Food and Agriculture Organization
of the United Nations

Second edition

MAPPING TERRITORIAL MARKETS IN RWANDA

SUMMARY REPORT

Second edition

MAPPING TERRITORIAL MARKETS IN RWANDA

SUMMARY REPORT

Food and Agriculture Organization of the United Nations

Rome, 2023

Required citation:
FAO. 2023. *Mapping territorial markets in Rwanda*. Second edition. Rome. https://doi.org/10.4060/cc3303en

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dashed lines on maps represent approximate border lines for which there may not yet be full agreement. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

ISBN: 978-92-5-137358-3
© FAO, 2023
Fist edition, 2022

Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original (Language) edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization http://www.wipo.int/amc/en/mediation/rules and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

Cover, figures and illustration: ©FAO/Natanson Films/Pietro Santovetti

CONTENTS

Figures and tables iv

Acknowledgements v

Introduction 1

MAPPING PROCESS 2

- Food diversity 4
- Economic gender gap 6
- Business environment 9
- Producer–consumer link 12
- Minimum day-to-day contribution to healthy and diversified diets 14

CONCLUSIONS 20

References 20

FIGURES

Figure 1. Localization of selected territorial markets 2
Figure 2. Estimated volumes of products sold, by food group 4
Figure 3. Food diversity indicator, by market 6
Figure 4 Distribution of retailers by sex, by market 7
Figure 5. Average net take-home income, by sex 7
Figure 6. Access to credit or loans, by sex 8
Figure 7. Economic gender gap indicator, by market 9
Figure 8. Access to credit or loans, by market 10
Figure 9. Infrastructure availability, by type of infrastructure 10
Figure 10. Business environment indicator, by market 11
Figure 11. Product sourcing, by market 12
Figure 12. Product sourcing for retailers who sell products they have purchased, by market 13
Figure 13. Producer–consumer link indicator, by market 14
Figure 14. Food groups consumed in the preceding 24 hours 15
Figure 15. Distribution of consumers, by number of food groups consumed 15
Figure 16. Shopping frequency, by market 16
Figure 17. Consumer purchasing frequency, by food group 17
Figure 18. Minimum contribution of markets to day-to-day food consumption, by food group 18
Figure 19. Minimum contribution to the day-to-day purchase of healthy food baskets, by market 19
Figure 20. Minimum contribution to healthy and diversified diets indicator, by market 19

TABLES

Table 1. Preliminary market analysis 3
Table 2. Availability of different food products in selected markets, by food group 5

Acknowledgements

This report was written by Ana Puhač, Marcello Vicovaro, Livia Celardo and Sara Hoogerwerf of the Food and Nutrition Division at the Food and Agriculture Organization of the United Nations (FAO).

The authors wish to thank colleagues at FAO for their valuable support and input, in particoular Florence Tartanac, Annalisa De Vitis and Chiara Deligia of the Food and Nutrition Division.

This report is the result of a study on territorial markets in Gasabo and Rulindo districts, Rwanda, implemented through the project "Feeding urbanization: building prosperous small cities and towns" (FMM/GLO/132/MUL).

This report has been published thanks to the support received from the project "Interagency support to the Work of the 10YFP on Sustainable Food Systems Programme" (GCP/GLO/790/SWI). The report contributes to the Sustainable Food Systems Programme of the One Planet Network.

INTRODUCTION

Smallholder farmers are responsible for most of the food consumed in the world and most of the investments made in agriculture (CFS, 2016; FAO, 2017). They operate largely in a range of local and national markets that are embedded into territorial food systems, also known as "territorial markets".

From a consumer perspective, these markets serve as key retail outlets for access to the foods needed for healthy diets, in particular fresh fruits and vegetables, fish, meat, and staple foods.

Despite their importance however, data concerning territorial markets — such as the availability of food groups, food retailers and consumer profiles — are not often included in national data collection systems. As a result, they are often neglected in strategies aimed at improving nutrition, reducing poverty and fostering local economies.

This is the context in which FAO conducted a mapping of territorial markets in Rwanda. The objective of the mapping was to identify the business and operational models that work best, to therefore serve as entry points for the implementation of policy and investment strategies towards more inclusive and nutrition-sensitive markets.

MAPPING PROCESS

The mapping process, based on the methodology and set of guidelines developed by FAO and partners (FAO, 2021), began in Rwanda in October 2021. FAO provided training on data collection methods and tools, after which data on territorial markets in the country were collected by the Association of Traders, Wholesalers and Retailers in Rwanda ("Association des Commercants, Grossistes et Detaillants au Rwanda" or ACGDR, in French).

The mapping exercise took place in seven markets, selected according to a number of predetermined criteria.[1] As illustrated in Figure 1, the markets included in the sample are located in two different districts of Rwanda (Gasabo and Rulindo).

For each market in the sample, the mapping process involved three stages:

1. preliminary market analysis to determine a representative sample of retailers;
2. data collection from the representative sample of food retailers; and
3. data collection from a non-probabilistic sample of consumers (large enough to reflect the existing diversity of the overall consumer base).

Figure 1. Localization of selected territorial markets

Source: Adapted from Map No. 3717 Rev. 11.1 UNITED NATIONS, September 2018. Department of Field Support, Geographical Information Section

[1] The seven markets were selected based on the following criteria: (i) markets that are recognized by consumers as food markets; (ii) markets in which at least ten retailers operate; (iii) markets that are held with regular frequency; and (iv) markets offering products produced by family farmers.

As a first step, the preliminary market analysis collected information on (i) the given market's profile (including name, department, district, market frequency, typology of market and GPS coordinates) and (ii) the distribution of retailers within the given market, based on sex, age and type of food (i.e. group) sold.

As a second step, and based on the preliminary market analysis, a representative sample of 300 retailers was established, in order to administer a second survey (retailers' survey) composed of 42 questions. The results of this second survey were then analysed to assess each market's performance across the following four synthetic indicators,[2] each of which aggregates key information (variables) collected through the survey: food diversity indicator, economic gender gap indicator, business environment indicator and producer–consumer link indicator.

Finally, a third round of data collection was conducted with a randomly selected sample of 307 consumers who were making their food purchases in the selected markets. This third survey (consumers' survey) was composed of 27 questions. The results of the consumers' survey were then analysed to assess the market's performance against a fifth synthetic indicator: the minimum day-to-day contribution to healthy and diversified diets indicator.

The following sections provide an overview of the results of the mapping process for all seven markets across each of the five indicators or dimensions identified, including disaggregated key findings, along with a presentation of results for each synthetic indicator by market.

Table 1. Preliminary market analysis

District	Market	Average no. of retailers operating in the market	No. of retailers interviewed (300)	No. of consumers interviewed (307)
Rulindo	Base market	72	34	32
	Shyorongi market	200	55	62
	Kiyanza market	95	49	32
	Gasiza market	255	33	26
	Rusine market	580	57	52
	Buyoga market	250	60	75
Gasabo (Kigali)	Mulindi market	40	12	28

Source: Authors' own elaboration.

[2] A synthetic indicator is a composite measure that mathematically combines several pieces of information into a single measure, allowing for the evaluation and comparison of multidimensional phenomena. Synthetic indicators were useful to the mapping process, as they allowed for the aggregation of several kinds of data on each market (as collected through the survey), and for the assessment of each market's performance against the given dimensions.

