Territorial offer and FDI's attractiveness: energy competitiveness and factor analysis

Camelia El AOUAMI and Abdeljalil LOUHMADI,
Faculty of Legal, Economic and Social Sciences of Tangier,
ABDELMALEK ESSAADI University of Tetouan.

abstract

The competitiveness of the territorial offer characteristics determines the attractiveness of FDI (foreign direct investments), the components of the territory such as the climate, natural resources, energy competitiveness, infrastructures, the business climate, and others several factors which constitute the components of the territorial offer. In through a survey conducted with investors foreigners settled in the area TTA (Tangier-Tetouan, Al Hoceima) we tried to analyze the set are features of the offer of u territory while emphasizing energy and competitiveness of the climate. Still, we have Vons tried to determine the are obstacles enrayant attractiveness for FDI. Thus, the results of our analysis can be classified into groups the variables are the offer of territory according to the choice priority of investors and therefore a diagnosis (strengths / weaknesses) of the territory. Competitiveness in energy infrastructures plays a driving role in the attractiveness of the offer; on the other hand, energy costs can constitute an obstacle to the attractiveness of the territory.

Keywords: foreign direct investments, territorial offer, attractiveness of the territory, territorial economy, energy competitiveness, competitiveness of the territory, factor analysis.

Introduction

"Foreign direct investment (FDI) is beneficial to the home and host country and is an integral part of an open and efficient international economic system and is one of the main catalysts for development" (OECD 2002).

The notion of regional attractiveness is essentially linked to the ability to attract foreign investment, to secure and maintain their facilities, to benefit from their positive externalities and to allow local businesses to benefit from them. In fact, in a context of globalization, the phenomenon of the attractiveness of territories is based on a series of competitive advantages of location to offer "approved land". According to Michalet (2007): "the dynamics of globalization exacerbates the competitiveness between firms… It also puts national economies in competition as specific territories… It is therefore a question of increasing the supply of competitive advantages in order to respond to competitive pressure" [1] .

"Attractiveness is the capacity for a territory to offer investors sufficiently attractive reception conditions to encourage them to locate their projects there in preference to another territory".

The attractiveness of a territory depends essentially on the preparation of a political and socio-economic investment climate that is practically stable and therefore attractive while taking particular account of several types of factors, in this case market factors, those economic costs, and those of the macro environment.

"A territorial offer is therefore made up of a set of socio-economic characteristics of a territory having a more or less direct impact on the reception and maintenance of economic activities. They can be very heterogeneous elements: physical characteristics of a territory, infrastructures (in the broadest sense), demographic characteristics, the local institutional framework, skills in gray matters and in research, fiscal policies and financial incentives, quality of the interdependencies of local actors and the intensity of local animation" (*Ernst and Young, 2002*). This definition summarizes the territorial offer in a set of attributes of the territory, more or less given and likely to influence the location decisions of companies.[2] .

The CERISE REVAIT® method of (V. GOLLAIN, 2009), allows to highlight the characteristics of the territory in order to more easily appreciate the competitive advantages of the territorial offer. This method of analysis highlights the components of the territory's attractiveness, including components such as natural and physical resources, which are made up of climate, geographic location and energy resources.

Within this framework we have identified a set of variables that represent the FDI attractiveness of elements for an area, said variables are developed e s form of a questionnaire completed by 43 heads of foreign companies installed TTA region the form also contains the obstacles hindering attractiveness in a territory through a multivariate analysis while highlighting the importance of energy competitiveness and the climate as a competitive advantage through a univariate analysis.

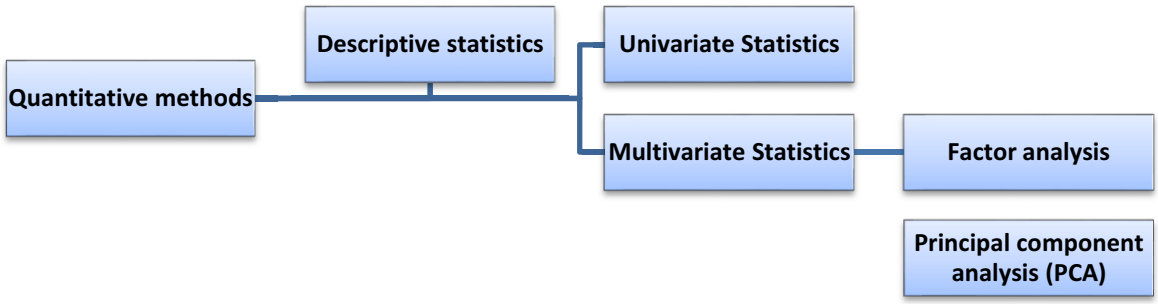
However, the objective of our survey is to establish a diagnosis of the attractiveness of the territory from an analysis (strengths / weaknesses) of the territorial offer measured by foreign investors.

