The Impact of the Yogyakarta Idiosyncrasy Fund on the Tourism Sector in Yogyakarta

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ABSTRACT

The Law Number 13 issued in 2012 (known as the Yogyakarta Idiosyncrasy Law) stated that Yogyakarta has special authorities that differ from other provinces in Indonesia. To maintain those specialties, according to the law, the Government of the Republic of Indonesia has to allocate special budget (known as the Idiosyncrasy Fund) as a part of the national budget. Initially assigned for developing the cultural sector as the uniqueness of Yogyakarta, other sectors having appropriate relation to cultural development could access the fund as well, including the tourism sector.

This study aims to evaluate the impact of the fund on the tourism sector in Yogyakarta which is proxied by the hotel occupancy rate. For evaluating the impact, the difference in differences (DID) approach was utilized in this study along with the panel data of 22 provinces in Indonesia.

The findings suggested that the Idiosyncrasy Fund impacts the tourism sector in Yogyakarta positively significantly. Indeed, this study is not without limitations, and further studies are necessary to reveal more specific and accurate results.

Keywords: Yogyakarta; Idiosyncrasy Fund; Difference in Differences

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1. INTRODUCTION

Yogyakarta Special Region (*Daerah Istimewa Yogyakarta/Yogyakarta*) is a region standing at the same level as a province. Officially became the second "province" of the Republic of Indonesia when the Government of the Republic of Indonesia (the Central Government) issued Law Number 3 in 1950 (revised by Law Number 19 in the same year), Yogyakarta is the only region ruled by a king (who plays a role of the governor) in Indonesia today. Therefore, in 2012, the Central Government issued Law Number 13 stating the Idiosyncrasy Status of Yogyakarta. Probably, Yogyakarta culture, as one of the reasons of the status establishment, attracts tourists to visit Yogyakarta.

The United Nation, in the *International Recommendations for Tourism Statistics*, defined tourism as the activity of visitors, (which) are travelers taking a trip to main destination outside their usual environment, for less than a year, for any purpose other than to be employed by a resident entity in the place visited (Santos and Cincera, 2018).
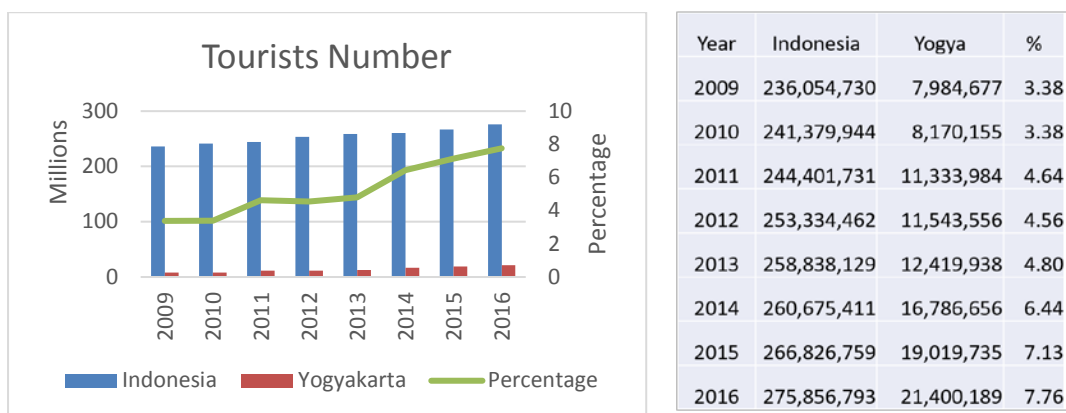
According to the Annual Report published by the United Nation World Tourism Organization in 2017, 1,323 million international tourists arrived in worldwide destinations. It was 84 million more than in 2016. The increase of approximately 4% per year for the last 8 years was also reported. Obviously, this situation is a huge opportunity for every country to catch, including Indonesia.

