

AN ASSESSMENT OF TRANSPORT POLICY FOR TOURISM CITY —CASE STUDY: FOREIGN USERS SATISFACTION OF TRANSJOGJA—

Aleksander PURBA¹, Fumihiko NAKAMURA², Shinji TANAKA³, Peamsook SANIT⁴
Ryo ARIYOSHI⁵

¹Doctoral Student, Graduate School of Urban Innovation, Yokohama National University
(79-5 Tokiwadai, Hodogaya-ku, Yokohama, Kanagawa 240-8501, Japan)
E-mail: purbaynu@gmail.com

²Member of JSCE, Professor, Graduate School of Urban Innovation, Yokohama National University
(79-5 Tokiwadai, Hodogaya-ku, Yokohama, Kanagawa 240-8501, Japan)
E-mail: f-naka@ynu.ac.jp

³Member of JSCE, Associate Professor, Graduate School of Urban Innovation, Yokohama National University
(79-5 Tokiwadai, Hodogaya-ku, Yokohama, Kanagawa 240-8501, Japan)
E-mail: stanaka@ynu.ac.jp

⁴Researcher, Graduate School of Urban Innovation, Yokohama National University
(79-5 Tokiwadai, Hodogaya-ku, Yokohama, Kanagawa 240-8501, Japan)
E-mail: sanit-peamsook-an@ynu.ac.jp

⁵Member of JSCE, Research Associate, Graduate School of Urban Innovation, Yokohama National University
(79-5 Tokiwadai, Hodogaya-ku, Yokohama, Kanagawa 240-8501, Japan)
E-mail: ariyoshi-ryo-np@ynu.jp

The Jogjakarta economy is largely dependent on education and tourism industry. The emerging dominance of private transport has reached to a degrading traffic conditions. Severe traffic congestions and high level of air pollution have been affecting the attractiveness of Jogjakarta, a popular tourism city in Indonesia. Unless a new approach of urban transport system development, it is feared that the amount of visitors will keep declining and hence affecting the city economy. From the awareness of the increasingly complex issues, the Ministry of Transportation of Indonesia enacted a decree No 51 of 2007 promoting pilot cities for land transport improvement. This paper originally examines the existing transport policy framework before and after new transit, TransJogja, implementation. The impact of service quality policies on visitor's willingness to take trip by transit is then investigated by using SEM model. From organizational structure point of view, there are only two institutions in terms of urban public transport management at city level, i.e. the city government as the regulator and operators as the service provider. There is no direct relation between the two institutions that can be used to develop the system and to encourage the number of passengers. More than two years after TransJogja was launched, the Cities Development Initiative for Asia (CDIA) was appointed to undertake a review of the urban transport plans for Jogjakarta and the surrounding urban area, however, over three years later the provincial, city and regency governments are in complete support of the strategy of the conducted research and in particular the improvements proposed. According to SEM results, rather than TransJogja service quality, the information and English guidance factor is the main consideration for the foreign users to travel by the transit.

Key Words : *Tourism city, Foreign users, Satisfaction, Service quality, SEM*

1. INTRODUCTION

The lack of sustainable transport policy implementation might be common in most of Asian developing cities even they already know much of

what to do. According to Deakin¹⁾, a massive research has been conducted on sustainable transport since the mid of 1990. Such researches discuss sustainability from multidimensional perspectives, including the social, economic, and environmental

aspects. The present transport policies are aiming at GHG reduction, and the enhancement of the transport safety and social equality, and deal with major issues such as securing investment finances, improvement of governance, and utilization of sophisticated technologies. Based on the results of such researches, transport projects involving specific practical measures have been carried out, and significant efforts have been made to develop sustainable transport systems.

It is inevitable that an increasing in population generates higher in travel demand. Indonesia as one of the most populated countries in the world next after China, India, and USA are facing a large number of travel demand (see **Table 1**). In the period 2000 to 2025, for example, the city of Palembang as the second largest city in Sumatra and capital of South Sumatra province has a growth rate of more than 40%. The city is estimated to be occupied to almost two million inhabitants²). In the same period, Jogjakarta has a growth rate of 18%, whose figure is almost double from Jakarta (10%)³). Nowadays, Indonesia deals with an explosive growth in vehicle ownership and utilization. An increased road length and new roads generate faster and longer trips, more trips by car and higher car ownership all of which trigger to more traffic congestion and pollution (see **Fig 1** and **Fig 2**).

