

Box 2420  
Plot No. 59, Block "M"  
Tumaini, Iringa  
Tanzania



Micro Venture Capital Investors  
[info@CheetahDevelopment.org](mailto:info@CheetahDevelopment.org)  
[www.CheetahDevelopment.org](http://www.CheetahDevelopment.org)  
+ (255) 769 851 994

# Agricultural Community Development Framework

*A Strategic Approach to Organizing, Financing & Mentoring Farmer Cooperatives*

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Raymond Menard  
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## Introduction

The Cheetah Model invests in the ideas of the local people to help them unlock their own resources. In essence, Cheetah is leveraging the existing resources of the poor to leverage the finances to lift them up.

Therefore, the Cheetah Model is not aid in the traditional sense but an investment requiring repayment. Repayment is a key to teaching profitability which creates sustainability of businesses whose success is crucial local people. A requirement of profitability creates the discipline to resolve all the problems related to that opportunity. Therefore, the investment model can create projects that really work. And Cheetah invests an amount that is usually unavailable in local markets, \$5000 to \$500,000, filling a gap known as the “Missing Middle.”

The developing world is dominated by farmers; in Tanzanians the number is 75%. In a developing economy farming is central to almost everything. Cheetah’s focus is to fill the structural breaks in the agriculture value supply chains. This unlocks the potential to create sustainable businesses that can help numerous people with relatively few investment dollars. Cheetah estimates that a \$50 investment per person is enough to PERMANENTLY change their income by orders of magnitude.

To create a profitable (thus sustainable) development Cheetah brings together:

- Communities,
- Entrepreneurs, local management and ownership
- Local and international institutions of higher education
- Local investment
- Outside investment and donations,
- International aid organizations
- International volunteers

*Human* development has always naturally followed *economic* development regardless of history, culture or geography. Therefore, it is not surprising that the enterprises that Cheetah is investing in have already working to create human development initiatives, like quality healthcare, childcare, and AIDS/HIV education.

This paper explains these principles and some of the related challenges and solutions. It begins with ‘why’ the model is structured as it is and then takes up the questions of ‘how’ to make it work on the ground. Beginning in East Africa this model can revolutionize economic growth strategies worldwide.

## Why: “Field to Fork”

### Importance of Agriculture

Agriculture is the common thread for poverty and food security in the developing world; 75% of people in these nations live in rural areas and depend on agriculture for their livelihoods.<sup>1</sup> The vast majority of these are small scale subsistence farmers, eating what they grow and selling little. Women are integral to this, producing up to 80% of Africa’s food.<sup>2</sup> (In Tanzania, 92% of rural women are engaged in agriculture.<sup>3 4</sup>) Supporting farmers is recognized as a critical strategy to increase agricultural productivity, enhance food security, and improve health of families.<sup>5 6</sup> But farmers face numerous obstacles to productive agricultural livelihoods, including unequal access to information and inputs (e.g., fertilizer and improved seed varieties), lack of capital for investments, as well as limited access to extension services and markets.<sup>7</sup>

Therefore, if one wants to address economic development and opportunity for the poor, agricultural considerations need to be integral to the approach. Indeed, most urban poverty is sourced from rural areas when people give up in the village and go to the city to seek their fortune. Unfortunately, they usually find worse conditions.

### The Missing Food

In Tanzania, 12% of rural women are underweight, 38% of children under age 5 are chronically malnourished, and 41% of rural children are stunted.<sup>8</sup> The Global Hunger Index<sup>i</sup> for Tanzania is 21.1, signaling alarming levels of hunger,<sup>9</sup> and 89% of the population lives on less than \$1.25 a day.<sup>10</sup>

Because people are hungry, it is often assumed that there is a shortage of food. Therefore, agricultural programs for farmers often focus on increasing crop yields. However, in the developing world the problem of hunger is not so simple. For example, in Tanzania, post-harvest losses of agricultural products overall are around 40%.<sup>11</sup>

Agricultural Product	Estimated Loss
<b>Overall</b> <sup>12</sup>	40%
<b>Grains</b> <sup>13</sup>	25%
<b>Dairy</b> <sup>14</sup>	16-25%
<b>Fish</b> <sup>15</sup>	
<b>Fruits and Vegetables</b> <sup>16</sup>	18-46%
<b>Maize</b> <sup>17</sup>	20-25%
<b>Bananas</b> <sup>18</sup>	50+%
<b>Rice, Sorghum, Millet, and Wheat</b> <sup>19</sup>	10-15%

viewed vast fields of pears and tomatoes where most of the crop is never harvested. This applies to maize or cassava, as well, when it is left in the field as the best ‘storage’ location but eventually succumbs to various sources of loss. Maize is

These studies only measure POST HARVEST losses. The POST GROWTH losses are much larger. For example, when we talk to farmers about fruits, they harvest on average only half of the fruit crops – the rest rots in the field. Therefore, the real loss of fruits grown is between 60% and 75%. In the Iringa region we have



*Food comes in a flood, but much of it is never consumed*

<sup>i</sup> The Global Hunger Index is a multidimensional index combining three equally weighted indicators: 1) the proportion of undernourished as a percentage of the population, 2) the prevalence of underweight in children under the age of five, and 3) the mortality rate of children under the age of five (partially reflecting the fatal synergy between inadequate dietary intake and unhealthy environments).

generally shelled by beating with a stick, destroying another 15% a loss that is not incorporated into statistics. When we view oil presses we often find that they are less than 75% efficient, another source of post-harvest loss.

In Tanzania there are 43 million people and 17 million cows, and far more goats and pigs. Although in the case of animals the 'post-harvest' loss is lower, the animals are left on the hoof because it is generally impossible for a family to finish them before spoiling. In this case, the animals are consuming the country and the people are not consuming the animals - another type of post growth loss.

Studies show that the problem of harvest losses is widespread all across the developing world for nearly every crop – and that the losses are considerable.

The real problem of hunger – and its close relative, rural poverty - is generally not a shortage of food production.

The problem is a lack of processing, storage, preservation and access to markets.<sup>20</sup> The typical approach of increasing production just dumps (literally, 'dumps') more food into a system that is overflowing with waste.

## Value Chain Problems

Agricultural production has the source of food flowing. However, most of the food comes in a flood and is not 'captured' for consumption over time. Food loss represents a failure of the agricultural economy on multiple levels; including poor adoption of food preservation technologies, gaps in the value chain, and lack of market access.

