

Analyzing Market Reforms and Food Distribution Systems in Accra, Ghana:

**Lessons and Implications for Reforming the Bazurto Market of
Cartagena, Colombia**

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I. INTRODUCTION: THE CASE OF ACCRA, GHANA

The purpose of this memo is to provide a comparative lens to understand how food supply and distribution reforms which took place in Accra, Ghana, may be useful tools for policymakers currently considering similar market reforms in Cartagena, Colombia. This case study provides a set of recommendations which aim to help policymakers formulate plans for improved efficiency of market operations in Cartagena. This analysis thus draws from the successes, failures and challenges of urban food markets in Accra as well as greater Ghana, in order to highlight the common challenges that both the Bazarto market and Ghanaian markets face. To provide the reader with an understanding of how urban markets in Ghana operate and their role in Ghanaian society, the memo first provides a snapshot of Ghana's food distribution systems and its urban food markets in the city of Accra. It then discusses why Accra is an appropriate case for comparison with Cartagena, and further elaborates on the dynamics and actors involved in fostering market efficiency in Accra. Last and most importantly, the memo outlines the market reform strategies that were recommended by the Food and Agriculture Organization (FAO, 1998) in a case study of markets within Accra, which provide a toolkit of relevant market reforms including potential lessons for policymakers involved in reforming the Bazarto market.

II. BACKGROUND INFORMATION ON GHANA AND ITS URBAN MARKETS

Ghana is located in West Africa and has a population of approximately 20 million people—half of which live in its cities. As a developing country, only 60% of Ghana's population is literate and the average person can expect to attend school for 9 years. Almost 1/3 of the country lives below the poverty line (CIA World Fact Book) and spends up to 60 percent of their income on food (Lyon, 2003). In 1957, the country declared its independence from Great Britain and has since organized its government into a relatively stable multiparty democratic political system.

Accra, which is 170 km in size, is the capital of Ghana and is the largest city with a population of 1.6 million. As it is the most industrialized city in Ghana, people from all over the country and neighboring nations migrate to Accra in hopes of finding better job opportunities (RUAFA). This has led to rapid urbanization and an annual population growth rate of 3% within the boundaries of Accra and a 10% population growth rate along the peripheries of Accra (RUAFA). This has had a profound effect on food production and distribution patterns. It has created a food deficit in Accra that is exacerbated by the fact that agriculture represents the smallest portion of Accra's economy (RUAFA). Furthermore, sharp increases in the price of food have made it difficult for low income families to access healthy affordable food. In order to understand the steps Accra has taken to try to alleviate the burden of high food prices for its poorest citizens, it is important to first grasp how Ghana's markets function and where possible barriers to efficient market activity exist.

A. Food Production and Food Distribution Systems in Ghana

Urban food markets and local food distribution systems play a crucial role in the development of African nations and their ability to sustain their growing population—this is especially the case in Ghana. Ghana is rich in natural resources and is one of the world's principal exporters of gold, timber and cocoa (CIA World Fact Book, 2010). Agriculture activity represents 35% of the country's Gross Domestic Product and employs more than half of Ghana's workforce (CIA World Fact Book, 2010). Most farms in Ghana are small family operated farms that are less than 2 hectares in size. Approximately 2.74 million households operate these farms. Larger plantations

specialize mainly in palm oil, coconut, rubber, maize, pineapple and rice (Lyon). Two of the largest threats that farmers face is the lack of rain and arid climate. In order to minimize the country's agricultural risks, the Ghana Irrigation Development Authority has created a network of irrigation systems that they plan to build and expand in the near future (Lyon, 2003). Meanwhile, crops such as roots, tubers and vegetables have erratic production patterns because of the brutal weather. But despite these challenges, the country is still able to produce more than half of its cereal, meat and fish needs, locally, further emphasizing the need for efficient transport mechanisms to bring these goods to market (FAO, 1998).

Food distribution in Ghana can be described as having two types of distribution channels: long distance and peri-urban agriculture. Peri-urban farmers primarily produce perishable items, like dairy, meat, fruits and vegetables. These goods tend to be sold directly to the consumer by the wives of producers and generally must reach the consumer within 24 hours due to lack of refrigeration. Trains and vehicles are the primary sources of food transport and new markets have emerged next to train stations and stops since rail travel is cheaper and spans the city of Accra by 100 km (FAO, 1998).

