



Appendix 2

Greater Monrovia Housing Value Chain Analysis

Habitat for Humanity International / Liberia Country Program

Cities Alliance
Cities Without Slums

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Introduction

On Sept. 1-16, 2016, Habitat for Humanity International conducted a small-scale housing value chain analysis in the greater Monrovia area of Liberia. The goal was to ascertain the possibilities for working with the private sector to expand access to housing products and services for underserved and unserved segments of the market. This analysis will feed into a larger slum upgrading and affordable housing framework for Monrovia to be developed by Habitat, which in turn is a component of the larger Cities Alliance Liberia Country Program. The following pages detail the preliminary conclusions of the value chain analysis and recommendations on next steps.

Methodology

The value chain analysis consisted of several months of preparatory work, involving first contacts and desk-based research, an orientation for the value chain researchers, and two weeks of in-country research. A team of five global Habitat staff members, representing African, North American and Latin America housing contexts, carried out the value chain analysis, traveling to Liberia and conducting over 40 interviews with public- and private-sector stakeholders and four focus group discussions with low-income households residing in informal settlements.

The value chain exercise uses Habitat's typical process for assessing a housing market and designing a housing market development program that works with the private sector to expand access to housing products and services. The process in Liberia included the following steps:

Orientation and review of value chain and market development principles: Of special importance was the discussion of 1) traditional, unsustainable market development approaches vs. more sustainable models that are inclusive of all actors, and 2) avoiding traditional pitfalls of development programs that result in market distortions and unhealthy dependencies of beneficiaries on direct provision of services by development organizations.

Review of interview strategies for value chain analysis and logistical preparations for fieldwork:

After the orientation, the team conducted a fieldwork activity planning session involving Habitat for Humanity's global programs vice president, an international housing programs manager, a housing finance and market development specialist, a market development program manager, and a market systems and entrepreneurship manager. This session covered the following points:

- An initial list of key informants in the public and private sectors to contact for interviews.

- Establishing and coordinating two to three teams for the value chain analysis in the greater Monrovia area. Thrice-weekly group report-back sessions were scheduled for coordination and exchange of information between teams.
- A review of interview guides to use for analysis, including questions to focus on depending on the interviewee.
- Tips on interview strategies and how to solicit thorough information through open-ended questioning, observing confidentiality with private-sector businesses, etc.

Value chain analysis, mapping, end-market assessment and identification of constraints: A preliminary value chain map of the construction sector in greater Monrovia was developed, along with the various players, their roles and interrelationships, support networks and end markets. The map was used to identify potential interviewees in the construction value chain and its support markets. Over the course of the fieldwork, this map was altered to reflect realities on the ground.

Market-based solution identification: Throughout the fieldwork, the team developed a list of the major constraints and gaps identified through interviews and observation. The team then worked to identify market-based solutions that correspond to value chain constraints and identified market actors with incentives who could provide these solutions on a commercial and sustainable basis.

Value chain analysis and identification of market-based solutions

The Liberian housing market is profoundly dysfunctional, delivering a very uneven product to homebuilders, homeowners and renters in greater Monrovia.

From the perspective of the individual homebuilder, the principal dysfunctions center on issues of affordability, land and tenure security, basic services and infrastructure, access to finance, and construction services and materials – in order of their estimated impact on access to affordable housing.

1. **Affordability:** More than 80 percent¹ of the greater Monrovia area derives its incomes from the informal sector, and incomes are uniformly low. Sixty-eight percent of Liberians live below the poverty line. Because of the low household incomes and resulting low affordability levels, low- and middle-income households make most construction decisions based principally on price and not quality. This decision is usually based on the immediate costs of the materials, however, not the life-cycle costs of the construction materials, typically resulting in increased housing costs over the long term. The issue of low incomes is greatly compounded by the high costs of construction materials and lack of livelihood and employment opportunities for many households. Normally, it takes seven years to build a home.
2. **Land access and tenure security:** Liberia has a land administration system that is in tatters after many years of civil war. Tenure security, dependent on a functioning land administration system and sound land policies, is highly insecure. Additionally, much of the prime land within Monrovia is privately held and not available to the government for public housing. The processes for acquiring land and registering it are unclear, and where land is available, it is often relatively expensive.
3. **Basic services and infrastructure:** Serviced land within greater Monrovia is rare and not typically provided by public entities. Most often, developers and contractors are responsible for providing the necessary infrastructure, greatly adding to the cost of new house construction and ultimately deterring investments in residential construction.
4. **Access to finance:** Financing new home construction or incremental building is a challenge for many segments of the market. Liberia's mortgage market is highly underdeveloped and offers fewer than 100 mortgages a year. Commercial banks offer loans to salaried workers, and bank informants estimated that 60-70 percent of these loans are used for housing construction.

¹ More information at: <http://www.heritage.org/index/country/liberia>

However, salaried workers are a small percentage of the population. Banks and microfinance institutions offer loans to small and medium enterprises, but these loans typically reach only the “largest” of the small. Microfinance institutions and credit unions have relatively small operations within Monrovia, and for most of the population, formal financing is out of reach. This leaves the majority of the market reliant on self-financing through savings and loans from family and friends, remittances, and diversion of microenterprise loans where microfinance and credit union access is possible. A large part of the population remains outside of the formal banking sector.

5. **Construction services and materials:** Most construction supplies are imported, as Liberia has little manufacturing capability. Import and excise duties add to the costs of supplies. Where local manufacturing operations exist for cement, plywood, PVC piping and rebar, the expense of self-generated power adds significant cost to the final product.

In terms of construction services, masons and other construction artisans often learn informally, with little knowledge of or access to state-of-the-art training to upgrade their skills. As a result, the skill level of local construction artisans and laborers is very low, making development more costly for developers. Additionally, low-income households rely on these artisans who might not have adequate skills to build a quality house.