So, our problem is as follows: to what extent can energy competitiveness and the other components of the territory's supply influence the attractiveness of FDI?

The varied united analysis and the factorial analysis will allow us to apprehend the results envisaged in response to our problematic and also seems to us that our work can contribute modestly to the enrichment of the research work on the attractiveness of the territories.

Methodologies

The methodological choice discussed in our article is based on a quantitative method, in particular descriptive statistics:



To develop our article, we have used data collected through a questionnaire completed by 43 foreign investors settled in the region TTA, these data are processed e s by the software of statistical analysis SPSS (*Statistical Package for the Social Sciences*) using univariate analysis and factor analysis, specifically the PCA (Principal component analysis)**.**

The PCA is a technique applies to tables describing each individual by p quantitative variables X_k. Conventional techniques only allow the study of the link between two variables: correlation, regression and cloud of points for example. The objective here is to summarize the whole table in order to:

- Synthesize the links between variables (circle of correlations), define the variables which go in the same direction, in an opposite direction, independent...;
- Represent the individuals in a plan in order to determine the close or distant individuals, group them into a homogeneous class, ... We speak of the topology of individuals;
- construct new variables, called principal components, which are uncorrelated and which make it possible to synthesize information [3] .

To analyze the behavior vis-a-vis investors of the attractiveness of elements we used the method of the PCA which allows us to realize a classification by groups of investors with their decision to invest depends on factors attractiveness priorities.

The variables chosen represent certain characteristics that determine the offer of a territory, each variable is rated by foreign investors from 1 to 5 less attractive to the most attractive.

The competitiveness of infrastructure convertible energy in Morocco and to climate

Morocco is a country with a mining vocation due to the diversity of its resources. Thus, many minerals are exploited: phosphate (94% of mining extractions), coal, silver, gold, zinc, copper, cobalt, manganese, antimony, iron, barite, fluorite, salt, gypsum, smectic clay, pyrophyllite, ghassoul, feldspar, mica, bentonite, calcite and talc [4] .

“Morocco has a geology that conceals untapped potential. (…) It is considered to be a true paradise for new investments”, affirmed Chryssa Tsouraki , head of the Oil and Gas department of International Research Networks (IRN). [5] .

The country is characterized by a climate that is both Mediterranean in the north and arid in the south and south-east of the Atlas, with a dry and hot season and a cold and wet season.

Morocco is making efforts to keep its competitive advantage of its attractive climate by fighting against global warming according to the Performance Index in the fight against climate change, Morocco's very favorable positioning under this index, in view of its low contribution to greenhouse gas (CO2) emissions and its perpetual commitment to the fight against climate change [6] .

Morocco is particularly vulnerable to the CC. This vulnerability particularly concerns strategic sectors for the country: water, agriculture, soils / forests, the coast, fishing and tourism.

Morocco also plans, in its national contribution, to carry out various adaptation actions by 2020 and 2030 with the aim of strengthening resilience in the face of CC. Although Morocco is already investing heavily in adaptation, the achievement of the objectives defined in sectors vulnerable to CC will only be possible with significant support from the international community and donors.

Morocco has embarked on a major deployment of renewable energies, in parallel with the modernization and expansion of its electricity transmission and distribution networks and an acceleration of its hydrocarbon exploration efforts. The country is also seeking to phase out its infrastructure for producing polluting fossil fuels for cleaner natural gas. These measures aim to reduce energy imports and carbon emissions.

The energy sector in Morocco is dominated by fossil fuels , almost entirely imported, which covered 88.7 % of the country's primary energy consumption in 2018 (oil 60.2 %, coal 24 %, gas 4, 5 %) ; renewable energies contribute 9.9 % (especially biomass : 6.4 % and 2.8 % wind and solar) and electricity imports for 1.4 % [7] .

Morocco has very large reserves of oil shale and shale gas , which have not yet been exploited on an industrial scale.

