of the exchange (e.g., will food aid be released just after you buy a large amount of cereal)?
   e. What is the reliability of the supplier to meet the terms of the contract?
2. Costs of negotiation of the contract. These depend both on the complexity of the exchange and the degree of trust among the trading partners. Trust affects:
   a. How complex the exchange becomes. Does one write a contract covering all contingencies, or does one leave open the possibility of amicably settling unforeseen situations? If there is little trust among the trading partners, then the cost of specifying a contract covering all contingencies can become so high as to discourage trade.
   b. The degree to which specialized assets are involved in the production oriented towards the exchange. The decision to use specialized assets, which may greatly increase productivity, is fraught with risk. If one's trading partner reneges on the terms of the contract (e.g., refusing to pay the previously agreed-upon price or deliver the agreed-upon quantities at the agreed-upon time), then the party investing in the specialized assets can take serious losses (expropriation of quasi-rents). The risk of such opportunistic behavior on the part of trading partners may discourage such investment in specialized assets (Staatz). Preliminary survey results from Mali suggest that this may be a major impediment to investment in animal feed mixing equipment.
The *ex post* transaction costs are the costs of monitoring and enforcement of the explicit or implicit contract that is negotiated. E.g.,

1. Did the other party perform as required?
   a. Was the correct quality of product delivered?
   b. Did one's employees act in accordance with the employers interests? (This is referred to in the literature as the "agency problem" and has historically been an impediment to the development of long-distance trade. See North.)

2. What are the costs of resolving contract disputes?
   a. Directly among the parties involved?
   b. With intervention of third parties
      i. Private mediation—e.g., referring the matter to a trader association or wise person
      ii. Public adjudication through the judicial system. The costs include the risks of arbitrary decisions based on bribes, etc. In this regard, several authors (e.g., North, Breimyer) argue that a key step in the economic development of Europe occurred when the state agreed to begin enforcing private contracts in a reliable way. One important precursor to this was the state's commitment to begin respecting its own obligations to the private sector and move away from widespread arbitrary seizure of property (North and Weingast). However, as Schmid notes, some redistribution continued to occur and was probably necessary for development.

The traditional ways of dealing with these transaction costs in many poor countries, including those of West Africa, where there has not been reliable third-party enforcement of contracts has involved two approaches. In many cases, people try to move to a highly personalized system of exchange. Trade is often largely restricted to highly personalized exchange within the village. Here transaction costs are low (since one knows one's trading partners very well), but the scale of production is so low that per-unit production costs are high. Hence, farmers cannot capture scale economies, and consequently the scope for specialization is limited, forcing farmers, and the economy as a whole, back towards autarky (Bromley).

Between farmers and merchants and amongst traders themselves there is also large effort to personalize exchange. This often involves reinforcing commercial relationships with social links, which help increase the likelihood that trading partners will respect their contracts. This is a major explanation why trade is often concentrated within certain ethnic groups (e.g., the Lebanese; until recently, Mauritanian shop-keepers in Dakar). Within such groups there are contract enforcement mechanisms (social pressures) to help ensure performance that cannot be brought to bear on individuals outside the ethnic group. Besides the obvious problems of ethnic tensions, a major problem of concentrating exchange along ethnic lines is that the economy as a
whole loses potential economies of scale. It is straightforward to demonstrate that if you have a population of N persons and you divide them into two groups that refuse to trade with each other, the potential number of trades in the economy goes down by $N^2$. In general, the potential number of trades goes down exponentially as the number of groups that won't trade with each other increases. Consequently, the economy is soon forced back towards subsistence/autarkic production (Robison).

Even when trade is not restricted along ethnic lines, high transaction costs can hinder economic performance. For example, prior to liberalization, grain markets in Mali were based on close personal relationships between traders. Liberalization has encouraged new entrants into the cereal trade, but a major constraint to improved market performance is the lack of close personal relations among the new entrants. This has led to an unwillingness to extend informal credit among traders, aggravating the generalized liquidity crisis in the trade.\footnote{Traders in many low-income countries frequently cite the lack of credit as a major constraint to expanding their businesses. An alternative to credit is the pooling of capital through partnership. An important question from a transaction-cost perspective is what are the costs that restrict expanded use of partnerships and joint-ventures among traders as an alternative to credit (Schmid).}

