The territorial attractiveness for foreign investments of Mediterranean cities: the case of city of Tangier in Morocco

ABBES ELHASBI
LMPGI Laboratory, University Hassan II of Casablanca, Morocco

MOHAMED BARKAOUI
LMPGI Laboratory, University Hassan II of Casablanca, Morocco

OTHMANE BOUKSOUR,
LMPGI Laboratory, University Hassan II of Casablanca, Morocco

OULAID KAMACH
LMPGI Laboratory, University Hassan II of Casablanca, Morocco

The objective of this article is to provide the main factors of attractiveness for foreign investors in the manufacturing and logistics sectors of the city of Tangier in Morocco. The conceptual model was developed from literature review and interviews with a sample of the leaders of foreign small and medium enterprises (SMEs). The empirical analysis is carried out using data from a survey of executives of these foreign (manufacturing and logistics) companies based in the city of Tangier. The use of the Partial Least Squares (PLS) approach allowed us to test the causal links between the various political, economic, social, technological, legal and environmental (PESTEL) factors. The scientific interest of the model is to provide decision makers of the city of Tangier with the recommendations to improve the development and attractiveness of foreign investments in both logistics and manufacturing sectors.[1]

Key words: Territorial attractiveness; PESTEL; PLS; manufacturing and logistics activities

1 The authors express their thanks to Mohamed Amekhchoun who participated in the data analysis of this study.

INTRODUCTION

According 150 executives interviewed for the "BaroMed 2015" (Lacovone and Lhermitte 2015), the Mediterranean region is the more attractive than Europe. It has attracted in 2013 an amount of 85 billion U.S. dollars which has been higher than the foreign investments in China on the same year.

The regions are increasingly seeking to attract FDI in a concern to reduce the unemployment rate, to decrease the deficit in the balance of trade by strengthening the exports, transferring technology, contributing to industrial development and strengthening the attractiveness territorial arrangement of the country, etc. The purpose of this Article is to define the main factors of attractiveness of manufacturing enterprises and logistics by a Mediterranean city by taking the case of the city of Tangier. This research is based on an exploratory study conducted with the leaders of the foreign firms.

This article is divided into two parts. The first part concerns the theoretical framework on which authors rely to provide a conceptual model resting on the political, economic, social, technological, legal and environmental (PESTEL) factors model. This is to clearly identify the industrial location factors that determine the manufacturing and logistics attractiveness of the city of Tangier. The second part includes the empirical study allowing to achieve the end result. Therefore, we develop an almost exhaustive questionnaire according to the stages of Churchill paradigm (Benraiss 2004). From 120 questionnaires distributed, in fact only 57 are exploitable. The PESTEL model has a qualitative structure. To be measurable, we will adopt a research-based approach using the Likert scale and method of structural equations with latent variables according to the partial least squares (PLS) analysis approach via the XL-STAT software.

THEORETICAL AND CONCEPTUAL FRAMEWORK

To determine the factors of territorial attractiveness of foreign manufacturing and logistics companies we use a conceptual framework at the base of PESTEL model and add the factor of proximity (WHY this new factor?).

THE CONCEPT OF TERRITORIAL ATTRACTIVENESS

An attractive area is one that has more "capacity to provide, through their resources, more attractive settling conditions than those of competing areas for mobile projects" (Hatem 2004). In fact, the notion of territorial attractiveness becomes more and more a topic of local elected officials and public stakeholders working in the framework of local development agencies to improve the attractiveness of territories to productive and residential activities. In this context, we have seen the creation and development of a number of organizations which evaluate the attractiveness of countries towards companies such as the World Economic Forum, AT Kearney, the United Nations (UN) and the annual Doing Business report of the group of the World Bank that provides an assessment of the business climate by analysing the favourable and unfavourable regulations of business activities of the country.

The reports of these organizations have helped to classify the countries in terms of attractiveness compared with other competing countries. Moreover, these reports influence the decision-making of business location within and outside the countries. If territories are in need of multinational firms, companies in turn want territories (Hatem 2004).

Companies seek to enjoy various offers worldwide by optimizing their organizations and by being established where there are the best comparative advantages.

There are various research works on the theoretical foundations of the firms' investment decisions abroad. Among these works, there is the eclectic theory that was developed by John H. Dunning and which is also called O.L.I. paradigm that is based on three types of benefits to multinationalisation namely: The ownership (O) specific advantages, the locational attractions (L), and the advantage in of internalization (I) (Dunning 2000, 163).

Following the literature review, one finds several models and concepts that address the significant factors of territorial attractiveness for foreign investment.

