

# Markets and the Diffusion of Institutional Innovations

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### 1 Introduction

Institutions are important for development (e.g. Acemoglu, Johnson and Robinson 2005, Keefer and Knack 1997). This is particularly true of market institutions which play a key role in directing valuable scarce resources to their best possible use. Alternative allocation mechanisms exist, such as command and control within large organizations. But most firms in developing countries are quite small and governments often lack the resources to manage large and efficient public services. This means that markets in poor economies are even more central to the efficient allocation of resources than in developed economies (Fafchamps 1997).

This is certainly true in sub-Saharan Africa. Yet the evidence suggests that Africa has weak market institutions and unsophisticated market practices (Fafchamps 2004). This raises two questions: is the lack of market sophistication the result of an inherently market-unfriendly culture; and what can be done to remedy the current situation. The purpose of this note is to offer elements of answer to both questions.

We argue that there is no reason to suspect African cultures to be any more inimical to market development than other cultures. This conclusion arises from comparing market institutions in Africa to those in other parts of the world today and in the past. The problem is that many African entrepreneurs are unfamiliar with institutional innovations that have emerged in other parts of the world. This lack of familiarity makes them less competitive and makes African economies less productive.

Social and economic isolation is the most likely explanation for the lack of familiarity with modern market institutions. This is suggested by observing that non-indigenous entrepreneurs in Africa are more likely to use modern market institutions (Fafchamps 2004). Non-indigenous groups have managed to establish themselves in a number of African countries. Their historical and geographical origin is quite varied, but they seem to share a better familiarity with a small number of key innovations, not just in terms of production technology and internal organization of the firm, but also in the way they interact with others through the market. This familiarity has often enabled non-indigenous entrepreneurs to outcompete native Africans in business. Unfortunately, the institutional

innovations introduced by non-indigenous groups have not always spread beyond the confines of their own social group. The unanswered question is why. We suspect it has to do with political conditions that do not favor social and economic integration.

## 2 Market institutions

To understand market institutions in Africa, it is essential to recognize that an efficient organization of market exchange results from the combination of three essential components: formal rules of conduct enforced by courts; social norms; and expectations of behavior.

### 2.1 Laws and courts

The policy focus to date has been on formal rules of conduct, namely laws and regulations. Researchers, for instance, have divided countries according to their legal tradition and investigated whether countries that inherited a common law tradition from their British colonizers have fared better than countries that inherited a roman law tradition from the French and other European colonizers (e.g. Beck, Demirguc-Kunt and Levine 2003a, Beck, Demirguc-Kunt and Levine 2003b). The literature has also focused on the legal environment required for specific markets to operate smoothly. Calls for land titling are a case in point, given the role that land can play as loan collateral (Deininger 2003).

Much attention has also been paid to the organizations in charge of promulgating and sanctioning laws and regulations. The process by which laws are passed and regulations enacted by governments is the object of an ever expanding political economy literature. Some attention has also been paid to the organizations that sanction these formal rules, namely courts and, to a lesser extent, prisons (e.g. Messick 1999, Ministere de la Justice 1999). Figure 1, for instance, shows that countries differ in the extent to which they regard courts as fair. The comparison suggests that African entrepreneurs are less inclined to believe that courts would treat them fairly, possibly because of corruption, possibly because the law itself is regarded as unfair.

With a few well-noted exceptions (e.g. North 1990, Acemoglu et al. 2005), economists to date have paid less attention to the role that social norms and rules of behavior play in market performance. Yet laws and courts can accomplish little if societies choose to ignore them. As Table 1 suggests, for instance, only a minority of African entrepreneurs actually use courts to resolve commercial disputes.

Laws can only affect market efficiency if they are internalized in social norms and expectations of behavior. This takes us into the realm of business culture (e.g. Greif 1994, Fukuyama 1995). Laws can influence behavior in two ways: directly by serving as deterrent through the threat of court action; and indirectly by influencing social norms. For the threat of court action to work as deterrent against opportunistic breach of contract, this threat must be credible. This is seldom the case for small transactions because the magnitude of the loss is not commensurate with the direct and indirect cost of court proceedings. Even for large transactions, civil action is not worth initiating if the debtor has no assets to foreclose upon. This immediately puts the overwhelming majority of

market transactions in Africa de facto beyond the reach of courts. This is especially true in the so-called informal sector where microenterprises dominate, entrepreneurs are poor, and transaction sizes are small.

