

Cornhusker Economics

A Model for Farmer Support in Zimbabwe – Opportunity for Change

| Market Report | Year Ago | 4 Wks Ago | 8-24-18 |
|--|----------|-----------|---------|
| Livestock and Products, Weekly Average | | | |
| Nebraska Slaughter Steers, 35-65% Choice, Live Weight. | | * | * |
| Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb. | 168.72 | 197.51 | 176.47 |
| Nebraska Feeder Steers, Med. & Large Frame 750-800 lb. | 150.91 | 162.56 | 163.87 |
| Choice Boxed Beef, 600-750 lb. Carcass. | 192.30 | 204.83 | 213.86 |
| Western Corn Belt Base Hog Price Carcass, Negotiated | 65.33 | 61.04 | 36.85 |
| Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean. | 86.70 | 76.05 | 64.40 |
| Slaughter Lambs, woolled and shorn, 135-165 lb. National. | 167.98 | 147.93 | 141.26 |
| National Carcass Lamb Cutout FOB. | 416.93 | 376.18 | 383.67 |
| Crops, Daily Spot Prices | | | |
| Wheat, No. 1, H.W. Imperial, bu. | 2.96 | 4.98 | 4.59 |
| Corn, No. 2, Yellow Columbus, bu. | 3.11 | 3.53 | 3.26 |
| Soybeans, No. 1, Yellow Columbus, bu. | 8.54 | 8.05 | 7.34 |
| Grain Sorghum, No.2, Yellow Dorchester, cwt. | 5.20 | 5.49 | 5.12 |
| Oats, No. 2, Heavy Minneapolis, Mn, bu. | 2.80 | 2.85 | 2.82 |
| Feed | | | |
| Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton. | * | 180.00 | * |
| Alfalfa, Large Rounds, Good Platte Valley, ton. | 92.50 | 110.00 | 102.50 |
| Grass Hay, Large Rounds, Good Nebraska, ton. | 95.00 | 100.00 | 105.00 |
| Dried Distillers Grains, 10% Moisture Nebraska Average. | 106.50 | 110.00 | 139.00 |
| Wet Distillers Grains, 65-70% Moisture Nebraska Average. | 39.00 | 37.00 | 41.49 |
| * No Market | | | |

Community development refers to the collective action of a group of people to improve their quality of life or to fix a problem they face. It involves active participation by the people facing the problem. Input subsidy programs (ISPs) are commonly used in Sub-Saharan Africa as a strategy to achieve several development goals. They generally aim to improve the lives of poor subsistence-level farmers, improve agricultural output, and stimulate the economy. However, ISPs are not technically a community development tool because they are typically centrally planned and top-down in nature.

The goal of ISPs is to encourage farmers to adopt the use of inputs (basically seeds and fertilizers) provided by the government and thereby increase agricultural productivity by increasing fertilizer use, improving soil fertility, improving food security, alleviating poverty, increasing use of hybrid seed varieties, and generating economic growth. Maize is white corn and is the staple food in most Sub-Saharan countries. It is cheaper to import fertilizers and grow maize than it is to import maize in most African countries.

Three-quarters of Africa's poor live in rural areas and are smallholder farmers. A smallholder farmer is a farmer with limited resources (Food and Agriculture Organization). They work on small plots of land, rely on family labor and on rain-watered agriculture, and use little technology. Most of their agricultural output is for consumption and they sell any surplus that is available.

Input Subsidy Programs were a popular agricultural development strategy in Africa in the 1970s and 1980s. At the time, the young African countries sought ways to increase farmer productivity in order to feed themselves. These programs were

forcibly phased out by the International Monetary Fund and the World Bank when they imposed structural adjustment programs in the 1990s. These programs were restarted in Africa when Malawi led the way with the Starter Pack Program from 1998 to 2000.

