

Impacts of sanitary and regulatory restrictions during the COVID-19 pandemic on Morocco's tourism industry

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Abstract | Tourism is a strategic sector for creating wealth, employment, and foreign exchange. However, it is, also, vulnerable to external factors such as natural disasters, socio-political and economic crises, and so on. The COVID-19 pandemic has had a tragic impact on the tourism sector globally, leading to new regulations and restrictions to stop the spread of the virus. These restrictions changed the rules of the game and thus influenced tourism supply and demand. This paper explores the impact of the sanitary and regulatory restrictions on tourism industry in Morocco, using a quantitative exploratory methodology based on secondary data and a questionnaire addressed to private touristic actors. The main findings show that the closure of borders, confinement and constraints on mobility are the main regulatory restrictions that have had the greatest impact on tourism in Morocco, followed by closures & curfews, which have had a substantial impact on the tourism sector. Social distancing has a high-to-medium impact on tourism activity, and finally, the protection & hygiene measures have a low impact on the performance of the tourism establishments.

Keywords | Morocco, COVID-19 pandemic, sanitary and regulatory restrictions, tourism industry, new institutional theory

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1. Introduction

The tourism industry is widely acknowledged as a rapidly expanding sector that holds a significant share of the global economy due to its favorable effects on the growth and development of nations (OECD, 2020).

The tourism sector plays an important role in boosting Morocco's economy, as it accounts for approximately 7% of the country's gross domestic product (GDP). In 2019, the tourism industry provided over half a million direct employment opportunities, which constituted around 5% of the overall employment in the Moroccan economy. Furthermore, the tourism industry generates an annual foreign exchange revenue of nearly 80 billion Dirhams¹.

The COVID-19 pandemic has had a profoundly negative impact on various aspects of society, evolving from a health crisis into a socio-economic crisis with variable consequences at the global and local levels (Yum, 2020).

The tourism sector has been heavily affected by the pandemic (Altuntas et al., 2022; Škare et al., 2021; Uğur & Akbiyık, 2020). Indeed, the implementation of confinement policies, stay-at-home orders, and curfews by authorities has resulted in a substantial decline in the number of travelers, severely impacting the tourism industry (Kumudumali, 2020; Matheu et al., 2023). It's worth noting that tourism is a human activity that is characterized by temporal and spatial concentration, as emphasized by Knafo (2000).

Statistical data indicates a significant difference in the tourism industry's performance on a global scale between 2019 and 2020 (World Tourism Organization (UNWTO) (2020a). The closure of borders in early 2020 resulted in a 56% decrease in international tourist arrivals, and the loss of \$320 billion in tourism exports within the first five months of 2020.

Similar to other countries, Morocco has im-

posed sanitary-related restrictions that have had a negative impact on the tourism industry. These restrictions have not only limited the mobility of tourists, which is a fundamental aspect of tourism, but have also caused significant damage to the tourism supply, resulting in calamitous effects on the sector (Berriane, 2020).

The literature contains numerous publications that analyze the effects of the COVID-19 crisis on various aspects of the tourism industry. For example, Pappas (2021) studied how the pandemic impacted the vacation intentions of Athens residents, while Martins (2022) examined the economic impact of COVID-19 on the organization of the Romaria event in Alto Minho province, Portugal. Abbas et al. (2021) looked at the impact of COVID-19 on the practices and attitudes of the tourism sector, and Cornell et al. (2022) analyzed the factors that could make Divisoria in the Philippines a shopping destination amid COVID-19. Additionally, Dandotiya and Aggarwal (2022) evaluated the impact of COVID-19 on the hotel industry and explored the perceptions of hotel employees regarding the pandemic's effect.

Our study offers two folds novel contributions. Firstly, we utilize the theoretical framework of new institutionalism to analyze and explain how the tourism sector has been affected by the new rules of the game, manifested by sanitary and regulatory restrictions. Secondly, we examine the constraints faced by all actors in the tourism industry and how these constraints impact their operations, as we focus specifically on Morocco, which is a country where tourism is a major contributor to the national economy and has been significantly impacted by the COVID-19 pandemic.

The aim of this paper is to explore and explain the impact of the sanitary and regulatory restrictions on tourism industry in Morocco. To fulfill this objective, we have adopted a deductive reasoning approach and conducted a quantitative study.

¹Moroccan Program Contract 2020-2022, « Revival of the tourism sector in the COVID-19 phase»

The data used in this research is derived, primarily, from secondary data as well as the design of a questionnaire addressed to various private tourism actors. This questionnaire enabled us to determine the opinions of the various private tourist actors during two distinct periods of the crisis. The use of two distinct periods can help in understanding how the private tourism actors' opinions changed over time following the application of sanitary and regulatory restrictions. It would allow us to compare the responses obtained during these two periods, (following the strict application of sanitary and regulatory restrictions and following the relaxation of these measures) and to see if there were any significant differences in the opinions expressed by these actors.

The structure of our article is as follows: The study's theoretical framework and our theoretical model will be covered in Section 2; Section 3 elaborates on the methodology of our research. The results of our study are presented in Section 4, along with a discussion of the findings. Finally, we will conclude our article and address the limitations, respectively, in Sections 5 and 6.