EMPIRICAL WORK

Parallel to the above theoretical works, there are several empirical studies that attempt to measure the territorial attractiveness based on panel data or opinion survey. In fact, the concepts of attractiveness depend on what the user seeks to apprehend: measure of economic performance, observation of establishment decisions or, further upstream of the decision process, their determinants (improve translation - incomprehensible) (Coeuré, Rabaud, and Madiès 2003).

In the works of Fabrice Hatem (2005, 43), there are five categories of attractiveness:

- The "macro" approach, by global indicators, which is usually interested in the attractiveness of a country or a region. This approach, too, has led to the econometric approach and opinion approaches among investors. The most publicized barometers are: Ernst and Young, Business Competitiveness Index (World Economic Forum);
- The «meso» approach which is interested in studying the attractiveness factors of a particular area within a particular branch of industry;
- The «micro» approach which is based on the comparative analysis of the benefits of open multiple sites in the same area;
- The approach in terms of image, which studies the effect of the image or reputation of a territory on the decision making of the leaders at the time of the decision making on the location;
- The «decision making» approach which is based on academic and empirical research to study processes of decision-making.

Table 1 represents a synthesis of the main empirical works relating to the study of selected industrial location factors.

Table 1: Summary of the main empirical research

Authors	Results	Independent factors
(Head and Mayer 2004)	From the study of Japanese multinationals in the EU: the "market potential" factor is more important than other factors (labor or tax costs).	Economic factor
(Sascha et al. 2004)	From the study of German multinationals: the main location factor for these companies abroad, is access to "large markets".	Economic factor
Rathelot and Sillard 2008) (Baldwin and Krugman 2004)	The inequalities in taxation between countries on profits influence the location of firms.	Legal factor
(Cecchini 2002) (Hassane and Zatla 2001)	The legal and regulatory environment impacts the business location.	Legal factor
(Kalantari 2013)	From their exploratory study, they proposed some location factors.	- Social factors - Political factors - Economic factors - Legal factors - Proximity factors
(Elhasbi et al. 2015)	Exploratory research confirms that the geographical proximity of a territory and the proximity of industrial zones influence the decision-making of managers.	Proximity factors
(Yüksel 2012) Economic, Socio-cultural, Technological, Environment and Legal	In his article, the author puts forward PESTEL factors and sub-factors.	PESTEL factors

Source : Authors' own analysis.

PROXIMITY FACTORS

Originally, the space in economic theory is not thick, only generating transportation costs. According to Marshall, territory emerges when the interactions between activities make location decisions become interdependent. The role of space as a generator of economic benefits is then analyzed according to whether geographical proximity may or may not be combined with other forms of proximity between economic agents to facilitate coordination (Zimmermann 2008).

Several current empirical situations show that geographical proximity is a component of the strategy of economic actors (Talbot 2009). At the time of our exploratory research (Elhasbi et al. 2015), 26% of interviewed leaders of foreign companies stated that proximity to the poles of competitiveness and to customer demand was seen as a business location factor.

There are several concepts of proximity. According to Rallet and Torre (2004), the concept of proximity is divided into two dimensions: proximity of a spatial type and a non-spatial type proximity which is also divided into institutional proximity and organizational proximity. On the other hand, Jean-Benoît Zimmermann (2008) divides the concept of proximity into three dimensions: an institutional dimension, an organizational dimension and a geographic dimension.

THE PESTEL MODEL

Globalization and the development of new information and communications technology (ICT) have limited the importance of borders and distance between countries thus increasing competition among companies internationally. These new conditions are driving companies to integrate the analysis of the business environment among the decision-making tools for choosing a new location. A review of the literature reveals several approaches and macro environment analysis tools (Lynch 2009).

In our article, we have used the PESTEL analysis model (Political, Economic, Socio-cultural, Technological, Ecological and Legal).

PESTEL ANALYSIS

PESTEL analysis is indeed a diagnosis of an organization's environment in order to use this information to guide strategic decision-making. The assumption is that if the organization is able to control the current environment and evaluate potential changes, it will be better to have the appropriate information so that it is well positioned with respect to its competitors in order to respond to changes (Buchanan and Gibb 1998).

In his article, Yüksel (2012)Economic, Socio-cultural, Technological, Environment and Legal has listed a synthesis of several names (definitions) of the PESTEL analysis such as PEST, STEP, SEPT, and STEPE. The original form of PESTEL was first conceived by Aguilar SPTO (social, political, technical, and economic). Then, it was reformulated "STEP" by Arnold Brown Institute of Life Insurance so as to be used in the strategic assessment of trends. The legal factor was introduced to the model in 1980. Today, the PESTEL analysis is used in different fields, particularly in the analysis of business environment and territory (Katko 2006; Richardson 2006; Shilei and Yong 2009). The PESTEL factors are usually measured with sub-factors (Items) and they have different weights and meanings.

