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BRICS international cooperation as the mechanism for ensuring Russia's food sovereignty

Lubov Levaeva[1], Julia Zvorykina[2], Andrei Kalmykov[2], Sadhan Ghosh[3]

1 *Department of International private law Foreign Trade Academy (Russia)* **2** *Department of management and marketing Foreign Trade Academy (Russia)* **3** *Mechanical Engineer Department, Jadavpur University (India)*

Corresponding author: Lubov Levaeva (lyubovlevaeva@yandex.ru)

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Abstract

The paper discusses several aspects of Russian food sovereignty within the BRICS association, including the effectiveness of franchising systems, the use of trademarks and private labels, and issues related to packaging processing.

The Food Security Doctrine of the Russian Federation aims to increase the export potential of agricultural products by developing domestic production and establishing long-term partnerships with international partners. This is an important factor in ensuring food sovereignty. Retail chains are an effective platform for promoting products from national suppliers. The success of international retail chain activities confirms the effectiveness of franchising systems in expanding business into foreign markets. Franchising is one of the most effective business models for developing export potential of the Russian firms in international markets. This study examines various franchise systems integrated by Russian and foreign retail chains into their operational activities. Most retail chains offer business-format franchises that involve requirements for store size, style, and assortment. One of the elements of franchising is the use of the firms' own trademarks. These trademarks play a significant role in promoting goods in foreign markets, particularly private label products because they allow vendors to take into account the unique traditions and consumer preferences of each country where their business operates. Private labels are also one of the most flexible tools for effective operational activities as they help to regulate the supply chain at every stage, thus reducing costs. The paper summarizes data on consumers in the BRICS countries and identifies the characteristics of populations that are important for firms' operational activities, including the average age of residents, religious and cultural diversity. Analyzing the specific features of a territory to identify potential business opportunities allows the retail chain to create an assortment that satisfies the needs of consumers in a particular trading area. Today, trade in food products generates a large amount of waste packaging worldwide. As important participants in supply chains, retailers play a role in regulating the types of packaging and its processing possibilities. When planning future activities, a trading company evaluates market conditions to forecast operational success. The paper examines factors affecting future demand and conducts a regression analysis of consumption patterns in the BRICS countries.

Keywords
food sovereignty, franchising, BRICS, retail chains, private label mark, consumer habits

JEL: M10, M16, M19.

Introduction

The Russian Food Security Doctrine (President of the Russian Federation, 2025), sets out a strategic goal of maintaining stability in global food markets through multilateral and bilateral cooperation. This goal is to be achieved through increased export potential, based on enhanced domestic agricultural production. One of the main ways to achieve this goal is through international cooperation based on the development of international economic relations and diversification of suppliers to eliminate dependence on a single exporter. The task is to strengthen food sovereignty.

Some of the existing models for ensuring food sovereignty, such as subsidies to agricultural producers and reduced tax rates, are state-run initiatives aimed at promoting export growth; they involve spending from the government budget. Private labels of retail chains can be a successful business scaling tool as some retail chains have successfully demonstrated.

The first definition of food sovereignty was formulated in the Nyéléni declaration of the Global Forum in Mali in 2007. The concept was related to the rights of people to healthy and culturally suitable food produced using environmentally friendly and sustainable methods. This includes the right to decide on their own production systems and consumption patterns (Nyéléni, 2007).

In 2008, the intergovernmental group of the United Nations and the World Bank interpreted food sovereignty as "the right of peoples and sovereign states to democratically determine their own agricultural and food policies."(IAASTD, 2009).

There is no single approach to understanding food sovereignty in foreign and Russian doctrine. F.McMichael believed that food sovereignty was changing the global food system, in which human rights and freedoms prevailed. According to the scientist, such a system is resistant to negative phenomena (McMichael, 2016).

H. Whitman believes that food security is an alternative to food sovereignty. Food security is the provision of agricultural products through market mechanisms, and food sovereignty is the protection of local agricultural producers from dumping by the most powerful market participants (Wittman, 2011).

Baryshnikova N. A. believes that food sovereignty is not only a tool for achieving security goals, but also an algorithm for implementing tasks in the context of sustainable development of food systems (Baryshnikova, 2024).

However, these approaches to defining food sovereignty do not take into account such components as crop yields, climate zones, food supply chains, insurance, and payments that are not subject to various economic constraints.

The development of the export potential of small and medium-sized businesses in order to strengthen the food sovereignty of the state involves the creation of mechanisms for scaling companies' activities in international markets.

Retail chains have become a platform for the growth of local manufacturers. The potential for foreign economic activity of small and medium-sized businesses in this area depends on their ability to significantly reduce logistics costs and marketing expenses. International franchising is one of the most effective ways to enter foreign markets, enabling companies to conceptually strengthen their export position.

