

# Supplemental Appendix

## Women Entrepreneurs Find Business Opportunities in Nigeria's Fast-Moving Consumer Goods Sector

### Background

#### Women-Owned Businesses and Global Value Chains

As producers, innovators, distributors, market agents, and consumers, women-owned businesses are an essential part of global value chains. Small to medium-sized enterprises (SMEs) are key drivers of economic growth, and women-owned enterprises account for approximately 30 to 37 percent (8 to 10 million) of all SMEs in emerging markets.<sup>1</sup> Fully incorporating women into the economy could add US\$12 trillion to global gross domestic product (GDP) by 2025.<sup>2</sup> Research suggests that greater engagement of women businesses is also essential for innovation.<sup>3</sup> Investing in women-owned businesses by incorporating them into value chains presents an opportunity for companies to achieve more stable and efficient supply chains while expanding market reach. These business benefits impact financial performance and long-term business resilience.<sup>4</sup>

#### Women Entrepreneurs, Fast-Moving Consumer Goods, and the Nigerian Economy

In Nigeria, the fast-moving consumer goods (FMCG)<sup>5</sup> sector is the third largest contributor to the economy, estimated at 16 percent of GDP.<sup>6</sup> The sector depends on micro, small, and medium-sized enterprises (MSMEs), which constitute over 96 percent of all businesses in Nigeria<sup>7</sup> and play a critical role in the FMCG value chain as distributors, ensuring that products reach Nigeria's growing consumer market. Studies demonstrate that if Nigeria was to reduce gender inequality, the economy could grow on average by as much as 1.25 percentage points annually.<sup>8</sup> In the FMCG sector, female distributors are

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<sup>1</sup> IFC (International Finance Corporation) and GPF (Global Partnership for Financial Inclusion). 2011. *Strengthening Access to Finance for Women-Owned SMEs in Developing Countries*. Washington, DC: IFC.

[https://www.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/sustainability-at-ifc/publications/publications\\_report\\_accesstofinanceforwomensmes#](https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/sustainability-at-ifc/publications/publications_report_accesstofinanceforwomensmes#)

<sup>2</sup> Woetzel, Jonathan, Anu Madgavkar, Kweilin Ellingrud, Eric Labaye, Sandrine Devillard, Eric Kutcher, James Manyika, Richard Dobbs, and Mekala Krishnan. 2015. *How Advancing Women's Equality Can Add 12 Trillion to Global Growth*. McKinsey Global Institute.

<https://www.mckinsey.com/featured-insights/employment-and-growth/how-advancing-womens-equality-can-add-12-trillion-to-global-growth>

<sup>3</sup> BSR (Business for Social Responsibility). 2016. *Women's Empowerment in Global Value Chains*. <https://www.bsr.org/reports/BSR-Report-Womens-Empowerment-Supply-Chains.pdf>

<sup>4</sup> BSR 2016

<sup>5</sup> Fast moving consumer goods (FMCG) are low-cost products, in high demand and sold quickly.

<sup>6</sup> Fiorini, Reinaldo, Damian Hattingh, Ally Maclaren, Bill Russo, and Ade Sun-Basorun. 2014. *Africa's growing giant: Nigeria's new retail economy*. McKinsey & Company. <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/africas-growing-giant-nigerias-new-retail-economy#>

<sup>7</sup> Small and Medium Enterprises Development Agency of Nigeria. 2013. *Nigeria SME Survey*.

<sup>8</sup> IMF (International Monetary Fund). 2018. *Good for Women Good for Growth: Closing Nigeria's Gender Gap*. Podcast, March <https://www.imf.org/en/News/Podcasts/All-Podcasts/2018/03/08/nigeria-gender-inequality>

vital to sales, often reaching unserved or underserved last-mile consumer markets.<sup>9</sup> Yet, women entrepreneurs face many challenges that restrict the growth potential of their businesses, including limited access to finance, poor infrastructure, limited access to and use of technology, and smaller business networks.<sup>10</sup>

With financial support from the Women Entrepreneurs Finance Initiative (We-Fi)<sup>11</sup> and guidance from the World Bank Development Economics Vice Presidency (DEC), the International Finance Corporation (IFC) Gender Business Group partnered with Daraju Industries, Ltd (Daraju) to research how the FMCG sector in Nigeria can support female entrepreneurs and capture growth opportunities. This document is a supplemental appendix to the published case study of the findings from the IFC and Daraju research. It summarizes the research methodology, quantitative survey results, and sales performance analysis findings. The full case study publication can be downloaded at [www.ifc.org/gender](http://www.ifc.org/gender).