2. Literature Review

2.1 Impact of crises on tourism

The crisis can have an impact on various domains and sectors and represents an unexpected shock that requires analysis and, most importantly, rapid and effective management to mitigate its effects on businesses.

Tourism is one of the most important sectors in the world economy (World Tourism Organization (UNWTO), 2020b), but it is also one of the most vulnerable (Pforr, 2009; Hall, 2010). This is mainly due to the nature of tourism, which is considered to be an open system influenced by its environment (Morrison et al., 2018).

Researchers have conducted numerous scientific studies on tourism crises over the past three decades (Duan et al., 2022). Historically, this sector has been vulnerable to various crises (Gössling et al., 2021; Abdula, 2019).

For instance, since the beginning of the 21st century, the world has faced numerous crises, including the severe acute respiratory syndrome



Figure 1 | Evolution of global tourism indicators (arrivals and receipts) from 2000 to 2021
Source: UNWTO (2022)

(SARS) in 2003, the global economic crisis of 2009, and the Ebola virus in 2013–2014. However, the COVID-19 crisis that began in 2020 remains the most catastrophic and devastating, affecting all major tourism indicators worldwide.

Figure 1 illustrates how tourism has evolved and changed since the beginning of the century in relation to the different crises that the world has experienced.

This chart clearly shows a significant decline in tourism flows, with a near-complete collapse of all flows starting 2020. The impact of COVID-19 is much more significant compared to previous crises, as the tourism industry lost 72% (over 1 billion tourists internationally) in contrast to the SARS crisis in 2003, which resulted in only a 0.4% decrease (over 2 million tourists), and the global economic crisis, which resulted in a 4% decrease (37 million tourists only).

2.2. Tourism mobility

The tourism industry has grown and evolved in the context of globalization (Hjalager, 2007), which is characterized by the free flow of people and capital in a highly interconnected and transparent global environment.

According to Salomon (2016, p.69), "Tourism mobility is a key factor in the development of tourism. "In fact, the concept of "mobility" is crucial to the practice of tourism and is expressed in the movement of the traveler from his or her usual place of residence to a new environment, i.e., the tourist destination".

Cacomo (2007, p.107) affirmed that mobility is the basis of tourism: "...The tourism economy is impregnated with a very active geopolitical and socio-institutional dimension that constrains its possibilities of development and its spaces of blooming. For tourism is based on the mobility of people and the freedom of movement ...".

The COVID-19 crisis has had a greater impact

on the tourism sector compared to previous crises, according to experts. This is because it has disrupted a crucial element of tourism growth and development, which is travel (tourism mobility). Unfortunately, the mobility of people is closely linked to the spread of infectious diseases like COVID-19, and this has had a major impact on tourism (Grimée et al., 2022). The effects of the crisis can be seen not only in the social and economic changes it has caused globally, but also in the policies that have been implemented, which have altered people's daily personal and professional lives (Hao et al., 2021).

In response to the challenges posed by the COVID-19 virus, authorities have instituted several policies and regulations aimed at curtailing its transmission and safeguarding the population and the economy. These new rules have disrupted and changed the existing norms and have affected all sectors.

The widespread of the COVID-19 virus represents an environmental problem that has led to market failures especially by the implementation of sanitary and regulatory procedures.

2.3. The mobilized theory: new institutional theory

There are several theories today that explore the impact of the environment on the economy and its strategic implications, as well as the roles of different actors. However, few theories have investigated the relationship between the institutional environment and economic performance.

The new institutional theory is well-suited for case studies as it explores the relationship between the institutional environment and the behavior of actors (Butler & Carney, 1986; Oliver, 1991; Ramaswamy et al., 1994; Lawrence, 1999; Barley, 2008). It has been used by various authors to study how changes in the rules of the game during the COVID-19 crisis have impacted player beha-

avior (Schmidt, 2020; Bormann et al., 2021; Loi et al., 2021; Marier, 2021). In this regard, we believe, that, this theory is particularly relevant for analyzing the Moroccan tourism sector, which has undergone many significant institutional modifications (sanitary and regulatory restrictions), that have impacted its growth and development, since the outbreak of COVID-19 back in March 2020.

As its name implies, the new institutional theory has been centered on the question of institutions. Institutions or the institutional environment, which refer to the fundamental constraints or the rules of the game that guide, shape and regulate the attitudes of actors (North, 1990). For Williamson (1998, p.24), "new institutional theory operates at two interdependent levels: the institutional environment (i.e., the rules of the game) and the institutions of governance (the actors) that play according to the rules".

In this respect, Davis and North (1971, p.6) stated that "the institutional environment is the set of basic political, social, and legal rules that establish the basis for production, exchange, and distribution. Examples include rules governing elections, property rights, and contract law".

A key element in North's analysis is the concept of "rules of the game", which we consider to represent the new measures and constraints taken by public authorities. In the context of the COVID-19 crisis, the new measures and constraints represent the sanitary and regulatory restrictions that guide the behavior of all tourism actors and impact their performances.

