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## **Helping Producers Make Money From Digital Information**

*Russell Southwood*

**Bananas can be bought for 200 Ugandan shillings a bunch on the roadside near to where they're grown. The same bunch costs UGS 6-7,000 in the capital Kampala and UGS 10,000 at times of high demand like Christmas. This price disparity has attracted a whole range of technology-based information providers who are attempting to redress the price and negotiating balance of power in favour of the producer. More and more providers are coming up with ICT information solutions to address this issue.**

This briefing is based on a workshop hosted by IICD for its projects partners in November 2002. In order to portray the participant's views as clearly as possible, this briefing is provided on an "off-the-record" basis: views or quotes are not attributed.

### **Changing the balance of power in the value chain**

The value-chain describes how a basic item like a bunch of bananas starts at one price and ends at another much higher price. At a domestic level, it might involve a producer, a lorry driver with room on a return load, a wholesaler and a market stall owner. At an international level, it can involve producers, an exporter, an importer/wholesaler, a local cash-and-carry and a retailer. Each person in the chain needs to be paid for what they do in getting the crop from one place to another and/or from one state (unprepared) to another (pre-prepared).

The argument of those offering agricultural information and transaction-based sites is two-fold. Information is power and if the producer knows the retail or market price, he or she will have power in the negotiation. The apocryphal anecdote that everyone in this area repeats at one point or another is the case of the Bangladeshi farmer who used a phone to discover market prices and was so shocked by the disparity with what he was selling for that he banded together with other farmers to form a transport co-op to take their goods directly to market, cutting out the "middleman". It is worth noting that no one can ever tell you where these farmers are and that the crop in question varies in the telling from one person to another.

The second argument is related to the first and applies particularly at an international level. Web-based technology offers producers the opportunity to go direct to buyers in the developed world and it is argued reduces the number of people in the value-chain and thus retain more of the value for themselves.

Increasingly high value "boutique" products (for example, special coffees) are finding niche markets. Each of these two arguments rests on the notion that digital technology can produce efficiency savings in the value chain.

### **Unpacking of expertise of middlemen**

In each case it is always the "middleman" who is the villain of the piece. He or she buys low from the producer and sells high to the retailer. But before condemning the "middleman" it is worth unpacking the expertise that they have. They know where to buy crops and the likely price and quality of them. They know where to find trucks for transport and at what price. They often take financial risks on crops that will not keep longer than a few days. They may well lose as well as win on some transactions, but know how to come out ahead over a range of transactions. They know where to sell goods and the prices different outlets are likely to pay. The buyers will trust the "middleman" to offer them some relationship between price and quality.

All of which is not necessarily in their defence but it does illustrate that they do a whole lot more than nothing much: each of the layers of expertise described above has its value. It is easy to see that providing price information may help change the "terms of trade" but may not fundamentally affect them. There may be simply too many other things going on in the value chain and these also need to be looked at.

For example, a South African supermarket chain sources all its tomatoes in South Africa nationwide

rather than locally. Why? Probably for two reasons. Its aggregate buying power across the chain enables it to get the lowest possible price. But it can also impose a high quality threshold that ensures it gets only the best tomatoes. Buyers often want to deal with a single seller rather than running hundreds of smaller transactions.



It's an old Hollywood saying that 'there are only really five stories' in films. So it is with agri-info and transaction sites. There are the price-based information services that are sometimes supplemented with information from potential buyers. These give farm-gate prices and market prices as a way of offering leverage to producers. Often those involved in producing this kind of information find themselves getting involved in playing a broking role. They begin to get to know enough to broker introductions between buyers and sellers and charge a small commission. In effect they begin to play the part of the "good guy middleman". Finally there are the transaction-based sites. These offer the producers the chance to sell direct to buyers. The online coffee auctions described below and Jamaica's JAMPRO export promotion site are or will offer this kind of service.

### **Different sources, similar goals**

Several of the price information services have come out of Government-run agricultural extension services, Ministries of Agriculture or producers' associations. Not surprisingly they focus on helping producers in ways that go wider than price. They often offer information on: what crops are in demand, production levels, fertiliser prices and international regulations on quality, packing and what constitutes "organic". For example one of the projects at the conference was a government ministry looking to encourage farmers to grow non-traditional export crops like green beans and chillies.