Brief assessment of the end market

Based on initial analysis, the construction sector in greater Monrovia, of which housing is a large component, is among the largest employers (informal) and generators of economic growth, next to mining and rubber production.

Viewed by some government agencies, there are three "tiers" to home construction.

1. US\$9-12 per square foot is the lowest tier of formal housing. Houses are typically one-bedroom and range from 300 to 400 square feet. The lowest estimated cost for a house of this construction is between \$2,700 and \$4,800.
2. US\$13-17 qualifies as a middle-tier. Houses are typically two bedrooms and greater than 400 square feet. The lowest estimated cost for a house of this construction is between \$5,200 and \$8,500.

3. US\$18-25 qualifies as the higher tier. Houses are typically three bedrooms or larger and are greater than 500 square feet. The lowest estimated cost for a house of this construction is between \$9,000 and \$15,000.²

Low-income homes are found in periurban areas and informal settlements around Monrovia, and also scattered through the urban areas. Their construction is catered through several formal distribution and retail chains and informal actors supplying the following products, mainly imported:

- Traditional clay/mud bricks, along with some compressed soil bricks and stabilized earth bricks (locally produced).
- Iron rebar (mostly imported but produced in Liberia as well).
- PVC piping (imported and produced locally by several companies).
- Window frames and doors (imported, though some companies are beginning to “assemble” final products in Liberia).
- Cement (imported and domestically produced).
- Nails, joints, screws, etc. (imported).
- Paint, spackle, joint compound, sheetrock, mold/trim (imported).
- Timber (local)
- Quarried rocks/stones and sand (local).
- Concrete blocks (locally produced)
- Corrugated metal roofing (imported, some local production)
- Plumbing fixtures (nearly all imported).
- Tools, cords, batteries, light bulbs, electrical wire, outlets, etc. (imported).

These products are sold through local retail shops and in some cases through centralized wholesale/retail “factories” within the city — the local name for where various retailers congregate to enable easy access by buyers.

More details on the market are provided in subsequent sections.

² It should be noted that no developer would find it easy to build any of these houses on a commercial basis given the constraints noted previously and in section 2.3. Only one developer we spoke with claimed to be able to build a house at the \$15,000 price point, likely not taking into account the cost of land and infrastructure provision. The National Housing Authority builds houses for between \$20,000 and \$30,000, but these are heavily subsidized, as the land and infrastructure are not part of the final price. Government agency estimates of the price for “affordable” housing are wildly optimistic.

Value chain map and description of market actors

Figure 1: Stylized Value Chain Map 1

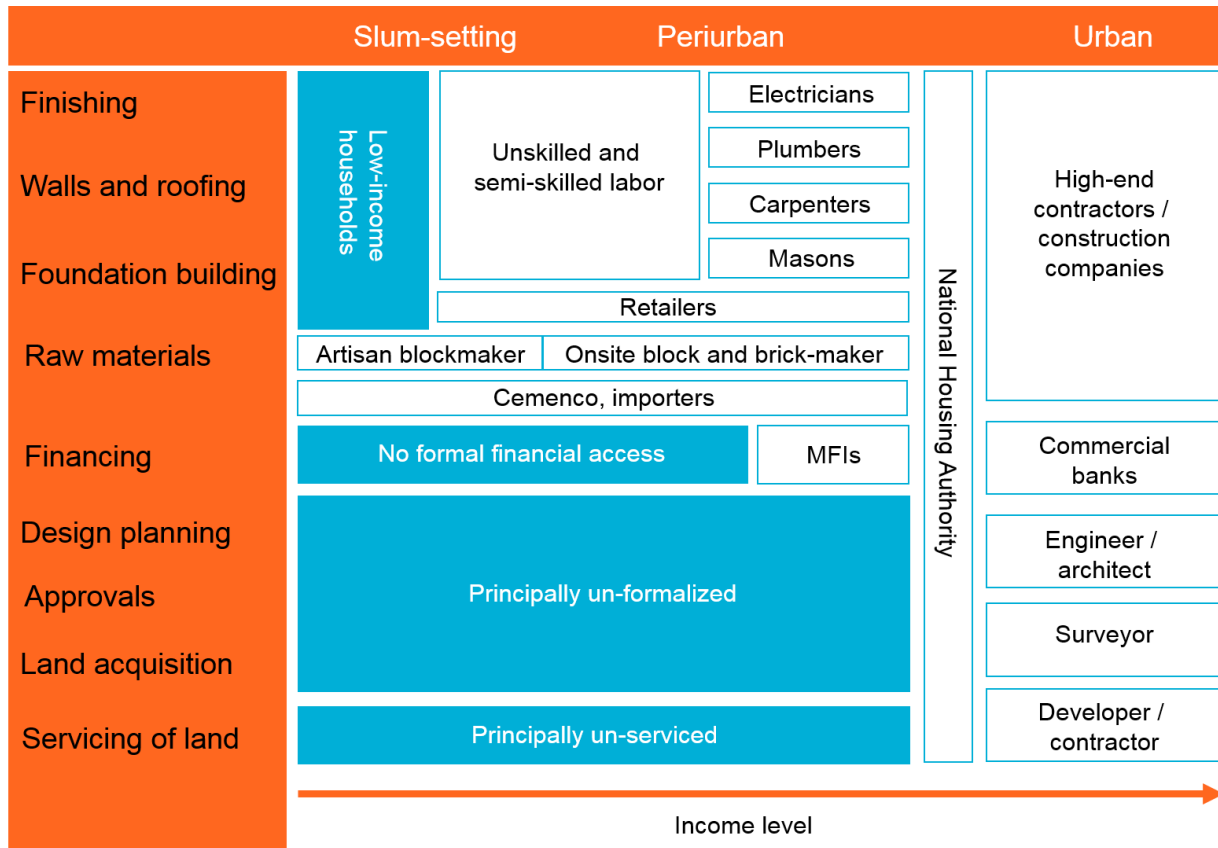
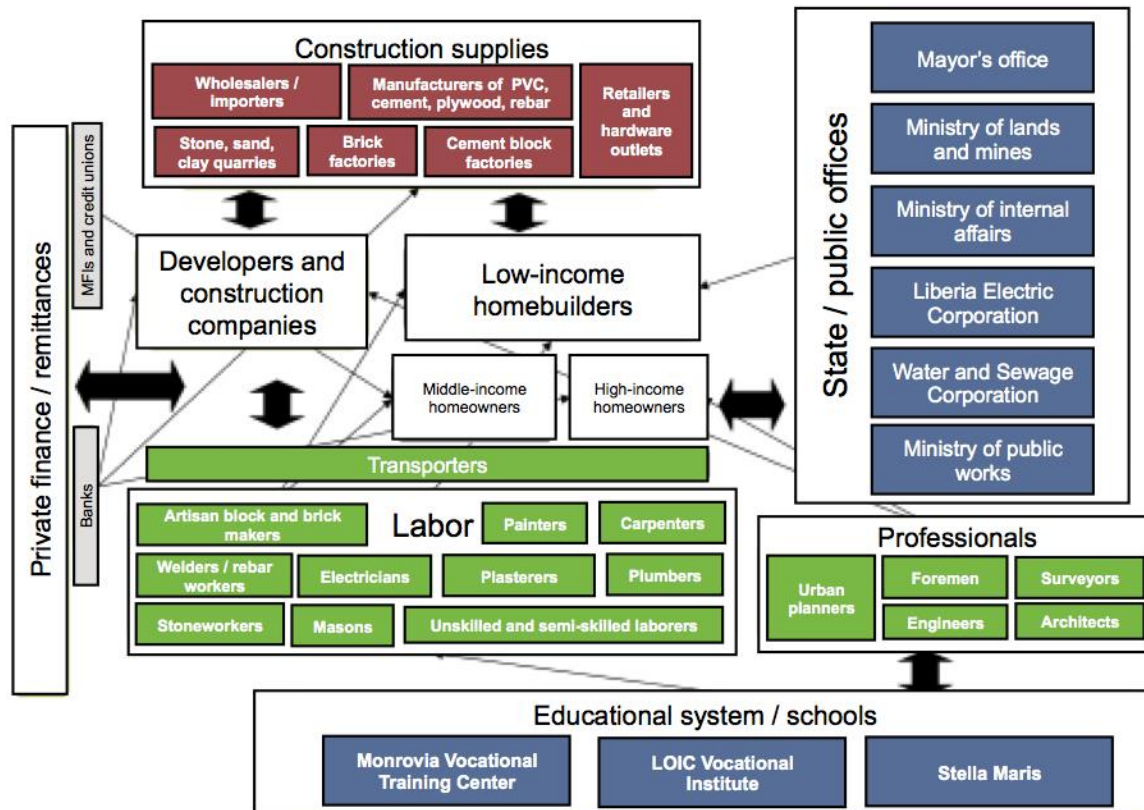