Franchises of retail chains and public catering companies are common on the international and Russian market. In the Perekrestok retail chain, partners are offered a reverse franchising model. This involves transferring technologies for running a retail business and providing a full range of services to ensure the effective operation of the franchisee's supermarket. An entrepreneur-partner of "Perekrestok" (franchisor), by acquiring a Perekrestok franchise, becomes the owner of an established business with support and patronage from the leader of Russian retail in the supermarket sector. This franchise model is used in several business formats:

- retailer's area is 800 m2 with the number of product items 9-10 thousand.
- retailer's area is 1200 m2 with the number of product items 12-14 thousand.
- retailer's area is 1600 m2 with the number of product items 15-16 thousand (Perekrestok, 2022).

In the Pyaterochka retail chain, partners are offered reverse franchising in four business formats: 270-329 m2, 330-444 m2, 445-544 m2, from 545 m2 (Pyaterochka, 2025).

The Magnit retail chain offers the following business formats: Magnit GO, ultra-small Magnit Nearby stores, Magnit Cosmetics store, Magnit at Home stores, the main format of the retailer, Magnit at Home Plus (a hybrid format combining the features of walking distance stores and supermarkets). The company is planning to launch a franchise of "hard" discounters B1 (Magnit, 2024).

Franchise systems of international retail chains, as a rule, include business formats for their partners. The Carrefour retail chain promotes the Carrefour Contact, City, Express, Mountain, Potager City, Proxy and 8AUIT formats. Carrefour Proximity meets all the needs of its customers by offering cozy and modern stores, the assortment, prices and opening hours of which are adapted to the needs of customers and their geographical location (Carrefour, 2025).

Auchan offers franchises tailored to the retailer's format:

- Retailer at MyAuchan house (area from 150 to 800 m2).
- Supermarkets (from 800 to 2500 m2).
- Hypermarkets (from 5,000 to 15,000 m2) (Auchan, 2025).

The modern practice of scaling international retail chains in foreign markets involves several business models, such as opening trading platforms, selling goods through e-commerce, and traditional franchising.

As a rule, companies entering foreign markets have to create and register their own trademarks that take into account the habits of consumers in each individual territory. The business model of their brands should involve waste management, which means building a responsible supply chain and working with suppliers. For example, responsible packaging conditions are integrated into contracts for the supply of goods of their own brand. Responsible packaging refers to eco-friendly packaging, i.e. recyclable, made from recycled materials or reusable. Trade networks in the BRICS countries are shaping the practice of recycling waste that has been generated as a result of the expiration dates of goods. The resulting waste can be used as fertilizers and for the production of biogas.

The authors believe that international franchise systems of retail chains employ standardized and proven strategies suitable for the BRICS countries' retail chains provided they are approved by local authorities.

Carrefour is one of the largest franchisors in the world, with stores in some of the BRICS countries, e.g. Egypt and United Arab Emirates. All Carrefour stores have their private labels. The company's strategic goal until 2026 has been to increase the number of its private label products to 40% of the total range (Carrefour, 2022). Such products make it possible to quickly respond to consumer demand in the country where the trading platform is located. Consumer preferences are determined by climatic features, income, average age of population and gastronomic traditions. The BRICS countries have enormous cultural differences. The franchise management model allows the franchisor to take into account the unique challenges of doing business in a foreign market by partnering with local entrepreneurs. These partners integrate their own brands into the franchise system, ultimately increasing profits for all parties involved.

Scaling the franchise model of a trading company in the BRICS space serves as the basis for ensuring Russia's food sovereignty.

The analysis of academic sources reveals both the significance of the chosen topic and the limitations of research on country brands as a basis for a franchising business model, which can serve as a means of ensuring food sovereignty.

This study offers a comprehensive analysis of factors influencing consumer demand in the BRICS countries with the exception of Ethiopia. The data for Ethiopia are incomplete or unavailable in public sources, so only the demographic aspects of the territory have been considered. The authors examined the cultural and demographic characteristics of the population of the BRICS countries, energy consumption per capita, the volume of industrial production and the consumer price index over three years in order to predict future consumer demand.

This study is based on general methods of scientific research, including deduction, induction, and a systematic approach. It also includes analysis of information from various sources, which helped to thoroughly study the object of the research and develop the author's own definitions of the retail chain's brand and food sovereignty in the context of the Russian Food Security Doctrine, valid as of March 10, 2025.

Research Objective

The paper aims to show the importance of the franchising mechanism for ensuring Russia's food sovereignty in the BRICS space through expanding the business model of a Russian company's franchising in the retail sector. This model allows for the management of private labels, and it can also be implemented by other retail chains in different countries.

The study hypotheses:

H1: Food sovereignty is based on a well-integrated system of domestic and international food supply chains. This system allows for timely control over crop yield risks in different climatic zones, optimal use of logistics routes, and efficient payment and insurance systems. Retail chains are also becoming a major regulator of packaging at each stage in the supply chain for all goods that are sold through the retail chain.

H2: The effective mechanism for scaling a business in the BRICS countries is international franchising in the form of a business trading platform, which establishare requirements for the size of stores, design and assortment of product categories. Private labels integrated into the franchise concept, represent a flexible investment model for managing the export supplies of retail market participants.

