Analysis Externality Flyover as Public Goods on Economic and Social Conditions (Study Case: Flyover of Jl. Sultan Agung)

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Abstract

Bandar Lampung City, the capital of Lampung Province, is the hub of a variety of activities, including social, cultural, economic, and tourism related ones. The high population of Bandar Lampung City, coupled with immigrants who visit or stay, creates new problems, namely traffic jams due to population density. Flyover is being offered through the Bandar Lampung City Government in an attempt to lessen traffic congestion. Flyover Jl. Sultan Agung is one of the 11 flyovers in Bandar Lampung City that have been documented to date. This research aims to look at positive and negative externalities from economic and social aspects. The research method used is qualitative based on distributing questionnaires through closed questions with assessments on a Likert scale. There were 45 respondents in this research, with the scope being trader surrounding area flyover Jl. Sultan Agung. From the research that the existence of flyover Jl. Sultan Agung has positive and negative externalities on economics and socials aspects, referring to income and turnover, business opportunities, employment, number of customers, distribution of goods, business sustainability, competitiveness, rental costs, level of congestion, security and comfort, the culture of mutual cooperation, interaction relations, and the level of traffic accidents.

Keywords Flyover, Externalities, Economic-Social

INTRODUCTION

As center of government of Lampung Province, Bandar Lampung City has a great influence on all activities, including the economy as demonstrated through the trade and service industry, education, social and cultural sectors to tourism. As reported by bandarlampungkota.go.id, this is in line with one of the 6 regional development missions of Bandar Lampung City, namely increasing the carrying capacity of infrastructure on a steady scale to support economic development and social services (Diskominfo Kota Bandar Lampung, 2023).

Demographically, the city of Bandar Lampung has a population that continues to increase in number from year to year. This can be proven by presenting data on the population of Bandar Lampung City in 2020-2022, which is as follows (Badan Pusat Statistik Provinsi Lampung, 2023):

Table 1. Population of Bandar Lampung City 2020-2022

Subdistrict _	Year			
Subdistrict _	2020 2021		2022	
Bumi Waras	63 166	64 189	65 542	
Enggal	28 649	29 113	29 727	
Kedamaian	57 905	58 843	60 084	



Cub distuist			
Subdistrict	2020	2021	2022
Kedaton	57 336	58 264	59 493
Kemiling	88 574	90 007	91 907
Labuhan Ratu	52 393	53 241	54 364
Langkapura	43 569	44 275	45 208
Panjang	80 811	82 120	83 581
Rajabasa	57 589	58 552	59 756
Sukabumi	75 870	77 099	78 724
Sukarame	67 725	68 882	70 273
Tanjung Karang Barat	65 554	66 616	68 020
Tanjung Karang Pusat	55 925	56 831	58 029
Tanjung Karang Timur	43 076	43 774	44 697
Tanjung Senang	62 168	63 175	64 607
Teluk Betung Barat	41 096	41 761	42 642
Teluk Betung Timur	53 874	54 746	55 901
Teluk Betung Utara	53 552	54 419	55 567
Teluk Betung Selatan	42 870	43 564	44 483
Way Halim	74 364	75 568	77 162
Kota Bandar Lampung	1 166 066	1 184 949	1 209 93

Source: bandarlampungkota.bps.go.id

Data on the population of Bandar Lampung City based on division per sub-district and overall, from 2020-2022 shows a significant increase. In general, an increase in population can be caused by high birth rates or high migration rates over time. The high population is in line with the level of population density. Based on research conducted by Cornellia Yulin Esther Dita & Martinus Legowo (2022) shows that population density is a fundamental problem in economic development if it is not controlled, it can cause economic development goals to not be achieved.

According to Rahane et al. (2014) and Jalagat et al. (2016) in Muhammad Ichsan Ali & Muhammad Rais Abidin, (2019) traffic jams can be caused by various factors such as the construction of office buildings and shopping centers, expansion of road and bridge networks, traffic rules, driver behavior and explosions. population which leads to overpopulation. An increase in population and population density can directly cause congestion, especially if the existing road capacity is unable to accommodate the increase in the number of vehicles.