However, food traveling long distances also enters through a network of middlemen before reaching the consumer. One of the principle and most influential stakeholders in this network are itinerant wholesalers who are the primary financiers of farming costs and thus share any risk of crop failure. Because of this, they often earn high remunerative returns on their agriculture investments which generates criticism by stakeholders who see this as unfair practice within the food distribution process. Once itinerant wholesalers purchase the food from producers, it is delivered to resident wholesalers who in turn supply street vendors (hawkers) and retailers (formal market vendors) (FAO, 1998). The presence of such actors so crucial to food distribution has deep implications for how market reforms are carried out. This is exemplified in the FAO policy recommendations discussed in later sections.

Figure 1: Long Distance Food Marketing Channel

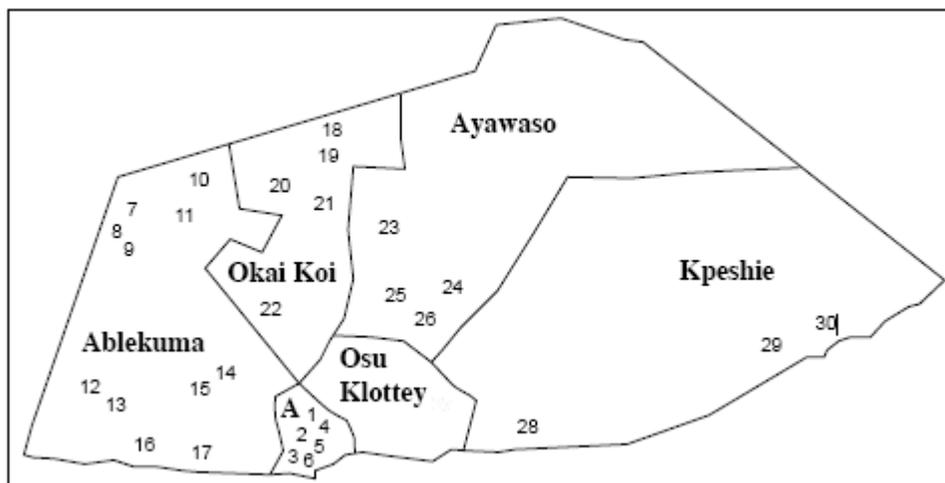


Despite the importance of these food systems much of the research on food production in Africa has been limited to the macroeconomic determinants of growth including trade, globalization and the liberalization of markets, rather than ground-level reforms. This is in part because African countries were expected to follow the same development trajectories as Western nations and become less dependent on informal sector activities. However, rapid urbanization and steep increases in the population have further reinforced the need to consider informal sector market activities (Porter, 2007).

B. Geography of the Accra Market

There are 47 markets in Accra, the majority of which operate during the day and a few operate at night. Most markets are located in the old town section of Accra but were intended to be evenly distributed in Accra's different residential neighborhoods. There are 4 large wholesale markets that specialize in different commodities but also trade household items and clothing. Some of the main foods traded at these markets include yam, cassava, maize, meat and various fruits and vegetables (FAO, 1998).

Figure 2: Distribution of market sites Distribution of market sites in the the Accra Metropolitan Assembly Sub-Districts



Source: FAO (1998), adapted from Nyanteng (1988)

C. Accra and Cartagena

Accra was chosen as the focus of this study because it faces many of the same food market planning challenges as Cartagena. Furthermore, Cartagena and Accra share similar demographic and agricultural characteristics that influence market activity. Both cities are located along the coast and share a diet that is rich in seafood, plantains, rice, and yam. Due to the year round hot weather in both cities, transporting perishable items to the market in a timely manner is crucial yet presents a large challenge for middlemen. Like Cartagena, Accra also relies on the importation of food from other regions within the country and outside of the country.

Cartagena has a slightly smaller population of 1.24 million while Accra has a population of 1.6. Nonetheless, more than 80% of both their populations live at the poverty line and primarily shop at markets. The increasing population growth rates in Accra and Cartagena have also created planning challenges that are evident in the structure of the Bazarto Market and markets in Accra.