Figure 2: Stylized Value Chain Map 2



The two maps above present a stylized overview of the housing market and the major categories of actors at every stage.

Map 1 looks at the housing market from the perspective of the construction process, from start to finish. It also attempts to note the differences in the process from low to high income, as well as the context (slum, periurban, urban), which often correlates to income levels. Blue boxes indicate significant gaps in the market, where formal processes and actors are not typically operating. Note that the construction process for most of the market is incremental, built over time. Only the higher-income households can afford the expense of new home construction, including the homes built by the National Housing Authority, which are more affordable but still out of reach of most of the population.

Map 2 looks at the housing market from the perspective of the major actors present and their linkages. The actors depicted in green are individual artisans or construction professionals, with whom households would interact directly in the construction process, depending on their income levels. The presence of the state or government is fairly limited throughout most of the housing construction process, except for

higher-end housing and developers, with various offices issuing approvals at different stages of the planning and construction process.

The traditional construction practice for most of the market (low and middle income) starts with the home or property owner engaging the services of a mason who serves as a foreman, often under the homeowner's direct supervision. That mason then completes the work himself or hires or engages various specialists and local labor to begin the construction process. The number of workers involved in construction will vary depending on the income level of the household, with the lowest-income households doing as much of the work as possible themselves. The person serving as mason typically doesn't change at each *stage* of the construction process, which often progresses from foundation to walls to roofing. It is the foreman's task at each stage, sometimes together with the homeowner, to choose the construction materials and where to purchase them. Whenever possible, these materials are purchased locally at hardware stores, building material retailers and "factories." In most cases, it is the property owner who prefinances the purchase of these inputs. The materials are not usually purchased all at once or in bulk, as financing for the project is provided in several stages. Often the material and labor are paid in three or more stages, between which there can be significant pauses lasting months or even years: foundation, then walls, and on to roofing with plumbing/electricity (if applicable). Owners with the lowest level of financing will often produce their own concrete blocks (the basic component of the construction process) on site.

The laborers and artisans, few of whom have received formal vocational training at polytechnic schools, often learn on the job from each other. There is little evidence of associations. The retailers from whom households and masons source products will infrequently extend credit to pay for any supplies as an informal credit mechanism. Otherwise, construction proceeds in piecemeal fashion, depending on infusions of money from remittances or microcredit, the latter usually only supplementary to the former.