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The number of vehicles in Bandar Lampung City as of the beginning of 2023 was recorded at 955,187 units, including 152,234 MP (Passenger Cars), 1,693 Buses, 64,791 MB (Goods Cars), 735,674 SP (Motorcycles), and 795 Ransus (Special Vehicles) or 23 .89% as presented in table 2.

Table 2.Vehicle Data in Lampung Province

No	Kabupaten/Kota	MP	BUS	MB	SP	Ransus	Total	%
1	Bandar Lampung	152.234	1.693	64.791	735.674	795	955.187	23,89
2	Lampung Tengah	30 575	272	22.701	523.71	162	577.42	14,44
3	Lampung Selatan	24 997	178	18 518	445.886	139	489 718	12,44
4	Lampung Tımur	20.405	143	15.744	398.68	127	435.099	10,88
5	Tulang Bawang	9.859	204	10.423	274 522	213	295.221	7.38
6	Lampung Utara	18 107	162	12.226	190.337	111	220 943	5.53
7	Tanggamus	8 902	96	7 555	197.374	341	214.268	5.36
8	Metro	18.242	241	8.844	116.368	94	143 789	3.60
9	Way Kanan	6.892	96	6.404	117.959	59	131.41	3.29
10	Pringsewu	10.056	52	5.644	111.683	54	127.489	3,19
11	Pesawaran	7.546	56	4.334	110.043	67	122.046	3.05
12	Lampung Barat	5 471	3 5	5.036	103.552	92	114.186	2.86
13	T. Bawang Barat	5.110	46	3.737	73.258	40	82 191	2.06
14	Mesuji	3.582	26	3.244	59.618	49	66.519	1,66
15	Pesisir Barat	1 573	25	1 149	17 822	77	20 646	0.52
	Total	323 551	3 325	190 35	3 476 486	2 420	3 996.132	

Source: rc.korlantas.polri.go.id, data diolah (2023)

LITERATUR REVIEW

Public Goods

Public goods are goods that, if consumed by certain individuals, will not reduce other people's consumption of those goods. In this case the government must step in to provide these goods. Such goods and services are called public goods or a type of collective good. The existence of goods and services that cannot be provided through market mechanisms is generally caused by market failure(S Suryadi, 2017). Public goods generally have two characteristics and aspects related to their use, namely non rivaly and non excludable.

Pigou argues that public goods must be provided to a level where marginal satisfaction with public goods is equal to marginal dissatisfaction with taxes levied to finance government programs to provide public goods. If explained further, the provision of public goods or services is optimal if the additional benefits felt by the community are the same as additional dissatisfaction in the form of taxes collected to finance the Government's program in terms of providing public goods (Marselina Djayasinga, 2006).

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Fly Over

Flyovers are freeway equipment to overcome obstacles due to conflicts at intersections, through difficult slum areas or through swampy areas (Ramadhan, 2015). Sitepu & Anisah P.C, (2019) states that Fly Over has other uses, namely in streamlining city traffic, overcoming traffic jams, and reducing the possibility of danger for motorists. However, behind it all, there are things that influence the community and the city itself in the construction of the Fly Over which need to be considered in its construction.

Externalities

Externalities are effects or impacts that arise and are produced by the economic activities of a person or group on other people or groups outside the market. Externalities, if viewed in terms of the parties who carry them out and the parties who receive the consequences of externalities, can be divided into four, including: Prasetyia, 2013 in Asti Sucita Septiana, (2022). Consumers and Consumers, Consumers and Producers and Consumers, Producers and Producers.

Externalities, if viewed in terms of the parties who carry them out and the parties who receive the consequences of externalities, can be divided into four, including Consumers and Consumers, Consumers and Producers, Producers and Consumers, Producers and Producers Prasetyia, 2013 in (Asti Sucita Septiana, 2022).. Apart from the existence of positive and negative externalities which can generally affect the environment and society, it is important to know that on the other hand, externalities are divided into two categories, namely technical externalities and non-technical externalities.

Government Intervention

Externalities are classified as being successfully internalized when government intervention causes individuals playing in the market to calculate all the costs and benefits of their economic actions (Hyman, 2010). Apart from implementing regulations, to overcome externalities, the government can also implement policies based on a market approach, which can combine private and private incentives with social efficiency.

Taxes that are specifically applied to correct the impact of a negative externality are commonly referred to as Pigovian taxes, after the name of the first economist who formulated and advocated them, namely Arthur Pigou (1877-1959).