D. Trade Associations and the Role of Social Institutions in Accra's Markets

Any long-term reforms that impact physical market infrastructure must inevitably deal with trade associations, as well as the social norms of interaction within markets which are heavily integrated into the fabric of the food distribution system. Visually, markets in Accra and Kumasi can be described as hectic and chaotic while they in fact have a number of structured systems and associations that are not readily apparent. Trade associations developed out of the need for political power when British colonists took away the right for chiefs to oversee market activity during colonial rule. These trade associations continued to thrive until the 1980's when associations were placed under scrutiny for false pricing. The government then became heavily involved in market activity in attempt to limit price manipulation. However, in order to limit corrupt behavior, these same actors eased off of market regulation in the 1990s in an effort to pursue freer markets (Lyon, 2003).

Trade associations are generally operated by a female referred to as Ohemma—or the “Market Queen.” She is selected based on her traits, ability to manage traders and experience in the marketplace. Ohemma is not paid but is known to receive gifts. Some associations that specialize in certain commodities will have a male secretary who is in charge of documenting the quantity of goods that each trader brings into the market and serves as liaison between the association and local authorities. Associations are composed of various stakeholders including retailers, resident wholesalers and itinerant traders selling the same commodities. These associations often develop into homogeneous groups that are characterized by ethnicity and/or gender. To join these associations members pay a registration fee and membership is generally fluid. Such memberships, while considered informal by modern standards, actually reflect a more formalized “buy-in” to participate in market activities.

There are also different views as to the role and benefits involved with Trade Associations in Ghana. Some people believe that they play an important role in markets, particularly in reducing the transactions costs through the dissemination of information about prices, supplies of produce, reputations, as well as price negotiations and contract enforcement. On the other hand, politicians and the media in Ghana may think of such associations as cartels operating to exert their monopolistic powers and attempt to control the market. In recent years however, the image of Trade Associations has improved as they are accepted as intermediaries between the private and public sector in economies dominated by open market processes (Lyon, 2003, Porter, 2007).

While market reforms in Accra must by nature deal with the aforementioned actors, relationships as social institutions are equally important for understanding how reforms might impact the efficiency of the market system. Government projects can benefit from understanding informal institutional arrangements, and for this reason it is important to take an institutionalist look at Ghana's market to understand the relations that make possible the existence of informal institutions. In the Ghana's case these relations are based on trust and power.

Traders are found to build relationships with a number of different types of players in order to market their produce in urban markets. These relationships with other traders help gain access to credit, and encourage porters with supply information to sell on their behalf as well as with other retailers who sell on credit. Through participation in association activities, especially with regard to the welfare of other members and attending family ceremonies, trust is built. The women can also draw on commonalities of shared gendered relations and constrains. However, women from

differing ethnic groups were found to be working very closely with groups of men from other regions, who acted as trusted salesmen and porters.

Trust is also generated by way of intermediaries, such as the association “elders.” The sustainability of these groups depend largely on mutual trust between traders and these leaders, as well as the ability of the leaders to ensure that members obey the rules of the association. The larger the group, the harder it is to establish cooperation through interpersonal relationships based on moral norms and information about each other’s reputation. As number increase, groups appear to be more reliant on power relations to coerce people into cooperation because of the higher transaction cost in terms of obtaining information on other’s reputations and establishing interpersonal relationships. In this way, the larger market associations operate in hierarchies that are similar to some larger scale firms.

How power is exerted also depends on the respect that traders have for the leadership of the association and their obedience. Power is exerted through surveillance and establishing routines that control behavior. In many cases, it was found that there is unquestioning acceptance of association elder’s authority.¹

The sustainability of trader’s associations in Ghana is surprising given that they have faced economic and political crisis in the last 20 years, and that they are made up of large groups with conflicting objectives. Ghana’s traders associations also show that women not necessarily have less access to resources, less education, and less making power. According to Lyon (2003), there are two aspects that have contributed to the survival of these associations. First, the “self-identified objectives that are flexible and fluid”, besides, unlike associations that are set up by the government or external agencies, Ghana associations do not depend on donors to survive. Second, their leadership structure is clear. As it was mentioned before, it is far from being participatory, and it is based on exercising power and control. This is possible since trader’s association can control the selling space.

Based on the exiting evidence, it is not possible to claim that associations are bringing benefits or not. On one hand they can reduce transaction cost, and may allow traders to have large returns, but on the other hand this could be being achieved at the expense of farmers, retailers and consumers. Besides, the cost of not having these forms of association is not known (Lyon, 2003).