According to Statistical Yearbook of Indonesia 2017, the number of international tourists visiting Indonesia in 2016 was more than 11.5 million, approximately 1.3 million more than its number in 2015.

Based on the data published by the Central Statistics Bureau (*Biro Pusat Statistik/BPS*) and the Yogyakarta Tourism Authority, Yogyakarta has an increasing trend of tourist number share to Indonesia. Starting from 3.38% in 2009, the share significantly increased to 7.76% in 2016. Note that at the end of 2013 Yogyakarta started programs

funded by the Idiosyncrasy Fund, including programs in the tourism sector. Since the programs started at the end of 2013, the effects, if any, could only be seen starting from 2014.

Graphic 1 and Table 1: The Growth of Tourist Arrival in Indonesia and Yogyakarta[3]

Year	Indonesia	Yogya	%
2009	236,054,730	7,984,677	3.38
2010	241,379,944	8,170,155	3.38
2011	244,401,731	11,333,984	4.64
2012	253,334,462	11,543,556	4.56
2013	258,838,129	12,419,938	4.80
2014	260,675,411	16,786,656	6.44
2015	266,826,759	19,019,735	7.13
2016	275,856,793	21,400,189	7.76

Regarding the possible impact of the Idiosyncrasy Fund on the tourism sector in Yogyakarta, the research question of this study is: does the Idiosyncrasy Fund increase the tourism demand in Yogyakarta? Therefore, given the preceding problem, the objective of this study is: to capture the spillover impact of the Idiosyncrasy Fund on the tourism sector in Yogyakarta.

2. LITERATURE REVIEW

The Idiosyncrasy Fund is the fund allocated and transferred by the Government of the Republic of Indonesia as part of the national budget to the Local Government of Yogyakarta to maintain the Idiosyncrasy Status of Yogyakarta. Although the Law was issued in 2012, the implementation of transferring the fund was just started from the end of 2013.

Most policy questions involve cause-and-effect relationships. However, it is not a straightforward matter to establish that a relationship is a causal. The impact evaluation methods are utilized to establish causality between a policy and an outcome to eliminate

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[3] Sources: Jakarta in Figure (BPS) and Tourism Statistics (Yogyakarta Tourism Authority)

the probability of other factors influencing the outcome (Gertler et al, 2011). The basic impact evaluation formula:

$$\alpha = (Y \mid P=1) - (Y \mid P=0)$$

answers the basic impact evaluation question. This formula says that the causal impact (α) of a policy (P) on an outcome (Y) is the difference between the outcome (Y) with the policy (when P=1) and the same outcome (Y) without the policy (when P=0) (Gertler et al, 2011).

The difference in differences (DID) approach or also known as double differences (DD) approach is a statistical technique in econometrics that tries to imitate an experimental design using observed data. Basically, DID compares the average difference of outcome of a group treated by the policy (called the treatment group) and of another group untreated by the policy (called the control group), before and after the implementation of the policy (called the treatment). This comparison is done under the assumption that both the treatment and the control groups have a similar trend of the outcome before the treatment (equal trend assumption) and factors affecting the changes are constant through the time (Gertler et al, 2011). The simple illustration of this method is shown below: DID = $(Y_4 - Y_0) - (Y_3 - Y_1)$.

