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Relationship between certification and export in Moroccan food industry

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ABSTRACT

Placed among Moroccan World's Professions, national food industry has made significant progress in recent years which enable the country to cover a big part of internal needs. In addition, food companies have a vision to conquer international market through the export of their products. The impacts of export activity on companies and national economy are important. However, to attract and retain foreign customers, Moroccan company must provide guarantees about safety of food it produces. Those guarantees include third-party certification. This work aims to highlight the relationship between export and certification of Moroccan food companies based on results of a questionnaire sent to some of them in order to analyze constraints to food security in the Moroccan food industry. Outcome of this study show that exports increase was accompanied by an increase of certification number delivered to these companies. Also exporters are more likely to be certified then non exporting companies. We found that first certification, usually according to ISO 9001, is a step for the company to comply with other specific standards such as ISO 22000, BRC and IFS.

KEYWORDS

Moroccan food industry; Exporting companies; Certified food companies certification; Export; Questionnaire; Food safety.

INTRODUCTION

Our environment is increasingly competitive and globalized. Regulation, and also technologies evolve in a rapid way and all businesses (large or small) are facing customers demands and more restrictive requirements[1]. In recent years, private standards have taken on an increasing role in the governance of global agro-food chains[2]. Traditionally, it was predominately government agencies that were responsible for monitoring food safety standards and food quality attributes. However, the globalization of the agro-food system, the consolidation of the food retail industry, and the rise in private retailer standards have precipitated a shift in responsibility for this task to third-party certifiers[3,4,5]. Many producers believe that certified agricultural products market is very complex and the opportunities and requirements of certification programs are not always clear. In addition, producers do not always know if standards applied to products for export are mandatory or voluntary[6]. Food industry remains a strategic sector in Morocco because of its economic, social and environmental crucial role. In fact, this sector contributes on average 16% of GDP through its upstream agriculture and 4% of its food-industrial downstream, for nearly 10% to total exports and 44% of employment. Agriculture is also responsible for valorization and conservation of natural resources of our country (land and water)[7]. Over the period 2009-2011, Moroccan food exports were heavily concentrated to the European Union market, which has absorbed about 73% of it. Among importers we note France which leads with nearly 50%. The evolution of EU part from food industry exports informs about its dominance despite the obstacles placed for access to this market. Indeed, this part has almost remained unchanged all over the last decade above 70%. The high concentration of exports to the European market has made Morocco very vulnerable to the changing economic conditions of the European Union[7]. To support the growth of the Moroccan food industry, the government is implementing a program to develop Food-Industrial Platforms (6 agro-food poles) and seafood processing (2 Fish Hub), providing infrastructure and services at the best international standards[8].

EXPERIMENTAL

In this work, questions 1 and 2 of the questionnaire relating to Food safety constraints analysis in Moroccan food industry: focus on documentation[9], are studied in detail. These questions are about export and certification. The study was conducted during the period from December 2012 to December 2013. When the questionnaire was under preparation, the following factors were taken into consideration:

- Questions should be clear, simple and minimized,
- Time required to complete the questionnaire should not exceed 10 min,
- Information classified as confidential (such as: turnover, capital, main customers and suppliers, salaries, etc.) are not required,
- With the exception of “company’s name”, all questions are classified as "obligatory" to prevent uncompleted answers,
- Making access to the questionnaire easy by launching online via the following link:

https://docs.google.com/spreadsheet/viewform?formkey=dFpsQXJlU0doUlBDTEZKTTR5cTdkUVE6MQ.

RESULTS AND DISCUSSION

Certification

For certification criteria, TABLE 1 shows results of the survey. It is found that 78% of companies are certified or in the way of certification.