In fact, the decision to close borders and the majority of tourism establishments is in complete contradiction and opposition to the fundamental principle of tourism, namely free movement and fluid mobility. Thus, imposing a total or partial shutdown on the various tourism actors had a very negative impact on the overall performance of all these actors.

2.4. The theoretical model of the research

In this paper, we examine the relationship between sanitary and regulatory restrictions (independent variables) and the evolution and trend of the tourism sector in Morocco (dependent variables).

We have found that the change in the institutional environment has resulted in new rules of the game that conditioned and impacted the evolution and growth of Moroccan tourism demand and supply. In other words, and in accordance with North's analysis, the rules of the game (sanitary and regulatory restrictions) include both what agents cannot do and sometimes under what conditions certain actors are allowed to undertake certain activities. They are, therefore, binding and the guiding scheme within which relations between agents take place.

As a result, the model presented in figure 2 is well suited to simulate the impact of COVID-19 health crisis on both tourism demand and supply in Morocco.

The COVID-19 pandemic has affected tourism demand through:

- **Border closures** as part of international preventive measures taken by authorities to halt the spread of the COVID-19 pandemic, in particular through the suspension of passenger flights, sea and land travel (Rosik et al., 2022);
- **Confinement & constraints on mobility**: the people are required to stay at home during confinement, and beyond that, they are restricted in their abilities to move freely. In this regard, Dube (2021), Rutynskyi and Kushniruk (2020) respectively analyzed the effects of the application of confinement and lockdown on travelers visiting friends and relatives in South Africa and on tourism activity in Lviv (Ukraine).

The COVID-19 pandemic has influenced the tourism supply and has had serious repercussions on the national tourism (Santos & Oliveira Moreira, 2021), especially after the application of some measures, including the closures & curfews, social distancing (Sengel, 2021), sanitation and disinfection of spaces and equipment (Ferreira et al., 2021):

- **Closures & curfews:** the prohibition imposed on the various actors in the tourism industry (particularly lodging establishments, tourist restaurants, and so on) to receive customers during a given period in a total or partial way; Tourism actors have shorter hours than before, resulting in a decrease in sales and customers (Jafari et al., 2021; Eneyo, et al., 2021);

- **Social distancing** which reduces the capacity of tourism establishments such as hotels, tourist restaurants, and tourist transport, among others. This restriction impact not only, indoor activities but also outdoor activities (Ferreira et al., 2021);

- **Protection & hygiene** impose additional costs and fees for tourism establishments, particularly in terms of the acquisition of new equipment and products necessary to protect against the spread of the virus (e.g., hydro-alcoholic gel, temperature measuring devices, masks, signalization, and so on). Especially since hygiene is considered, by tourists, as a fundamental criterion for the choice and evaluation of tourism establishments (Baptista et al., 2022).

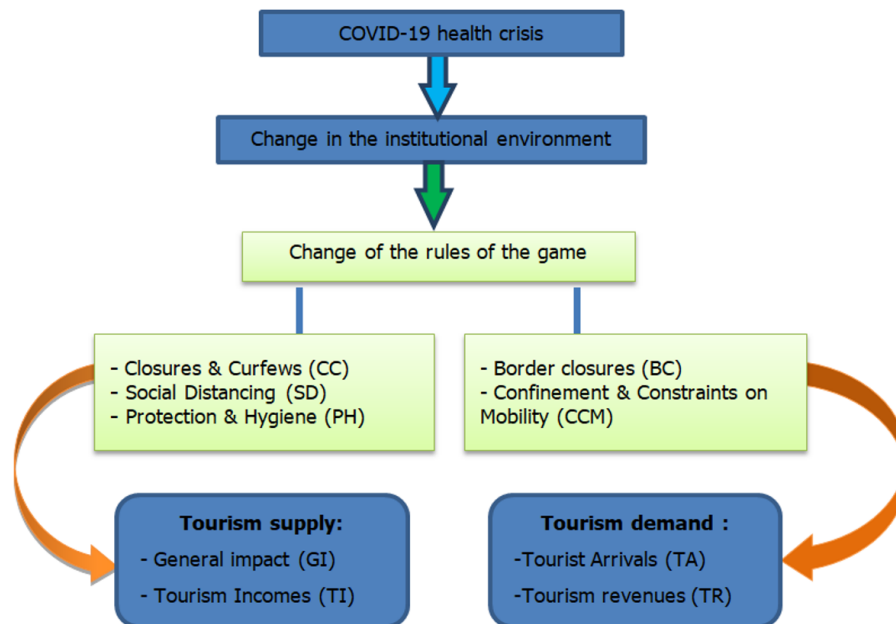


Figure 2 | A theoretical model of the impact of sanitary and regulatory restrictions on the tourism industry
Source: Constructed by the authors

3. Methods

3.1. The research procedure

For our research, we have chosen to employ a quantitative approach utilizing descriptive analysis. This decision can be justified, firstly, by the use of quantifiable or countable numerical data, and secondly, it allows for better testing the theories (Giordano & Jolibert, 2016).