The energy sector is heavily dependent on imports of coal, oil and gas. In 2018, the installed electricity production capacity totaled 10,938 MW and its overall production was recorded at 34,519 GWh,

Although coal, oil and gas still represent the bulk of the energy mix, hydroelectric power production increased by 42.9% from 1184 GWh in 2017 to 1693 GWh in 2018. In addition, the production of hydroelectric power Solar power increased 128.8% over the same period, from 415.3 GWh to 950.2 GWh. Wind energy production has

Access to water and distribution infrastructure have also benefited from Morocco's economic development,

attracting expansion projects in different regions of the country. Much of this project has been geared towards improving access to water in rural areas, although significant investments have also been made in upgrading water treatment systems to improve access in urban and industrial areas.

Although the country continues to seek viable hydrocarbon reserves, it has also accelerated the development of renewable energy. Morocco's geographical location and climatic conditions give it a strategic advantage in the renewable energy segment. According to government estimates, the country has around 3,000 hours of sunshine per day and an annual solar energy potential of 5 KWh per square meter. Morocco also has significant wind power potential, measured at around 5,000 TWh per year, and a potential useful capacity of 25,000 MW. The most recent figures from ONEE indicated that the country had an installed capacity of approximately 1,770 MW in hydropower generation, 1,220 MW in wind power and 711 MW in solar power at the end of 2018.

Morocco's renewable energy has made considerable progress through the 580 MW Noor Ouarzazate Concentrated Solar Power Plant project, which began operating in 2016. Noor I has a production capacity of 160 MW and was delivered by Saudi developer ACWA Power. In 2018, Noor Ouarzazate II, III and IV became operational, adding 200 MW, 150 MW and 70 MW respectively.

In particular the Noor Midelt solar production project, which should be built in the Atlas Mountains. The development will be financed by a multitude of multilateral institutions, such as the World Bank, the European Commission, the Clean Technology Fund and the African Development Fund. The project will involve the construction of 800 MW of solar generation capacity and its cost is estimated at $ 781 million. The tender was launched by Masen and will include a hybrid system with photovoltaic and concentrated solar generation technologies.

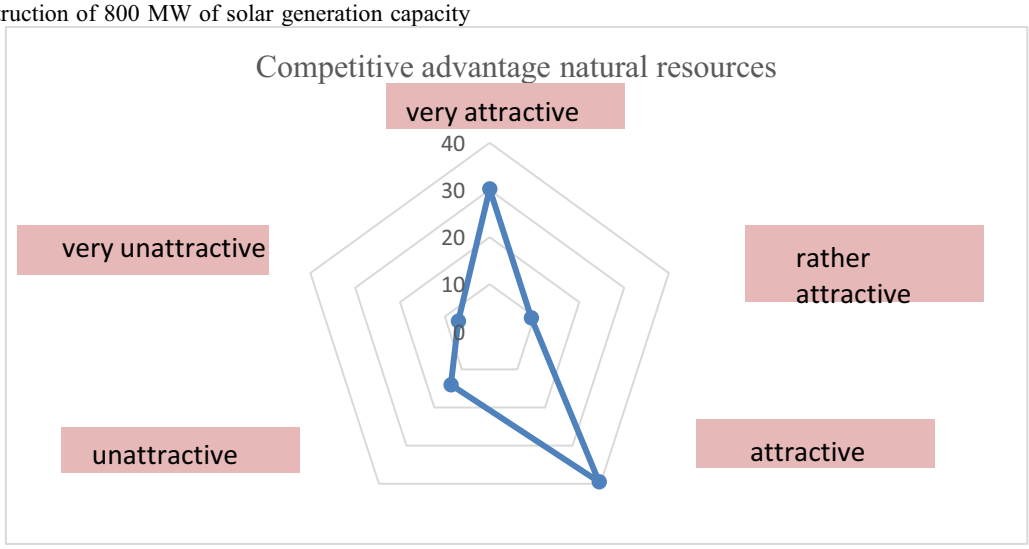
Along with promising developments in the solar segment, Morocco continues to expand its wind and hydroelectric production capacity. The Integrated Wind Power Program was launched in 2010 with the goal of establishing an annual wind power capacity of 2000 MW by 2020. As a result of these efforts, wind power production has increased tenfold from 0.3 TWh in 2007 to 3 TWh in 2017. With 1207 MW of capacity in 12 wind farms from 2018 and 1330 MW commissioned between 2019 and 2021, Morocco is on track to achieve its target.

Along with efforts to expand its renewable energy capacity, Morocco is taking steps to develop upstream exploration to reduce its dependence on energy imports and provide more income to the sector. Although confirmed oil and gas discoveries have been minimal, the country is one of the least explored areas in the region in terms of hydrocarbon resources, highlighting the possibility of future discoveries.