## Methodology

### Research Objectives

The study's main objectives were to

- Understand how incorporating women into corporate value chains can contribute to better outcomes and business results.
- Identify additional insights on good practices and lessons learned for investing in women in distribution networks.
- Support Daraju in identifying how to strengthen the business capacity of its distributors.

The research was driven by two questions:

- Are there business performance differences between male and female distributors?
- If so, what are these differences, and what contributes to them?

### Data Sources

The research used two data sources for quantitative data inputs: a survey questionnaire completed by distributors and distributor sales performance data. Qualitative data was captured through interviews with senior management, sales executives, and female distributors. Analysis, findings, and insights from both quantitative and qualitative data were incorporated into the overall narrative of the published case study.

### Survey Questionnaire

The survey contained 44 general questions, mainly multiple choice and ranked responses, with a few open-ended questions to limit the potential for error during survey administration. The questions captured dimensions of distributor success across several factors, including access to finance, access to markets, customer segmentation, sales and revenues, access to technology, access to networks, access to logistics, and business management skills.

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<sup>9</sup> The "last mile" is defined as the final leg in point of sale, often geographically remote, off-grid, and lower income.

<sup>10</sup> IMF, 2018

<sup>11</sup> For more information on We-Fi, visit [www.we-fi.org](http://www.we-fi.org).

## Sales Performance Data

Sales performance data for distributors was provided across various FMCG categories (household, personal care products) and products (detergent, soaps, toothpaste, petroleum jelly, notebooks, other). Sales data was shared for calendar years 2017 and 2018.

## Data Collection

IFC and DEC teams used the software application SurveyCTO for data collection, monitoring, and quality checks. Survey data was collected over a one-month period during April 2019. Given the limited Internet access and number of surveys to be conducted, 20 IFC-trained Daraju staff conducted the data collection in person. IFC staff received guidance from SurveyCTO, which provided troubleshooting support with the application. Several quality checks on the data were implemented, including audio audits during survey data collection, monitoring of start and end times and dates for surveys, and survey data verification for accuracy and reliability.

## Data Analysis

Survey responses and sales performance data were analyzed using regression analysis to examine statistically significant performance differences by gender, and if/how such differences impact distributor sales performance.

## Sampling

Three key criteria were applied to develop a robust sample for analysis: 1) sufficient sample size, 2) equal participation of male and female distributors, and 3) geographic distribution of respondents representative of the geographic distribution of distributors within Daraju's distribution network. Three hundred distributors were selected across different regions in Nigeria. Almost 250 distributors completed surveys (47% women and 53% men). The number of surveys collected from each region was calculated based on the percentage of total distributors present in that region. For example, for 20 percent of distributors in Lagos, approximately 30 male and 30 female distributors were surveyed from Lagos:  $300$  (male and female distributors to be surveyed)  $\times 0.2$  (20 percent distributors in Lagos) = 60 male and female distributors in total were surveyed. Table A.1 shows the regional breakdown of the sample.

**Table A.1****Survey Sample by Region and Gender**

Sample characteristic	Number	Percentage
Total survey responses	243	100%
<b>Respondents by gender</b>		
Number of male surveys	128	53%
Number of female surveys	115	47%
<b>Respondents by region</b>		
East	32	13%
West	61	25%
North	76	31%
Lagos	74	31%

## Survey Results

### Demographics and Time Usage by Gender

Findings on household demographics, time spent running the business, and time spent caring for the household are included in Table A.2. Findings were categorized by varying levels of statistical significance (90% [0.1], 95% [0.05] and 99% [0.01]).

**Table A.2****Summary Statistics of Distributor Demographics**

Demographic	Number of observations	Mean	Median (population)	Standard deviation	Mean (male)	Mean (female)	Female-male diff (coeff)	Standard error
Age (in years)	223	43.73543	44	10.90032	41.67	46.27	4.595***	1.424
Education (scale 1 to 5)	243	3.662551	4	1.083935	3.58	3.76	0.178	0.139
Dependents in family (#)	243	8.670782	7	5.716318	9.67	7.56	-2.115***	0.71
Hours spent running business	243	9.958848	10	1.738704	9.78	10.16	0.375*	0.223
Hours spent caring for household	243	4.045267	4	1.887871	4.23	3.83	-0.400*	0.242

\* $p \geq 0.1$ ; \*\* $p \geq 0.05$ , \*\*\* $p \geq 0.01$ .

The analysis of survey findings shows that female distributors are on average 4.6 years older than male distributors. Male and female distributors are almost equally educated, mostly at a high school or university level, with women slightly more education than their male counterparts. Female distributors in the survey sample reported fewer dependents than men, and spent more time running their business and fewer hours on household responsibilities. Qualitative interviews with female distributors revealed they felt they had enough support for household responsibilities and could be more present in their business.