Academic novelty: The paper has identified and systematized the supporting measures for food security in the BRICS countries. It has shown that the proprietary private label networks are an effective tool for food sovereignty in the BRICS countries. The strategies for entering foreign retail markets are standardized, so in order to generate profits retailers need to create their own brand as an instrument for attracting local suppliers in countries of operation. It can also be used to help scale manufacturers from countries where the retail chain's headquarters are located. The authors argue that franchise systems can be an optimal mechanism for developing a trade network, both globally and in BRICS countries.

Data and Methodology

BRICS is a potential market for business growth and the expansion of non-energy exports for all countries involved.

The consumer demand in the BRICS countries accounts for 35% of global consumer demand (Aksenova, 2024; Mantorov, 2024). The BRICS countries see enormous potential in trade cooperation. Every country has its own unique traditions that significantly influence consumer preferences, which must be considered when a Russian company decides to enter their markets using franchise mechanisms.

The food retail market in India is transforming. The market is projected to reach USD 850 billion in 2025. Healthy lifestyle products, natural products, and sugar- and gluten-free items continue to be popular among consumers. Rice, pasta, and noodles, as well as sauces and condiments, are popular imported goods. Ready-to-eat and cooked food items are also in high demand. The ready-to-eat food market in India is expected to grow by 45% by 2029 (Food Export Association, 2023). The reasons for the development of these trends include population growth (with a growth rate of 0.88%) and urbanization (33% of the population lives in rural areas), as well as the average age of people being 29. The population is very diverse in its cultural characteristics (Table 1). Most people in India are buzzers according to the generational theory (Sitnikov, 2024). Zoomers who advocate for unique products and sustainable development appreciate the delivery of goods and ready-to-eat foods.

ESG principles implemented by retail chains and manufacturers have a significant impact on zoomers' choices . Regulatory policy in India requires a minimum level of recycling of packaging, therefore, retail chains and other businesses are required to work out a packaging composition for themselves.

In India the supporting mechanism for food security is "the distribution of food grains through the government-controlled Distribution System (PDS)." Wheat, rice, sugar and kerosene are distributed through this system, which is funded by the State. India has international retail chains that sell their own brands, working with local suppliers (Kurbatova, 2023).

In the UAE, retail food sales were expected to amount to $6.8 billion in 2023. This is 19.5% and 1.1 billion USD more than in 2019 by Euromonitor. Ready meals, savory snacks, soups, alternative meats and agricultural products had excellent sales (Food Export Association, 2023). The country's population is growing (the growth rate is 3.29%) mostly because of foreigners who come to UAE for various reasons. This must be taken into consideration when cooking. Their cultural preferences may be very different, but most of the people in the United Arab Emirates are Muslim, so the preparation of meals should be based on Islamic traditions. Food must be labelled "halal". The average age of the population is 38.4 years. This means that most people are part of the millennial generation, who love fast food but are also not indifferent to homemade food. They are aware of the importance of healthy eating, but do not always follow a strict healthy lifestyle (Sarıoğlan & Şat, 2025). The trend of eco-friendly packaging is also relevant to residents of the UAE. From January 1st, 2025 there has been a ban on disposable plastic tableware, which exacerbated shipping issues in the country.

The National Food Security Strategy until 2051 has been adopted in the UAE. There are government programs called Food Tech Valley and FoodTech Challenge that are involved in research into resource-saving technologies.

In China, the projected growth rate for food retailing by 2026 is 26.2%. Retail sales in the packaged food market in China are expected to reach 411.8 billion US dollars by 2028. The largest growth in food categories is seen in ready meals, which include breakfasts, condiments, and sauces. China's population is declining (- 0.08%), the average age of residents is 40.1 years. Chinese people have different cultural food preferences depending on their area of residence. The rise in urbanization has significantly increased the population's demand for easily accessible food (Food Export Association, 2023). Ready-made food generates a large amount of waste. Therefore, recycling is becoming an essential part of the work for retail chains and an increasing trend towards ESG policies. China's updated Food Security Law of 2003 represents a national food security strategy based on the generally accepted principles of equal access to grain and food, with substantial subsidies provided for agricultural development (Khairullina, 2025).

Brazil is the tenth-largest market for packaged, ready-to-eat foods in the world. Special attention is paid to brand recognition, shelf life and innovation (Food Export Association, 2023). The average age of the population is 33.2 years (buzzers and millennials), 87.7% live in cities. The Statistics Service classifies the population by skin color, which has repeatedly been criticized by human rights organizations. The majority of Brazilian residents are white and brown (48% and 48%, respectively), and catholic.

The increasing population and its rapid urbanization, coupled with the millennial demographics, determine the rising demand for pre-packaged, ready-to-eat meals, while still honoring regional culinary customs. The introduction of proprietary brands and private label products by retailers into their product ranges allows them to customize the packaging, which can influence consumer perceptions of the food and the retailer. Brazil has many programs aimed at combatting hunger, but they have not yet achieved their ultimate goals (Andreeva & Alyoshukina, 2025).