A common problem in most industries in Africa and the developing world is that the value chains are broken or have never developed. If you trace products from raw materials to consumption, you find many places where there is dysfunctional or broken links. This is true of the food value chain, as well. As described above, 40% of the food that is grown in Tanzania is left to rot and is never consumed. Meanwhile, hunger persists. The problem is that the value chain is not functioning well.

The reason for the broken value chain is the lack of small businesses – that is businesses that hire people and have between 5 and 250 employees. Businesses like this are real operations having substantial infrastructure. This might be contrasted with a typical "trader" that buys and sells within value chains, having no real organization, structure, or reliable continuity. That is by definition a weak link in the chain. Weak or broken links are great place to consider investing.

It is worthy of note that any sound investment process forces a value chain approach. Business planning by its very nature must answer the basic supply chain and market analysis questions. In contrast, aid only looks to solve a spot problem. For example, consider a typical aid project such as teaching people to keep bees and harvest honey. In the aid approach rarely is there consideration for the rest of the business issues like food-standard sanitation, packaging, marketing, transportation, or distribution. Investments are forced to think differently because they are looking for returns and hence will follow the value chain far enough to ensure a profit. Aid doesn't have to meet this test; therefore it usually won't. In contrast, business forces certain disciplines and comes with built in success metrics.

Because 70-90% of people are subsistence farmers, Cheetah's investment strategy is to identify these weak or broken links in the food value chain and invest in them. This is the highest value place to invest because it serves large segments of the value chain. As a

result thousands of farmers or tens of thousands of people can be served with even small investments.

In the food value chain Cheetah has identified three strategies to bring results:

1. Unite Farmers: Bring farm production from many farmers together to source inputs like seed and fertilizer, increase value and deliver reliable, consistent and quality supply to food processors and other market opportunities.
2. Preserve Food: including in large volumes and not just flavoring sauces and jams, which are common; and including bulk warehousing.
3. Add Value: move from food commodities to products through improved quality, unique characteristics, processing, etc.

Investments that target these results have the impact of bringing increased value to food production, increasing incomes, reducing hunger, and providing incentives for expanded agriculture.

What is needed is economic development with the “heart” of aid; that is, development that also pays attention to the needs and opportunities of the poor and occasionally kick-starts the development effort with a little aid around the edges. The poor are a good financial risk. That’s been demonstrated by microfinance worldwide.

Now it’s time to invest among them with real businesses.

## Linking Value Chains to Investment

### Welcome to Kiwere

It was a bright, hot, and dusty day in the middle of the dry season. I was being guided to a small remote village south of Iringa in the Tanzanian southern highlands. I put a big bottle of water in the car because I was going to need it.

There are 13 producers of honey in this village and another 10 surrounding it. Oddly, I kept bees for a few years myself when I was in university so I know a fair bit about the craft.

An NGO (non-governmental organization) had come to their village and taught them how to keep safe bees, produce honey and beeswax, and donated the basic equipment to do this. The man who took me to visit Kiwere did so to show me the amazing value of honey. He wanted me to invest in his own creation of a beekeeping operation. A pastor who accompanied me said, ‘It is a treasure hiding among us that we just never even noticed.’

I was noticing something completely different.

The chief producer of the village hosted us; indeed he was the chief of the village. He proudly toured us through his operation from top to bottom. He had enormous volumes of honey, including four each 55 gallon drums full and a couple of 30 gallon drums. By African standards, the sanitary conditions were less than ideal.

I asked to purchase 20 liters and we waited almost an hour and half for them to prepare it. Finally I became impatient. It turns out that they were searching for a container to put the honey in.

The organization that donated the equipment and provided the training was well meaning but gets nearly a failing grade for results. They might give themselves an A+ because there is

honey in production. According to traditional aid theory, it is even sustainable because the equipment still works and the bees are still working.

But the point is that they missed the point.

They were thinking like a traditional aid organization, giving things away. The metrics they used to determine success don't make sense in the long run. Their success is pinned on getting 23 farmers in a small village *engaged* in beekeeping. However, none of them is in the *business* of producing honey. This is an important and critical distinction.

The NGO that did beekeeping work thought about honey but didn't think holistically. In a business structure, you are forced to think holistically. If the NGO had instead been helping to start a business, they would have been forced to deal with a much wider set of issues: How will the honey be packaged and how will the beekeeper have access to this packaging? Where will the honey be sold? What standards for processing will the buyer have? How will it get from the village to the market?

Instead, poor farmers were moved from one crop that was sustaining them as a food source (maize), to another more glamorous one (honey). The poverty and hunger persisted and was perhaps made worse.

When we finally learned that the village chief of Kiwera had no packaging for the honey, I took my water bottle from the car, broke the seal, and poured out our drinking water. It was the only container we had. It was the only container in the village. The chief sold us 1.5 liters of honey instead of the 20 I ordered.

I have told the man that wants me to invest in his new beekeeping operation that he is missing the opportunity. Instead, of competing with beekeepers, he should find a way to organize the many hundreds that dot the landscape around Iringa. He guessed there were 300. He could solve the core issues: food standards, packaging and marketing. That's where the money is. And that's how he could help hundreds of families.

And that is value chain development.

And that's why a single *investment* can change the lives of hundreds or thousands of farmers, in this case beekeepers. That's why the human impact can be very large for value chain investments.

### **Investments**

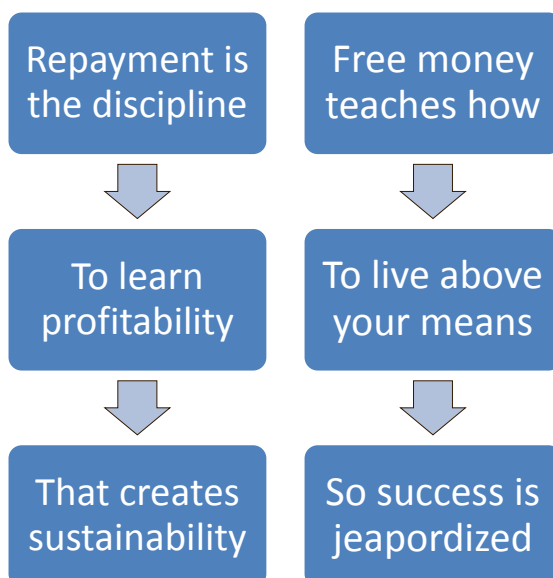
It is fashionable for aid orgs to term their 'donations' as 'investments'. Although it is possible to see returns as human impact, the use of the term fogs the key issue of successful investments. For business people, money becomes an 'investment' when it requires a financial return. In that context investments must resolve the wider set of problems for a *business* rather than just implementing the narrower set of steps for a *project*. This means that one must consider a wide variety of factors (like value chains) or success will be elusive (just like in Kiwera). In this context, success has a specific and clear leading metric: profit. Profitability is a built in discipline of business. Profit means the entity functions, adds value, and lasts. Those are all good things. They can create sustainable human impact when they achieve this result.