The early ISPs were done using a universal distribution method. Subsidies were available to all farmers. This method failed to reach the smallholder farmers and was criticized by international organizations. Now they target a certain group of farmers. These are called *smart subsidies* and have straightforward objectives: providing economic improvement for the poor by combining subsidies with other elements in a wider agricultural development strategy, empowering stakeholders through capacity building and promoting competitive markets (Kelly et al. 2011). However, evidence from the ISPs in Malawi and Zambia showed that this is not an effective means of distributing assistance because of leakages in inputs that for whatever reason do not reach the intended recipient (Jayne and Rashid 2013) thus creating an illegal market for agricultural inputs. The focus of this study is in Zimbabwe where there is very little research assessing the efficiency of ISPs and their effect on economic development.

Background

Zimbabwe is a small country in southern Africa with a population of 13 million, of which 7.1 million are dependent on agriculture for their livelihood. They mainly produce maize, groundnuts, other grains, beans, vegetables, meat, and milk. Cash crops such as tobacco, cotton, and cut flowers are grown by the few large commercial farmers with the better land for agriculture. Agriculture provides for 70% of the population's income and accounts for 40% of exports. Recently, the economy crashed with all sectors in disarray. Depending on the definition of employment, the unemployment rate is estimated at 90% (Mlambo 2017, BBC 2017).

People survive through informal employment and remittances from Zimbabweans who live in the diaspora. There is no record of how much Zimbabwe receives through remittances. However, if an average for the region is used, Zimbabwe is estimated to receive roughly \$235 million USD in remittances yearly (Kuhudzayi 2016). Remittances and incomes from international agencies aid workers in keeping the retail industry afloat. The life expectancy is 59 years; this is an improvement from 40 years in 2000. The under-five infant mortality is 84 per 1000; this is an improvement from 102 in 1999. At 90%, Zimbabwe boasts the most literate population in Africa.

There are 1,534,396 smallholder farmers in Zimbabwe. Eighty percent of the livestock and 50% of the land in Zimbabwe is owned by smallholder farmers. All smallholder farmers have livestock. Sixty-five percent of them have

small livestock such as goats, sheep, and chickens and 45% have both small and large livestock (Mutami 2015). Small livestock offers income generating capacity and nutrition. However, smallholder farmers opt for cattle because of draught power and a store of wealth in case of livelihood shocks, such as death and sickness.

Zimbabwe needs 1.8 million tons of maize every year to feed the country. The last time the country produced enough maize to feed the country was in the year 2000 with 2.1 million tons. The main reason used to explain Zimbabwe's inability to grow enough grain is the land distribution. In the mid 2000's there was a politically motivated land redistribution program. This program took large farms owned by descendants of the British settlers and redistributed them to veterans of the war of independence and government officials. The effect of this program was that many who received farm land were not qualified farmers, and agricultural production decreased sharply (Mafundikwa 2014). Almost overnight smallholder farmers, who were largely untrained in agriculture became the backbone of Zimbabwean agriculture. The government moved to acquire 12.4 million hectares of the 16 million that were large scale farms. The country's economy is agriculturally based, so the receipts that came from the produce of the large commercial farms to the country suddenly stopped. Political mismanagement continued, which saw foreign investment end leading to the collapse of all other industries. Nowadays the country is reliant on smallholder farmers to produce the country's food. They are not as productive as they could be for a variety of reasons, including lack of knowledge, lack of technical support, and poor soil. Farmers who have gone through basic training are over 50 years of age (Sungirai et al. 2016).

In the 2016-17 growing season, the government of Zimbabwe released a farming input subsidies program called Command Agriculture. The government of Zimbabwe learned from its own previous ISPs and others that those who are able to capitalize on ISPs are usually not the poor smallholder farmers who have little land, little technology, and rely on rain. With production growth in mind, instead of smallholder farmers, Command Agriculture targeted 2,000 farmers who live in higher potential areas, who had 200 hectares or more, and irrigation facilities (Scoones 2017). It delivered loans in the form of fertilizer, fuel, equipment, and other inputs to those farmers and ambitiously required at least 1000 tons of grain from each of them to be used towards repayment of the advanced loans. The program coincided with good rains and a good crop was produced. Command Agriculture produced 2.8 million tons -- more than that necessary for internal consumption. The program was seen as such a success that it is

being repeated in the 2017-18 growing season and expanded to include livestock, fisheries, and wildlife.

