The Impact Level of the Environmental Approach on Moroccan Industries: Case Study

ECH-CHELFI Wiame[a], EL HAMMOUMI Mohammed[b]

[a] *Industrial Laboratory Techniques, FST, Sidi Mohammed Ben Abdellah University (USMBA), Fez, Morocco.*

[b] *Industrial Laboratory Techniques, FST, Sidi Mohammed Ben Abdellah University (USMBA), Fez, Morocco.*

[a]*ORCID: 0000-0001-8181-4767*

Abstract

The aim of this article is to analyze the behavior of Moroccan companies with regard to the use of road freight transport and their knowledge in terms of environmental approaches. Thus, a survey analysis was carried out by applying a site condition questionnaire to assess the perception of environmental, logistic and company managers on environmental issues related to transport and logistics activities. In order to verify the correlation between the different questions we chose the SPSS software as a platform for analysis and administration of questionnaire.

Keywords: ISO 14001; road freight transport; logistics; prevention; risk.

1.   INTRODUCTION

The integration of Morocco into globalization requires not only structural reforms, bold initiatives, economic and social projects, but also an upgrade of the economic fabric. In order to gain international recognition and boost exports, Moroccan companies must align with international standards and standards regarding the global logistics approach in order to strengthen their competitiveness.

The companies that stand out today are those that have planned innovative management approaches to improve their quality, strengthen safety at work, but also to protect the environment.

Awareness of environmental issues is one of the most important issues in current scientific research and debate. Sustainable development and the protection of the environment are not only the responsibility of the state, but also the responsibility of all components of society.

The industrial sector is one of the most concerned, insofar as its responsibility for the degradation of the environment is well established (greenhouse gas emissions, industrial waste, etc.). Today, reducing and controlling environmental impacts through the implementation of an environmental management system (EMS) through ISO 14001 certification allows the company to play not only its role of citizen actor by reducing its rejects, but also to reduce production costs.

But what about Moroccan companies? Are they aware of the economic and environmental issues involved in such a process?

This work aims to analyze, for a sample of 30 companies, the dominant mode of transport, the knowledge and the prevention against the risks of road transport of goods and also the presence or not of the environmental standards like ISO 14001.

Currently, it is recognized that the performance of any institution, whatever its nature, requires the adoption of a management system that meets the basic requirements of the concept of sustainable development and its economic, sociocultural and environmental components..[1]

Despite the measures taken by the public authorities, the number of companies certified in Morocco remains very low[2]. Indeed, in the era of COP 22, Moroccan companies are increasingly asked to integrate economic, social and environmental concerns into their managerial practices [3] . In this sense, we focus on the practice and awareness of Moroccan companies on the basis of a questionnaire for a sample of companies and analyzed using SPSS software.

2.   DATA AND METHODOLOGY

2.1 Data source

The exploratory study described in this document aims to provide an overview of the state of the companies surveyed and the practices concerning the use of vehicles transporting the goods in the Moroccan territory, as well as the knowledge and application of approaches to managing transport risks and protecting the environment. To this end, a questionnaire survey was conducted among a sample of companies operating in Morocco in the industrial, commercial and other sectors using own-account or other transport.

In this section, the results of the empirical survey are presented, giving an overview of the relevant characteristics of the firms surveyed, including the name and corporate name, the legal form, their distribution by number of employees, size of the fleet, type of activity, the mode of transport used, geographic scope and extent of services provided. For example, data on the number of truckloads per week, product packaging, risk analysis and ISO 14001 certification are then documented and discussed.

A series of questions related to the mode of transport used, the business market (local, regional, national or international), the nature of the goods, the size of the company and its openness to international.

Various tools such as Microsoft-Excel, the SPSS statistical package and google forms were used in the analysis of the questionnaire data.

2.2 Methodology

Concerning our methodology, we chose the use of a questionnaire referred to companies then an analysis by SPSS 25. The statistical software package for the social sciences (SPSS) is one of the most used software for the statistical analysis in the field of social sciences. It is also one of the most used software by market researchers, health researchers, survey companies, governments, and educational researchers, among others. In addition to statistical analysis, data management (case selection, reconfiguration of files, creation of derived data) and data documentation (a metadata dictionary is stored) are SPSS functionalities [4].