Business planning is a well-studied discipline designed to identify obstacles to success and create results that last. Using this discipline to create sustainable human impact is a model

that can work. Just because some business people are corrupt or greedy doesn't mean the model is flawed. Every institution or model can become corrupted. It's the human condition.

The investment model brings significant advantages with it:

1. Attention to value chains: Since investment requires profitability, it forces a dedication to sustainability. This means identifying and solving all of the obstacles to success. Most important of all: value chain solutions.
2. Repayment model creates self-selection and dedication: Requiring repayment creates a risk. Entrepreneurs are the type of people willing and able to successfully navigate risks and only about 4% of people tend to be of this type. This requirement is self-selecting to bring entrepreneurs to the forefront. Moreover, knowing that there is repayment needed makes the entrepreneurs assess the opportunity and when taking it on, dedicate themselves to success. They come with ideas, energy and commitment. In contrast, a grant process opens a floodgate to all. Discerning the right partner for the project becomes very difficult.
3. Repayment requirement forces investor assessment: Investors must also exercise caution in the selection of entrepreneurs and investment opportunities to choose only the best targets. The requirement for repayment imposes a higher standard on what is successful. It makes investors choose projects that appear likely to succeed while forcing them to pay attention to all of the issues required to actually bring a business to success. It creates built-in accountability. Our projects are all *worthy*. Indeed, most of the effort we see in the developing world is. However, you can tell if our efforts are *working* if they pay their way. In contrast, much of current development effort is not sustainable.
4. Repayment teaches success creating sustainability: Providing a business with too much money tends to kill it. First, the entrepreneurs lose focus because they can head in too many directions at once. Second, the entrepreneurs are not forced to solve the difficult efficiency problems that will create long-term success; they are able to operate a sloppy business. Third, they are not taught to value the cost of money and cash flow, key skills for successful operations. (Contrast the discipline of repayment with the confusion of excess cash in the following diagram.)



5. Increases listening skills: The investment model keeps investors listening. They are continually trying to discern the skills and commitments of entrepreneurs and judge the merits of their plans. Investors understand the need for a long-term view and are present to assist the entrepreneurs and protect their investment. In contrast, the traditional aid model actually pushes people apart. The ones bringing the aid come up with an idea and then shop the idea to donors. After it is funded they show up and meet with people to enact it. The people have not been consulted on their need or the design of the solution. The approach is demeaning. And once the project is complete, the aid model forces a hasty retreat to raise the money for the next project.
6. Not dependence but dignity: People have become so accustomed to the traditional aid model that Cheetah is often openly criticized for using an investment model to create human impact results. People say things like, “How can you require the poor to repay?”, “How can you make money off the poor?” The truth is the opposite. Much of aid is demeaning in its approach. It says, “We are smarter, more educated, and positioned to know the solution to your problems. Do what we say.” It is very patrician despite its good intentions. But people want to have real opportunities. They want to pay for their own children’s education and feel like they are achieving something. We have seen the ugly face of dependency in many villages. As one local pastor said, “Some people have become like babies. We take a spoon and feed them. Spoonful. Spoonful. Spoonful. They don’t participate. They only want to receive and will do nothing for it. It doesn’t work.”

For these and many more reasons, aid is not working. The studies and evidence are widespread. It’s time to try something else. Cheetah is taking a new approach. We listen and instead of handouts, we invest in the people. We grow their gifts. This multiplies the impact because we are really multiplying their work and their results. Cheetah is leveraging up their resources. Growing gifts instead of giving gifts. That’s the Cheetah model.

<p>It’s not giving gifts, It’s <i>growing</i> gifts.</p>
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## How: Surmounting Significant Obstacles

### Slicing into the Value Chain

After Cheetah decided to pursue its investment model for development, it selected Tanzania and began to investigate potential opportunities. It had been imagined that factories, especially for food processing to stimulate the agricultural sector, would be the preferred targets. Consistently, factories of every kind were found to be operating at about 20-30% of capacity. The problem isn't markets. Demand is high and customers are screaming for product delivery. The problem is inputs. Middle men (see Appendix A) rule the day and value chains are dysfunctional. In addition, the number of potential opportunities is small. There is a shortage of active operations.<sup>21</sup>

This reality caused us to face the facts on the ground and rethink our approach. We found that we needed to back up and start building value chains from scratch because there aren't many candidates prepared to grow. Therefore, we are including two new aspects to our investment model: enterprise incubation and agricultural cooperatives. Although enterprise incubation is enterprise incubation is a critical work, this paper is this paper is focused on the agriculture cooperative side.

On the agricultural cooperative part of work, we found that many food processors were running under capacity because they couldn't reliably source their inputs. The problem is that farmers are very small, commodity prices fluctuate dramatically throughout the season, and commodity storage is nearly non-existent. The solution is agriculture cooperatives. So we went upstream and started working with farmers. Cooperatives are another form of a business requiring investment.

### Cooperatives

#### **The Typical Cooperative Model**

Cheetah's approach is to enter a village and solicit local ideas for a "big investment", as we announce in a village meeting. We do not tell people what we want to do, believing that commitment is only achieved when the people believe in the idea and have a personal stake in it. We provide the following criteria to local people to guide their thinking:

- We are not a government agency making promises nor are we an aid organization. We are business people. Therefore, the investment must be repaid – it must have a source of profits.
- As foreign investors we are looking for big opportunities. A big business will serve a lot of people.

After they have proposed their basic ideas, we vote on them in a session with village leadership. Then we ask basic questions like 'how long', 'what's the priority', 'what can go wrong', etc. This process leads to a 3-5 year plan conceived by villagers themselves. We hold a competition between villages to create the best plan. Even so, the proposed plans are nearly identical in their basic components between villages:

1. **Focus on Agriculture:** Villagers know that the only significant business opportunity at their immediate disposal is the few primary crops of the village. Therefore, they focus immediately on agriculture.
2. **Cooperative Formation:** They understand that as single farmers they are too small to achieve success. Therefore they must form a group (a cooperative).
3. **Direct Market Access:** They know that middle-men are a key obstacle to their success and they always want to eliminate them and access the market directly. Interestingly, we have found that the market feels the same way.