The young population in South Africa has an average age of 28 years. 85% live in cities. Consumer demand is focused on ready-made, halal products and healthy nutrition. Local retailers use their own brands to meet the demand of various groups of the population. Consumers are guided by brand reviews, blogger opinions and mentions in films. Internet services in the country are expensive, hence the number of e-commerce purchases is not very high. Food price inflation reduces consumer activity of the population. Exporters to South Africa from the BRICS countries have preferential status and this gives them significant advantages. 80% of the market belongs to international retail chains (Food Export Association, 2023), who are lobbying for ESG policies in the country, but the poverty rate does not allow for such policies to be implemented. Food sovereignty issues are not the priority. Cooperation with the BRICS countries could become effective with support measures, such as the supply of private-label products.

Egypt has a population of 118.4 million people, which is 1.8% more than in the previous period. 91% of Egyptians are Muslims with an average age of 23.9 years (buzzers). The urban population makes up 43% of the total population (Table 1), which is less than half, but the demand for pre-packaged food remains high. The reason for such consumer preferences is the low average age of the population. The production of beef, beef products, fruits (apples), dairy products, fish and seafood, spices and fresh fruit, teas, cocoa, chocolate, nuts and soups, as well as other ready-to-eat meals, fresh vegetables and poultry meat and eggs, has significant export potential (Food Export Association, 2023). Today, ESG principles are not a priority for companies in the country.

Egypt's modern food strategy is based on a combination of extensive and intensive agriculture. The government is working to both expand the area under grain crops and improve the technological process by introducing optimized management for the entire agri-food industry. However, Egypt's agricultural sector is unable to produce enough food to meet the demands of its ever-growing population. This is due to the lack of suitable areas for agricultural use, low levels of soil fertility, and the limited adoption of effective technologies for growing different crops (Isaev & Filonik, 2021).

In Ethiopia retail sales are expected to grow to US$ 16.4 billion USD by 2028. Sales of biscuits, fruit snacks, and confectionery are projected to increase (Food Export Association, 2023). The country's population is steadily increasing (in 2023 its growth rate was 2.7%). 60% of the Ethiopian population is under the age of 18. The urban population is small, at 23.1%, and only 49% of residents are literate. Most Ethiopians are Orthodox Christians, but pork is forbidden by church authorities. The population has a low purchasing power, which is mainly determined by military conflicts in the country. It is practically impossible to implement the principles of a circular economy in Ethiopia. About a third of the country's population live below the poverty line, and all expectations of security are associated with its joining the BRICS association (Karavdin,2025).

Indonesia has a population of 283.4 million people, with an average age of 31.1 years. These people are becoming more and more urbanized. Most of them are Muslims (Table 1), so all products need to be labelled as "halal". The country has more than 41,000 modern grocery stores. The sales of packaged foods are growing thanks to the convenience stores. The expansion of the chain stores in rural areas has also created opportunities for selling more packaged food. But the growth in the number of supermarkets and hypermarkets was insignificant, with their total number only 1,842. There are four major companies in the hypermarket segment: Carrefour Trans Mart, Giant, Hypermart и Lotte Mart. The country can potentially import fresh fruits, beef, cheese, snacks, frozen foods, sauces, dressings and seasonings, fresh fruits, beef, cheese, snacks, frozen foods, sauces, dressings and seasonings. The increase in sales of pre-packaged food implies greater use of packaging, but no trend towards ecology in the retail sector has been observed in retail chains so far. Therefore, retail chains entering the Indonesian market can introduce new trends that will appeal to consumers and attract new audiences. According to the food security law, food sovereignty should be achieved through local production. Only then can imports be considered, but the country has not yet attained this goal.

Table 1. Characteristics of the BRICS countries' population

	Russia	India	Brasil	China	South Africa	Iran	United Arab Emirates	Indonesia	Ethiopia	Egypt
Population/ growth rate	144520518/- 0,27%	1455993730/ 0,88%	211999000/ 0,43%	1419320000/ -0,06%	64 007 200/ 1,44%	91 567 700/ 1,02%	11027100/ 3,29%	283488000/ 0,8%	133385524/ 2,7%	118 400 000/ +1,8%
Ethnic Groups	81% russians	72% indo-Aryans	48% - White Brazilians 48% - pardo Brazilians*	91,51% Han people	79,4% - black South Africans	61% Persians	10% - aborigines, others - foreign citizens, 58% - emigrants from South Asia	40% Javanese	34,4% - oromo 27 % - amharas	91% egyptians
Religion	41% Christianity (Eastern Orthodoxy), 13% - atheist	18% - hinduism 13% -islam	90 % Christianity (Catholicism or protestantism)	85% religious population, different regional religions based on taoism, buddhism and confucianism	81,7% christianity	99% islam	76% islam	87% islam	63% Christianity (Eastern Orthodoxy) 34% islam	91% islam
Average age of residents (in years)	40,3	29	33,2	38	28	32	38,4	31,1	18**	23,9
Literacy rate	100%	74%	94,69%	97%	94,4%	88,96%	93,8%	95,4%	49%	74,5%
Urban population	74%	67%	87,7%	64,57%	85%	77,26%	87,78%	58,57%	23,16%	43,1%

Source: compiled by the authors based on data from (World Population Review, 2025; The Global Economy, 2023). * In Brazil the population is classified into white, brown, black, yellow and indigenous. ** 60% of the Ethiopian population is under the age of 25.