## 2.2 Relationships and reputation

It is important to recognize that, even in developed economies, the threat of court action is not credible for most market transactions. Think of all the transactions we engage in as consumers. For large transactions, such as the purchase of a home or unfair dismissal, the amounts at stake are typically large enough for the threat of court action to be credible. For most of everyday transactions, however, the amount involved is so small that we would never realistically engage court action. Yet we expect contract compliance with respect to quality, warranty, delivery date, etc. If the threat of court action is not what disciplines the seller, what is?

For many transactions, the fear of losing a valuable relationship serves as deterrent to opportunistic behavior. This implies that expectations of behavior depend on expectations of continued interest in the business relationship: only those who wish to continue the relationship fear losing it. An immediate corollary is that transactions between firms or individuals unknown to each other are risky. This serves as a disincentive to experiment with new clients and new sources of supply – and reduces market flexibility.

One important solution is reliance of reputation mechanisms. What distinguishes modern economies is the widespread use of a multiplicity of reputation mechanisms. There are old ones – like publicizing the names of those who fail to pay a bill of change. There are new ones – like Ebay feedback. Other examples include credit rating agencies, specialized press, and consumer reports. These reputation mechanisms typically rely on laws and courts to punish misreporting. This support role of laws and courts may in practice be more important than their direct role in the enforcement of contracts themselves.

For reputation mechanisms to work, economic agents must be unambiguously identifiable. There are formal institutions devoted to this purpose alone, such as business registration. The terms used in contracts must be given an unambiguous meaning. There are formal institutions devoted to this purpose as well, such as quality control agencies, industry standards, weights and measures. In some cases, the formal institutions are private (e.g., ISO certification), in others the government intervenes directly (e.g., weights and measures).

As soon as a name acquires a reputation for quality and reliability, this name becomes valuable and the fear of losing the reputation associated with the name itself becomes a deterrent against breach of contract (Tadelis 1999). Brand name recognition is an example of reputation value attached to a name or identifier. Franchising can be seen as a way to capitalize on such a reputation by guaranteeing a certain level of quality to consumers. Franchising is common in hotels and restaurants that cater to the needs of travellers.

By giving value to a name, reputation processes generate incentives for undue appropriation: it is in the interest of fly-by-night and cheap imitators to posture as the real firm or brand name in order to reap a profit from defrauding customers. For formal reputation mechanisms to work, business names must therefore be protected. This again calls for protection from laws and courts – trademark protection, copyright, etc.

What this discussion shows is that laws and courts are important institutions for supporting markets, but their role goes much beyond the simple enforcement of private contracts. In fact, one could even argue that, with the possible exception of large transactions, courts play little or no role in deterring opportunistic breach directly. The most important role of courts is indirect, that is, in supporting a large set of private and public institutions that activate various reputation mechanisms. It is the fear of losing a valuable reputation that is the real deterrent to opportunistic breach of contract.

Once this is understood, it becomes readily apparent that multiple equilibria are likely to arise. If all economic agents act in a reliable fashion, breach of contract is interpreted as a sign of fraud or impending bankruptcy, and results in an immediate loss of reputation and, consequently, of business. Breach of contract results in an immediate fall in profit. However, if all economic agents interpret contract terms in a flexible manner, breach of contract provides little information regarding the state of one's business. As a result, loss of reputation is not immediate (Fafchamps 2002).

This argument can be generalized because all enforcement mechanisms are ultimately vulnerable to massive defection. We have just seen that this is the case for reputation mechanisms. It is also true for courts since they could not cope with the case volume. It is even true for situations in which the fear of losing a relationship is what disciplines parties: once a pattern of behavior is established, e.g., paying late, it is very difficult to credibly threaten to sever the relationship when this pattern is repeated. It follows that for a norm to be enforceable, it must be followed by the majority of the intended population. The equilibrium in which an economy is can be taken as one dimension of 'business culture': in some business environments, contracts are seen as hard constraints, in others they are nothing but a general guide from which parties can depart at will. These patterns of behavior generate expectations of behavior which, over time, become enshrined in social norms, i.e., what is regarded as 'normal' behavior. Of course what is normal in one location or sector may not be normal elsewhere.