Meanwhile the mode share of walking, cycling, public transport, private car, motorcycle and non-motorized varies very significantly across cities (see **Fig 3**). The Ministry of Transportation (MoT) database finds evidence of public transport mode shares as low as 16% in Jogjakarta and as high as 58.9% in Palembang. Jakarta itself is 39.1%, much higher than Jogjakarta and lower than Palembang⁴). Much of the variation can be explained by factors such as urban density, relative prices and speeds of public versus private transport and the reach and quality of the public transport network. Even within a same region, cities which are close each others can have significantly different mode shares due to a result of the different policies and history of development of the systems.

One notable difference between developed and developing countries, particularly those in Indonesian cities, is the importance of powered two-wheelers where the mode share is as high as 52% in Jogjakarta, 21.1% in Palembang and 13.1% in Jakarta. From the awareness of the increasingly complex issues, the Ministry of Transportation of Indonesia enacted a decree No 51 of 2007 promoting pilot cities for land transport improvement⁵). The decree mandates the pilot city candidates to reflect

Table 1 Growth in selected cities and state (population in 000s).

Selected cities and state	Population			% Change 2000-2025
	2000	2010	2025	
Jogjakarta	505	541	598	18
Palembang	1,339	1,455	1,899	41
Jakarta	8,361	8,981	9,259	10
Indonesia	205,132	233,477	273,219	33

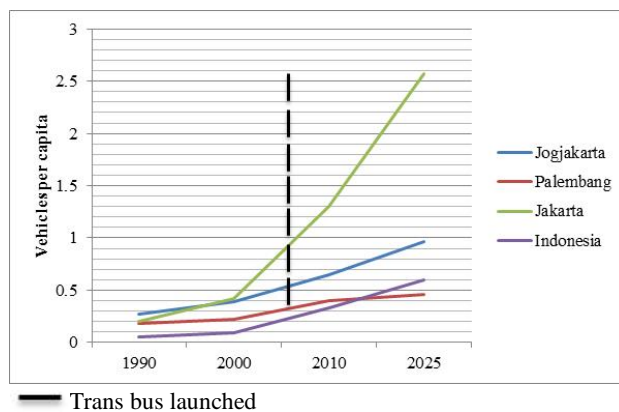


Fig 1 Forecast changes in vehicles ownership per capita.

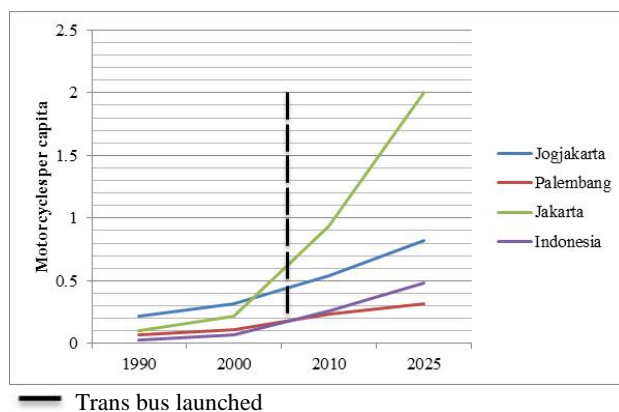


Fig 2 Forecast changes in motorcycles ownership per capita.

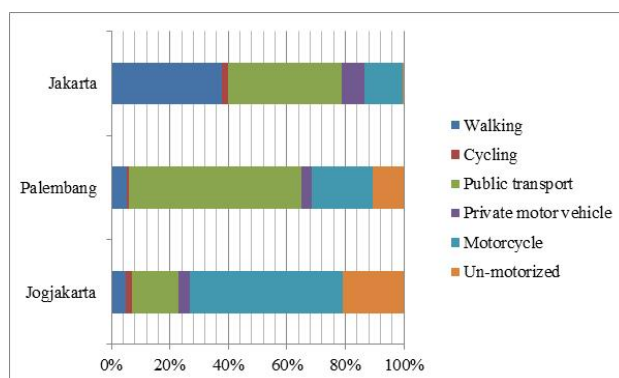


Fig 3 Modal share in selected cities and capital

their commitments by providing documents declaring their preparedness in terms of institutional ca-

capacity, funding capacity, human resource availability and transportation master plan. From the target of thirty pilot cities by 2014, to date, twenty seven cities have signed a memorandum of understanding with MoT and launched more than twenty new transit systems across the region, including TransJakarta as the pioneer of the program. TransJogja of Jogjakarta is included in the MoT program.

This paper examines the existing transport policy framework before and after new transit implementation and its impact regarding service quality by focusing on the foreign users only in famous tourism city of Jogjakarta. The next step is to explore users' satisfaction with new transit in order to see if the transport policies are related to user satisfaction as well, and to propose implications for the future by testing some hypotheses related to the service quality, information and English guidance, satisfaction, and willingness take trip by transit.