4. Inputs: Villagers have difficulty obtaining reliable quality inputs like seeds, fertilizer, and pesticides. They look to do this as a group.
5. Warehouses: Finally, villagers understand that their post-harvest losses are significant and so they want warehouses to store and preserve their crops. In addition, they know that the value of crops generally rises with time and they want to have access to this opportunity.

Villagers understand the challenges they face and have specific, practical, and realistic solutions in mind.

### **How Cooperatives Succeed**

IMPORTANT ISSUE: Cooperatives succeed when farmers join together, trust each other and deliver all or nearly all of their crops into the cooperative. The large and consistent bulk of crops create three important benefits:

1. They give the cooperative the strength of volume and reliability of delivery that can attract buyers – in short, the only way to go to market.
2. They create the profits to afford the storage and post-harvest processing required to serve those markets with quality goods over a span of time.
3. And they create group buying strength for inputs needed like fertilizer, seeds, and finance. In short, they increase capacity and production for increased profits.

Without the unwavering commitment of farmers to deliver their crops to the cooperative, it will fail because it won't be able to deliver on the first two benefits.

### **The Issue of Trust**

The basic business plans proposed by villages is cooperative formation, warehousing and direct market access. This plan is correctly conceived. It is the way that farmers have lifted themselves up in every culture, geography, and for more than 200 years. However, cooperatives and warehouses have generally failed in Tanzania. This fact is self-evident. All across the country there are crop warehouses that have been built in the last 40 years and they are usually empty – except for imported commodities. As already demonstrated, the problem is not a shortage of food production.

Although the causes of failure are complex with several contributing factors, there are few issues that are central. They are all related to the issue of trust:

1. Over the past 40 years there have been two rounds of government initiated and mandated cooperative formation, especially the policy of “Ujamaa”. Many tens of thousands of cooperatives were formed during these periods only to have failed from widespread. Cooperatives were an institutional way to steal from the poor. The farmers responded by verbally assenting to the cooperatives but not delivering their products into them. Three generations of experience has convinced farmers to be wary of cooperatives. Moreover, the current widespread corruption in East Africa doesn't inspire trust.
2. The gap unfilled by cooperatives was taken up by ‘middle men’ or ‘traders’, as they are known in Tanzania. These business people tend to be upper class, have little or no investment, and a modest warehouse, if any. In general, they buy low, even cheating the farmer out of a fair price. They lock farmers into loan shark schemes and they often force women into transactional sex, spreading HIV. They are generally disliked by both the sellers (farmers) and buyers (the market), although many people

dream of being one because of they are often wealthy. (There is a more complete analysis of middle men and their impact in Appendix A.) Suffice it to say, farmers have learned not to trust middle men. Therefore they tend to only sell a little of their crop to any given trader. Again, three generations of experience has made this almost a natural law in some places.

3. The local tribal culture also has an impact. Some tribes have a history and reputation of entrepreneurialism (like the Chaga) while others have a reputation for not being transparent in their commitments and statements (like the Bena) – they literally have trust issues.
4. The crop being considered for the cooperative also has an impact. If it is a relatively durable crop like maize, the farmer has more opportunity to do things the old way (middle men) and doesn't need to take a leap of faith into a cooperative. If it is less durable, like vegetables, the farmer has less time to wait on multiple middle men. They are more likely to consider the risk of the cooperative as better than the risk of the middlemen. In export markets like tea or coffee, the buyers themselves have forced farmers into cooperatives to streamline their own operations. In this case farmers have had little choice because it is their only market.

Indeed, even today there are tens of thousands of agricultural cooperatives that have been currently registered in Tanzania but most are inactive. In the Iringa region alone, there are more than 1000 agricultural cooperatives. In our extensive visits around the region we have rarely found any that are actively functioning and we estimate that less than 3% are doing any active work, most of those in export products like tea and coffee.

As a result, farmers are trapped in poverty. We do not fault the farmers. They are acting rationally, in accordance with three generations of experience. How can a poor farmer take their annual income and turn it over to an unknown and potentially risky entity? It's hard to fathom turning over ones entire annual income to anyone. However, the solution to this predicament is a matter of trust.

Trust is the grease that makes businesses work, allows banks to take deposits, and heartens entrepreneurs to take risk. It is what allows governments to govern and currencies to function. Trust is at the heart of every economy.

The biggest famine in East Africa is a famine of the mind; it is a famine of trust.

It is because of this famine that people are starving while food is in abundance, 30% of children don't reach age five, and middle men rule in perversity among the poor.

### **Solution: Building Trust Relationships**

If an economy is to be built in the developing world, the investments must start with agriculture. That's where the vast majority of the people and resources reside. And for those investments to succeed, the work must be built on a foundation of trust. This is difficult in the best of circumstances. In this case the work must be undertaken in the midst of a people who have been taught to not trust – and for good reason. This is not a matter just of compassion or human dignity; it is a matter of practical necessity.

The very definition of a cooperative, 'cooperation', assumes a trust relationship. Among all organizational structures, cooperatives are one of the most dependent on trust. And this is the structure proven to be effective in lifting farmers up.

Cheetah is deploying five practical steps to build trust as a foundation for rural economic development:

1. Bottom up organizational development: Cheetah listens. The people bring their own ideas, organize their own structures, select their own leaders, etc.<sup>ii</sup> Cheetah helps around the edges with business planning, legal work, etc. But in order to get buy-in, energy and trust, the ideas must spring from the people. They must take ownership.
2. Management participation by Cheetah: the villages insist on and trust us to infuse the organization with good management practices, direct accountability, etc.
3. Organizational structures that incorporate, inter-organizational accountability, transparency, training, and incentives: we help the people to structure their organization with watchers watching each other, good training, complete transparency and a system of carrots and sticks.
4. Microfinance organizational model of accountability for membership: For large ownership structures like a cooperative, Cheetah subdivides the structure into subgroups. These subgroups provide a system for technology infusion and training, joint responsibility, and accountability. Cheetah employs an accountability system like microfinance where groups are self-selecting and become jointly and severally responsible for commitments. This really moves cooperative ownership – and its related responsibilities into the community.
5. Staged development, where possible, to test trust and accountability: This is a crucial aspect of cooperative formation. We originally imagined that we would form cooperatives and build warehouses before serving markets and customers. That is a flawed approach. When we bring the market to the village first, then we are able to readily gauge their commitment to act in concert. Can they release their crops to a single buyer? If they can't (though they may have promised to do so), then they wouldn't for a cooperative either. In that case the cooperative would have failed and the warehouse would be left empty like so many others. Their response to the market opportunity acts as a litmus test of their resolve to act in concert.

