Research Article

The Impact of the "Belt and Road" Initiative on Tourism Economic Development in Chinese Regions along the Route—An Empirical Analysis Based on DID Model

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As an important component of modern service industry, tourism is regarded as a "green" driver to regional economic growth and industrial upgrading. Applying the "quasi-natural experiment" advocated by the "The Belt and Road" initiative, this paper, based on the method of DID, assessed the influence of this initiative on regional tourism development by analyzing panel data collected from 286 prefecture-level cities in China over the period of 2007–2018. It is found that the "The Belt and Road" initiative has stimulated market dynamics and promoted tourism development in the regions along the route and has significantly improved indicators such as per capita domestic and inbound tourism revenue and per capita domestic and inbound tourist receipt. Also, the degree of contribution of domestic tourists to the tourism economy of the regions where the policy has been implemented is stronger than that of inbound tourists. In sum, the results of this paper not only confirm that the "The Belt and Road" initiative has significantly contributed to the high-quality tourism development of Chinese provinces along the routes but also provide important policy enlightenment for the upgrading of regional tourism industry and regional economic balance.

1. Introduction

In 2015, China released the "Vision and Action on Jointly Building Silk Road Economic Belt and the 21st Century Maritime Silk Road" (hereinafter referred to as the "Vision and Action"). The "the Belt and Road" initiative has not only driven the economic development of the regions along the belt and road, but also promoted the flow of people and derived the development of local trade, but also benefited the development of tourism. It is a programmatic policy document that maps out the blueprint for the development of the "The Belt and Road" and proposes to strengthen tourism cooperation. For the tourism industry, on the one hand, it enhances the domestic regional coordination and promotes the development of domestic tourism; on the other hand, it pushes forward the opening of tourism, attracts international tourists to visit Chinese attractions, and accelerates the pace of foreign tourism cooperation [1, 2]. Thus, it can help the development of the tourism economy along the route.

Based on this, this DID-based paper analyzes the panel data of 286 cities at the prefecture level and above from 2007 to the end of 2018 as a way to explore the impact of "The Belt and Road" initiative on regional tourism. The paper finds that it has boosted tourists' expenditure in the regions along the route, and the cities affected by the policy have significantly increased tourism revenue and the number of visitors. Both the number of domestic tourists and their relevant spending indicate the positive correlation to the initiative, but inbound tourists show less significant levels than domestic tourists. These results hold true after controlling for provinces. Further analysis of overnight travel reveals that the main path to growth in inbound travel is through an increase in average tourism spending from foreign visitors, rather than an increase in arrivals. The regression results pass the parallel trend test.

The contributions of this paper are that, first, it adds a perspective to the study of "The Belt and Road" by exploring the impact of "The Belt and Road" on regional tourism in terms of domestic and foreign tourist performance, which enriches the research elements of regional tourism and expands the scope of the research of this initiative. Second, the DID method analyzes the degree of influence of "The Belt and Road" on regional tourism, and the difference between the control group and the experimental one makes the results more credible. Third, this paper assessed the impact of "The Belt and Road" on tourism, which can positively influence the prosperity of regional tourism and can drive the development of regional tourism through the cities where the initiative is implemented.

2. Institutional Background and Theoretical Hypothesis

2.1. Institutional Background. In March 2015, the National Development and Reform Commission (NDRC), the Ministry of Foreign Affairs, and the Ministry of Commerce jointly released the "Vision and Action on Jointly Building Silk Road Economic Belt and the 21st Century Maritime Silk Road," announcing for the first time the overall top-level design and strategic plan of the "One Belt and One Road." Subsequently, this initiative was included in the main objectives of the thirteenth Five-Year Plan and was gradually put into in-depth implementation. So far, the "The Belt and Road" initiative has realized the evolution of "concept-strategy-planning-implementation." The vision of the initiative is to "jointly build an open, inclusive, balanced, and universally beneficial regional economic cooperation structure, and generally form a network of high-standard free trade zones." As the initiator of "The Belt and Road," China enjoys a long history, rich culture, and landscape resources, ideal geographic location, and huge throughput of tourists, all of which can promote high-quality tourism development from different dimensions. In addition, this initiative can promote sustainable tourism development in the countries along the route, improve the welfare of local communities, stimulate investment, protect the cultural and natural heritage, and provide tourists with an unforgettable experience of the Silk Road. The development of tourism of the Belt and Road will go through a process of integration from a loose alliance, and the future goal of this tourism is to establish a tourism free trade zone [3], thus promoting the future development of the tourism industry within the region.