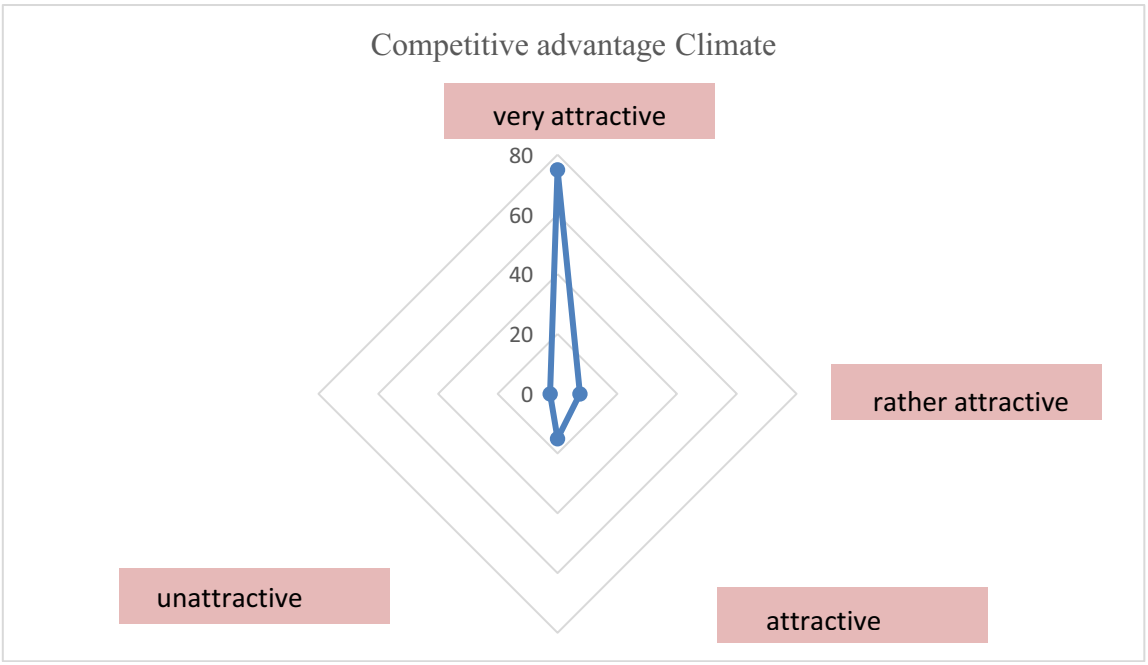
In the report " Fostering Effective Energy Transition 2021" (Promoting effective energy transition 2021) recently published by the World Economic Forum (WEF) The Morocco was ranked 66 th out of 115 countries covered by transition index Energy from the WEF, which assesses them on the performance of their energy system, as well as their readiness for the transition to a secure, sustainable, affordable and reliable energy future. This gives Morocco a score of 57 out of 100, below the overall average of this 2021 edition of the index which is 59 [8] .

Results:

1.Univariate analysis:



Almost 30% of investors rated natural resources as very attractive and 40% as attractive.



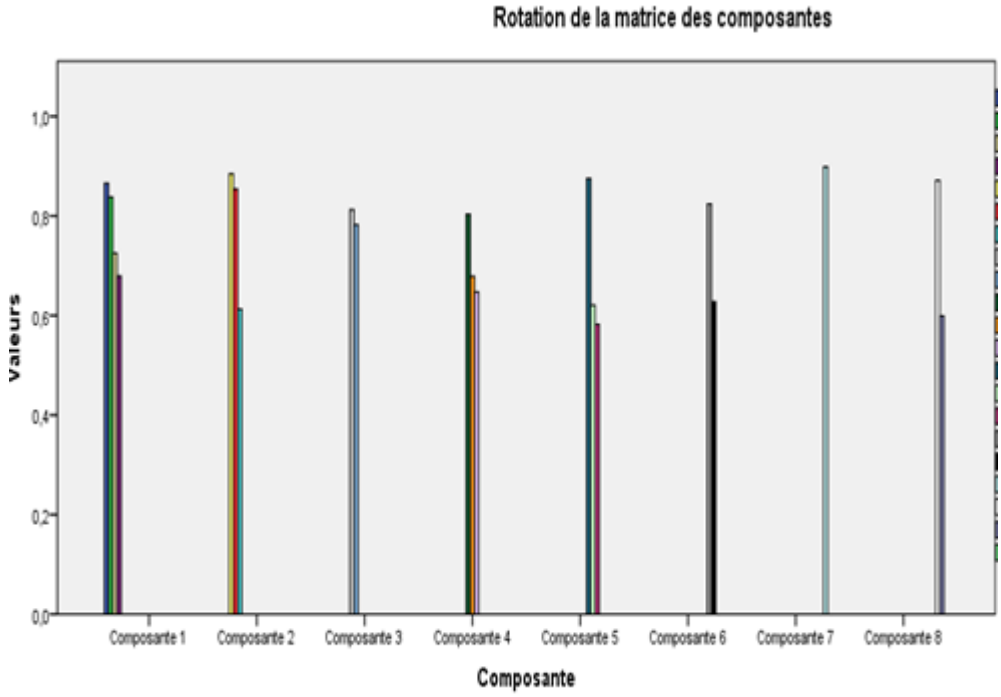
75% of companies rated the climate in the TT Al Hoceima region as a very competitive advantage.