METHOD

Types of Research

The type of research used is descriptive qualitative. This type of qualitative descriptive research refers to an explanation regarding the impact caused by the existence of the Jalan Sultan Agung Flyover on the economic, social and environmental conditions of the community around the Jalan Sultan Agung Flyover. The method used was a survey by distributing questionnaires to business actors in the Jalan Sultan Agung flyover area.

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Data Source

This research uses survey data through observation techniques, documentation by distributing questionnaires to business actors as respondents within a radius of 100 m from the Jalan Sultan Agung Fly Over which contains a closed statement. Meanwhile, for secondary data, this research uses data such as bps.go.id which contains data on the population of Bandar Lampung City and korlantas.polri.go.id which contains data on the number of vehicles in Lampung Province.

Research Location

The location of this research is in the area around the Jalan Sultan Agung Flyover, Kedaton District, Bandar Lampung City.

Population and Sample

The general population in this research is business actors in the area around the Jalan Sultan Agung Fly Over. Meanwhile, the target population is permanent business actors or those who own permanent buildings and have income in the area around the Jalan Sultan Agung Fly Over. In this study, researchers used a total of 45 populations spread along the Jalan Sultan Agung Flyover. In this study, researchers used a total of 10 samples taken randomly to test feasibility of questionnaire before ultimately being used as research measuring tool.

Operational Definition of Research Variables

In this case, there are 2 indicators that will be examined as a result of the positive and negative externalities (Y) of the existence of the Jalan Sultan Agung Fly Over, including economic aspects (X1) and social aspects (X2).

Variable	Indicator	Description	
	Positive	Positive externalities refer to positive impacts	
	Externalities	arising from the existence of Fly Over Jl. Sultan	
		Agung towards business actors and the community	
Externalities		around Fly Over Jl. Sultan Agung.	
(Y)	Negative	Negative externalities refer to the negative impacts	
	Externalities	arising from the existence of Fly Over Jl. Sultan	
		Agung towards business actors in the surrounding	
		area.	
	Income and	Income referred amount of net income obtained by	
	Omzet	business actors in Fly Over Jl. Sultan Agung area in	
Economic		a monthly period.	
Impact (X_1)		Omzet referred to form of income from business	
		actors in Fly Over Jl. Sultan Agung area within a	
		daily period.	
	_		



Variable	Indicator	Description
	Business	Business opportunities referred to projections for
	Opportunities	carrying out business development in the form of innovation or efforts to increase the quantity of goods and quality of services in Fly Over Jl. Sultan Agung area.
	Field Work	Field work referred to availability of employment opportunities in Fly Over Jl. Sultan Agung area as indicated by the existence of shops which can be a means of creating employment opportunities.
	Quantity of Customer	Quantity of customers in this research shows the success of businesses in Fly Over Jl. Sultan Agung area. The higher quantity of customers, the higher omzet and income.
	Freight	Freight unloading referred to in this research
	Unloading	describes activities during the flow of goods leaving and entering the shop at each business in Fly Over Jl. Sultan Agung area.
	Business	Business sustainability in this research reflects the
	Sustainability	ability of businesses in Fly Over Jl. Sultan Agung area to survive and be able to keep up with developments.
	Competitiveness	Competitiveness in this research describes the ability of business actors in Fly Over Jl. Sultan Agung area to be able to compete fairly as in a perfectly competitive market.
	Rental Cost	The rental costs referred to in this research refer to the costs of renting shops or places for business actors in Fly Over Jl. Sultan Agung area to conduct business.
	Level of congestion	The level of congestion in this study refers to the level of traffic congestion caused by the existence of Fly Over Jl. Sultan Agung.
Social Impact (X ₂)	Comfort and Security	Comfort refers to comfort of people passing through Fly Over Jl. Sultan Agung area. Security refers to safety of driving and doing business in Fly Over Jl. Sultan Agung area.
	Mutual Cooperation	Mutual cooperation refers to pattern of mutual cooperation activities formed in Fly Over Jl. Sultan Agung area.

Variable	Indicator	Description
	Social	Social interaction describes the pattern of
	Interaction	interaction between business actors and the
	Accident Rate	existence of Fly Over Jl. Sultan Agung. Accident refers to level of traffic accidents in the
	7 Resident Rate	area around Fly Over Jl. Sultan Agung.