This paper begins by providing some brief information about transport policy framework at city level and its impact regarding service quality, followed by a concise explanation of the methodology and data collection. Estimation results of the model, accompanied by the significance tests, are also presented. The final section provides some concluding comments.

2. TRANSJOGJA CHARACTERISTICS

In contrast to other regions in Indonesia, the Jogjakarta economy is largely dependent on education and tourism industry. Recent data shows, many university students live in Jogjakarta and surrounding areas; approximately 51,000 students and 2,400 lecturers attend the University of Gadjah Mada alone⁶⁾. Other big universities with more than 10,000 students are Jogjakarta State University, Islamic Indonesia University, and Atma Jaya University, respectively⁷⁾. Moreover, Jogjakarta is ranked after Bali as the most visited tourist place, making its city as the center for tourism, though the two most prominent attractions are Borobudur and Prambanan that lie 42 km and 17 km away. These two temples draw the majority of Jogjakarta's international tourists to the city and each receives about 1.1 million visitors annually.

Only the Sultan palace and historical surrounding areas, which are the most visited international tourist attraction in the city, attracted 152,843 foreign tourists in 2010⁸⁾. In addition to a legacy of historic structures, Jogjakarta is commonly known as the cultural heart of Java and is blessed with rich tradi-

tions of music, dance, and theatre, as well as a variety of craft industries, including leather, batik, pottery, painting, and silver. Recent years, the golf course is also capturing attention for some foreign tourists visiting Jogjakarta, mainly from South Korea and Japan, because the cost of playing golf in this city is cheaper than in many other countries.

There are a number of travel agencies providing charter bus rental services which are the fastest and most convenient to get to the tourist spots for the city and its surrounding areas, including Borobudur and Prambanan. However, the emerging dominance of private transport has reached to a degrading traffic conditions. Severe traffic congestions and high level of air pollution has been affecting the attractiveness of the city in Indonesia. To cope with these situations, in 2008 the provincial government began to operate the new transit system of TransJogja. The new financing approach for urban transportation operation is named buys the service system. Under the system, the provincial government buys the service provided by operator based on Rupiah per travel-km. The Rupiah unit per travel-km is calculating based on operational costs. All revenue from the service operation is collected by the provincial transportation authority to be used for paying the operational expenses. When deficit occurs (operational income < operational expenses), the subsidy mechanism is employed. But in surplus condition, it will be used for developing the system. Unfortunately, after a few years of operation, number of passengers has gradually decreased as the service quality also has simultaneously declined. In fact, during five years of the contract the provincial government allocates funding to local transport authority about Rp 30 billion annually for operating subsidies of TransJogja.

3. ASSESSING TRANSPORT POLICY FRAMEWORK

(1) Organization plan

Indeed, developing implementation strategy for long term plan of urban public transportation is one of the important components. The implementation is also used as the learning process to improve the sustainable system. There is no assurance that the production of academic document is a perfect result. Reviewing from countries succeeded in implementing transit system, it can be concluded that each of the implementation step highly depends on the government's role and allocated fund.

Normally, the followings steps are required for

the government to undertake from planning to implementation. They are organization plan, financial plan, procurement, construction and implementation plans, and monitoring and evaluation, respectively. Further, in providing urban transport services, four institutions should be established i.e. strategy and policy institution, regulation institution, management institution and operator. They are related to the system and correlated to each other⁹⁾.

Unfortunately, there are only two institutions in terms of urban public transport management at city level in Indonesia i.e. the city government as the regulator and operators as the service provider. There is no direct relation between the two institutions that can be used to develop the system. The reason is the existing operators consist of individuals who own the fleets instead of professional enterprises. Referring to such conditions, good monitoring and evaluating system would be quite difficult to create proper services (Fig 4).

As the diagram shows, government is assisted by academics to develop the public transport strategy and policy, in which will be put into the master plan and Minimum Service Standard (MSS). The strategy and policy are adjusted with the need on the fields. The master plan and MSS are then strengthened with regulation (the decree) released by the regulator to be officially implemented. Official regulation must be flexible in nature in proportion to both technical and cultural condition on the field.

Hereafter, official regulation is used as the foundation by Land Transport Authority to set out the network and system development, sustainable system plan, service operational standards (SOS), implementation technical plan (operational) and the route tender process (operator selection). In its development, the regulation is also adjusted to the development and sustainable plans. Operator itself is selected from procurement tender undertake by the management body of urban transportation¹⁰⁾. Ideally, the selected operator should be an enterprise capable of operating one or more routes within the city. In providing its service operation, operator must comply with standard operational procedure and prevailing official regulation. The development of service operation can also be used as inputs for the management to develop the standard, development plans and sustainable plans.

