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**REALIZING REGIONAL TRADE
IN WEST AFRICA**

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I. INTRODUCTION

This document reports on market analyses prepared by the West Africa Enterprise Network (WAEN)¹ in 1995 in collaboration with Associates for International Resources and Development (AIRD). These analyses were undertaken to assess post-devaluation market opportunities in regional trade for non-traditional exports and to train private entrepreneurs in techniques of market analysis. Opportunities for regional trade in West Africa which have become profitable since the devaluation of the CFA franc (CFAF) in January 1994 were evaluated and constraints to realization of those opportunities which may be due to market structure, government policies and regulations, and institutions were identified.

At the same time, working directly with members of the Network, private entrepreneurs were trained in techniques of market analysis in order to enable them to evaluate and seize such opportunities on their own. More broadly, the Network received assistance in the development of strategies for overcoming these constraints. In the twinning of international economists with extensive market analysis experience directly with private sector actors, the activity thus afforded a unique training opportunity to members of the Network. International aid donors also benefitted from this pilot experience working directly with private sector actors to undertake analysis, rather than via local analyst intermediaries.

The authors of the study recognize that formal exporters in West Africa focus today largely on potential and existing markets overseas, rather than on potential markets in the region. This, despite the fact that economic analyses suggest that interesting commercial opportunities exist in the region. There are several hypotheses which may explain the weakness of interest in the region. The economic analyses may have overestimated the potential profitability. The limited size of the regional markets today, compared with the opportunities overseas, probably reduces the commercial interests. Also, the constraints mentioned above may be sufficiently weighty that they prevent the realization of profitable business opportunities. These hypotheses are tested in this study.

AIRD has many years of experience in the analysis of the economics of production, marketing, and trade, with a particular focus on distortions introduced by policies, regulations, infrastructure gaps, etc. It has worked on the perspectives for regional integration in West

¹ In January 1993, a group of business men and women in eight West African countries launched an informal association with the following objectives: to examine policy reform issues, lobby in the name of the private sector in the various countries pour important modifications, and promote cross-border business and investment in the West African region. Two years later, the WAEN includes several hundred members coming from eleven countries. The regional network and its affiliated national organizations meet regularly. The members of the Network have also created subnetworks along professional themes, including financial services and accounting (NetForce) and exports (NetExport). The latter also intends to establish a regional commercial enterprise and a brand name.

Africa since 1990 (see Chapter II, in the French language version of this report).² Based on this accumulated experience, the staff of AIRD have worked with collaborators of the WAEN in order to formalize their research strategies on market perspectives. During a seminar led by AIRD in April 1995, exporters were trained in methods of market analysis of an entire subsector, including production, marketing, processing, packaging, exporting, importing, and final consumption. They were also introduced to definitions of prices, financial and economic profitability, and thus to definitions of competitiveness.

Each collaborator identified a product and a market for the product in the region which seemed to have commercial potential. The four combinations which were identified are indicated in the box to the right.³ Case studies of these product/market combinations were prepared by the collaborators individually.

Product/Market Combinations Identified

Product	Direction of Trade
Garlic	Chad → Côte d'Ivoire
Maize	Benin → Niger
Day-old chicks	Ghana → Côte d'Ivoire
Potatoes	Guinea → Senegal

These studies were to comprise a description of the product and relevant markets, a quantitative analysis of the costs of production/processing/ marketing/trade between the point of production and final consumption, and the identification of constraints which prevent or reduce the commercial viability of these products and markets. Chapter III describes the techniques of such analysis in laymen's terms. The technical definitions of financial and economic profitability, competitiveness, and protection calculations (as well as the hypotheses used for the regional trade simulations) are covered in detail in the methodological annex.

In the present report, the actual dimensions which the individual evaluations assumed depended on the product identified, the countries involved, and the particular enterprise or individual involved in the analysis. For example, sector analyses done by economists normally begin the analysis with an assessment of production costs. These may differ by region, by variety or quality of good produced, or by technologies used in production or processing. For example, in the case of a rice sector study done across West Africa, costs of production distinguished between different zones and systems of rice production in five

² The English version of the final report is currently an abbreviated edition of the completed document. It includes an outline of Chapter II, the full text of Chapter III, the Ghana poultry case study, Chapter VIII with the cross-country analysis, and the conclusions.

³ In two cases (maize, day-old chicks) the business man or woman was already engaged in selling the product, but either domestically or internationally, not on the regional market. In the other two cases (garlic, potatoes), the participant was interested in diversifying his or her business (one is an international arabic gum trader and the other is an office services provider interested in getting into trade activities) into regional trade of the product in particular. A fifth case, regarding the export of pineapples grown in Côte d'Ivoire to Senegal, was identified and worked on until August, but could not be concluded definitively.

countries.⁴ Alternatively, the competitiveness of an activity may depend on processing costs and, more particularly, the degree with which installed processing capacity is used.⁵ For an entrepreneur who intends to be involved in the production or processing of the primary product, such detailed analysis is essential. However, for a trader who simply intends to arbitrage between two wholesale markets, the relevant starting point of the analysis is simply the wholesale market price of the product in the country or market of origin.

In the case of the four products analyzed here, a combination of approaches was used.⁶ For instance, the garlic case (chapter IV) analyzes costs from the wholesale market price of garlic during the period of peak availability in Abéché, Chad and follows through to the wholesale market in Abidjan. Interviews were conducted in both Chad and Côte d'Ivoire in order to assess feasibility.

The maize case (chapter V) analyzes costs of production, collection, and distribution within Benin, stopping at the assembly market in Malanville (northern Benin), through which all imported maize must pass in order to proceed northward to Niger. Thus, it was unnecessary to add the final margin between Malanville and Niger; it was sufficient to adjust the imported maize price to Malanville, and compare costs at that point.

The poultry case (chapter VI) is admittedly somewhat incomplete. Detailed costs of production (through several breeding generations), processing, and marketing between Kumasi and Accra were collected and analyzed. However, the enterprise studied has not yet engaged in export to neighboring countries, and it was not possible to gather directly complementary costs and market structure information from Côte d'Ivoire or other potential regional markets. The study therefore relied on assumptions and secondary information on poultry trade and prices to complete the analysis.

The potatoes study (chapter VII) is the most complex of the four studies undertaken. Costs from production and assembly in Guinea through transport and marketing into Senegal are thoroughly examined. In addition, data on Senegal's own costs of potato production are presented.

⁴ Such as swamp, upland, or irrigated systems, producing rice using traditional or improved varieties and manual or mechanized traction. See Scott R. Pearson, J. Dirck Stryker, and Charles P. Humphreys, *Rice in West Africa: Policy and Economics* (Stanford University Press, 1981).

⁵ For an analysis of milling and refining costs in Moroccan sugar production for domestic consumption, see AIRD and Ministère de l'Agriculture et de la Réforme Agraire, *La Politique de Prix et d'Incitations dans le Secteur Agricole* (AIRD, 1986); For an analysis of crushing and refining costs in Tunisian olive oil production for export, see AIRD and Ministry of Agriculture, *Tunisia: Agricultural Profitability, Protection, and Comparative Advantage* (AIRD, 1987).

⁶ In some cases, the case studies have been edited from their original manuscripts; the originals can be ordered from the WAEN or AIRD.

Chapter VIII takes the cost figures provided in the case studies and derives financial profitability margins, comparative advantage coefficients, and nominal and effective protection indicators for each of the four commodities studied. Simulations are run, estimating the effect of reduced informal taxes and transport costs on profitability and economic competitiveness.

In Chapter IX, final observations regarding constraints to the realization of regional trade opportunities are offered, along with strategy and follow-up action recommendations.

II. BACKGROUND

[See French language report for full text.]

Recent History and Literature

Potential of regional trade: economic factors preventing its realization
*Exports in the region: institutional factors preventing their realization*⁷
Potential for the Evolution of Regional Trade

1995 Incentives Framework in West Africa

Economic policy measures

Institutional factors

Constraints

Informal taxes

Import/export quantitative regulations

High cost of transport

Inconsistency of application of official trade texts

Macroeconomic instability

Effect of growth in regional demand on regional surpluses

Lack of complementarity of production with demand calendar

Regional variations in consumer purchasing power, quality preferences

Atomized distribution and marketing networks

Monetary transfer constraints

High cost of capital

Underdevelopment or lack of reliability of commercial legal systems

Absence or underdevelopment of export promotion schemes

Lack of timely trade data

Lack of research applied to private sector needs

Infrastructure bottlenecks

Human resource constraints

Potential and Perspectives for Regional Trade

Projection of National Supply Surpluses for Cereals and Livestock Products

Base case

Trade potential under different economic growth scenarios

⁷ This section is drawn in large part from Stryker and Shaw, *Costs and Benefits of Eliminating Constraints to the Expansion of Nontraditional Exports* (Cambridge: AIRD, October 1994).

III. TECHNIQUES OF MARKET ANALYSIS⁸

New market opportunities are seized every day by business men and women around the world. In some instances, these opportunities are production-driven: a surplus of a commodity or product exists in one place and is sold somewhere else by a trader at a profit. In other instances, they may be demand-driven: a shortage of a commodity or product exists in one place and is brought in from somewhere else by a trader at a profit. In yet other instances, it is the entrepreneur who creates a market opportunity, by identifying a niche in the market and setting up the production, processing, marketing, and/or trading channels required to deliver a new product⁹ to a new market.

A distinction is made here between traders who identify profitable arbitrage opportunities for arbitrage, which are acted on in fairly short order, and entrepreneurs who develop markets for new products or services and who may need to make longer term investments in production or other infrastructure (processing, storage, marketing). The distinction is made as a way of identifying market information requirements for each. The former is likely more interested in unit margin, volume, and market logistics information, whereas the latter will probably need a more thorough analysis of supply, demand, and trade trends in order to "peer into the future" before s/he feels comfortable making investments.¹⁰

Increasingly, these new market opportunities involve cross-border transactions. The globalization of modern commerce is by now a cliché. All industries in all countries, whether manufacturing, trading, or providing services, in small, medium, and large enterprises, must be aware of commercial activity outside one's own borders. In many parts of West Africa, producing for an international market is not new; the region has supplied raw material, minerals, and other resources to overseas markets for many hundreds of years. What is new is the growth in formal trade *within the region* of products grown or manufactured within the region.

⁸ This chapter is written by economists who specialize in sectoral analysis. For a private business perspective, it borrows from a Harvard Business School marketing textbook by Philip Kotler, *Marketing Management* (8th edition) (Prentice Hall, 1994).

⁹ In West Africa, focus is primarily on the delivery of raw or processed commodities or manufactured items. According to industrial market definitions, a product may be either a physical good (raw or processed commodity, or manufactured item) or a service. Kotler, p. 8.

