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Cost of Non-Compliance with the Requirements of the Marketing Authorization (AMM) of Milk and Dairy Products Imported into Mali

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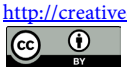

Abstract

The explosion in demand for foodstuffs of animal origin linked to the high growth rate and the change in eating habits has led to the development of trade in these products towards Mali which is, despite its status as a livestock country, one of the largest importers of milk and dairy products in West Africa. This study aimed to determine compliance of this trade with national regulatory requirements. Questionnaires addressed to the main players in the field were processed with Excel and Sphinx plus 2 software. A total of 465 people were surveyed, 72% of whom agreed on the essential nature of the Marketing Authorization (AMM) to preserve public health. However, in thirty (30) months (January 2012 to June 2014) approximately 21442.485 tons of milk and dairy products were imported, including approximately 17,798 tons unauthorized for a market value of 44,495,000,000 FCFA at the average price of 2500 FCFA/Kg. The regulations should be updated to meet current challenges.

Subject Areas

Business Finance and Investment

Keywords

Trade, Importers of Milk and Dairy Products, AMM, Market Value, Bamako

1. Introduction

In Mali, the Decree on Marketing Authorization (AMM) for foodstuffs, animal feed and food additives are based on the National Food Safety Policy, the objective of which is to ensure the protection of the health of populations by

controlling the health quality of food. Apart from the excessively high rates of food-borne illnesses [1], the trade in food and particularly milk and dairy products raises many questions [2]. Especially since in 2009, international trade was dominated by the most significant financial and economic crisis in several years [3]. Mali is one of the largest importers of milk and dairy products in West Africa, despite its status as a livestock country [4]. Studies on milk and co-products have mainly focused on production [5] [6] [7], productivity [8] [9], health safety [10], but few were interested in product-specific regulations. Statistics had, however, sounded the alarm: according to FAOSTAT, imports of dairy products were around 60 to 70 million litters of milk equivalent per year [6], they had cost the country nearly 12 million euros in 2003 [4].

This work aimed to demonstrate that: "Non-compliance of commercial transactions with regulatory requirements is costly for the national economy and public health". It illustrates this by taking as an example the AMM and milk & co-products imported and marketed in Bamako.

2. Materials and Methods

2.1. Study Area and Period

The Bamako district is the study area on "Cost of non-compliance with the requirements of the Marketing Authorization (AMM) of milk and dairy products imported into Mali".

The reference period was from January 2012 to June 2014, *i.e.* 30 months.

2.2. Material

The work used various materials: a questionnaire with closed and open numerical responses. The response is said to be closed when the respondent chooses an answer from the proposed response methods. It is open when it is possible to choose more than one answer; an identification form for marketed milk and dairy products; the list of milks and dairy products having a marketing authorization; the list of operators in the milk and dairy products sector; and the list of members of the National Commission for AMMs etc.

2.3. Methods

The study was descriptive cross-sectional. It used three (3) methodological approaches: the collection of information based on a documentary review and interviews with the main actors and resource people in the field; field surveys relating to the census of the main importers and imports of milk and dairy products; and processing and analysis of the data collected.

2.4. Collection of Information Focused on Documentation and Interviews with the Main Players and Resource People in the Field

Data collection took place at the National Agency for Food Safety (ANSSA), at the

Regional Directorate of Veterinary Services of the District of Bamako (DRSV-DB), at the National Directorate of Trade and Competition (DNCC), at the General Directorate of Customs (DGD), at the National Institute of Statistics (INSTAT), in certain supermarkets, in the agri-food or pharmaceutical industries and at the large Bamako market, a wholesale market where s supply other traders.

The main players in the agri-food sector and certain resource people were approached. The three socio-professional categories targeted were: civil servants of the structures in charge of AMM; economic operators in the agri-food sector; Bamako consumers; and resource people from ministries, umbrella organizations, NGOs, design offices, schools and universities.

The first part of the questionnaire, which was used to collect their impressions, aimed to draw up the profile of the people surveyed. The other questions related to their perceptions of AMM (the importance, weaknesses and remedies, etc.). They therefore contributed to the identification and formulation of proposed solutions to the questions linked to the study.

2.5. Census of the Main Importers and Imports of Milk and Dairy Products

The criteria used for the search for statistics on foodstuffs and food products of animal origin in general and on milk and dairy products in particular traded in Bamako were: the period, the quantity, the importer and provenance.

The numerical data collected from different sources were compared. They were used to determine different proportions: milk and dairy products on food and food products; milk and dairy products with AMM on milk and dairy products without AMM; powdered milk on dairy products; classification of importers and origins; evolution of imports over the thirty months of the reference period, etc.