This analysis identifies the relationship between the variables used in the questionnaire in order to clarify the situation of road freight transport in Morocco and the level of awareness of Moroccan companies towards 14001 certification.. The figure (1) illustrates the process adopted in the questionnaire processing
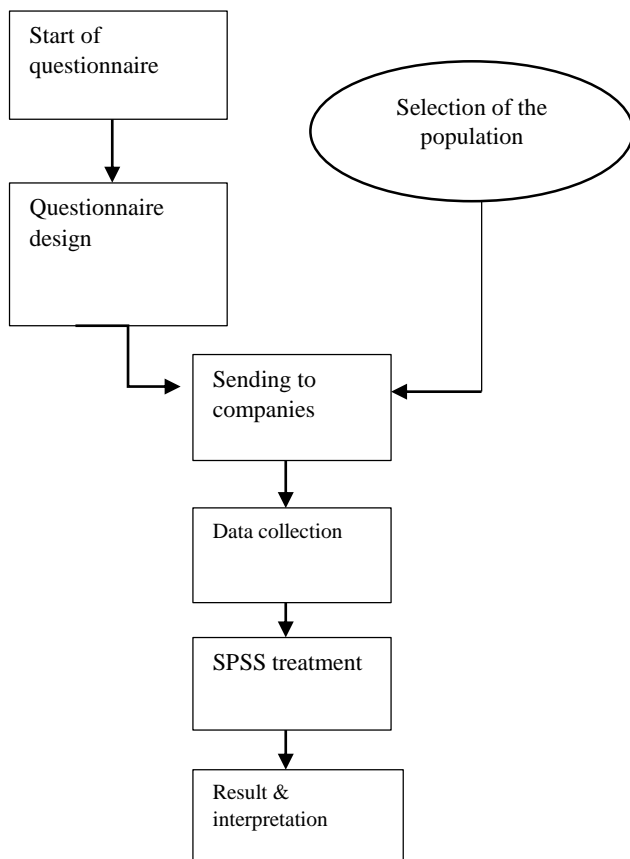
Fig 1: Questionnaire treatment process (authors)

In order to collect data, we distributed a questionnaire to 30 companies using road transport for the distribution of their products. The questionnaire method seems the most sensitive because the answers must be precise and clear. This method was chosen because it provides a better understanding of companies' actual transportation practices. In this work, we have taken into account in the choice of companies those who have the possibility to use the road mode for own account or by subcontracting. Among the questions asked

- Q_1 : How many shipments a week in a truck (tractor trailer or tractor or both)? in a van?

- Q_2 : Do you subcontract the means of transport?

- Q_3 : Are you satisfied with the various logistical services in terms of: service, security, cost and delay?

The purpose of Q_1 is to know the frequency of use of road freight transport which considers itself among the most polluting modes and to what extent the companies using this mode are aware of the risk management standards. The Q_2 question is analyze the level of collaboration between the company and the transport providers and the Q_3 question shows us the priority of the responding companies and what is the percentage of companies prioritizing security.

Descriptive statistics such as frequencies (fi), percentages (%), means (m) and standard deviations (σ) were used to describe the characteristics of the sample and to summarize the variables of the study. Guided by social cognitive theory and relevant empirical studies [5] we first examined the associations between these study variables using the Pearson correlation and the relative contribution of each group of variables to explain the dependent variable and the independent variable and to measure the correlation coefficient.

A hierarchical regression analysis was then used to identify significant correlations between firm size and road freight risk prevention and also with ISO 14001 certification adherence.

3. RESULT AND DISCUSSION

3.1. Characteristics of the sample

The small size of the samples poses problems for any statistical analysis and results in a decrease of the prediction potential compared to the models developed with more occurrences [6]. But according to [7] and [8], the selection of the sample and the selection of the interviewees are essential conditions for the success of an investigation.

For this, in the selected sample we have targeted transport user companies particularly in their activities to have fewer scattered answers. The questionnaire is divided into four main sections:

- Information about the company.

- The activity of the company and its extension.

- The most used mode of transport.

- The environmental vision of the company.

The administration of questionnaire responses is done using SPSS 25 software, which we have applied: descriptive statistics such as frequencies, percentages, means and standard deviations have been used to describe the characteristics of the sample and summarize the variables of the study, thus

correlation tests and simple non-parametric linear regression to measure dependence and independence between variables.