Responsibilities for urban transport, however, need to be comprehensively assigned to a lead agency to overcome the problems of poor coordination and execution. This generally means that

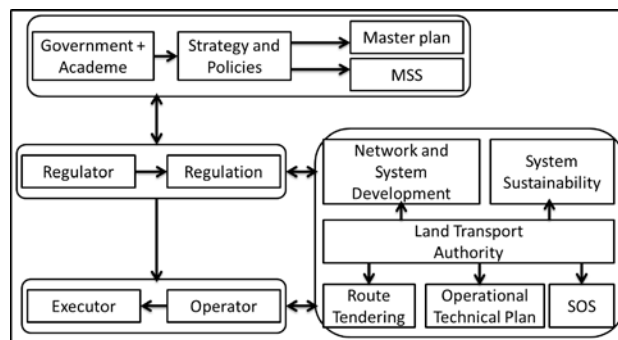


Fig 4 Organizational system of urban public transport.

several actions need to be taken across different sectors and multiple subsystems, but in a well-integrated manner. This requires comprehensive and integrated thinking about land use planning, environmental quality, energy, services for the poor and physically disadvantaged, and so on¹¹⁾.

But unfortunately, Jogjakarta city did not undertake enough researches on the organizational, operational and financial reform on urban public transport in advance before the new transit system was launched. Moreover, over five years of transit operation the city has not been improved pedestrian, bicycle path, and other non-motorized infrastructure support along the main corridors in order to enhance number of passengers. In the same period, performance of single operator has been in continuous decline. For example, from 2008 to 2010, the average ridership continued to grow, exceeding 13,000 passengers per day but the latest data shown that the numbers has decreased to 11,000 people since its service quality has continually declined. Then, the organizational structure of public transit system within a city has not been changes significantly. From the organization's point of view, TransJogja trying to superimpose its position on existing structures of the local transportation office rather than a dedicated unit with specific functions (Fig 5). Typically, some employees are placed in a small unit, called a technical implementation unit. It is assumed that a new transit system is a routine matter which is run like regular bus or para-transit. For example, there is no standard procedure to submit the complaint; their service frequency is sometimes erratic, even more than 30 minutes at peak hours. The vehicles are not clean, badly maintained and so prone to be unreliable. An inadequate organization structure of urban public transport in Jogjakarta has been thwarted effective urban transport management.