TABLE 1 : Distribution of companies according certification criteria

	Number	Percentage
Certified companies	58	62%
On the way of certification companies	15	16%
None certified companies	21	22%

In TABLE 2 and Figure 1, certified companies of this study are classified according to certification standards. We note that ISO 9001: 2008 certification comes in first with 28% of total certifications followed by ISO 22000: 2005. This can be explained by the fact that several companies consider ISO 9001 as a basis to organize internal management system (document and records control, organizational chart and job descriptions, none conform product control, internal audits, management review, etc.). Then they go towards other certifications like ISO 22000, BRC, IFS or GLOBAL GAP which are specific standards for companies operating in food sector. We note that these standards are the most chosen by enterprises for second certification because of their direct impact on working methods, customer's requirements in term of safety and competitively of the company in the market. Food safety and food quality assurance are forms of guarantees. Safety is defined as the condition of being safe from undergoing or causing hurt, injury or loss. The assurance of food safety is a guarantee that the food is safe from causing harm[10]. In 1998, the BRC, with participants such as TESCO and Sainsbury, took the initiative to define common criteria for the inspection of suppliers of food products. The inspections are carried out by certified inspection organizations. Before BRC was introduced retailers carried out inspections separately; joint inspections, however, reduce costs[11]. IFS Food is a standard for auditing suppliers / food manufacturers. It concerns only food processing companies or those packaging fresh products[12]. Global GAP is a private standard broadly focused on the implementation of good agricultural practice (GAP) in production that has been established on a collective basis by major retailers and other stakeholder groups, initially in Europe but increasingly more globally[13].

On the contrary, certification according to standards related to environment (ISO 14001), health and safety at work (OHSAS 18001 and NM 00.5.801) and social responsibility (MCGC label) remains undeveloped in this sector and do not exceed 10 of full % certifications. It has been noted that only the companies which implemented environmental management systems have good environmental practices which aim at minimizing and controlling the impact of their activities on the environment[14]. Concerning health and safety at work, research has proved that better health and safety standards are achieved when workers perceive that their companies are committed to the idea[15], that managers' and workers' commitment to their company's performance is heavily influenced the work load, labor turnover, hiring of temporary staff or outsourcing of some tasks or even shift schedules[16,17] can greatly condition the appropriate occupational health and safety management of a company. MCGC label, is given to companies complying with social responsibility charter. Which can be defined as ‘‘the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large[18].

TABLE 2 : Distribution of certified companies by standard

Standard	Percentage	Number
ISO 9001: 2008	28%	28
ISO 22000: 2005	19%	19
BRC: 6	13%	13
IFS: 6	9%	9
GLOBAL GAP	5%	5
ISO 14001: 2004	5%	5
HACCP	4%	4
Integrated Program of Quality Improvement (IPQI)	3%	3
HALAL	2%	2
Moroccan Standard (MS) 00.5.801	2%	2
Occupational Health & Safety Assessment Series (OHSAS) 18001: 2007	2%	2
European Standard (ES) 45011	1%	1
American Institute of Baking (AIB)	1%	1
BPF	1%	1
Field To Fork (F2F)	1%	1
Friend Of the Sea (FOS)	1%	1
ISO 17025: 2005	1%	1
Moroccan Companies General Confederation (MCGC) label	1%	1
WISE	1%	1