We have opted for explanatory (causal) research with the objective of clarifying the impact of COVID-19's sanitary and regulatory restrictions (the new rule of the game) on Morocco's tourism industry. This research method was chosen because it enables us to examine specific phenomena

that are either new or not adequately explored, like the effect of the COVID-19 pandemic on economies.

Although our paper primarily relied on secondary data, we bolstered our findings by distributing a questionnaire to various tourism actors during June and July 2022. Our aim was to gain a comprehensive understanding of the overall impact of COVID-19 on Moroccan tourism industry regardless of any distinction. The study period spans from March 2020 to June 2022, as this interval is crucial in obtaining representative feedback on the impact of restrictions. The severity of these restrictions varied across different periods, and Morocco implemented changes based on the intensity of the virus spread, as depicted in Figure 3.

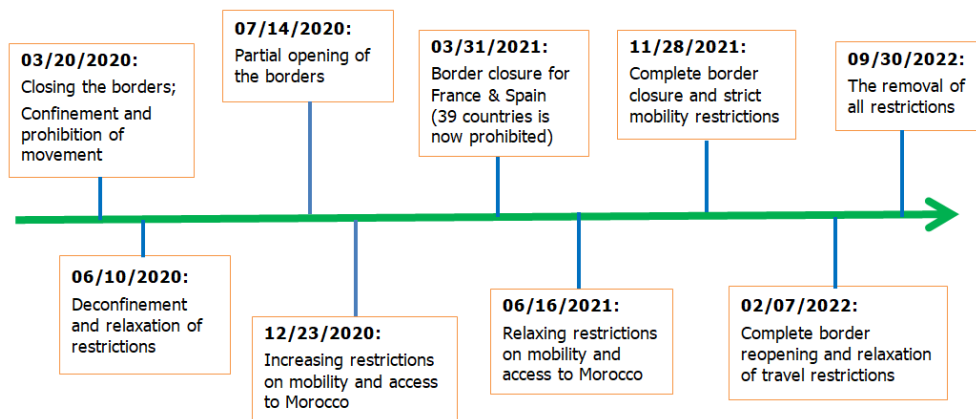


Figure 3 | A timeline of the actions taken by Moroccan authorities in response to COVID-19
Source: constructed by the authors

The Statistical Package for Social Sciences (SPSS 26) was used to assess the descriptive analysis and calculate the correlations between variables (Pato et al., 2021). A bivariate regression analysis was performed to calculate the causality coefficient between our variables.

We have used five independent variables (Border Closures: **BC**, Confinement & Constraints on Mobility: **CCM**, Closures & Curfews: **CC**, Social Distancing: **SD**, and Protection & Hygiene: **PH**) and four dependent variables (Tourist Arrivals: **TA**, Touristic Revenues: **TR**, General Im-

pact: **GI**, and Tourism Incomes: **TI**).

To study the impact of the pandemic on demand, the independent (ordinal) variables are classified into five levels: 0: no restrictions; 1: relaxing restrictions; 2: strict applications of restrictions; 3: combinations between strict and relaxing BC and CCM; 4: combinations between strict BC and CCM.

Table 1 | Measures attributed to restrictions

BC	0	1	2	2	1	0
CCM	0	1	2	1	2	1
BC+CCM	0	2	4	3	3	1

3.2. Participants and data collection

To compile our data, we drew from a variety of sources, including official documents such as those from the World Tourism Organization, the Moroccan Central Bank, and the Ministry of Tourism (which provided information on tourist arrivals, receipts, and so forth). We also collected feedback from private actors through a survey, which helped us evaluate the extent to which the restrictions impacted the tourism supply.

We have selected participants for our ques-

tionnaire from a range of Moroccan private tourism actors based in the country's main tourist cities, including Marrakech, Tangier, Rabat, Casablanca, Oujda, Meknes, and Fez.

The individuals' responses to our questionnaire were distributed as follows: Hotels represent 43.0% (104 establishments), tourist transport companies represent 23.1% (56 establishments), tourist restaurants represent 17.4% (42 establishments) and, finally travel agencies represent 16.5% (40 establishments).

Table 2 | Distribution of survey respondents by geographical location

	Lodging establishment	Tourist transport company	Tourist restaurant	Travel agency
Fez	23	16	12	11
Meknes	14	6	5	4
Casablanca	16	7	4	4
Rabat	12	5	6	5
Oujda	7	3	1	3
Tangier	8	6	3	3
Marrakech	24	13	11	10

Source: constructed by the authors

Given that it was unsafe and complicated to travel during COVID-19 pandemic, we have made the decision to administer our survey through email. We sent the questionnaire to all tourism actors in the cities mentioned above, totaling 930 emails.

The rate of return of the replies is 38.5%, representing 358 replies received, and after analyzing these replies, case by case, and removing the several incomplete or incorrect replies (116 replies), we were able to validate 242 answers.

The questionnaire consisted of 25 questions, divided into three sections. In the first part, there were general questions regarding the identification and characteristics of the participants (type of business, classification, location, and so on). The second part included questions about the impact

of restrictions (closures & curfews, social distancing, protection & hygiene) on the performance of each tourism actor. The third part focused on the respondents' perceptions of the decisions to relax and ease the restrictions on their businesses.