However, it is important to mention that other authors suggest that the success of an association can not only be based on how much it is needed or in terms of the reduction of the transaction costs. They state that there are “many cases of inefficient rules and property rights that persist beyond their economic usefulness, which cannot be explained by an analysis of transaction costs alone”. Besides, they claim, to assume that “institutions are shaped by the minimization of transaction costs and the drive to efficiency alone, is to ignore the social relations in which economic activity is embedded” (Lyon, 2003).

¹ There are three forms of coercion. The most visible form of coercion is threats of penalization and exclusion. Penalization takes the form of a financial fine or the confiscation of goods by the elders of the association. Traders can be excluded from trading by the market queen, although this is a rare occurrence. Traders exclude non-members by physically obstructing them from selling. The second form of coercion is through peer pressure, shame and the threat of damaging one’s reputation. This pressure can be exerted because traders see each other frequently and through knowing where the person lives, so that moral and other pressure can be used. The third form of exerting power over others is subtler and can be termed “surveillance.” Here, a member of the association observes the other and is aware they are being observed as well.

E. Market Management and Controllability

The control level that the associations have over the market changes over time and depends on the access that traders have to policy-makers and local elites. The District Assemblies can influence the market system since they are responsible for the planning of new market structures and they set up laws (town planning regulations) that define what activities can take place in certain areas and therefore can restrict the sale of produce outside the markets (Lyon, 2003, Porter, 2007).

The District Assemblies are often faced with several competing claims. On the one hand, they are dependent on the markets for raising a large proportion of their revenue. This is easier if the markets are structured and organized, with all the traders in one area, renting stalls from the assembly. However, this can have implications for both consumers and farmers. The District Assemblies, on the other hand, have to balance the demands of traders to secure their livelihood against complaints from farmers and traders who are not members of local associations. There are further complications as the District Assemblies may have a reduction in their revenue if people are restricted from trading.

This has generated discrepancies in the management of the market. Associations and operators often develop regulation practices and policies that do not comply with national regulations. This is in part because current national regulations are largely outdated and government officials and market operators have failed to develop management partnerships.

Some people question the role of the decentralization process given the decision-making power that the District Assembly has. They state that the decentralization goal was to give opportunity to participate to local people but in reality the District Assemblies are lobbied by the more powerful groups and therefore some groups are left behind. In Ghana, trader's associations appear more powerful than farmers as there are no functioning farmers associations.

F. Price Fixing

Overly high food prices for poor populations is often the result of artificial price distortion. Traders influence competition and therefore price by controlling the supply entering the markets and the number of traders allowed to sell. This control varies from market to market. The means that traders have to control access to the market include: physical obstruction of trucks carrying the produce, confiscation of goods, and fines and banning of itinerant traders from the market. In addition, it is common that the elders (or Ohemma) sell on the offending trader's behalf and take a large commission. Exerting such control is possible if the authorities and local government recognize the power of trader associations to control market spaces and if non-members are not able to sell in other places. For this reason associations actively lobby traditional chieftaincy authorities, some of whom own the land in many of the markets and act as intermediaries in disputes (Lyon, 2003, Porter, 2007).

Associations, which have retailers and itinerant or sedentary wholesale traders, establish the rules of bargaining. Prices are defined once the supply is known, and this is a daily basis. Retailers will take into account the farm gate price, the marketing cost and profit margins of the itinerant traders bringing the produce in. The Ohemma will not play a role unless there is dispute between the two groups that delays the setting of the price for the day. By setting the price at the beginning of the day, the selling of the produce is easier and there is less bargaining on each crate, although prices of unsold produce may drop later in the day.

In price fixing the role of the traders is seen in different ways. Usually politicians and the media accuse traders of cartel operation and price fixing which prevent the government from effective regulation. Farmers and other traders (that do not belong to the association) also complain of not being able to sell when they want². On the other hand, trader's associations think they provide a crucial service and they are often investing their capital in a high-risk environment where, arguably, returns should be commensurate with the risks involved. They justify having control over the supply in order to avoid congestion (and sell quickly) and reduce the risk of losing all their working capital from sudden changes in price. However, when there is glut due to a rapid increase in supply, a common occurrence with tomato crops, then it is the farmers who will suffer and have to accept the losses. They also argue that they do not exclude as long as the person pays the subscription fees and is accepted by the other members. In addition, they claim, retailers can bargain if the produce do not have the expected quality or if it is later in the day.