2.2. Theoretical Hypothesis. In theory, the "The Belt and Road" initiative can form a multifaceted effect on the tourism economy of the domestic provinces along the route. First is policy incentive. The domestic provinces along the route will choose to respond the Belt and Road initiative to increase tourism investment in the region and promote local tourism supply, which is supposed to have a significant impact on enriching local tourism products and optimizing

industrial structure [2]. The second is transportation improvement. Factors such as transportation infrastructure affect the agglomeration and diffusion of the regional tourism economy and are also the key concerns in the transformation and upgrading of the tourism industry and the improvement of quality and speed [4, 5]. The implementation of the "The Belt and Road" has further improved the transportation infrastructure in the provinces along the route, which has increased the spatial effect of tourism specialization. The third is the promotion of the flow of tourism production factors. "The Belt and Road" can strengthen tourism cooperation within the policy-implemented region, optimize the efficiency of the tourism industry, promote the use and flow of economic factors, improve the utilization efficiency of tourism resources, and coordinate the development of regional tourism [6]. In conclusion, the "The Belt and Road" initiative strengthens the interconnection of the tourism economies of the domestic cities where the policy is implemented [7], and through the interconnection of tourism resources between cities, a tourism circle is thus formed, which in turn promotes the growth of the local tourism economy. Accordingly, we propose the following hypotheses:

Hypothesis 1. "The Belt and Road" stimulates the market dynamics and drives tourism development and tourism economic growth in policy-influencing areas.

At the same time, the "The Belt and Road" policy will also attract foreign tourists to visit China in several ways, which can drive tourism development in the regions along the route. First is the policy interoperability. The countries involved in the "The Belt and Road" initiative will form a more practical cooperation, coordination, and effective policy support mechanism. The coordination of tourism-related policies can help connect tourists and tourist destinations to promote travel and mutual recognition, including visa-friendly policies to facilitate the arrival of tourists and mutual acceptance of industry standards, which will strongly support the development of high-quality tourism [1, 6, 8]. The second is unimpeded trade. The customs cooperation in information exchange, mutual recognition of supervision, and assistance in law enforcement in countries along the route widentrade scopes and optimizes trade structure; also, all of these increase the demand for materials, technologies, and resources in domestic areas along the "Belt and Road", further promoting the upgrading of regional industrial structure, provides a good industrial environment for tourism development and significantly increase business and tourism and other market sources. The third is the financial support. The convenient capital settlement of the countries along the route makes the trade including inbound tourism more convenient, and also, the elimination of investment and trade barriers diversify the investment and financing channels of the domestic regions along the route, promote the efficient flow of capital factors among industries, and provide factor support for the high-quality tourism development. Fourth is the cultural communication. The development of cultural projects and activities in countries along the route provides

a communication platform for tourism development, which can shorten the psychological distance of tourists. Tourism cooperation, sports activities, and other projects promote the development of domestic exhibition tourism, festival tourism, and other new industries; harmonious and friendly cultural ecology and public opinion environment is fundamental to the development of "The Belt and Road" tourism [3, 9]. In conclusion, one of the objectives of the "Belt and Road" is to promote the opening up of the region and to carry out deeper cooperation and exchange with the international communities, and the implementation of the strategy has contributed to the tourism cooperation of the countries along the route [2, 3, 10], allowing China's own unique historical and cultural and natural landscapes to attract tourists from all over the world. The "The Belt and Road" initiative helps the cities where the policy is implemented to be tourist-attracting while maintaining the stable development of domestic tourism, giving full play to the potential of regional tourism development.

Hypothesis 2. "The Belt and Road" attracts foreign tourists, increasing the number of tourist arrivals in China and boosting the development of regional tourism.

However, in reality, this initiative has had different impacts on domestic and international tourists. Firstly, visitors to China face higher costs of travel and information gathering; generally, only some very well-known scenic spots will be known by most people. Therefore, under the premise of information asymmetry and the pursuit of maximizing the utility of tourism experience, international tourists tend to choose those Chinese tourist destinations with high quality and reputation and thus have a limited effect on the tourism economy of cities without well-known tourist attractions, but domestic tourists are not likely to be affected by this above situation, whether it is a well-known scenic spot or not, domestic tourists are willing to visit it. Secondly, for traveling abroad, tourists face higher travel costs and also need to spend more time and energy to prepare for the trip, and inbound tourists will also need longer touring time to maximize the utility [11–13], In addition, other issues such as language and living habits, even customs, and legal issues should be taken into account; therefore, it will also form a certain obstacle to the number of tourists coming to China, and the increase of inbound tourists is lower than that of domestic tourists. Accordingly, we propose the following hypothesis.

Hypothesis 3. In the context of the "The Belt and Road" initiative, the contribution of domestic tourists to the tourism economy of the region where the policy is implemented is stronger than that of inbound tourists.