2. Multivariate Analysis:
The characteristics of the territorial offer attractiveness:

Total variance explained

Component	Initial eigenvalues			Sums extracted from the load square			Sums of rotation of the load squares		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	4,353	20,728	20,728	4,353	20,728	20,728	3,221	15,339	15,339
2	2,821	13,432	34,160	2,821	13,432	34,160	2,339	11,138	26,477
3	2,236	10,646	44,805	2,236	10,646	44,805	2,119	10,090	36,567
4	2,000	9,524	54,329	2,000	9,524	54,329	1,936	9,219	45,785
5	1,611	7,670	61,999	1,611	7,670	61,999	1,872	8,913	54,699
6	1,308	6,227	68,226	1,308	6,227	68,226	1,866	8,887	63,586
7	1,137	5,415	73,640	1,137	5,415	73,640	1,564	7,449	71,035
8	1,016	4,836	78,476	1,016	4,836	78,476	1,563	7,441	78,476
9	,875	4,168	82,644						
10	,728	3,467	86,111						
11	,653	3,108	89,220						
12	,512	2,437	91,656						
13	,438	2,087	93,743						
14	,315	1,500	95,243						
15	,265	1,260	96,503						
16	,224	1,066	97,569						
17	,159	,759	98,328						
18	,136	,650	98,977						
19	,108	,514	99,491						
20	,059	,279	99,770						
21	,048	,230	100,000						

Extraction method: Principal component analysis.



Administrative procedures
Export procedures
Import procedures
Innovation and R&D
Taxation
Fiscal advantages
Quality of life
Internet connection
Telephone networks
Legal and public institutions
Commercial court
Banking services
Regional investment center
Tax department
Hospitals
Stability and security
Professional training
Cost of transport
Local suppliers
Public transport

The factor analysis made it possible to identify 8 groups of companies according to the items defining the territorial offer:

Group 1: which defines and judges the territorial offer through variables grouping together administrative procedures, export and import procedures and innovation and R&D.

Group 2: which judges the territorial offer through the tax system in force and the quality of life.

Group 3: which judges the territorial offer through the internet connection and the quality of the telephone networks.

Group 4: which judges the territorial offer through legal and public institutions, the commercial court and banking services.

Group 5: which judges the territorial offer through the CRI, the tax department and hospitals.

Group 6: which judges the territorial offer through stability and security as well as the quality of training.

Group 7: which judges the territorial offer through the transport service.

Group 8: which judges the territorial offer through local suppliers and the quality of public transport means.