In our research, we will use statistical analyses to examine the causal links between different factors of our conceptual model, which was established on the basis of our general hypothesis: Political, Economic, Sociocultural, Technological, Ecological, Legal and Proximity have a significant influence on the territorial attractiveness of the city of Tangier.

RESEARCH MODEL AND ASSUMPTIONS

We intend to examine our conceptual model by analysing the causal links between the dependent variables and the dependent variable. For each causal relationship, we have formulated a hypothesis.

THE AIM OF OUR RESEARCH

The ultimate objective of our research is to propose a conceptual model of the factors of attractiveness typical to the Mediterranean cities and in particular to the city of Tangier by examining the causal links between these factors. Our model (Figure 1) is built from syntheses carried out in mainstream approaches presented above, and on the other hand, based on the PESTEL model used by organizations for the macro-analysis by adding the proximity factor (geographical position, proximity to Europe, proximity to Africa). If note explained above, explain here why you add this factor.

Figure 1: Assumptions of a new conceptual model PESTELP

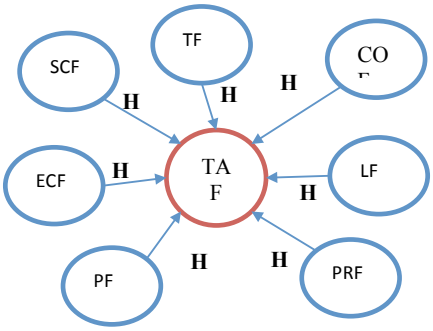


Table 2: Coding of variables in the model

	Variable	*Code*	*Type de variables*
1	*Political factor*	*PF*	*explicative*
2	*Economic factor*	*ECF*	*explicative*
3	*Socio-cultural factor*	*SCF*	*explicative*
4	*Technological factor*	*TF*	*explicative*
5	*Eco Factor*	*COF*	*explicative*
6	*Legal Factor*	*LF*	*explicative*
7	*Proximity factor*	*PRF*	*explicative*
8	*Territorial Attractiveness*	*TAF*	*To-be explained*

Source: Authors' own analysis.

Our model (Figure 1) intends to explain the territorial attractiveness of manufacturing and logistics activities based on eight constructs (Figure 2) which represent the explanatory variables (political factor, economic factor, socio-cultural factor, technological factor, ecological factor, legal factor, proximity factor and the would-be explained variable "territorial attractiveness").

The overall hypothesis (OH) of our research is "all the 'PESTELP' factors influence significantly the territorial attractiveness of the city of Tangier to foreign manufacturing and logistics companies". To verify the causal links between the PESTELP factors of our model with regard to the variable to-be-explained "territorial attractiveness (TA)", we will postulate and test the following hypotheses (Table 3).

Table 3: Recap of the study hypotheses

Hypothèses	
Relationship between Political Factor and Territorial Attractiveness	
H1	Political Factor has a positive and significant effect on Territorial Attractiveness
Relationship between Economic Factor and Territorial Attractiveness	
H2	Economic Factor has a positive and significant effect on Territorial Attractiveness
Relationship between Socio-cultural Factor and Territorial Attractiveness	
H3	Socio-cultural Factor has a positive and significant effect on Territorial Attractiveness
Relationship between Technological Factor and Territorial Attractiveness	
H4	Technological Factor has a positive and significant effect on Territorial Attractiveness
Relationship between Eco Factor and Territorial Attractiveness	
H5	Ecological Factor has a positive and significant effect on Territorial Attractiveness
Relationship between Legal Factor and Territorial Attractiveness	
H6	Legal Factor has a positive and significant effect on Territorial Attractiveness
Relationship between Proximity Factor and Territorial Attractiveness	
H7	Proximity Factor has a positive and significant effect on Territorial Attractiveness

METHODOLOGICAL FRAMEWORK OF RESEARCH

As part of our research, we have conducted an empirical study "face to face interview" with the leaders of foreign manufacturing and logistics companies based in the city of Tangier. To measure our assumptions, we have developed a questionnaire using Likert scale. Indeed, the questionnaire is considered as a tool for collecting quantitative data and mechanism of instrumentation of the assumptions (Giordano and Alain 2012). In the first page of our questionnaire, we have devoted a few lines to the explanation of the aim of the survey before proceeding to the various questions thereof.