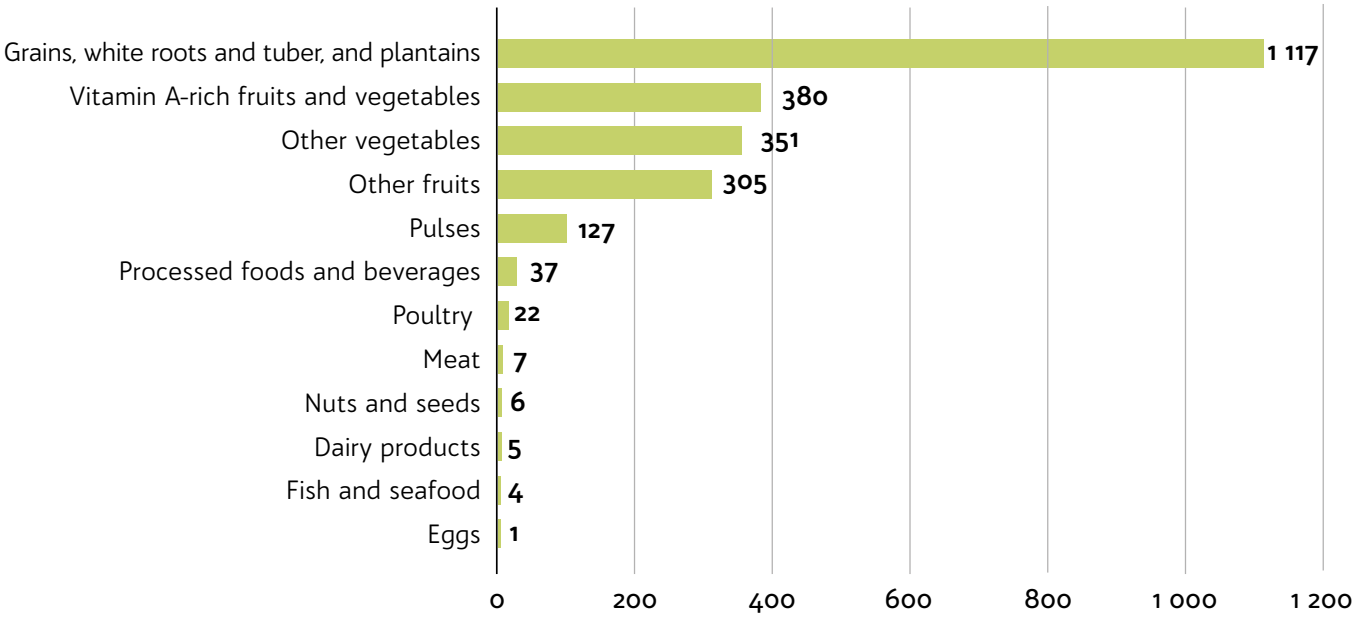
Food diversity

Key findings

The first key finding concerns the estimated total volumes of products sold in the territorial markets mapped. As seen in Figure 2, the food group "Grains, white roots and tubers, and plantains" " has by far the highest volumes of sales, with an estimate of more than 1 100 tonnes sold per month across all seven markets. On the other hand, animal and animal-source food groups, along with "Nuts and seeds" have the lowest volumes of sales.

With regard to the diversity of food offered, Table 2 lists the availability of different food products for each food group across the seven markets analysed. As the table illustrates "Grains, white roots and tubers, and plantains" and "Vitamin A-rich fruits and vegetables" are the groups with the largest numbers of options, followed by "Other vegetables" and "Other fruits".

Figure 2. Estimated volumes of products sold, by food group (tonnes/month)



Source: Authors' own elaboration.

Table 2. Availability of different food products in selected markets, by food group

Food groups	Food products offered by retailers	No. of products
Grains, white roots and tubers, and plantains	**Irish potatoes**, **plantains**, wheat, **maize**, rice, sorghum, yams, **cassava**, **sweet potatoes**	9
Pulses	Peas, beans	2
Nuts and seeds	Peanuts, sunflower seeds	2
Dairy products	Fresh milk, cream	2
Meat	Beef, goat meat	2
Poultry	Chicken	1
Eggs	Chicken eggs	1
Fish and seafood	Tilapia, catfish, mad fish	3
Vitamin A-rich fruits and vegetables	Passion fruit, mango, carrot, spinach, cassava leaves (*isombe*), tamarillo, papaya, amaranth	9
Other vegetables	Onions, tomatoes, eggplants, beets, cabbages, bell peppers, fresh peas, fresh beans	8
Other fruits	Oranges, lemons, pineapples, avocados, bananas, watermelons, mandarins, apples	8
Processed foods and beverages	Industrially processed foods and beverages: juices, alcoholic drinks, sodas	3
	Artisanal processed foods and beverages	0

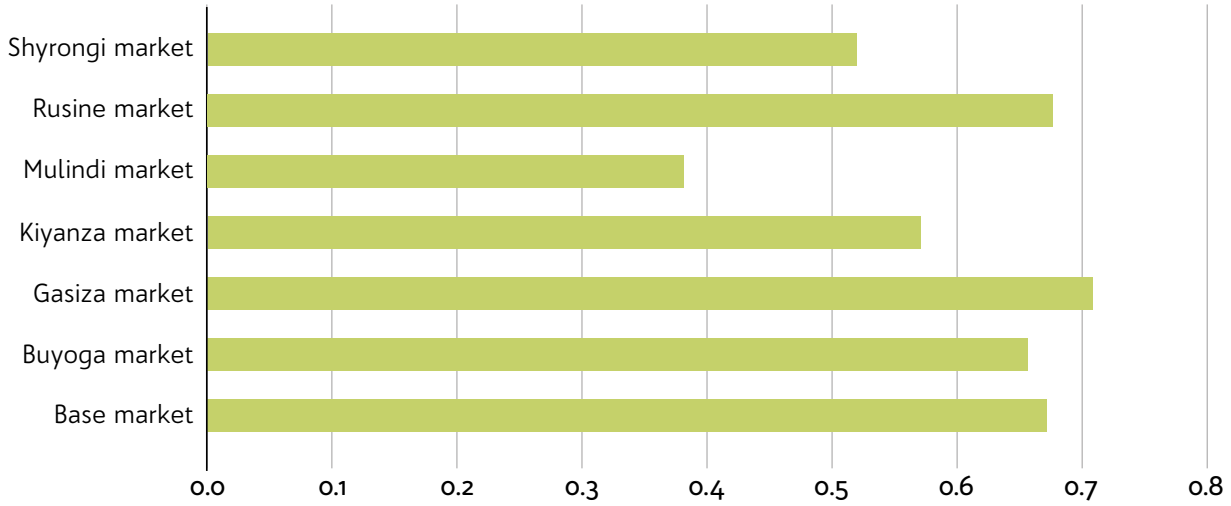
Source: Authors' own elaboration.

Food diversity indicator

Figure 3 shows the food diversity indicator,[3] as as calculated for each market. Gasiza market scores the highest in food diversity (0.71), while Mulindi has the lowest score (0.37). Overall, the values for the indicator are moderate, with four out of the seven markets scoring higher than 0.6.

[3] The food diversity indicator takes into account the number of food products available for each food group offered. The indicator is expressed as a value between 0 and 1, where 0 indicates the lowest level of food diversity (i.e. none of the food products is offered at the market), and 1 indicates the maximum level food diversity (i.e. four or more products for each food group are available at the market).

Figure 3. Food diversity indicator, by market



Source: Authors' own elaboration.

Economic gender gap

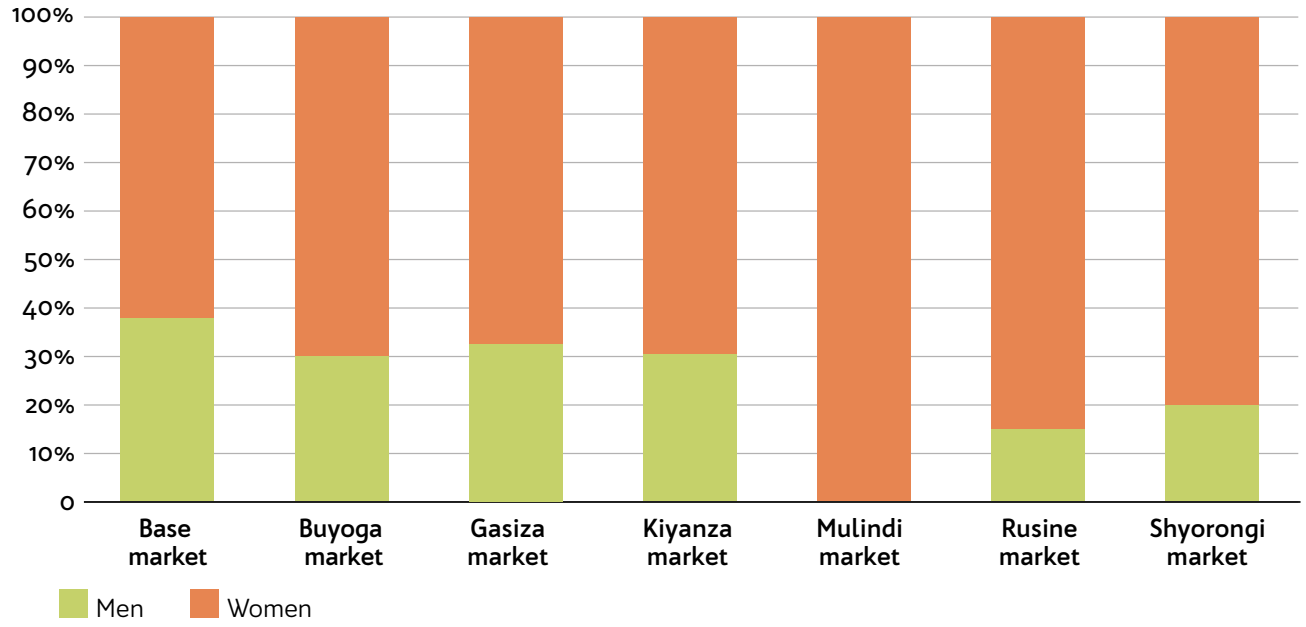
Key findings

Data collected on sex distribution indicate that the majority of food retailers operating in the selected markets are women (74 percent) while 26 percent are men. Figure 4 provides the sex distribution by individual market, showing that Mulindi is the only all-women market.