4. Results analysis and discussion

Starting March 2020, the Moroccan government implemented a series of sanitary and regulatory restrictions, which included border closures, confinement & constraints on mobility, closures & curfews. These restrictions had a negative impact on the national tourism demand and supply.

4.1. The impact of restrictions on the tourism demand

4.1.1. Evolution of tourist arrivals and tourism revenues

The border closures associated with confinement & constraint on mobility, imposed by both Moroccan and foreign public authorities, has generated negative effects on tourist arrivals and tourism revenues.

Like the rest of the world, the Moroccan tourism sector has seen an unprecedented loss of tourists since the outbreak of the COVID-19 pandemic. Based on figure 4, we can clearly notice that the COVID-19 pandemic has significantly and ne-

gatively impacted the number of tourists visiting Morocco, which decreased from nearly 13 million tourists in 2019 to 2.8 million in 2020 (-79%) and to 3.7 million in 2021 (-71%). This decrease exceeds the decline observed at the international level (-72% in 2020 and -69% in 2021) (UNWTO, Tourism Data Dashboard, 2022).

As shown in figure 5, we can clearly observe that tourist arrivals reached their worst levels in April and May 2020, in addition to December 2021 and January 2022. This situation can be attributed mainly to the strict closure of borders (BC=2) combined with the strict application of mobility constraints (CCM=2) observed during these periods.

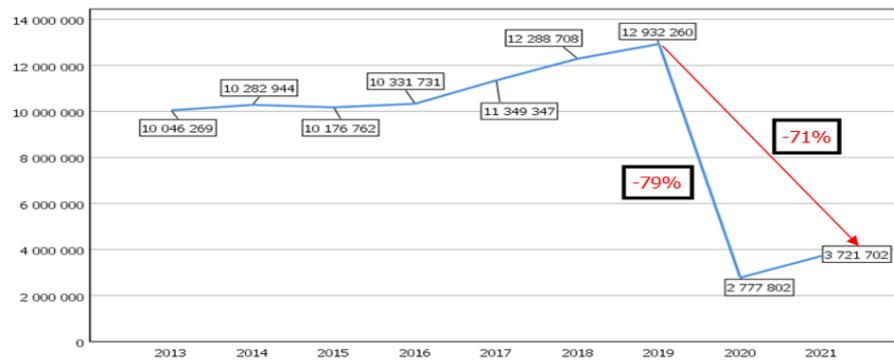


Figure 4 | Annual evolution of tourist arrivals from 2013 to 2021
Source: Authors compilation based on the Moroccan central bank and UNWTO

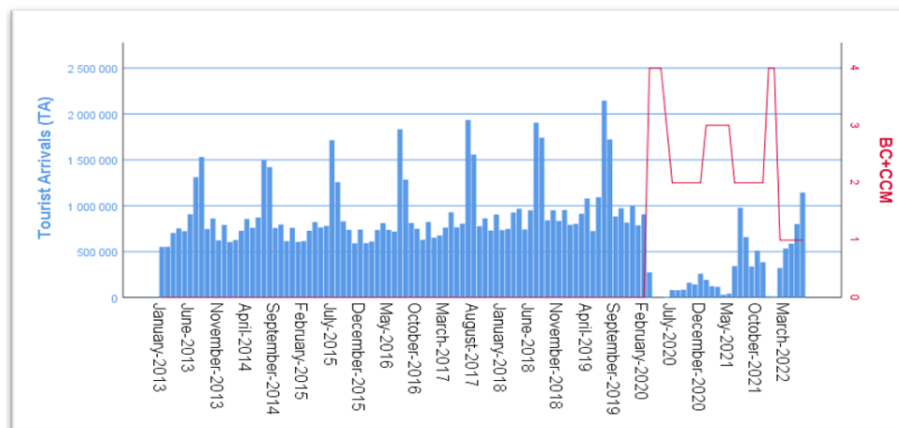


Figure 5 | Evolution of tourist arrivals from January 2013 to June 2022
Source: Authors compilation based on the Moroccan central bank and UNWTO

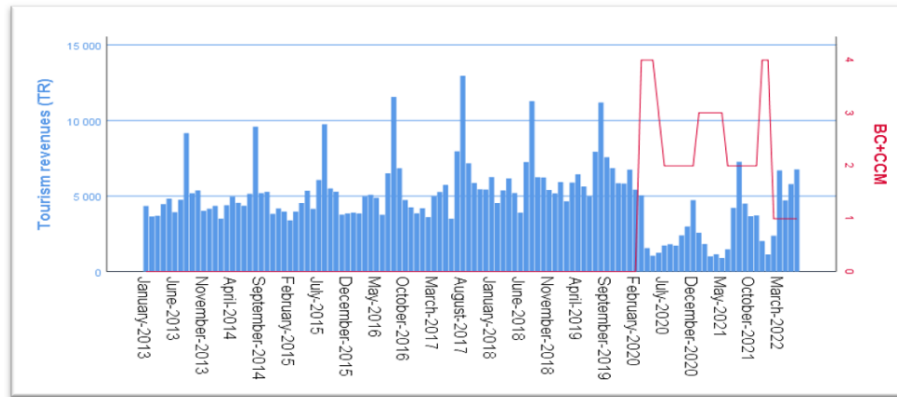


Figure 6 | Evolution of tourism revenues between January 2013 and June 2022
Source: Authors compilation based on the Moroccan central bank and UNWTO

We observed the same impact of the BC and CCM on the evolution of tourism revenues (see figure 6). For instance, tourist revenue in April 2020 dropped by 75% compared with April 2019 (1 560 million Dirham in 2020 versus 6 440 million Dirham in 2019).