It is important to not the part that warehouses play in a cooperative's success and are directly related to the trust issue. Warehouses achieve three important affects:

1. Warehousing causes the mingling of commodities so that individual farmer assets become cooperative assets. This is a critical part of cooperative management because it makes the farmer's commitment factual.
2. Warehousing allows the product to be credibly and reliably available for markets. This is a critical issue to markets because of trust issues.
3. Warehousing allows the product to be protected from rot, pests, and fungal infections, extending its life and value.

Therefore, this approach builds trust into every aspect of the development effort and the organizational structure. We are seeing people respond to it – but not all. Not all in a community and not all communities. Even after spending more than a year of intensive

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<sup>ii</sup> The impact of a bottom-up organizational strategy is startling. We know of an organization 'expert' in cooperative formation worldwide. They use a top-down approach – showing up and telling the people how they will organize them. Their objective in the same region we are working is to attract 20 members per village in a two year period. In the very same villages we are attracting hundreds (in one case 650) in the first few months. We have spent almost nothing and have done none of the organizational work. The people are doing it themselves and imposing stringent requirements on their membership.

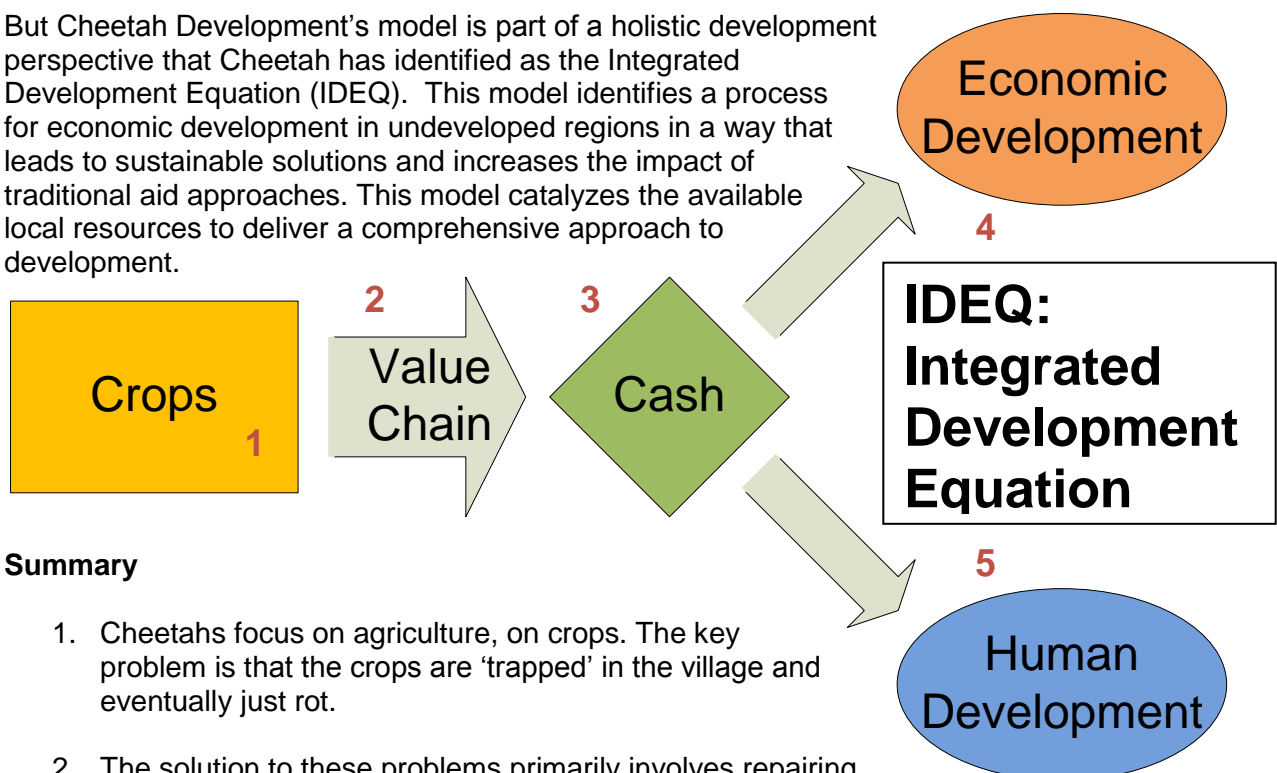
preparation in a village, we have been forced to move on. Some villagers are not yet ready to trust under any circumstance. When they see others succeeding, then perhaps they will step up. That's ok. We will build momentum.

## Integrated Community Development

It has been well established that economic development leads intrinsically to human development. For example, a 10% increase in income = 6% decrease in infant mortality, an amazingly direct correlation. Other studies show economic development results in lower birthrates, higher education rates, less child oppression, less domestic violence & more stable families, and more rights for women.

Although human development may be intrinsic, rarely is development practiced in such a way that there is a direct connection to economic development.

But Cheetah Development's model is part of a holistic development perspective that Cheetah has identified as the Integrated Development Equation (IDEQ). This model identifies a process for economic development in undeveloped regions in a way that leads to sustainable solutions and increases the impact of traditional aid approaches. This model catalyzes the available local resources to deliver a comprehensive approach to development.



### Summary

1. Cheetahs focus on agriculture, on crops. The key problem is that the crops are 'trapped' in the village and eventually just rot.
2. The solution to these problems primarily involves repairing value chain problems. Cheetah does this through its investment model, described below.
3. The value chain repairs enable farmers to convert their crops into cash. Thus, they become 'cash crops' for the first time. Converting crops into cash is the core of the Cheetah development model.
4. When there is no cash, everyone must be a farmer because otherwise they will not eat. Once there is cash, things change. A study in the USA in the 1970s suggested that money entering American towns at that time would turn 10 times before leaving. In essence, when the crop is converted to cash, the crop can be 'eaten' more than 10 times before it is consumed. It multiplies the effect. In addition, the introduction of cash into the local economy means that people who are not strong enough or not inclined to be farmers have alternative ways to create income and thus earn their food instead of growing it. Immediately affected will be women, especially widow-headed households. For example, once there is money, they could make dresses

because their neighbors will have cash to purchase them. In our surveys of Tanzanian villages, we see exactly this trend. As villages move beyond subsistence, local economies develop.

- When there is no cash, basic human development is not sustainable. For example, an aid organization may build a medical clinic but the people cannot pay to use it. In the Iringa region there are 438 medical clinics and more than a dozen hospitals. This is a lot of facilities for the population. However health care itself is of poor quality, medical staff often go without salaries, and medicine is in short supply and often fake. Therefore the support expenses never end. This is true of schools, water and utility systems, etc. However, once there is cash, then human development projects become increasingly sustainable. For example, farmer’s cooperatives we are working with have a primary objective to provide group health insurance policies to their members. This introduces a payer into the local health care system so that care can be upgraded and be sustainable.