Even if women make up the majority of the market retailers, when net take-home income is disaggregated by sex (as in Figure 5), results show a significant gap between male and female retailers. On average, the monthly net take-home income of male retailers is more than double that of female retailers (103 110 Rwanda francs (RWF) per month, compared to 41 978 RWF per month).

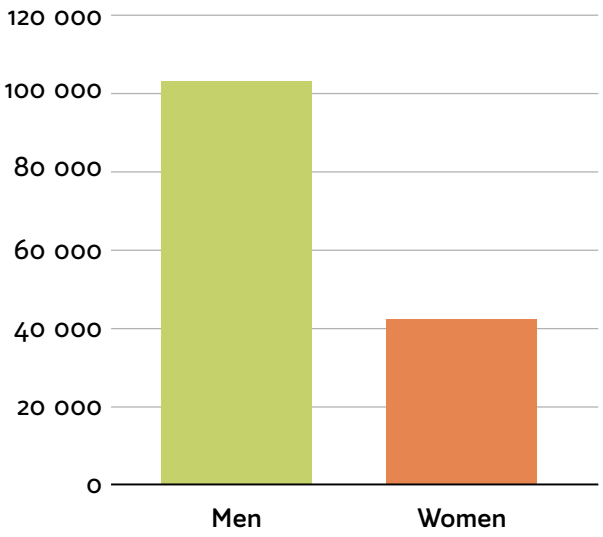
To assess whether women and men have equal opportunities to develop their business, data on access to credit were also disaggregated by sex. As shown in Figure 6, the share of women retailers with access to credit is equal to that of men retailers. However, the share of women with access to informal credit is significantly lower than that of men, and more women than men reported having difficulty in accessing credit due to a lack of opportunities or capacities. At the same time, the share or women retailers who reported that they did not need credit is higher than that of men retailers.

Figure 4. Distribution of retailers by sex, by market



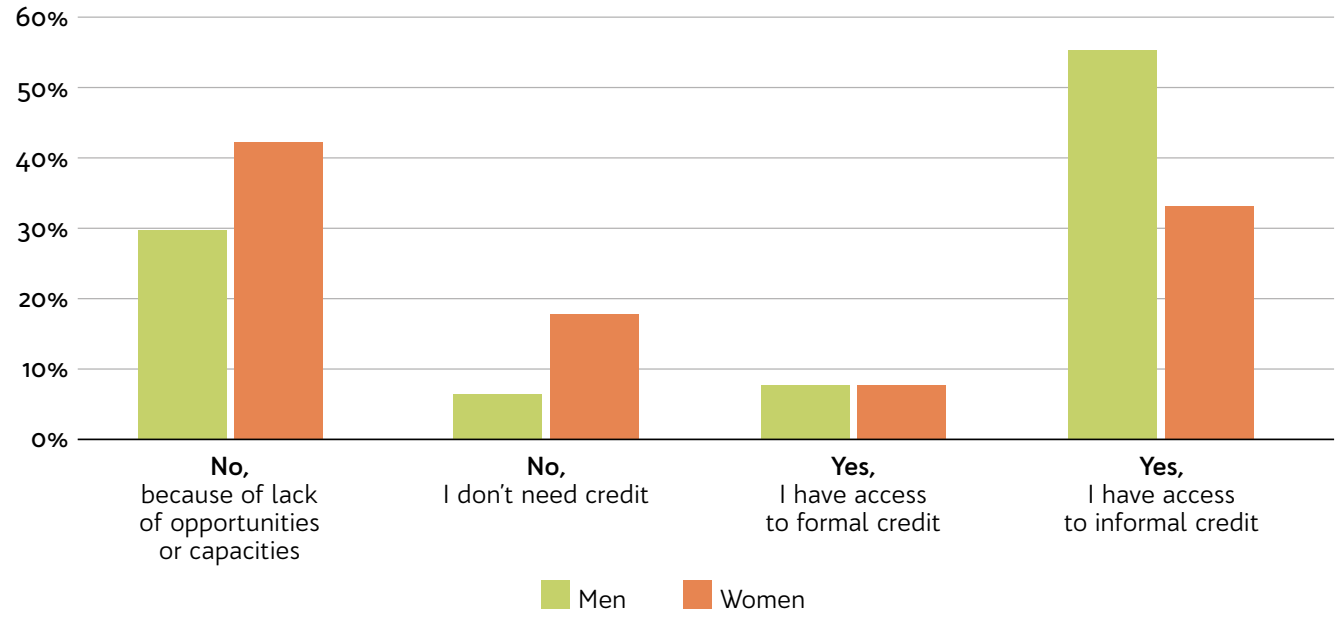
Source: Authors' own elaboration.

Figure 5. Average net take-home income, by sex
(RWF/month)



Source: Authors' own elaboration.

Figure 6. Access to credit or loans, by sex



Source: Authors' own elaboration.

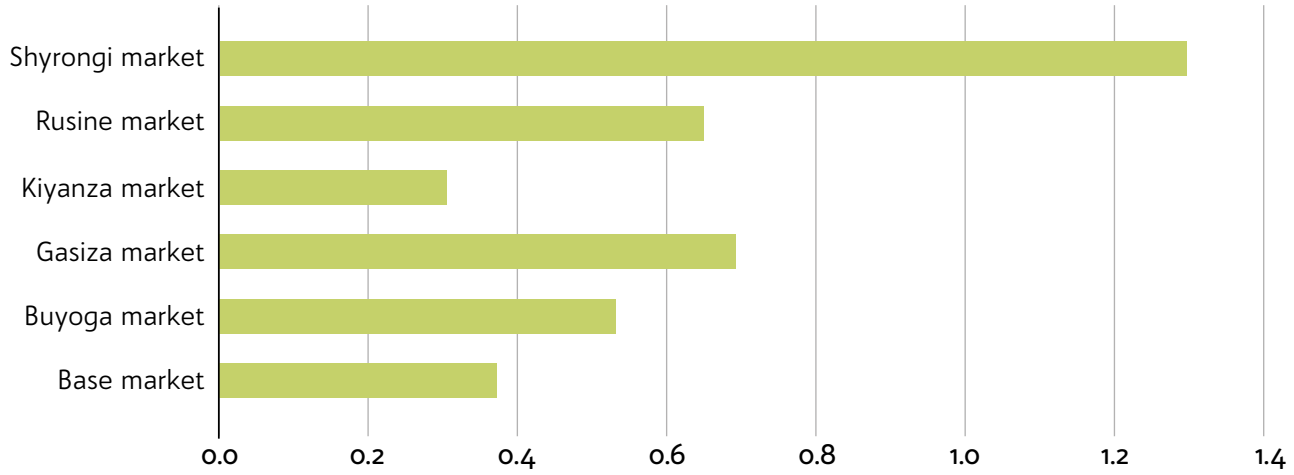
Economic gender gap indicator

Figure 7 shows the economic gender gap indicator,[4] as calculated for each market.

As seen in the figure, Shyorongi is the only market to score higher than 1, indicating a less favourable situation for men (as compared to women) in terms of net take-home income and access to credit and loans. All of the other markets that were mapped scored below 1, with Kiyanza scoring lowest of all, indicating the biggest gap between men and women retailers.

[4] The economic gender gap indicator takes into account the income gap by sex (calculated as the ratio of women's net take-home income to men's) and the gap between male and female retailers who do not have access to financial services. The synthetic indicator is expressed as a value between 0 and +∞, where 1 indicates equal economic inclusion of men and women, a value close to 0 indicates that women are not included, and a value higher than 1 indicates that men are not included.