The average age of the Iranian population is 38.4 years, according to Table 1. Its growth rate in 2023 was 1.02%. There is a trend towards urbanization, and the number of educated residents is rising. These factors shape the demand for imported goods. The incidence of diabetes is increasing, so the segment of gluten- and sugar-free, eco-friendly and organic products is developing. In Iran, the vast majority, approximately 99%, of the population, adhere to Islam, making the designation "Halal" obligatory.

There is an increased demand for poultry meat and confectionery in Iran, as well as for products with a longer shelf life. The number of retail chains in different formats is increasing, and discounter stores have become particularly popular. Although Iran is under tough sanctions, European retailers operate in the region through management companies based in the Middle East. For example, HyperStar Iran, which manages hypermarkets. It is a subsidiary of the French retail chain Carrefour and the Dubai-based management organization MAF.

The trends in the Russian retail market are similar to those of the global consumer market. Eco-friendly and organic foods, and fresh products with a short shelf life are particularly popular. Food security in the country is ensured through various agricultural programs (TV BRICS, 2025).

The majority of the Russian population is made up of millennials (with an average age of 40.3 years). Russian retailers are increasingly offering ready meals, fast last-mile delivery and food from a healthy lifestyle diet. This is driven by several reasons, including urbanization due to the cancelling of many social programs in smaller towns, changes in education patterns and growing number of overweight people. Retail chains in Russia follow effective ESG policies and carry out projects in the area of waste recycling. The waste generated during operations is sent to farms, biogas plants and other recycling facilities. Retail companies are actively promoting their own brands, which enable them to include eco-friendly packaging conditions in contracts with suppliers.

The study has shown that the demographic trends in some of the BRICS countries are on the rise. In India and Ethiopia, populations are very young. Indian minors and Indonesian teenagers belong to low-income groups. In China and Russia, however, the population is ageing and decreasing. The major age group of consumers there consists of buzzers who seek uniqueness in food supply and are fans of ready-made meals. When shaping the concept of a franchise system, it is certainly essential to take into account cultural features, demographic factors and economic risks in order to proactively address emerging challenges.

One of the most effective tools of analysis is econometric modeling, in particular the use of retrospective indicator-based regression. The concept of regression was first introduced by the English statistician Francis Galton (Galton, 1886).

In order to predict demand we will use the multiple regression formula:

$$y = b_0 + b_1x_1 + b_2x_2 + \varepsilon \qquad (1)$$

consist of:
y — per capita energy consumption (kW/h); x_1 и x_2 — independent variables:
x_1 — industrial production (%);
x_2 — consumer Price Index.
b_0 — free member (price to $x_1 = x_2 = 0$);
b_1 и b_2 — coefficients of influence of each independent variable on y;
ε — the random error representing deviations from the model.
The parameters for the regression analysis are based on public sources.

Table 2. Data sources for regression analysis*

BRICS Countries	Y per capita energy consumption (kW/h)			x_1 Industrial production (%)			x_2 Consumer Price Index		
	2021	2022	2023	2021	2022	2023	2021	2022	2023
China	30,7	31	33,2	4,3	1,3	6,8	129,5	132	131,4
India	6,8	7	7,5	1	5,1	4,4	166,2	175	185,7
Russia	57,8	60	60,1	6,1	-2,2	2,7	668	754	809,9
Iran	37,7	39	39,5	4,50	9,5	3,2	364,1	155	217
Brasil	16,6	17	17,8	1,5	0	1,5	6,12	6	6,77
UAE	133,5	144	149,8	4,2	2,8	3,2	107,9	106	107,4
South Africa	23,9	23	22,1	-0,7	-4,6	2,1	124,2	107	112,8
Egypt	9,6	10	9,7	9,3	6,9	9	117,8	144	194,2
Indonesia	8,08	10	10,1	6,05	4,86	2,02	107,6	114	116,5

Source: compiled by the authors based on data from (The Global Economy, 2023; Trading economics, 2023, Focus Economics, 2023). * Данные по Эфиопии в рассчитываемом периоде отсутствуют в публичных источниках.

Research Results and Discussion

The regression analysis is based on the interrelationship of indicators. The performance indicator's dynamics is contingent upon factorial characteristics and changes in the independent variable. Construction of the regression equation is linked to the method of specification and mathematical-statistical research method. Specification is based on factors and initial data that can influence the performance indicator. The mathematical and statistical methods are used to statistically verify the studied phenomena in their interrelation and totality. This study examines the influence of the Industrial Production Index and Consumer Price Index on per capita energy consumption.