The list of marketed milks and dairy products with marketing authorization was obtained from ANSSA. The difference observed between this list and that of imported and marketed foods available to the DNCC and veterinary services was used to measure the effective application of the Marketing Authorization relating to milk and dairy products.

2.6. Data Processing and Analysis

Data on foodstuffs and food products of animal origin in general and milk and dairy products in particular were processed using Microsoft Excel software.

The SPHINX plus 2 computer software was used to process data relating to targeted players in the agri-food sector and in particular marketing authorization. The SPHINX plus 2 analysis parameters were: closed questions (Minimum, Maximum, Sum, Mean and Standard Deviation) and numerical open response questions. The observations were grouped into classes of equal amplitude.

The data analysis was carried out in two phases: A univariate analysis which made it possible to focus on a single variable at a time (flat tables). Multivariate analysis consisted of simultaneously analysing several variables to exploit the

structuring of all the data with a view to reducing the variables to a smaller number of dimensions (factor analysis). It was also used to search for relationships between one variable and several others.

3. Results

3.1. Collection of Impressions from Stakeholders and Resource People

The players in the field surveyed, numbering 465, had various profiles (Figure 1), technical control agents, economic operators and consumers. They came from various backgrounds: from ministerial offices to health training schools passing by umbrella organizations, NGOs, design offices. They expressed their visions on AMM.

The univariate analysis of the opinions of the actors showed that almost all the people surveyed (72%) agreed on the essential nature of AMM to preserve public health. Table 1 summarizes the modalities cited in order of importance and the non-responses.

The multivariate analysis of the opinions of the actors was used to reduce the number of dimensions of the summary table by searching for the first factorial axes. It made it possible to couple the socio-professional category with the other variables taken two by two.

The greatest number of observations from consumers came from people with a duration of experience between 10 and 20 years (e2: 61/138 observations). They were perfectly aware of the AMM (C1: 82/138 observations) (Table 2).

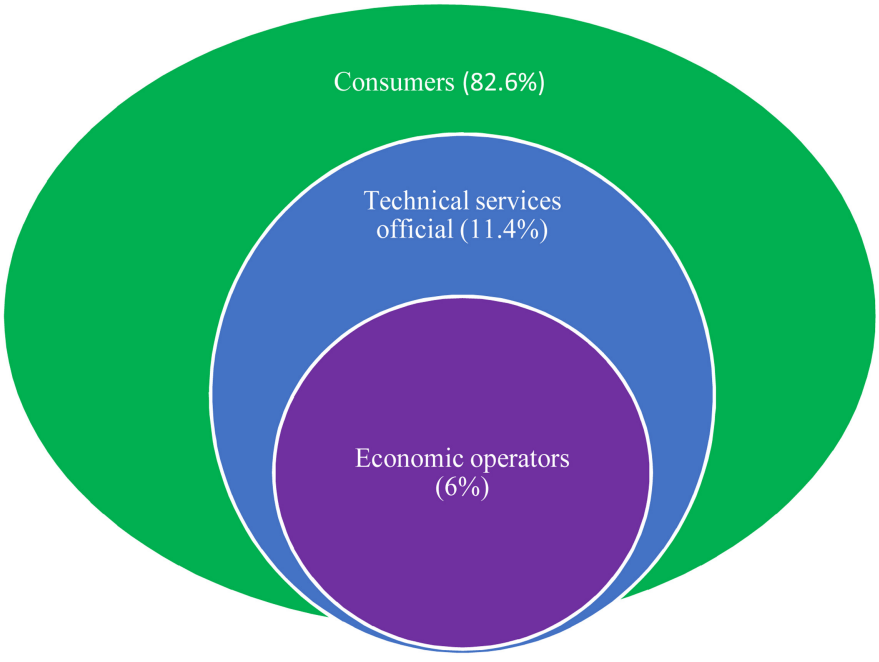

Figure 1. Actors surveyed in the agri-food sector. Author: Toure Kalifa, 2015. The people surveyed were categorized into three (3) including technical control agents, economic operators and consumers.

Table 1. Summary of data relating to the opinions of agri-food stakeholders on marketing authorizations. The table summarizes the modalities cited in order of importance and the non-responses.