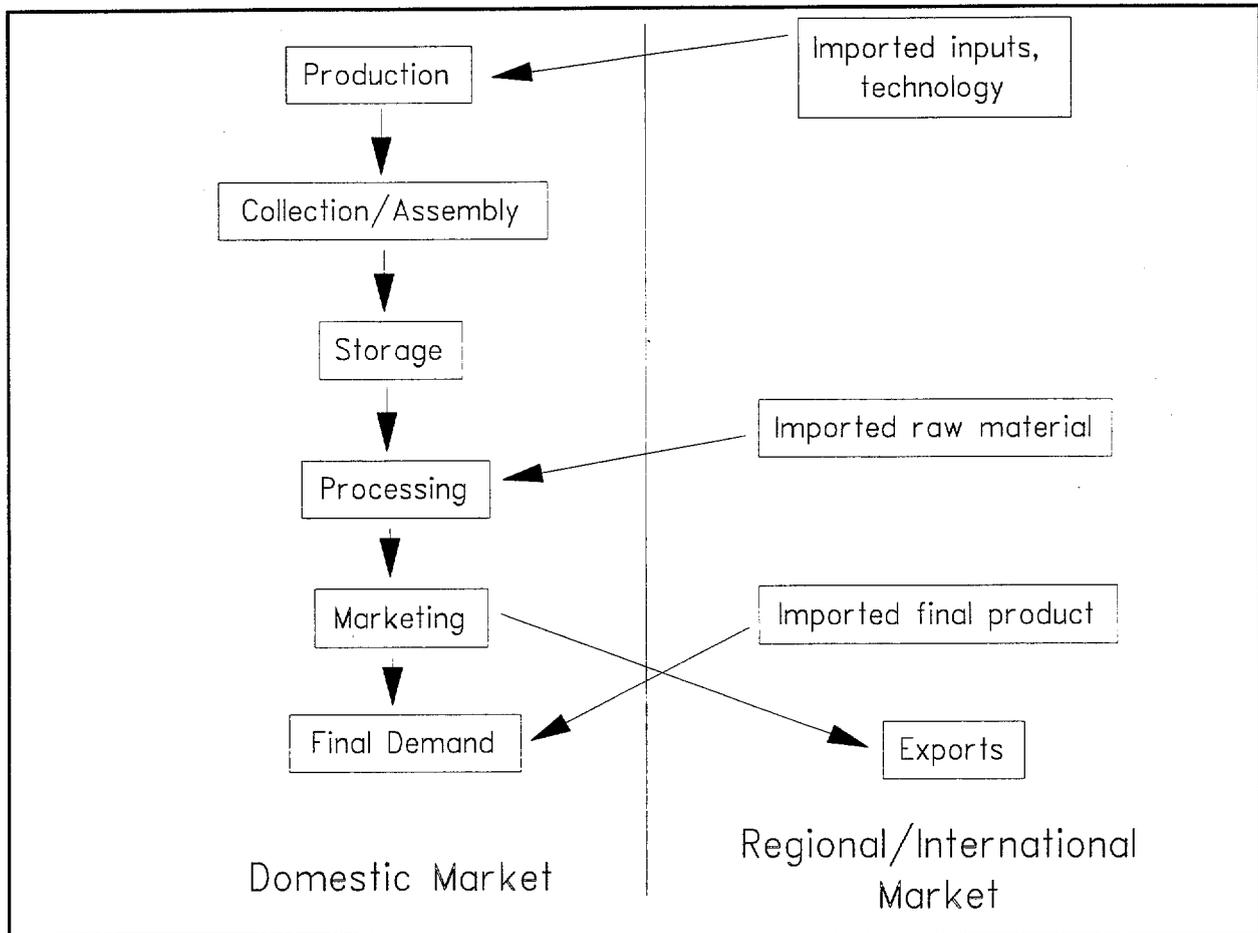
¹⁰ The American Marketing Association in 1985 approved the following definition of marketing management: *Marketing management is the process of planning and executing the conception, pricing, promotion, and distribution of goods, services, and ideas to create exchanges with target groups that satisfy customer and organizational objectives.* Taken from Kotler, *Marketing Management*, p. 13.

For both trade-oriented and entrepreneurial enterprises, a number of analyses will assist in the decision making process to set up a new business or diversify an existing activity into a new product or new market. These include the following (each will be discussed in more detail below):

- descriptive analysis, to identify the relevant stages in the market;
- supply analysis, to assess issues relating to domestic production and competing imports;
- market analysis, to identify buyers and sellers of raw material, inputs, and final goods, and the networks that link them;
- demand analysis, to assess issues relating to consumption;
- institutional analysis, to identify the jurisdictions and policies of public sector agencies which may have an effect on the activity;
- cost and revenue analyses, to assess unit margins under alternative price and cost scenarios, expected revenue streams under alternative volume scenarios, and net cash flow, under alternative investment and business development scenarios; and
- constraints analysis, to identify bottlenecks along the chain and strategies for remedying them.

Descriptive Analysis

The first step in organizing one's thinking about a given market is to understand the composition of the relevant stages in the market. This may be thought of in terms of a flow chart, as shown in the figure below.



For each stage in the productive chain, the trader or entrepreneur should know who the important actors are and how they relate to one another. The figure above distinguishes among six different stages, all of which may or may not apply to a particular business. These are production, collection/assembly, storage, processing (including packaging), marketing, and final demand (or consumption). The entrepreneur should consider how much of the chain occurs within the confines of one domestic market, and how much involves regional or international markets. Taking the perspective of a business located in the final demand market, inputs or technologies may be imported upstream from production of raw material, or raw material may be imported for domestic processing and marketing to consumers. Or, production, collection, processing, and marketing may take place in one country for export to a final consumption market. Each cross-border flow implies additional complications, which will be discussed below.

Supply Analysis

At the production stage, will the raw material be produced by the business directly or via contract with local or foreign producers, or will it be purchased on the spot market? What are the risks and advantages of each approach?

If the business intends to produce directly, advice on alternative products and production technologies may be available, from other business people (individually or through professional associations such as the WAEN) or from domestic, regional, or international research centers. For example, one member of the WAEN learned about methods of fruit tree production from a retiring French fruit farmer and from the _____. Technical advice and even investment funds may also be available in published form from foreign technical advisory services or projects. Another way to learn many aspects of a business is to work for someone else in the same line of work before branching out into an independently run operation. Once a production platform has been initiated, technological innovations being developed at home and abroad must be continuously monitored, in order to keep the production operation as competitive as possible.

Alternatively, the business may not be directly involved in production of the primary product, but instead will contract for its delivery. What form of contractual relationship is the most satisfactory (partnership, subsidiary, strategic alliance, cooperative)? What will be included in the terms of the contract? At a very minimum, the business should specify the volume of product it wishes to buy and at what price. Increasingly, however, as businesses contract for raw material or primary product delivery, they determine specific qualities or grades of product to be delivered and/or specific calendar deadlines for delivery, and nuance their purchase prices accordingly. Moreover, the business may actually extend technical advice or physically provide critical inputs (hybrid seeds of a specific variety, key phytosanitary or feed products, specialized cloth or machinery,...) to ensure that producers deliver the specified product.

If raw material or primary products are to be purchased from the market, a series of rural prices over one (or better, several) year(s) should be collected, broken down by month, in order to assess price variability by season and over time. If raw material is only available locally during a specific season, alternative business plans must be developed to amortize fixed investments during "down time." One is to adapt the installed infrastructure to a complementary activity during the "off season," in order to keep machinery operating and employees productive. Another is to temporarily lay off (if labor codes allow) at least unskilled labor in order to reduce fixed costs. Another approach may be to develop a completely distinct commercial activity to provide positive cash flow during the period when the business in question actually generates a negative cash flow.

With regard to imported inputs, technology, or raw material, the business needs to consider how to bring these items into the country. Are reliable suppliers known to the business person; if not, how can they best be identified? Sharing of experiences with others in the business, perhaps through the WAEN, is one approach. Another is to gather information on foreign suppliers by contacting commercial attachés in foreign embassies in one's own country, or by attending trade fairs. How will these imports be paid for? Standard practice with industrial countries is to establish a letter of credit with one's bank, which vouchsafes for one's credit worthiness vis-à-vis the foreign supplier. Under what arrangement will the inputs be delivered to the country? Is the business buying FOB (costs measured at the exporter's border) and therefore responsible for arranging for shipment, or is the business buying C + F (costs measured at the importer's border)? How long does an average shipment take from the port of departure to the port of entry (critical for perishable products)? Once arrived in-country, how long does it take to clear inputs through domestic customs at the air/ seaport, and what additional costs are associated with clearance (customs duty, other fees and duties, value of time spent clearing, forwarding agent fees)? Are there delays associated with clearance, and if so, how long and how frequent are they? Are duty drawback, bonded warehouse, or temporary admission schemes available to export-oriented enterprises to exonerate the payment of duties on imported inputs?

Another critical variable in production is labor. The entrepreneur needs to evaluate what kinds (unskilled, skilled technical, skilled management) of labor will need to be employed by the business. Are such workers available? As permanent or occasional laborers? If the latter, are they available when needed by the business? If they are not available, will the entrepreneur train on-site or pay for training? What employment codes (benefits, income taxes, job security clauses, union regulations,...) apply to the hiring, firing, and temporary laying off of different kinds of labor by formal enterprises? What are the wages paid per locality, degree of job security, and skill level? What alternative hiring arrangements can be used by the entrepreneur to engage staff (partnerships, employment conditional on output or productivity,...)?

The final demand market may already be supplied by imports of the final commodity or product. In this case, the business should assess how competitively it can supply the same market with an alternative production chain. There are several platforms on the basis of which

the enterprise may be able to compete: cost, quality, associated service.¹¹ Is the cost of the domestically or regionally produced product cheaper than that of the imported substitute? Alternatively, rather than pursuing a price-based strategy, the domestically or regionally produced product may be distinguished from that of the imported substitute in terms of product quality, associated services, reputation of personnel, or product or enterprise image in order to create a new niche in the market.

Market Analysis

In the descriptive analysis, the business identified the relevant stages of production through final consumption. In the market analysis, the business evaluates how these stages will be linked. The entrepreneur must consider whether to contract out or lease in for various stages of the marketing, whether to enter into joint ventures with domestic, regional, or international partners, whether to establish subsidiaries in foreign markets, and/or whether to attempt to control all aspects of the process.

For example, it may be possible to hire in trucking or private air cargo capacity for regional shipment. In some instances, cheaper backhaul cargo space may be available from third parties, or can be negotiated.¹² In other instances, the availability of cargo space may be limited, particularly air cargo space in countries where air cargo is controlled by one supplier, Air Afrique. However, private (and to some extent, public) air companies are interested in increasing business, and will respond to a well-documented request for increased cargo availability. Rates are usually negotiable as a function of the bulk, weight, and value of the expected shipments.