Multiple equilibria need not be equivalent in terms of economic efficiency. Some equilibria may dominate others. The question is: how can we move an economy from an inferior equilibrium to a superior one. Since this requires changing social norms, the answer to this question is unclear. But it probably has something to do with the social context within which market transactions take place. To this we now turn.

## 2.3 Embedded markets

Norms and expectations are themselves embedded within a social structure consisting of associations and overlapping social networks (e.g. Granovetter 1985, Putnam, Leonardi and Nanetti 1993). This is true anywhere, even in the most developed economies. But it is particularly true when formal market institutions are weak or non-existent and the enforcement of contracts relies exclusively on informal enforcement mechanisms (e.g. Bernstein 1992, Bernstein 1996). In such economies, the social context becomes essential because it provides the information sharing needed for reputation mechanisms as well as the environment in which norms of acceptable behavior get formed.

The shape of this social context is itself affected by culture because business patterns of socialization at least partly reproduce private ones. Belonging to the same church,

temple, or golf club predisposes individuals to exchange business information and emulate each other's business practices (e.g. Greif 1993, Fafchamps and Minten 1999, McMillan and Woodruff 1999b, McMillan and Woodruff 1999a). Socialization within the extended family can perform the same function.

Social contacts can assist the functioning of markets in many different ways. They can circulate valuable information about trade opportunities, prices, and market conditions. They can convey information about hidden characteristics of products and economic agents. They can also provide the context for collective action, for instance to lobby political authorities for support, or to exclude individuals whose have violated norms of conduct. Table 2 illustrates this for information on market conditions.

In my research I have shown that social contacts are valuable for business: individuals who are better connected have higher profits, are better able to obtain supplier credit, and grow their business faster (e.g. Fafchamps and Minten 2002, Fafchamps and Minten 2001, Fafchamps 2003). Table 3 shows results from regression analysis that illustrates that this is indeed the case.

If markets are embedded in a social context and social links are economically beneficial, the social context will affect how markets operate. Perhaps the most visible manifestation of this simple reality is the role that ethnicity and religion play in the development of markets.

In most countries, people tend to intermarry with members of their caste, ethnicity, religion, and social class. Since many interpersonal contacts follows – or are influenced by – extended family lines, socialization tends to be segmented along the same lines. It is common for business socialization to reproduce, at least in part, whatever segmentation is present in the private realm.

What this means that business communities are often segmented along ethnic, religious, and social lines – even though there may be a lot of variation from country to country as to which factor of differentiation is most prominent in segmenting social interaction (Fafchamps 2000). This variation is illustrated, for instance, in Table 4.

Segmentation along ethnic or religious lines is often reinforced by other processes. Signaling, for instance, arises whenever a costly signal – e.g., participation in religious activities – is used by individuals to signal that they are reliable business partners (Ensminger 1992). Statistical discrimination – and other forms of discrimination – arises whenever able but less well connected individuals find it difficult to establish their credentials and, as a result, are unable to gain a footstep into the dominant business community (Fafchamps 2000). Fortunately, such reinforcing processes are not universal. Using survey data from three African countries, I have shown that agricultural markets are not subject to ethnic bias even though network effects are quite strong.

When multiple reinforcing processes are at work, however, once a group becomes dominant in a given activity, for whatever reason (e.g., historical or accidental), this group tends to remain dominant as long as there are benefits from network proximity. This has been documented, for instance, in the manufacturing sector of certain African countries (e.g. Himbara 1994, Fafchamps 2000).

## 3 Institutions and development

The segmentation of market exchange along ethnic or religious lines can be extremely damaging for development because it acts as a barrier to the diffusion of technological and institutional innovations. To this we now turn.