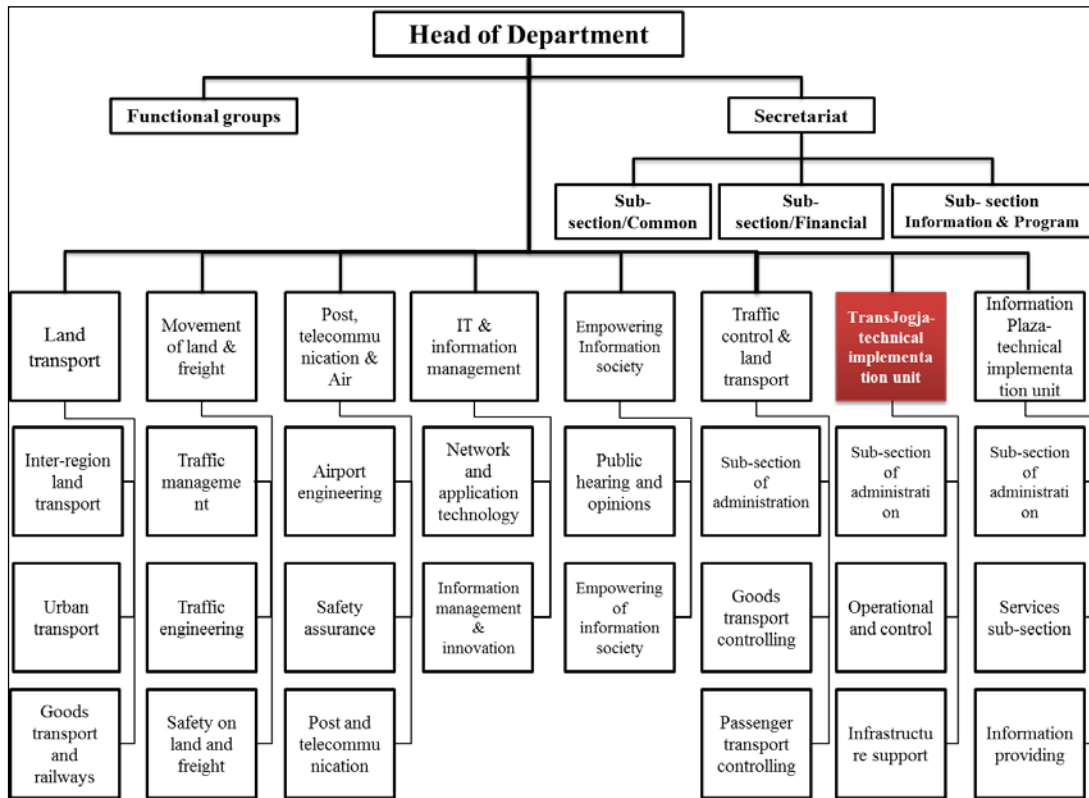


Fig 5 Organizational structure of transport department.

(2) Proposed organization structure

In November 2000 or more than two years after TransJogja was launched, the Cities Development Initiative for Asia was appointed to undertake a review of the urban transport plans for Jogjakarta and the surrounding urban area³⁾. The main objectives of this study are; firstly, to establish an urban transport sector strategy for Jogjakarta and recommend the necessary policy and regulatory framework improvements to implement the strategy. The purpose of this strategy is to help the government of Jogjakarta to form a long-term vision for sustainable urban transport development which will support Jogjakarta's economic development and social wellbeing. Secondly, to strengthen the capacity of key institutions involved in the management and service delivery of the urban transport sector, including local and provincial level agencies as applicable. The purpose of this is to help ensure the benefits proposed by the investments are actually realized.

It formulated a sustainable urban transport sector strategy and high priority investment package for the greater Jogjakarta urban area in province. It is the result of a detailed, collaborative effort between the provincial and city governments, the Cities Development Initiative for Asia (CDIA)³⁾ and its Consultants, the Sustainable Urban Transport Im-

provement Project (SUTIP), and a wide range of government and other community based stakeholders¹²⁾.

Both the provincial and city governments have subsequently expressed strong commitment to implement the transport strategy and deliver the recommended transport infrastructure improvements.

This will dramatically improve the city's urban transport modes, and contribute significantly to Jogjakarta's attractiveness and urban amenity. As such, this initiative reflects fully the needs and desires of a wide range of stakeholders.

In terms of institutional arrangement, the government has confirmed that the study transport strategy is to be formally adopted and used as a reference for provincial government policy in the transport sector. The task now for the provincial government is to deliver the investment project. An effective way to address this is to establish a specific unit within the machinery of government, which would be responsible for the success of the project. For convenience, such a unit has been referenced in the study simply as a Project Implementation Unit (PIU) as shown in Fig 6. Such a unit can be established within the government structure to deliver the project, which would receive specific capacity development capabilities to ensure the delivery according to the supporting decrees of the Governor.