SAMPLE SELECTION

Sampling was selected to ensure representation of manufacturing and logistics companies in the city of Tangier. We conducted our survey between August 2014 and April 2015 with 120 leaders of foreign manufacturing and logistics companies that were set up in Tangier between 2007 and 2015. We chose this period because Morocco has launched, since 2007, several national and regional strategies to stimulate foreign investments (emergence programme, logistical strategy, etc). The administration of the questionnaire was very difficult because we have chosen as a target; the managers of foreign companies. The latter rarely find time for an interview. Despite all the obstacles, we were able to complete 80 questionnaires but of which only 57 being usable. This represents a 48% response rate.

DEFINITION OF THE METHOD OF STATISTICAL ANALYSIS

The Structural Equation Modelling (SEM) is a method to define complex interacting systems (Fernandes 2012) and it allows studying the causal connections between multiple latent variables. These variables represent a concept but we can only measure them with manifest variables (MV) (Roussel et al. 2002). MES is used for the generalisation of many classic

models such as principal components analysis, factor analysis, and canonical analysis. We meet these statistical models in several research fields (Jakobowicz 2007) especially in the marketing field to construct satisfaction indicators (Clémence 2004). This type of modelling is thus important to test the hypotheses of our conceptual model. There are two methods of modeling via (MES) for estimating the existing relationships between the constructs : the LISREL method and the PLS method (Lacroux 2009).

The PLS approach is a regression analysis method of latent variables with their indicators and latent variables among themselves. It was developed by Herman Wold (M. Tenenhaus 1999) and mainly used for the analysis of small samples (observations) and several variables. It became operational with the development of PLS 1.8 software (Fernandes 2012).

We have chosen for our exploratory research the PLS approach because it is adapted to the development of theories and prediction, and to predictive causal analyses in complex situations and with weak theoretical information (Zaied and Ramzi 2012). With the PLS approach, the construct is defined as a composite variable (CV) and does not include the measurement error (Tensaout 2016).

$$\mathbf{VC = w_1X_1 + w_2X_2 + w_3X_3 + \cdots + w_nX_n}$$

Knowing that:

- (VC) variable to be explained (dependent variable).
- x_1 à x_n represent the n variables which have an influence on (VC).
- The values w_1 à w_n are the parameters of the model and represent the relations between variables.

A structural PLS model is described by two sub-models (Addinsoft 2011):

1. The measurement model (or external model) connecting the manifest (observed) variables with the latent variables associated with them.
2. And the structural model (or internal model) connecting the endogenous-called latent variables to other latent variables.

Several software's have been developed to operationalize the PLS approach such as PLSGRAPH, LVPLS, SMARTPLS, and XLSTAT that we have chosen to analyze the data from our survey.

MEASUREMENT AND EVALUATION OF THE MEASUREMENT MODEL

The research model includes seven explanatory latent variables and a latent variable to be explained (Error! Reference source not found.). These variables are measured by manifest variables operationalized by several items. For our reflective model, each manifest variable is associated with a latent variable by a simple linear regression equation (Jakobowicz 2010):

$$x_{h=}\pi_{h0} + \xi\pi_h + \varepsilon_h$$

Knowing that ξ has an average m and a standard deviation 1. The only assumption required in this case is:

$$E(x_h \mid \xi) = \pi_{h0} + \xi\pi_h$$

Hence the remainder ε_h has has a mean of 0 and is not correlated with the latent variable ξ. The first step to take is the verification of the one-dimensional feature of the blocks (Addinsoft 2011). To verify this, three main tools exist: 1) Principal components analysis of a block, 2) Cronbach's Alpha and 3) the Rho of Dillon-Goldstein.

a. Principal components analysis of a block

A block is said to be one-dimensional when the first proper value of the matrix of correlation between the manifest variables of the block is greater than 1 and the second is smaller than 1 or at least much smaller than the first (Addinsoft 2011).

Table 4 shows the results of the verification of dimensionality, we notice that all the first proper values are greater than 1 (and higher than the second) which means that the manifest variables actually reflect their latent variables).

Table 4 : Proper values of latent variables of the causal model

PF	ECF	SCF	TF	COF	LF	PRF	TA
1.334	4.472	2.936	1.805	4.281	2.696	6.084	7.992
0.462	1.291	0.928	0.252	0.649	0.535	1.616	2.321
0.262	1.009	0.478		0280	0.320	1.131	1.086
	0.679	0.416				0.877	0.882
	0.542	0.220				0.682	0.778
	0.396					0.558	0.512
	0.201					0.309	0.447
						0.200	0.362
							0.256
							0.214
							0.167
							0.133
							0.103
							0.078
							0.073
							0.000

Source: Authors' own analysis.