However, in West Africa, because risks of contract non-compliance are generally high and the legal enforcement of contracts is usually weak, the entrepreneur needs to manage all aspects of an operation, including collection, storage, processing, and marketing to end-consumers. This implies a need for much higher up-front investments in infrastructure (lorries, collection and storage warehouses, distribution centers) and commercial networks. For such investments to be profitable, care must again be taken to maximize the use of infrastructure capacity.

In some instances, it may not be in the interest of an individual entrepreneur to assume all the costs of the investment. For example, cold storage or bulk loading/unloading facilities at air/seaports or in urban markets could be constructed and managed privately, and extra

¹¹ Not all may be available to an entrepreneur for a given product, particularly in West Africa. Consumers may focus strictly on cost in order to minimize expense. Alternatively, consumers may weigh quality heavily in factoring in the useful service life of a product. Or, consumers may value services (home delivery, longer store hours, guarantee of reliable replacements if a product fails, repair or support services,...) associated with the purchase of a product.

¹² Such as has been negotiated by Ghanaian pineapple exporters with Nigerian private air cargo companies.

space leased out to customers. However, the initial costs of such an investment may be high or regulations may be so onerous¹³ that a public agency may need to invest or, at the very least, organize a consortium of public and private monies to fund and run the facility.

Another marketing aspect which is especially critical with regard to exports to international markets is the observation of international grades and standards. "Grades and standards" is a relatively general term which may refer to government-determined phytosanitary and health regulations of imported food products, or industry-determined quality and caliber standards on which contracts and prices can be structured. Frequently, price premia are paid for smaller, larger, sweeter, spicier, cleaner, neater, finer, or fuller bulk commodities, high-value specialty foods, or manufactured goods. The quality and technology of packaging and labelling will also affect a product's appearance at the final point of sale and thus is an additional important variable for the entrepreneur to consider. Contracts should specify the desired quality of the final product to be supplied, and in many instances will also specify the packaging requirements. Entrepreneurs who pay attention to these will greatly enhance the commercial viability of their product; failure to observe them may render a product completely unmarketable.¹⁴

A potential final market must be identified. Again, personal business contacts, published data, government agencies such as commercial attachés of overseas embassies, trade fairs, foreign funded advisory services or projects, and professional organizations can all be exploited for leads on markets for the commodity or product in question. If the activity under consideration is an export activity, there may be special exemptions available to the export-oriented enterprise (sales and excise duty reductions or exemptions) about which the business should be aware.

With regard to exports, each country has its own set of procedures required of exporters. These may involve the following: income tax payment certificate, sanitation or health inspection, standards boards approval, certificate of country of origin, port health certification, plant protection and quarantine certification, payment of shippers' fees, engagement of forwarding agent, procurement of export insurance, volume/quality verification upon export.

There are many issues which determine final market selection. What is the current size of that market (volumes sold, number of suppliers), and how has it evolved over recent time? How competitive is it, i.e. how many vendors are currently supplying that market with the same good? With whom can one work in that market, i.e. who will buy from you and distribute your good, what is that person/company's reputation, and are there any advantages (such as credit or advertising or business advice) that the business can negotiate with that importer? What kind of commercial relationship can be established with the distributor (as

¹³ In some countries, there are regulations against private investments at publicly run air/seaport facilities.

¹⁴ See the Chadian case study regarding the potential for garlic exports to Côte d'Ivoire.

with production and upstream marketing, one might consider partnerships, subsidiaries, strategic alliances, joint ventures,...) to encourage him/her to position the business' product advantageously? What regulations of the importing country apply to the good in question (import tariffs, reference prices, tariff calendars, import quotas, phytosanitary rules, quality/packaging requirements,...)?

Rather than automatically targeting a European market (the traditional market for most West African commodities and produce), a market within the West African region may afford certain advantages. For example, supplying a regional market may be easier in terms of assessing consumer preferences, getting away with a less exacting set of quality, timeliness, and packaging standards, and reduced transport costs due to shorter distances. On the other hand, cross-border trade within West Africa obviously presents its own problems with regard to transport, customs, and monetary transfers hassles. It also may be harder, rather than easier, to formalize commercial relations with unknown trading groups in foreign countries within the region, especially without institutionalized relationships to facilitate payment transfers.

The market analysis must also anticipate the wholesale and/or retail prices at which the product will be sold. As a starting point, the price of equal or similar products already available in the market will determine the range of prices available to the trader or entrepreneur. In the case of a commodity or good which is not traded regionally or internationally, its price is determined by domestic supply and demand and may vary with changes in either. An increase in supply reduces prices, whereas an increase in demand will increase prices, all things being equal.

In the case of a commodity or good which is traded regionally or internationally, its domestic price is determined by the regional or international market, plus or minus the taxes and/or subsidies that intervene between the border and the market, plus the "basis" (or costs of transport and other margins) between the border and the point of sale.¹⁵ International prices may also rise or fall, according to shifts in international demand or supply; however, unless a country supplies or demands a substantial portion (more than 25%) of the international market, the interactions of a "small country" will not significantly affect the international price.

In the case of a commodity or good which is only traded between countries A and B, but is also produced and consumed in neighboring country C, the enterprise must beware of the price in country C when setting a price for the product in country B. If B's price is significantly higher than the price in C, consumers may prefer to go across the border and buy the good in C. If B's price is significantly lower than the price in C, C's consumers may come across the border to buy the good for sale back in country C. Thus, in a region of small, but integrated economies, it behooves the enterprise to consider cross-border

¹⁵ If the two products are not of equal quality, however, domestic prices may differ from their international equivalents. For example, freshly slaughtered meat is often sold at a premium above the price of imported frozen or chilled meat.

availability and pricing issues as they may affect supply and demand (and thus price) in their target market.

Finally, the business must consider how cross-border monetary transfers will be handled. Foreign exchange earnings now enter most West African countries without constraint, i.e. exporters may retain 100% of their earnings, and convert them at market-, not government-determined, rates of exchange into local currency. However, significant delays can be encountered between the time of payment by a foreign importer and the time of notification of receipt into a personal bank account by the local business. Some entrepreneurs get around this by holding off-shore bank accounts.

Demand Analysis

A new business must be able to assess issues relating to consumption patterns. Two factors to which an entrepreneur must be sensitive are prices to consumers and consumers' preferences and ability to pay.

In pricing a product, the entrepreneur first must consider how sensitive consumers are to the price of that product. Products which are staples in the consumer's consumption basket, have few substitutes, or comprise a small portion of total consumer expenditure tend to have what economists call "inelastic demand," that is, the change in demand for the product is low with respect to the change in the price of the product. On the other hand, products which are non-essential components of the consumer's consumption basket, for which there are many substitutes, or which comprise a large proportion of total consumer expenditure exhibit elastic demand, that is, a change in the price of the product can result in a large shift in demand. Understanding this price responsiveness by class of product will help the business person understand how to price his/her product in the market.

Consumers' purchasing power also affects their ability to demand certain kinds of products. Higher income households or regions demand a different composition of consumer goods than lower income households or regions. Economists also refer to different classes of goods with respect to the sensitivity of consumers' demand for them as a function of changes in their income.¹⁶

An increase in demand for a product relative to a decrease in income defines an inferior good, while an increase in a product's demand relative to an increase in income reflects a necessity. In the case of a luxury good, the increase in demand is proportionally greater than the increase in income.

¹⁶ This is the definition of the income elasticity of demand, measured as the percentage change in demand over the percentage change in income.

Economists also evaluate changes in demand for one good relative to changes in the price of a substitute or complementary good. For example, after the devaluation in West Africa, demand shifted away from rice as a basic staple and toward coarse grains, roots, and tubers such as millet and cassava. Similarly, the demand for red meat fell and the demand for dried fish increased, particularly in poorer parts of the region or by poorer households. Thus, in the case of goods which substitute for each other (albeit imperfectly), X and Y, an increase in the price of X leads to an increase in the demand for Y. In the case of complementary goods, the "cross-price elasticity of demand" is negative. For example, an increase in the cost of a fishing license may lead to a decrease in the demand for fishing poles.

These changes in consumer demand with respect to changes in income are also important for the entrepreneur in order to be able to anticipate how demand for a product will rise or fall as a result of economic growth or recession, or as a result of individual consumers to whom a specific product might be targeted increasing or decreasing their income.

Other factors affecting consumer purchase patterns are quality, volume sold per transaction, degree of processing,... For instance, one of the arguments in favor of the purchase of more expensive rice, compared with less expensive coarse grains, even by poorer households, is that the cost of preparing the grain must be included in the calculation. Milled rice is ready-to-eat, whereas millet, sorghum, maize, and some roots/tubers must be milled or otherwise processed before they can be prepared to eat. Especially in urban households, where female members of the household may also be employed outside of the home, the value of the processing time is a factor with which to reckon when making consumption decisions.

Consumer research is big business in industrial economies. At a minimum, an enterprise should understand who is buying its product (households, firms, public agencies; men, women, children; older or younger consumers), how much of its product is consumed annually by the appropriate class (is this an essential consumption item, or a luxury item; what are annual sales across all sellers for this product in a given market?), and how demand for a product evolves (are there seasonal changes in demand¹⁷ or does demand remain constant throughout the year?).

If a product is targeted to a specific class of consumer (women, children, urban dwellers,...), the business should be aware of the projected demographics for that specific group. For example, is the percentage of urban consumers rising or declining relative to the general population? What about the relative importance of particular age groups?

Moreover, the business needs to consider consumer preferences and how the product is intended to be used by the consumer. What characteristics affect the consumer's purchase decisions (quality, price, seasonal availability,...)? For example, if the product is slaughtered, chilled red meat, will consumers balk at its purchase if they normally prefer to buy meat which has been freshly slaughtered? Do consumers prefer leaner or fattier meat? Where is the

¹⁷ For instance, toward the end of the year in Ghana, the demand for spent hens goes up markedly.

product usually bought and sold (open market, door-to-door, boutique shops,...) and in what quantities and presentations (in bulk or in small quantities, unpackaged or packaged, raw or ready-to-eat,...)?¹⁸

Another issue to consider is lifestyles of target consumer groups. In the United States, for example, women are increasingly seeking remunerative employment outside the home, and a plethora of products have been developed to facilitate meals preparation and consumption. In West Africa, women have traditionally been engaged in a range of small-scale or informal trading and manufacturing activities in addition to home-making, which makes them willing consumers of products that cut down on food preparation times.

Marketing research firms in the U.S. contribute in yet another way to business development by understanding evolving trends in lifestyles of the multivariate U.S. population, which in turn suggests new ideas for goods and services and appropriate marketing strategies (see box below).

Consumer Lifestyle Trends in the U.S.