### 3.1 Growth and innovation

Over the last 200 years the world has witnessed unprecedented growth in standards of living. During the pre-industrial era, the prosperity that empires brought for their citizens was always limited and much of it was achieved by impoverishing someone else. The industrial revolution brought an application of science to technology. This dramatically increased the productivity of the invention process, making possible for societies to increase their standards of living through innovation. Before the industrial revolution, science had little or no practical intent. Applying scientific discoveries to technology is what has made it possible to produce more with less. Without this, the massive increase in world prosperity would not have been possible.

In the initial phases of the industrial revolution, science was applied primarily (or at least most visibly) to the physical production process itself – e.g., the steam engine, the cotton gin. Hence the nickname ‘industrial revolution’. But this obscures the fact that science can be applied to all sectors of the economy, not just industry. The application of science to agricultural technology has led to the green revolution. The service sector has also benefitted from the application of science to technology, for instance through the use of office machinery, transport equipment, computers, telephones, and tall buildings to facilitate agglomeration externalities.

All these examples focus only on material things – equipment, machinery, agricultural inputs. But science can also be applied to immaterial things, like organizations and institutions. This is where economics comes into the picture. Thanks to science in general and economics in particular, we now know that hyperinflation is a scourge, that auctions are a good way of allocating goods, that managers work more if provided strong incentives, that markets are a cost-effective way of decentralizing the allocation of goods and services.

A continued increase in prosperity requires not only that the physical production process be continuously adapted to keep up with innovations. It also requires that institutions and organizations be continuously adapted as well. For instance, the physical infrastructure for providing telephone services has changed dramatically in recent years. The older technology had massive returns to scale: there was no point in duplicating wires installed in the ground or on telephone poles. This kind of technology generated a natural monopoly – hence the need for regulation, hence the tendency to have government-provided telephone services. Cellular phones have changed all that. The technology is different, it does not have such large returns to scale, there is room for multiple providers and hence room for competition. With sufficient competition, regulating prices becomes unnecessary. This calls for a change in institutions – a change in the law, an abolition of state monopoly – and a change in organization – e.g., auctioning off the airwaves. Maintaining old institutions and organization becomes counter-productive, and ultimately hurts consumers and businesses. Change in institutions and organizations is needed if the

full benefits of innovation in physical production are to be achieved, and this change must itself build on the application of science to technology – in this case, the economics of competition, regulation, and auctions.

### **3.2 Improving market institutions**

While social networks and business communities play an absolutely essential role in Africa today, nearly exclusive reliance on them is fraught with problems. One problem is that social networks are not equitable, they do not provide a level playing field, they do not provide equality of opportunity. Informal market institutions typically result in a system that is inequitable as well as inefficient: jobs do not go to the most qualified person, orders do not go to the best suppliers, and loans do not go to the most dynamic entrepreneur (e.g. Barr and Oduro 2002, Fafchamps 2004). Moreover, because social networks and business communities are often organized around ethnic lines, the day to day operation of social networks results in ethnic bias. With time, this generates rancor and political tension which serve as disincentives to investment.

The solution is better market institutions, institutions that are open to all, regardless of race, gender, religion, language, or ethnicity. This means formal institutions.

Formal institutions include the police and courts that protect property rights against thieves and crooks. But, as we have seen, they also include a large number of specialized institutions, some private, some public, some hybrids. Examples include: credit reference and credit rating agencies such as Dun and Bradstreet and Moodys; private and public agencies that set grades and standards; quality certification agencies such as ISO certification; bonded warehousing services that are essential to organized commodity exchanges; auctions and auction floors for grain, coffee, copper, fish, foreign exchange, futures, stocks, airwaves; many kinds of financial institutions and the innovations they bring, such as the letter of credit or hire-purchase contracts, secondary markets for mortgages, junk bonds; bankruptcy liquidators; customs and port services; secondary market in machinery and equipment; formal business associations with open membership; etc. The list goes on.

These formal institutions are innovations. They result from the application of science to technology, in this case the technology of market exchange. Like other forms of technological innovation, they only happen if people know about them, become familiar with them, make them part of their social norms.

### **3.3 Business practices**

To survive in a given environment, familiarity with local practices is essential. To most people this familiarity comes with upbringing and imitation. But when people are thrown into unfamiliar circumstances, they have to adjust to their new environment. This means changing their behavior. Most African entrepreneurs are unfamiliar with the conditions prevailing elsewhere, with modern institutions for economic exchange. This means they find it difficult to survive when faced with competition from entrepreneurs from other parts of the world, who are familiar not only with more productive physical technology but also with more efficient modes of organization, both within the firm and in market exchange with other firms.