Do you subcontract the means of transport? =>Tab5.

Tab 1 : Legal form

		F_i	%	% valid	% accrued
Valid	SARL	23	76,7	76,7	76,7
	SA	4	13,3	13,3	90,0
	SAS	1	3,3	3,3	93,3
	other	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

Tab 5 : Under Traitance

		F_i	%	% valid	% accrued
Valid	yes	19	63,3	63,3	63,3
	No	11	36,7	36,7	100,0
	Total	30	100,0	100,0	

Are you satisfied with the various logistical services in terms of:?=>Tab 6.

Tab2 : Company size

		F_i	%	%valid	% accrued
Valid	small	17	56,7	56,7	56,7
	medium	10	33,3	33,3	90,0
	large	3	10,0	10,0	100,0
	Total	30	100,0	100,0	

Tab 6 : Satisfaction

		F_i	%	% valid	% accrued
Valid	Service	12	40,0	40,0	40,0
	security	4	13,3	13,3	53,3
	cost	10	33,3	33,3	86,7
	Time limit	4	13,3	13,3	100,0
	Total	30	100,0	100,0	

In which sectors of activity does the company carry on (industry, trade, crafts, ...)?=>Tab 3.

Tab 3 : activity sector

		F_i	%	% valid	% accrued
Valid	industry	13	43,3	43,3	43,3
	commerce	12	40,0	40,0	83,3
	crafts	1	3,3	3,3	86,7
	other	4	13,3	13,3	100,0
	Total	30	100,0	100,0	

How many shipments a week in a truck (semi-trailer or tractor or both)? in a van?=>Tab 7.

Tab 7 : Number of sending

		F_i	%	% valid	% accrued
Valid	0	4	13,3	13,3	13,3
	1	5	16,7	16,7	30,0
	2	3	10,0	10,0	40,0
	3	6	20,0	20,0	60,0
	4	3	10,0	10,0	70,0
	5	3	10,0	10,0	80,0
	7	2	6,7	6,7	86,7
	10	2	6,7	6,7	93,3
	20	2	6,7	6,7	100,0
	Total	30	100,0	100,0	

What mode (s) of transport is often used for the transport of your goods?=>Tab 4.

Tab 4 : Transport mode

		F_i	%	% valid	% accrued
Valid	Road	23	76,7	76,7	76,7
	Maritime	4	13,3	13,3	90,0
	Air	3	10,0	10,0	100,0
	Total	30	100,0	100,0	

Is there an analysis of the risk of road transport of goods already made within the company?=>Tab 8.

Tab 8 : Risk analysis

		F_i	%	% valid	% accrued
Valid	yes	10	33,3	33,3	33,3
	no	20	66,7	66,7	100,0
	Total	30	100,0	100,0	

Are your company's staff trained in road risk prevention? =>Tab 9

Tab 9 : risk prevention

		F_i	%	% valide	% accrued
Valid	yes	14	46,7	46,7	46,7
	no	16	53,3	53,3	100,0
	Total	30	100,0	100,0	

Is your company engaged in a 14001 certification process?=>Tab 10.

Tab 10 : 14001 certification

		F_i	%	% valide	% accrued
Valid	yes	5	16,7	17,2	17,2
	no	24	80,0	82,8	100,0
	Total	29	96,7	100,0	
Missing	System	1	3,3		
Total		30	100,0		

How transport and logistics are they included in the ISO 14001 certification process ? =>Tab 11.

Tab 11 : 14001 measure

		F_i	%	% valide	% cumulé
Valid		24	80,0	80,0	80,0
	none	1	3,3	3,3	83,3
	under study	1	3,3	3,3	86,7
	providers are certified	1	3,3	3,3	90,0
	minimizing CO_2 emissions	1	3,3	3,3	93,3
	Minimize risks and losses	1	3,3	3,3	96,7
	security and delivery time	1	3,3	3,3	100,0
	Total	30	100,0	100,0	

3.2. Correlation and regression analysis

3.2.1. Non-parametric correlations

The most frequently used statistics to test the association of variables are the correlation coefficients of Bravais-Pearson (parametric) and Spearman (nonparametric). Spearman's correlation coefficient (rs) is generally adopted when the hypothesis of the normal two-variable distribution is not sustainable [9].