	Modality cited in No. 1	Modality cited in No. 2	Least cited modality	No answers
category	Consumer: 384	Civil servant: 53	Economic operator: 28	0
Age	Between 20 and 40 years: 311	Above 40 years: 91	Below 20 years: 63	0
Experience	Between 10 and 20 years: 79	Less than 10 years: 74	More than 20 years: 65	247
AMM knowledge	Yes: 223	No: 198	Don't know: 44	0
AMM cost	Very expensive: 156	Inexpensive: 129	Insignificant: 25	0
Duration of AMM	Just: 252	Very long: 94	Don't know: 41	0
Technical formalities AMM	Supportable: 274	Restrictive: 93	Too light: 21	0
Necessity AMM	Essential: 335	Just useful: 114	Not necessary: 5	0
Operators and AMM	Non-compliance with Laws: 267	Ignorance: 233	Don't know: 13	1
Appropriation AMM	More awareness: 386	By constraint: 120	Don't know: 18	1

SPHINX plus 2 analysis parameters: 1) Closed questions: Minimum = 1, Maximum = 465; Sum = 108,344; Average = 233.00; and Standard deviation = 134.38. 2) Questions 11 and 12 are digital open response. 3) The observations are grouped into 7 classes of equal amplitude.

3.2. Census of Importers and Imports of Milk and Dairy Products

Twenty-three identified importers shared the milk and dairy products market in Bamako over the study period. The largest importer of milk and dairy products during 2012 was SODIMA followed by SICOMA and Mr. Amadou H TALL with respectively 2075.043 tons, 1451, 494 tonnes and 1136.614 tons. In 2013, SICOMA came first among importers of milk and dairy products with 2857.747 tonnes and Save the Children closed the list with 5672 tons. NESTLE, Demba WAGUE and SODIMA imported the largest quantities of milk and dairy products during the first half of 2014 with in order 325,742 tons, 272.8 tons and 203.68 tons.

Table 2. Analysis of multiple category correspondences coupled with experience and knowledge of AMM. The greatest number of observations from consumers come from people with a duration of experience between 10 and 20 years (e2: 61/138 observations). They are perfectly aware of the AMM (C1: 82/138 observations). The staffing table (Burt table) for the 9 modalities.

	C1	C2	C3	e1	e2	e3	C1	C2	C3
C1	53	-	-	14	13	26	40	5	8
C2	-	27	-	8	5	14	21	5	1
C3	-	-	138	52	61	25	82	46	10
e1	14	8	52	74	-	-	42	22	10
e2	13	5	61	-	79	-	49	28	2
e3	26	14	25	-	-	65	52	6	7
C1	40	21	82	42	49	52	143	-	-
C2	5	5	46	22	28	6	-	56	-
C3	8	1	10	10	2	7	-	-	19

C1: Civil servant C2: Economic operator C3: Consumer. e1: Less than 10 years e2: between 10 and 20 years e3: more than 20 years. C1: Yes C2: No C3: Don't know. Non-responses were ignored.

The data collection on the importation of foodstuffs and food products of animal origin in general and milk and dairy products in particular generated the following results:

Mali (observation made in Bamako) was one of the largest importing countries of milk and dairy products in West Africa. Approximately twenty-one thousand four hundred and forty-two tonnes and four hundred and eighty-five kilograms (21442.485) of milk and dairy products were imported in thirty (30) months (January 2012-June 2014) (Figure 2).

The vast majority of processing units in the sector use powdered milk, hence the significant quantity imported estimated at eleven thousand six hundred and eighty-one tons, seven hundred and fifteen kilograms (11691.715) or 54.525% of the total quantity of mil and imported dairy products. Companies such as SICOMA and SODIMA even specialized in the importation of powdered milk. Other dairy products (cheese, cream, butter, yogurt) were imported by food stores, supermarkets (ALS) and companies like EURO Lait and Harry Délices. Condensed milk, sweetened or not, was imported by companies such as SODIMA.

The access roads serving as entry points to Bamako were: Samé, Sébénicoro, Niamana, Railway Station and Bamako Sénou Airport. The main origins of all these imports were: Africa (Senegal, RCI, etc.), Outside Africa (France, United Arab Emirates, Holland, etc.).