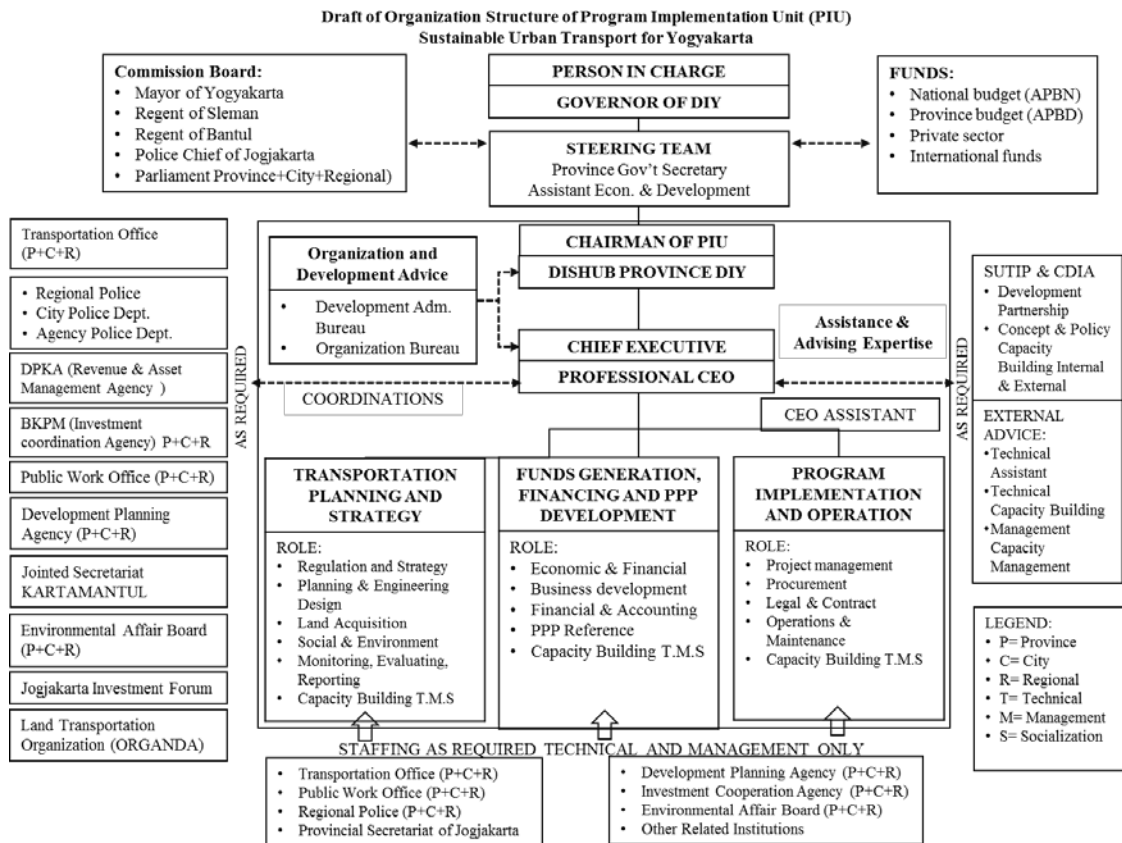


Fig 6 Proposed of PIU organizational structure.

However, over three years later these provincial, city and regency governments are in complete support of the strategy of the conducted research and in particular the improvements proposed. PIU as a proposed lead agency has not been established; the transportation department as lead agency has not changed, and there has been no change in terms of transport policy framework.

Meanwhile, the development of international tourism, together with the steady increase of Jogjakarta's student population over the last decade, has changed the appearance of the city. As the impact of a foreign oriented consumer culture, the city has a lot of star-rated transnational chain hotels such as Novotel, Ibis, Hyatt and Sheraton. Unfortunately, the strength of Jogjakarta's tourism lies in some aspects, including poor image of urban public transport which is unsafe and uncomfortable.

In order to measure the service level, authors explore user perceptions of new transit operation, regarding service quality, information and English guidance, satisfaction, and willingness take trip by transit expressed by the foreign tourists of Jogjakarta TransJogja. Authors' proposed a path analysis with structural equation modelling (SEM) due to its useful to researchers as a multivariate technique combining

regression, factor analysis, and analysis of variance to estimate interrelated dependence relationships simultaneously.

4. METHODOLOGY

(1) Structural equation models

It is inevitable, the structural equation modelling (SEM) method spread rapidly as a consequence of the rapid development of specific packages, like LISREL^{13), 14), 15)} and AMOS¹⁶⁾. The presence of these packages has encouraged some applications in different contexts. This approach enables the modelling of a phenomenon by considering both the unobserved latent construct and the observed indicators that describe the phenomenon.

Originally, SEM are made up of two components, i.e. the first describes the relationship between endogenous and exogenous latent variables, and permits the evaluations of both direction and strength of the causal effects among these variables (latent variable model); the second component describes the relationship between latent and observed variables (measurement model).

Moreover, path analysis with SEM is similar to

traditional methods like correlation and regression in many ways. First, both regression and path analysis are based on linear statistical models. Second, statistical tests associated with both methods are valid if certain assumptions are met. Regression methods assume a normal distribution and path analysis assumes multivariate normality. Third, neither approach offers a test of causality.

Traditional statistical methods normally utilize one statistical test to determine the significance of the analysis, R Square for regression analysis. Structural equation modeling, however, relies on several statistical tests to determine the adequacy of model fit to the data. The chi-square test indicates the amount of difference between expected and observed covariance matrices. A chi-square value close to zero indicates little difference between the expected and observed covariance matrices. In addition, the probability level must be greater than 0.05 when chi square is close to zero.

The Comparative Fit Index (CFI) is equal to the discrepancy function adjusted for sample size. CFI ranges from 0 to 1 with a larger value indicating better model fit. Acceptable model fit is indicated by a CFI value of 0.90 or greater.

Root Mean Square Error of Approximation (RMSEA) is related to residual in the model. RMSEA values range from 0 to 1 with a smaller RMSEA value indicating better model fit. Acceptable model fit is indicated by an RMSEA value of 0.06 or less. If model fit is acceptable, the parameter estimates are examined.

The SEM model was developed according to previous research conducted by authors¹⁷⁾. Authors add information and English guidance and willingness take trip by transit as the main determinants since the city is favored by international visitors.