Spearman is one of the oldest and best known nonparametric procedures [10], The rank correlation coefficient (ρS) is generally expressed as

$r_s = 1 - 6\sum d^2/(n^3 - n)$

where n is the number of measurements in each of the two correlation variables

$\sum d^2 = \sum_{i=1}^{n} di^2$, and d_i is the difference between the two measures for the two variables.

SPSS Statistics generates the tab 12. containing the analysis of the correlation of the variables of our questionnaire through the Kendall tau-b test (τb) and Rho de Spearman rs.

The purpose of correlation analysis is to measure and interpret the strength of a linear or non-linear relationship (eg, exponential, polynomial, and logistic) between two continuous variables [11].

The results are presented in a matrix with replicated correlations. Nevertheless, the table presents Kendall's tau-b correlation, its significance value, and the sample size on which the calculation was based. In our analysis, for the two variables Risk Analysis (RA) and Risk Prevention (RP) we can see that Kendall's tau-b correlation coefficient, (τb), is ,472[**], which is statistically significant with Sig. (unilateral) (p) = 0,005).

The size of the company and the number of shipments of the goods per week were correlated with a Spearman Rho =0,164

Similarly, the business sector of the company is an average relationship with the certification and knowledge of ISO 14001 standars With a Spearman Rho = 0.206

Also the prevention of risk is well linked to the variables Number of sending, legal form, membership and sector of activity.

Tab 12 : Intervariable correlations

			size	Number Sending	Legal form	belonging	activity area	customer area	market	Mode of transport	subconracting	Satisfaction	Conditioning	Risk analyse	Risk prevention	14001 certification
Tau-B de Kendall	size	Correlation coefficient	1,000	,137	,301*	-,400*	-,303*	-,037	,337*	,336*	-,153	,150	-,346*	-,196	-,308*	-,308*
		Sig. (unilateral)	.	,189	,042	,013	,037	,411	,024	,027	,197	,183	,018	,137	,043	,046
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Number Sending	Correlation coefficient	,137	1,000	,275*	,030	-,206	-,357**	-,071	,196	-,255	,134	-,176	-,043	,098	-,128
		Sig. (unilateral)	,189	.	,039	,425	,088	,008	,322	,106	,056	,184	,118	,395	,272	,216
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Legal form	Correlation coefficient	,301*	,275*	1,000	-,325*	-,067	,039	-,005	,172	-,078	,158	-,242	-,086	,061	-,155
		Sig. (unilateral)	,042	,039	.	,035	,347	,407	,489	,162	,331	,171	,072	,317	,368	,198
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	belonging	Correlation coefficient	-,400*	,030	-,325*	1,000	,272	,087	-,498**	-,224	,146	-,145	,211	,213	,040	,127
		Sig. (unilateral)	,013	,425	,035	.	,061	,306	,002	,108	,216	,200	,108	,125	,414	,251
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	activity area	Correlation coefficient	-,303*	-,206	-,067	,272	1,000	,066	-,421**	-,108	,172	-,097	,342*	,163	,135	,206
		Sig. (unilateral)	,037	,088	,347	,061	.	,343	,006	,264	,164	,276	,017	,177	,222	,124
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	customer area	Correlation coefficient	-,037	-,357**	,039	,087	,066	1,000	,015	-,121	,068	-,125	-,115	-,222	-,212	,143
		Sig. (unilateral)	,411	,008	,407	,306	,343	.	,464	,235	,346	,216	,235	,099	,109	,207
		N	29	29	29	29	29	29	29	29	29	29	29	29	29	28
	market	Correlation coefficient	,337*	-,071	-,005	-,498**	-,421**	,015	1,000	,439**	-,180	-,036	-,174	-,036	-,170	,154
		Sig. (unilateral)	,024	,322	,489	,002	,006	,464	.	,005	,153	,413	,141	,419	,167	,194
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Mode of transport	Correlation coefficient	,336*	,196	,172	-,224	-,108	-,121	,439**	1,000	-,226	-,155	-,235	-,134	-,259	-,170
		Sig. (unilateral)	,027	,106	,162	,108	,264	,235	,005	.	,105	,178	,079	,228	,076	,177
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	subcontracting	Correlation coefficient	-,153	-,255	-,078	,146	,172	,068	-,180	-,226	1,000	,047	,613**	,245	,157	-,245
		Sig. (unilateral)	,197	,056	,331	,216	,164	,346	,153	,105	.	,392	,000	,094	,199	,097
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Satisfaction	Correlation coefficient	,150	,134	,158	-,145	-,097	-,125	-,036	-,155	,047	1,000	,055	-,168	-,121	-,254
		Sig. (unilateral)	,183	,184	,171	,200	,276	,216	,413	,178	,392	.	,364	,164	,241	,075
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Conditioning	Correlation coefficient	-,346*	-,176	-,242	,211	,342*	-,115	-,174	-,235	,613**	,055	1,000	,198	,053	,048
		Sig. (unilateral)	,018	,118	,072	,108	,017	,235	,141	,079	,000	,364	.	,123	,377	,391
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Risk analyse	Correlation coefficient	-,196	-,043	-,086	,213	,163	-,222	-,036	-,134	,245	-,168	,198	1,000	,472**	,053
		Sig. (unilateral)	,137	,395	,317	,125	,177	,099	,419	,228	,094	,164	,123	.	,005	,390
		N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
	Risk prevention	Correlation coefficient	-,308*	,098	,061	,040	,135	-,212	-,170	-,259	,157	-,121	,053	,472**	1,000	,107
		Sig. (unilateral)	,043	,272	,368	,414	,222	,109	,167	,076	,199	,241	,377	,005	.	,285