Instrument Requirement Test

To measure the level of validity and reliability of the questionnaire using Product Moment Correlation using SPSS 29.

A. Validity Test

The calculated r results will be compared with the r table, where df=n-2 with a significance of 5%. If r table < r count then it is valid. Conversely, if r table > r count then it is invalid (V. Wiratna Sujarweni & Poly Endrayanto, 2012)

$$\mathbf{r} = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (x)^2][[n \sum y^2 - ([\sum y)^2]]}}$$

B. Reliability Test

Reliability testing can be carried out simultaneously on questionnaire statement items. If the Cronbach's Alpha value is > 0.60 then it is reliable. On the other hand, if the Cronbach's Alpha value is < 0.60 then it is not reliable (V. Wiratna Sujarweni & Poly Endrayanto, 2012) Reliability testing can be carried out using the following:

$$\left[\frac{k}{(k-1)}\right]\left[1-\frac{\sum \sigma b^2}{\sigma t^2}\right]$$

Notes:

r = instrument reliability coefficient (cronbachalfa)

k = number of statement items

 \sum ob² = total item variance

 $ot^2 = total variance$

Meanwhile, when distributing questionnaires to respondents, an assessment will be carried out in the form of a score according to the Likert scale provisions.

Table 3. Likert Scale Assessment

Scale	Score
Very Agree	5
Agree	4
Doubtful	3
Disagree	2
Very Disagree	1

Source: Sugiyono (2018)



The Likert scale is a scale used to measure the attitudes, opinions and perceptions of a person or group of people about social phenomena. With a Likert scale, the variables to be measured are translated into indicator variables.

RESULTS AND DISCUSSION

Validity Test

The validity test is used to measure the consistency of an item in the questionnaire or scale that you want to measure. In determining whether an item is valid or not, the activity that must be carried out is to compare the calculated r with the r table where the significance level used is 0.05 with N=45. To determine the level of validity, the questionnaire was tested on 10 samples and data processing was carried out using the SPSS 29 program. The output of the validity test can be seen from the table below:

Table 4. Economic Variable Validity Test

I abic 4	Table 4. Leonomic variable variaty Test				
Statements	R Count	R Table	Criteria		
S1	0.681	0.294	Valid		
S2	0.677	0.294	Valid		
S 3	0.548	0.294	Valid		
S4	0.752	0.294	Valid		
S5	0.526	0.294	Valid		
S 6	0.505	0.294	Valid		
S7	0.475	0.294	Valid		
S 8	0.500	0.294	Valid		

Source: Primary Data Processed (2023)

It can be seen that based on the table above, by using 10 samples, the entire statement item on the Economic variable can be declared valid because all statement items have a calculated r value > than r table of 0.2940.

Table 5. Social Variable Validity Test

14	Tubic et Bociai variable valiaity Test				
Question	R Count	R Table	Criteria		
S1	0.618	0.294	Valid		
S2	0.577	0.294	Valid		
S 3	0.714	0.294	Valid		
S4	0.600	0.294	Valid		
S5	0.775	0.294	Valid		

Source: Primary Data Processed (2023)

It can be seen that based on the table above, by using 10 samples, the entire statement item on the Economic variable can be declared valid because all statement items have a calculated r value > from r table of 0.2940.



Reliability Test

Reliability testing is carried out to determine the consistency of the measuring instrument, whether the measuring instrument used is reliable and remains consistent if the measurement is repeated. In this case, the reliability test was carried out using the Cronbach alpha method, with the criterion that the calculated alpha is greater than the Cronbach alpha coefficient of 0.6, so the data tested has a good level of reliability. The alpha level measurement was carried out using the SPSS 29 program. The results of the calculations can be seen in the SPSS output results table below:

Table 6. Reliability Test of Economic Variables

Cronbach's	N of
Alpha	Items
.716	8

Source: Primary Data Processed (2023)

The results of the reliability test for Economic variables can be seen in the Reliability Statistics output results in the table above using 10 samples. Where the results obtained from the Cronbach's Alpha value are 0.716 and because these results are more than the standard Cronbach's Alpha coefficient value of 0.6, it can be concluded that the measuring instrument in this study is reliable.