Zimbabwe, as with other African countries, has a long history of using ISPs (Kuhudzayi 2018). In general, input subsidies have been used to increase agricultural productivity and alleviate poverty but also as a political tool. The results from programs like Command Agriculture come quickly. So to the people it seems as if the government is supporting them. In the 1980s after Zimbabwe’s independence, input subsidies were a way to keep the war veterans content. In the 2000s, it was the new resettled farmers who were the government’s support base and, therefore, targeted by the input subsidies (Scoones 2017). This model can be a double-edged sword because it leads farmers to become reliant on subsidies. At the moment, the Zimbabwe government has not announced an exit strategy for its subsidy program.

The Problem – Are ISPs an Appropriate Solution?

Contrary to other ISPs, Command Agriculture was created with the singular goal of increasing maize production. Under this program Zimbabwe produced the largest amount of grain that the country has grown since the year 2000. Consequently, Command Agriculture was declared a success, more money was raised for the 2017-2018 season, and the program will be expanded to include livestock, fisheries, and wildlife. In light of the short term *success* of Command Agriculture and the mixed results presented by ISPs in the past, this article used the community capitals framework to evaluate ISPs in Sub-Saharan countries with the aim of understanding what community investments will be achieved by Command Agriculture.

Community Capitals Framework

The community capitals framework shows the entire system of a community and how the parts, that is the capitals, interact with one another. The capitals represent the community assets that exist within all aspects of community life.

Strong and resilient communities do their best to balance investments in the seven capitals described in the table . If investments are heavily directed in just one or two of these capitals, the overall health of a community can be damaged (Emery and Flora 2006; Green and Haines 2016).

There is very little information on ISPs in Zimbabwe and the data is not easily accessed. In order to understand the potential effects of the current ISP in Zimbabwe, this study investigates ISPs studies done in other African countries, more specifically Malawi and Zambia. Malawi, Zambia, and Zimbabwe have similar climates, cultures, and histories. First, eight studies of ISPs in Malawi and Zambia were selected and examined through the lens of the Community Capitals Framework. Then, the same was done to an additional six papers focused on technical efficiency of small scale maize farmers in Malawi, Zambia, Zimbabwe, and Kenya (as a special case).

Since ISPs put more inputs in the hands of farmers, an investigation of technical efficiency will reveal where investments or support are needed to increase efficiency of farmers. When compared with the community investments made by ISPs, this will reveal whether ISPs, as they exist, make the necessary investments to generate a long term increase in agricultural output (and, as a consequence, in community development). Using the community capitals framework, this study will discover which community capitals need to be invested in to increase technical efficiency compared to the ones being invested in currently.

The Positive and Negative Impacts of ISPs

The most commonly observed positive impact of ISPs in the research studies was an increase in human capital. As more maize is grown, more food is available and people’s physical (health) condition is improved.

| Community Capitals | |
|--------------------|---|
| Human capital | Includes general education background, labor market experience, health, skills, and abilities. Education and training increase the human capital. |
| Built capital | The stock of buildings and infrastructure. Investments made in physical capital offer returns to the whole community. |
| Financial capital | The financial resources that can be invested in a community. It is access to credit and banking services, government investment, etc. |
| Natural capital | The stock of renewable and non-renewable natural resources. |
| Political capital | The ability to influence the distribution of resources, access to power brokers within a community, and the opportunities for civic participation. |
| Cultural capital | The system of meanings and values that are learned within a community. It reflects how a group of people understand the world and interact with it. |
| Social capital | The social relationships and ties that facilitate collective action in communities. It contributes to the building up of the other capitals. |

This fact is supported by seven papers examined. Improvement in reaching intended recipients and reductions in corrupt activities such as leakages were verified by three studies. This is an improvement in political capital. Build-up of nutrients in soil and learning and experimentation by smallholder farmers are both mentioned by two papers and reflect improvements in natural and human capital.