		size	Number Sending	Legal form	belonging	activity area	customer area	market	Mode of transport	subcontracting	Satisfaction	Conditioning	Risk analyse	Risk prevention	14001 certification
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
14001 certification	Correlation coefficient	-,308*	-,128	-,155	,127	,206	,143	,154	-,170	-,245	-,254	,048	,053	,107	1,000
	Sig. (unilateral)	,046	,216	,198	,251	,124	,207	,194	,177	,097	,075	,391	,390	,285	.
	N	29	29	29	29	29	28	29	29	29	29	29	29	29	29
Rho de Spearman — size	Correlation coefficient	1,000	,164	,309*	-,414*	-,333*	-,058	,371*	,355*	-,158	,164	-,389*	-,203	-,319*	-,319*
	Sig. (unilateral)	.	,193	,048	,011	,036	,382	,022	,027	,202	,193	,017	,141	,043	,046
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Number Sending	Correlation coefficient	,164	1,000	,320*	,035	-,259	-,436**	-,077	,237	-,294	,176	-,256	-,049	,113	-,148
	Sig. (unilateral)	,193	.	,042	,427	,084	,009	,344	,103	,057	,176	,086	,398	,276	,221
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Legal form	Correlation coefficient	,309*	,320*	1,000	-,336*	-,077	,048	-,006	,184	-,081	,176	-,286	-,088	,063	-,160
	Sig. (unilateral)	,048	,042	.	,035	,344	,402	,488	,165	,335	,176	,063	,321	,371	,203
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
belonging	Correlation coefficient	-,414*	,035	-,336*	1,000	,288	,096	-,526**	-,230	,146	-,156	,229	,213	,040	,127
	Sig. (unilateral)	,011	,427	,035	.	,062	,310	,001	,111	,221	,204	,111	,129	,416	,256
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
activity area	Correlation coefficient	-,333*	-,259	-,077	,288	1,000	,109	-,476**	-,113	,182	-,102	,368*	,172	,142	,218
	Sig. (unilateral)	,036	,084	,344	,062	.	,287	,004	,276	,168	,296	,023	,181	,227	,128
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
customer area	Correlation coefficient	-,058	-,436**	,048	,096	,109	1,000	,022	-,138	,075	-,166	-,108	-,244	-,233	,157
	Sig. (unilateral)	,382	,009	,402	,310	,287	.	,456	,237	,349	,195	,288	,101	,112	,212
	N	29	29	29	29	29	29	29	29	29	29	29	29	29	28
market	Correlation coefficient	,371*	-,077	-,006	-,526**	-,476**	,022	1,000	,465**	-,190	-,048	-,219	-,038	-,179	,163
	Sig. (unilateral)	,022	,344	,488	,001	,004	,456	.	,005	,157	,400	,123	,421	,171	,199
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Mode of transport	Correlation coefficient	,355*	,237	,184	-,230	-,113	-,138	,465**	1,000	-,232	-,166	-,270	-,138	-,266	-,175
	Sig. (unilateral)	,027	,103	,165	,111	,276	,237	,005	.	,108	,191	,075	,233	,077	,182
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
subcontracting	Correlation coefficient	-,158	-,294	-,081	,146	,182	,075	-,190	-,232	1,000	,051	,666**	,245	,157	-,245
	Sig. (unilateral)	,202	,057	,335	,221	,168	,349	,157	,108	.	,395	,000	,096	,203	,100
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Satisfaction	Correlation coefficient	,164	,176	,176	-,156	-,102	-,166	-,048	-,166	,051	1,000	,084	-,181	-,131	-,272
	Sig. (unilateral)	,193	,176	,176	,204	,296	,195	,400	,191	,395	.	,329	,169	,246	,076
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Conditioning	Correlation coefficient	-,389*	-,256	-,286	,229	,368*	-,108	-,219	-,270	,666**	,084	1,000	,215	,058	,052
	Sig. (unilateral)	,017	,086	,063	,111	,023	,288	,123	,075	,000	,329	.	,127	,380	,394
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Risk analyse	Correlation coefficient	-,203	-,049	-,088	,213	,172	-,244	-,038	-,138	,245	-,181	,215	1,000	,472**	,053
	Sig. (unilateral)	,141	,398	,321	,129	,181	,101	,421	,233	,096	,169	,127	.	,004	,392
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
Risk prevention	Correlation coefficient	-,319*	,113	,063	,040	,142	-,233	-,179	-,266	,157	-,131	,058	,472**	1,000	,107
	Sig. (unilateral)	,043	,276	,371	,416	,227	,112	,171	,077	,203	,246	,380	,004	.	,290
	N	30	30	30	30	30	29	30	30	30	30	30	30	30	29
14001 certification	Correlation coefficient	-,319*	-,148	-,160	,127	,218	,157	,163	-,175	-,245	-,272	,052	,053	,107	1,000
	Sig. (unilateral)	,046	,221	,203	,256	,128	,212	,199	,182	,100	,076	,394	,392	,290	.
	N	29	29	29	29	29	28	29	29	29	29	29	29	29	29