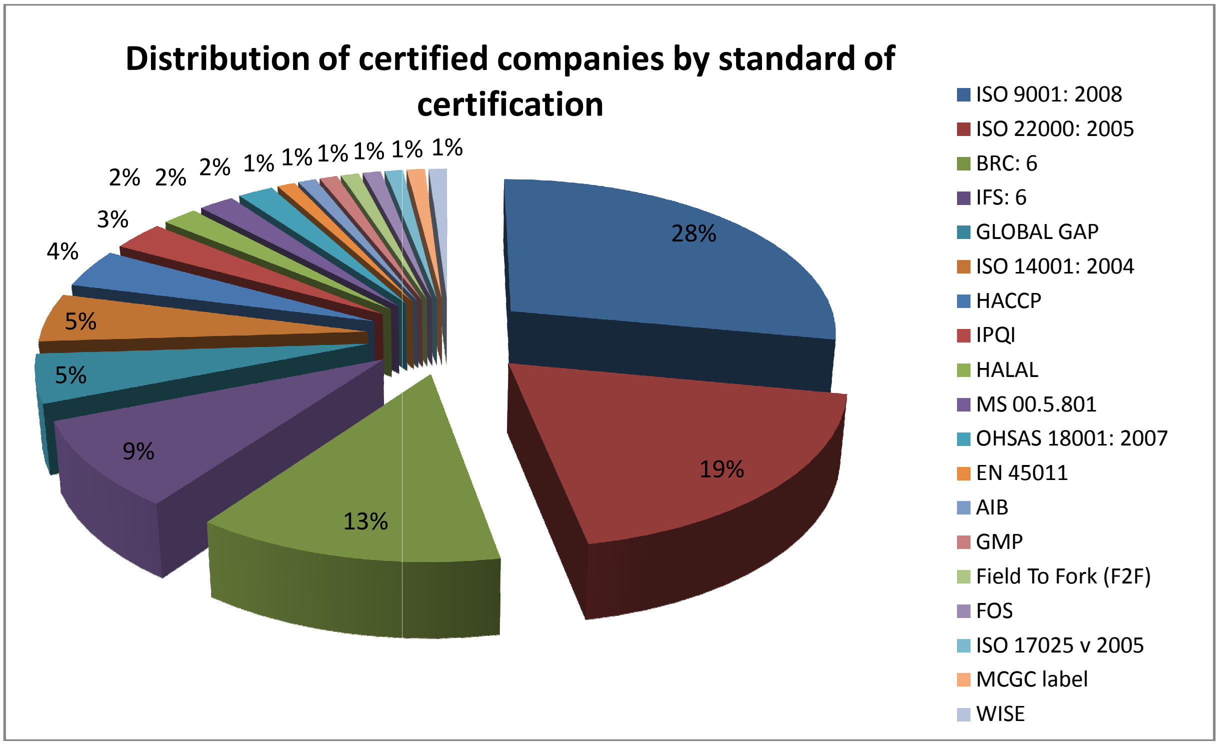

Figure 1 : Distribution of certified companies by standard of certification

According to annual survey results about management system standards certification carried out by ISO[19], the number of ISO 9001 certification has increased from 414 to 689 certificates (all confused -food industry and other sectors-). On the contrary, ISO 22000 certifications have recorded a decline between 2010 and 2012 (from 52 to 46 in 2011 and 40 in 2012) before returning to the initial number of 52 in 2013. For other standards related to food security like British Retail Consortium (BRC) and International Featured Standards (IFS), numbers show that for BRC standard, the number of certified sites has rises from 28 in 2009 to 107 in 2013. While, for IFS certification, it started in Morocco in 2012 with 12 companies to arrive to 56 in the end of 2013. According to these numbers, we conclude that the number of certified companies rises.

TABLE 3 and Figure 2 «Distribution of certified companies by the number of certification» inform us that about the half of certified companies surveyed have one certification, 26 % of them have 2 certifications, 16% obtained 3 certifications and only 3 enterprises, so 5%, have 4 certifications.

TABLE 3 : Distribution of certified companies by number of certifications

1 certification	2 certifications	3 certifications	4 certifications
53%	26%	16%	5%
31	15	9	3

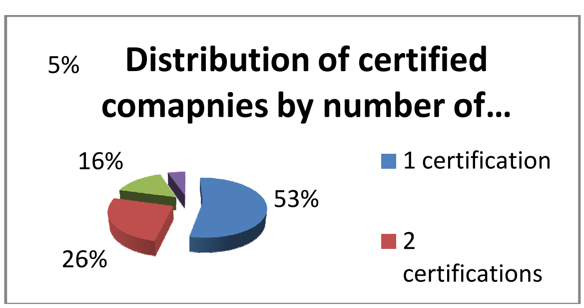

Figure 3 : Distribution of certified companies by number of certifications

Analysis of dual certification enterprises shows that almost half of them are certified according to ISO 9001 and ISO 22000 standards, then the couple IFS / BRC and ISO 9001 / Good Manufacturing Practices (GMP) ranks second with 13% each. 60% of these companies have certified their quality management system according to ISO 9001 requirements before moving to other standards (ISO 22000 and GMP).

TABLE 4 : Ranking of dual certification companies

ISO 9001 + ISO 22000	IFS + BRC	ISO 9001 + BPF	ISO 22000 + HACCP	ISO 22000 + BRC	ISO 22000 + IFS	GLOBAL GAP + BRC
47%	13%	13 %	7%	7%	7%	7%
7	2	2	1	1	1	1

Triple certification concerns 9 companies, the equivalent of 16% of the total surveyed. Detail is as follows:

TABLE 5 : Ranking of triple certification companies

ISO 9001 + IFS + BRC	ISO 9001 + ISO 22000 + WISE	BRC + IFS + IPQI	ISO 9001 + ISO 14001 + MS 00.5.801	HACCP + HALAL + IFS	GLOBAL GAP + HACCP + IPQI	ISO 9001 + ISO 22000 + ISO 14001	GLOBAL GAP + BRC + Field To Fork (F2F)
1	1	1	2	1	1	1	1

With the exception of triple certification quality, safety and environment that is common between two companies of this study, the choice of others varies from a company another depending on the constraints of its market and customer requirements. For the quadruple certification, the number of the companies concerned does not exceed three. Their classification is presented in TABLE 6. The common point between these three is ISO 9001 certification.