Figure 1: Difference in Differences Illustration[4]
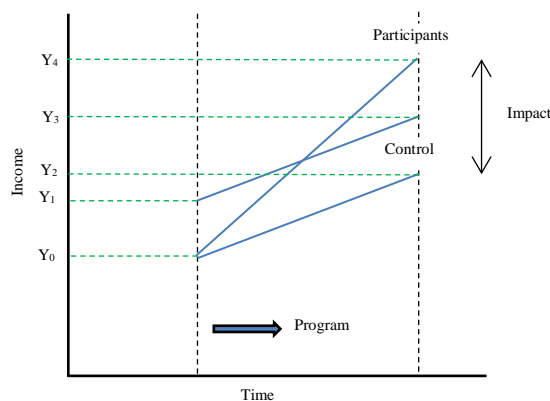
Essentially, when only a fraction of the population is exposed to the treatment, an untreated comparison group can be used to identify temporal variation in the outcome that is not due to treatment exposure (Abadie, 2005). This is the basic idea of the difference in differences (DID) method. DID compares the changes of the treatment and the control groups outcomes over time relative to the outcomes observed for a pre-treatment baseline. That is, given a two-period setting where t=0 before the treatment and t=1 after the treatment implementation. Let Y_t^T and Y_t^C be the outcomes for the treatment and the control groups respectively in time t, the DID will measure the average treatment impact as follows:

$$DID = E(Y_1^T - Y_0^C \mid T_1=1) - E(Y_1^C - Y_0^C \mid T_1=0)$$

where $T_1=1$ denotes the treatment or the existence of a policy at t=1, whereas $T_1=0$ denotes untreated areas (The World Bank, 2010).

The DID estimate can be calculated within a regression framework as well. Particularly, the equation would be:

$$Y_{it} = \beta_0 + \beta_1 \, Treated_i + \beta_2 \, After_t + \beta_3 \, DID_{it} + \varepsilon_{it}$$

where $Treated_i$ is a dummy that takes value 1 if it refers to the treatment group; $After_t$ is a dummy variable that takes value 1 if it refers to the time when the treatment is implemented; and DID_{it} is the difference in differences estimator that takes value 1 for the treatment group in the 'after' period (Albalate et al, 2017). In this equation, the coefficient β_3 on the interaction between the treatment group variable and the post-treatment variable gives the average DID effect of the treatment. Therefore, combining the two equations above, DID= β_3 (The World Bank, 2010; Albalate et al, 2017).

Obviously, the difference in differences approach is not without limitations. DID includes all of the trend differences between the treatment and control groups occurring from the time the treatment begins to the treatment effect. In short, any factor affecting the

treatment group only has the potential to lead the estimate of the treatment impact invalid or biased. Therefore, even if the trends of both groups are parallel before the treatment, bias in the estimation may still appear (Gertler et al, 2011). Furthermore, it is appropriate when the treatments are as good as random, conditional on time and group fixed (Bertrand et al, 2004).

3. DATA AND METHODOLOGY

This study utilizes tourism related data published by the Central Statistics Bureau (*Biro Pusat Statistik/BPS*) in every province. It means that the province level annual panel data is utilized. The sample period starts from 2010 due to the availability of the data in the majority (22 provinces) and ends in 2016 for the same reason. Since the Idiosyncrasy Fund was started at the end of 2013, its impact, if any, might be evaluated starting from 2014. It means that the pre-treatment period starts from 2010 to 2013 and the post-treatment period starts from 2014 to 2016.

Panel data, longitudinal data, or combined time-series/cross-section data are terms used in econometrics and statistics to denote datasets which contain repeated observations on a selection of variables from a set of observation units. This set of data covers both the temporal and the spatial dimensions. Panel data are in several respects 'richer' than pure time-series data and pure cross-section data for they do not include information about individual differences and period-specific differences respectively. Additionally, panel data contributes to reducing collinearity among the control variables and allows more extensive testing of competing model specifications. Usually, researchers do not (or very rarely) have access to experimental data. Therefore, by utilizing panel data, researchers in an intermediate position closer to an experimental situation than pure cross-section data and pure time-series data do (Biørn, 2017).

Regarding the limitation of the method, this study utilizes the difference in differences method to examine the impact of the Idiosyncrasy Fund on the tourism sector in Yogyakarta. This method is appropriate when the treatment cannot be considered random or only depending on observed characteristics (Albalate et al, 2017). Therefore, the provinces as the observation units are differentiated into two groups, which are Yogyakarta as the treatment group and other provinces as the control group.