Figure 7. Economic gender gap indicator, by market



Source: Authors' own elaboration.

Business environment

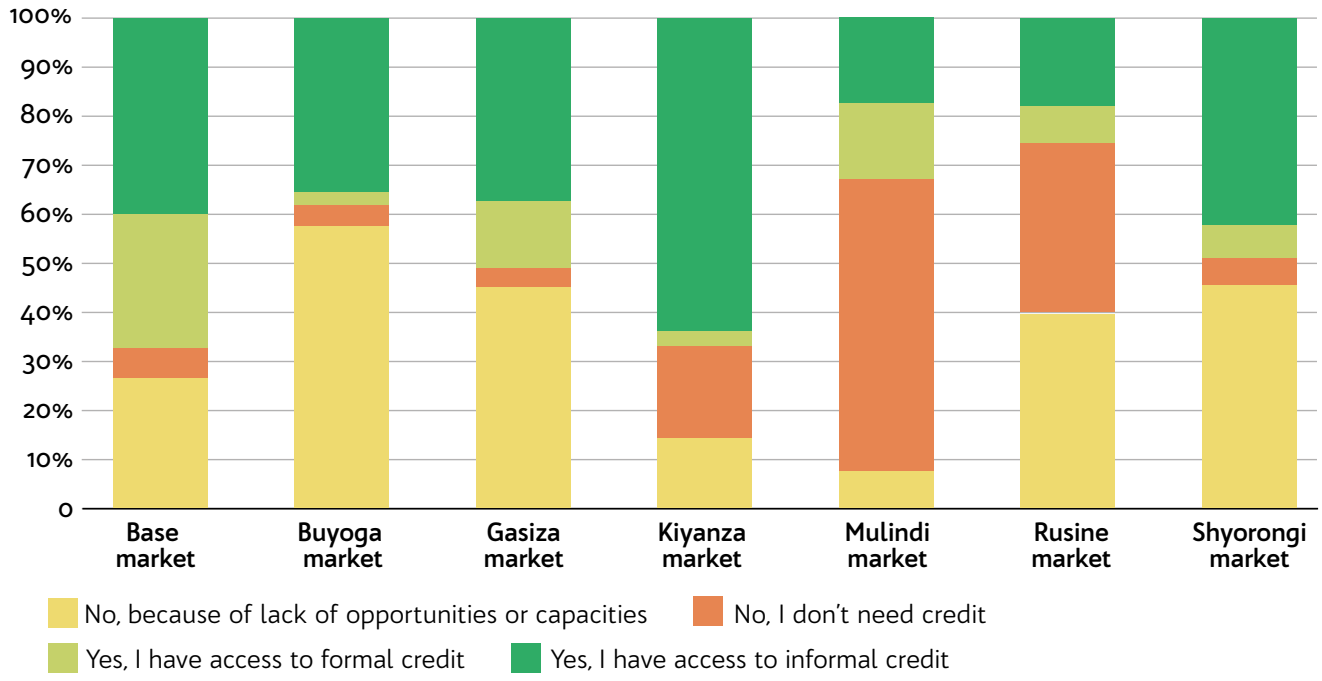
Key findings

Assessing each territorial market's business environment involved a consideration of market infrastructure, as well as access to credit (both formal and informal) and financial services. As shown in Figure 8, retailers in all seven markets have access to both formal and informal credit, although access to informal credit is more widespread than access to formal credit. Buyoga is the only market where the share of retailers lacking opportunities and capacities to access credit is greater than the shares of retailers in the other three categories combined. Mulindi market on the other hand, has the lowest share of retailers reporting a lack opportunities and capacities to access credit (less than 10 percent), while also having the highest share of retailers who reported that they do not need loans to run their businesses.

Rusine market follows Mulindi with the second-highest share of retailers whose businesses do not require loans or credit. Base and Kiyanza markets have the highest share of retailers who reported having credit, while at Gasiza, Rusine and Shyorongi markets, over 40 percent of retailers do not have access to credit due to a lack of opportunities and capacities.

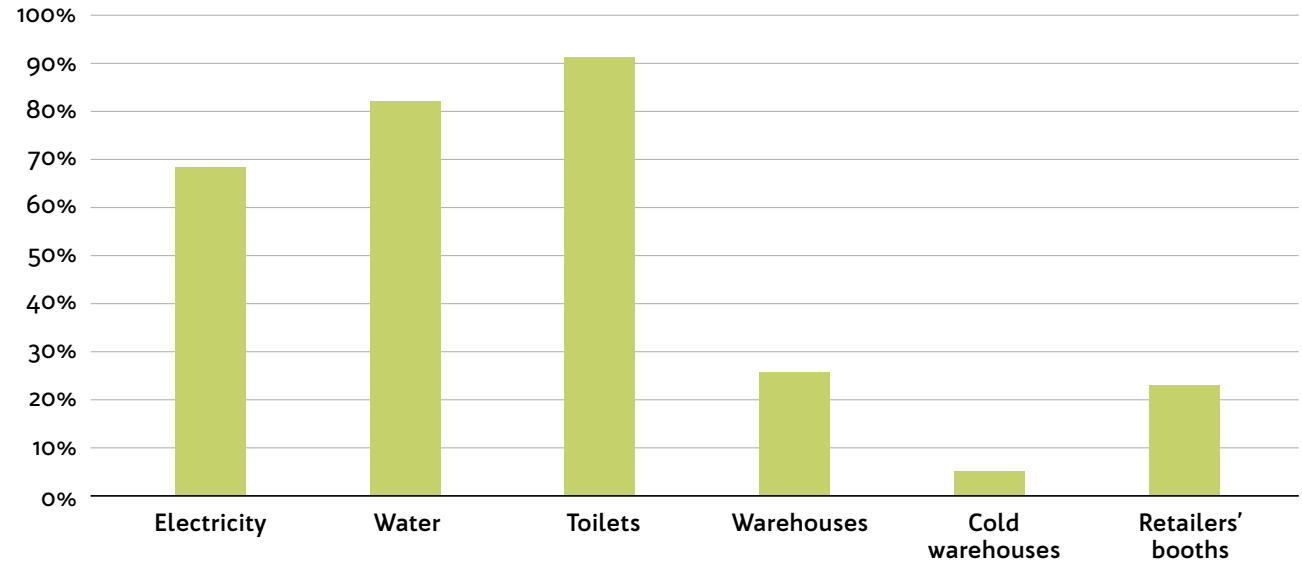
With regard to infrastructure availability across all seven markets, and as shown in Figure 9, while water and toilets are available for the vast majority of retailers, and electricity is available for nearly 70 percent, warehouses and retailers' booths are instead available for only a minority (just above 20 percent), and cold warehouses in particular are almost completely unavailable.

Figure 8. **Access to credit or loans, by market**



Source: Authors' own elaboration.

Figure 9. **Infrastructure availability, by type of infrastructure**



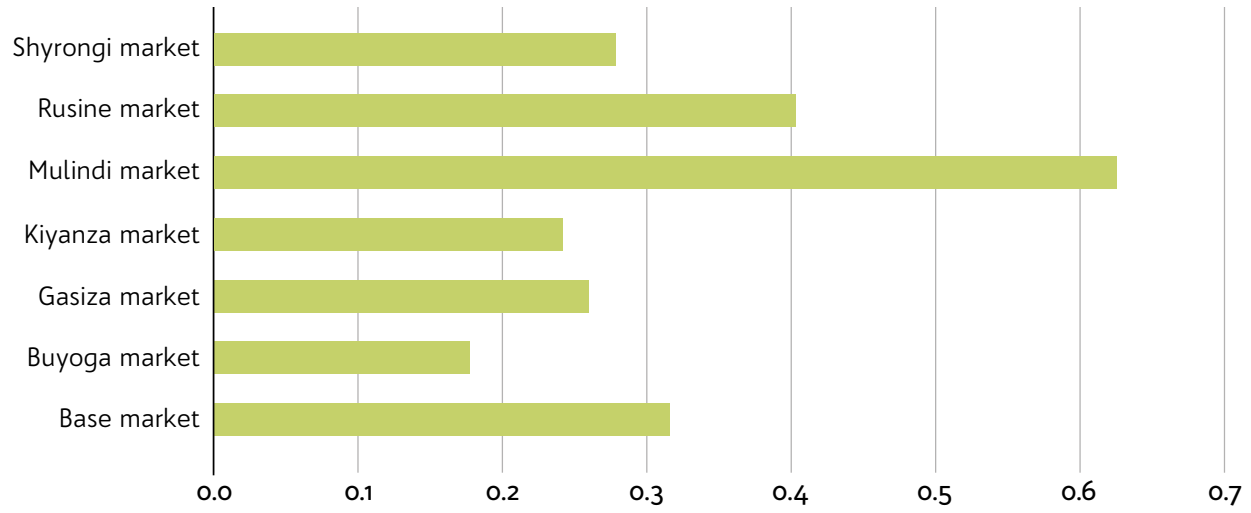
Source: Authors' own elaboration.