The choice of influencing factors is determined by the relationship between the Consumer Price Index reflecting inflation, new taxes, market monopolization and other parameters and the Industrial Production Index that takes account of raw material prices, electricity consumed for production, volume of production and other variables on the one hand, and the increase in energy consumption per capita on the other. This last value reflects energy intensity of the economy, population growth, climatic conditions of the country, household income growth, home-cooking as opposed to purchasing ready-made food, and other factors. A change in the industrial production index implies an adjustment of companies' profit indicators. Revenue can be generated through real growth in production, and a corresponding increase in energy intensity in the economy. However, an increase in industrial production can also be caused by inflation, higher taxes, and other factors, so it is important to take into account the consumer price index. All factors that can influence the Industrial Production Index and Consumer Price Index should be considered when assessing energy consumption per capita. In general, an increase in energy consumption usually indicates an improvement in the quality of life of the population, supported by the introduction of electricity into the lives of people in a particular country. Firms planning to enter foreign markets should use data on the quality of life of residents in order to formulate the most accurate and conceptualized offer. The results of the regression analysis are presented in Table 3. Sampling and calculation of data for Ethiopia was not possible due to the lack of available data from open sources for the analyzed period.

Table 3. Regression analysis results

Country	The multiple regression equation	X1 +1 unit	X2 +1 unit
China	$y= - 60,7476+0,4753X_1+0,6904x_2$	0,48	0,69
India	$y= - 0,43-0,04517X_1+0,04377x_2$	-0,05	0,044
Russia	$y= 49,8285-0,1292X_1+0,01311x_2$	-0,13	0,013
Iran	$y= 42.391-0.1838X_1-0.01061X_2$	-0,18	-0,01
Brasil	$y= 15,6065+0.4347X_1+0.2277X_2$	0,43	0,23
UAE	$y= -884,2533-21,4333X_1+10,2667X_2$	-21,43	10,27
South Africa	$y= 13,3593-0,2047X_1+0,0813X_2$	-0,21	0,08
Egypt	$y= 10,8756-0,1465X_1+0,000734X_2$	-0,15	0,001
Indonesia	$y= -30,2338+0,2316X_1+0,3432X_2$	0,23	0,34

Source: compiled by the authors based on their own calculations.

For the Brazilian economy, the parameters of the econometric model may be interpreted as follows: an increase in X1 (industrial production index) by 1 unit leads to an increase in Y (energy consumption per capita) by an average of 0.435 units; an increase in X2 (consumer price index) by 1 unit leads to an increase in Y by 0.228 units on average. Based on the maximum coefficient β2=1.071, we conclude that the factor

X2 has the greatest impact on Y. The Consumer Price Index, among other things, characterizes the purchasing power of the population in the given period.

Brazil's Consumer Price Index for the period between 2021 and 2023 ranged from 6.12 to 6.77.

During the COVID-19 pandemic, the Industrial Production Index decreased to zero due to a significant decrease in business activity within the business community. The increase in the Consumer Price Index suggests that logistics supply chains were disrupted during the pandemic, leading to higher prices of goods. The increase in energy consumption per capita together with the minimum values of the Industrial Production Index suggests that residents spent more time at home eating more home-cooked meals. The average age of the Brazilian population is 33.2 years, which indicates a predisposition towards ready meals and fast food. This, along with the increase in urbanization (87.7%) and the size of the population, suggests an increase in the energy intensity of the economy. People's preference for ready-made foods makes the market predictable. The downside is that it generates a large amount of packaging.

Indicators of the Egyptian economy have allowed us to create an econometric model that can be interpreted in the following way: an increase in X1 by 1 unit leads to a decrease in Y by an average of 0.146 units; an increase in X2 by 1 unit leads to an increase in Y by an average of 0.000734 units. The maximum coefficient $\beta 2=0.137$ means that the factor X2 has the greatest influence on the result of Y. The consumer price index has a significant impact on energy consumption. Between 2021 and 2023, there was a sharp increase in prices (from 117.8 to 194.22 points), while energy consumption per capita remained stable. This suggests that inflation in the country is rising, as the industrial production index showed no significant changes during this period. The average age of people in Egypt is 23.9 years. At this stage of life, individuals often have lower incomes despite the availability of various economic opportunities. Their spending habits have a minimal impact on the overall economic situation.

The econometric model based on Indian data can be interpreted as follows: an increase in X1 by 1 unit leads to a decrease in Y by an average of 0.0452 units; an increase in X2 by 1 unit leads to an increase in Y by an average of 0.0438 units. By the maximum coefficient $\beta 2=1.186$, we conclude that the factor X2 has the greatest influence on the result of Y. In the analyzed period, there was a jump in the Consumer Price Index, and, when forming an econometric model, this factor had a serious impact on the performance indicator. In the period from 2021 to 2023, there was a pandemic that had a significant impact on purchasing power and inflation rates.

During this period there was no population decline; the open sources present only positive values of statistical data. The average age of the Indian population is 29 years old (zoomers), who gravitate towards ready-made food and delivery of goods.

The results of the Iranian econometric model show that an increase in X1 by 1 unit leads to a decrease in Y by an average of 0.184 units; an increase in X2 by 1 unit leads to a decrease in Y by an average of 0.0106 units. The maximum coefficient $\beta 1=-0.658$ indicates that the factor X1 has the greatest influence on the result of Y. In this period, there was a sharp increase in industrial production caused by the restructuring of the economy. The measures related to COVID-19 required a significant amount of energy and industrial production continued to develop. In Iran, there was an increase in the extraction of natural resources, despite ongoing conflicts. The population had also grown slightly, but this cannot be a major factor in energy consumption.