In the term of the regression framework, the difference in differences model utilized in this study can be presented as follow:

$$or_{it} = \beta_0 + \beta_1 \, d\_province_i + \beta_2 \, d\_fund_t + \beta_3 \, d\_province\_d\_fund_{it} + \beta_4 \, x_{it} + \varepsilon_{it}$$

where or_{it} denotes the hotel occupancy rate as the outcome variable for province i in period t, $d\_province_i$ denotes province dummy (1 if Yogyakarta, 0 otherwise), d_fund_t denotes period dummy (1 if the Idiosyncrasy Fund is granted, 0 otherwise), and x_{it} denotes other control variables for province i in period t. β_3 is the DID estimator representing the impact of the treatment on the treatment group within the period (The World Bank, 2010; Albalate et al, 2017).

a. Outcome Variable

Usually, the attractiveness of the tourism sector (tourism demand) is measured by the number of tourists visiting tourism destinations (tourist arrival) or the amount of money spent in tourism destination (tourist expenditure). However, other than that, tourism demand can also be quantified by the number of nights spent in tourist accommodation. The number of nights spent at tourist accommodation is argued to be superior to using other proxies for it accounts for the length of stay and excludes stay with friends and relatives (Lim, 1997). Additionally, a tourist probably visits more than one tourism destinations in the same day causing double counting since the same tourist would be counted in every destination visited. For that reason, this study utilizes the

hotel occupancy rate (occupancy rate) as the outcome variable for the number of nights spent in tourist accommodation is related to the level of occupancy rate. Other than that, as mentioned before that tourism activities involve visitors coming from other regions (Santos and Cincera, 2018), this study assumes that people who stay in the hotels are not the local residents and there is no probability that they would be counted more than once in the same time. Occupancy rate is the number of room-nights occupied divided by the number of room-nights available. It is measured in percentage (%).

b. Other Control Variables

Due to the different characteristics of the provinces examined that probably affect the outcome, this study utilizes some characteristics as control variables to control those variations. Those variables are:

1) The Number of Rooms

The number of rooms is the total number of hotel rooms available in that province for the respective year. The more rooms available means that the tourists have more choices that suit their budget. Therefore, the number of rooms available is one of the important factors affecting the occupancy rate. In fact, the effect is significant (Lei and Lam, 2015).

2) The Number of Tourists

The number of tourists arriving at the province plays an important role as well. It acts in the opposite direction of the number of rooms (Lei and Lam, 2015). In this study, the number of tourists is taken in the natural logarithm form. Therefore, it is measured in percentage (%).

3) The Number of Flight

This variable means the number of inbound flights at the province. Albalate and Fageda (2016) found that air traffic is a strong predictor of tourist arrivals (Tsui,

2017). In the case of domestic tourism, researchers have generally achieved a consensus that Low-Cost Carriers (LCCs) impacts tourism demand positively (Tsui, 2017). This variable is measured by the trip (flight).

4. RESULTS

Based on the available data, this study establishes a general depiction of the occupancy rate trends of the treatment and control groups. Then, those established trends are compared. The graph[5] portrays both the treatment (Yogyakarta) and the control (Others) groups' occupancy rate trends before and after the treatment. In the beginning of the before treatment period, both trends increased in approximately the same pattern. However, from 2011 to 2013, the trends went to the opposite ways. The trend for Yogyakarta continued its increase in the same pattern as before, while the trend for Others decreased slightly. Finally, from 2013 to 2014 both trends moved in the same pattern once again.