Table 7. Social Variable Reliability Test

Cronbach's	N of
Alpha	Items
.671	5

Source: Primary Data Processed (2023)

The results of the social variable reliability test can be seen in the Reliability Statistics output results in the table above using 10 samples. Where the results obtained from the Cronbach's Alpha value are 0.671 and because these results are more than the standard Cronbach's Alpha coefficient value of 0.6, it can be concluded that the measuring instrument in this study is reliable.

Respondent Description

Respondent descriptions contain information on the characteristics of business actors such as age, gender, type of business, length of business, amount of turnover, and amount of income.

Table 8. Classification of Business Actors Based on Gender

Gender	Frequency	Percentage (%)
Man	26	57,7
Woman	19	42,2
TOTAL	45	100%

Source: Primary Data Processed (2023)



Based on the data presented above, it can be seen that male business actors tend to be more numerous than female, namely 57.7%. This also influences their type of business field. Men tend to own types of businesses such as repair shops, cellphone or credit counters and computer and musical instrument services. Meanwhile, women tend to have types of businesses such as florists, groceries, culinary food and drinks.

Table 9. Classification of Business Actors Based on Age

Age	Frequency	Percentage (%)
17 – 24	6	13,3
25 - 34	22	48,8
35 - 49	9	20
50 - 64	5	11,1
> 65	3	6,6
TOTAL	45	100%

Source: Primary Data Processed (2023)

Based on the table presented above, it can be seen that business actors with an age classification are dominated by 25 - 34 years, namely 48.8%. Referring to this, it shows that the productive age are capable of running businesses in their respective fields, and there are quite a few young people who have an interest and entrepreneurial spirit in the Jalan Sultan Agung Flyover Area.

Table 10. Classification of Business Actors Based on Type of Business

Type of business	Frequency	Percentage (%)
Food & Drink	22	48,8
Grocery	6	13,3
Repair Shops	3	6,6
Counter	3	6,6
Other	11	24,4
TOTAL	45	100%

Source: Primary Data Processed (2023)

Based on the table above, it can be concluded that the classification of business actors based on business type is dominated by food and beverage business types, namely 48.8%. The food and beverage industry within the scope of MSMEs is currently able to absorb a lot of workers and encourage economic growth, especially with the innovative taste images offered and marketing strategies using social media which are considered capable of increasing customer interest.

Table 11. Business Actors Based on Length of Business

Length of	Frequency	Percentage (%)
Business (Year)		
< 1	8	17,7
1 - 4	21	46,6
5 – 9	10	22,2
10 - 14	4	8,8
> 15	2	4,4
TOTAL	45	100%

Source: Primary Data Processed (2023)

Based on the table above, it can be seen that the classification of business actors in the Jalan Sultan Agung Flyover Area based on length of business is dominated by those who have been running a business for a period of 1 - 4 years, namely 46.6%. This is also the reason why researchers did not examine the comparison before and after the construction of the Jalan Sultan Agung Flyover, because the majority of business actors are still relatively new, considering that the Jalan Sultan Agung Flyover project started in May 2020 until it was finally inaugurated in April 2021.

Table 12. Business Actors Based on Omzet

Omzet (Rupiah/Day)	Frequency	Percentage (%)
< Rp 500.000	14	31,1
Rp 500.000 – Rp 999.000	18	40
Rp 1.000.000 – Rp 1.999.000	12	26,6
Rp 2.000.000 – Rp 2.999.000	-	-
>Rp 3.000.000	1	2,2
TOTAL	45	100%

Source: Primary Data Processed (2023)

Based on the table above, it can be seen that the turnover classification of business actors in the Jalan Sultan Agung Flyover Area is mostly in the interval IDR 500,000 – IDR 999,000, which is 40%. Through the distribution of questionnaires that have been carried out by researchers, quite a few respondents said that daily turnover is uncertain, meaning it fluctuates, especially since the existence of the Jalan Sultan Agung Flyover makes most of them have the perception that not a few traffic users pass through the Flyover. over Jalan Sultan Agung, especially when the train is passing and the train sign is closed, which means that the opportunity for traffic users to pass through their shop is reduced.