BrainReserve, a U.S. marketing research firm in the U.S. (president, Faith Popcorn), has identified ten important trends in the U.S., which have implications for the kinds of goods and services the U.S. consumer is buying today:

- 1) "cashing out," or the impulse of career persons to downshift to slower paces of life,
- 2) "cocooning," or the impulse to turn one's social attentions inward to the home and family,
- 3) "down-aging," or the tendency for older citizens to act younger than one's age,
- 4) "egonomics," or the trend to participating in narrowly defined interest groups to define one's individuality,
- 5) "fantasy adventure," or the desire to go beyond the boundaries of day-to-day living,
- 6) "99 lives," or the needs of busy people for products to assist in juggling multiple day-to-day roles and responsibilities,
- 7) "save our society," or the desire of some consumers to contribute to improved social and environmental realities,
- 8) "small indulgences," or the desire for affordable extravagances, however small,
- 9) "staying alive," or the trend toward healthy lifestyles, and
- 10) "the vigilante consumer," or the desire of some to do business only with socially responsible commercial entities.

Taken from Faith Popcorn, *The Popcorn Report* (1991), reprinted in Kotler, pp. 152-153.

¹⁸ One poultry producer in Ghana intends to target the ready-to-eat niche in the poultry market by producing broilers for making grilled broiler parts available as a curbside "fast food" item. In addition, the company will also help to establish food vendors in their businesses by lending for wheelable grilling stations.

This is not to suggest that West African consumers are caught up in the same trends or that they will respond to the same marketing approaches. However, it does suggest that identifying social, cultural, economic, and demographic trends germane to West Africa may assist new businesses in developing new products appropriate to the region. Some possible examples of demographic or lifestyle trends in West Africa which may suggest new products include the postponement of marriage particularly among the educated, urban population which leads to an increase in demand of that group for leisure products and services, such as eating out.

Institutional Analysis

Enterprises do not operate in a private market vacuum. Rather, formal and informal enterprises must deal with a host of regulations, tax obligations, and policies that emanate from the state.¹⁹ Thus, in assessing the viability of an enterprise it is also important to identify the jurisdictions and policies of para-public or public sector agencies which may affect its activity.

Over the last fifteen years, all countries in West Africa have experienced significant economic policy upheaval. Much of the reform associated with the "structural adjustment" programs of the 1980s and 1990s has been implemented in order to improve the functioning of markets, in order to foster private enterprise and encourage economic growth. While the reach of Governments into various realms of economic activity has been curtailed in many parts of the region, it has by no means been eliminated. In part, this is because the business of "structural adjustment" may not be completed (although political enthusiasm for it may have waned). However, some level of regulation is deemed necessary to protect companies from one another, protect consumers, and protect common interests of society.

¹⁹ An enterprise which has complied with all licensing, banking, and tax requirements for new business establishment is commonly defined as a formal enterprise, as opposed to an informal one. Alternatively, one can think of a formality continuum wherein different enterprises comply more or less with Government regulations, as measured by an index. See Karen Engel, *The Cause and Consequences of Informal Economic Behavior in Antananarivo, Madagascar* (Ph.D. dissertation, The Fletcher School of Law and Diplomacy, Tufts University, 1995). In any case, all enterprises are affected by Government regulations and policies, either in having to comply with or trying to avoid them.

Among the Government policies of which enterprises should be informed are the following:

- Trade-based offices, such as customs services and Ministries of Trade, may set import or export quotas, assess trade taxes, impose phytosanitary and quality regulations,²⁰ define other trade-related fees and charges.
- Technical ministries may control aspects of production or trade of specific commodities or activities within their jurisdiction and thus affect a private enterprise.
- Financial agencies, such as Ministries of Finance, impose tax obligations on businesses, while banks (central, investment, and commercial, which may be private or public) control access to capital and foreign exchange (see below).
- Parastatal companies' (production plantations or factories, marketing boards, processing plants,...) own activities may compete or otherwise interfere with the activities of the enterprise. Moreover, those companies may benefit from extraordinary public subsidies which unfairly penalizes private enterprises.

Government interventions are not always obstructionist. Governments have subsidized the cost of capital, land, and inputs, or provided special trade duty exonerations to private sector firms. The privatization of publicly held industrial infrastructure may offer advantageous market opportunities to private investors. Irrigation schemes frequently undercharge for the recurrent cost of providing water and maintaining water delivery systems, as well as for their initial investment costs. Commercializable results obtained from publicly financed research stations are often made available at no charge to interested individuals. Truck or rail services may be available from publicly run transport companies at a subsidized cost. Special monies may be available for export promotion or overseas market intelligence gathering.

²⁰ While these are often critical to safeguarding the plant and animal health of a territory, excessive regulation of this kind can be used to obfuscate commercial activity. Increasingly, developing countries are replacing their own often outdated standards with internationally recognized standards in order to accelerate domestic producers' access to new technologies which have been approved for use overseas, rather than imposing long delays to allow for domestic certification.

Exchange Rate Policy

The issue of exchange rate management is mentioned here separately because of its central role in foreign trade. Overvaluation of officially determined exchange rates and volatility of market-determined rates are topical issues in West Africa today. The devaluation of the CFAF and the sliding parities of the Ghanaian cedi and the Nigerian naira have an important effect on private commercial business in the region.

Overvaluation of a currency makes imports artificially cheaper for domestic consumers, thereby reducing their demand for locally produced products, and exports more expensive for foreign consumers, thereby reducing the competitiveness of locally produced products abroad.

A currency may become overvalued when domestic spending exceeds domestic income (in a macroeconomic sense) and the exchange rate is determined by officials rather than by the market. This may be due to increases in government spending, expansions in private consumption, or drops in export revenues (perhaps due to international commodity price slumps), foreign aid receipts, or portfolio capital inflows which may have been financing the increased spending. Unless balance of payments equilibrium is restored, the exchange rate must adjust to balance accounts.

In countries where the exchange rate is now market determined (such as Ghana), the issue of overvaluation of a currency should not present itself.* However, unless macroeconomic variables are carefully controlled, exchange rate volatility may ensue. This is the case in Ghana today, where Government spending exceeds revenues, the velocity of money creation is increasing, and the value of the cedi is depreciating rapidly relative to foreign currencies.

Businesses cannot directly affect exchange rate determination, but they need to consider the negative effects of overvaluation or rapid currency value depreciation on their competitiveness on foreign or regional markets, and the production, employment, and revenue effects which such a loss of competitiveness might engender. In countries with overvalued currencies, businesses must be aware of the possibility of devaluation and take care to hedge their positions or minimize their foreign exchange exposure. In countries with rapidly depreciating currencies, businesses' planning exercises are complicated by exchange rate contingencies, and risks are increased.

* See note below.²¹

²¹ In 1995, the value of the cedi only fell by 30%. While Ghana ostensibly liberalized its exchange rate regime in the mid-1980s, the mechanism by which the market rate is set may actually constrain its ability to find its equilibrium. A large part of Ghana's foreign exchange earnings (in 1994, gold represented 46% of export revenues, cocoa 25%, and timber 14%, much of which is run through state-owned enterprises; in addition, aid monies feed directly into the central bank) are public sector controlled. After paying for some imports (petroleum, imported by the state, represents about 10% of the import budget), debt financing, and maintaining foreign reserves, the residual is released to authorized banks and foreign exchange bureaus for sale. It may be that the central bank needs to more actively manage the supply of foreign exchange to that market in order to push down the value of the cedi, commensurate with its rapidly accelerating rate of inflation. The record of Ghana's exchange rate regime in maintaining the cedi in equilibrium and the testing of the hypothesis that the cedi may again be overvalued will be reviewed in an upcoming study under the USAID-financed *Equity and Growth through Economic Research/Trade Regimes and Growth* Project, under the direction of the Center for Economic Policy Analysis in Accra and AIRD.

Cost and Revenue Analyses

Once the various components of the production and market chain are thoroughly understood, the entrepreneur needs to estimate the unit margin of profitability under alternative price and cost scenarios, net revenue under alternative volume scenarios, and the structure of cash flow over a twelve- or eighteen-month period.²²

Costs may be estimated in one of several ways. One approach simply estimates the value of variable costs, including hired labor and variable inputs. In this case, net revenue is considered to be returns to family and/or management labor and to other fixed assets (such as land). An alternative approach is to value all inputs, including family and/or management labor, and land, in which case the net return is a return on capital investments.

The entrepreneur will cost inputs in financial prices, that is, in the prices which he/she expects to pay. These may include taxes and/or subsidies, and should reflect optimal purchasing strategies. Costs are usually aggregated for a given unit of production (one hectare, one farm, one factory) and then divided by yield or production through-put in order to estimate the cost of production per unit of output (kilogram, ton, manufactured unit,...). To the production cost must be added the costs of collection, processing, storage, and marketing, in order to arrive at a wholesale or retail cost in the final market. This is compared with the wholesale or retail price in order to estimate the unit financial profitability of the activity.²³

The unit profitability must then be assessed, given expectations of price variability and other risks. Thus, the "single number" which is estimated by projected accounts should be re-interpreted as just one point in a band representing possible outcomes under alternative final price and input cost scenarios.

The profitability of the enterprise may not be based on fat unit profit margins, however. Rather, projected volumes of sales, if sufficiently large, may compensate for thin margins.

Moreover, when a business enters a new market or develops a new product, it sometimes chooses, or is forced to accept, reduced unit margins as part of its start-up costs, until it has developed a sufficient foothold or reputation in the market. Thus, a projected cash flow analysis should be run which estimates monthly or annual cash flow over a period of time sufficient for the business to achieve this degree of maturity. This kind of analysis is unnecessary for a trader seeking to arbitrage profitably. But for an entrepreneur with a longer planning time horizon, such an analysis is crucial for estimating accurately the expected level and timing of the return on investment.

²² A medium-term analysis over five years is advisable as well.

²³ An economist will do a market analysis in both financial and economic terms. For the definition of unit economic, or social, profitability, see the methodological annex to this report.

Constraints Analysis

Having undertaken the previous analyses, a trader or entrepreneur is now able to identify key risks or bottlenecks along the market chain and define strategies for remedying them. For each, the business person must do an implicit risk assessment: how much do I stand to lose if I do not adequately address this constraint? The greater the risk, the more attention must be paid to remedying the problem in advance.

Potential constraints may fall into one of several categories: production, marketing, cost/ finance, policy/regulation, or organization. Some of these can only be resolved within the firm. Others are more societal in nature, and are better dealt with by applying external pressure (direct lobbying of policy makers, individually or via groups, such as the WAEN, and/or indirect lobbying, via outside pressure groups, such as the international donor community or the press).

Finally, the enterprise must also be able to anticipate potential threats to the financial viability of the business. What happens to the business if competition (a superior product or someone undersells you) develops? What happens if economic growth, and thus consumer demand, stagnates?²⁴ How might the business respond to increased input costs?²⁵ How likely are changes in the local or foreign policy or regulatory environment, and how will the business respond?

Market Analysis: Conclusion

These analyses, once completed, comprise the elements of a business plan which the trader or entrepreneur can use to implement his/her activity. A business plan may have a number of different focuses. A production orientation concentrates efforts on the efficiency of the production system in order to deliver a product as widely and at lowest cost as possible. A product orientation concentrates efforts on maximizing the quality of the product itself. A selling orientation concentrates efforts on convincing consumers to maximize their purchase of the enterprise's product.