3. Identification Strategies, Data, and Variables

3.1. Identification Strategy. The "Belt and Road" initiative began in 2015, involving 140 prefecture-level cities, and this paper uses the DID method of time and region to analyze its impact on regional tourism. By the end of 2018, there were 298 prefecture-level cities, subprovincial cities, and

municipalities directly under the Chinese central government, and from 2007 to 2018, the number of Chinese prefecture-level cities has changed, so to ensure consistency, the data of Bijie, Chaohu, Sansha, Haidong, Danzhou, Turpan, Hami, Rikaze, Changdu, Linzhi, Shannan, and Naqu are deleted, and finally, the data of 286 cities analyzed in the paper. Among them, there are 140 cities involved in "The Belt and Road" initiative, which are the experimental group; cities in other regions constitute the control group. Specifically, this paper implements the DID method through two-way fixed effects. The model is

$$\text{Tour}_{i,t} = \beta_0 + \beta_1 BR_{i,t} + \sum_j \beta_j \text{Control}_{i,t} + \gamma_t + \mu_i + \varepsilon_{i,t}, \quad (1)$$

where Tour represents tourism development, BR represents whether the city is the participant of "The Belt and Road" initiative; Control is the control variable; i represents the order of the respective city, and t represents the t-th year; γ_t represents the time fixed effect, and μ_i represents the regional fixed effect.

3.2. Data, Variables, and Descriptive Statistics. To study the impact of "The Belt and Road" initiative on the development of regional tourism, this paper introduces domestic tourism revenue, domestic tourist receipts, inbound tourism revenue, inbound tourist receipt, total domestic and inbound tourism revenue, and total domestic and inbound tourist receipt to indicate the level of regional tourism development and uses "The Belt and Road" to indicate the cities participating in this initiative. A series of control variables are also used, including the number of star hotels per 10,000 people, the number of taxis per 10,000 people, the per capita consumption of electricity, the level of medical care, the level of higher education, the per capita GDP, the percentage of the population in the tertiary sector, and the greening rate (Table 1).

In this paper, per capita domestic tourism revenue, per capita domestic tourist receipts, inbound tourism revenue per capita, inbound tourist receipts per capita, total domestic and inbound tourism revenue per capita, and total domestic and inbound tourist receipts per capita are selected to characterize the level of tour (tourism) development. The core explanatory variable Belt and Road (BP) is denoted by BR. The 140 provinces that participated in Belt and Road in 2015 were assigned the value of 1 from that year and 0 for the others.

In order to control the influence of other factors on the development of regional tourism, a series of variables were selected as control variables in this paper based on the literature findings and reality. In the process of local tourism development, per capita GDP, and per capita electricity consumption, which represent the level of economic development, play a very important role [14, 15]. The ability of tourist attractions to provide tourists with good services is also an important part of local tourism development. The variable number of star-rated hotels with 10,000 people reflects the local service and reception capacity [16–19]. Traffic directly affects the number of accessible tourist

Table 1: Introduction of variables and calculation methods.

Representation	Variable	Name of variable	Method of variable accounting	Average value
Level of tourism development	Domestic tourism revenue	pcinc_dom	Domestic tourism revenue	248707.5
	Inbound tourism revenue	pcinc _fore	Inbound tourism revenue	1814.44
	Domestic tourism receipts	pcpop_dom	Domestic tourism receipts	202774.3
	Inbound tourism receipts	Pcpop_fore	Inbound tourism receipts	3094.37
	Total tourism revenue home and abroad	pcinc	Total tourism revenue home and abroad	205868.6
	Total tourists receipts	pcpop	Total tourists receipts	250521.9
Ability of tourism service	Number of star hotels per 10 k	hotel	Number of star hotel/Total population of the region EOY	2.79
Level of traffic convenience	Number of taxi per 10 k	taxi	Number of taxi/Total population of the region EOY	177.66
Level of economic development	Per capita consumption of electricity	elec	Number of electricity consumption/Total population of the region EOY	154049.1
	Per capita GDP	gdp	GDP/Total population of the region EOY	418492.4
Level of higher education	Level of higher education	educ	Number of higher learning institutions/Total population of the region EOY	0.06
Level of medical care	Level of medical care	med	Number of doctors/Total population of the region EOY	33.61
Preference of landscape	Greening rate	green	Area of greening/Area of land	0.36
	Square of greening	green^2	(Area of greening/Area of Land)^2	0.156
	The Belt and Road	BR	BR city or not	

attractions [5, 20, 21]. Therefore, the number of taxis per 10,000 people is used to reflect the accessibility of local transportation. Higher education means that it is easier to attract foreign tourists because of more convenient cultural exchanges [17, 22, 23]. Therefore, the "number of higher education schools/total population at the end of the year" is used to reflect the local higher education penetration rate. In addition, travelers have a strong preference for mountainous and forested areas with high greenery rate and volcanoes and deserts with low greenery rate, so the quadratic term of greenery rate and greenery rate is used to reflect the attractiveness of the natural environment to travelers. This paper uses Chinese provincial data (with deletions) from 2007 to 2018 to analyze the impact of the Belt and Road on tourism. Data sources are China City Statistical Yearbook, China Tourism Statistical Yearbook, and provincial economic statistical yearbooks.