Table 13. Classification of Business Actors Based on Income

Income (Rupiah/Month)	Frequency	Percentage (%)
< Rp 2.991.394	12	26,6
> Rp 2.991.394	33	73,3
TOTAL	45	100

Source: Primary Data Processed (2023)

Based on the table above, it can be concluded that the majority of business actors, namely 33 out of 45 respondents in the area around the Jalan Sultan Agung Flyover, have a monthly net income above the UMR for Bandar Lampung City or 73.3%. In general, the size of their net income in one month depends on the length of operating hours and the marketing strategies used to attract lots of customers.

Questionnaire Recapitulation Results

After distributing questionnaires to 45 respondents, namely business actors in the Jalan Sultan Agung Flyover area, various answers were obtained for each statement based on economic, social and environmental variables. The following are the results of the questionnaire recap:

Externalities Fly Over on Economic Conditions

Table 14. Statement 1 (S1) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	5	11,1
4	Agree	10	22,2
3	Doubtful	1	24,4
2	Disagree	19	42,2
1	Very Disagree	-	-

Source: Primary Data Processed (2023)

Statement 1: "The existence of the Jalan Sultan Agung Flyover increases your business opportunities" with 45 respondents, it was found that 19 respondents with the types of basic food businesses, credit counters and handicrafts chose to Disagree (TS) with this statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover does not increase business opportunities for business actors in the surrounding area.

Externalities Fly Over on Social Conditions

Table 15. Statement 2 (S2) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	4	8,8
4	Agree	12	26,6

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3	Doubtful	9	20
2	Disagree	20	44,4
1	Very Disagree	-	-

Source: Primary Data Processed (2023)

Statement 2: "The existence of the Jalan Sultan Agung Flyover is able to increase the workforce for your business" with 45 respondents it was found that as many as 20 respondents with the types of handicraft businesses, credit counters, workshops and basic necessities chose to Disagree (TS) with this statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover is not able to increase employment or employment opportunities for businesses in the surrounding area.

Table 16. Statement 3 (S3) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	4	8,8
4	Agree	12	26,6
3	Doubtful	5	11,1
2	Disagree	19	42,2
1	Very Disagree	5	11,1

Source: Primary Data Processed (2023)

Statement 3: "The existence of the Jalan Sultan Agung Flyover increases the number of customers sir/madam" with 45 respondents it was found that as many as 24 respondents with credit counter, basic food and repair shop business types chose to Disagree (TS) and Strongly Disagree (STS) to the statement the. So it can be concluded that the existence of the Jalan Sultan Agung Flyover does not increase the number of customers for businesses in the surrounding area.

Table 17. Statement 4 (S4) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	2	4,4
4	Agree	24	53,3
3	Doubtful	-	-
2	Disagree	18	40
1	Very Disagree	1	2,2

Source: Primary Data Processed (2023)

Statement 4: "The existence of the Jalan Sultan Agung Flyover makes it easier to load and unload raw materials for your business" with 45 respondents it was found that 26 respondents with food and beverage, basic food and handicraft businesses chose to Agree (S) and Strongly Agree (SS) to this statement. So it can be concluded that the existence of



the Jalan Sultan Agung Flyover is able to facilitate the loading and unloading of business raw materials for businesses in the surrounding area.

Table 18. Statement 5 (S5) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	6	13,3
4	Agree	25	55,5
3	Doubtful	8	17,7
2	Disagree	6	13,3
1	Very Disagree	-	-

Source: Primary Data Processed (2023)

Statement 5: "The existence of the Jalan Sultan Agung Flyover threatens the sustainability of your business" with 45 respondents it was found that 31 respondents with the types of business workshops, handicrafts, credit counters and food and beverage chose to Agree (S) and Strongly Agree (SS) to this statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover can threaten the business sustainability of business actors in the surrounding area.

Table 19. Statement 6 (S6) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	7	15,5
4	Agree	15	33,3
3	Doubtful	7	15,5
2	Disagree	14	31,1
1	Very Disagree	2	4,4

Source: Primary Data Processed (2023)

Statement 6: "The existence of the Jalan Sultan Agung Flyover increases the competitiveness of your business" with 45 respondents it was found that as many as 22 respondents with the types of food and beverage businesses, credit counters and basic necessities chose to Agree (S) and Strongly Agree (SS) to this statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover does not increase the competitiveness of businesses in the surrounding area.