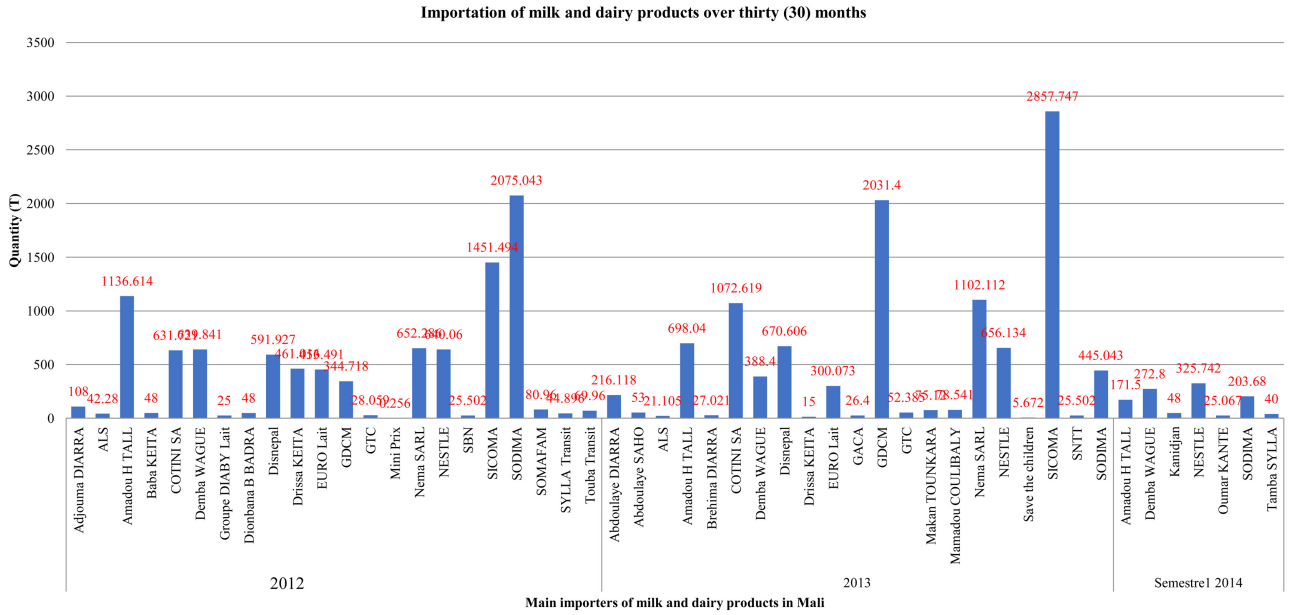

Figure 2. Main importers of milk and dairy products from January 2012 to June 2014. Source: DRSV-DB monthly reports (2012, 2013 and first half of 2014). Author: Toure Kalifa, 2015. The quantities of milk and dairy products imported by operator were estimated over the thirty months of study.

4. Discussion

Restricting the scope of the study to imported and marketed milk and dairy products aimed to collect precise and real data on imports of these foods. This has made it possible to considerably reduce the usual inadequacies linked to the system for registering imports of foodstuffs and products. It was also possible to highlight the impact of these massive imports of subsidized milk on efforts to develop local production.

The approach did not take into account the categories of food, no less important, which were: local milk and dairy products, foodstuffs and food products of plant origin, certain mixed products, pharmaceutical products, phytosanitary products…Exports of milk and dairy products have also been ignored [11].

The results showed that the massive importation of food and food products into Mali was not new [12] [13]. The 21,442,485 tons of milk and dairy products imported in thirty (30) months were consistent with the trends observed during the 2010 decade [2] [11].

The specific case of milk and dairy products must strongly challenge decision-makers to take appropriate measures to protect the population. Because Africa, particularly the countries of sub-Saharan Africa, had become the potential market for absorbing milk production surpluses from developed countries, major milk producers [2]. As a result, the Malian population as a whole appears very exposed. According to the permanent modular household survey (EMOP), just over half of household consumption expenditure was allocated to food (53%). In addition, the results revealed that poor households allocated nearly 69% of expenses to food [14]. However, the annual per capita consumption of

milk would be on average around 47 kg for Mali, including 59 kg for Bamako [13]. Most of this consumption was covered by imports. This was illustrated by the peaks observed in 2012 and 2013. Ultimately, the harmful consequences of these imports were innumerable. Apart from the health hazard, not only did they slow down the development of the local milk sector but they mobilized a fabulous treasure abroad [13].

Investigations revealed that only four (4) economic operators present on the market, or 17%, complied with the regulatory requirements relating to marketing authorizations. By extrapolation, imports "non-compliant with marketing authorizations" were estimated at approximately 17,798 tons of milk and dairy products and a market value of forty-four billion four hundred and ninety-five million (44,495,000,000 FCFA in Average price of 2500 FCFA/Kg).

Dependence on imports was real and anchored in the habits of consumers and processing industries [4]. These imports consisted mainly 90% of powdered milk [6]. However, this cheap milk powder is generally skimmed milk, a "by-product", which is re-fatted with vegetable fats, very often palm oil, then sold 30% cheaper in South Africa West [15].