4. Empirical Results and Mechanism Testing

4.1. Basic Regression Results. This paper uses the software, stata12 for regression analysis of the data, and to prevent errors, time effects and individual effects are controlled. The regression results are shown in Tables 2–4.

Before controlling the regional economic development level, traffic accessibility, higher education level, medical care level, and landscape preference, the regression results show that the coefficients of different explanatory variables reflecting tourism development level, such as domestic tourism revenue and domestic tourist arrivals, are positive and significant, and the regression results thus support Hypothesis 1. The coefficients of inbound tourism revenue and inbound tourist arrivals are positive and significant, and the regression results thus support Hypothesis 2. Comparing inbound tourism and domestic tourism, the coefficients of inbound tourist arrivals and revenues are significantly smaller than those of domestic tourism, and the degree of significance is also lower, and therefore, the regression results thus support Hypothesis 3.

After adding controlled variables, the regression results still confirm the positive impact of Belt and Road on regional tourism development, as shown in Tables 2 and 3.

5. Robustness Test and Heterogeneity Test

5.1. Robustness Tests

5.1.1. Inclusion of Joint Geographic-Temporal Fixed Effect. As different tourism economic policies are adopted in different years in the central region (CR), eastern region (ER), and western region (WR), and their attention and investment in tourism vary, the characteristics of regional change over time can affect the development of tourism in each province. Considering that regional tourism development can be affected by overall tourism planning and policies at different geographic levels, this paper further considers joint geographic-temporal fixed effects in the robustness tests to capture the policy effects of each province over time. The impact of geographic differences for each province is examined.

The regression results are shown in Table 4. The coefficients of domestic tourism trips and domestic and inbound tourist arrival are significantly positive after adding the geographical control, and the other results are not significantly different from Tables 2 and 3; that is, the coefficients of inbound tourism and the degree of significance are smaller than domestic, which further supports Hypothesis 3.

5.1.2. Parallel Trend Test. The DID analysis assumes that the experimental and control groups have the same trend in the absence of event influence and that there is no ex ante error. The analysis in this paper assumes that tourism development in the control and experimental groups can maintain the same trend per se. If tourism development in policy-implementing and nonpolicy-implementing cities is systematically different, the premise of DID will not exist.

Parallel trend tests were conducted on the tourism development levels of the control and experimental groups in the first two and last four years of the Belt and Road, and the regression coefficients were plotted. The results are shown in Figures 1 to 6. In the year before 1, before 2, and the present year of current, the curves fluctuate above and below the value of 0, indicating that there is no systematic difference. In the year after 1, after 2, and after 3, the curves rise significantly, indicating that "one belt, one road" has brought a positive impact on regional tourism development, and the impact is gradually deepened in these three years. The curve declines sharply in the year of after 4, indicating that the positive impact declines in the fourth year after the implementation of this initiative. The impact of "one belt, one road" is generated after a one-year delay and deepens over the next three years, before declining in the fourth year. However, it should be noted that domestic tourism revenue, domestic tourist receipts, inbound tourism revenue, inbound tourist receipts, and total domestic and inbound tourism revenue all show the above trends and satisfy the requirements of the parallel trend test. But the total domestic and foreign tourist receipts did not pass the test, so this indicator should not be used as a variable for DID.

5.1.3. Exclusion of Extreme Values Test. In practical situations, there may be extreme cases affecting the regression results. For example, some cities have data that have a great positive impact on the regression results due to rich tourism resources, smooth transportation environment, and good policy conditions while some cities have the opposite. The occurrence of extremes can bring errors to the regression results. In order to exclude the influence of extreme values, this paper uses 1% and 5% winsorization to the data to exclude the extreme values above this degree in the variables, respectively, and then, the results are tested. The new regression results are similar to the above, and the effects of extreme values can be excluded from the data used in this paper.

5.2. Heterogeneity Analysis. The market operation mechanism is based on the existing tourism resources in the region, the degree of integration and utilization of tourism resources in the region is different, and the link between the richness of

Table 2: Impact of "one belt, one road" on the tourism economy of the regions along the route (a).