Table 20. Statement 7 (S7) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	8	17,7
4	Agree	10	22,2
3	Doubtful	6	13,3
2	Disagree	17	37,7

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1 Very Disagree 4 8,8

Source: Primary Data Processed (2023)

Statement 7: "The existence of the Jalan Sultan Agung Flyover increases the amount of your business income" with 45 respondents it was found that as many as 21 respondents with the types of business workshops, handicrafts, credit counters and basic necessities chose to Disagree (TS) and Strongly Disagree (STS) to the statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover has no effect on increasing the income of business actors in the surrounding area.

Table 21. Statement 8 (S8) Economic Variables (X1)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	10	22,2
4	Agree	18	40
3	Doubtful	2	4,4
2	Disagree	14	31,1
1	Very Disagree	1	2,2

Source: Primary Data Processed (2023)

Statement 8: "The existence of the Jalan Sultan Agung Flyover influences the cost of renting your shop, sir/madam" with 45 respondents, it was found that 28 respondents with food and beverage and florist business types chose to Agree (S) and Strongly Agree (SS) to this statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover has an influence on shop rental costs for business actors in the surrounding area.

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Table 22. Statement 1 (S1) Social Variables (X2)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	16	35,5
4	Agree	17	37,7
3	Doubtful	-	-
2	Disagree	12	26,6
1	Very Disagree	-	-

Source: Primary Data Processed (2023)

Statement 1: "The existence of the Jalan Sultan Agung Flyover reduces traffic congestion in the surrounding area" with 45 respondents it was found that 33 respondents with the types of food and beverage businesses, workshops, basic necessities and handicrafts chose to Agree (S) and Strongly Agree (SS) to the statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover is able to reduce traffic congestion in the surrounding area.



Table 23. Statement 2 (S2) Social Variables (X2)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	3	6,6
4	Agree	22	48,8
3	Doubtful	5	11,1
2	Disagree	15	33,3
1	Very Disagree	-	-

Source: Primary Data Processed (2023)

Statement 2: "The existence of the Jalan Sultan Agung Flyover provides comfort and security for your business" with 45 respondents it was found that as many as 25 respondents with the types of food and beverage businesses, workshops, counters and credit chose to Agree (S) and Strongly Agree (SS) to the statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover provides convenience for business actors in the surrounding area.

Table 24. Statement 3 (S3) Social Variables (X2)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	5	11,1
4	Agree	11	24,4
3	Doubtful	4	8,8
2	Disagree	20	44,4
1	Very Disagree	5	11,1

Source: Primary Data Processed (2023)

Statement 3: "The existence of the Jalan Sultan Agung Flyover increases mutual cooperation in the surrounding area" with 45 respondents it was found that as many as 25 respondents with credit counter, florist, food and beverage business types chose to Disagree (TS) and Strongly Disagree (STS) regarding that statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover does not increase mutual cooperation in the surrounding area.

Table 25. Statement 4 (S4) Social Variables (X2)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	2	4,4
4	Agree	24	53,3
3	Doubtful	7	15,5
2	Disagree	12	26,6
1	Very Disagree	-	-

Source: Primary Data Processed (2023)

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Statement 4: "The existence of the Jalan Sultan Agung

Flyover affects communication or interaction between you and other business actors in the area around your business" with 45 respondents, it was found that 26 respondents with food and drink businesses and workshops chose to Agree (S) and Strongly Agree (SS) with the statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover influences communication or interaction between business actors in the surrounding area.

Table 26. Statement 5 (S5) Social Variables (X2)

Score	Description	Total Respondents	Percentage (%)
5	Very Agree	4	8,8
4	Agree	21	46,6
3	Doubtful	3	6,6
2	Disagree	16	35,5
1	Very Disagree	1	2,2

Source: Primary Data Processed (2023)

Statement 5: "The existence of the Jalan Sultan Agung Flyover increases the number of traffic accidents in the area around your business" with 45 respondents it was found that 25 respondents with the types of business workshops, handicrafts and food and beverage chose to Agree (S) and Strongly Agree (SS) with this statement. So it can be concluded that the existence of the Jalan Sultan Agung Flyover increases the number of traffic accidents in the surrounding area.