An alternative to highly personalized, small-scale exchange is to vertically integrate a whole range of productive activities within one firm or organization. The CFDT/CMDT model of cotton production in Mali (and allied systems in West Africa) is perhaps the most successful model of such vertical integration in Africa. By integrating research, input provision, credit, and output marketing within one organization, the CFDT system has successfully avoided many of the risks inherent in dealing across markets. The drawbacks of such a vertically integrated system are the high level of investment it requires (which is not likely to be forthcoming for many activities—especially food crops—in West Africa) and the concentration of income that may result. While the CMDT/CFDT system has spread its benefits fairly widely in southeastern Mali, there are plenty of examples of vertically integrated enclave (plantation) agriculture in Africa that have led to highly concentrated distributions of incomes.

### 3.3. Research and Policy Challenges: The Use of Transaction-cost Analysis

Transaction-cost/institutional approaches have potential uses in at least three major areas in analyzing agricultural marketing reforms in West Africa: (a) explaining the logic of current institutions, (b) helping in the design of new market institutions, and (c) predicting the impact of new technologies on the institutional structure of markets.

#### 3.3.1. Explaining current behavior and institutions

Transaction-cost analyses offer insights into explaining what sometimes seems, at first glance, to be irrational behavior from an economic perspective. These approaches are also useful in explaining the logic of various contractual relationships within subsectors (filières).

DeJanvry, Fafchamps and Sadoulet demonstrate how incorporating transaction costs into a model of farm-household decision making allows the model to explain the often observed
"external stability" of the household with respect to export crop prices (i.e., low supply response) combined with the "internal instability" of the household (frequent food crises). The model shows how poorly functioning food markets lead the household to "over-produce" food crops regardless of cash-crop prices, leading to a low supply response to price changes of cash crops. Furthermore, when food markets are characterized by high transaction costs, all the risk and instability of the farm household's food production to spill over onto the remaining markets for credit and rural non-farm manufactured goods, making those markets highly volatile and costly.

Subsector analyses, which are very similar to études de filières, are increasingly using transaction cost analysis to explain contractual arrangements in various subsectors (Nabli and Nugent; Masten; Williamson). These studies incorporate transaction costs into traditional structure-conduct-performance analyses in order to explain the transaction-cost origins of current market structures. In many ways such analyses simply quantify and formalize in a different framework the types of analysis that anthropologists and sociologists have long carried out to explain the structure of commercial relations in agricultural markets (e.g., Lambert).

3.3.2. Helping to Design New Institutions

The question of designing new institutions comes back to the debate described above about how far the state should go in influencing market outcomes. For most development practitioners (who are probably philosophically closer to the "old institutionalists" than the "new institutionalists"), the challenge is to go beyond simply describing the logic of the institutions that currently exist to the design of institutions that foster more rapid development. Yet understanding the transaction costs that gave rise to the current structure of institutions is an essential first step in institutional redesign. Without that knowledge, one risks proposing new institutions and marketing arrangements that do not address the basic structure of transaction costs that gave rise to the existing institutions in the first place. For example, most of the donor-funded proposals to reorganize and "rationalize" the West African cattle trade following the severe droughts of the early 1970s failed because they did not accurately take into account the risks and other transaction costs that induced the current system, which is built along ethnic and personal relationships, to arise.

The challenge, then, is to see if it is possible to design institutions and organizations that serve as either substitutes or complements for the existing institutions. For example, in Mali USAID is currently funding the strengthening of the commercial court system. This is a court system, which with strong trader participation, is designed to help resolve commercial disputes and, through third-party enforcement, help broaden the scope for trade. The aim is not to substitute entirely for the current private system of dispute resolution but to make that system more effective. By giving traders the opportunity to appeal to the commercial courts, there is more of an incentive to settle disputes privately. A key question is whether these courts will provide a truly independent source of third-party enforcement or be simply another source of transaction-cost and rent-seeking in the system.

Similarly, throughout the Sahel, governments, with donor support, are creating public information systems for the cereals markets (SIMs--Systèmes d'Information sur le Marché). In some ways these systems act as substitutes for the private information systems that exist, especially for the formerly worst informed participants in the grain markets--farmers and
consumers. But in some ways, these SIMs act as complements to the existing private market information systems of traders. By signaling areas where prices are high or low in the country, private traders are induced to gather more information from their private networks to see if conditions warrant trading in those markets. Furthermore, the SIMs give the traders a cross-check on the accuracy of their existing information systems. This may be particularly important for prices reported by a trader's agent in distant markets which the trader independently verify. By reducing the risk of the agency problems mentioned above, the SIMs may encourage greater long-distance trade.