G. Access to Information on Prices and Supplies

In Ghana, as well as throughout West Africa, personal networks are essential for getting market information, but trader's associations are also important for its dissemination. Price information is not formally disseminated; rather it is obtained by talking to others traders that were in the market. The situation becomes more complicated because inclusion in networks is not homogenous but discriminatory and depends on factors such as gender, ethnicity, wealth and age. Thus, it is common to see that groups of traders sell at lower prices even though the information is available, since transport services are poor. Farmers frequently complain that traders do not tell their colleagues if there is a large supply of tomatoes in one area as the price may then increase when more traders arrive. This was denied by traders, who claimed that they share information in a way of building up reciprocal ties with fellow traders who they referred to as colleagues rather than competitors. Another way of getting information is going to the market. Traders observe the offer and demand and the way sellers and buyers are bargaining (Lyon, 2003).

There is a debate about the involvement of the government in the supply of information given that the private sector is less likely to find it cost effective. Some studies have found that the main difficulties for the public sector to manage market information include: i) prices vary on a daily basis and even during the day (especially for perishable crops) according to the supply; ii) producers may find confusing the difference between urban and farm-gate prices; iii) price collection from traders is difficult among other things due to the lack of resources and motivation, the time of day the price collectors are willing to work, the suspicion of traders, and the need to find the price by bargaining. All these factors prevent government from providing accurate market information and this could be more harmful to farmers than no information at all since people could get involved in unprofitable trading activities.

As to the use of technology for the dissemination of market information, radio broadcast in Ghana has not been useful given that farmers do not trust government bodies and it is usually out of date by the date it reaches farmers. Besides, even if prices are correct at the time of broadcast, by the time the more remote farmers have reached the market, they are likely to have changed. In addition there are gendered patterns of access to radio information. In central Ghana male are in the most likely to use broadcasted price information and in coastal Ghana, women have less access to radio.

² In Ghana, Clark (1994) refers to numerous incidents in the 1980s when soldiers went into markets and beat women traders to force them to sell their goods at lower prices. In these cases, the government attacks were focused mainly on traders who were selling to the public rather than those buying from producers, so the issues (as perceived by the governments involved) were related to trading at the end of the commodity chain.

It has been proposed that local, independent, and community radio could be used instead, but this would require changes in existing legislation. On the other hand, in this era of mobile phones, one-to-one personal relations based on trust appear to have critical significance for disseminating accurate, up-to-date information with detailed reference to product quality and such.

H. Infrastructure

Ghana markets have several infrastructure related problems. Road and transport infrastructure for the movement of agricultural commodities and inputs are inadequate, which aggravate women's time constraints and hinder their productive work (since are women who head-load goods when transport facilities are not available), as well as affect cost of important inputs such as fertilizer. The rate of expansion of irrigation infrastructure has been slow largely because of the high capital cost in irrigation development. Besides, private sector investment has been limited due to lack of incentives. Likewise, the infrastructure for landing and hygienic handling of fish and pre-shipment storage of fish and other fresh produce at the ports is inadequate. In addition, supply of hatcheries, ponds and cages for aquaculture is limited (Ministry of Food and Agriculture, 2007).

In addition, Ghana markets have space issues and traffic congestion. Not enough land has been designated for market space, which has forced many street vendors to sell their goods in old city-an area of Accra characterized with heavy traffic. Consequently, traffic congestion has become one of the main challenges to market activity. In some cases, delivery trucks are prevented from entering the market area in order to minimize traffic congestion, which in turn creates food deficits in the market.

Storage facilities are also a critical problem, since their shortage is posing great risks to perishable goods. This is worsened by the fact that food is inspected by local authorities, and this process is far from being rapid and efficient.

Ghana's markets also lack of bathrooms, running water and proper garbage disposal, and sewage vents are often clogged. This, along the crime issues like thieves and drug abusers poses a high risk for all stakeholders, specially children and women. Lastly, it is important to mention that there are regularly occurring market fires due to failing electrical systems.

I. Trader's Access to Finance

The problem of access to credit and the high cost of credit for farmers and small-scale traders have been widely reported across West Africa for many decades. In Ghana, rural banks, which were created with the goal of helping farmers, are now focused on serving salaried workers. In addition, women face more difficulties in obtaining formal credit, which has affected the size of load generally transported and the frequency of trips made (a point not commonly recognized in the marketing and transport literature). Thus, finance is available through informal savings, credit associations³, suppliers, money-lenders and rotating credit, however they may be expensive and they can be used exploitatively if individuals become tied into debt relations over many years (Ministry of Food and Agriculture, 2007).