The error theory (Roehrich 1993) is based on two criteria: reliability and validity.

b. Reliability measures

The analyst must validate his questionnaire by testing the measuring instruments used (Hair et al., 1998).

Reliability is the degree of accuracy of a measuring instrument when the same identical result is obtained by repeating the measurement of the same phenomenon several times.

To check the reliability of the measurement instrument, we will use two indicators of Rho of Jöreskog (1971) and Rho of Dillon-Goldstein (Composite reliability) (Dillon and Goldstein 1984) .

To calculate $\rho(A)$ of Dillon and Goldstein the following formula is used:

$$\rho(A) = \frac{(\sum_{i=1}^{p} cor(x_i, t_1))^2}{(\sum_{i=1}^{p} cor(x_i, t_1))^2 + (\sum_{i=1}^{p} (1 - cor^2(x_i, t_1))}$$

With, the X matrix, the columns x_1 represents the P variables associated with the block. The first principal components of the principal components analysis performed on the X matrix are noted down t_1, t_2 ...

From the results of our analysis (Table 5), the indices, Cronbach's alpha and Rho, that we have calculated for each latent variable are greater than 0.7. Following the recommendations of (Nunnally and Bernstein 1994) and initiations of (Fornell and Larcker 1981), these results are satisfactory.

Table 5 : Reliability of measures

The latent variables	Items	Cronbach's Alpha	Rho of D. G. (ACP)
PF	3	0.718	0.844
ECF	7	0.843	0.882
SCF	5	0.822	0.876
TF	2	0.858	0.935
COF	3	0.885	0.932
LF	3	0.836	0.904
PRF	8	0.872	0.900
TA	16	0.929	0.939

Source : Authors' own analysis.

c. The convergent validity

According to (Evrard et al. 2009), convergent validity is used to verify the correlation between items of a scale measuring a construct, and moreover the correlation between the items and the construct to be measured. The validity is convergent when the average variance extracted (AVE) is greater than 0.5 (Evrard and Pras 2009).

To calculate AVE of each latent variable (j), the following formula is used:

$$AVEi = \frac{\sum_{i=1}^{p} (\lambda_i^2)}{\sum_{i=1}^{p} (\lambda_i^2) + \sum_{i=1}^{p} Var(\xi_i)}$$

λi: Represents the standardized coefficient of the measure i
n: Represents the number of observed variables
ξi: Represents the measurement error of i

According to the results of table 6, we have a measurement model of good convergent validity.

Table 6: Quality index of measurement models

Latent variable	AVE	Rho of D. G
PF	0.55	0.773
ECF	0.52	0.881
SCF	0.53	0.876
TF	0.87	0.932
COF	0.81	0.982
LF	0.75	0.899
PRF	0.53	0.900
TA	0.51	0.943

Source : Authors' own analysis.

d. Discriminant validity(divergent)

To verify that there is no correlation between the items of a construct with those of another; we will resort to the check of discriminant validity. The check is based on comparing the square root of the average variance extracted (AVE) of each latent variable with the correlation of different latent variables two by two (Chin et al. 2010, 43). According to

Table 7, the square root of the AVE is higher than the correlations between the different dimensions of our model. Therefore,

we can assert the discriminant validity of the concept of latent variables of our model.

Table 7 : Discriminant validity

	PF	ECF	SCF	TF	COF	LF	PRF	TA
PF	0.74*							
ECF	0.237	0.72*						
SCF	0.401	0.220	0.72*					
TF	0.379	0.322	0.144	0.93*			0.025	
COF	0.009	0.001	0.001	0.007	0.90*		0.080	
LF	0.002	0.318	0.022	0.099	0.019	0.87*	0.174	
PRF	0.058	0.355	0.066				0.73*	
TA	0.164	0.557	0.228	0.318	0.054	0163	0.359	0.71*

** The square root of the AVE (Zait and Bertea 2011).*
Source: Authors' own analysis.

Based on previous analyses of (Cronbach's Alpha and Rho of Dillon-Goldstein (Rho of D.G)), the proper value and discriminant validity, we confirm the validity of our measurement model (external).

e. Validation of the internal structural model with PLS

The validation of the internal structural model with PLS is carried out with the following indicators:

Goodness of Fit index (GoF) for the model quality

Using the PLS approach, we must determine the quality of the model by calculating, the adjustment index, Goodness of Fit index (GoF) (Michel Tenenhaus et al. 2005)

$$GoF= (\sqrt{(Mean\ AVE * Mean\ R^2).}$$

According to Latan and Ghozali (Latan and Ghozali 2012), there are three values of quality level of GoF: low quality (GoF 0.10), medium quality (GoF 0.25) and high quality (GoF 0.36). To validate a research model requires that the index is higher

than 0.5 (Wetzels et al. 2009). According to our results (Table 8) GoF = 0.63, therefore, our research model is maintained.