	Domestic tourism revenue		Inbound tourism revenue		Domestic tourist arrival	
	Control variables added	Without control variables added	Control variables added	Without control variables added	Control variables added	Without control variables added
BR-DID	84442.192*	102759.7***	1341.18*	1892.378*	3810.369*	16664.376*
	1.85　0.06	3.14　0.00	0.68　0.49	1.47　0.14	0.50　0.62	−0.13　0.89
hotel	−184.619	— —	66.607*	— —	3066.553*	— —
	0.06　0.96	— —	1.73　0.09	— —	1.05　0.29	— —
Taxi	144.942	— —	1.882	— —	92.82	— —
	1.34　0.18	— —	1.44　0.15	— —	0.89　0.37	— —
Elec	0.262 —	— —	−0.002	— —	−0.01	— —
	1.24　0.22	— —	−0.71　0.48	— —	−0.07　0.95	— —
educ	−126000**	— —	−157.216	— —	−116000**	— —
	2.15　0.03	— —	−0.27　0.79	— —	−2.02　0.04	— —
Med	−94.612	— —	−1.177*	— —	−111.74	— —
	−0.97　0.33	— —	−1.94　0.05	— —	−1.08　0.28	— —
Gdp	0.024	— —	0	— —	0.04	— —
	0.49　0.63	— —	−0.46　0.65	— —	0.75　0.46	— —
green	−37200***	— —	−70.761	— —	−40600***	— —
	−3.02　0.00	-	−0.78　0.44	— —	−3.15　0.00	— —
green2	−7695.159*	— —	−162.182***	— —	10313.894**	— —
	1.95　0.05	— —	−5.43　0.00	— —	1.99　0.05	— —
Whether to control time effects	Yes	Yes	Yes	Yes	Yes	Yes
Whether to control individual fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2_within	0.42	0.32	0.17	0.07	0.28	0.15

Table 3: Impact of "one belt, one road" on the tourism economy of the regions along the route (b).

	Inbound tourism revenue		Domestic and inbound tourism revenue		Domestic and inbound tourist arrival	
	Control variables added	Without control variables added	Control variables added	Without control variables added	Control variables added	Without control variables added
BR-DID	389.259*	1321.016*	84626.37**	102367.3***	17053.63	−5131.392
	0.75　0.45	−2.52　0.01	2.08　0.038	3.12　0.00	0.47　0.64	−0.18　0.86
hotel	365.182**	— —	−118.012	— —	3431.734	— —
	2.14　0.03	— —	−0.03　0.976	— —	0.98　0.33	— —
taxi	1.958	— —	146.8245	— —	94.772	— —
	1.09　0.28	— —	1.09　0.278	— —	0.79　0.43	— —
Elec	−0.003	— —	0.2599	— —	−0.0167	— —
	−0.61　0.54	— —	1.28　0.200	— —	−0.09　0.93	— —
educ	−1226.157	— —	−126376.3*	— —	−117577.9*	— —
	−0.89　0.376	— —	−1.77　0.077	— —	−1.86　0.064	— —
Med	−1.463	— —	−95.789	— —	−113.200	— —
	−0.63　0.532	— —	−1.01　0.312	— —	−1.35　0.178	— —
Gdp	0	— —	0.0236***	— —	0.0349	— —
	0.12　0.91	— —	0.57　0.000	— —	0.95　0.34	— —
green	−419.787**	— —	−37316.54***	— —	−41005.5	— —
	−2.37　0.018	— —	−3.54　0.000	— —	−4.39　0	— —
green2	185.368***	— —	−7857.342	— —	10499.26	— —
	3.98　0.00	— —	−0.98　0.33	— —	1.48　0.14	— —

TABLE 3: Continued.

	Inbound tourism revenue		Domestic and inbound tourism revenue		Domestic and inbound tourist arrival	
Whether to control time effects	Yes	Yes	Yes	Yes	Yes	Yes
Whether to control individual fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
R^2_within	0.219	0.082	0.222	0.067	0.165	0.179

TABLE 4: Impact of the Belt and Road on tourism along the policy route after the inclusion of territorial control.

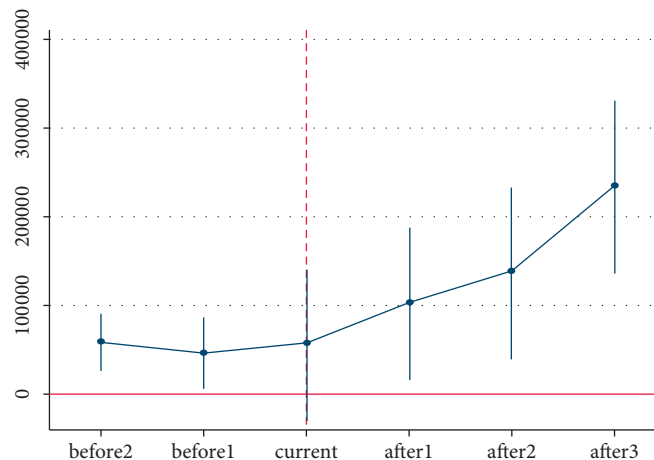|	Domestic tourism revenue		Inbound tourism revenue		Domestic tourist arrival	
BR-DID	85202.1**		38.22*		21592.54*	
	1.8	0.072	0.1	0.923	0.51	0.73
ER	10045.77		54.77		5351.84	
	0.31	0.757	0.2	0.839	0.19	0.91
Cross term of ER	−1925.76		48.31		−17214.37	
	−0.05	0.962	0.14	0.886	−0.48	−0.75
CR	19515.36		−156.64		−7430.056	118.099
	0.69	0.487	−0.67	0.503	−0.3	0.26
Cross term of CR	13034.25		318.78		−7071.35	−168.577
	0.32	0.751	0.93	0.352	−0.19	−0.26
Whether to control time effects	Yes		Yes		Yes	
Whether to control individual fixed effects	Yes		Yes		Yes	
R^2_within	0.412		0.168		0.28	0.224
	Inbound tourist arrival		Domestic and inbound tourism revenue		Domestic and inbound tourist arrival	
BR-DID	551.97*		85240.317**		22144.51	
	0.73	0.464	1.79	0.073	0.53	0.599
ER	470.189		10100.55		5822.02	
	0.91	0.363	0.31	0.756	0.2	0.84
Cross term of ER	−483.880		−1877.444		−17698.25	
	−0.75	0.455	−0.05	0.963	−0.49	0.625
CR	118.099		19358.72		−7311.96	
	0.26	0.792	0.69	0.492	−0.29	0.77
Cross term of CR	−168.577		13353.03		−7329.92	
	−0.26	0.797	0.32	0.746	−0.2	0.843
Whether to control time effects	Yes		Yes		Yes	
Whether to control individual fixed effects	Yes		Yes		Yes	
R^2_within	0.224		0.419		0.281	