As it can be observed, tourist arrivals (TA) and tourism revenues (TR) decrease as actions related to border closures and mobility restrictions increase, and vice versa. For instance, the increase in revenues and tourist flows during the period from June 16 to November 27, 2021, is largely due to the reopening of Moroccan borders (BC= 0). However, this increase remains well below its 2019 level due to the continued mobility restrictions (CCM= 2). The discrepancy in the effects of BC and CCM (BC+CCM=2) throughout the time periods from July 14 to December 23, 2020, and from June 16 to November 27, 2021, might be attributed to the fact that during the earlier period, only Moroccan citizens were permitted to enter Morocco.

4.1.2. Correlation test and bivariate regression analysis

The nature of our variables, which are ordinal and quantitative, obliges us to opt for Kendall's tau or Spearman's rho tests. Indeed, this choice is

explained by the fact that our ordinal variables do not follow a normal distribution.

We have chosen the Kendall's tau-B test to determine the correlation between the variables in our study. As a matter of fact, Kendall's test is a non-parametric test that is used to quantify the degree of monotonic agreement between ordinal variables, whether they are continuous or categorical (Laurencelle, 2009).

Table 3 shows a significant and negative correlation (the same results have been obtained using Spearman's rho test) between border closures and confinement & mobility constraints, on the one hand, and tourist arrivals and tourism revenues, on the other hand. This result supports our descriptive analysis of the influence of restrictions on the evolution of tourist arrivals and revenues. Nevertheless, in order to validate our interpretations, we conducted a bivariate regression analysis.

The independent and dependent variables have a very significant negative relationship, as seen in Table 4. For example, tourist arrivals (TA) are significantly impacted by the border closures (BC). BC significantly predicted TA, $p\text{-value} < 0.001$, which indicates that the BC can play a significant role in shaping TA ($b=-508152.829$, $p < .001$). These results evidently present the negative effect of the BC on TA.

Table 3 | Correlations test Kendall's tau-B

			TA	TR	BC	CCM	BC+CCM
Kendall's tau-B	TA	Correlation Coefficient	1,000	,593**	-,528**	-,524**	-,533**
		Sig. (2-tailed)	.	,000	,000	,000	,000
		N	114	114	114	114	114
	TR	Correlation Coefficient	,593**	1,000	-,445**	-,401**	-,404**
		Sig. (2-tailed)	,000	.	,000	,000	,000
		N	114	114	114	114	114
	BC	Correlation Coefficient	-,528**	-,445**	1,000	,874**	,902**
		Sig. (2-tailed)	,000	,000	.	,000	,000
		N	114	114	114	114	114
	CCM	Correlation Coefficient	-,524**	-,401**	,874**	1,000	,980**
		Sig. (2-tailed)	,000	,000	,000	.	,000
		N	114	114	114	114	114
	BC+CCM	Correlation Coefficient	-,533**	-,404**	,902**	,980**	1,000
		Sig. (2-tailed)	,000	,000	,000	,000	.
		N	114	114	114	114	114

** . Correlation is significant at the 0.01 level (2-tailed).

Table 4 | Linear regression

Regression Weights	Unstandardized Coefficient Beta	Constant	standardized Coefficient Beta	p-value (sig.)
BC → TA	-508152.829	895098,930	-.638	.000
BC → TR	-2123.739	5477,872	-.527	.000
CCM → TA	-443316.625	913604,191	-.646	.000
CCM → TR	-1837.515	5550,128	-.529	.000
BC+CCM → TA	-251875.341	913863,981	-.663	.000
BC+CCM → TR	-1047.987	5553,545	-.544	.000

Source: Authors compilation

In other words, whenever the authorities enforce border closures, Moroccan tourism experiences an average decrease of 508152.829 tourists per month. The closure of borders acts as a major barrier that prevents tourists from visiting Morocco, leading to a decline in tourist flows. This observation also holds true for tourism revenues.

Hence, tourism demand is largely influenced by policies and decisions made by public authorities, as they determine the rules of the game that affect both tourist arrivals and tourism revenues.

4.2. A descriptive analysis of the impact of restrictions on the tourism supply

In this section, we will investigate the impact of restrictions on the tourism supply, including the impact of closures & curfews (CC), social distan-

cing (SD), and protection & hygiene (PH) on the performance of the 242 Moroccan tourism actors who are the subject of our questionnaire.