Economic interpretation of the econometric model for China is as follows: an increase in X1 by 1 unit leads to an increase in Y by an average of 0.475 units; an increase in X2 by 1 unit leads to an increase in Y by an average of 0.69 units. Since the maximum coefficient is 0.959 ($\beta1$), it is possible to conclude that factor X1 has the greatest influence on Y. During the analyzed period, industrial production had the greatest impact on energy consumption.

In 2021 and 2022, the years of the coronavirus pandemic, there were tight restrictions on the import of goods. This gave impetus to the development of domestic production. However, in the post-pandemic period of 2023, the industrial production index did not decrease, indicating that the growth of energy consumption could have a significant impact on industrial energy usage. At the same time, another significant factor could be the willingness of the Chinese population to cook at home. This is because the average age group consists of millennials, who are less likely to eat a lot of ready-made food compared to zoomers.

The results of the econometric model based on the data of the Russian economy show that an increase in X1 by 1 unit leads to a decrease in Y by an average of 0.129 units; an increase in X2 by 1 unit leads to an increase in Y by an average of 0.0131 units. The maximum coefficient is $\beta2=0.721$, so we conclude that the factor X2 has the greatest influence on the result of Y. The consumer price index is linked to the increase in energy consumption per capita, due to inflationary pressures caused by the pandemic in 2021-2022 and significant sanctions on the Russian economy in 2022-2023. People became more willing to cook at home to reduce costs despite the growth of the last-mile delivery industry. At the same time, energy intensity in industry was rising as a result of increased oil production to fill budget deficits.

The data on the economy of the United Arab Emirates allowed us to build an econometric model, which can be interpreted as follows: an increase in X1 by 1 unit leads to a decrease in Y by an average of 21.433 units; an increase in X2 by 1 unit leads to an increase in Y by an average of 10.267 units. By the maximum coefficient $\beta2=1.224$, we can conclude that the factor X2 has the greatest influence on the result of Y. The consumer price index has a significant impact on the growth of energy consumption per capita. One of the reasons for this is the increase in consumption due to tourists and businessmen visiting the country. Labor migrants also contribute to this increase, as they generally consume more resources than the average citizen. Another reason is related to the rising prices of delivering goods to countries where most food is imported.

In South Africa, an increase in X1 by 1 unit leads to a decrease in Y by an average of 0.205 units; an increase in X2 by 1 unit leads to an increase in Y by an average of 0.0813 units. By the maximum coefficient $\beta2=0.942$, we conclude that the factor X2 has the greatest influence on the result of Y. The country has expensive Internet service providers, as the authors previously pointed out, due to a lack of electricity-generating capacity and low purchasing power associated with rising unemployment and unstable foreign investment.

The econometric model developed for the Indonesian economy shows that in Indonesia, industrial production and consumer prices have a nearly identical impact on electricity use.

Conclusions

This study analyzes cultural and demographic factors that influence consumer demand in the BRICS member countries. The holistic understanding of preferences and the results of regression analysis suggest that the majority of people in the studied countries are Generation Z (zoomers), who are willing to order prepared, packaged food, often from a healthy menu, and eat at home. This is because they have seen positive reviews about the product on various platforms, such as streaming services, social media, financial institutions, and retail chains.

However, price increases encourage people from different countries to be more careful when spending on food, which results in the actual need to provide goods in different price categories: premium, mid-range, and low prices. Another trend is that, in the BRICS countries, the number of people who would like to lose weight for various reasons is growing. Many of them take medications to help with this (for example Ozempic). These drugs cause a lack of protein in the body, so it is important to ensure that people have access to a sufficient supply of protein-rich foods. (Bitter, 2025).

The import structure of the BRICS countries confirms the hypothesis about the demand for protein-rich foods. For instance, poultry meat, offal products such as egg powder, liquid eggs and eggs in their shells are consistently imported by these countries (FAOSTAT, 2023). Russian manufacturers can strengthen their positions in the BRICS markets by increasing the production of foods containing large amounts of protein.

Franchising systems of retail chains can be a mechanism for increasing supply, with their own brand of goods from local manufacturers integrated into their business model. The Russian retail networks have the potential to become an aggregator for small and medium-sized businesses, helping to reduce marketing and logistics costs. Successful implementation of this business model will be a significant factor in ensuring the country’s food security.

The hypotheses proposed were validated by research data from the BRICS economies. The private label brand represents a versatile investment model aimed at securing food sovereignty. It relies on creating a well-developed food supply chain with international connections, enabling the management of risks associated with food supplies from different climatic regions. This approach considers yield predictions from various areas and the use of logistics, payment, and insurance systems that are not affected by sanctions.

Supporting measures for the food sovereignty of the BRICS countries are usually provided by states. However, private labels from retail chains are an effective mechanism for ensuring food sovereignty in Russia and other BRICS countries. Private labels don't require government spending.