Stone, gravel, sand, timber and cement

Stone, sand and gravel are purchased either by construction companies or concrete block companies at several quarries in the greater Monrovia area, then brought to the construction site or shop by independent or in-house transporters, and processed into concrete blocks either at concrete block companies or (mostly) on site. Though the quarries aren't separated from the urban area by a large distance, the poor conditions of the roads and climatic conditions cause frequent delays in shipments to factories and companies (informants mentioned shipments that ideally would take several hours turning into multiday ordeals because of poor roads). Concrete blocks are mixed from two broad types of sand: washed river sand from supplier quarries based outside of Monrovia or sea sand. Sea sand is illegal to mine because of erosion concerns, but enforcement is questionable. Otherwise, the washed river sand that is used is transported, usually in bulk, to larger, more industrial concrete block factories.

Cement is produced locally by Cemenco or imported by one of three cement importers. Cemenco and the importers run their own distribution networks. The domestically produced cement is of good quality but sold at slightly higher prices than the imported cement. Developers and construction companies preferred Cemenco primarily for the large quantities of cement that could be supplied and for the regularity of the supply. By itself, Cemenco cannot meet local demand for cement, though further conversations indicate that Cemenco is operating below 50 percent capacity, so this may be a function of demand, not supply, constraints on Cemenco's part.

Timber is widely available, and Liberia is known to have one of the largest timber reserves of any West African country. Though timber construction is used in more rural settings, it isn't used widely in the periurban or urban areas, except in the roof frame. Bamboo is also available but not used in urban construction.

Concrete blocks and bricks, and timber

The primary component in urban middle-income home construction, especially of the walls, is concrete blocks. All households aspire to concrete block construction. Concrete blocks are typically produced on site by artisan block makers, using hand molds and often working without cement mixers. These blocks are often sand and cement, without any aggregate. Artisan block makers will also use a bag of cement to make twice the amount of recommended blocks in order to provide a more affordable block to homebuilders. This results in a more brittle and less durable concrete block. High-quality concrete blocks are produced by several firms but are available only to higher-end construction because of the costs (US\$1.25-\$1.75 per block, as opposed to 70-80 cents for blocks produced by artisans). Traditional clay brick is used to build less expensive housing. The clay is often quarried locally; traditional bricks, dried in the sun, are then made by hand or with molds, or produced and fired by larger firms. These more expensive standard red bricks are used in more formal structures, though it should be noted that brick construction is not widely used.

Laterite soil is abundant in Liberia and is a key ingredient of soil stabilized blocks. Previous research indicates these types of blocks could serve as a cheaper and more environmentally friendly substitute for concrete blocks, but the blocks currently are not manufactured or used in any significant quantity.

Support markets

Transport:

With varying fleets of trucks, transport companies and individuals work all along the value chain and are mostly responsible for transporting large quantities of sand and gravel, cement, and iron rebar from wholesalers in the greater Monrovia area or more frequently the nearby quarries to concrete block companies, hardware stores and construction sites. The concrete block and construction companies themselves may have their own in-house transportation as well. As mentioned, the road network is in extremely poor shape and adds significant costs to everything.

Credit:

In Monrovia, commercial credit from various banks extends to small and medium enterprises and established concrete block companies. In certain cases, local retailers will provide credit to trusted clients, but by and large homeowners and local construction professionals report no access to formal credit, relying on informal “*susu* credit,” savings and remittances for capital. This is largely attributed to the low-income status and unclear land tenure (i.e., lack of land collateral) of Monrovia residents.

Training:

Most construction professionals and laborers rely on informal, on-the-job training through more experienced masons. However, several formal training or vocational training schools (in particular the LOIC Vocational Institute and Monrovia Vocational Training Institute) “could” offer such training, though it is small-scale at the moment.

Identification of constraints and market-based solutions

Through the description above of the market actors and their relations, the relatively disorganized and nascent nature of the Monrovia construction market becomes evident: With low infrastructure, arms-length and cash-based transactions, poorly trained artisans, and expensive construction materials, many constraints inhibit access to affordable housing for the majority of the market.

Based on the information garnered in the field with key informants, the following constraints and associated market-based solutions in the home construction value chain were identified. It should be understood that these constraints will continue to be rearticulated over time as the market development program progresses with new findings. Additionally, the constraints listed below are those that lend themselves to private-sector involvement; the Habitat for Humanity team developed a more extensive list of constraints, many of which do not have corresponding market-based solutions. That will be detailed in the full Slum Upgrading and Affordable Housing Framework report.

Constraints	Market-based solutions ³	Existing and potential providers
Technology/product development constraints		
<p>Nearly all semifinished and finished construction materials are imported, and this, along with related excise duties and import taxes, affects the affordability of construction, especially for low-income housing.</p>	<p>Development of more locally manufactured supplies and the promotion and use of alternative/traditional building materials (soil compressed blocks, timber, mud bricks, etc.).</p>	<p>Entrepreneurs and construction product manufacturers.</p>
<p>There is a lack of choice of building materials and technologies in the urban housing market. This is due, in part, to the price of new technologies, low acceptance of traditional (mud bricks) and new materials and processes (such as paneling and pre-fab housing), and general underdevelopment of the market. This leads to hesitance to import or develop a market for these technologies on the parts of firms and ultimately limits choice in the marketplace.</p>	<p>Promotion of locally manufactured materials and alternate building technologies to low-income households.</p> <p>Development of “showcase projects” that demonstrate the use of affordable alternative building technology.</p> <p>Awareness of and access to new products and technologies to low-income household consumers and small to medium enterprise construction professionals.</p>	<p>Cement companies, construction product manufacturers, importers, building supply retailers and distributors, small to medium enterprise construction professionals, training institutions.</p>
<p>Block and brick making for many urban households is principally done on site by dedicated block makers, and is overseen by the household. Because of the diffuse nature of block making, quality is hard to</p>	<p>Training in and access to quality verification methods to LIH consumers and SME block manufacturers</p>	<p>Cement companies; construction product manufacturers; importers;</p>

³ These market-based solutions will need to be validated and assessed once implementation begins.