The above-mentioned findings confirmed the initial hypothesis, namely that milk and dairy products marketed in Bamako without AMM, the vast majority on the market, were costly for the national economy and public health. Which was regrettable because this practice, by the same operators over years, was bleeding the country's economy and represented a potential risk for consumers. For example, the number of marketing authorizations for all of these operators represented at least sixty-nine (69) per product range (this does not take into account the types of packaging). These 69 AMMs corresponded to at least 3 products per operator. In other words, a contribution of only seventeen million two hundred and fifty thousand (17,250,000 FCFA) allowing 23 operators to comply with the regulations…

5. Conclusions

Milk and dairy products imported like the foodstuffs and food products marketed in Bamako were recorded to highlight a massive importation but also the gulf that existed between products having an AMM and those not having one. Only four of the twenty-three large importers have a marketing authorization for some of their products. The synthesis of the opinions of the different actors in the field made it possible to identify the strengths, weaknesses and opportunities for improvement of the system. The challenge to overcome is then to transform these constraints into development opportunities. This involves updating the text, favouring prevention through education, from primary school for example, on hygiene, sanitation, etc.; to promote the self-control of agri-food companies through the adoption of HACCP and ISO 22,000.

The desired reforms must have as a basis the updating and harmonization of national regulations in the field of agri-food.

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Conflicts of Interest

The authors declare no conflicts of interest.

References

[1] FAO/WHO (2007) Food Safety Risk Analysis; Guide to the Use of National Authorities Responsible for Food Safety: Study FAO Food and Nutrition. https://books.google.ml/books/about/Analyse_des_risks_relatifs_%C3%A0_la_s%C3%A9cu.html?id=KdRBPB6yglIC&redir_esc=y

[2] Coulibaly, D. (2008) Socio-Technical Change in Dairy Production Systems and Marketing of Milk in the Peri-Urban Area of Sikasso, Mali. Doctoral Thesis, AgroParisTech (IER), Paris.

[3] Bellmann, C., Biswas, T. and Chamay M. (2010) Recent Trade Trends and International Negotiations International Review of Development Policy, Dossier. Africa: 50 Years of Independence-Review. Development Policy Developments. 171-200.

[4] Alimenterre (2006) The Dairy Sectors in Mali. 35 p. https://www.cfsi.asso.fr/wp-content/uploads/2021/01/19-etude-lait-mali.pdf

[5] (2008) Project: Research on Herd Management Methods for Farming Economic and Sustainable Dairy Cattle in Peri-Urban Areas of Mali: Production, Distribution and Consumption of Milk and Dairy Products in Peri-Urban Areas of Mali. 36 p. https://agritrop.cirad.fr/572377/

[6] Corniaux, C. (2013) Study Relating to the Formulation of a Detailed Action Program for Development of the Milk Sector within the West African Economic and Monetary Union. UEMOA. p 36.

[7] Bytyqi, N., Muji, S. and Rexhepi, A. (2020) Consumer Behavior for Milk and Dairy Products as Daily Consumption Products in Every Household—The Case of Kosovo. *Open Journal of Business and Management*, **8**, 997-1003. https://doi.org/10.4236/ojbm.2020.82063

[8] Doufils, A. (2010) Capitalization of the Rural Mini-Dairy Model in Mali: Definition of Success Factors and the Place of Mini-Dairies in National Dairy Development. Master's Thesis, CIRAD/Montpellier II University, Montpellier, p 85.

[9] Bytyqi, H., Rrustemi, M., Mehmeti, H., Kryeziu, A., Gjinovci, V. and Gjonbalaj, M. (2010) Milk Production in Commercial Cattle Dairy Farms in Kosova. https://www.researchgate.net/publication/43138269

[10] Bonfoh, B. (2002) Healthy Milk for the Sahel. Hygiene and Quality of Milk and Dairy Products in Mali: Implications in Dairy Production and Public Health. LCV/INSAH-STI/ETHZ, Bamako, 51 p.

[11] Diarra, A. (2007) Procedures and Techniques for Quality Control of Milk and Dairy Products Used in the Bamako District: Constraints and Perspectives. Thesis, Rural Polytechnic Institute/Institute of Training and Applied Research, Koulikoro.

[12] FAO (2009) The Global Situation of Food and Agriculture: Update on Livestock. FAO, Rome, 202 p.

[13] (2006) Study on the Profile of the Dairy Industry in Mali. Executive Summary. USAID, Mali, 24 p.

[14] (2013) Consumption, Poverty, Household Well-Being: April 2011-March 2012. INSAT, Mali.

[15] Duteurtre G. (2019) West Africa: The Diversity of Dairy Products Threatened by Imports. https://www.cirad.fr/les-actualites-du-cirad/actualites/2019/science/afrique-de-l-ouest-diversite-des-produits-laitiers-menacee