### Business Demographics by Gender

Findings on business demographics reveal that the distributors (both male and female) surveyed had owned businesses for periods ranging from 1 to 21 years, with male distributors owning businesses for longer periods of time: a maximum of 21 years for male distributors versus 13 years for female distributors. Most of the businesses were SMEs. See Table A.3 for data points.

The most substantive differences in business statistics for male and female distributors were across two areas:

- *Employees* (referred to as “manpower” in the survey): Female distributors on average have fewer employees than men.
- *Customer reach*: On average, female distributors sold 30 percent more to female consumers than male distributors. Over 75 percent of female distributors’ customers are women, whereas 45 percent of male distributors’ customers are women.

**Table A.3**

#### Summary Statistics of Distributor Business Demographics

Business statistic	Number of observations	Mean	Median (population)	Standard deviation	Mean (male)	Mean (female)	Female-male diff (coeff)	Standard error
Years in business	243	12.6	12	6.8	13.59	11.58	-2.011**	0.869
Sole proprietor	243	0.7	1	0.4	72%	78%	0.064	0.056
Number of employees	79	8.1	6	6.3	9.39	6.24	-3.149**	1.311
% of women customers	243	59	70	27.3	45%	75%	29.548***	2.891
Customer segmentation	243	29.8 (R) 13.4 (M) 49.4(W)	30 (R) 10 (M) 50 (W)	18.1 (R) 10.7 (M) 21.3 (W)	30% (R) 13% (M) 49% (W)	29% (R) 14% (M) 50% (W)	-1.3 (R) 0.4 (M) 0.9 (W)	2.3 (R) 1.4 (M) 2.7 (W)

Notes. R: retail clients, M: market women,<sup>12</sup> W: wholesalers

\* $p \geq 0.1$ ; \*\* $p \geq 0.5$ ; \*\*\* $p \geq 0.01$

<sup>12</sup> In this study, “market women,” also known as *onigbanjo*, are mobile female microretailers who operate in market areas. They usually collect goods on credit from distributors and sell directly to consumers.

## Current Business Obstacles

To understand current business challenges faced by distributors, respondents were asked to rank various obstacles on a scale of 1 (key barrier) to 5 (not a major obstacle). Table A.4 summarizes the findings.

**Table A.4**

### Distributor Business Obstacles, Ranked from Highest to Lowest

Business obstacle	Number of observations	Mean	Median (population)	Standard deviation	Mean (male)	Mean (female)	Female-male diff (coeff)	Standard error
Theft, crime, and corruption	243	2.312757	2	1.185711	2.31	2.31	0.001	0.152
Access to finance	243	2.160494	2	1.2414	2.16	2.16	-0.008	0.157
Access to transportation	243	2.045267	2	1.139998	1.98	2.12	0.145	0.148
Finding suppliers	243	1.921811	2	1.031557	1.84	2.01	0.165	0.133
Access to networks	243	1.884774	1	1.122228	1.87	1.90	0.037	0.145
Access to storage	243	1.81893	1	1.064128	1.77	1.88	0.113	0.138
Support from family/community	243	1.847737	1	1.039243	1.84	1.85	0.008	0.135
Balancing household and business	243	1.769547	1	0.9558317	1.75	1.79	0.041	0.124
Finding customer base	243	1.831276	1	1.016562	1.92	1.73	-0.191	0.13

Four business obstacles were further analyzed in both the quantitative analysis and qualitative interviews:

- Access to finance:** Both male and female distributors surveyed cited access to loans as a key barrier to growing and expanding their businesses. Overall, less than 30 percent of distributors have access to credit. Of the 243 distributors surveyed, 69 reported access to some type of loan (microfinance, local savings group, credit facility, cooperative society, family, or friends). Only 22 percent of female distributors have access to any type of credit facility versus 34 percent of male distributors (see Table A.5).

**Table A.5**

### Percentage of Distributors with Access to Finance, by Gender

Business obstacle	Number of observations	Mean (male)	Mean (female)	Female-male diff (coeff)	Standard error
Access to finance	69	34%	22%	-0.126**	0.057

\* $p \geq 0.1$ ; \*\* $p \geq 0.5$ ; \*\*\* $p \geq 0.01$

- **Access to logistics (transportation and storage):** Female distributors highlighted access to logistics as a larger challenge than their male counterparts. Women stated that having their own means of transportation was critical for business growth. Distributors also cited access to nearby storage facilities for inventory management and more efficient logistics as major obstacles. Inefficient and long delivery wait times and high costs for faster replenishment of inventory means businesses need greater access to storage facilities and more stock on hand to meet customer demand.
- **Access to networks:** Overall, only 22 percent (54 of 243) of distributors have access to a formal network or association. Female distributors face a more significant challenge in this area, with only 13 percent of female distributors reporting access to a network versus 32 percent of male distributors (see Table A.6). Qualitative interviews revealed that many distributors are not aware of the existence of networks, and remain unclear on their usefulness to support business growth.