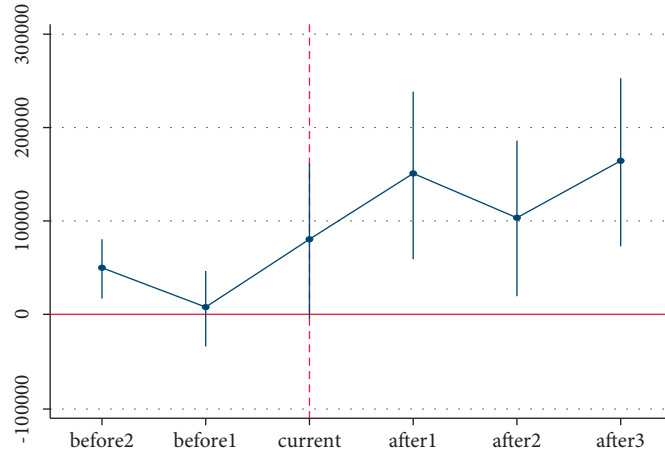FIGURE 1: Parallel trends in domestic tourism revenue.

FIGURE 2: Parallel trends in domestic tourist arrival.
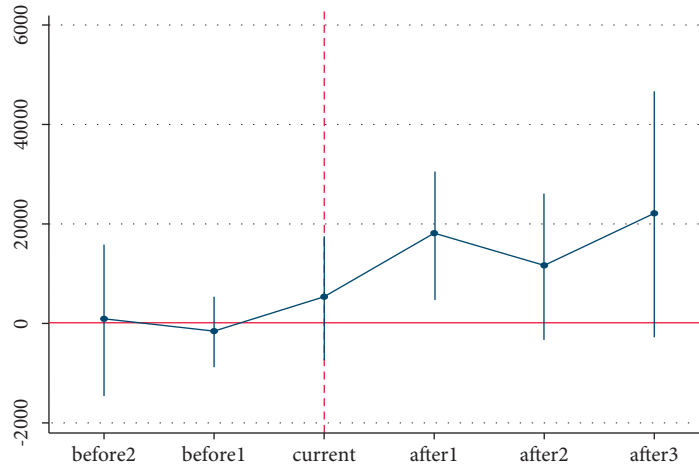

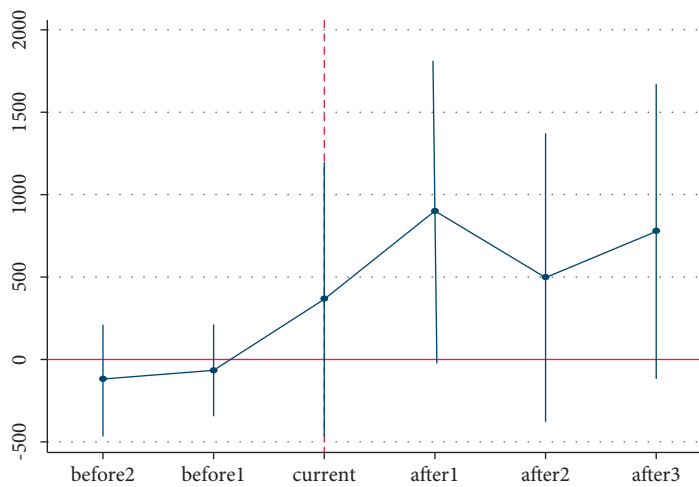FIGURE 3: Parallel trends in inbound tourist arrival.