In order to evaluate TransJogja service quality, the respondent was asked about three important determinants with nine attributes, in which each determinant factor has three attributes (**Table 2**). In all question, respondents were asked to rate each attribute on a five point scale of satisfaction, ranging from very dissatisfied to very satisfied. Furthermore, the last one is a question regarding the willingness to take trip or re-use TransJogja for foreign tourists. The respondent asks whether he or she will make use of city transit bus on the next trip. For each question, the respondent was shown several prerequisites, such as if service quality improved, the services satisfy, and the service is safer. In all question, respondents were asked to rate each attribute on a five point scale of willingness, ranging from strongly disagree to strongly agree.

Table 2 Factor and attribute of services.

Factor	Attributes
1. Service Quality (Q)	<ul style="list-style-type: none"> • Frequency and reliability (X1) • Safety and security (X2) • Customer service and personnel appearance (X3)
2. Information and English Guidance (I)	<ul style="list-style-type: none"> • Availability of map/route at bus stops in English (X4) • Availability of service information in English by phone, mail, internet (X5) • Availability of information on buses in English regarding bus stops, transfer points (X6)
3. Satisfaction (S)	<ul style="list-style-type: none"> • Satisfaction with overall services (Y4) • Satisfaction with comfort (Y5) • Satisfaction with helpfulness of personnel (Y6)
4. Willingness Take trip by Transit (T)	<ul style="list-style-type: none"> • Consider/return to use if service quality improved (Y1) • Consider/return to use if the services satisfy (Y2) • Consider/return to use if the service is safer (Y3)

These attributes are similar to any other measurement taken by other researchers, but this research argues that a specific attribute selected for measuring the performance of new transit service in famous tourist city of Indonesia exists. This difference influences the way user's measure performance, including their expressions of willingness or return to use. We can deduce from this logic some hypotheses to test using structural equation modeling. These are that information and English guidance is positively related to satisfaction, that information and English guidance is positively related to willingness take trip by transit. Then, that service quality is positively related to satisfaction, that satisfaction is positively related to willingness take trip by transit, and that service quality is positively related to willingness take trip by transit.

(2) Data collection

The field surveys, conducted in December 26 of 2014 to January 7 of 2015, were addressed to foreign tourist passengers who use or ever tried the Jogjakarta's TransJogja service. A total of 211 of foreign tourists were interviewed, approximately 65 percent of respondents were interviewed face to face on board, while the rest is conducted in such tourist sites i.e. Malioboro and Sultan palace, and hotel lobby. Respondents were asked to fulfill information about their foreign tourist characteristics and TransJogja service quality. Some foreign tourist characteristics requested were: gender, origin region, reason traveled to Jogjakarta, frequency of visit, length of

staying, spending money, and complaints during the visit (see **Table 3** and **Fig 7**).

Jogja Tugu Trans Limited, a consortium transit agency manages the city transit lines. Generally, the service is available from 6 a.m. to 9 p.m. but a service frequency is delivering without timetable (**Table 3**). Based on field survey, the service frequency is varying from twenty five to sixty minutes depend on level of congestion along route and also weather conditions, since the buses running in the mix traffic. In rainy season, the travel time tends to be longer because of some roads are flooded, causing delay that exceeds normal travel time.

(3) Foreign user characteristics

Though the respondent is not significantly spread between male and female, the majority of the foreign transit users is male (59% of the sample). According to region origin, most of the interviewed foreign users are from Europe (36%), ASEAN/Asia Pacific (31%) and North America (30%). Moreover, nearly 40% of respondents claimed to visit Jogjakarta for the second time, 26% is the first visit and 24% is the third visit, indicating that the city is a famous tourism destination for foreign visitors.

The majority of respondent interests regarding culture (38%) follow by nature (25%), adventure (19%), and family (18%) as the reason for their visit to Jogjakarta. Further, about 41% of the sample stated that Borobudur and Prambanan as the main purpose of the visit, followed by Sultan palace (22%), golf course (15%), museum (13%), and beach (9%). However, in practice they may visit more than two or three tourist spots, because nearly half of the respondents (47%) with length of stay 5 to 6 nights, 23% with length of stay 7 nights or more, 18% with length of stay 3 to 4 nights, and 12% with length of stay 1 to 2 nights.

Three and four-stars hotel is a favorite accommodation for respondents (64%); the total local spend per visitor per day of most respondent is \$500 to \$1,000 (44%), followed by \$1,000 to \$1,500 (21%), \$500 (18%), and more than \$1,500 (17%).