<p>monitor and ascertain. They are also not using best practices in concrete block production (e.g., curing, mixing, vibration, water, etc.), and many small to medium enterprise block makers do not use gravel/aggregate or will stretch a bag of cement to make double the amount of blocks recommended, resulting in lower-quality blocks and weak construction. Quality blocks are produced by firms but not available at a price point that low-income households can afford.</p>	<p>Training in best practices in construction (especially concrete blocks) to masons and other construction professionals.</p> <p>Access to affordable, high-quality materials for concrete block makers.</p>	<p>building supply retailers, distributors and dealers; quarries; training institutions.</p>
<p>Market access constraints</p>		
<p>Because of low affordability levels, low-income households make most construction decisions based principally on price, not quality. This decision is usually based on the immediate costs of the materials, however, not the life-cycle costs of the construction materials. Because owners often lack knowledge or awareness of safe building practices, materials and the consequences of “cheaper” construction techniques, the results are substandard and unsafe housing and increased housing costs over the long term.</p>	<p>Sensitization on differences in long-term construction outcomes between high- and low-quality materials (e.g., concrete blocks) and safe building practices.</p>	<p>Cement companies; construction product manufacturers; importers; developers and construction companies; building supply retailers, distributors and dealers; engineers/architects.</p>
<p>Many masons and artisans do not employ marketing techniques to find new work, relying on word-of-mouth and passers-by hiring them. This results in lost work opportunities and unstable income flows.</p>	<p>Access to customers and training in marketing and outreach for masons, foremen and concrete block makers.</p>	<p>Cement companies; construction product manufacturers; developers and construction companies; building supply retailers, distributors and dealers; training institutions.</p>
<p>Artisanal concrete block factories lack marketing/outreach skills to attract clients, resulting in reduced sales opportunities and reduced cash flow for investment.</p>		
<p>It is challenging for developers and large contractors to focus just on residential construction; the majority of their business needs to be focused on the commercial market to sustain their operation.</p>	<p>Aggregation of a sufficient pool of residential homebuilders to demonstrate commercial viability of residential construction for capable developers and contractors.</p>	<p>Cement companies; construction product manufacturers; building supply retailers, distributors and dealers; low-income homeowner groups;</p>

		microfinance institutions; banks; credit unions.
Business management and organization constraints		
Employee work-readiness, absenteeism and a general lack of trust are management challenges for many of the firms we spoke with. These challenges inhibit growth and vibrancy in the private sector.	Work-readiness training for lower-level and management employees in private-sector, construction-related businesses.	Training institutions.
Policy and land constraints		
Where building regulations or codes do exist, they are generally not enforced. There is also a lack of awareness about these standards among the community of construction professionals. This results in variable construction quality and typologies that may not be compatible with existing regulations and codes.	Awareness/sensitization to standards for masons, foremen and specialists.	Cement companies, construction product manufacturers, developers and construction companies.
There are no regulations requiring domestic banks and insurance companies to invest a certain percentage of their reserves or float in T-Bills. This limits the amount of investment capital the government might have in infrastructure, affordable housing development, mortgage market development, etc.	Development of regulations that require banks and insurance companies to invest a certain percentage of their reserves in T-Bills.	Advocacy.
Alternative building materials (such as soil stabilized blocks), are not yet included in the building codes. This means that banks cannot use this type of housing as collateral, limiting housing finance in the country.	Expand the building code to include the use of new materials and building technologies.	Advocacy from financial institutions.
Finances		
The amount of money that can be transacted via mobile money is quite small, which could limit loan repayment possibilities for the poor and increase friction in loan collection.	Expand the utility of mobile money for both users and providers, and grow the market for mobile money.	Mobile network operators.
There are no sources of long-term funding for mortgages or housing finance products in general, nor are there secondary markets or guarantee funds that would facilitate the development of a mortgage	Identify sources of long-term funding for the Liberian mortgage market.	

<p>market. There are also missed opportunities around concessions, who could provide long-term guarantees as part of their agreement with the government, and government outreach to multilaterals who could provide guarantees. The mortgage that is present in the country is only a 10-year mortgage, provided by one financial services provider, and it is a quasi-mortgage product because the builder doesn't see the money until the mortgage has been paid off in its entirety, and the wholesale interest rate is potentially subsidized (or unrealistically low). This keeps the mortgage out of reach of many middle-income customers and forces them to build progressively, extending the building process (up to seven years by some estimates).</p>	<p>Identify guarantee funds for wholesale mortgage lenders.</p> <p>Develop government strategies for negotiating long-term guarantees with concessions.</p> <p>Establish a secondary market for Liberian mortgages.</p>	
<p>It is difficult to find financing and guarantees for developers who wish to move into real-estate management, building multiunit housing and charging an affordable monthly rental rate (US\$100-\$750/month).</p>	<p>Identify sources of long-term funding for developers who wish to move into real-estate management.</p> <p>Identify guarantee funds for wholesale and retail lending to developers.</p>	
<p>Savings groups are well-perceived and a normal practice for low-income households, but sometimes not trusted because of repayment concerns. Related to this, there is a lack of a "credit culture" because expectations were created post-conflict that microfinance money was not meant to be repaid as it was "relief money." Donor-funded capacity building is focused at the government level, not the sector level. There is also low financial literacy and savviness of bank and microfinance institution clients. All of this limits the growth of microfinance institutions in the country and restricts access to financing for middle- and low-income households.</p>	<p>Capacity-building for microfinance lenders.</p> <p>Financial literacy and awareness training to current and potential microfinance clients.</p>	<p>Banks, microfinance institutions, credit unions, financial consultants.</p>
<p>Staff capacity and products of financial institutions are focused on the formal sector, primarily small to medium enterprises and commercial</p>	<p>Development of housing finance products for middle-income households</p>	<p>Banks, microfinance institutions, credit unions,</p>