FIGURE 4: Parallel trends in inbound tourism revenue.

regional tourism resources and the impact of "one belt, one road" on the regional tourism economy is not consistent [24]. The impact of "Belt and Road" on the regional tourism economy should also be considered.

In this paper, the number of 5 A scenic spots is used to represent the richness of regional tourism resources. 5 A is the highest rating of scenic spots in China and represents the most authoritative distribution of tourism resources in
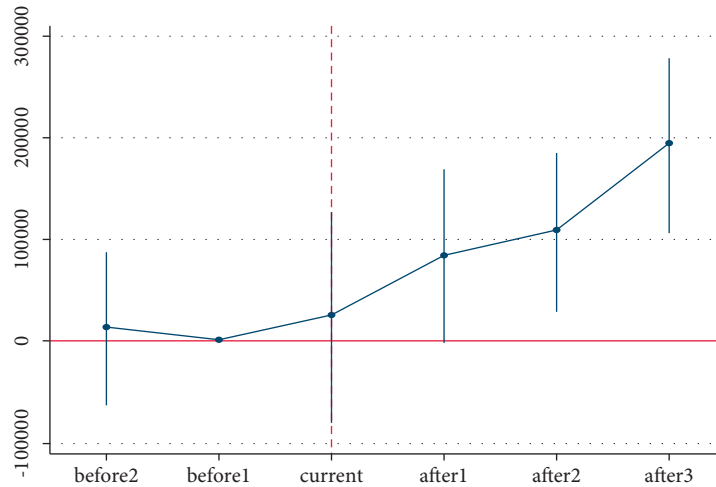
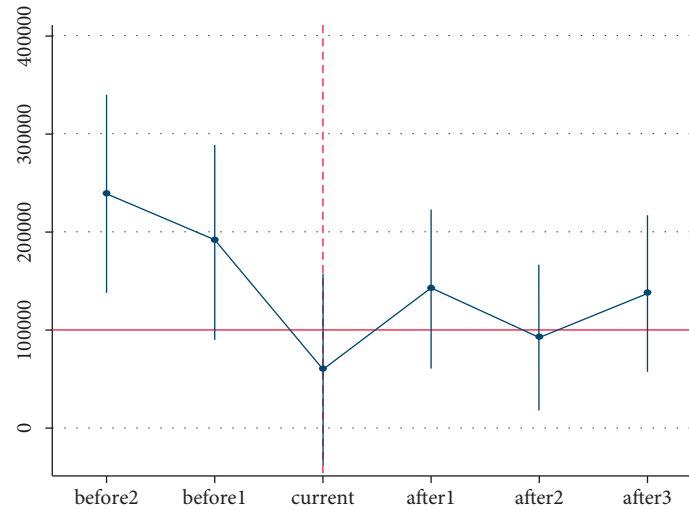FIGURE 5: Parallel trends in domestic and inbound tourism revenue.

FIGURE 6: Parallel trends in domestic and inbound tourist arrival.

China. The data used are from the 5 A scenic spots list of 2020, because the formation of the landscape requires a long period of accumulation, even though some attractions are excluded in 201 for cross-regional scenic spots (some scenic spots are distributed across a wide area, making it difficult to identify the area to which their tourism revenue belongs) and scenic spots not under the jurisdiction of prefecture-level municipalities (tourism revenue of scenic spots not under the jurisdiction of prefecture-level municipalities is not within the scope of prefecture-level municipal tourism revenue and is thus not included in provincial statistics).

As shown in Table 5, the impact coefficients of the cross term on domestic tourism revenue, domestic tourist arrival, inbound tourist arrival, and domestic and per capita inbound tourism revenue are significant, but the impact coefficients on inbound tourist arrival are not significant;

moreover, the coefficients of the six regressions are all negative. This indicates that the richer the resources of 5 A scenic spots, the smaller the positive impact of "one belt, one road" on the regional tourism economy. Because the 5 A scenic spot will attract a large number of domestic and foreign tourists, and the reception capacity of the scenic spot is limited, it is impossible to receive more tourists, so the overall income growth is limited. It can also be interpreted that the regions with abundant tourism resources are less dependent on the tourism economy promoted by the "Belt and Road," but the regions with insufficient tourism resources can gain the favor of domestic tourists through the "Belt and Road", and there are a large number of idle tourism resources in these areas, which have not been fully utilized and develop, including the increase in both of the number of domestic tourists and the spending of domestic tourists, which will bring new

TABLE 5: Regression results of cross-terms between 5 A scenic spots and "one belt, one road" nodes.