TABLE 6 : Ranking of quadruple certification companies

ISO 9001, ISO22000, ISO14001 & OHSAS 18001	ISO 9001, ISO22000, IFS & BRC	ISO 9001, ISO 14001, OHSAS 18001, Label CGEM
1	1	1

Companies in the way of certification are also concerned by this study. They constitute 16% of all companies surveyed. TABLE 7 shows their distribution according to certification standard. It is found that 36% of them are in the way of complying to ISO 22000 relative to food safety management system. 18% plan to implement ISO 9001 (quality management system). BRC and IFS standards are in the way of certification by 24% of these companies. The rest (7 companies so 22%) are dispatched between HACCP, ISO 14001, FSSC 22000, ISO 50001 and Tesko choice.

TABLE 7 : Distribution of companies in the way of certification by standard

ISO 22000 : 2005	36%	12
ISO 9001: 2008	18%	6
BRC: 6	12%	4
IFS: 6	12%	4
HACCP	6%	2
ISO 14001: 2004	6%	2
Food Safety System Certification (FSSC) 22000	3%	1
ISO 50001: 2011	3%	1
Tesko choice	3%	1

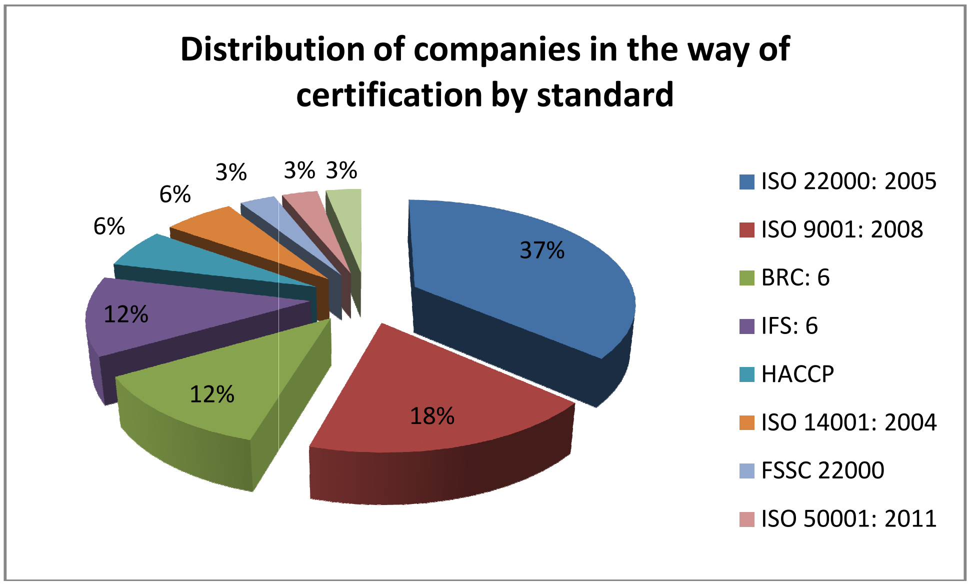

Figure 4 : Distribution of companies in the way of certification by standard

Export

In this study, 94 of food companies have answered the questionnaire. 63 of them have confirmed that they export their products, against 31 who market only on local market. TABLE 8 shows the distribution of companies according to Export criteria.

TABLE 8 : Distribution of companies according to export criteria

	Number	Percentage
Exporting companies	63	67%
None exporting companies	31	33%

Export and certification

TABLES 9 and 12 present the distribution of surveyed companies according to both criterions: export and certification. Exporting companies (in TABLE 9) on the number of 63 units, 51 of them, so 81%, are certified or on the way of certification according to 17 different standards (TABLE 10 and 11). This percentage (81%) shows the importance of certification in the access to new markets, facilitation of transactions and confidence giving to customers / consumers, on the one hand. On the other hand, the establishment of a certification process according to a standard brought the company in a project that involves, in most cases, all staff through the introduction of new principles, new working methods, training and in some cases organizational changes. 74 certificates were delivered to these companies. It is note the presence of 12 certified exporters and in the way of certification at the same time according to other standards.