*. The correlation is significant at the level 0.05 (unilateral).

**. The correlation is significant at the level 0.01 (unilateral).

3.2.2.   Linear regression analysis using SPSS

The simple regression analysis aims to evaluate the relative impact of a predictor variable on a given outcome. This is different from a correlation analysis, where the goal is to examine the strength and direction of the relationship between two random variables[11]. We apply simple linear regression on two important questions:

Q1 : Is there an analysis of the risk of road transport of goods already made within the company?

Q2 : Are your company's staff trained in road risk prevention?

The simple linear regression was done to identify the correlates between the company's approach in risk analysis and the sensitization of staff through training, to deal with the simple regression analysis on these two questions, there are two hypotheses to assume:

- **H_0 hypothesis:** there is no relationship between the risk analysis of road freight transport and training of staff on risk prevention.

- **H_1 hypothesis** : there is a significant relationship between the two variables.

Tab 13 : Variables introduced / eliminated[a]

Model	Variables introduced	Variables eliminated	Method
1	Risk analyse[b]	.	Introduce

a. Dependent variable:risk prevention

b. All requested variables were introduced.

Tab 14 : Model Summary[b]

Model	R	R-two	R-two adjusted	Standard error of the estimate	Variation of R-two	Variation of F	ddl1	ddl2	Sig. Variation of F
1	,472[a]	,223	,195	,455	,223	8,046	1	28	,008

a. Predictors : (Constante), risk analyse
b. Dependent variable: risk prevention

Tab 15 : ANOVA[a]

Model		Sum of squares	ddl	mean square	F	Sig.
1	Regression	1,667	1	1,667	8,046	,008[b]
	of Student	5,800	28	,207		
	Total	7,467	29			

a. Dependent variable: risk prevention
b. predictors : (Constante), risk analyse

Tab 16 : Coefficients[a]

Model		Unstandardized coefficients		Standardized coefficients	t	Sig.
		B	Standard error	Bêta		
1	(Constante)	,700	,305		2,293	,030
	Risk analyse	,500	,176	,472	2,837	,008

a. Dependent variable: risk prevention

Tab 13 indicates the independent variable (Risk Analysis) and the dependent variable (risk prevention training), Tab 14, there are two important values, the model of regression:

R= 0.472(correlation coefficient) et R^2=0.223(R*R)

The value of R indicates that there is an average relationship between the two variables.