The different origins of these types of price services tend to shape how they develop. If it is a government-

based service, the underlying model is one of the state helping to improve planning: the information is there to enable farmers to grow the right crops in the best way. Because in the past it was based on phone and typewriter, understandably its ability to produce timely information has (until relatively recently) been somewhat limited. At least two of the participants started price services from the position of being private sector publishers. They could see how information had value and in both instances found themselves broking consequent sales as a natural entrepreneurial extension of the first service. Others were NGOs who saw it as their role to help defend the livelihoods of peasant producers in the increasingly choppy waters of global agricultural markets. All illustrate different objectives whilst addressing the same fundamental problem.

The government-based organisations often found it hard to convince their superiors of the value of a new service of this kind that might cost more to run and might not produce immediate benefits: "My boss doesn't understand computers and can't see why we should be doing this." Government (especially in Africa) tends to be risk-averse and does not invest in new services easily. There are too many competing demands. The private sector entrepreneurs were quick to spot opportunities and move on them but were often not trusted by government. The NGOs were able to innovate quickly but lacked a basic understanding of running a business that might enable them to put their services on a more sustainable footing.

Differences of organisational culture often led to confusions between whether the service was simply information-based or more sharp-end transaction-based. But wherever the services originate, they all need government to facilitate improvements in infrastructure, quality setting measures and information generation. In some instances, government has the means to collect information but may not have the ability to create value from it. As the Tanzanian private sector provider put it: "We need to have a policy intervention on measurements. There are no common measures. We would like to work with government on these sort of things."

So why doesn't government sell the information to others who can create businesses from it? A near parallel is the way the Ordnance Survey in the UK sells mapping data to companies who use it to create pay-for information services. (However there is currently a huge argument as Ordnance Survey has announced its intention to go into these business areas itself).

### **Technologies for information delivery**

Whatever the service, the technological means of delivery matter more than in developed countries. The

most widely distributed means of delivery in Africa is the mobile phone and using SMS text messaging would seem to be a natural way of offering these services. Although, SMS text messaging has obvious limitations for more complex information other than a price "feed".

Other approaches have been to try and extend rural connectivity; telecentres and cyber cafes where producers can either go to use a computer or simply see posted information on paper. One West African service will rely on using telecentres that form a part of the framework of local government. Progress on extending connectivity to rural towns has been slow in e.g. Tanzania and Zambia, and without this first set of connections in place the roll-out to even more isolated places will not take place.

PDAs (handheld computers) were much discussed but are not yet as widely distributed as mobiles amongst African agricultural producers. However, their value as a means of information gathering should not be underestimated. Web-based transaction sites offer another platform that might work with higher value transactions.

The long-term dream of developed world e-business specialists is to create seamless transactions in the value-chain. Gartner's four-step model describes businesses going from presence (having an non-interactive web site) to prospecting (carrying out business through your web site) to business integration (B2B transactions) to the highest state of nirvana, business transformation.

Significant obstacles stand in the way of following this path in Africa. There is not yet the trust or infrastructure to make electronic transactions an everyday feature of business life. But as the tourism industry in South Africa shows, the possibilities are not as far off as is often argued. However, seamless information gathering amongst a relatively small network of people is less likely to be a substantial challenge if approached with determination.

### **Dealing with fundamental business questions**

Although technology offers obstacles, it is not the only thing standing in the way of developing effective agri-info and transaction services. Many projects were wrestling with more fundamental problems: how frequent did the service need to be? How swiftly was the information needed? How was the information to be gathered at the frequency required? How would you describe the quality of produce to potential buyers in the absence of agreed quality standards? Who were the customers? Who would pay for the service?

The government agencies collecting information often did so on a frequency cycle that was probably too slow

to affect producer decisions: monthly as against weekly. There are problems of sampling sizes. For example, one country has 200,000 farmers. In order to get a representative sample, it would be necessary to be polling several thousand farmers a week to get any meaningful information on a given crop. If you work out how many farms an agricultural information officer (or indeed any other information gatherer) can visit in a week, you can begin to see the scale of the task. Only information gathered by phone (or in the longer term computer or PDA) will ultimately make sense. Likewise, in for example Tanzania, how many markets would you need to be sampling to say anything meaningful about retail prices?