	Domestic tourism revenue		Inbound tourism revenue		Domestic tourist arrival	
BR-DID	84442.192**		184.18*		16664.37*	
	2.08	0.037	0.55	0.585	0.46	0.642
5A scenic spot	−8824.56		−541.95***		−17015.72	
	−0.98	0.326	−7.26	0	−2.14	0.032
Cross-terms	−43706.98***		−463.166		−23249.48***	
	−6.9	0	−8.81	0	−4.15	0
Whether to control time effects	Yes		Yes		Yes	
Whether to control individual fixed effects	Yes		Yes		Yes	
R^2_within	0.415		0.165		0.278	
	Inbound tourist arrival		Domestic and inbound tourism revenue		Domestic and inbound tourist arrival	
BR-DID	389.259*		84626.37**		17053.63	
	0.75	0.452	2.08	0.038	0.47	0.636
5 A scenic spot	−890.161***		−9366.51		−17905.89**	
	−6.23	0	−1.04	0.299	−2.24	0.025
Cross-terms	−263.736**		−44170.15***		−23513.22***	
	−2.62	0.009	−6.95	0	−4.18	0
Whether to control time effects	Yes		Yes		Yes	
Whether to control individual fixed effects	Yes		Yes		Yes	
R^2_within	0.22		0.414		0.279	

growth points for their tourism economies. This is in line with the above analysis that the impact of Belt and Road on domestic tourists is greater than that on inbound tourists. Meanwhile, this paper uses excellent tourism cities as representative variables of tourism resources included in the analysis, and its cross-term regression results are similar to those of the 5 A scenic spots and thus will not be repeated.

6. Conclusions and Policy Implications

6.1. Conclusion. The regression results of this paper support the hypothesis that "one belt, one road" has boosted the development of the tourism economy in the regions along the route. The "Belt and Road" has significantly increased domestic tourism revenue per capita, inbound tourism revenue per capita, domestic tourist receipt per capita, foreign tourist receipt per capita, and domestic and inbound tourism revenue per capita, while the contribution of domestic tourists to the tourism economy of the regions where the policy is implemented is stronger than that of inbound tourists. The "Belt and Road" initiative has promoted the development of tourism in the cities where the policy is implemented. Also, domestic and inbound tourists show a higher level of interest in tourism in the cities where the initiative is implemented, as evidenced by higher average spending. The stronger attraction of the Belt and Road initiative cities to domestic tourists may stem from their excellent performance in terms of tourism economic linkages, unique tourism resources, and tourism transportation conditions and advantages that accelerate the chances of

tourism cooperation and integration of regional tourism effects. The increased interest of Chinese tourists in these cities is reflected in the increase in the average spending of the intrinsically interested groups, while they do not significantly increase the attractiveness of the originally uninterested groups. In short, compared with other studies, the panel data of prefecture-level cities show that the "Belt and Road" initiative has a good role in promoting the development of tourism.

6.2. Policy Implications. First, the analysis suggests that the Belt and Road has had a positive impact on tourism in the cities where the policy is implemented. In general, the impact of the Belt and Road on tourism is multifaceted. China's implementation of the Belt and Road has not only strengthened its ties with foreign countries and increased its openness to the rest of the world but has also greatly contributed to the development of tourism in the related cities. Therefore, Belt and Road cities should actively integrate and accelerate the implementation of specific rules and regulations to take advantage of the Belt and Road. As China's economy is facing the double pressure of eliminating backward production capacity and upgrading industries, the Belt and Road has strengthened domestic and international ties and contributed to breaking down regional barriers and releasing economic influence.

Second, the results of this paper show that the positive impact of Belt and Road on tourism development in policy-implementing cities exceeds that of nonpolicy-implementing cities which should actively integrate into

the Belt and Road development strategy, using policy-implementing cities as core circles to expand their tourism influence and seek to absorb the benefits brought by the Belt and Road. Many cities, especially nonpolicy implementation cities in central and western China, have rich natural landscapes and unique humanistic landscapes, but due to their geographical location, insufficient investment in tourism industry development, poor transportation infrastructure, and relatively backward service industries such as hotels and restaurants, they are unable to give full play to their tourism resources. Therefore, the policy should focus on narrowing the time distance between the "Belt and Road" to boost the potential of the local tourism industry, and thus, the utilization rate of tourism resources can be improved while satisfying the diversified tourism needs of people. The interaction of tourism elements between cities implementing the policy promotes closer tourism economic ties and achieves synergistic development between coastal and inland cities implementing the policy.

Third, the results of this paper show that the "one belt, one road" has had a significant impact on the average spending of visitors to China, but not on the number of tourist arrivals. In response to this feature, the cities implementing the policy should consider providing higher convenience to meet the spending needs of tourists coming to China. For example, provide greater convenience in tourist visas, train more bilingual tour guides, and provide private customized tourism services. By developing a more flexible foreign exchange conversion mechanism and more extensive promotion, the existing tourist attraction groups should be deepened, and their spending needs can be explored.

Data Availability

The datasets used and/or analyzed during the current study are available from the corresponding author upon reasonable request.

Disclosure

The article has been preprinted before, and the current manuscript has been improved on the basis of the preprint in https://www.preprints.org/manuscript/202112.0495/v1[25].

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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