References

Aksenova, E. (2024). Denis Manturov: The BRICS countries provide 35 percent of consumer demand. *Spbdnevnik.Ru* https://spbdnevnik.ru/news/2024-06-06/denis-manturov-strany-briks-obespechivayut-35-protsentov-po-potrebitelskomu-sprosu

Andreeva, D. A., & Alyoshukina, S. A. (2025). *Brazil's national policy in the fight against hunger and malnutrition*. Ocean Management.

Auchan (2025). *Our franchises*. https://www.auchan-retail.com/fr/nos-franchises/

Baryshnikova, N. A. (2024). Food sovereignty in the research of Russian and foreign scientists: a comparative analysis of concepts and approaches. *Prodovolstvennaya politika i bezopasnost*, 11(3), 439–456. https://doi.org/10.18334/ppib.11.3.121653 (in Russian)

Bitter, A. (2025) *McDonald's CEO pointed to this surprising trend for food chains this year*. Business Insider. https://www.businessinsider.com/mcdonalds-ceo-fast-food-predictions-protein-ai-sauces-2025-3

Carrefour (2022). *Carrefour strategic plan 2026*. https://www.carrefour.com/en/carrefour-2026-strategic-plan

Carrefour (2025). *The Franchise at Carrefour*. https://www.carrefour.com/en/node/6394

FAOSTAT (2023).*Trade Indices*. https://www.fao.org/faostat/en/#data/TI

Focus economics. (2023). *Country Indicators*. https://www.focus-economics.com/country-indicator

Food Export Association. (2023). *Market and Country Profiles*. https://www.foodexport.org/export-insights/market-country-profiles/egypt/#Retail-Sector

Galton F. (1886). Regression towards mediocrity in hereditary stature. *Journal of the Anthropological Institute of Great Britain and Ireland*, (15), 246-263.

IAASTD (2009). *International Assessment of Agricultural Knowledge, Science and Technology for Development*. https://digitallibrary.un.org/record/648226?v=pdf

Isaev, V. A., & Filonik A. O. (2021) Food sovereignty and agrarian policy of Egypt. *The world of the new economy*, 15(1), 82-90. http://doi.org/10.26794/2220-6469-2021– 15-1-82-90

Karavdin, A. A. (2025) Ensuring the food security of Ethiopia in the context of the country's accession to the BRICS. Economy, labor, management in agriculture, (8), 24-32. http://doi.org/10.33938/258-24

Khairullina, O. I. (2025). State support for producers in the agricultural sector of China: results and priorities. *Economics, Entrepreneurship and Law*, 15(6), 3917-3932. http://doi.org/10.18334/epp.15.6.123379

Kurbatova S. M. (2023). The legal foundations of India's state policy in the field of food security. *Agrarian and Land law*, 11(227), 296-297. http://doi.org/10.47643/1815-1329_2023_11_296

Magnit (2024). *Magnit is launching a franchise of its main trading formats*. https://www.magnit.com/ru/media/press-releases/magnit-zapuskaet-franshizu-svoikh-osnovnykh-torgovykh-formatov/

McMichael P. (2016) Commentary: Food regime for thought. *The Journal of Peasant Studies*, 43(3), 648-670. https://doi.org/10.1080/03066150.2016.1143816

Nyéléni (2007). *Nyéléni 2007 Forum for Food Sovereignty Full Report*. http://nyeleni.org/DOWNLOADS/Nyelni_EN.pdf

Ourworldindata (2025). -Perekrestok. (2022) *Reverse franchising*. https://files.perekrestok.ru/static/docs/perekrestok_franchising.pdf

President of the Russian Federation. (2025). *Food Security Doctrine of the Russian Federation* (Decree No. 20 of January 21, 2020, as amended by Decree No. 141 of March 10, 2025). https://www.garant.ru/products/ipo/prime/doc/411519389/

Pyaterochka (2025). *Franchising*. https://franch.5ka.ru/#usp

Sarıoğlan, M. & Şat, R. (2025). *The Effects of Food Consumption Habits of Generations X, Y and Z on Food Menus.* Özgür Yayınları. https://doi.org/10.58830/ozgur.pub709

Sitnikov G. (2024). The generational theory: what is the difference between zoomers, boomers, millennials, generation X and alpha. *Rossiiskaya Gazeta*. https://rg.ru/2024/03/01/teoriia-pokolenij-chem-otlichaiutsia-zumery-bumery-millenialy-pokoleniia-x-i-alfa.html?utm_referrer=https%3A%2F%2Fya.ru%2F#7

The Global Economy. (2023). *List of available indicators*. https://www.theglobaleconomy.com/indicators_list.php

Trading economics. (2023). *Indicators*. https://tradingeconomics.com/indicators

TV BRICS. (2025). *Iran intends to become a regional center of food security*. https://tvbrics.com/news/iran-nameren-stat-regionalnym-tsentrom-prodovolstvennoy-bezopasnosti-/?ysclid=mh4q9vvivl946084144

Wittman, H. (2011). Food sovereignty: a new rights framework for food and nature?. *Environment and Society*, *2*(1), 87-105. https://doi.org/10.3167/ares.2011.020106

World Population Review. (2025). *Total Population by Country 2025*. https://worldpopulationreview.com/countries