TABLE 9 : Distribution of exporting companies according to certification criteria

Exporting		
Certified	**In the way of certification**	**None certified**
42	9	12
67%	14%	19%

TABLE 10 : Certification standards for exporting companies

Standard	Certification number	Percentage
AIB	1	1%
BPF	1	1%
BRC	14	19%
EN 45011	1	1%
Field To Fork (F2F)	1	1%
FOS	1	1%
GLOBAL Good Agricultural Practices (GAP)	5	7%
HACCP	4	5%
HALAL	2	3%
IFS	10	14%
ISO 14001	1	1%
ISO 22000	13	18%
ISO 9001	15	20%
OHSAS 18001	1	1%
IPQI	3	4%
WISE	1	1%

TABLE 11 : Standards in the way of certification by exporting companies

Standard	Certification number	Percentage
BRC	4	19%
HACCP	1	5%
IFS	4	19%
ISO 14001	1	5%
ISO 22000	6	29%
ISO 9001	4	19%
Tesko choice	1	5%

TABLE 12 : Distribution of none exporting companies according to certification criteria

None exporting		
Certified	**In the way**	**None certified**
16	6	9
52%	19%	29%

For none exporting firms of this questionnaire, the percentage of those certified and in the way of certification is about 71%. Three of them are certified and in the way of certification according to other standards. The detail of standards subject certification and certification project is specified in TABLES 13 and 14 below. It is noted that ISO 9001 comes as the head of certified standards, while ISO 22000 is in the first place for those in the way of certification.

TABLE 13 : Certification standards for none exporting companies

ISO 14001	ISO 17025	ISO 22000	ISO 9001	MCGC label	MS 00.5.801	OHSAS 18001
4	1	7	14	1	2	1
13%	3%	23%	47%	3%	7%	3%

TABLE 14 : Standards in the way of certification by none exporting companies

FSSC 22000	HACCP	ISO 14001	ISO 22000	ISO 50001	ISO 9001
1	1	1	5	1	2
9%	9%	9%	45%	9%	18%

CONCLUSION

For its development, Morocco has implemented several national strategies to increase the productivity and sustainability of its enterprises, particularly those in food sector. For example, Emergency and Green Morocco plans. Their impact on food and beverages products exports is positive. Exchange Office, “Office des Changes”, numbers show that imports of food, beverage and tobacco products have recorded a decline of 14.6% between 2012 and 2013. Against exports of Moroccan food industry that increases from year to other. Between 2012 and 2013 the variation was +11% against +6.5% and +6.9% respectively between 2011/2012 and 2010/2011. Morocco recorded a coverage rate of 93.9% (value of imports / value of exports) at the food, beverages and tobacco products (knowing that for tobacco there is only imports and no exports)[20]. The increase in exports was accompanied by an increase in the number of certification delivered by ISO, BRC and IFS. Certification of Moroccan food companies become increasingly requested because of guarantee and confidence that gives to customers / consumers. Hence the tendency of these companies to increase and diversify certifications to meet customer requirements and to maintain their competitiveness at national and international level.

47% of certified companies have more than one certification. This means that the first certification, usually according to ISO 9001, is a step for others in relation to food safety such as ISO 22000, IFS, BRC, etc. Food safety is a global concern, not only because of the importance for public health, but also because of its impact on international trade. Globalisation of food production and procurement makes food chains longer and more complex and increases the risk of food safety incidents. Effective and harmonized food safety systems shall manage and ensure the safety and suitability of food in each link of the supply chain[21].

SUPPLEMENTARY INFORMATION AVAILABLE PARAGRAPH

The UK retailer Tesco, while a EUREPGAP member, still requires its suppliers to comply with its own safety specifications (‘Tesco Nature’s Choice’). Nature’s Choice has 180 compliance criteria, compared with EUREP’s 150 criteria. The main difference lies in Tesco’s emphasis on environmental/ social issues, which makes the assessment of small unit farms difficult[22].

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