Table 8 : Ajustement indices

	GoF	GoF (Bootstrap)
Absolute	0.626	0.644
Relative	0.820	0.738
External model	0.981	0.958
Internal model	0.836	0.770

**The coefficient of determination (R^2)*
Source: Authors' own analysis.

The determination coefficient R^2 is used to evaluate the internal model. It is calculated for each endogenous variable and it is used to get an idea on the contribution of each endogenous variable in predicting the exogenous one.

According to Chin (Henseler and Wang 2010), the usual values of R^2 are 0.67 (substantial), 0.33 (moderate) and 0.19 (low). R^2 result of our model is: $R^2 = 0.69$. From this, we can conclude that R^2 is substantial and the model is significant.

- Size effect of R^2 (f2) (weight of latent variables)

To calculate the weight of each endogenous variable we will be interested in size effect (f^2). This index is used to measure the impact of a manifest variable in the explanation of an endogenous latent variable. The size effect indicates the degree to which a given phenomenon is present in the population. According to Cohen (1988)(Cohen 1988), the usual f2 values are 0.02 (low effect), 0.15 (moderate effect) and 0.35 (high effect).

According to the results presented in Table 9, all the latent variables have a large effect magnitude except f2 associated with links ECF →TA, SCF→TA, TF→TA, PRF→TA that have low effect sizes.

The results of our survey clearly show the validity of the measurement model (external) and that of the structural model (internal).

STRUCTURAL EQUATIONS OF THE CONCEPTUAL MODEL

Our model consists of seven exogenous variables: political factor (PF); economic factor (ECF), socio-cultural factor (SCF), technological factor (TF), ecological factor (COF), legal factor (LF) and proximity factor (RPF). Since we have only one endogenous variable, we can write our model using the following equation:

$$AT=a_1FP + a_2 FEC + a_3FSC + a_4FPR + a_5FT + a_6FCO + a_7FL$$

The model has seven equations that we tested using the PLS approach through the Version 2015 of XL-STAT software. These structural equations of the conceptual model are presented as follows:

- PF = -0.228 * TA
- ECF = 0.465 * TA
- SCF = 0.230 * TA
- TF = 0.339 * TA
- COF= -0.154 * TA
- LF = -0.106 * TA
- PRF = 0.256 * TA

TESTING OF ASSUMPTIONS

According to Figure1, we can confirm the validity of the hypotheses (H2, H3, H4, H7) (P-value <5%).

Table 9 : Research hypotheses testing

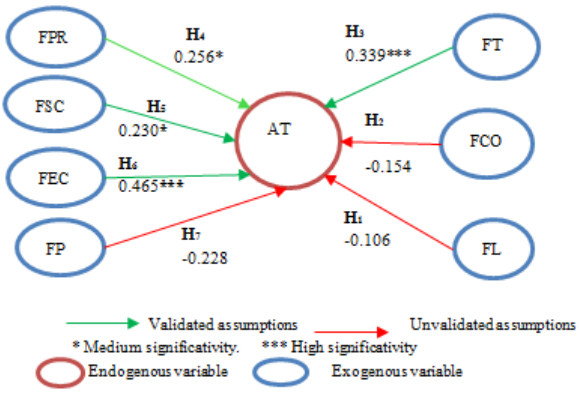
Causality	Path Coefficient	P-value	Size Effect f2	T of Student	Validation of assumptions
H1 PF → TA	-0.228	0.099	0.063	-1.682	Not Validated
H2 ECF→TA	0.465	0.002	0.225	3.183	Validated
H3 SCF→TA	0.230	0.045	0.094	2.058	Validated

H4 TF→TA	0.339	0.008	0.169	2.758	Validated
H5 COF→TA	-0.154	0.089	0.067	-1.731	Not Validated
H6 LF →TA	-0.106	0.336	0.021	-0.972	Not Validated
H7 PRF→ TA	0.256	0.030	0.111	2.232	Validated

Source : Authors' own analysis

The figure below illustrates the final model estimated by the PLS approach.

Figure 2: Final model estimated by the PLS approach



Source: Authors' own analysis.

ANALYSIS OF RESULTS

Our empirical study aims at testing the influence of industrial location factors on territorial attractiveness (case of Tangier Morocco).