4.2.1. General impact of restrictions on tourism actors' activities

The vast majority of tourism establishments that participated in this survey confirmed that the application of the closures & curfews measures imposed by the public authorities has negatively affected their activities. Indeed, about 65.7% of the tourism establishments stated that they were extremely impacted. This situation is explained by the fact that a curfew deprives tourist enterprises of a substantial part of their profits since it deters customers from visiting the establishments during a large part of the day, while a total closure deprives them of all of their revenues.

Concerning the impact of social distancing on actors' activities, it can be seen that 49.6% of the tourism establishments have acknowledged that the social distancing imposed by the public authorities has caused a high impact on their activities, while 43.0% of the tourism establishments have perceived a medium impact. This impact can be explained by the fact that social distancing measures force tourism establishments to reduce their capacity to receive guests and customers in order to avoid as much contact² as possible between customers, on the one hand, and between customers and establishment staff, on the other.

Regarding the third point of protection & hygiene, most of the tourism establishments confirmed that the sanitary safety measures did not necessarily have a major impact on their performance.

About 67.4% (a total of 163 establishments) confirmed that the protection & hygiene measures have a weak impact on their performance, and 32.6% of the tourism establishments (a total of 79 entities) see that there is no impact. This observation is explained by the fact that hygiene is one of the fundamental quality criteria in the daily operation of any tourism establishment. In other words, tourism establishments spend a lot of money on hygiene, and therefore, this regulatory restriction of protection & hygiene has only required a moderate effort in terms of additional financial charges (the increase does not exceed 10%).

Table 5 presents the details of the results found from the analysis of the participants' responses to our questionnaire.

Table 5 | Impact of restrictions on tourism establishments' activities

	Closures & curfews		Social distancing		Protection & hygiene	
	Number of actors	Valid percentage	Number of actors	Valid percentage	Number of actors	Valid percentage
No impact	0	0	0	0	79	32.6
Weak impact	0	0	18	7.4	163	67.4
Medium impact	17	7.0	104	43.0	0	0
High impact	66	27.3	120	49.6	0	0
Extreme impact	159	65.7	0	0	0	0
Total	242	100	242	100	242	100

Source: Authors compilation

4.2.2. Impact of closures & curfews and social distancing on the tourism actors' incomes

In this section, we will examine the impact of closures & curfews and social distancing on Morocco's tourism supply by examining the effect of these restrictions on incomes during both period of the strict and relax application of these two restrictions.

A. impact of restrictions on the incomes during strict period

The impact of restrictions is resulting in a significant decrease in the incomes of tourism establishments. Indeed, 100% of the 242 participants in the survey reported negative growth in their incomes following the application of the closures & curfews and social distancing.

²State health officials believe that physical contact is the main vector for the spread of COVID-19

Table 6 | Impact of restrictions on tourism establishments' incomes

	Closures & curfews		Social distancing	
	Number of actors	Valid percentage	Number of actors	Valid percentage
Impact=0%	0	0	0	0
0%<Impact≤25%	0	0	23	9.5
25%<Impact≤50%	20	8.3	89	36.8
50%<Impact≤75%	61	25.2	119	49.2
Impact>75%	161	66.5	11	4.5
Total	242	100	242	100

Source: Authors compilation

Relying on Table 6, over 91% of tourism establishments acknowledged that the closures & curfews restrictions had a highly to extremely negative impact on their incomes. In details, 66.5% of respondents confirmed that they have suffered a decrease of more than 75% of their revenues in 2020 compared to 2019, while 25.2% of the respondents stated that the decrease in their sales figure remains above 50% (between 50% and 75%). The impact of closures & curfews is explained by the fact that they do not permit tourism establishments to receive customers during a specific period, whether completely (a closure) or partially (a curfew).

Regarding the impact of social distancing on the incomes of tourism establishments, all participants have confirmed a significant decrease in their incomes of around 63% in 2020 compared to 2019. In fact, 4.5% of the tourism establishments stated that social distancing had an extreme negative impact of more than 75% on their sales figures. For their part, 49.2% of the respondents confirmed that they suffered from a drop of more than 50% in sales results, while 36.8% of the respondents stated that the drop in sales was between 26% and 50%. Only 9.5% of tourism establishments, mainly travel agencies, reported a drop in income of less than 25% following the application of social distancing. This situation can be explained by the possibility for travel agencies to receive clients remotely, which limits the impact of the social

distancing restriction on their business.

The impact of these sanitary and regulatory restrictions is resulting in a significant decrease in the incomes of tourism establishments.

B. Evolution of the incomes during relaxing period

Following the decision to relax sanitary and regulatory restrictions during the fourth quarter of 2020 (Q4-2020), the Moroccan tourism sector showed a deceleration in its downward pace. This new context had a positive impact on the incomes of tourism establishments, which increased by an average of 38.3%, reducing the annual decline from -63.2% to -49.1%.

Additionally, all the respondents stated that their revenues increased slightly (see figure 7); 55.9% of the respondents had their revenues increase by less than 25%, while 35.1% of the tourism establishments declared an increase in their turnover from 26% to 50%, and finally, 9.1% of the respondents announced that the increase in their turnover was greater than 50%.