This lack of competitiveness is visible not only in poor export performance but also in the displacement of domestic firms by foreign firms in African domestic markets. The success of Asian and Lebanese businessmen in a few African countries is striking in this respect. Perhaps even more striking is the success of natives from Central and West Africa as small entrepreneurs in South Africa. How is it possible that these individuals perform better than native entrepreneurs in an alien environment? The reason is that they bring familiarity with relatively simple innovations, such as networking, invoicing and supplier credit, that outperform local institutions. These institutional innovations are simple enough that they can survive in a weak institutional context – mostly in combination with strong social networks.

African entrepreneurs can learn how to survive in the global village. The question is: who will they learn from? Ultimately the new knowledge comes from scientists and innovators. But few people learn directly from the innovators themselves. For most people, learning comes from imitation. To imitate, there must be someone nearby to imitate from. This is where things get complicated.

In their overwhelming majority, African entrepreneurs operate very small businesses and do not have much knowledge regarding technological and institutional innovations used elsewhere. With sufficient funding, they can acquire the new technology by importing the necessary equipment and learning how to use it. Funding is not enough, however.

African entrepreneurs are also largely unfamiliar with institutional innovations in widespread use elsewhere. Unlike physical technology, an individual entrepreneur cannot simply import the institution and learn how to use it. An institution is not something that can physically be moved from one place to another. It is a complex combination of formal rules, expectations of mutual behavior, and social norms of conduct. Importing one component only – say the formal rules – will not work without the other two. This is because formal rules can only be enforced if a sufficiently large proportion of the target audience follows them.

While it is possible for a single entrepreneur to adopt a new technology independently from others, institutional change is subject to coordination failure: a large enough group of people have to change the way they do things at the same time for institutional change to be sustainable. This makes decentralized institutional change slow and unpredictable.

### **3.4 Diffusion of institutional innovations**

So how can we improve the institutional environment in which African firms operate? One possibility is to give them time. With sufficient time, they will eventually come up with innovations that improve upon the current situation. For this process to be reasonably fast, it must be based on the application of science to technology, that is, the application of social sciences to institutional design. Economists thus have a crucial role to play in this transformation process since their special skill is precisely the application of science to institutional design.

Even if we were willing to assume that policy makers listen to evidence-based advice, homegrown institutional innovation would take a very long time – probably of the same order of magnitude as it took Europe to come up with its market institutions and export them to other parts of the planet, that is, several hundred years (North 1973). And even

this would require developmental states, that is, states that have their own development in mind and are willing to make the decisions required to foster it. There have been plenty of counter-examples in Africa. So left to its own device, a homegrown process would take a very long time.

There is no need to reinvent the wheel, however. Africa can just imitate others by adapting and adopting institutional innovations introduced elsewhere. The adaptation and introduction of institutional innovations requires government intervention. But, as we have noted earlier, it also requires changes in social norms and patterns of behavior. Social norms and expectations of behavior that help shape business practices must spread through the business community for adoption to be complete.

This diffusion process can be understood as a network diffusion process. Our understanding of such processes has greatly improved over recent years thanks to epidemiology models on networks (Vega-Redondo 2006). The main intuition of this literature can be illustrated with a simple example. Take a contagious disease that spreads through close contact. This disease will spread across the social network, first reaching individuals who are closely connected to the originator of the disease. This means that social segmentation will slow the spread of the disease across ethnic lines. Individuals or groups who are socially isolated from the infected part of the network may never contract the disease.

By analogy, a useful business practice will spread through the social network, reaching first those individuals most closely connected with the source of the innovation, and then spreading slowly to other parts of the networks. Here too social segmentation will slow the spread of adoption of the innovation, and may even result in some groups being bypassed altogether. As a result, we may observe different groups following different business practices at the same time. In this sense it becomes possible to talk about the business culture of a specific community within a given country at a specific point in time.