Based on the results of Table 9, Figure 2 and the structural equations of section 4.4, we conclude that the subsequent exogenous latent variables:

- 'ECF': (path coefficient = 0.465, f2= 0.225, t=3.183, p-value=0.002);
- 'SCF': (path coefficient = 0.230, f2= 0.094, t=2.058, p-value=0.045);

- 'TF': (path coefficient = 0.339, f2= 0.169, t=2.758, p-value=0.339);
- 'PRF': (path coefficient = 0.256, f2= 0.111, t=2.232, p-value=0.030).

have a positive and statistically significant influence on 'territorial attractiveness'. The exogenous latent variables:

- 'PF': (path coefficient = -0.228, f2= 0.063, t=-1.682, p-value=0.099);
- 'COF': (path coefficient = -0.154, f2= 0.067, t=-1.731, p-value=0.089);
- 'LF': (path coefficient = -0.106, f2= 0.021, t=-0.972, p-value=0.336);
- 'PF' and 'COF' and 'LF' have a negative and statistically insignificant influence on 'territorial attractiveness'.

In this study we have used the structural equations and particularly the PLS approach to explore the causal links between the constructs that have been postulated and tested. The link between territorial attractiveness and PESTELP factors considered is represented in the model of Figure 2. Therefore, given the structural diagram, the determination of territorial attractiveness (TA) is in the form of structural model equation:

$$TA= -0.228*PF + 0.465*ECF + 0.230*SCF + 0.339*TF – 0.154*COF – 0.106*LF + 0.256*PRF$$

CONCLUSION

This article scrutinizes the factors of territorial attractiveness influencing the location of manufacturing and logistics companies in the city of Tangier. Using a PESTEL strategic analysis tool and an exploratory study (face-to-face interview), we were keen to empirically explain the factors that actually attract manufacturing and logistics companies to the city of Tangier.

We have adopted a statistical analysis approach to verify the existence of causal connections between the different PESTELP factors and the endogenous variable 'territorial attractiveness'

which were measured by a questionnaire on the scale of Likert. From the results of our research, we can conclude that the proximity factor, the socio-cultural factor, the economic factor and the technological factor have a positive influence on the territorial attractiveness of manufacturing and logistics activities in the city of Tangier. On the other hand, the legal factor, the environmental factor and the political factor do not have a significant influence in the decision of choosing the city of Tangier for the location of their businesses.

Our conceptual model shows that public and private actors of the city of Tangier must create an observatory to measure, control and adjust the industrial attractiveness of the city of Tangier by ensuring watchfulness on innovative measures of attractiveness developed by other cities in the world. In addition, it should be necessary to stimulate the development of a local industry in partnership with foreign firms in order to ensure the transfer of technology and also increase the integration rate of locally manufactured products. These actions might improve the attractiveness of the city of Tangier and thus potentially contribute to the reduction of the unemployment rate.

REFERENCES

Addinsoft. 2011. "XLSTAT – Statistics Package for Excel." Accessed October 20, 2016. https://www.xlstat.com/fr/solutions/fonctionnalites/approche-pls.

Baldwin, R., and P. Krugman. 2004. "Agglomeration, Integration and Tax Harmo- Nization." *European Economic Review* 48 (1): 1–23.

Benraiss, Laila. 2004. "Méthodologie de Construction D'une Échelle de Mesure : Application Du Paradigme de Churchill." Paper presented on *Congrés AGRH, Montréal*, November 19–21.

Buchanan, S., and F. Gibb. 1998. "The Information Audit: An Integrated Strategic Approach." *International Journal of Information Management* 18 (1): 29–47.

Cecchini, L. 2002. "Les Déterminants Des IDE Dans Les Pays Du Bassin Méditerranéen." *CEFI-CNRS*. Accessed October 19, 2016. http://www.memoireonline.com/10/09/2813/ m_Lanalyse-des-determinants-de-linvestissement-direct-au-Cameroun17.html.

Chin W.W, V., J. Henseler, and H. Wang. 2010. "How to Write up and Report PLS Analyses, Dans Esposito Vinzi." *Handbook of Partial Least Squares, Concepts, Methods and Applications,* Springer, Heidelberg*,* 655–90.

Clémence, DERQUENNE et. 2004. "Une Méthode Alternative À L'approche PLS: Comparaison et Application Aux Modèles Conceptuels Marketings." *Statistique Aplliquée* 52 (3): 37–72.

Coeuré, Benoît, Isabelle Rabaud, and Thierry Madiès. 2003. "Attractivité de La France – Analyse, Perception et Mesure; Suivi D'un Commentaire de Thierry Madiès." *Economie et Statistique* 363 (1): 97–127.