Graphic 2: The Outcome Trends
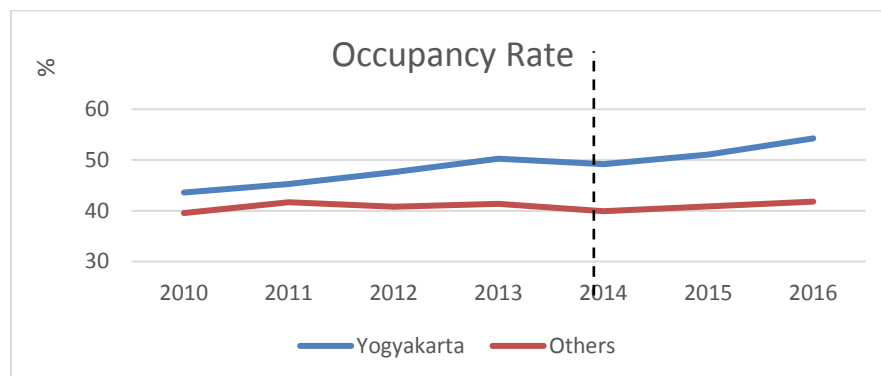
Starting from 2014, both trends increased. However, their increases were slightly different. The increase of the Others' trend was constant from 2014 to 2016. Compared to it, the increase of the Yogyakarta trend was slightly higher from 2014 to 2015. Moreover, the discrepancy was even bigger from 2015 to 2016. This discrepancy indicated that there

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[5] Data source: (province) in Figure

might be something generating the acceleration. However, undoubtedly, it is difficult to obtain that conclusion based on the graph alone. Therefore, this study tries to obtain the evidence through statistical analysis.

Before conducting the impact evaluation, the t-test was conducted to examine whether the different means, between before and after the treatment period, of the outcome was statistically significant or not. This test was conducted utilizing monthly data of the outcome. However, due to the availability of the data, the provinces included in the control group for this test were slightly different from those included in the control group for the main estimation utilizing the difference in differences method.

The t-test result portrays that the difference was statistically significant in the case of Yogyakarta, but it was not statistically significant in the case of other provinces on average although individually several provinces were statistically significant (see appendix A). This result indicated that probably there was something accelerating the improvement of the tourism sector performance in Yogyakarta suggested by the significant increase of occupancy rate. Therefore, further investigation is feasible to conduct.

Next, using monthly data of Yogyakarta, OLS estimation was conducted. In this estimation, the same variables used in the DID estimation were utilized. Furthermore, a variable referring to the number of events conducted in Yogyakarta was also added since some of the fund was used to conduct cultural events that might attract tourists to visit Yogyakarta. The results, both with and without the additional variable referring to the events, showed significant coefficients of the fund. Similarly, the coefficients of the interaction term between the fund and the number of hotel guest showed significant results as well (see appendix B). The negative sign of the coefficients of the interaction term does not mean that the impact of the fund, related to the number of the hotel guest, is negative. The impact is still positive but in the decreasing rate (illustrated by graphic 3). These results

indicate that the influence of the Idiosyncrasy Fund on the tourism sector in Yogyakarta (proxied by the improvement of the hotel occupancy rate) might exist. Therefore, to verify its existence, the main analysis was encouraged.

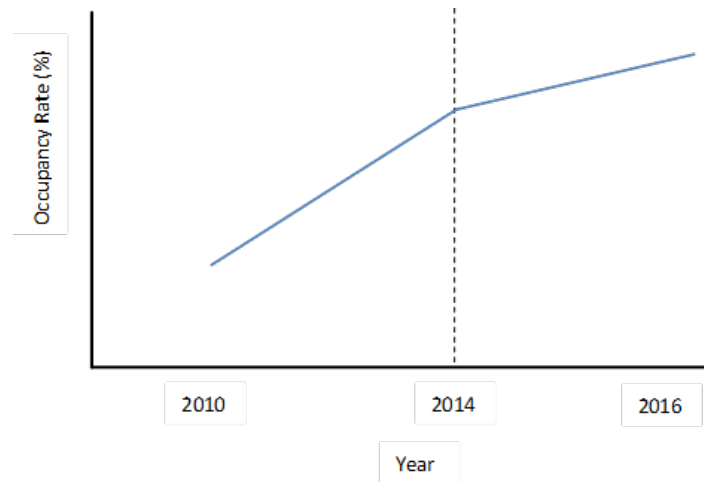Graphic 3: The Effect of the Idiosyncrasy Fund within Yogyakarta