<p>customers, all of which is short-term lending. This limits the market for financial services to middle- and low-income households who derive their income from the informal sector (confirm size of informal sector).</p>	<p>that are not small to medium enterprises.</p> <p>Capacity building with banks and microfinance institutions with commercial incentives to develop housing loan products for underserved middle-income segments.</p>	<p>financial consultants.</p>
<p>Many property owners have no access to steady income, resulting in an inability to pay for materials and labor to build homes efficiently, quickly and to standard. Many lack knowledge of credit systems that could help them save money as an alternative to incremental homebuilding.</p>	<p>Awareness of and access to finance for property owners.</p>	<p>Banks, microfinance institutions, credit unions.</p>
<p>Property owners do not have regular income flow and cannot pay immediate lump sums for materials. This pressures them into saving on materials and practices and results in poorer construction methods being applied.</p>		
<p>Masons, construction specialists and foremen (including iron/rebar workers, carpenters, plumbers, electricians, etc.) lack access to various credit mechanisms that could increase their ability to invest in improved tools and equipment.</p>	<p>Awareness of and access to finance for masons and construction specialists.</p>	<p>Banks, microfinance institutions, credit unions.</p>
<p>Raw material constraints</p>		
<p>Sea sand is a poor material for construction, and sand mining on beaches contributes to coastal erosion and is now illegal, though enforcement is uncertain. River sand pumping operations are now being set up by Chinese firms, though sites are difficult to access during the rainy season or just inaccessible for low-income households. Sand mining is a regulated business and enforced by the EPA, but enforcement capacity is weak.</p>	<p>Adequate and reliable access to river sand for middle- and low-income home builders.</p>	<p>Quarries.</p>

<p>Timber is readily available in Liberia, but cutting and curing practises are rudimentary and quality is variable. Liberia has one of the largest timber reserves of any West African country. Forestry in Liberia is regulated, but enforcement and control practice are weak. Valuable species are harvested primarily for export. Large swathes of forests are occupied by concessions. Timber may be underused in housing construction as a result of all this.</p>	<p>Development of production and marketing capacity in the timber industry and among artisans and carpenters.</p> <p>Promotion of timber for use in low-income homebuilding.</p>	
<p>Alternative construction materials are underused because of lack of skills, awareness, perceptions, and the ability to manufacture and use them. For example, bamboo grows well in Liberia but is not used traditionally as a construction material for anything other than woven mats. Sun-dried mud blocks are commonly used, but knowledge of and capacity to improve the versatility of mud is low.</p>	<p>Exploration of alternative construction materials in low-income homebuilding.</p> <p>Development of “showcase homes” that demonstrate the viability and attractiveness of non-concrete block construction.</p>	
<p>Infrastructure</p>		
<p>Public electricity generation and delivery is extremely limited, and most electricity for households, manufacturing and industry is self-generated at high cost. This limits industrial development and household electricity access and affordability. The availability of power will be greater once the hydro plant comes online later this year, though household access will still be very limited.</p>	<p>Connect households to hydro power.</p> <p>Expanded distribution networks and marketing of solar products in the homes of off-grid customers.</p>	<p>Building supply retailers, distributors and dealers; microfinance institutions; banks; credit unions.</p>
<p>Skills level/labor constraints</p>		
<p>Generally, a small number of formal contractors are working in the housing market (often for upper-income households), and they have access to a very small pool of skilled professional workers in country (engineers, urban planners, architects). This ultimately limits housing development for middle- and low-income earners.</p>	<p>Large-scale training investments in Liberians who wish to become construction-related professionals.</p>	

	Fellowship opportunities for construction-related professionals who wish to work for a time in Liberia.	
Masons and other specialists are learning informally, with no continuing education. Masons and specialists lack knowledge of and access to state-of-the-art training to upgrade their skills. As a result, the skill level of local construction artisans and laborers is very low, making development more costly for developers. This also affects progressive housing, as low-income households rely on masons who have been trained on the job and may not have adequate skills to build a quality house.	<p>Training in improved construction techniques and skills for masons and other specialists.</p> <p>Development of artisan unions and associations.</p> <p>Facilitation of the formation of construction brigades that can work and promote their construction services “on site” (masons, plumbers, electricians, carpenters, etc.).</p>	Training institutions.
For financial service providers, there is a lack of skills and capacity for targeting and providing services to low-income, middle-income, and informal sector earners. This manifests in challenges around risk assessment, character assessment, longer-term lending, etc.	Capacity building with banks and microfinance institutions with commercial incentives to develop housing loan products for underserved middle-income segments.	Financial consultants.
Surveyors are planning the city because of a lack of a master plan and urban planners. This results in piecemeal development of the city based on individual interests, limiting holistic neighborhood development for all income levels.	Fellowship opportunities for construction-related professionals who wish to work for a time in Liberia.	
There are no artisan unions or associations that would focus on formalizing the profession or self-enforcing quality standards. This results in an inability to standardize and promote good construction practices and challenges in identifying skilled artisans on the part of households who are managing their own construction process.	Development of artisan unions and associations.	

Recommendations on next steps in program implementation

The value chain analysis exercise is the first step in the development of a program that works with the private sector to expand the provision of higher-quality housing products and services to underserved and unserved segments of the market in the greater Monrovia area. Below are the next steps and recommendations for actualizing such a program.

Prioritization of market-based solutions

Once this list of constraints and market-based solutions, or MBS, are fully articulated, the program design team will need to prioritize each MBS on the basis of:

- The number of housing consumers who would benefit.
- The impact on the price and quality of low-income housing.