Analysis of variance (ANOVA) Tab. 15 is a hypothesis test procedure that checks whether two or more means are significantly different from each other, is a widely used tool for analyzing experimental data from carefully designed experiments[12].

The statistic F is the ratio of the sum of the average squares between the model regression and student model (1,667 /, 207 = 8,046), also Tab 16 contains three important value 0.7 which expresses the constant B, 0.5 is the value of the slope for the regression line

$$y=Ax+ B \text{ if } x=0, B= 0,7$$

P-value= $0.008<0.05$ so H_1 : there is a statistically significant relationship between the company's risk analysis and risk prevention approaches.

4. CONCLUSION

This work is based on the result of a questionnaire containing a set of questions sent to a selective sample of companies, the objective is to know the mode of transport most used for Moroccan companies, and also to analyze for the different companies operating at regional, local, national or international level. Have an idea about the level of adoption and application of ISO 14001 environmental certification standards of respondents.

The results obtained are processed on the statistical software SPPS which allowed us to translate and to process the correlation and the regression between the different variables.

The answers obtained were expected we recorded for this sample 66.7% of the companies have never done a risk analysis and 53.3% confirmed that they do not provide training of the personnel on the prevention of the risks of road transport of goods. by questioning companies on their commitment to the 14001 certification process, we recorded 83.3% have no idea about the 14001 certification standard. These percentages show the negligence of several mostly Moroccan companies in the environmental approach in the process of development and this may be among the major causes of accidents in the road.

This survey made it possible to establish a study of the existing situation in the field of prevention against the risks of road freight transport and the integration of the company in the ISO 14001 certification process. Moreover, the synthesis of correlations and the inter-variable regression of the survey allowed to establish a reflection around the road transport of goods of Moroccan companies in an environmental and social approach.

REFERENCE

[1] A. Renaud, "CONTROLE DE LA DECLINAISON ET DE L ' EMERGENCE DES STRATEGIES ENVIRONNEMENTALES .," 2011.

[2] A. Fekari, "La certification ISO et le changement organisationnel dans la PME marocaine : résultats d'une enquête auprès de 100 PME," *Management & Avenir*, vol. 43, no. 3, p. 164, 2011.

[3] A. Cherkaoui, "Pratiques RSE des PME au Maroc : une analyse perceptuelle auprès des dirigeants casablancais," *Question(s) de management*, vol. 14, no. 3, p. 13, 2016.

[4] G. A. F. Serber and A. J. Lee, *Linear Regression Analysis*. 2003.

[5] A. Bandura, "The Explanatory and Predictive Scope of Self-Efficacy Theory," *Journal of Social and Clinical Psychology*, vol. 4, no. 3, pp. 359–373, 1986.

[6] D. R. . Stockwell and A. T. Peterson, "Effects of sample size on accuracy of species distribution models," *Ecological Modelling*, vol. 148, no. 1, pp. 1–13, 2002.

[7] C. Forza, "Survey research in operations management: A process-based perspective," *International Journal of Operations and Production Management*, vol. 22, no. 2, pp. 152–194, 2002.

[8] N. E. Synodinos, "The 'art' of questionnaire construction: Some important considerations for manufacturing studies," *Integrated Manufacturing Systems*, vol. 14, no. 3, pp. 221–237, 2003.

[9] R. Artusi, P. Verderio, and E. Marubini, "Bravais-Pearson and Spearman correlation coefficients: Meaning, test of hypothesis and confidence interval," *International Journal of Biological Markers*, vol. 17, no. 2, pp. 148–151, 2002.

[10] J. H. Zar, "Significance testing of the spearman rank correlation coefficient," *Journal of the American Statistical Association, 67(339)*, vol. 67, no. 339, pp. 578–580, 1972.

[11] K. H. Zou, K. Tuncali, and S. G. Silverman, "Radiology," pp. 617–622, 2002.

[12] I. Lind, *Regressor and Structure Selection Uses of ANOVA in System Identification*, no. 1012. 2006.