²⁴ Note that providers of "inferior goods" or lower cost services may actually benefit during an economic downturn. For example, the dried fish business in the Sahel has taken off dramatically since the 1994 devaluation of the CFAF due to a combination of reduced purchasing power of Sahelian households and an increase in coastal demand for Sahelian (as opposed to imported European or Latin American) red meat. As economic growth resumes in the region, how will this business' prospects be affected?

²⁵ For example, after the 1994 CFAF devaluation, the cost of imported inputs nearly doubled. One confectionery manufacturer responded by substituting local butters and oils for imported butter, and introduced mixed grain flours, comprised in part by millet/sorghum/maize flour, to substitute for imported wheat flour. In the process, new niche products were created, with new aromas and flavors, and market share actually increased.

A marketing orientation combines the previous three and goes beyond. It strives to identify and respond more efficiently than competitors to the needs and wants of target markets. It does this by identifying to whom one intends to sell, what kind of positioning the enterprise will take (i.e., deliver the cheapest, or the highest quality, or the most reliable X), what kind of product line(s) will be delivered to accomplish this, a pricing strategy, distribution outlets, sales modalities and network, service packages to accompany the product, a campaign of advertising and sales promotion, strategies for product and market research and development, planning an action program to accomplish the strategy, anticipating profits and losses, and outlining controls for monitoring the plan's progress.²⁶

²⁶ Adapted from Kotler, pp. 108-110.

IV. GARLIC TRADE BETWEEN CHAD AND CÔTE D'IVOIRE

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[See French language report.]

V. MAIZE TRADE BETWEEN BENIN AND NIGER

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[See French language report.]

VI. POULTRY TRADE BETWEEN GHANA AND CÔTE D'IVOIRE²⁷

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6.1 Sector Overview

6.1.1 Production trends

The Ghanaian economy remains predominantly agricultural and the sector has traditionally accounted for up to 50% of GDP. In recent years, however, this figure has gradually dropped to about 45% with services taking an increasingly important share.

Poultry production is an important, and growing subsector within Ghana's agricultural economy. The table below gives an indication of the evolution of livestock and poultry production between 1989 and 1994. Over the five-year period 1989-1993, poultry production more than doubled, with an increase of 76% between the years 1992 and 1993 alone. This phenomenal increase could to a large extent be attributed to the surge in the number of small-scale operators in the industry and to expansion of capacity by a couple of large-scale producers such as Darko Farms.

Table 6.1 : Livestock Production
(in thousands)

	<u>Bovine</u>	<u>Sheep</u>	<u>Goats</u>	<u>Poultry</u>	<u>Porcine</u>
1989	1136	2212	2364	8787	559
1990	1145	2224	2018	9990	473
1991	1195	2162	2194	10572	454
1992	1159	2125	2157	10115	N/A
1993	1240	2200	2240	17798	420
1994	1260	2220	2270	N/A	400

Source: Ministry of Agriculture

²⁷ For this report on Ghana's poultry industry, the consultant has focused primarily on Darko Farms & Co., Ltd. (DF), the largest private poultry farming operation in Ghana. DF's founder and majority shareholder, Mr. Darko, is a leading businessman in Ghana and a member of the WAEN. He has provided much of the background information on the poultry subsector from a private sector perspective. Supporting data was collected from the Ministry of Agriculture, Ministry of Trade, and other businessmen and women involved in the poultry industry in Ghana.

The poultry sector in Ghana is dominated by a few large-scale producers and a sizeable number of small-scale poultry breeding farms. The main production areas are in the Accra-Tema Metropolitan Area, the outskirts of Accra, and the Kumasi Metropolitan Area.

The table below lists the major large-scale poultry farms, in terms of annual production capacity (breeders). Of the fifty formal sector poultry farms in Ghana, just four farms represent over 40% of total installed capacity.

Table 6.2 : Major Poultry Farms in Ghana

<u>Name of Company</u>	<u>Annual Production Capacity</u>
Darko Farms & Co., Ltd.	250,000
Pomadze Poultry Enterprises	400,000
Glamour Farms Ltd.	100,000
Akropong Farms	100,000
TOTAL FARM CAPACITY	2,000,000

Source: African Project Development Facility

Industrial scale poultry production represents the more dynamic side of the industry in Ghana. Total output of the formal sector in 1994 was 9 million day-old chicks (DOC), 2.8 million heads of frozen broilers, and 480 million eggs. Over 90% of the total production was destined for the local market, with the balance being informally exported to neighboring countries. Most farms, both large and small, market their production through various wholesaling distribution channels.

The larger farms almost all invariably blend their own feed, although some 51 independent feed mills exist in Ghana. The farms with feed mill capacity are listed below.

**Table 6.3 : Poultry Farm Feed Mill Capacity
(MT/hour)**

<u>Name of Feed Mill Company</u>	<u>Plant Capacity</u>
Pomadze Poultry Enterprises	10.0
Hildan Feedmills Ltd.	8.0
Akropong Farms	6.0
Sydals Farms	5.0
State Farms Corporation	5.0
Darko Farms	4.5

Source: African Project Development Facility

6.1.2 Input trends

Poultry feed is the largest cost item for any company involved in this business. Feed prices are subject to market forces and are to a large extent dictated by the movements in exchange rates due to the fact that most of the key ingredients are imported. The value of the Cedi compared to the dollar has fallen by 64% over the period 1992 to 1995, leading to a near tripling of Cedi prices of imported goods, *ceteris paribus*.

Summarized below is the evolution of poultry feed prices in the country between 1993 and 1995. The data show the sharp price increase between 1994 and this year. The impact of this has been an increase in costs of all products and a consequent sharp reduction in margins. The upward trend in prices is expected to continue through to the end of this year.

Table 6.4 : Nominal Prices of Poultry Feed in Ghana
(in Cedis)

	<u>Layer Chick Starter</u>	<u>Broiler Chick Starter</u>	<u>Grower Mash</u>	<u>Layer Mash</u>	<u>Broiler Finisher</u>
1992	6,500	6,800	5,500	6,500	6,500
1993	7,200	7,500	6,000	7,000	7,200
1994	10,800	11,800	7,800	9,800	10,800
1995	17,500	18,500	12,000	15,500	16,500

According to a recent study by the African Project Development Facility, Ghana's DOC production of 9 million chicks is spread approximately equally among broilers, layers, and cockerels. The layer chick segment has experienced the highest growth rate over the recent year. However, in the years to come, demand for day-old broilers is expected to grow faster as the result of the increased competitiveness of local chicken meat production. Ghana is nominally self-sufficient in DOCs, although imports of 5% have been recorded in recent years.

Some 15 hatcheries produce most of the commercial chicks raised in Ghana, of which Darko Farms is one of the leading suppliers. Darko Farms and Pomadze have established breeding lines, importing grandparent and parent stock from European suppliers, while a few others, including Afariwaa, are developing their own breeds. Other farms import fertile eggs from Europe for local hatching. Except for those importing their eggs for hatching, most Ghanaian hatcheries have hatchability rates of 50-75%, compared with 80-85% in Europe, due to poor husbandry practices and outdated equipment.

Due to Cedi depreciations and high transport costs, DOC imports from EU countries have been supplanted by imports from Côte d'Ivoire. Côte d'Ivoire and other neighboring countries, however, are experiencing their own shortages, suggesting there is room in the region for significant expansion of supply. Currently in Ghana, local DOC are sold at 750 (broiler) to 850 C/head (layer), while imported chicks sell for 800-900 (broiler) to 1300-1400 C/head (layer).

6.1.3 Trade trends

Ghana imports most of its grandparent and parent stock, as well as many feed ingredients (such as fish meal, soy meal, vitamin and mineral supplements, medicines, and sometimes even maize). Maize imports are normally banned; special license is required from the Ministry of Agriculture for extraordinary imports.²⁸ According to official statistics, Ghana exports little poultry meat, table eggs, breed stock, or day-old chicks. Yet unofficially, such trade exists. For example, headloads of egg trays cross from Ghana into Togo in order to avoid border crossing hassles. Trade trends for livestock products are presented below.

Table 6.5 : Livestock Import Trends
(thousand tons)

	<u>Beef</u>	<u>Goat</u>	<u>Pork</u>	<u>Broilers</u>
1992	16,097	13	1,404	2,302
1993	19,124		2,048	3,062
1994	7,362	70	1,711	1,848

In neighboring countries, imported meats and meat products have also exhibited a declining trend. This is due, in part, to the reduction by the European Union of export subsidies, and in part, to the devaluation of the CFA Franc.^{29,30} In Côte d'Ivoire, domestic production of day-old chicks (of which, 80% is broilers), or 6 million chicks per year, supplies 90% of chick needs, one-third of which is supplied by imported ready-to-hatch eggs; the remaining 10% of the chick requirement is supplied by imported chicks. Similar ratios prevailed in 1990-1991 for poultry meat requirements.

²⁸ This contradicts the official trade position put forth by the Ministry of Trade, which applies an import duty of 25% on the C+F price of maize for consumption and a sales tax of 15% on the C+F price, inclusive of the import duty. Maize imported for seed purposes only receives the 15% sales tax. No quantitative restrictions are said to apply to maize imports. Yet private actors insist that the Ministry of Agriculture's position takes precedence.

²⁹ The reduction of support has varied from 20 to 35% for beef, and 44 to 100% for poultry. Jean-Pierre Rolland, "Les Filières Avicoles en Afrique de l'Ouest."

³⁰ According to one author, the devaluation of the CFA Franc has re-equilibrated trade between the CFA zone and non-CFA countries in the region, thanks to a much improved competitiveness of Sahelian livestock. Jean-Pierre Rolland, "Les Filières Avicoles en Afrique de l'Ouest: Éléments de réflexion sur les perspectives de développement," (Paris: SOLAGRAL, May 1995).

6.1.4 Consumption levels

Estimating total availability of livestock products for consumption as 95% of production (assumes 5% losses) plus imports minus exports, one can derive the following per capita meat and egg consumption levels as set out below.

Table 6.6 : Per Capita Consumption

	<u>Table Eggs</u> (eggs/year)	<u>Meat</u> (kg/year)
World average	123	9.8
European average	244	15.3
N.American average	238	32.7
African average	45	3.1
Ghanian average	12	1.3

Source: FAO

The analysis calculates a consumption rate of 12 eggs per annum which is far below the all-African average of 45 eggs per person. The per capita consumption is however increasing consistently and the trend is expected to turn as further explained below.

These findings reflect the extent of the unsatisfied demand for poultry products in Ghana. The situation prevailing in the adjacent neighboring countries, with regards to production and supply of poultry products, offer greater optimism. Production and distribution is better organized whilst purchasing power has traditionally been higher in these countries. There is a need to organize the industry to capitalize on the latent unfulfilled demand.