The analogy with the spread of a disease is imperfect, however. In the case of a disease, contact with a single infected person is sufficient to catch the ailment. For institutions, this is not the case. For someone to switch behavior, a sufficient number of his or her immediate neighbors must have already changed their own behavior. This is because market interaction based on social norms and expectations of behavior results in local network externalities. The upshot of this observation is that the transfer of institutional innovations across social networks requires dense connections. A single bridge is not enough. This means that social segmentation is much more likely to hinder the spread of institutional innovations than it is to hinder the spread of disease. The successful spread of institutional innovation throughout society requires a high level of social integration along ethnic and religious lines (e.g. Vega-Redondo 2004, Jackson 2007, Galeotti 2007, Young 2007).

### **3.5 Foreign investors**

Armed with this understanding, we can now consider the most likely source of information on institutional innovations, namely, foreign investors. Letting foreign investors in Africa brings them close enough that they can in principle be observed and imitated by African entrepreneurs. This avenue offers the fastest growth potential for Africa. But is it sufficient to ensure that institutional innovations diffuse to widely? This ultimately depends

on the level of social integration between foreign investors and local entrepreneurs.

We have seen that when market institutions are weak, social networks acquire a critical role as substitute for formal institutions. Network externalities naturally lead to a selection bias. This bias is typically of an ethnic or religious nature, simply because socialization anywhere primarily takes place along ethnic and religious lines. Once a group becomes overrepresented among the modern business class, entry becomes more difficult for those who do not have the right background.

If foreign investors are much more sophisticated in their technology and business practices, they are very likely to outperform local entrepreneurs. If the gap between foreign investors and local entrepreneurs is too large, the latter will be forced to exit before they have had the time to learn about the new technology and business practices. Furthermore, once a foreign business class has gained a foothold in an specific industry or country, network externalities will favor further investment and entry by members of the same class. This process in turn may thwart the very imitation by African entrepreneurs that it was intended to foster.

The histories of South America and South Africa are not reassuring in this respect: in both cases white settlers gained long-lasting economic supremacy over indigenous people. Although in both cases political factors played a key role in this process, the knowledge gap between indigenous and foreign entrepreneurs was wide at the outset. As a result, the comparative advantage of foreign investors may have been so large that imitation became very difficult.

Over time this often means that foreign investors – and their descendents – face political resentment. This further limits opportunities for imitation if imitation is seen as politically alienating. There is also the possibility that a wealthy entrepreneurial class may use its financial might to seek political control, thereby furthering its economic advantage and further complicating social integration and imitation by native entrepreneurs.

The fear of losing control to a foreign entrepreneurial class may explain the mixed feelings that many Africans have towards foreign interference in general, and foreign investors in particular. As a result, foreign entrepreneurs in Africa often find themselves in a politically subordinate situation, not dissimilar to those of the Jews in Medieval Europe or of Armenians in the Ottoman empire – i.e., a business class without political rights subject to the whims of the prince and readily usable as scapegoats to feed public resentment.

In this, Africa is not very different from other parts of the world. China and India, for instance, remained closed to foreign investment for a long time. They only began to enjoy serious growth when they opened up to foreign investors. But they did so in a position of strength, when they were confident it would not entail a loss of control over their own affairs. I suspect that Africa will similarly open up to foreign investment once it is ready for the challenge, that is, once African elites are confident they will be able to imitate foreign investors and will not lose control to foreign interests. When this condition is satisfied, average productivity and competitiveness will rise across the board – not just in small foreign enclaves.

## 4 Conclusion

The application of science to technology is the ultimate driving force behind the massive increase in standards of living that the world has witnessed over the past 200 years. This includes technological innovation in the production process, but also innovations in institutional and organization design. In many instances, the two can only work together. An immediate corollary is that an upgrading of market institutions is essential for development and growth.

Modern market institutions are a complex mix of formal rules and social norms, the main purpose of which is to support reputation mechanisms. When these modern institutions are absent, business networks serve as an imperfect substitute. Private patterns of socialization influence the formation of business networks and often result the overrepresentation of specific ethnic or religious groups. This fuels potential tension and inhibits the spread of institutional innovations. The end result is a low equilibrium trap in which countries discourage foreign investors for fear of losing control.