³ For example, ROSCAs (rotational saving and credit associations) where each participant takes a turn in receiving a lump sum.

IV. PROPOSED POLICY RECOMMENDATIONS FOR ACCRA FOOD MARKETS

A. Lessons for Cartagena's Bazurto Market

The following sections draw from a series of workshops which took place in Accra in 1998, initiated to improve food distribution efficiency and accommodate (plan for) the future growth of both formal and informal markets in Accra. We believe that many of Accra's Food Supply and Distribution challenges relate to those faced by the city government of Cartagena, Colombia. The Food and Agricultural Organization (FAO) and Accra Metropolitan Assembly's jointly proposed policy solutions, referenced in this report (1998), could therefore be considered seriously as potential opportunities for Cartagena's city policymakers when assessing Bazurto's challenges. While no single recommendation can be replicated verbatim from one city to the next (as they are contextual by nature), the proposals from Accra may at the very least shed some light on creative options for Cartagena and highlight the policy space available to the city's policymakers. The following section first compares the challenges faced by both Accra and Cartagena, then describes similarities between the institutional capacity for action in both cases, and concludes with lessons for how several of Accra's proposed policy solutions could be partially applicable and/or implementable in the Cartagena case.

B. Comparable Challenges

Two of the major challenges which have highlighted the need for Cartagena to reform its food distribution system were also present in the Accra case. Accra's need for reform grew out of unchecked urban growth and the associated pressure on food distribution institutions and infrastructure, as well as general urban congestion which was stifling overall economic activity in the city. Cartagena is also increasing in population and the location of the Bazurto market and its overgrowth in informal activity evidences similar congestion problems to that of Accra. Like Cartagena, the inability of market logistics to keep up with urban growth in Accra resulted in increased costs of food distribution, which eventually led to higher food prices for the poorest populations. This is also the motivating factor for policy intervention in Cartagena.

The logistics challenges in both cases include how to improve storage mechanisms, transportation/marketing channels, market efficiency, and how to decrease the overall urban congestion associated with overgrown informal markets which impact all market activities within as well as outside the market. Other challenges include improving market price information, eliminating non-value-added middle men activities (like price collusion practices by Market Queens) that cause unnecessary price increases for the poor, as well as a renewed focus on the institutional and ownership-based conditions that ensure long-term participation and enforcement of new distribution systems. While overall, the similarity between the challenges in both cases suggests that the recommendations carried out in Accra are appropriate for comparison in Cartagena, differences between the two must also be considered. These include the type of crops produced, modes of transportation (predominantly trucking in Cartagena vrs. rail in Accra), as well as the degree of power and function held by middle-men in their role as market traffic controllers and production quota setters. Lastly, the difference in the extent to which the rule of law can be enforced (insofar as each city is able to regulate new food distribution systems and institutions) is different in each case even though both countries are considered middle-income and better off than many of their neighbors when comparing governance indicators. The following section considers these challenges by discussing the role of institutions in food distribution in both Accra and

Cartagena. This is followed by an analysis of how such institutional arrangements may be more conducive to the successful implementation of some policies rather than others.

C. Similar Institutional Capacity

Like Bazaruto, Accra turned to a Food Supply and Distribution System (FSDS) which invited private sector actors along with the public sector in an open forum rather than turning to a marketing board which operates outside of the public realm to carry out such reforms. The Accra case was intentionally inclusive, using the Accra Metropolitan Assembly (AMA) (the district planning authority responsible for market operations, safety and security) to bridge together the private sector, city government, and informal market actors under agreed upon rules and regulations to meet the needs of all stakeholders. What is different in the Accra case was the presence of FAO officials from various offices (Regional, Agricultural Marketing, Rural Finance) which provided various levels of oversight, guidance, leadership, and potential financing for such reforms. While the extent to which their proposals were actually implemented on the ground is unclear, what can be taken away from their workshop is the clear need to be explicit about which institutions will implement policy proposals, and how financing as well as political feasibility play in to the reality of achieving long-term market reforms. The next section details the policy recommendations that came out of these meetings, and includes which institutions were designated as responsible for their implementation.

D. The Accra Report's General Policy Recommendations

The Accra Metropolitan Assembly developed policy recommendations to address the aforementioned challenges by grouping them into five major areas. These are elaborated broadly here, and those most relevant to Cartagena are analyzed in further detail in the next section.