Markets showing higher demand for eggs and broiler meat are the urban and suburban areas. With the increased awareness of the critical need to upgrade the daily diets with digestible and abundantly available protein sources, the increase in per capita incomes, and the development of the tourism industry, there is reason to believe that a continuing increase in demand for poultry products will be sustained.

6.1.5 Domestic price trends

Domestic prices of livestock products are determined by market forces in Ghana, rather than any Government directive. Nominal price trends are presented below. It shows that nominal poultry prices in Ghana have been increasing over the years.

Currently in the Accra market, the cheapest source of protein is dried fish, followed by eggs. Of the meats, white meat is now cheaper than fresh fish, both of which sell below the cost of red meat. A tray (30 eggs) of large eggs currently costs 2800 cedis, while medium and small eggs are priced at 2600 and 2300, respectively. Slaughtered poultry meat (fresh) sells for about 2700 cedis per kilogram, while fresh red meat is over 4000 c/kg.

Table 6.7 : Nominal Poultry Prices in Ghana
(in Cedis)

	<u>Day-old Layer</u>	<u>Day-old Broiler</u>	<u>Day-old Cockerel</u>	<u>Old Layer</u>	<u>Broiler</u>	<u>Egg</u>
1992	365	270	85	1500	1750	40
1993	450	350	100	1700	1750	45
1994	650	570	120	3000	3000	70
1995	850	750	130	4000	4000	83

Exchange rate, mid-1995: US\$1.00 = Cedis 1190.

Domestic market prices of livestock products are not available publicly, according to Darko Farms. In other countries, such information may be available over radio from a National Market Information System (such as is available in Mali, at least for basic foodstuffs prices), or may be distributed via newsprint (the Department of Agricultural Marketing in Bangladesh publishes urban wholesale prices of rice, a few fruits and vegetables, meats, and eggs in daily papers).

There is a Poultry Farmers' Association in Ghana, but it does not collectively provide this service for its membership. Large-scale producers such as Darko Farms therefore send their representatives into the Accra and Kumasi markets on a weekly basis to collect market price information, which they evaluate in comparison to their production costs in order to determine their selling prices.³¹

6.1.6 Market prospects

Poultry products markets are developing rapidly throughout West Africa. In Ghana, meat imports expanded rapidly, and demand continues to be in net deficit. This trend will continue as a result of population growth, urbanization, decreasing subsidization of meat exports in Europe, and continuing devaluation of the Ghanaian cedi. Moreover, as industrial production

³¹ Because Darko Farms' products are by and large highly perishable, management is very sensitive about not overpricing them, in order to assure a competitive position in the market and rapid turnover. Only the price for frozen chicken for large corporate customers is set for a three-month period.

takes off, the price of white meat relative to red will continue to fall, making poultry consumption an ever more attractive consumption good.

In the medium term, the African Project Development Facility predicts that modern poultry farms in Ghana will continue to be diversified operations, providing a range of products to a range of clients. Some farms, however, such as Afariwaa, are specializing in a single product (cheap broiler meat for popularization as an inexpensive street/snack food) to take advantage of economies of scale.

6.2 Darko Farms: A Case Study

6.2.1 Current operation

Darko Farms & Co. Ltd. (DF), of Kumasi, is one of the largest industrial poultry producers in Ghana. The company was started in 1967 by its founder Mr. Kwabena Darko and today has an installed capacity of 250,000 birds. Its capacity is spread among several farms producing layer parents (40,000 birds produce about 3 million day-old chicks per year), frozen broilers (9,000 broilers per week), and table eggs (130,000 layers producing 300 eggs per hen per year, for an annual egg production of 39 million).

Spent hens are then also sold, live, after 50-80 weeks of laying as well as eviscerated and frozen chicken. The company's main markets are in Accra where there is a stable roster of wholesale clients (about 105 customers), Kumasi (30), and Sunyani (25), as well as smaller towns in middle and southern Ghana. DF also currently sells to a few Togolese customers, who arrive in Kumasi for cash-and-carry purchases (in cedis).

Darko Farms has a feed mill capacity (rated at 5 tons per hour, or 35 tons per day), which is sufficient to meet its current needs. Its on-site grain/meal storage capacity is only sufficient to cover two weeks of raw material requirements. As with other feed millers and poultry producers in Ghana, DF also has to import key feed ingredients.

Fish and soy meals are imported from PROVIMI of the Netherlands, their regular supplier. White maize is normally procured locally and used for broiler and day-old chicks production, while yellow maize is imported from the United States for layer production. The minimum shipment tonnage of 10,000 tons represents a year's worth of yellow maize for the company. This implies heavy storage costs that management would prefer not to bear. DF also imports 1,000 heads of grandparent stock and 40,000 heads of parent stock per year from British and French suppliers.

All imports from international suppliers are invoiced, and must be paid, in dollars. A standard letter of credit, is opened upon successful commercial negotiation by a local commercial bank

and settled in dollars on the day of opening at the current official bank exchange rate.³² Shipment proceeds immediately, and Darko Farms reports no problems in either shipping times (two weeks until delivery) or clearance through the port in Tema (two days, handled by Darko Farms' own agents).

6.2.2 Future plans of Darko Farms

Darko Farms is an agribusiness employing over 270 people, of which almost 40 are management personnel.³³ Kwabena Darko has built up a multi-million dollar business over nearly 30 years, from humble beginnings with 200 layers. He now plans to expand its frozen broiler production (diversifying into cut parts) to make full use of its evisceration and freezing line.

6.2.3 Marketing and trade activities of Darko Farms

Darko Farms markets exclusively at the wholesale level. For example, the minimum sales size for table eggs is 50 trays (1500 eggs), although the average purchase is more on the order of 500-600 trays. It also sells exclusively in Ghana. According to management, current production is insufficient to meet all potential domestic demand in Ghana.

This present line currently operates at about 65% of capacity, or 9,000 broilers every two weeks, whereas capacity is closer to 14,000 heads. DF also plans to expand its day-old chick and layer production by constructing a new farm with an additional 100,000 layer capacity. The latter investment will be financed approximately 60% out of own capital, and perhaps 40% via borrowed capital.³⁴

The company has not actively sought regional trade opportunities as yet. However, a number of potential clients from Burkina Faso, Côte d'Ivoire, and Benin have inquired in the last several months regarding possible cross-border sales of day-olds and eggs. These requests have already been followed up by Darko Farms with pro forma bids. In addition, the European grand/parent stock suppliers with which Darko Farms deals have apparently

³² Darko management observed that a slightly higher rate can be found, net of commission, at Foreign Exchange Bureaus outside of commercial banks, but financial services being more plentiful at commercial banks, the company prefers to maintain its account with the latter.

³³ There is no constraint in finding skilled labor for hire.

³⁴ Expansion of the business appears to be relatively uncomplicated. Land is readily available on 99-year lease terms, although some zoning restrictions may apply. Also, a waste disposal plan must be presented to officials to safeguard against land contamination from poultry waste (recycled litter is sold cheaply to farmers as manure).

encouraged Darko Farms to seek regional clients for their breed stock, which they feel Darko Farms could supply more cheaply from Ghana than they could themselves from Europe.³⁵

6.2.4 Future strategy

Darko Farms' strategy is to continue to expand in various poultry market segments, enlarging their layer capacity significantly. They are also choosing to develop steady relationships with their domestic client base before contemplating expansion into the regional market. Last, they are also expanding their feed mill operations in order to be able to provide quality inputs in a "one-stop shop," including feeds, DOC, and pre-mixes, for their DOC customers who are small-scale poultry producers.

6.3 Constraints Analysis of Industrial Poultry Production in Ghana

6.3.1 Sustainability of supply and demand

Darko Farms is extremely sensitive to issues regarding the sustainability of supply and demand before any expansion of its business is undertaken. It wants to take care to insure the stability of its current level of operation and thus its reputation, in addition to assuring that it can adequately supply a newly expanded market across borders. Sustainability of foreign demand is another, though less pressing, issue at the moment. Management believes that domestic demand still outstrips domestic supply; it is therefore willing to undertake production expansion, even at the risk that foreign market conditions may change.

6.3.2 Storage infrastructure

One constraint which appears to contribute to higher production costs is the high cost of storage infrastructure investments. This constraint needs to be evaluated more closely. In an initial interview with Darko Farms' management, the domestic price of white maize was said to be about 38,000 cedis per 100-kilogram bag currently, or approximately \$320 per ton. This compares with a U.S. FOB price for white maize which is about \$150 per ton right now (higher this year, due to tight international supplies after bad production conditions in South Africa). Even with a \$75 per ton margin for international shipping and insurance, port charges, and bagging costs, that would leave a \$225 per ton CIF price, Ghana. Yet this \$100 per ton margin is still not sufficient incentive to import, says Darko Farms, because of the minimum shipment size of 10,000 tons which surpasses any individual feed mill's capacity. However, until regularity of maize imports is established in the country, no private

³⁵ A grandparent costs \$25 per chick, CIF Ghana, and a parent costs \$2.50 per chick, from Europe. Darko Farms has not yet done the analysis to assess whether regional trade in grand/parent stock is financially feasible for them.

intermediary will become involved in maize wholesaling. Adequate storage facilities in-country are either not available, are poorly maintained, are regulated by the Government, or are simply too costly to erect at current annual lending rates of 40-45%.

6.3.3 Bulk grain trade infrastructure

One of the constraints to importing grain into Ghana is that imports arrive in bulk, and must be bagged before they can be unloaded, adding extra time and expense to the transaction. Since Darko Farms only imports 60% of its maize needs, this is not a major constraint for the Ghanaian poultry sector. In addition, Ghana's imported maize requirements are intermittent.³⁶

6.3.4 Capital availability

Banks are generally reluctant to lend to businesses. Darko Farms in any case does not avail itself of a regular line of commercial credit for operating capital, nor does it intend to go public and seek equity financing from private investors via the Ghana Stock Exchange. It does however have a strong commercial banking relationship with Standard Chartered Bank in Ghana, through which it opens its lines of credit for importing breed stock and feed stuffs. It also expects to have access to a loan for financing of its new, expanded layer operation.

6.3.5 Technical advice

There does not appear to be a constraint on the availability of technical information. Darko Farms employs highly trained managers (the director, Samuel Darko, has a B.A. in animal science from Kansas State University, and an M.A. in poultry production from a school in Holland), has access to competent domestic veterinary services, and receives advice regarding breeds, animal vaccination protocols, and feeding regimens from its international parent and grandparent stock and feed ingredient suppliers in the U.K., France, and the Netherlands.

6.3.6 Trade procedures

Air freight and border crossings. Due to the depreciation of the Cedi and high air freight costs, imports of day-old chicks have dropped significantly. Day-old chicks requirements make up for about 5% of total poultry imports. Border crossings with DOCs is quite easy although it is quite expensive to import due to the depreciation of the Cedi and high freight costs.