Plan for assessment of prioritized market-based solutions and engagement of firms

The next phase of program design activities will focus on identifying and engaging providers of the prioritized MBS, many of whom had been initially identified in value chain analysis interviews. These potential MBS providers or firms include, but are not limited to:

Banks and microfinance institutions: The housing finance market is incredibly underdeveloped, and while salaried workers can access loans, the households engaged in the informal market — which make up the majority of the market — cannot. Several microfinance institutions we interacted with expressed interest in exploring the development of loan products for households with sufficient income who cannot currently access any formal housing finance products.

Cement suppliers and importer-wholesalers of construction materials: As they interact with concrete block companies and hardware stores as their clients, they can influence the way their cement is being mixed, while expanding sales of improved construction materials in Monrovia through existing retail outlets.

Gravel and washed river sand suppliers: Their quality product may be missing for lower-income households in Monrovia, and it is important to assess how they could market their product and advocate its use among building professionals in Monrovia.

Concrete block companies: These companies had expressed difficulties selling their concrete blocks, which are produced according to higher standards. One manufacturer mentioned that it had attempted to produce a reasonably priced yet still higher quality block for the market and met with little success.

Focus group discussions with targeted MBS providers

During the process of assessing MBS, it is important to gauge firms' incentives, willingness and capacity to provide the solutions to the target population in a commercially viable manner. To this end, the program design team will need to hold several roundtables or focus group discussions in January with representatives from the private sector. Representatives should include construction companies,

cement companies, a materials wholesaler, and some local hardware stores known for their outreach to the market above and beyond simple retail. To triangulate discussion and include local stakeholders, local foremen, masons and property owners should also attend. Another group discussion should focus on financial service providers.

The purpose of these discussions will be to:

- Validate the findings, constraints and MBS from the value chain analysis in a group setting.
- Provoke discussion among the targeted firms as to how the identified MBS can best be provided in the market.
- Solicit suggestions for how Habitat could build the capacity of the firms to sustainably provide the targeted MBS in Monrovia, e.g., through market development facilitation activities.

The format at these focus group discussions will involve presenting the top two or three prioritized market-based solutions, and discussing the challenges and incentives the participating firms would have in providing the MBS in Monrovia. To solicit constructive suggestions to Habitat for facilitation activities to carry out in concert with the companies, illustrative examples will be developed and presented.

Outreach to firms to solicit initiatives: Invitation for applications

It will be important for Habitat to "keep the ball rolling" with the firms it meets and who attend the focus group discussions by distributing an "invitation for applications" to solicit proposed initiatives from the targeted firms. Because of the nature of the Liberia Country Program, these invitations can be distributed only in the second phase, when implementation is set to begin. It is important that there not be too long of a lag between the focus group discussions and the dissemination of these invitations for applications. The invitation provides an opportunity to follow up on ideas and initiatives that were proposed by market actors and should be distributed to as many potential firms as possible. This invitation for applications will be developed together with the team after the focus group discussions and will include clear guidelines and parameters that specify the nature of potential collaboration between Habitat for Humanity International and the firms.

Examples of firm selection criteria

- Firms have commercial linkages with a large number of small and medium enterprise intermediaries and low-income housing consumers.
- Firms have incentives and are willing to make investments in improved or expanded relations with small and medium enterprise intermediaries and low-income housing consumers that may only show results over a longer period.
- Firms have sufficient financial strength to make investments or dedicate resources to operations that will result in improved and/or expanded relations with small and medium enterprise intermediaries and low-income housing consumers.
- Firms are able to compete successfully in the market for their products or services.
- Firms have the potential to influence other actors in the value chain.
- Firms have an acceptable track record and reputation as businesses.

Once applications are submitted by these firms, Habitat can enter into discussions and negotiations to determine the most appropriate initiatives to support. Moreover, during the application process, it is expected that the Habitat team will help the firms articulate their ideas and initiatives, ensuring these comply with Habitat's objectives in Monrovia and the specified criteria.

Examples of firm initiatives

- Development of housing loan products for middle-income households currently without access to formal housing finance.
- Company-led training, field days and extension to expose construction professionals and low-income housing consumers in greater Monrovia to improved construction materials.
- Construction of "demonstration homes" in strategic locations around Monrovia.
- Mentoring of wholesale/retail distributors and construction professionals in the advantages and proper use of construction materials.
- Capacity building activities for small- and medium-sized enterprises (serving low-income consumers) to improve their management skills, knowledge of products and "client-oriented" practices.
- Development and/or procurement of improved quality, affordable construction materials targeting the low-income housing market for sale to low-income housing consumers.
- Development of strategies and linkages with financial institutions to facilitate the provision of cash or in-kind production finance to low-income housing consumers with whom they transact, either directly or through retail outlets.
- Cross-company initiatives to identify improved products and technologies (affordable to low-income consumers) through attending regional or international trade fairs, visiting potential suppliers, guest speakers, etc.
- Firm-designed training curricula (to be used by local vocational training institutions) and apprenticeships in the use of improved construction products and services destined for low-income consumers.

Although many financial service providers, wholesale importers, retailers and general construction companies (categories of firms identified as potential providers of market-based solutions) were interviewed during the program design exercise, it will be important to reach out to others that fit the profile and criteria established by Habitat within the next few months. This will help ensure that Habitat is providing an equal opportunity to all qualified firms interested in collaboration, maximizing the number of qualified firms, and thereby creating the greatest scale of impact for low-income property owners. This can be done through a public advertisement (through newspapers, associations, etc.) where qualified firms are requested to submit an "expression of interest" to collaborate with the Habitat program.