Table 2: DID estimation results

VARIABLES	(1) Random or	(2) Fixed or	(3) Random or	(4) Fixed or	(5) Random or	(6) Fixed or
d_province	0.16198		-0.09754		0.08857	
	(7.73474)		(7.35100)		(7.36946)	
d_fund	0.17802	0.17802	-0.70045	-0.56323	-2.32277	-2.32383
	(0.76235)	(0.76235)	(0.81300)	(1.03155)	(1.48202)	(1.51607)
d_province_d_fund	6.58011*	6.58011*	6.24601*	6.10074*	6.29677*	6.52316*
	(3.57572)	(3.57572)	(3.53610)	(3.54674)	(3.52525)	(3.53632)
room			0.00022**	0.00021	0.00021**	0.00016
			(0.00009)	(0.00018)	(0.00009)	(0.00018)
ltourists			-0.16536	-0.94729	-0.24023	-1.73201
			(0.57931)	(0.95187)	(0.58169)	(1.06922)
flight			0.00003	0.00009	0.00002	0.00003
			(0.00003)	(0.00008)	(0.00003)	(0.00009)
t (time trend)					0.49266	0.73341
					(0.37676)	(0.46512)
Constant	40.83781***	40.84517***	39.36509***	48.63642***	39.46741***	59.80195***
	(1.64905)	(0.48760)	(7.42616)	(13.34454)	(7.42864)	(15.03852)
Observations	154	154	154	154	154	154
R-squared		0.02838		0.07562		0.09351
Number of province_id	22	22	22	22	22	22

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 2 summarizes the results of the main analysis. Hausman test conducted in this study generated an insignificant result. Therefore, both random and fixed effect results are provided. The table portrays similar results for all variations. The coefficients of the interaction term (DID estimators) are all positives as they were expected and significant. Additionally, their values are similar. This means that the results are, to some extents, consistent despite of the different variation of variables. The results reveal that the implementation of the Idiosyncrasy Law[6] allocating the Idiosyncrasy Fund as part of the national budget for Yogyakarta increases the tourism demand that is proxied by the hotel occupancy rate by approximately 6% on average in Yogyakarta.

To obtain more confidence, this study utilizes the same model to examine the impact using monthly data. However, due to the availability of the data, the full model could not be utilized (see appendix C and D).

The two tables portray similar results. Those two tables reveal positive coefficients for the interaction term. The positive coefficients for all variations mean that the impact is positive. The results provide additional evidence that, to some extents, the Idiosyncrasy Fund impacts the tourism demand in Yogyakarta positively.

Assuming that people who stay at the hotel are not the local residents, the increase of hotel occupancy rate indicates the increase of tourists arriving in the region. Indeed, this increase does not illustrate the increase in tourism demand perfectly for some tourists might visit and leave the region on the same day. Therefore, they will not be counted in this estimate. However, the occupancy rate is the only consistent estimate compared to other estimates in measuring tourism demand (Lei and Lam, 2015) for it eliminates the probability of counting the same person more than once in the same time.

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[6] The Law Number 13 Year 2012

The main limitation of this study is the fact that the treatment group consists only of Yogyakarta, while the control group consists of 21 provinces in Indonesia. Ideally, the treatment group consists of the similar number of subgroup as the control group. However, unfortunately, this ideal condition could not be achieved for Yogyakarta is the only region granted the Idiosyncrasy Fund. Other limitations come from the methodology utilized in this study.