The solution is to promote social integration, especially in business circles. Integrating socially with foreign investors is the best short-term strategy for getting Africa out of a vicious circle in which its entrepreneurs are not sufficiently cognizant of up-to-date institutional practices to form an attractive business environment for modern production, but local elites are reluctant to let foreign entrepreneurs fill this need for fear of losing political control.

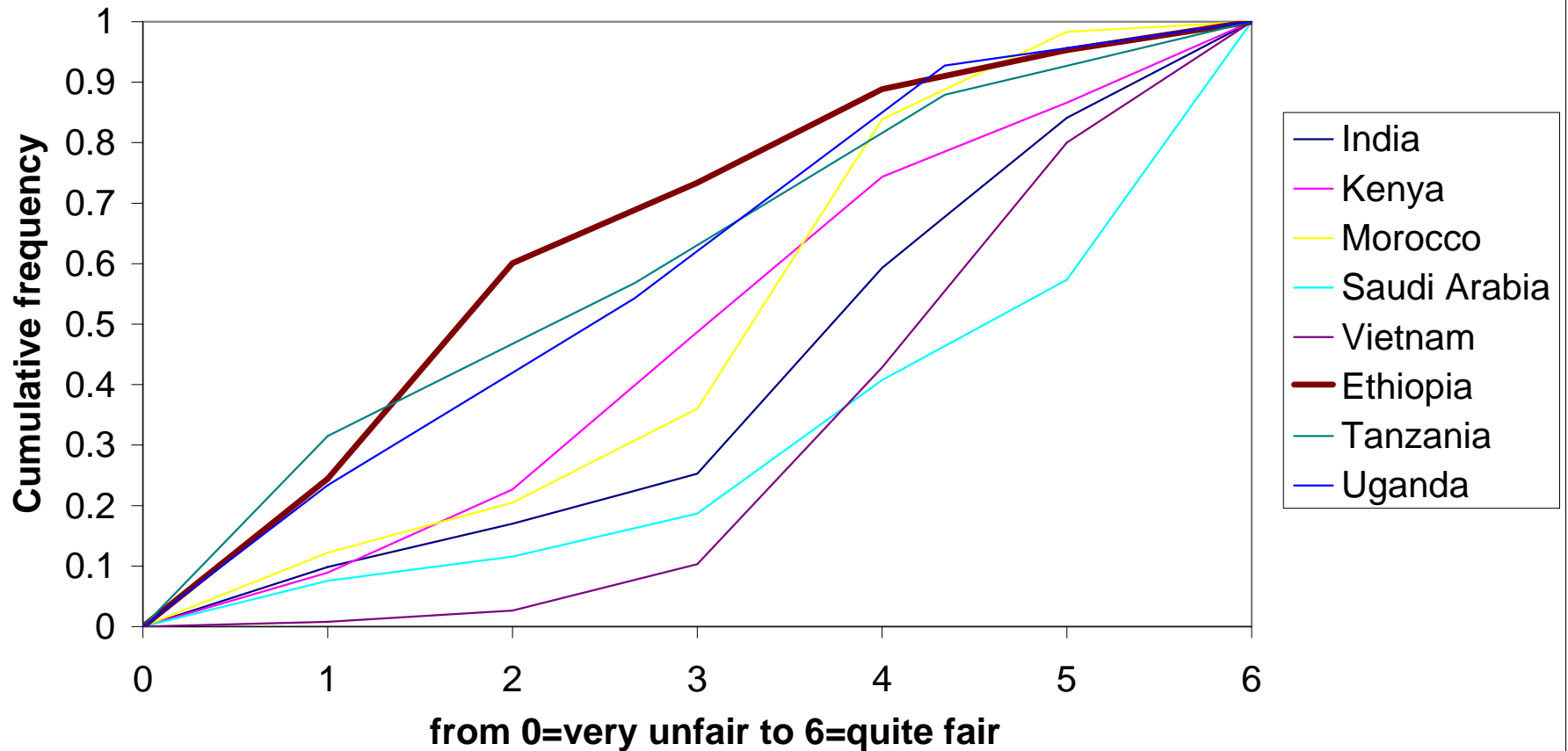
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**Figure 1. Belief in fairness of courts**



from 0=very unfair to 6=quite fair  
Source: Fafchamps and Chu, Making Markets Work,  
unpublished report to the World Bank, 2007