Memoranda of understanding and technical/ financial support agreements

Facilitating firm initiatives to improve the products, services and support they provide to construction professionals and low-income property owners will be a learning process both for the Habitat team and the firms involved. We recommend that the program begin by providing modest technical and financial support to firm initiatives (with initial cost share contributions not to exceed \$15,000 per firm). Starting small will help to structure collaboration carefully, and Habitat staff members will be able to adapt to working with these firms, finding out more cautiously what is possible over the long run and avoiding oversubsidizing firms or structuring expensive activities that in the end do not work for either the Monrovia homebuilders or the firms. Then, after a first cycle of these activities has been successfully implemented, Habitat may elect to scale up to support other firm initiatives.

Once activities are identified and agreed upon, Habitat for Humanity International will develop memoranda of understanding, or MOUs, and technical/financial support agreements, or MOU addendums, with the targeted firms. These will clearly describe the nature of collaboration between the project and the firms, roles and responsibilities, work plans, monitoring procedures, and cost share payment modalities. Once these are established, Habitat can provide technical support as

needed to the firms in implementing their initiatives. The creation of an MOU and addendums should be a collaborative effort; the firm and Habitat will have specific requirements and requests that need to be negotiated and discussed.

Conclusion and acknowledgments

This value chain analysis report is meant to be a practical road map for developing a successful market development program in the greater Monrovia area and for illustrating how the development of the private sector can fit within a wider slum upgrading and affordable housing framework for the Cities Alliance Liberia Country Program by:

- Facilitating low-income homebuilders' access to improved credit through financial service providers and other firms.
- Providing low-income homebuilders with access to more affordable construction materials and services through firms and their commercial distribution channels.
- Building the capacity of firms to introduce and expand sales of state-of-the-art construction materials to low-income housing consumers, either directly or through commercial distribution networks.
- Supporting the initiatives of firms to improve the capacity of their intermediaries (wholesale/retail distributors and construction professionals) to improve their marketing and technical support to low-income housing consumers and construction professionals.
- Supporting market actors to carry out training/promotion activities for small to medium enterprise construction professionals in improved, state-of-the-art, affordable construction technologies.

For this value chain analysis, we were heavily reliant on Frank Krah, Amos Paye and the helpful staff of YMCA Liberia, and we want to extend our sincere thanks for their support. We also appreciate the willingness of the staff of Slum Dwellers International to put us in contact with their partners in Monrovia.

Annexure A: List of key informants

Public sector	
Monrovia City Corporation	Honorable Mayor Clara Mvogo
Paynesville City Corporation	Honorable Mayor Cyvette Gibson
	Special Projects, Ms. Robena Vincent
National Housing Authority (NHA)	Deputy Director Prince Wreh
	Honorable Sam Wlue, Managing Director
Ministry of Internal Affairs, Government of Liberia	Deputy Minister for Urban Affairs H.E. Mr. Stephen Nueville
	Assistant Minister for Urban Affairs Mr. Robert Bestman
Central Bank of Liberia	Dr. Mounir Siaplay, Deputy Governor for Economic Policy
	Michael B. Ogum, Deputy Director Regulation and Supervision
Liberia Institute of Statistics & Geo-Information Services	Director Thomas L. Davis, Mr. Johnson Q. Kei
Interim Land Task Force	Hon. Dr. Othello Brandy, Chairman, Interim Land Task Force
Liberia Chamber of Commerce	Vice President Tony Hage
Environmental Protection Agency of Liberia	Urias S. Goll, Deputy Executive Director
National Social Security and Welfare Corporation	George Bright
Private sector	
Land surveyors	
Aksad Consultants	Kelvin I. Aighobahi, President
Banks	
Liberia Bank for Development & Investment	Ms. Edwina C. Zackpah, Mortgage Consultant
EcoBank	David Thompson, CEO
	Gibson Kollie, mortgage products
Guarantee Trust Bank	Jonathan Toe
Access Microfinance Bank	Charles Kollie, Microfinance Manager
	Emmanuel Holder, Risk Manager
Microfinance Institutions	
LEAD Microfinance Institution	CEO
Diaconia MDI	MD of Diaconia MDI, Edwina D. Vakun-Lincoln
Alliance Microfinance AS	CFO, Ingunn Nesje
BRAC Liberia Microfinance Company Limited	Mainuddin Ahmed, Country Representative

Housing construction supply — raw materials

Cemenco	Mr. Pramod Gemawat, Managing Director Ms. Christine Nimely, Sales Manager
Kpaku's Plaza Inc.	Mr. Clarence K. Momolu, CEO

Housing construction supply — manufacturers of finished and semifinished supplies

Artisan concrete block manufacturers	
Lemixe Blocks	Abdallah Fouani
James Davis & Sons	James Davis, President

Housing construction supply — dealers and retailers

City Builders Inc.	Marwan Eid
Eagle Electrical Corp.	Fadi Eid

Developers, construction companies, housing providers

Alisa Group/Brooklyn Group	CEO George A. Miller President Aloysius S. Tiklo
Ammenton	
Firestone Plantation Company	Aynn Reeve, Human Resources and Social Services Director

Contractors, masons, plumbers and other small and medium enterprise construction professionals

Mason	Dexter Cassell
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Design professionals (architects and engineers)

Caesar Architects Inc.	Eva-Mae Campbell, Manager
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Training institutions and vocational schools

LOIC Vocational Training Institute	Marie S. Kolensky, Deputy Director
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Community sector

Low-income households	4x Community Focus Group Discussions
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Donors, NGOs

USAID	Democracy and Governance Specialist Louise Fahnbulleh
	Jeremy Meadows, Local Government Governance and Capacity Development
United Nations Development Program	Moses A. Massah, Programme Specialist, Energy and Environment
YMCA Liberia	Amos Paye, Liberia country program point person

Academic institutions and housing experts

AEP Consultants	Sylvanus B. O'Connor, Managing Director
UN-HABITAT	Frank Krah
Microfinance institution expert	Ruth Kullah
Agency for Economic Empowerment and Development	Samuel W. Thompson

**every
hand**
makes a difference



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