### Cheetah’s Micro Venture Capital Investment Model

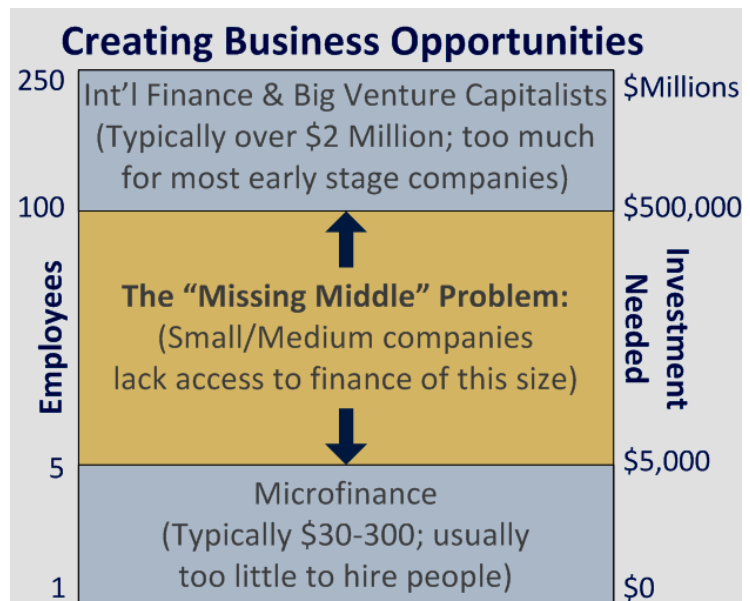
#### **The Missing Middle**

In the developing world, there is a shortage of small businesses – typically defined as having 5 to 250 employees. These are the businesses that drive economies, including filling value chains. A study by the German-Marshall Fund<sup>22</sup> seeking the cause of this shortage finds across the developing world there are many challenges for small business including, red-tape, corruption, and lack of infrastructure. However, the key missing ingredient was found to be small business capitalization.

Although in the developing world microfinance is providing capital to individuals, the amounts are insufficient to start businesses that hire people. Microfinance provides loans typically in amounts between \$30 and \$300, occasionally rising to \$1000 or so. Also, there are a limited number of venture capitalists operating in the developing world, mostly making investments above US \$500,000 and \$2,000,000. The World Bank says that from \$2 million and up there is more money available than businesses ready to receive an investment. Technoserve says that is true from \$0.5 million and up in Tanzania.

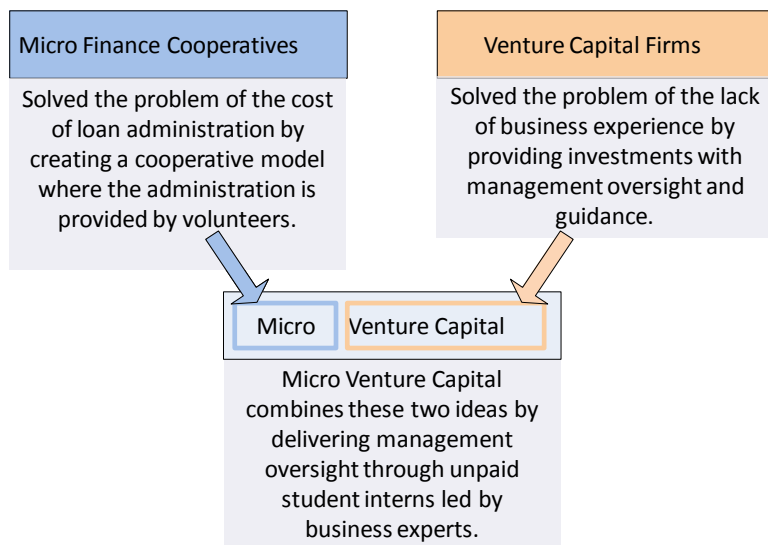
This leaves a large gap between \$5000 and \$500,000 where essentially no money is available, especially in the sub-\$250,000 range. In the west, “friends and family”, “angels” and occasionally venture capitalists fill this gap. The angel and venture capital models succeed by pairing their investments with careful vetting, guidance, and equity control mechanisms.

In Tanzania there are 3,000,000 micro-businesses and only 60,000 that have 5 or more employees. And in Tanzania, it is reported that there is more investment money available in the \$500,000 and up than there are business to invest in.



What is needed is a model to make small investments in small and medium businesses that are positioned to grow and succeed. The importance of this size investment is apparent. It is the size that buys a truck for transport, machines for processing and facilities for operation. It is critical to small business growth.

Cheetah is pioneering a new model, “micro venture capital” to invest in this gap. Micro venture capital (MVC) is a combination of two proven finance models: microfinance and venture capital. (See diagram.) MVC reduces the costs traditional VC costs of vetting, guidance, and equity control by partnering with local universities. Cheetah is establishing local subsidiaries with local presence and the university relationships to manage these investments. Cheetah will selectively support and provide investments to businesses that receive assistance. Selection of support will be contingent upon the identification of potentially profitable investment opportunities.



As a result Cheetah will seek out profitable investments that can reduce poverty and change the lives of people through economic development. To address the “Missing Middle”, our investments will range in size from \$5000 to \$500,000. Cheetah will seek to maximize economic development for disadvantaged people and investment returns.

### **Equity / Loan Investment Model**

SEAF ([www.seaf.org](http://www.seaf.org)), who is working across the developing world, has successfully used an equity/loan combination investment model for some time. As described to us, this model is typically 2/3 loan and 1/3 equity. Here is an outline of the model:

1. The loan is paid off by dedicating most monthly cash flow with a minimum of interest to be paid.
2. Then the equity portion of the investment is recouped. The process for equity recovery is to have a pre-agreed upon formula for company valuation. Based upon that valuation, the equity is paid off at the same interest rate with a dedication of most of the monthly cash flow. With repayment, the investors achieve liquidity. Thus the equity is returned with dividends.
3. The advantage to the Cheetah MVC model becomes apparent: Cheetah and the university remain vested in the business and enjoy future profit sharing. The incentive for the university is to help the business achieve complete repayment because it is at that point that profit sharing begins and potentially the investment is recycled for an additional equity stake.

4. Further, the advantage to the SEAF model of mixed equity/loan is that it creates liquidity and it allows the investment organization to profit from the possible big successes so as to offset potential losses.