<b>Table 1. Recourse to legal institutions</b>	<b>Ghana</b>	<b>Kenya</b>
Following a dispute with a supplier		
Ever saw a lawyer	13%	6%
Ever went to court	2%	0%
Ever used arbitration	4%	0%
Threatened to call the police	5%	2%
Ever called the police	5%	0%
Following a dispute with a client		
Ever saw a lawyer	8%	38%
Ever went to court	6%	21%
Ever used arbitration	4%	6%
Threatened to call the police	14%	4%
Ever called the police	5%	4%

Source: Fafchamps, Market Institutions in Africa, Table 4.5

**Table 2. Sources of Information on Market Conditions**

Table reports the main source of information on the following:

	Firm size:			
	Small	Medium	Large	Total
A. Prices:				
Other traders	81%	61%	40%	60%
Suppliers and clients	15%	31%	37%	28%
Messengers	4%	8%	23%	12%
Public sources	0%	0%	0%	0%
B. Supply conditions:				
Other traders	32%	20%	19%	23%
Suppliers and clients	65%	76%	68%	70%
Messengers	2%	4%	12%	6%
Public sources	1%	0%	0%	1%
C. Demand conditions:				
Other traders	30%	11%	10%	16%
Suppliers and clients	68%	86%	79%	78%
Messengers	1%	2%	9%	4%
Public sources	1%	2%	2%	2%
Number of observations	227	254	243	729

Size categories are based on total sales.

Source: Fafchamps and Minten, Relationships and Traders in Madagascar, JDS 1999

**Table 3. Determinants of Value Added Among Agricultural Traders**

<i>(dependent variable in log)</i>	Madagascar		Benin		Malawi	
	OLS		OLS		OLS	
Regressors	<i>Coef.</i>	<i>t-stat.</i>	<i>Coef.</i>	<i>t-stat.</i>	<i>Coef.</i>	<i>t-stat.</i>
Number of traders known (log)	0.460	<b>5.74</b>	0.328	<b>6.19</b>	0.301	<b>5.42</b>
Member of trader association (yes=1)	n.a.		1.000	<b>6.44</b>	-0.018	-0.06
Working capital (log)	0.298	<b>8.38</b>	0.628	<b>10.21</b>	0.591	<b>12.56</b>
Manpower, in man-months (log)	0.840	<b>8.14</b>	-0.200	<b>-1.93</b>	0.361	<b>3.06</b>
Female trader (yes=1)	-0.245	<b>-2.18</b>	-0.189	-1.01	-0.353	<b>-2.85</b>
Years of education	0.040	<b>2.01</b>	-0.034	-1.52	-0.026	-1.39
Years of experience in trade (log)	0.143	1.56	0.066	0.60	0.065	0.80
Number of languages spoken	-0.248	<b>-2.17</b>	0.089	<b>1.65</b>	-0.044	-0.70
Regional dummies	included but not shown					
Intercept	3.052	<b>4.25</b>	0.882	<b>1.88</b>	3.695	<b>10.97</b>
R-squared	0.446		0.425		0.438	
Number of observations	636		535		585	

Source: Fafchamps and Minten, Social Capital and Agricultural Trade, AJAE, 2001

**Table 4. Ethnic Composition of the Ownership of African Manufacturing Firms**

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	<b>Cote</b>								
	<b>Burundi</b>	<b>Cameroon</b>	<b>d'Ivoire</b>	<b>Ethiopia</b>	<b>Ghana</b>	<b>Kenya</b>	<b>Tanzania</b>	<b>Zambia</b>	<b>Zimbabwe</b>
African	82%	81%	60%	83%	91%	42%	73%	59%	33%
Asian	3%	2%	0%	0%	0%	51%	24%	26%	13%
European	6%	14%	23%	1%	1%	4%	0%	13%	47%
Mid-Eastern	0%	1%	7%	0%	8%	2%	2%	2%	0%
Other	1%	3%	10%	15%	0%	2%	1%	0%	7%

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Source: Fafchamps, Market Institutions in Africa, MIT Press, 2004