Business environment indicator

Figure 10 shows the business environment indicator,[5] as calculated for each market. The variability between the markets is significant; Mulindi market scores the highest by far at over 0.6, while Rusine market is in second place, scoring 0.4.

These markets also had the highest shares of retailers who reported that they did not need access to credit or loans. Buyoga market on the other hand, which had the highest proportion of retailers without access to credit due to a lack of opportunities, scored the lowest at 0.2.

Figure 10. Business environment indicator, by market



Source: Authors' own elaboration.

[5] The business environment indicator takes into account existing infrastructure in the markets, along with retailer access to formal financial services. The indicator is expressed as a value between 0 and 1, where 0 indicates a business environment that is not favourable to food retailers, and 1 indicates an environment that is favourable to them.

Producer–consumer link

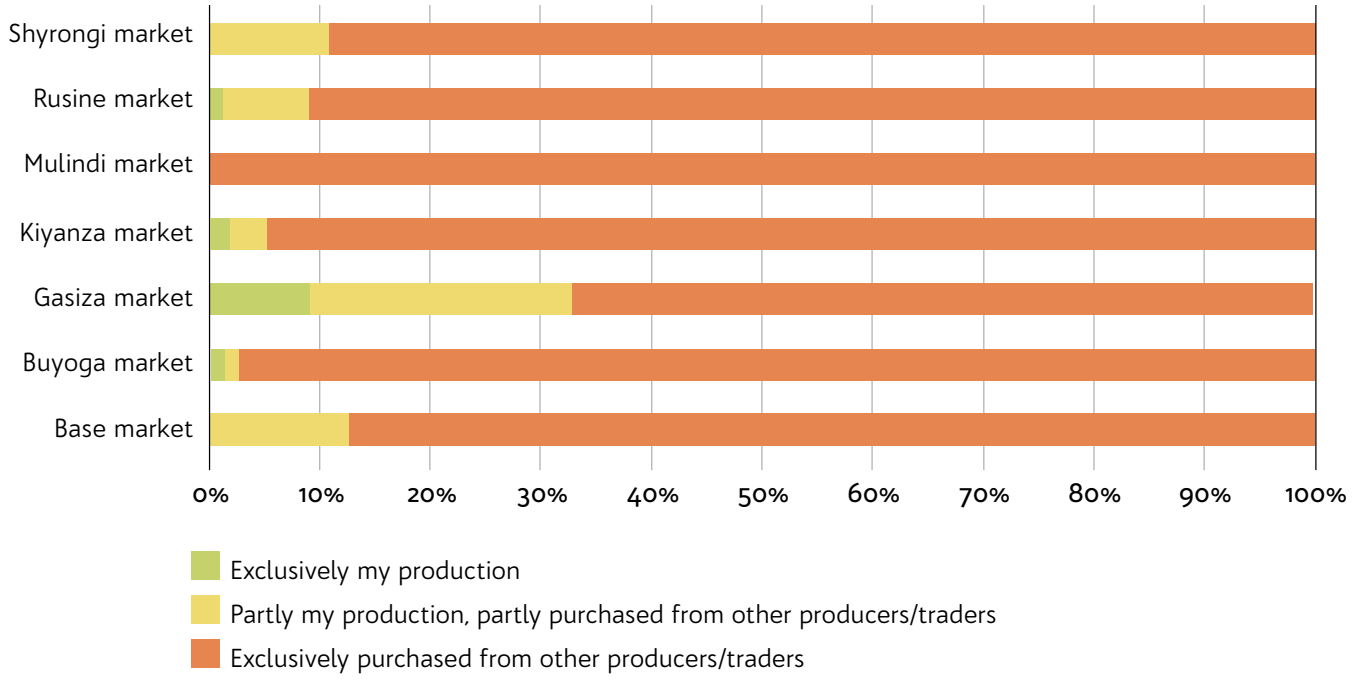
Key findings

This aspect of the market analysis sought to better understand the length of the supply chain, as well as the sourcing of products sold in the market (by differentiating between retailers who are also producers and retailers who are not).

With regard to product sourcing, Figure 11 shows, for each market: (1) the share of retailers who sell only food products they have produced; (2) the share of retailers who sell both food products they have produced and food products they have purchased; and (3) the share of retailers who sell only products they have purchased. As seen in the figure, the results do not indicate major differences in the nature of the mapped markets – with the exception of Gasiza market, which has significantly higher shares of retailers selling products exclusively of their own production and retailers selling a mix of products they have produced and purchased. Otherwise and in general, the vast majority of retailers operating in these markets exclusively sell products that they have purchased from other traders or producers.

Retailers who were not also producers were asked to indicate the source for the products they purchase. As illustrated Figure 12, their responses show that for three of the seven markets, more than 50 percent of such retailers purchase their products exclusively from farmers.

Figure 11. Product sourcing, by market



Source: Authors' own elaboration.

Figure 12. Product sourcing for retailers who sell products they have purchased, by market

Source: Authors' own elaboration.

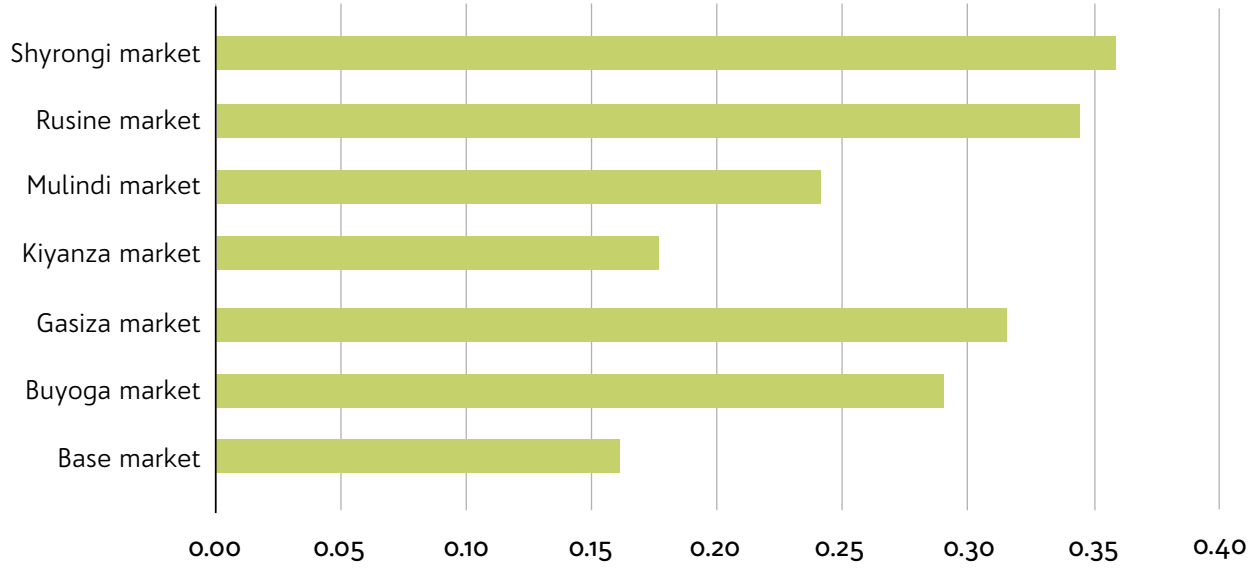
Producer–consumer link indicator

Figure 13 shows the producer–consumer link indicator,[6] as calculated for each market.

Overall, the markets scored quite low for this indicator, with none of them achieving a score of 0.5 or above. Shyorongi market scored the highest at just above 0.350, followed by Rusine market at 0.344. Kiyanza scored the lowest at 0.175, indicating that the smallest share of produce at this market comes directly from farmers.