The most common negative impact found by the analysis was on financial capital due to the rich benefiting from the use of ISPs more than vulnerable households. In addition, the analysis showed that political capital was negatively affected by diversion and leakages of inputs, corruption, and use of ISPs to manipulate presidential election voting.

Regarding technical efficiency, studies demonstrate that investment in social capital is the most effective way to improve farmers' technical efficiency by developing cooperatives and farmers groups. These groups disseminate knowledge among farmers and allow more opportunities for extension to transfer knowledge and information. From six studies, it was mentioned five times. It was followed by investments in human capital in the form of boosting extension and farmer training.

According to this investigation, the ISPs focused on the increase of productivity are just investing in human capital by developing farmers' capacity to increase yields and output. However, smallholder farmers could produce more with the inputs they currently have if they worked together. What they need is greater social capital in the form of more farmers' networks and cooperatives and more support from extension and farmer training. Based on the goals and small amount of information available on Command Agriculture and on the demonstrated benefits of ISPs examined in other African countries, by focusing heavily in human capital Command Agriculture is missing opportunities to make small scale farmers more productive in the long term and stimulate the economy.

While people do need food in the short term, many of the researchers who have been reviewed in this study have commented that it is doubtful that the subsidy programs will generate long-term change to the low agricultural productivity in Sub-Saharan Africa. The fact that social capital is the most commonly mentioned capital that must be invested in to improve agricultural production in the long term and quality of life should not come as a surprise. Emery and Flora (2006) show that investments in social capital start the upward spiral of community capitals that is required to improve communities and the quality of life they offer. Nayaran and Pritchett (1999) studied the link between social capital and income levels among smallholder farmers in Tanzania. They found that half a village population joining an additional community group or club is associated with at least a 20% higher expenditure per person in each household in the village. They state that the social capital

of a village is an important determinant to the level of income of the village's households. They also found that households in villages with more social capital are more likely to enjoy better public services, use advanced agricultural practices, join communal activities, and use credit for agricultural activities.

Recommendation – a Model for Farmer Support, an Opportunity for Change

Emery and Flora (2006) note that governments and community leaders must resist the temptation to start with injections of financial and human capital. Investments in social capital must be made and it must be used as an entry point to start the upward spiral of communities in African countries.

One way to invest in the social capital of resource-constrained smallholder farmers is through the private sector. Agricultural businesses can subcontract smallholder farmers, provide the extension they need, provide the initial capital, and be a guaranteed market for the farmers. The farmers would be grouped and social ties would be strengthened. The business can provide its own extension or partner with the local extension network. Location-specific organizations develop knowledge bases that are specific to their location. The business would only cultivate crops that can be grown viably in the area where they are located--a big mistake small scale farmers commonly make.

Such businesses already exist and are flourishing in southern African countries. Good Nature Agro in southern Zambia is an example of such a business. Good Nature Agro seeks to generate lasting income by subcontracting smallholder farmers. Community leaders or those selected by the farmers are trained by Good Nature Agro to be extension agents. One agent is responsible for 40 farmers. This is a vast improvement to the Zambia average of one agent to 5000 farmers. Knowledge can be transferred easier in the small groups of 40 farmers. Through the agents, Good Nature Agro provides loans of seed and other inputs to the farmers. At harvest, Good Nature Agro buys the crop and deducts the cost of the initial inputs – it is therefore a guaranteed market for the farmers. Then it handles the storage, brands the crops under its name and sells them. Legumes provide an income that is double what the farmers would make from traditional cash crops (maize and cotton). Good Nature Agro currently works with 2000 farmers and has raised their incomes by \$220 USD (194%). Farmers develop stronger social ties from the farming groups they work in and greater human capital from the extension agents and experiences growing legumes, and a greater understanding of the soil.

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