### **Community Sized Investments**

It turns out that these mid-sized investments that fall in the “Missing Middle” space are appropriately sized as community investments. They fill a missing gap in that space, too. For example, whereas microfinance might afford a tiny maize sheller, a mid-sized investment can afford a powered sheller that can serve the whole community – and at a far smaller cost per person. The Missing Middle has caused a community-sized solutions gap, as well.

### **Agricultural Cooperative Repayment Model**

Business investments are designed to increase capacity that generates returns. The returns are used to repay the investment. This is true of an investment in a farmer’s cooperative, as well. In farmer cooperatives, increased capacity and increased profits come from a variety of sources:

<b>Impact of Investments</b>	<b>Minimum</b>	<b>Maximum</b>
Direct selling access to higher margins	2	6
Post harvest processing	1.2	2
Plant more land	2	2
Improved yields	2	5
Less waste	1.25	4
<b>Total</b>	<b>12</b>	<b>480</b>

This means that we expect capacity building in the range of 12x to 480x current production. It is unlikely that all of the factors would be at a minimum or maximum for any given product to the results will usually land somewhere in between.

Here is an actual example from a maize village in the Iringa region, Ilambilole:

<b>Impact of Investments</b>	<b>Expected result within 3 years</b>
Direct selling access to higher margins	1.25
Post harvest processing	1.2
Plant more land	2
Improved yields	5
Less waste	1.3
<b>Total</b>	<b>19.5</b>

We have demonstrated results from the Tumbani Agricultural Institute that farmers are able to achieve 5x the crop on the same acreage with some basic agronomy practices, fertilizers and improved seeds. Our surveys show that the farmers have 2x the land available for planting but do not plant because of lack of access to markets. By combining just these two factors we can see a 10 fold increase in production.

If we use the direct selling access to higher margins to fund the investment, it means that the farmer will be able to get paid the same price for their crop and still send 20% towards repaying the cooperative. This village has about 20,000 bags of maize in it, according to our

estimates. They have a current value of \$330,000. 20% is \$65,000. This is not enough to rapidly pay for the expected investment of \$250,000, plus interest, plus cooperative expenses.

But by the third year we expect at least a 10 fold increase in capacity. That means that the \$330,000 becomes \$3,300,000 and the profit jumps to \$650,000. At this level the cooperative can easily afford the investment and far more.

## Development Components

The process of rural cooperative and community development is as follows:



The areas of development work are as follows:

Ag Services	Financial	Member Support Services
<ul style="list-style-type: none"> <li>• Extension services for seeds, fertilizer, training</li> <li>• Warehouse mfg relationships</li> <li>• Simple post harvest processing</li> </ul>	<ul style="list-style-type: none"> <li>• Direct marketing of goods</li> <li>• Microfinance linked to warehouse voucher system</li> <li>• Coop financial mgmt by Cheetah</li> </ul>	<ul style="list-style-type: none"> <li>• Group Health Insurance</li> <li>• Upgrade Health Care</li> </ul>

## Appendix A: Understanding Traders

When I first went to Tanzania to seek investments, I started by speaking to a number of factories, including food factories in the first few weeks. All the factories I visited were running at about 20-30% of capacity. Without exception, food producers said that their number one problem is getting enough input. Everything that they make they sell that day. I sat with the CEO of a leading food producer while she took call after call from people wondering why they aren't receiving the orders they have placed. The problem isn't lack of market; it's lack of input. Management often puts a majority of their effort into sourcing their raw food inputs.

As I explored the country, this problem replayed itself over and over for every type of food. The caterer at Tumaini University in Iringa is struggling to feed students and staff because she can't source enough chicken, eggs, vegetables, etc. She is now opening her own truck farm to grow her own vegetables. Chickens were such a problem that she wanted me to invest in a chicken farm for her. In fact, the 2<sup>nd</sup> largest chicken farm in the country is owned by a caterer in Dar es Salaam. Sourcing food input commodities is incredibly difficult and its value chains are almost completely broken.

Because hunger is such a terrible problem, I kept digging.

The Iringa area is one of the four largest maize growing regions in Tanzania. Iringa town is surrounded by hundreds of villages where fields of maize are ubiquitous. I have been in many, many of these villages and literally met with hundreds of farmers. The farmer's number one problem: they can't sell what they produce. In the village of Ilambilole, we spent time quantifying the maize production. This village of 1000 families probably produces about 2000 tons of maize per year.

Back in Iringa town I met with four simple operations whose primary business was to purchase maize and mill it into flour. Each of these businesses had the same number one problem: they couldn't get enough maize!

And they are in the heart of maize country! 25 kilometers away, one village could supply much of their needs. Indeed, if you would stand on the roof of the mill you could see maize. Yet one of these mills was sending trucks 600 kilometers to get their supply!

I like challenges but getting my head wrapped around this problem was one of the most compelling challenges of my life. Not because it is so tricky but because it is so important. We are talking about the heart of the hunger problem in Africa. Remember, there is no shortage of food production and 40% of what is produced rots.

### The Hunger Puzzle

#### The Maize Value Chain

Each of the maize mills tries to source their maize in the surrounding villages. They either buy from traders or act as their own trader to purchase the maize. A 'trader' is a type business person that is common in everywhere in the developing world. The traders are middlemen that buy and sell throughout value chains in nearly every type of industry. Indeed, they are often the only links between many parts of the value chain.

Drilling into this small segment of the maize value chain provides an example of the roles that traders fill. I took the time to meet with traders, too. In Iringa, the maize traders (often

trading in a variety of agricultural products) go into the villages and negotiate with villagers to purchase their farm goods. This can be a frustrating experience for a trader. In time honored African tradition, the trader has to go through a negotiation that may last a half hour and result in no purchase. They do this from shamba (farm) to shamba, slowly acquiring the goods they are seeking to trade. I've been told that may take a whole week to fill one truck. The traders say that this is a frustrating process and you can't trust the farmers. Makes you feel bad for the traders, right?

Why does it take so long for traders to fill their truck? Remember that in just one village, Ilambilole, there is 2000 tons of maize production.

So let's take a look at the farmers. In the negotiation the farmer is likewise frustrated. They find that the trader is trying to buy their crop at about or below cost. If they are selling a crop that might have a little shelf life like maize or rice, the farmer knows that the lowest price is right at harvest when there is abundance and as time passes the price will rise. The farmer has the crop, thus is eating, they are selling their excess and therefore can afford to wait. Why sell your crop if you're not going to make much on it?

Over the course of the year, the farmer can see an increase in maize prices of about 30%. The food factory will see an increase of about 100%. The trader enjoys the spread. The farmer still loses because without proper storage the maize crop will deteriorate about 30% - or about as fast as the price goes up.