5. CONCLUSION

Based on the results obtained in this study, it can be concluded that the Idiosyncrasy Fund increases the tourism demand in Yogyakarta, indicated by the increase in the hotel occupancy rate as the proxy utilized in this study by approximately 6% on average. Under the assumption that people who stay at the hotel are not local residents, the increase of the hotel occupancy rate means the increase of the tourist number visiting Yogyakarta. Obviously, this is a good sign for the tourism sector in Yogyakarta due to the multiplier effect generated. The increase in the tourist number generates more opportunity for tourism-related business to gain more costumers.

The positive impact of the Idiosyncrasy Fund on the tourism sector in Yogyakarta indicated by the results obtained in this study can be the starting point to conduct a further study related to the Idiosyncrasy Fund and tourism in Yogyakarta. For example, since the Idiosyncrasy Fund is accessed by many sectors as long as it related to the cultural sector appropriately, studies of the impact of the fund can be conducted related to each sector. Certainly, those sectors could also be evaluated integratedly. Another example, related to the tourism sector, a further study examining the impact of the fund on each subsector related to tourism can be conducted as well. Then, the results obtained are compared to reveal which subsector benefits the most along with the strategy to maximize it and which subsector benefits the least along with the strategy to improve it.

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7. APPENDIX

Appendix A: the t-test score

Average Occupancy Rate				
Province	Before 201001-201311	After 201312-201612	Difference	t Stat
Yogyakarta	40.656	48.013	7.357	5.121*
Bali	48.812	46.254	-2.557	-3.316*
DKI Jakarta	56.341	64.142	7.801	6.542*
Gorontalo	37.596	37.575	-0.021	-0.014
Jambi	46.618	45.709	-0.908	-0.669
Jawa Barat	42.414	42.904	0.490	0.700
Jawa Tengah	37.120	36.741	-0.380	-0.613
Jawa Timur	39.381	46.103	6.722	6.613*
Kalimantan Selatan	48.006	38.637	-9.369	-9.757*
Kalimantan Tengah	41.643	42.352	0.709	0.554
Lampung	46.264	44.587	-1.677	-1.678
Maluku	32.049	32.138	0.089	0.040
Maluku Utara	28.511	35.194	6.684	3.245*
Nusa Tenggara Timur	32.312	33.466	1.155	1.128
Sulawesi Barat	26.454	29.471	3.018	2.045*
Sulawesi Tengah	47.206	42.735	-4.471	-3.085*
Sumatera Barat	42.831	43.615	0.784	0.837
Sematera Selatan	46.577	41.850	-4.727	-4.641*
Sumatera Utara	41.312	44.302	2.990	3.521*
Average of Others	41.191	41.543	0.352	0.723
* statistically significantly different				

Data source: (province) in Figure (BPS)

Appendix B: OLS results

VARIABLES	(1) or	(2) or	(3) or	(4) or
d_fund	13.61047***	10.53207***	11.29508***	9.32491**
	(3.15316)	(3.46996)	(3.41085)	(3.59991)
hotelguest_th	0.18652***	0.17992***	0.17764***	0.17441***
	(0.01123)	(0.01151)	(0.01231)	(0.01235)
d_fund_hotelguest_th	-0.05358***	-0.04511***	-0.04623***	-0.04105***
	(0.01079)	(0.01143)	(0.01153)	(0.01187)
room	-0.01041***	-0.00980***	-0.01169***	-0.01085***
	(0.00135)	(0.00136)	(0.00154)	(0.00162)
flight	-0.00086	-0.00101	-0.00063	-0.00081
	(0.00087)	(0.00086)	(0.00087)	(0.00087)
event		0.02808*		0.02335
		(0.01442)		(0.01490)
t_m (monthly trend)			0.07776	0.05794
			(0.04688)	(0.04805)
Constant	30.25093***	30.16492***	31.94953***	31.44517***
	(2.07647)	(2.03443)	(2.29105)	(2.28856)
Observations	72	72	72	72
R-squared	0.92485	0.92898	0.92790	0.93056

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix C: DID results using monthly data 1