Research Implications

The existence of the Jalan Sultan Agung Flyover has negative externalities on economic conditions, which are shown by not increasing business opportunities in the surrounding area, not being able to create jobs or absorb labor for businesses in the surrounding area, not being able to increase the number of customers for businesses. business actors, threatening business sustainability, increasing competitiveness, and increasing shop rental costs. This can happen because the existence of the Jalan Sultan Agung Flyover is able to attract many new nomadic business actors, such as business people who go around carrying carts because the increasingly busy conditions around the Jalan Sultan Agung Flyover encourage them to sell their wares more easily compared to business actors who have permanent or permanent buildings.

Apart from that, the existence of the Jalan Sultan Agung Flyover has positive externalities on economic conditions, which is shown by the positive response of business actors to the ease of distribution of goods and services. Business people feel that the existence of the Jalan Sultan Agung Flyover can be an alternative when the railroad crossing activity is in operation and the back entrance to the Mall Boemi Kedaton (MBK) is busy, plus Jalan Sultan Agung has a route to the Kota Baru toll gate, making distribution of goods and services as well as traffic activities Traffic can use the Jalan Sultan Agung Flyover.

Analysis Externality Flyover as Public Goods on Economic and Social Conditions (Study Case: Flyover of Jl. Sultan Agung)

Dion Nalsal Winata Sinaga¹, Marselina² DOI: https://doi.org/10.54443/sj.v2i6.255



The existence of the Jalan Sultan Agung flyover has negative externalities on social conditions, which is demonstrated by reducing mutual cooperation cultural activities, reducing communication and interaction between business actors, and creating opportunities for traffic accidents. This can happen because the existence of the Jalan Sultan Agung Flyover creates a barrier between one business actor and another, especially for business actors who are opposite each other, giving rise to a feeling of indifference, especially towards mutual cooperation activities. Both directly and indirectly, this creates a gap that makes the social life of business people only want to interact with neighbors on the right and left, not with neighbors across from them.

The existence of the Jalan Sultan Agung flyover also certainly causes changes in traffic, especially in this case the U-turn point which can be said to have a long distance. This means that quite a few motorbike and even car drivers have to go against the flow when entering and exiting residential alleys and passing under the Jalan Sultan Agung flyover, especially at railway crossing points. This cannot be considered trivial, because based on the testimony of several respondents when filling out the questionnaire they added that there had been several minor accidents or commotions between fellow traffic users passing under the Jalan Sultan Agung flyover.

Apart from that, the existence of the Jalan Sultan Agung flyover has positive externalities on social conditions, which is demonstrated by reducing traffic congestion, providing comfort and safety in driving. This goes back to the initial designation of the Jalan Sultan Agung flyover, which was a solution to overcome traffic jams due to the operation of the railway crossing, the existence of Mall Boemi Kedaton (MBK) and access to the Kota Baru toll gate. This allows traffic users to travel more quickly without getting stuck in traffic via the upper route, namely the Jalan Sultan Agung Flyover.

CONCLUSION

The existence of the Jalan Sultan Agung Flyover has negative externalities on the economic aspect, which is shown by not increasing business opportunities in the surrounding area, not being able to create jobs or absorb labor for businesses in the surrounding area, not being able to increase the number of customers for business actors, threatening business sustainability, increasing competitiveness, and increasing shop rental costs. Apart from that, the existence of the Jalan Sultan Agung Flyover has positive externalities on economic aspects, which is shown by the positive response of business actors to the ease of distribution of goods and services.

The existence of the Jalan Sultan Agung flyover has negative externalities on social aspects, which is shown by being able to reduce mutual cooperation cultural activities, reduce communication and interaction between business actors, and create opportunities for traffic accidents. Apart from that, the existence of the Jalan Sultan Agung Flyover has positive externalities on social aspects, which is demonstrated by being able to be a solution in reducing traffic congestion.

For externalities that arise negatively, the Bandar Lampung City Government should implement a policy of providing subsidies for business actors. Meanwhile, for externalities

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that arise positively, the Bandar Lampung City Government should be able to implement a policy of increasing tax rates for driving comfort and solutions to traffic congestion obtained by the community. It would be better for the public, in this case including business actors, to have more orderly traffic. Don't go against the flow just because traffic is far away.

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