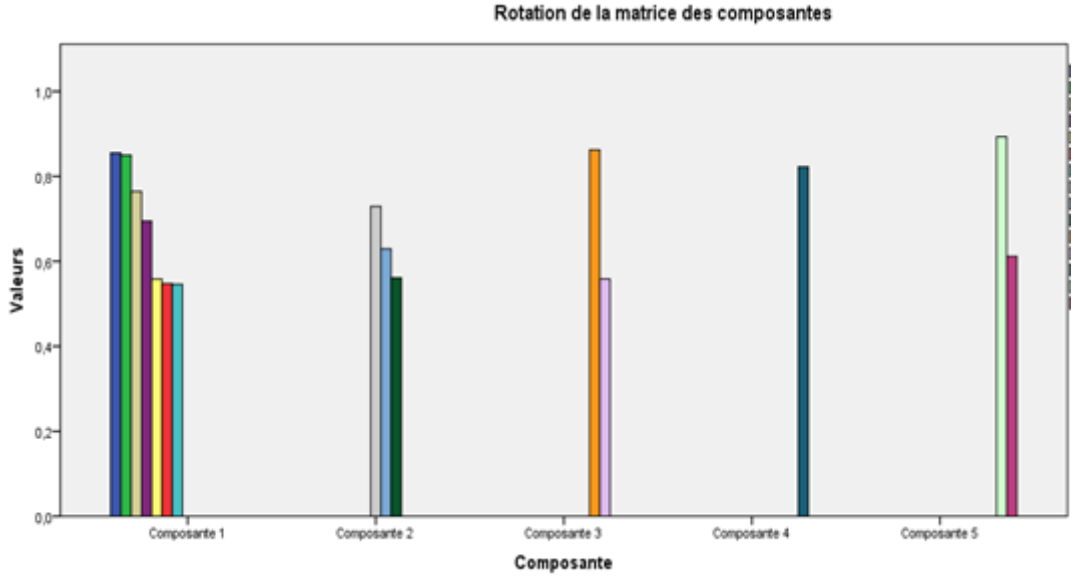
The obstacles to the attractiveness of the regional offer

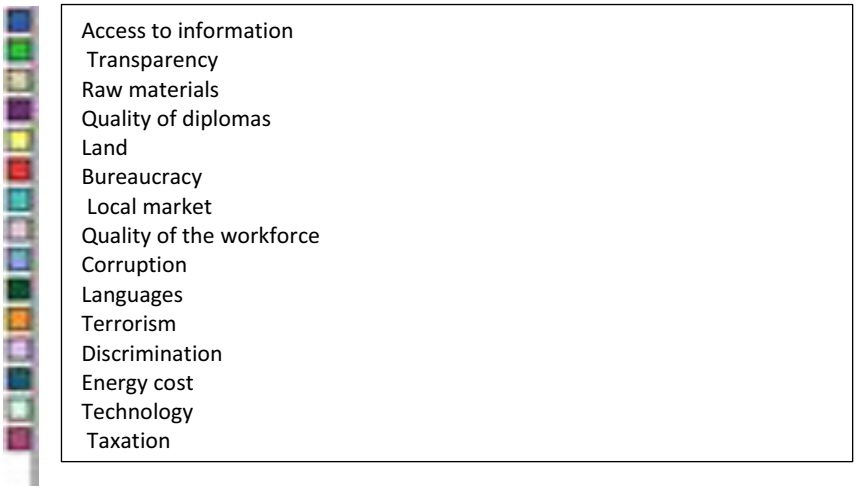
Total variance explained

Component	Initial eigenvalues			Sums extracted from the load square			Sums of rotation of the load squares		
	Total	% of variance	cumulative%	Total	% of variance	cumulative%	Total	% of variance	cumulative%

1	5.534	36.892	36.892	5.534	36.892	36.892	3.901	26.007	26.007
2	1.625	10.833	47.725	1.625	10.833	47.725	2.101	14.008	40.015
3	1.363	9.087	56.812	1.363	9.087	56.812	1,642	10.949	50.963
4	1.162	7.745	64.557	1.162	7.745	64.557	1,580	10.534	61,497
5	1.010	6.733	71.290	1.010	6.733	71.290	1,469	9,793	71.290
6	, 817	5.446	76.736						
7	, 702	4.683	81,419						
8	, 622	4,144	85,563						
9	, 555	3,701	89.265						
10	, 469	3.129	92,393						
11	, 373	2.489	94.882						
12	, 312	2.078	96.960						
13	, 228	1,522	98,482						
14	, 174	1,160	99.643						
15	, 054	, 357	100,000						

Extraction method: Principal component analysis.





The factorial analysis of the obstacles encountered by companies reveals several profiles:

The group 1: which consider the barriers to FDI as barriers that are linked e s access to information, transparency in the raw material, the quality of degrees, to land, to bureaucracy and local market.

Group 2: which consider the barriers to FDI as barriers that are linked e s the quality of the manpower, corruption and languages.

Group 3: which consider the barriers to FDI as barriers that are linked e s terrorism and discrimination.

Group 4: who consider the barriers to FDI as barriers that are linked with the energy cost.

Group 5: who consider the barriers to FDI as barriers that are linked e s technology and taxation.

Analysis of results and discussion:

The competitiveness of a territory is made up of three elements, structural competitiveness, price competitiveness and cost competitiveness, the latter element is considered to be a driving force behind the attractiveness of investors whose strategy is to minimize costs. So, the cost of energy can be either an attractiveness factor or a barrier.