The scale and logistics of information gathering are thus often harder than they might appear. With some exceptions, most of the projects at the conference were running the equivalent of small-scale pilots: operating in one district or centre. The Tanzanian provider estimated that it would take 18-20 centres to provide a full service.

The next stage is to create a "critical mass" of information so that the services become indispensable. Each operates at a country level and in order to get this "critical mass" for export crops, there will need to be an aggregated service that offers prices from different parts of Africa and from across the world. FIAB, a trade association in Burkina Faso, was the only organisation to realise the importance of transport prices to the final price achieved.



Most of the workshop participants had not yet reached the point of addressing how their services might be sustainable in the long-term. They felt that since those who needed the information were often not well off, it did not make sense to be charging them for it. There was not always a clear sense of income against cost. However, all were painfully aware that if the services are to survive they have to find an answer to the question: who will pay for it?



## Doing business with information

The biggest difficulty for most will be the transition from being "free" to needing to charge for services delivered for it to be sustainable in the long-term. A donor can "seed" developments, but cannot be the long-term funder. One way of looking at it would be to think about customers at different value levels. The producers must surely be able to pay at least something if the information has the value its proponents argue. Therefore these represent numerous low value customers. It would also be possible to charge the equivalent of subscriptions to the services with higher subscription levels for larger farmers and major agri-producers. The much-abused "middlemen" would also be likely mid-value subscribers. Finally governments and donors ("donor farming" as one person described it) provide a small number of high-value customers for statistics and activity information.

It might not be possible to cover the entire costs of the service, but it would be possible to look at a percentage cost recovery model. If the service was well used it might make back more than half its costs and look to

government to fund the rest. It may be that government does not attempt to run the service directly itself but sells the information to others to create new businesses that have the expertise to make money from it.

For example, one of the government participant's organisations had a variety of key pieces of information: the mobile numbers of a considerable number of farmers, farm price information and the names and phone numbers of buyers. It could sell this information to a company that could produce a value-added service that it could sell to a mobile company or share revenues with the mobile phone company based on use of the service.

Price or cost information becomes valuable where the crops produced are high-value and there are big price swings. It is perhaps in areas of agriculture that fit these more demanding criteria where commercial returns will be made. Any company or organisation that can collect and process information has the basis of some considerable expertise. These are the skills that will enable organisations to win developed-world, value-added information service outsourcing contracts.

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**The International Institute for Communication and Development (IICD)** assists developing countries to realise locally owned sustainable development by harnessing the potential of information and communication technologies (ICTs). IICD realises its mission through two strategic approaches. First, Country Programmes bring local organisations together and help them to formulate and execute ICT-supported development policies and projects. The approach aims to strengthen local institutional capacities to develop and manage Country Programmes, which are currently being implemented in Bolivia, Burkina Faso, Ghana, Jamaica, Mali, Tanzania, Uganda and Zambia. Second, Thematic Networks link local and international partners working in similar areas, connecting local knowledge with global knowledge and promoting South-South and South-North exchanges. Thematic Networks focus on sectors and themes like education, health, governance, the environment, livelihood opportunities – especially agriculture – and training. These efforts are supported by various information and communication activities provided by IICD or its partners. IICD is an independent non-profit foundation, established by the Netherlands Ministry for Development Cooperation in 1997. Its core funders include the Directorate-General for Development Cooperation (DGIS), the UK Department for International Development (DFID) and the Swiss Agency for Development and Cooperation (SDC). [www.iicd.org](http://www.iicd.org)

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Juffrouw Idastraat 11  
P.O. Box 11586  
2502 AN The Hague  
The Netherlands

T +31 (0)70 - 311 73 11  
F +31 (0)70 - 311 73 22  
E [information@iicd.org](mailto:information@iicd.org)  
I [www.iicd.org](http://www.iicd.org)