[6] The producer–consumer link indicator takes into account the share of retailers who are also producers themselves, and the share of retailers who, for products they do not produce, purchase directly from farmers. The indicator is expressed as a value between 0 and 1, where 1 indicates a short supply chain, in which farmers are directly linked to markets without intermediaries.

Figure 13. Producer–consumer link indicator, by market



Source: Authors' own elaboration.

Minimum day-to-day contribution to healthy and diversified diets

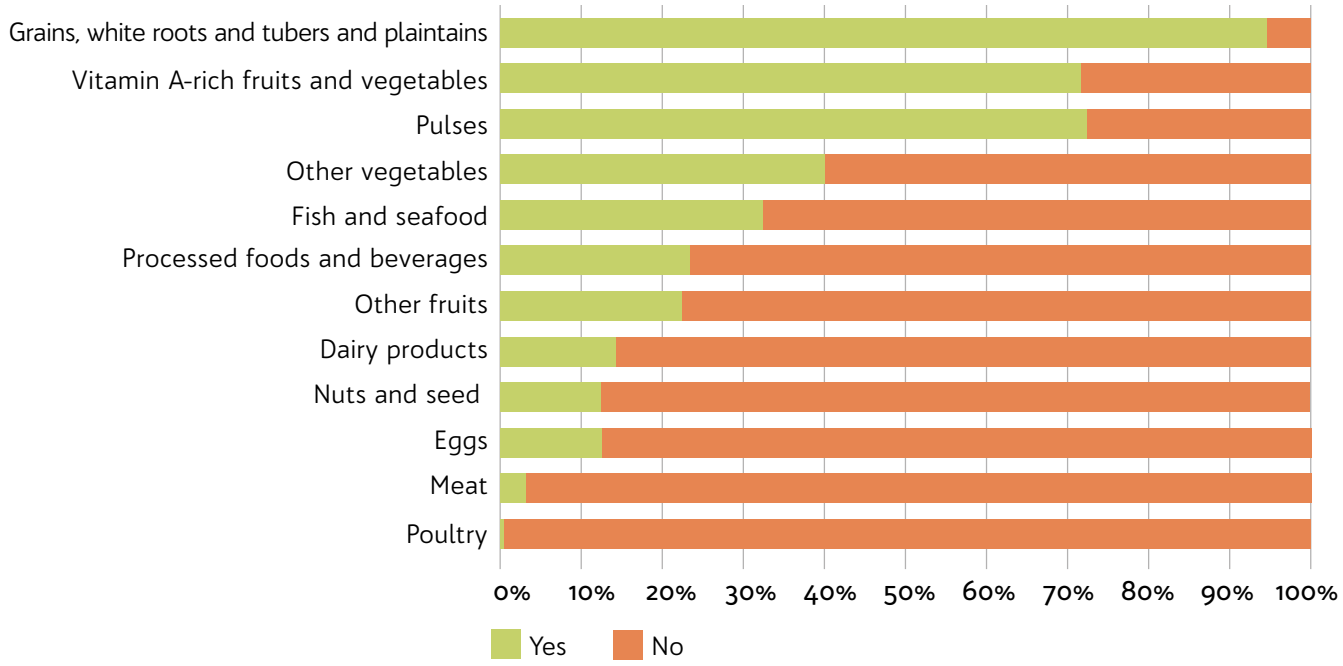
Key findings

Territorial markets are essential outlets for the territories in which they are embedded, and play a significant role in influencing diet-related health and nutrition among local consumers by ensuring exposure, availability and accessibility for a wide variety of products.

In order to fully understand the contribution of territorial markets to consumer diets, shoppers in each market were interviewed regarding the food groups they had consumed from in the preceding 24 hours, and their responses were analysed. Figure 14 provides an overview of the results, and of the quality of the diet of interviewed consumers. As seen in the figure, the majority of consumers reported having eaten starchy staple foods in the preceding 24 hours. "Vitamin A-rich fruits and vegetables" and "Pulses" share second place, at just over 70 percent of consumers. The figure illustrates how sparingly meat is consumed, especially poultry, which was consumed by only 1 percent of shoppers in the preceding 24 hours.

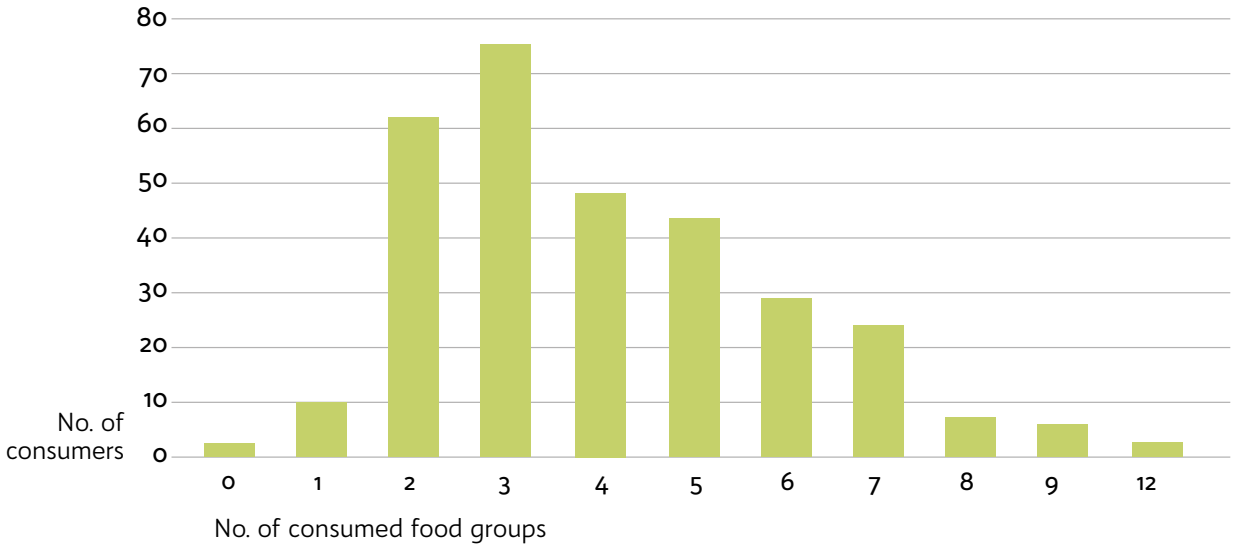
Figure 15 reflects the distribution of consumers by the number of food groups consumed, and indicates that the majority consumed foods from at least three different food groups in the 24 hours preceding the survey.

Figure 14. Food groups consumed in the preceding 24 hours



Source: Authors' own elaboration.

Figure 15. Distribution of consumers by number of food groups consumed

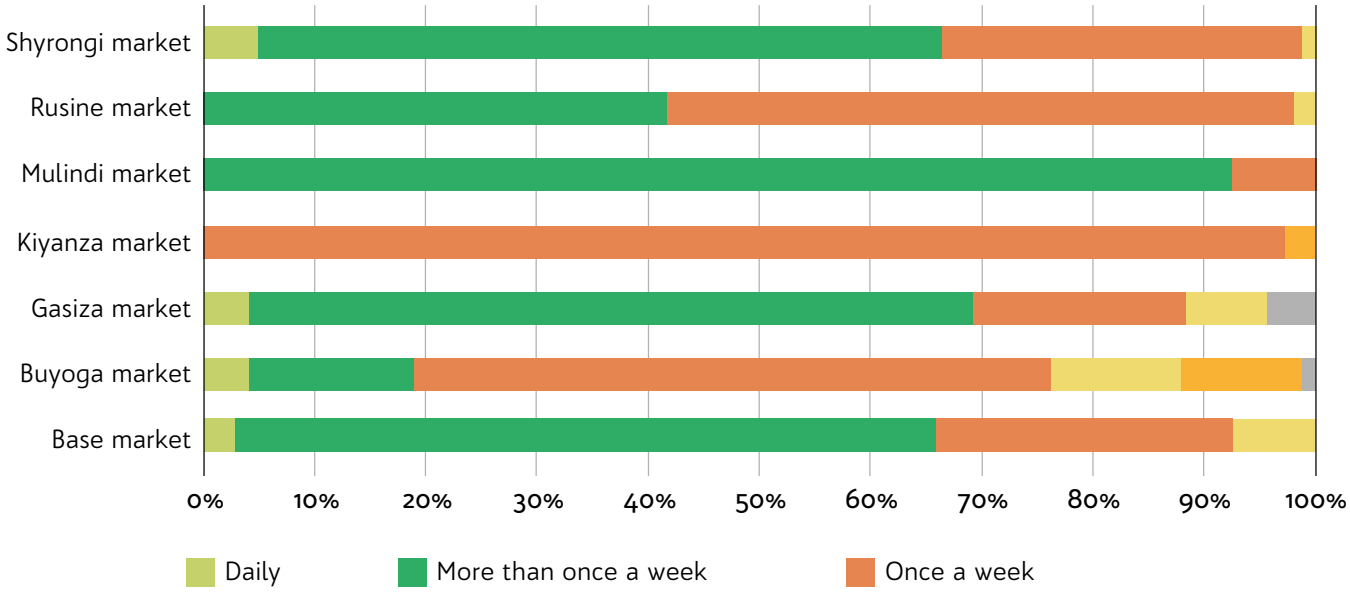


Source: Authors' own elaboration.