Without doubt, a competitive energy infrastructure with a reduced cost ensures an attractiveness of FDI on the other hand a high cost of energy slows down the attractiveness of the territory.

Alongside the energy competitiveness, natural resources and other climate elements affecting the business climate have impact of the region's attractiveness.

Among the key factors considered by investors to settle in a country are " u not predictable and non-discriminatory regulation" and, on a more general level, the lack of administrative obstacles to the conduct of operations " but also " d es sufficient and accessible resources, including the presence of adequate infrastructure and human resources"[9] . Therefore, a transparent institutional framework and a coherent policy guaranteeing a non-discriminatory policy open to competition are necessary assets for the investment decision.

Empirical work on FDI offers many explanatory variables of attractiveness around which no consensus emerges. These are as many industrial factors (transport costs, establishment costs, labor costs, technological advantages, agglomerations of activities, etc.), commercial (size of the market, proximity to demand, barriers to trade, etc.) membership in an integration area) and institutionally the (fiscal or trade policy, legislative provisions on repatriation of capital or capital movement, country risk, business climate).

The World Bank (The World Bank development report 2005) defines the investment climate as the set of local factors influencing the opportunities and incentives that allow companies to invest profitably, create jobs and develop their activities. Thus, the investment climate includes the following four dimensions:

- Stability and security;
- Regulation and taxation;
- Finance and infrastructure;
- The workforce and the labor market [10] .

Also, the economic development agencies represent one of the main means of distribution of the territorial offer. They constitute the first point of contact between the territory and companies looking for a location favorable to their activity.

The agencies also have a role to achieve economic and technological monitoring, carry out assessments and studies for the company 's having acceded to the agency (Julian VIDAILLAC , 2015) [11] .

A territorial offer is therefore made up of a set of socio-economic characteristics of a territory, however, we have chosen some of the aforementioned elements to carry out our analysis.

The results of our analysis have allowed us to classify the characteristics determining e s of the region's attractiveness as each group of investors for each group of the most important features are: the facilitation of the administrative procedures, the tax system, ICT, IRC, stability / security and transport.

The transport means the public transportation and the cost and quality of goods and staff transportation.

In return, the obstacles which hinder the attractiveness of the first order according to each group are: access to information and transparency, the quality of the workforce, terrorism, energy costs and technology.

Morocco occupies an intermediate ranking in terms of the World Peace Index[12] which was vari ed by advancing 7th row between 2019 and 2020 with a drop of 19 rows from 71 th place in 2018 to 90 th in 2019, positioning relatively unstable, but still considered intermediate and competitive at regional [13] .

The results show that the climate was favorable ffairs element- is the key to the attractiveness of FDI, according to the index doing business (business facilitation index) Morocco is ranked 53 rank s / 190 [14] countries in 2019 .

Second, the characteristics that can determine the offer of the territory are: innovation and R&D, quality of life, quality of banking services, quality of training and of the economic fabric defined through local suppliers.

In terms of obstacles, they are in second place, obstacles related to raw materials, access to the local market and obstacles related to taxation.

The determining factors such as market size, opening the country to trade, natural resources of the country and its index of economic growth influence the decision of investment (BILEL NAHIA BEN , 2008) [15] .

The ability of a region to attract mobile factors of production also depends on many other factors. These include the density of standards and the quality of institutions, such as labor market provisions or various product markets. The accessibility of the region and the traffic conditions are also to be taken into consideration, as well as the quality of the offer of public and private services. The abundance of well-paid jobs or highly skilled workers is most important for potential newcomers and for businesses likely to locate. other elements linked to the quality of life, such as the cultural offer or the relaxation areas, also determine the choice made by people who have settled in whether or not to stay in a region.

(P. MÜLLER, Martin Eichler, 2007) [16] .

According to the report of the World Economic Forum (WEF) , the are three strengths of Morocco are its macroeconomic stability, but also its health system and infrastructure; it is well placed in the fight against terrorism, electrification, employee protection and the speed of business creation.

Its three weak points are the skills of its workforce, its capacity for innovation and the use of information and communication technologies; he is handicapped by the short duration of schooling and the mediocre participation of women in economic activity [17] .

Lastly, the assets which can condition the attractiveness of foreign investors are the quality of services such as health services, the services of the tax department and the commercial court.

The obstacles relate relatively, corruption, bureaucracy, taxation and taxes and languages.