By the way, the farmers say the same thing about the traders: "You can't trust them." For some the hatred of traders is intense. We'll take a look at this in a bit.

So let's take a look at the mill owners. They say their number one problem is getting enough input. Clearly, the traders are not delivering enough. The mill owners have a few choices. I have seen all of the following tactics used:

1. The mills can buy from the traders. Some larger mills are dealing with hundreds of traders.
2. The mills can become their own trader and go direct to the farmers. This is a huge project but some undertake it. It doesn't provide big dividends because they become just one more trader wandering through villages. Anna Temu of Power Foods is considered an expert on farmer relations because she is dealing with thousands of them. Even when she tries to create enduring, helpful relationships with farmers, traders may step in take the crops out from under her. Proof that it's not working: she could double her sales instantly if she could get more input.
3. The mills can go elsewhere and buy from a source that has a large supply. This is why one small mill in Iringa is going 600 kilometers to Sangea to get maize.
4. The mills can go overseas for supply and they do. Over half of the grains in Tanzania are imported. The need to find an aggregated source explains this importation of grain in a country that has an excess.

(There does seem to be inadequate production of soybeans, millet, and wheat. Actually, this failure in the value chain explains that, as well. Farmers that grow these 'exotic' crops are even more frustrated, often selling nothing.)

By the way, the mill owners generally don't trust the farmers or the traders, either. How could they when they can't keep their factories running?

This value chain puzzle remains unsolved.

There is enough dysfunction that everyone has some blame in the problem. But notice that the farmers are growing enough and would like to sell more. Also notice that the factories are big enough to buy more and have excess demand. So the farmers and the factories are doing their job at least beyond the capacity of the current system. Therefore, at least for the moment the heaviest part of the blame needs to be placed at the feet of the traders. So let's take a more careful look at traders.

Traders fill valuable links in value chains in nearly every industry. It's convenient that as a factory you can open your doors and not worry about sourcing your inputs or distributing your products. Hundreds of traders will show up with baskets, bicycles and trucks filled with the inputs you need and ready to distribute your product. The factory doesn't have to lift a finger and invest in these solutions.

There are thousands of traders and they are usually operating in the informal sector of the economy as unregistered businesses not paying any taxes. Many people want to be traders because many traders are wealthy.

Without traders, the economy wouldn't work at all. They are a vital part of how things get done.

On the other hand, we see that trader model doesn't work to meet the needs of the value chain, at least in the case of this maize value chain in the Iringa area.

It isn't that the traders aren't doing their job, even though I implied that. Actually, they are doing their job very well. They are responding to the incentives that are at work in the system.

It turns out that the trader is maximizing their profit. It's open market so they want to buy at the lowest price and sell at the highest possible. Here's some of their strategy:

### **#1: Buying Low**

The trader can buy at the lowest price if the farmer is also a borrower. As we have discussed elsewhere in this blog, these money lending schemes are common across the developing world. In this maize example, the trader loans to the farmer either the seeds or the capital to purchase seeds. The terms of the loan require the farmer to sell their crop to the trader – at a very low price. The trader wins three ways: they have a pre-negotiated right-to-purchase, they have a lower price, and they make money on interest on the loan.

And they win a fourth way: they keep the borrower poor enough that they never break the cycle and so they are trapped indefinitely.

Clearly the trader benefits substantially from such an arrangement. Why would a farmer ever agree to such an arrangement?

Easy answer: they don't have a choice.

Life in the developing world is much more precarious than in the developed world. For example, even a small illness can wipe out one's life savings to buy medicine. One's saving includes next year's seeds. And illness and death are not uncommon.

All a trader need do is find someone who has suffered a setback and requires a loan to continue. As you can imagine, needy people are common in the poorest nations on earth.

(This is one of the reasons why microfinance is so needed in the developing world. Microfinance can help to prevent these endless cycles of poverty.)

There are important things to notice about this situation:

- The trader has an added incentive to buy low – extra low. Farmers that are well off are much less likely to be caught in such a cycle of money lending.
- In more helpful value chains, buyers want their sellers to be productive and healthy. This gives them a supply side that they can count on. This is not true in this value chain.
- It is not surprising that there is strong distrust between traders and farmers. Indeed, many farmers hate traders because they have been caught in a money lending cycle or their neighbors have.
- Since the trader is buying at such a low price, the farmer has added incentive NOT to sell. Of course the negotiations are long. Of course the farmer doesn't like the buyer – doesn't even want to sell to them. How can there be a successful negotiation when the parties dislike and distrust each other? Therefore the farmer spreads his sales among many traders, trying to spread his risk, too.
- Traders hold the money. They often force women farmers into transactional sex before they will buy their crops. We have heard women say that they may insist on taking their daughters, too. Traders are an important vector in the spread of HIV.

## **#2: Selling High**

How does a trader sell at a high price? Another easy answer: supply and demand. If the factories had all (or close to all) the input they needed then the price would fall. Traders keep the factories desperate for input because that keeps the price at its highest. This explains why factories are operating consistently at 20-40% of capacity. This is the line of desperation where the price will be highest. They are still in business and can buy the product. Any lower and they fail (many do). Any higher and they become more independent, more profitable, and the price falls.

There is no need to have a conspiracy to set prices among traders. The numbers will speak for themselves.

Why are maize mills unable to source their maize from the nearby farmers? Puzzle solved!

This is an example of a broken value chain. It isn't a lack of food that is causing hunger; it is broken value chains.

## **Not Capitalism**

Some might say that this value chain problem under consideration – bad traders – is actually caused by businesses responding to capitalistic profit incentives. They might say, “See? Business isn't all good. Where is Adam Smith's 'invisible hand'?”<sup>23</sup>

One might have expected that the invisible hand should have created an efficient solution to this problem. When an investment is made, then the investor protects it by making sure that they have reliable suppliers and buyers. They work to have a win, win, win situation. Traders don't make investments. They don't add value. The work to have a lose, win, lose situation. The reason they exist at all is that the value chains are broken. They are broken because of

the “Missing Middle” – there isn’t capital available to fix these gaps. Therefore, a gap exists and the traders have been able to ‘capitalize’ on it. Actually, the invisible hand is at work.

That’s also why there is a good investment opportunity. Markets naturally replace middle men with organizations that can add value. Neither the buyer or the seller wants to deal with middle men because they don’t add value and they are working against them – the lose, win, lose situation.

Middle men are doomed in a context of adequate capital. In the developed world they are essentially gone.

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