The frequency with which consumers shop at territorial markets is central to their importance in ensuring people's access to food. In each of the seven markets, consumers were asked how often they visit the market to make their food purchases. As seen in Figure 16, in three of the markets, there were no consumers who reported visiting the market on a daily basis, while at the other four markets the share of daily shoppers was very low. The large majority of the consumers visited "More than once a week", especially in the case of Mulindi market, whereas "Once a week" was the predominant response from consumers at Kiyanza market.

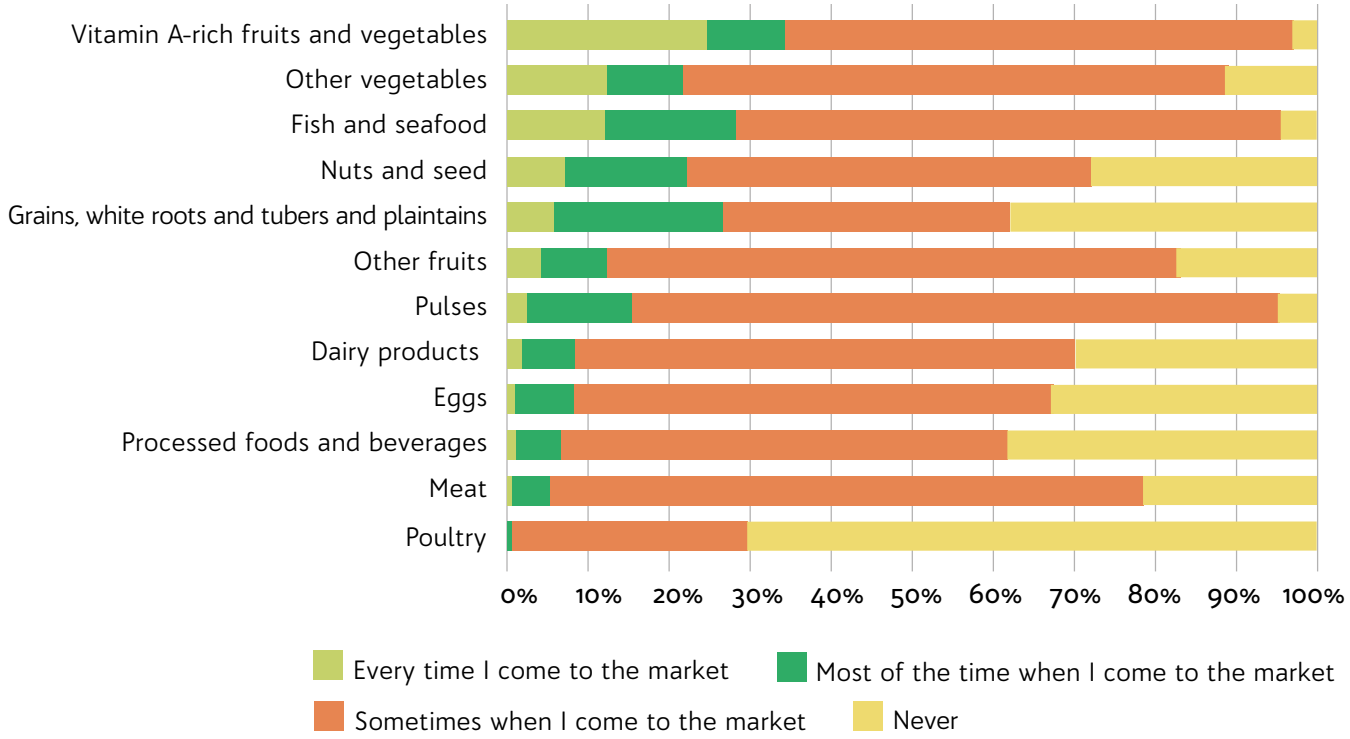
Figure 17 reflects the purchasing frequency for each food group. As seen in the figure, "Vitamin A-rich fruits and vegetables", "Other vegetables" and "Fish and seafood" are the most frequently purchased food groups, while animal-sourced products ("Meat" and "Poultry") and "Processed foods and beverages" are the least frequently purchased food groups.

Figure 16. Shopping frequency, by market



Source: Authors' own elaboration.

Figure 17. Frequency of consumers' purchase to markets, by food group



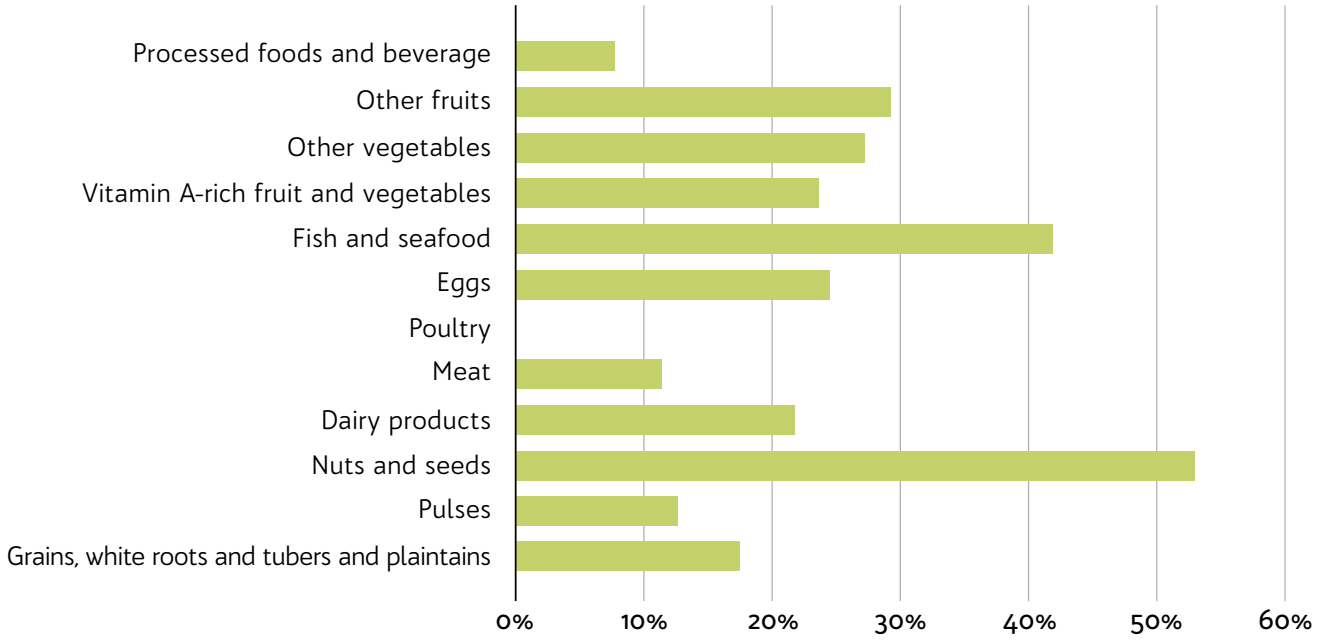
Source: Authors' own elaboration.