1) Making food storage, processing, and marketing channels more efficient and dynamic:

- Create incentives for large wholesalers and farmers associations (who contribute the most to marketing infrastructure) to make use of food storage by publicizing already available public silos (Institution: The Ghana Food Distribution Corporation)
- Cut out middle-men malpractices (by market queens) by enforcing "pure-information Sunday markets" and formalize informal activity of spillover stall vendors and parking spaces (Institution: AMA & Local Authorities)

2) Adapting urban market infrastructure and facilities to meet the food needs of the year 2020:

- Create task-force for the ECG to ensure appropriate electrification and safety in markets (Institution: Electric Corporation of Ghana)
- Encourage local authorities to manage sanitation issues in markets (Institution: AMA)

3) Improving market planning, management, rules, and regulation:

- Create task-force to regulate "hawking" of parking places so that government can appropriate capture public revenue from market activities, and increase inspection frequency of hawking activity (Institution: AMA & Local Authorities)
- Formalize newly emerging informal satellite markets which occur at rail stations and act as regional food distribution hubs. Formally include them in the grander supply-chain and participation in future market reforms (Institution: AMA & Local Authorities)
- Update market by-laws to represent more formal market activity and specific rules for marketing channel activity (Institution: AMA & Local Authorities)
- Improve market ownerships legislation to allow the private sector to invest in market upgrading (physical infrastructure) and gain profits in joint ventures with the AMA (Institution: AMA)

4) *Improving market information and promote universal grading and standards by gathering key institutions:*

- Include GSB, MFA, Farmer and Trader Associations, Food Research Institute, Atomic Agency Commission of Ghana to create universal quality standards.

5) *Encouraging the role of specific actors, women, food traders, and youth employment, in food marketing:*

- Set up credit operations within markets to aid female vendors (Institution: AMA)

E. Applying Accra's Policy Proposals to Cartagena

The market solutions proposed in the Accra case can be further divided into the following categories: Marketing Channels; Storage; Processing; Roads, Transport & Trucking; Electricity Provision; Security; Informal and Spontaneous markets; Sanitation; City Planning; Market Management; Market Information; Market facilities. The following sums up the most relevant proposals of the Accra case as applied to Cartagena, and then concludes with the key lessons Cartagena can learn from this case, and those which the city should perhaps be more cautious of:

- **STORAGE:** Packaging logistics solutions including storage facilities should be designed so that rural goods don't perish: improving the general efficiency of food delivery packaging, storage, and other services could help create cheaper goods for consumers and encourage new local enterprises which link all market actors together under one umbrella. This should be considered in the case of Cartagena if there are serious problems with preserving perishable goods.

- **PLANNING:** Facilitate agreed upon consensus by-laws for the market that include police enforcement actors so that everyone is clear on market operation: Having a participatory process is especially relevant for Cartagena as the market administration is particularly active and enforcement relatively lax.

- **FINANCE:** Credit lines should be developed for the establishment, by both the public and private sectors, of storage facilities and the necessary equipment: This should always be considered when thinking about how to finance new market reforms, and is definitely applicable in Cartagena which may not have much public funding.

- **TRAINING:** Technical and managerial training should be provided to prospective processors to develop local packaging material industries e.g. Glass, tin, aluminum, plastic: These are more interventionist procedures aimed at improving efficiency and quality of goods and service delivery, which again, may be the case in Cartagena if packaging has a big impact on food prices.

- **INCLUSION, FORMALITY, AND MARKET RELOCATION:** Satellite markets should be planned for and formalized so that new market actors are included in the conversation. Reduced rent charges should also be implemented as an inducement to facilitate relocation: this is certainly relevant as Cartagena considers splitting Bazaruto into two.

While these recommendations are important to consider when planning market reforms in Cartagena, one of the major cautions that must also be extracted from this report is its overwhelming number of recommendations without explicit mention of the political and financial feasibility of such reforms. Cartagena must be careful not to exclusively propose institutional solutions and task-forces (new meetings, commissions, associations) to solve more physical logistics issues. The more valuable take-aways from the Accra proposals are perhaps those more geared to real logistics improvements and formalizing satellite markets to be included in the newer and more efficient food distribution system. An additional understanding of how the financing of new market infrastructure (and the public incentives that encourage such financing) can be implemented is necessary for such proposals to go beyond the memo phase and reach a level of real implementation.

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