VARIABLES	(1) Random or	(2) Fixed or	(3) Random or	(4) Fixed or	(5) Random or	(6) Fixed or
d_province	-2.22820		-1.05951		-1.46818	
	(7.24981)		(4.65164)		(4.66198)	
d_fund	1.91064***	1.91064***	1.34199***	1.39725***	-2.40818***	-2.53259***
	(0.37374)	(0.37374)	(0.38578)	(0.39864)	(0.69551)	(0.69617)
d_province_d_fund	5.44640***	5.44640***	8.02914***	8.01123***	8.52883***	8.50191***
	(1.29467)	(1.29467)	(1.43174)	(1.43261)	(1.40535)	(1.40241)
flight			0.00102***	0.00092***	0.00066***	0.00022
			(0.00019)	(0.00026)	(0.00020)	(0.00028)
t_m (monthly trend)					0.09402***	0.10286***
					(0.01463)	(0.01510)
Constant	42.88373***	42.69805***	40.06403***	40.25323***	38.79345***	39.66142***
	(2.09284)	(0.23748)	(1.44565)	(0.74860)	(1.45995)	(0.73699)
Observations	1,008	1,008	996	996	996	996
R-squared		0.05814		0.08271		0.12419
Number of province_id	12	12	12	12	12	12

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix D: DID results using monthly data 2

VARIABLES	(1) Random or	(2) Fixed or	(3) Random or	(4) Fixed or	(5) Random or	(6) Fixed or
d_province	-6.37144		-4.60922*		-4.72092*	
	(9.24257)		(2.65738)		(2.67369)	
d_fund	2.23573***	2.23573***	0.90269	0.95488	-4.42863***	-4.71911***
	(0.59468)	(0.59468)	(0.60811)	(0.71287)	(1.02304)	(1.00770)
d_province_d_fund	5.12130***	5.12130***	8.14699***	7.90060***	8.84439***	8.42582***
	(1.32975)	(1.32975)	(1.44031)	(1.45148)	(1.37942)	(1.36170)
ltourist			0.60774	1.13190*	0.45498	-0.25450
			(0.37507)	(0.67893)	(0.37469)	(0.66228)
flight			0.00094***	0.00065**	0.00078***	-0.00022
			(0.00015)	(0.00028)	(0.00015)	(0.00029)
t_m (monthly trend)					0.13280***	0.17445***
					(0.02094)	(0.02320)
Constant	47.02697***	45.75268***	35.47114***	30.42449***	34.72565***	45.57751***
	(4.13340)	(0.35301)	(3.59863)	(7.19546)	(3.59776)	(7.03626)
Observations	420	420	408	408	408	408
R-squared		0.11259		0.16724		0.27083
Number of province_id	5	5	5	5	5	5

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Appendix E: The List of Provinces

The List of Provinces Included in DID Estimations

	Using Annual Data		Using Monthly Data 1		Using Monthly Data 2
No	Province	No	Province	No	Province
1	Yogyakarta	1	Yogyakarta	1	Yogyakarta
2	Aceh	2	Bali	2	Bali
3	Papua	3	DKI Jakarta	3	DKI Jakarta
4	Bali	4	Gorontalo	4	Kalimantan Tengah
5	Bangka Belitung	5	Jambi	5	Sumatera Utara
6	Banten	6	Jawa Barat		
7	DKI Jakarta	7	Jawa Timur		
8	Gorontalo	8	Kalimantan Tengah		
9	Jawa Barat	9	Lampung		
10	Jawa Tengah	10	Maluku Utara		
11	Jawa Timur	11	Sumatera Barat		
12	Kalimantan Selatan	12	Sumatera Utara		
13	Kalimantan Tengah				
14	Kalimantan Timur				
15	Lampung				
16	Maluku				
17	Maluku Utara				
18	NTB				
19	NTT				
20	Sulawesi Barat				
21	Sulawesi Tengah				
22	Sumatera Selatan				