**Table A.6**

**Percentage of Distributors with Access to Networks, by Gender**

Business obstacle	Number of observations	Mean (male)	Mean (female)	Female-male diff (coeff)	Standard error
Access to networks	54	32%	13%	-0.198***	0.044

\* $p \geq 0.1$ ; \*\* $p \geq 0.5$ ; \*\*\* $p \geq 0.01$

- **Access to and use of technology:** Access to technology was not included in the business obstacle ranking survey question (highlighted previously), rather, it was addressed in a specific separate survey question as well as emerged as a significant business obstacle in the qualitative interviews—specifically, limited access and underutilization of mobile phones and computers to conduct business transactions. Overall, only 19 percent of distributors surveyed use a computer for business transactions and 11 percent use a mobile phone to conduct financial transactions. Female distributors’ access to and use of technology is even lower than male distributors’, as Table A.7 shows.

**Table A.7**

**Percentage of Distributors Who Have Access to and Use Technology, by Gender**

Business obstacle	Number of observations	Mean (male)	Mean (female)	Female-male diff (coeff)	Standard error
Access to own computer	46	26%	11%	-0.145***	0.049
Use of computer	46	22%	16%	-0.062	0.05
Use mobile banking	28	13%	10%	-0.037	0.041

\* $p \geq 0.1$ ; \*\* $p \geq 0.5$ ; \*\*\* $p \geq 0.01$

- *Access to and use of computers:* Only 16 percent of female distributors surveyed use computers (either their own or through their spouse, children, or friends) versus 22 percent of male distributors. Of those who use computers, only 11 percent of female distributors own their own computer compared to 26 percent of male distributors.
- *Mobile phone access and use:* Most distributors have access to a mobile phone, and more than 70 percent report having access to a smartphone, but only 10 percent of female distributors use mobile banking technology versus 13 percent of male distributors.

## Sales Performance

A regression analysis was conducted on the annual sales performance data of the distributors for calendar years 2017 and 2018. Results were analyzed to compare differences in sales performance between male and female distributors, and against two main obstacles distributors faced—access to finance and access to technology.

### Sales Performance, by Gender and Region Variations

In 2017, overall sales were on average 29 percent higher for female distributors than for male distributors. In 2018, overall sales for female distributors were on average 24 percent higher than for male distributors. When controlling for regions, sales performance varied by gender. Both male and female distributors in the Lagos region had higher sales than in other regions. Women-owned businesses in the north region had the lowest sales. Data from qualitative interviews revealed that women-owned businesses in the north were smaller and faced more restrictive sociocultural norms, which affected the women’s ability to grow their businesses.

### Sales Performance, by Gender and Access to Finance

IFC analyzed whether sales performance by gender was affected by access to finance. Table A.8 shows the findings.

**Table A.8**

#### Difference in Sales Performance, by Gender and Access to Finance

Access to finance affect	All distributors		Female distributors only	
	2017 sales	2018 sales	2017 sales	2018 sales
Percentage increase in sales performance data when distributor cited access to finance	159%	87%	20%	26%

The 69 distributors who reported having access to finance also reported substantially higher sales—almost 1.6 times higher in 2017 (159 percent) and 0.9 times higher in 2018 (87 percent). This suggests that distributors who have access to loans could have up to 1.6 times higher sales revenue than those who do not have access to capital. Sales for female distributors with access to finance was also higher (20 percent higher sales in 2017 and 26 percent higher sales in 2018), suggesting that a business case exists to provide distributors with financing. The positive correlation between access to loans and better sales performance suggests that limited access to finance is an obstacle to business growth (that is, higher sales performance).

It is important to note that these results should be interpreted with caution as the direction of causality is not certain. Distributors may have higher sales because they have access to loans, or, alternatively, they may perform better on other barriers, such as access to networks, inventory, and so on. Based on qualitative interviews obtained for the main case study and other desk research,<sup>13</sup> access to finance is scarce for MSMEs across Nigeria. Increasing access to finance for distributors presents an opportunity to support the growth of distributors and FMCG company growth.

## Conclusion

Data analyzed for this case study demonstrates that investing in female distributors can open new markets, and that sales can increase when men and women have equal access to resources such as financing. The FMCG sector is in a unique position to address the constraints for both female and male distributors highlighted in this research as part of its growth and expansion strategies, enhancing profitability and contributing to broader economic growth.

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<sup>13</sup> World Bank. 2017. Global Findex Database.