The result of our study is corroborated by the evolution of tourism revenues at a national level, which constitute a major part of the turnover of tourism establishments. Indeed, as shown in figure 8, tourism revenues have evolved positively from -77.4% to -45.6% between Q2 and Q4 2020.

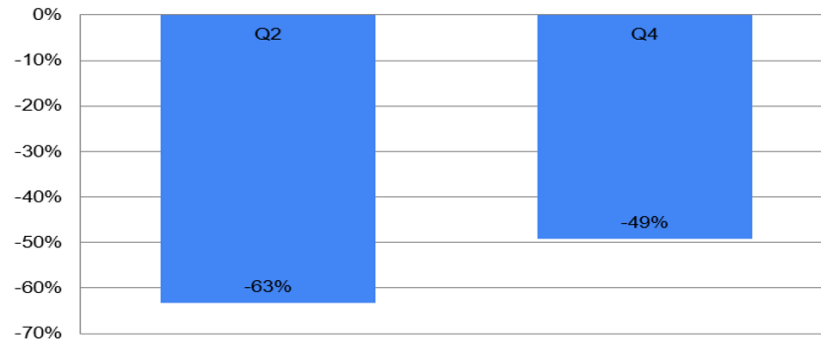


Figure 7 | The evolution of the incomes of the tourism establishments during Q4-2020 compared to Q2-2020
Source: Authors compilation

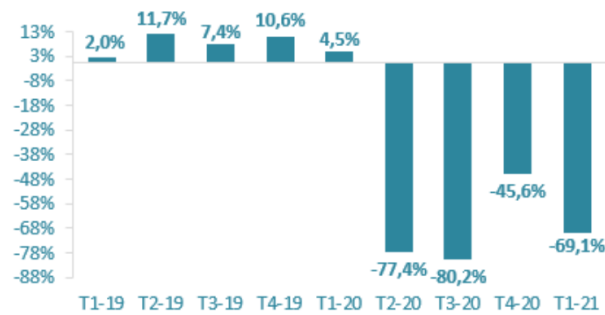


Figure 8 | Evolution of the tourism revenues by quarters (2019-2020)
Source: Note de conjoncture³, DEPF No. 291 (May 2021)

The significant decline of -77.4% in the second quarter of 2020 corresponds to the first three months of the closing of tourism establishments, while the improvement of the downward trend to -46% is explained by the relaxation of closing measures and curfew that took place during Q4-2020.

Finally, the results from the analysis of our questionnaire reveal a trend that is consistent with what was seen at the national level.

5. Conclusion

Our research was based on the new institutional theory to elucidate the worsening condition of the tourism industry in Morocco from 2020 to 2022. We specifically examined the effects of sanitary and regulatory restrictions, such as, the border

closures, the confinement & constraints on mobility, the closures & curfews, the social distancing, and the protection & hygiene.

Similar to other countries, Morocco's tourism sector has suffered adverse effects due to the enforcement of new restrictions that have had a considerable impact on it. The border closures and the confinement & constraints on mobility measures have substantially curtailed tourist movement (with tourist arrivals in Morocco decreasing by 79% and 71% in 2020 and 2021, respectively, compared to a decline of 72% and 69% in tourist arrivals worldwide).

The analysis of the secondary data and the results of the questionnaire has revealed that the primary cause of the tourism industry crisis in Morocco is the implementation of sanitary and regulatory restrictions. Furthermore, our findings have demonstrated that these restrictions have impac-

³ Notes de conjoncture | (finances.gov.ma), No. 291 (2021)

ted all tourism actors to varying extends.

Indeed, the closures & curfews measures have had a considerable impact on all Moroccan tourism actors. More than 65% of respondents to the survey indicated that it has had a significant impact on the evolution of their revenues, and the majority confirmed that they have lost more than 75% of their total revenue since the implementation of this measure. As for the impact that the tourist actors perceived on the performance of their establishments with regard to social distancing, it is at a high-to-medium level. For example, all the tourism actors confirm that the effect of social distancing on their revenues has resulted in a significant drop of approximately 63% in 2020 compared to 2019. Only protection & hygiene measures have a weak impact.

This paper, utilizing the analysis of new institutional theory, has confirmed a link between the restrictions and the progression and development of the Moroccan tourism sector. Specifically, the tourism industry has witnessed an increase in revenues and visitor arrivals each time the authorities have eased the restrictions. Consequently, tourism actors have been able to recover approximately 38% of their turnover losses during periods of stringent restrictions.

Thus, the decisions made by authorities through the rules of the game were crucial factors in the demise of Morocco's tourism industry. The "rules of the game" are what regulate the tourism industry and, hence, place obstacles on both supply and demand for tourism.

6. Limitations of the research

The first limitation of the current study consists of the number of participants although our sample of 242 actors is considered representative. Nevertheless, a more consistent sample size is always desirable.

The second limitation consists of being limited

to a one country (Morocco). Even if the results obtained seem satisfactory, it is advisable to conduct a comparative study with Morocco and other similar countries; it would be interesting, to know if there are differences in the degree of impact of sanitary and regulatory restrictions on tourism industry in the global scale.

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