The use of transaction-cost analysis to identify such substitutes to and complements for existing market institutions implies adopting a broader vision of institutions than as simply constraints to private contracting. If institutions are primarily constraints on behavior, then the obvious policy recommendation is to remove them. But if institutions are also seen as enabling—i.e., ways of allowing people to do things they could not otherwise achieve through individual private contracting, then the role of policy analysis becomes more complex. In the legal area, for example, the task not only involves identifying "bad laws" that raise transaction costs (e.g., by imposing complex licensing requirements). One also needs to understand how the absence of "good laws" prevent individuals from behaving in ways that promote the broader interests of society (de Soto).

3.3.3. Predicting How Changes in Technology Will Affect the Institutional Structure

New technologies can often change the level of transaction costs in a market. Theory suggests that these changes in transaction costs should induce changes in the underlying institutional structure of markets. Reasoning in terms of the theory described above, one can try to deduce the likely institutional changes that will result from a given change in technology. Inversely, one can try to identify the needed changes in technology that would be necessary to induce a desired institutional change.

For example, in the U.S., the fresh fruit and vegetable trade is based on highly personalized trading relationships. These relationships result from the difficulty of judging ex ante the quality of certain types of produce. For example, it is frequently difficult to judge the crispness of apples from their external appearance. Buyers for major retail chains therefore develop strong personal relations with individual wholesalers who have reputations for assuring good quality. The recent development of pressure testers which measure the internal pressure of apples (an objective measure of their crispness) has provided retailer buyers a way of developing of independently verifying quality ex ante. This would be expected to allow retailers to rely on a broader set of suppliers, implying a more impersonal, competitive trade. The retailers can now substitute the information available through the new technology for the guarantee of quality previously available only through highly personalized trading relations.

4. Conclusions

Transaction-cost analysis offers considerable promise as a tool for examining marketing policy reforms in West Africa. The techniques are still in their infancy, and hence the analysis of transactions costs is most frequently done qualitatively rather than quantitatively. Yet for many purposes, such a qualitative analysis is sufficient, as it is the relative magnitude of transaction costs rather than their precise level that influences institutional structures. Increasingly,
however, researchers are also developing techniques for quantifying transaction costs and incorporating such costs in their analytic models.\textsuperscript{6}

A major challenge for researchers in West Africa concerns how to design marketing institutions that engender greater trust amongst trading partners. The transaction-cost approach stresses the need to develop institutions that allow potential trading partners to make "credible commitments" to one another in order to overcome the risks of trading. In West Africa, the lack of such credible commitments is one of the major hindrances to the development of the grain trade. For example, in Mali, women frequently refuse to purchase pre-processed sorghum or millet flour because they are unsure whether retailers have adulterated the product. Similarly, farmers often refuse to use natural rock phosphate fertilizer because, in the form in which it is sold, it is impossible to verify \textit{ex ante} whether traders have added dust and sand to it. Although it is relatively easy to use transaction-cost analysis to analyze the consequences of such lack of confidence in the market, designing new institutions to deal with this lack of trust remains a major intellectual challenge.

Although the transaction-cost approach is a useful addition to the economist's set of tools, one needs to keep in mind some of critiques raised by the "old institutionalists." Whose cost are being measured in this analysis, and with what weight? What sorts of institutions are needed to enable people to achieve, through joint action, results that are not available simply through private contracting? If one fails to pose these questions, the new institutional economics risks, at its worse, to become simply an intellectual justification for the status quo—"The existing institutional structure is there because it is the most efficient in minimizing transaction costs." From a development perspective, one must always remember to ask, "Efficient for whom?"

\textsuperscript{6}For examples, see de Soto; Nabli and Nugent; and Masten.
Boughton, Duncan (Research Specialist, Dept. of Agricultural Economics, Michigan State University), personal communication.


Breimyer, Harold...


Buchanan, James and Tullock. The Calculus of Consent.


Boughton, Duncan (Research Specialist, Dept. of Agricultural Economics, Michigan State University), personal communication.