³⁶ Also, maize is not a major foodgrain in Ghana; rather, rice, manioc and other tubers, and plantains are the important food staples in the forest and coastal regions, while in the North of Ghana, millet and sorghum are relatively more important.

Import duties and authorizations. An import duty of 25% is paid on maize and poultry meat, while veterinary supplies are taxed at 10%. While the official policy of the Ministry of Trade is to apply an *ad valorem* tariff on maize, the Ministry of Agriculture continues to ban maize imports in order to protect domestic production, except in periods of extreme domestic deficit.

Paperwork. Most countries require that DOCs for example have all their vaccinations up to date before being imported into their countries. This means therefore that one has to formalize everything before exporting poultry into any other country. Most of these documents (vaccination cards, etc.) need duty stamps etc. from the capital city and involves therefore a lot of movement to and from the border to the city and back before exporting goods across the border.

Sanitary regulations. DOCs need to be vaccinated before being imported.

Payments. The management has not yet explored transborder payment modalities with potential clients in neighboring countries. Other Ghanaian companies currently trading with CFA zone clients report that the lack of correspondent bank relationships across borders within the region results in several week delays in advice regarding the opening of letters of credit, and in actual receipt of payments. The Central Banks of the ECOWAS states are trying to strengthen the West African Clearing House system with a view to streamlining intra-regional trade.

6.3.7 Other government policies

Taxation. Darko Farms is relatively unaffected by Government taxes. As a company producing animal products and trading in animals imported for breeding purposes, most of its business was not subject to a sales tax prior to the Value-Added Tax Act of 1994, and was not subject to VAT when it was instituted. Under extreme negative reaction to the tax's imposition, the VAT was suspended in early 1995. Currently, a 15% sales tax applies to packaging materials and maize (on the CIF value of the maize, including the import tariff). Darko Farms also pays a 15% tax on corporate profits. Under the soon-to-be approved Export & Import bill, exporters will be able to retain all of their foreign exchange earnings in Ghana without any restrictions regarding its use.

6.4 Conclusions

6.4.1 Future perspectives

There is room for real expansion, both domestically and regionally. As a consequence of the vigorous structural adjustment program launched by the Government of Ghana, the industrial sector is being re-launched on a more rational basis.

6.4.2 Major constraints

Apart from the constraints mentioned above in this text, mention has to be made that the lack of data on market potential in neighboring countries, lack of information on export regulations to neighboring countries up to now, and the lack of reliable contacts to pursue formal trade are really the major constraints.

6.4.3 Actions

The Enterprise Network offers solutions to constraints — a network of reliable business people to explore joint ventures, direct exports or technical assistance to start up firms interested in this sector.

VII. POTATO TRADE BETWEEN GUINEA AND SENEGAL

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Directrice, International Multi-Services, Dakar

[See French language report.]

VIII. FINANCIAL AND ECONOMIC ANALYSIS

The purpose of this chapter is to examine the level of incentives which are faced by the private sector and the economic competitiveness (or comparative advantage) of their final product delivered to a specific market. The analyses of incentives and economic competitiveness are based on notions of market and reference prices, which are described in the methodological annex in greater detail.

The approach generally followed by economists to evaluate incentives and economic competitiveness of a sector in a given country is the estimation and comparison of costs of production and marketing (collection, storage, processing, transport, etc.) to an international reference price in the case of a product which is tradable on the international market.³⁷ Thus, for an import-substitution product, the categories of costs listed above are compared to the CIF price of the product, delivered to a given market. For export products, the comparison of costs is made with the FOB price of the product at the border. In the analyses presented here, costs were estimated through delivery to the final consumption market and compared to the international CIF price of the product in this market. The rationale for this approach is that the export good from a country in the West African region is in direct competition with imports coming from the international market in the consuming market; this is true for potatoes, garlic, and day-old chicks. Maize was also treated in the analysis as an import-substitution good en route to Niger.

While the approach described above is conventionally employed in incentives and comparative advantage analyses, it is not always easy to obtain international reference prices. This was in fact the case for garlic, day-old chicks and potatoes, which were the subjects of this report's case studies. International prices for these products are not always available from public documentation sources. For this reason, the analyses in this study relied on direct observation of unit values of actual transactions.³⁸

Incentives Analysis

Private operators who take part in export activities are generally motivated by a desire to make immediate or future financial profits. If the policies put in place allow them to achieve their objective, they undertake the commercial activities. On the other hand, they will

³⁷ In the case where the qualities of the local and international products differ, an adjustment is made to the international price to correct for this. This is the case, for example, of Chadian garlic which is a smaller grade than garlic imported from the international market which is larger and relatively more expensive.

³⁸ The CIF price of garlic, Abidjan, was 7000 FF/ton. That of potatoes in Dakar was 70 FF per sack of 25 kg. For maize, a CIF price of \$140/ton was used (which represents a projected value; in fact in 1996 the price of yellow and white maize is exceedingly expensive, due to shortages in the U.S. and in South Africa). For chicks, world price quotes are unavailable and we assumed a CIF price of 400 CFAF/chick in Abidjan (Rolland, 1995; *op cit*).

refrain from making the investments until the financial conditions improve or they can undertake the activity in the hope of a more auspicious future. What incentives were faced in the case studies mentioned above? Do the policies which are currently in effect encourage private actors to export to neighboring countries?

The results of the incentives analysis presented in Table 8.1 seem to indicate that on the basis of the cost-price and sales price in the export markets, the different products do in fact yield a positive financial profitability to the private actors, varying between 5 and nearly 145 CFAF/kg.

Table 8.1. Base Case Results

	FP	NPC	EPC	DRC
Garlic produced in Chad and transported to Abidjan by boat	145	1.14	0.93	0.70
Garlic produced in Chad and transported to Abidjan by plane	15	1.14	0.91	1.00
Maize produced in Benin and sold in Niger	5	0.43	0.27	0.44
Potatoes produced in Guinea and sold in Dakar	115	1.14	1.05	0.67
Day-old chicks produced in Ghana and sold in Abidjan (FP = cedis/chick)	70	0.98	0.67	0.62

Note: FP = Financial Profitability
 NPC = Nominal Protection Coefficient
 EPC = Effective Protection Coefficient
 DRC = Domestic Resource Cost Coefficient
 For definitions of these indicators, see the methodological annex.

Source: Calculated on the basis of case study data

Garlic which is produced in Chad and transported by road and by sea to Abidjan seems to generate the largest unit financial profit. However, if the same garlic is brought to Abidjan by air, it becomes one of the least financially profitable products, due to the high costs of air freight transport. Air freight nonetheless offers considerable advantages since it is quick and offers less risk of physical loss during transit. These advantages offered by air freight do not compensate, however, the financial risks which would result from a fall in the price of garlic in Abidjan. In fact, the market price used to estimate financial profitability is the average of actual prices observed during the year of 600 to 900 CFAF/kg, or 750 CFAF/kg. If the Chadian exporter in fact has to sell at the lowest price of 600 CFAF/kg, he will realize a net financial loss, unless he is able to reduce considerably his marketing costs. At this price, even garlic transported overland and by sea becomes financially unprofitable.

The exporting of Guinean potatoes to Dakar also seems to be a lucrative activity during the off season, the period during which the market price is at its peak. The price in this period is even higher than the price of potatoes imported from Europe, even though it is now permitted for import since the beginning of 1995, due to the customs duties (10%), import tax

(5%) and the surtax of 20% upon arrival in Dakar. For this reason, traders in Dakar receive a domestic price which exceeds the international reference price. This same order of magnitude of protection is received by garlic traders on the Abidjan market, due to customs duties (10%), an import tax (5%) and other taxes (statistical tax, OIC, stamp tax, etc.). Data available on the costs of chick production in Ghana suggest that local producers face a disincentive due to taxes on imported animal feeds and veterinary products.³⁹

In the case of Benin's maize, the incentives analysis was done at Malanville which is the Beninois market serving as an assembly market for trade with Niger. At this market, Beninois maize seems the least financially profitable among the products studied (unit margin of 5 CFAF/kg of profit) due to a relatively low domestic price. This is due to the imposing of a temporary export ban in Benin, despite the fact that there would appear to be a surplus of maize in Benin. Because of this, private actors are strongly penalized in the Malanville market, as indicated by nominal and effective protection coefficients which are well below 1.00, indicating strong taxation of producers. This weak profitability explains in part the fact that the greater part of Beninois maize converges on this market to be wholesaled up to Niger.

Potential for Regional Trade of Agricultural Products

The structural adjustment programs undertaken in West Africa during the 1980s resulted in the disengagement of states in production and marketing activities to the benefit of private sector economic agents. The corollary of this liberalization was the improvement in economic competitiveness of West African products due not only expanded competition within the domestic market, but also to the fact that domestic products became subject to greater competition regionally and internationally. It is in this spirit of competition that the potential for regional trade should be analyzed, because only products which are economically viable will be able to compete effectively in regional markets. In summary, regional trade must be based on comparative advantage of products vis-à-vis their regional and external competitors.

The level of economic competitiveness, or comparative advantage, of products on the regional market is measured by the domestic resource cost coefficient (DRC) which is the ratio between the value of domestic factors of production and the difference between the reference output price of the final good and the economic value of the tradable inputs used to produce one unit of the good, both valued at their economic opportunity cost or economic price. If the DRC is less than one (value of domestic resources is less than the economic value-added created, representing a net economic gain), one concludes that the product is competitive in the given market. A DRC which is greater than one indicates that the product is not competitive. The definition of the DRC is explained in detail in the methodological annex.

In light of DRC results presented in Table 8.1, the potential for regional trade of the agricultural products studied here seems strong in West Africa, with most DRCs well below

³⁹ Accurate data on costs of trading chicks between Ghana and Côte d'Ivoire are unavailable.

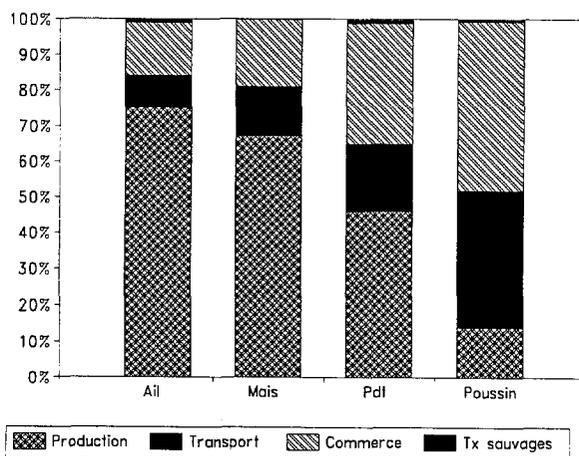
1.00. The exception to this rule seems to be that of Chadian garlic transported by air to Abidjan. The air transport costs are, as mentioned above, sufficiently high that traders will have a hard time bringing their product competitively to the Abidjan market.