Figure 18 shows the minimum contribution of all seven markets to the day-to-day food consumption for each food group.[7]

As shown in the figure, the contributions vary greatly by food group; for example, the contribution of the markets to poultry consumption is 0 percent, whereas their contribution to "Nuts and seeds" (which are typically not purchased frequently from such markets) exceeds 50 percent. After "Nuts and seeds", the food group with the second-highest market contribution to day-to-day consumption is "Fish and seafood" (just over 40 percent), followed by "Other fruits" (almost 30 percent). Besides "Poultry", the food groups with the lowest contributions include "Processed foods and beverages", "Meat", "Pulses" and "Grains, white roots and tubers, and plantains". For pulses and grains (which, as seen in Figure 14, score high with regard to consumption in the preceding 24 hours), it may be that the markets do contribute more significantly to day-to-day consumption, but the contributions are

[7] The minimum contribution of markets to day-to-day food consumption estimates how much of the food consumed in a given day (by food group) comes from the mapped markets. For each food group, it is calculated as the share (%) of consumers who consumed products from the food group in the preceding 24 hours, who purchase products from the food group every time or most of the times they visit the mapped markets, and who visit the markets every day or more than once a week, over the total number of consumers who consume from the food group. The obtained value expresses the minimum contribution of the mapped markets to the day-to-day food consumption of the given food group.

Figure 18. Minimum contribution of markets to day-to-day food consumption, by food group



Source: Authors' own elaboration.

low because these products tend to have relatively long shelf-lives (therefore consumers may not purchase as frequently).

Figure 19 shows the minimum contribution of each market to the day-to-day purchase of healthy food baskets among their respective consumers.[8]

As the figure illustrates, market contributions vary significantly. Mulindi market makes the highest contribution (over 35 percent) to the purchase of healthy food baskets among its consumers, while Shyorongi market makes a very small contribution, and Rusine market surprisingly contributes 0 percent.

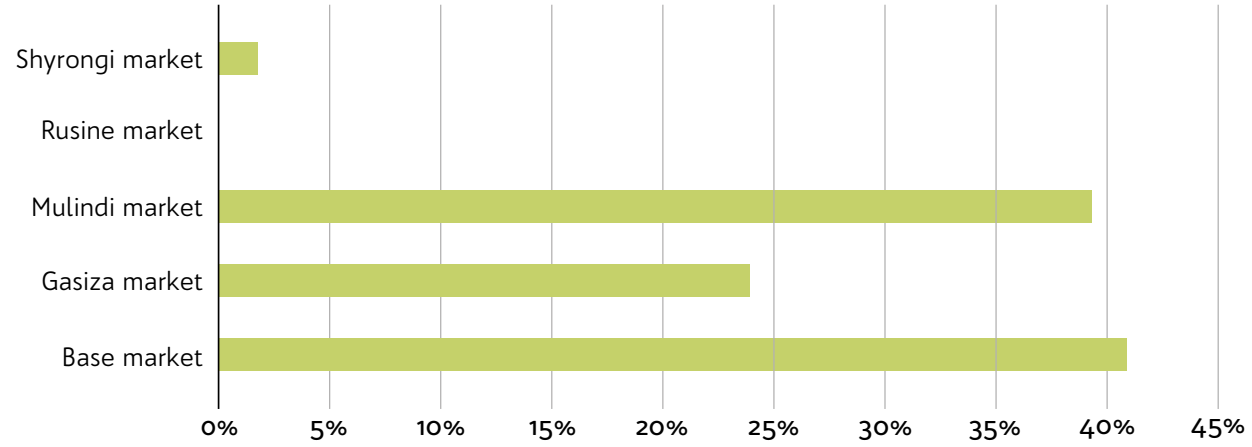
Minimum day-to-day contribution to healthy and diversified diets indicator

Figure 20 shows the minimum day-to-day contribution to healthy and diversified diets indicator,[9] as calculated for each market.

[8] The minimum contribution of a market to the day-to-day purchase of healthy food baskets by its consumers estimates the number of consumers who purchase the entirety of their healthy food basket in a specific territorial market. It is calculated as the share (%) of consumers who consumed from at least five different food groups (at least three of which must include: a source of carbohydrates, a source of protein and a source of vitamins and fibre), and purchased all products from these food groups at the given territorial market, over the total number of consumers. The obtained value expresses the minimum contribution of the market to the purchase of healthy food baskets.

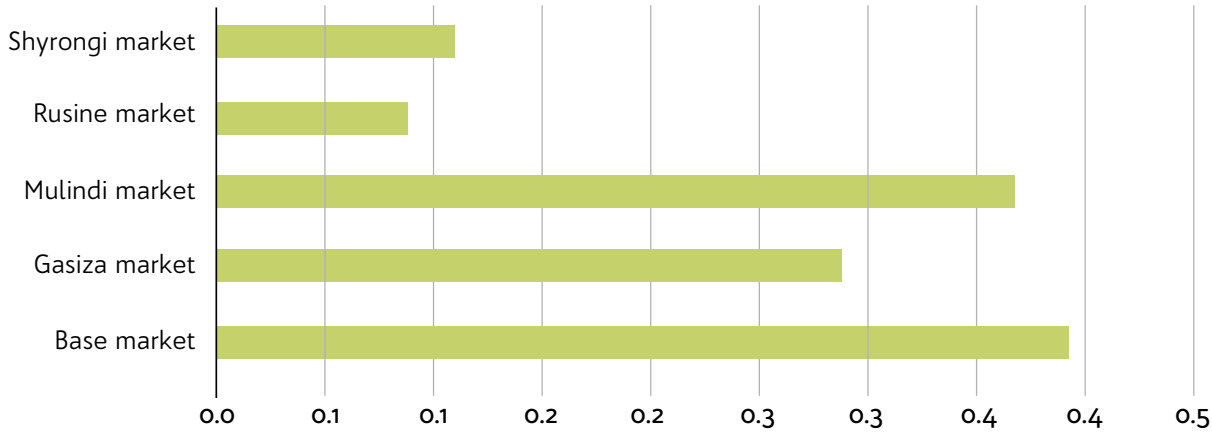
[9] The minimum day-to-day contribution to healthy and diversified diets indicator takes into account the share of consumers relying on a given territorial market for their day-to-day consumption of specific food groups, along with the share of consumers relying on the market to purchase a healthy food basket. The indicator is expressed as a value between 0 and 1, where 1 indicates that the market contributes to ensuring access to healthy and diversified diets for all its consumers.

Figure 19. Minimum contribution to the day-to-day purchase of healthy food baskets, by market



Source: Authors' own elaboration.

Figure 20. Minimum contribution to healthy and diversified diets indicator, by market



Source: Authors' own elaboration.

As seen in the figure, only three markets score higher than 0.25, indicating their crucial role in ensuring access to healthy and diversified diets for at least 25 percent of their consumers. Base market scores the highest at almost 0.4, indicating its importance in ensuring healthy and diversified diets among its consumers.

CONCLUSIONS

Based on the findings discussed in this report, the following conclusions may be noted:

- Across all seven markets, "Grains, white roots and tubers, and plantains" is the food group with the highest volumes of sales, while fruits and vegetables ("Vitamin A-rich fruits and vegetables", "Other fruits" and "Other vegetables") are the most frequently available food groups in all the markets.
- Although women make up the large majority retailers operating in all the mapped markets, the economic gender gap remains a key issue to be addressed, particularly in terms of net take-home income and opportunities for access to formal credit.
- The business environment is challenged by a lack of adequate infrastructure – especially (cold) warehouses and retailers' booths – as well as a lack of capacities and opportunities for women retailers to access formal credit and scale up their businesses.
- The findings related to the producer–consumer link indicator show that the markets are characterized by relatively long (even if entirely domestic) supply chains – as a large majority of retailers sell products they have purchased from other traders.
- The findings related to the minimum contribution of the markets to healthy and diversified diets indicate the importance of the markets in this regard, given that three markets score higher than 0.25. In addition, and with regard to the daily consumption of foods from specific food groups, these markets also serve as crucial outlets for ensuring the daily consumption of nuts and seeds, fish and seafood, and fruits and vegetables.

References

CFS (Committee on World Food Security). 2016. *Connecting smallholders to markets: An analytical guide*. Rome. www.csm4cfs.org/wp-content/uploads/2016/10/ENG-ConnectingSmallholdersToMarkets_web.pdf

FAO. 2017. *The State of Food and Agriculture 2017. Leveraging Food Systems for Inclusive Rural Transformation*. Rome. https://www.fao.org/publications/card/en/c/I7658EN

FAO. 2021. *Mapping of territorial markets: Methodology and guidelines for participatory data collection*. Rome. https://doi.org/10.4060/cb9484en

CONTACT US

Food and Nutrition Division - Economic and Social Development
MLVC@fao.org

Food and Agriculture Organization of the United Nations
Rome, Italy

CC3303EN/1/06.23