Cohen, J. 1988. *Statistical Power Analysis for the Behavioral Sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Dillon, W. R, and M. Goldstein. 1987. „Multivariate Analysis: Methods and Applications." *Biometrical Journal* 29 (6): 750–756.

Dunning, J. H. 2000. "The Eclectic Paradigm as an Envelope for Economic and Business Theories of MNE Activity." *International Business Review* 9: 163–190.

Elhasbi, A., M. Barkaoui, and O. Bouksour. 2015. "The Territorial Attractiveness, Governance, Infrastructures and Logistics Activities: Case of Tangier City, Morocco." *Asian Journal of Management Research* 5 (3): 438–50.

Evrard, Y., B. Prad, and E. Roux. 2009. *Market–Fondements et Méthodes Des Recherches En Marketing*, 3rd Edition. Paris: Dunod.

Fernandes, V. 2012. "En Quoi L'approche PLS Est-Elle Une Méthode a (Re)-Découvrir Pour Les Chercheurs En Management?" *Management* 15 (1): 102.

Fornell, C., and D. F. Larcker. 1981. "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error." *Journal of Marketing Research* 48: 39–50.

Giordano, V., and J. Alain. 2012. "Specifier L'objet de La Recherche. Méthodologie de La Recherche. Réussir Son Mémoire Ou Sa Thèse En Sciences de Gestion." *Pearson Education* 5: 47–86.

Hassane, B., and N. Zatla. 2001. "L'IDE Dans Le Basin Méditerranéen, Ses Déterminants et Son Effet Sur La Croissance." *Report Synthesis. Contract FEM-REF/99/B2-04.*

Hatem, F. 2004. *Investissement International et Politiques D'attractivité*. Paris: Economica.

---. 2005. *L'attractivité Du Territoire : De La Théorie À La Pratique*. Paris: CNER.

Head, K., and T. Mayer. 2004. "Market Potential and the Location of Japanese Investment in the European Union." *Safety And Health* 86 (2): 959–72.

Iacovone, D., and M. Lhermitte. 2015. "*BaroMed* 2015 – The next opportunity."Accessed October 24, 2016. http://www.ey.com/Publication/vwLUAssets/ey-baromed-2015/$FILE/ey-baromed-2015.pdf.

Jakobowicz, Emmanuel. 2007. "*Contributions Aux Modèles D'équations Structurelles À Variables Latentes*." Accessed October 3, 2016. https://tel.archives-ouvertes.fr/tel-00207990/.

---. 2010. "*Applications et Exercices*." Accessed October 19, 2016. https://tel.archives-ouvertes.fr/tel-01207810/.

Jöreskog, K.G. 1971. "Statistical Analysis of Sets of Congeneric Tests." *Psychometrika* 36: 109–133.

Kalantari, A. H. 2013. "Facility Location Selection for Global Manufacturing." MA thesis, University of Wisconsin-Milwaukee.

Katko, T.S. 2006. "Road Safety Fatalities, Management, and Policy in Finland." *Public Works Management and Policy* 11 (2): 126–38.

Lacroux, A. 2009. "L'analyse Des Modèles de Relations Structurelles Par La Méthode PLS: Une Approche Émergente Dans La Recherche Quantitative En GRH." Paper presented on XXème Congres (AGRH), Toulouse, November 17-21.

Latan, H., and I. Ghozali. 2012. *Partial Least Squares Konsep, Metode, Dan Aplikasi Menggunakan Program WarpPLS 2.0*. Semarang: Badan Penerbit Universitas Diponegoro.

Lynch, R. 2009. *Strategic Management*. London: Pearson Education Limited.

Rallet, A., and A. Torre. 2004. "Proximité et Localisation." *Économie Rurale* 280 (1): 25–41.

Rathelot, R., and P. Sillard. 2008. "The Importance of Local Corporate Taxes in Business Location Decisions: Evidence from French Micro Data." *Economic Journal* 118 (527): 499–514.

Richardson, Jr. J. V. 2006. "The Library and Information Economy in Turkmenistan." *IFLA Journal* 32 (2): 131–39.

Roussel, P., F. Durrieu, E. Campoy, and A. El Akremi. 2002. *Méthodes D'équations Structurelles: Recherches et Applications En Gestion*. Paris: Economica.

Sascha, B., K. Ekholm, R. Jackle, and M. A. Muendler. 2005. "Location Choice and Employment Decisions of German Multinationals." Review of World Economics 141 (4): 693–731.

Shilei, L., and W. Yong. 2009. "Target-Oriented Obstacle Analysis by PESTEL Modeling of Energy Efficiency Retrofit for Existing