The potential for trade between Benin and Niger is even greater given the natural complementarity between Benin and Niger. Benin generally produces a maize surplus, sold at a good price, whereas Niger is in chronic deficit and is supplied by the northern markets of Benin and Nigeria. It seems that Benin and Nigeria, while they are both large producers of maize, themselves exchange this grain given the differences in production periods and the storage constraints each has after harvest. One can ask if the volume of trade would not be greater if economic agents had adequate storage techniques at their disposal which would allow them to sell more regularly throughout the year as prices rose in the markets. What would be the volume of trade if certain parameters important to economic competitiveness changed in the future? In order to answer this question, profitability and DRC simulations were undertaken.

Simulations

Information collected by the case studies revealed that most of the transactions of products from one country to another are handicapped by informal taxes collected by law enforcement forces between the zones of production and the consumption markets. However, it should be recognized that these taxes represent an extremely small portion of the total cost of an activity, shown in Table 8.2.

Table 8.2. Breakdown of Total Cost Delivered to the Final Market



	Garlic	Maize	Potatoes	Chicks
Cost of on-farm production (%)	14	75	46	67
Cost of marketing (%)	86	25	54	33
Of which:				
Cost of transport (%)	38	9	19	14
Informal taxes (%)	0.4	1	1	NA

Due to the relative minor role of these informal taxes, they have a very marginal effect on the level of economic competitiveness and profitability of the various agricultural products. However, these taxes nonetheless a constraint to regional trade to the extent that they limit or inhibit the participation of new agents in the marketing process, resulting in reduced competition.

Albeit small, these taxes could be eliminated in order to help reduce overall costs of transport which, compared with transport costs in other regions of the world, are quite high. According to Inrets-Let and Badiane,⁴⁰ African transport costs exceed those in Asian countries by at least 25% and could easily be reduced if greater competition existed in the transport sector and if formal taxes on truck imports were considerably reduced.

Assuming a 25% reduction in these costs and elimination of informal taxes, profitability and comparative advantage of the different agricultural sectors is re-estimated and results are presented in Table 8.3. This simulation indicates that products which are transported a long distance, such as Chadian garlic delivered to Abidjan and Guinean potatoes brought to Dakar, gain distinctly in competitiveness by such cost reductions. Moreover, reducing these costs also greatly increases the financial incentive to these subsectors. This is particularly so for Chadian garlic transported by air.

⁴⁰ INRETS-LET, "Politiques de réduction des coûts de camionnage en Afrique sub-saharienne: cas de la Côte d'Ivoire et du Mali," (Lyon, France, 1989) and Ousmane Badiane, "Regional Integration and Country Macroeconomic Policies in West Africa," paper presented to the IFPRI/ISRA conference on regional integration of agricultural markets in West Africa (Saly Portudal, Senegal, December 2-4, 1992).

Table 8.3. Simulation Results of Eliminating Informal Taxes and Reducing Transport Costs by 25%

	FP	DRC
Garlic produced in Chad and transported by road/sea to Abidjan	175	0.66
Garlic produced in Chad and transported by air to Abidjan	103	0.79
Maize produced in Benin and brought to Niger, via Malanville	8	0.65
Potatoes produced in Guinea and sold in Dakar	135	0.62

Note: FP = Financial Profitability
DRC = Domestic Resource Cost

Source: Calculated on the basis of case study data

As for Guinean potatoes, it seems that one of the factors contributing strongly to the competitiveness of the product on the Dakar market is the unusually high price of potatoes in Europe at the time of the analysis. According to Senegalese importers of European potatoes, the international price would not be likely to exceed 40 FF/sack of 25 kg this year. On the basis of this price, Guinean potatoes would lose their competitiveness in Dakar. And if the level of the new international price were transmitted without distortion to the local market, Guinean potatoes would no longer be financially profitable for trade to Dakar, as indicated in the price simulation results reported in Table 8.4.

Table 8.4. Results of International Reference and Local Price Variations

	FP	NPC	EPC	DRC
Garlic produced in Chad and transported by road/sea to Abidjan a/	195	0.65	0.80	0.54
Garlic produced in Chad and transported by air to Abidjan a/	1	1.00	0.73	0.67
Maize produced in Benin and brought to Niger, via Malanville b/	20	0.52	0.37	0.68
Potatoes produced in Guinea and sold in Dakar c/	-45	1.08	0.78	1.67

Notes: FP = Financial Profitability
 NPC = Nominal Protection Coefficient
 EPC = Effective Protection Coefficient
 DRC = Domestic Resource Cost Coefficient

- a/ Chadian garlic quality is improved by 20% (production of large calibre), thus its reference price is increased by 20%.
- b/ The price of maize in Benin (Malanville) rises by 20% with elimination of the export ban and improvements in market information circulation between Niger and Benin.
- c/ The international potato price falls to 40 FF/sack instead of 70 FF/sack, leading to an equivalent drop in the Dakar price.

Source: Calculated on the basis of case study data

IX. CONCLUSIONS AND STRATEGIES

Implications of the Incentives and Comparative Advantage Analysis

The incentives and comparative advantage analysis presented in the previous chapter highlights the competitiveness of several non traditional agricultural crops produced for regional consumption. Yet despite the fact that DRCs are below 1.00, indicating that the activities identified would be efficient earners of export revenues for the producing countries, levels of effective protection in two cases (day-old chicks in Ghana and maize in Benin) are less than 1.00, indicating that current policies act as disincentives to production. In the case of Ghana, the EPC results from taxation of feedstuffs and other inputs, while in the case of Benin, the maize NPC and EPC are below 1.00 because of the export ban which pushes the domestic equilibrium price down. On the other hand, potatoes in Senegal and garlic in Côte d'Ivoire are protected, offering positive incentive to regional producers and traders.

In assessing the constraints which result in divergences between financial and economic competitiveness, our research has distinguished two types of barriers. First, there are the costs associated with the behavior of the public sector that can be interpreted as direct or implicit taxation of the producer and/or the trader. These costs reduce the financial profitability of an activity. Simulation analysis suggests that informal taxes are not a significant financial burden to traders, confirmed in discussions with local business people who have learned how to deal with them. However, it is these costs which a Government can influence in order to improve the profitability of African enterprises and encourage regional commercial activity. In fact, in several countries, the private market coordinates with local law enforcement officers, and "one-stop" payment or "pusher" systems have been arranged to facilitate transit within and across borders.

Second, there are economic costs which derive from the fact that regional markets for finished products, factors of production (labor, land, capital) and services (public services such as water, telecommunications, electricity; transport; marketing services; financial services; transit services at the ports and borders; informational services;...) are extremely underdeveloped at the present time. This underdevelopment translates into an increase in the real economic cost of the management of an enterprise, threatening thereby the competitiveness of a product or a subsector. A product which is not economically competitive cannot compete with a similar product from the international market, without a support (subsidy or protection) from the state. The simulation analysis demonstrates that financial profitability (and to a lesser extent, economic competitiveness) is significantly enhanced if transport costs are reduced to levels which are comparable to international standards. However, many of these underdevelopment-related costs are much more difficult to reduce, or eliminate, until countries in the region attain a minimum threshold with regard to population density, per capita revenue, level of Gross Domestic Product... to promote the development of these product, factor, and service markets.

Other studies currently underway are endeavoring to measure current flows of such trade, both within and outside of the region.⁴¹ Given the economic potential highlighted in these four case studies, the West African region seems poised for expansion of trade volumes in non traditional products.

The implication for policy makers is that efforts must be made now to commit to liberalizing conditions for regional trade,⁴² harmonize written policy texts which profess preferential trade conditions for regional partners with actual practice which is often just the opposite, and invest in improved transport infrastructure to reduce costs. And as also promised at the recent annual meeting of the WAEN in Accra in November 1995, regional banks must be encouraged to implement cooperation protocols in order to facilitate intra- and inter-currency zone monetary transfers within the region.

Perspectives on WAEN Training and Future Recommendations

As an experiment in combining business people with economists to conduct market analyses jointly, the previous chapters demonstrate the richness of analysis which such a consortium can produce. By viewing a potential commercial transaction through the eyes of a business man or woman, numerous constraints were identified of a commercial nature which may otherwise have been overlooked. In conducting such a multifaceted assessment using experienced sector economists, entrepreneurs were exposed to issues of supply and demand, and the effects of Government policy on private sector incentives, that may otherwise have been ignored. While private entrepreneurs in West Africa may not undertake such a thorough analysis on their own today without a stipend contribution from the WAEN, many members of the Network have been sensitized through this study to the importance of thoroughly understanding the evolving markets in which they expect to operate. In the future, such services will be hired in or undertaken directly by West African enterprises, just as they are today by companies in higher income markets around the world.

Regional commerce in West Africa has by and large consisted of traders, largely informal, taking advantage of profitable arbitrage opportunities to move goods across borders. This study has highlighted a number of such profitable trading opportunities in cereals and non-traditional high-value foods. These arbitrage opportunities would be even more profitable if the burden of certain market and institutional barriers (high costs of transport (road and air, in particular), informal "taxation" of cross-border and even intra-border transactions, cost of

⁴¹ One set of market studies is being sponsored by REDSO/Abidjan, while another is underway under the direction of Abt Associates, Bethesda, MD.

⁴² One of the issues confounding regional trade liberalization is the fact that West African governments derive a significant portion of their revenues from trade taxes. Yet these taxes often impose important disincentive effects on trade-related activity. Analyses of current fiscal regimes and alternatives will be undertaken in a number of countries in West Africa (Ghana, possibly Mali) as part of the EAGER/Trade project, now underway in at least seven Sub-Saharan countries.

delayed payments due to monetary transfer difficulties, difficulty of penetrating local marketing networks,...) was reduced or eliminated.

Increasingly, however, profitable commercial opportunities will be realized by *entrepreneurs* who mobilize investments to realize longer term business development strategies. Rather than accepting a certain variety, quality, breed, or style of locally produced good as a given, investments will be made in research, production, processing, and marketing to improve these in response to consumer demands in the final market, whether in the region or overseas. Rather than suffer losses due to lack of appropriate storage, air/seaport, transport, packaging, or processing facilities, investments will be made privately (individually or collectively) or in conjunction with public funds in order to minimize losses, speed transactions, realize smoother intra-annual price trends, and reduce transactions costs. And, increasingly, entrepreneurs will invest in strategies to distinguish their goods and services from others available in the market place in order to establish market shares and develop consumer loyalty.

The WAEN is the vanguard of the new entrepreneurial class in West Africa. This report demonstrates the potential insights which can be gleaned from market analyses, such as were undertaken for four somewhat hypothetical cases. A logical follow-on for the WAEN to pursue after this initial exercise would be to train its broader membership in market analysis, marketing strategy, and business proposal development. The development of such skills would empower business men and women in West Africa to undertake longer term investments in order to grow domestic and regional businesses, create new employment opportunities, and promote economic growth in the region.