The governance (including corruption) also plays an important role in the competitiveness of countries and the improvement of the investment climate. In this sense, administrative hassles and opacity of procedures

constitute a source of corruption and generate additional costs for investors (Mohamed AZEROUAL, Mouna CHERKAOUI , 2015) [18] .
Corruption reduces the competitiveness and efficiency of countries' economies by erecting artificial barriers to investors, who no longer bear the cost of "bribes" and other kinds of illicit billing by public officials, prefer to return to more transparent and credible States (Evelyne Patience, Memphil Ndi , 2015) [19] .
In general, the good quality of institutions favors FDI and exports of manufactured products (Sekkat and Méon , 2004; Sekkat, 2012) .

Conclusion

Ultimately the strengths and weaknesses of the territorial offer determine the attractiveness of FDI, the results have made it possible to identify a priority ranking according to the vision of foreign investors who define the characteristics of the territory which promote its attractiveness as well as for obstacles that can slow down the attractiveness of a territory.
Morocco has a young and active human capital with very competitive salaries as well as the costs of means of transport and the provision of a favorable logistics platform are added to the assets promoting the attractiveness of the territory, energy costs. remains a challenge, information and communication technologies remain to be developed and the gaps linked to good governance still persist despite the administrative reform.
To highlight the strengths of a territory, the adaptation of a regional marketing approach e strengthens the visibility of the territorial offer internationally.
Another pillar is added to the competitiveness of the territory, the environmental dimension. Thus, a country's competitiveness is not an end in itself; it only makes sense if its results are used for the sustainable improvement of the well-being of the populations concerned and, therefore, if the competition it involves does not lead to unsustainable imbalances[20] .
So environmental competitiveness will be a perspective to be considered in research into the competitiveness and attractiveness of territories.

[1] Souad Bannour, the attractiveness of the territory and the role of the location of foreign direct investment in the economy: an evaluation essay for the case of Tunisia, Economies and Finances, University of Nice Sophia Antipolis, French., 2013 .p11.
[2] https://www.institut-numerique.org/section-ii-territoires-et-offre-de-facteurs-de-localisation-5201ed2192707 consulted on 04/17/2021
[3] https://math.univ-angers.fr/~labatte/seignement%20UFR/masterTVPS/cm2010M2.pdf consulted on 04/20/2021

[4] https://www.cfcim.org/magazine/21618
[5] SWISSECO, review of the Swiss Chamber of Commerce in Morocco n ° 26 June-July 2014, P 11
[6] IRES report the evolution of Morocco's international positioning, Strategic Dashboard, Fourth edition, January 2017, pa66
[7] Oxford Business Group - The Report Morocco 2018 and 2019

[8] https://lematin.ma/journal/2021/transition-energetique-maroc-mieux-faire/357026.html

[9] Quote verbatim from the OECD document: List of criteria for assessing strategies to encourage foreign direct investment.
[10] The World Bank development report 2005: http://go.worldbank.org/WVDAOSZJ20 consulted on April 2, 2021

[11] Julian VIDAILLAC, When marketing concepts apply to territories, European university editions, 2015 , p 12, 13.
[12] The GPI classifies 163 countries according to factors such as the level of violence and domestic delinquency, and factors concerning countries' international relations, such as military spending and wars.
[13] Global Peace Index, https://countryeconomy.com/demography/global-peace-index/morocco
[14] https://francais.doingbusiness.org/fr/rankings
[15] BILEL BEN NAHIA, The Impact Of Corruption On FDI : Application To A Few MENA Countries, Faculty of Economics and Management of Sfax - Master in Economics 2008.p52.
[16] Prurs M üller, martin E ichler, Regional competitiveness, *in Economic life Revue de politique économique* , 2007.p.26

[17] https://www.jeuneafrique.com/648026/economie/classement-comment-le-forum-economique-mondial-evalue-la-competitivite-des-economies-africaines/
[18] Mohamed AZEROUAL, Mouna CHERKAOUI, Main determinants of foreign direct investments in Morocco (1980-2012), Revue Économie, Gestion et Société, N ° 4 December 2015
[19] Evelyne Patience, Memphil Ndi, Economic attractiveness of foreign direct investments in the CEMAC zone: harmonization of legal instruments with international rules. Law. Thesis at the University of Nice Sophia Antipolis, 2015. P 82.
[20] Ms. Isabelle de Kerviler, Opinion of the economic, social and environmental council, Competitiveness: the stake of a new development model, October 2011, Les éditions des journals officiel, p 9