To success of tourism industry depends on a set of elements, including a more sustainable and holistic approach to local environmental management. However, these preconditions have not been fully implemented in Jogjakarta; according to the survey results, the most common complaints by respondents related to travel/tourism are less information on internet (28%), security (27%), transportation (23%), signs in English (17%), and book/brochure and tour guide (5%) as described in **Table 4**.

Table 3 Transit Service Characteristics.

Urban Area Characteristics	
Area (km ²)	32.5
Population (people-2013)	510,108
Province	Jogjakarta
Provincial capital	Special Region Jogjakarta
Physical Measures	
Year of implementation	2008
Number of fleets	54
Number of routes	3
Bus capacity	40
Average length/route	34
Number of bus stop/route	17
Dedicated lane available	No
Regulatory Framework	
Regulator	Provincial Transportation Office
Bus operator Bus provider	Consortium MoT, province, consortium
Approach to competition Other modes within the city Way of payment	Gross cost Bus, PT, Rickshaw cash/card at bus stop
Multimodal integration Operation hour	Airport 6 a.m. to 9 p.m.
Operational Performance	
Daily ridership	16,000
Load factor (%)	40
Headway(minutes)	5-10
Average speed (km/h)	20-30
% Fare subsidy	36.4
% Fare box revenue*	35

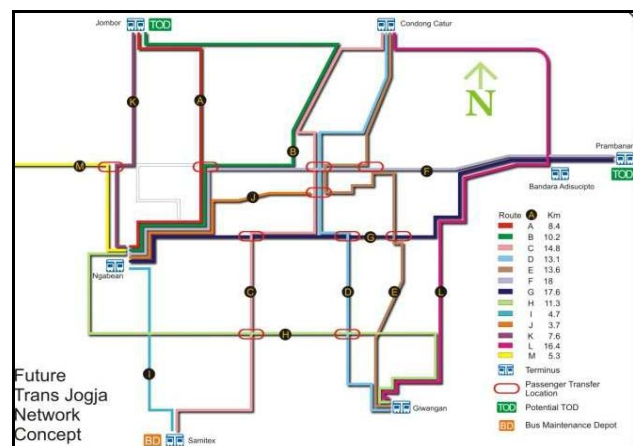


Fig 7 Proposed TransJogja network.

Table 4 Foreign Tourist Characteristics.

		Numbers	%
Gender	Male	125	59
	female	86	41
Region of origin	ASEAN/Asia Pacific	65	31
	Europe	76	36
	North America	63	30
	Central & South America	4	2
	Africa	3	1
How many times have you visited this city	once	55	26
	twice	82	39
	three times	51	24
	four time or more	23	11
What made you want to look up Jog-jakarta	culture	80	38
	nature	53	25
	adventure	40	19
	family	38	18
Which of these destinations was the most visited	Borobudur/Prambanan	87	41
	Sultan palace	46	22
	beach	19	9
	museum	27	13
	golf course	32	15
Length of stay in nights	1 to 2	25	12
	3 to 4	38	18
	5 to 6	99	47
	7 nights or more	49	23
Hotel accommodation	two stars	30	14
	three stars	59	28
	four stars	76	36
	five stars	46	22
Total spend per visitor per day	up to \$500	38	18
	\$500 to 1,000	93	44
	\$1,000 to 1,500	44	21
	more than \$1,500	36	17
The most common complaints related to travel/ tourism	security	57	27
	less information on internet	59	28
	poor transportation	49	23
	signs in English	36	17
	books/brochures and tour guide	10	5
Total		211	100

Table 5 Parameter estimates by foreign users.

Parameter	Standardized estimate	Sig. level
	Regression weights	
1. Satisfaction ← Service quality	.194	**
2. Satisfaction ← Information and English guidance	.670	***
3. Take trip by transit ← Service quality	-.226	**
4. Take trip by transit ← Information and English guidance	.820	***
5. Take trip by transit ← Satisfaction	.343	**
6. Frequency and reliability ← Service quality	.660	*
7. Safety and security ← Service quality	.721	***
8. Customer service and personnel appearance ← Service quality	.805	***
9. Availability of map/route at bus stops in English ← Information and English guidance	.726	*
10. Availability of service information in English by phone, mail, internet ← Information and English guidance	.726	***
11. Availability of service information on buses in English regarding bus stops, transfer points ← Information and English guidance	.816	***
12. Consider/return to use if service quality improved ← Take trip by transit	.743	*
13. Consider/return to use if the service satisfy ← Take trip by transit	.750	***
14. Consider/return to use if service is safer ← Take trip by transit	.796	***
15. Satisfaction with comfort ← Satisfaction	.854	***
16. Satisfaction with helpfulness of personnel ← Satisfaction	.762	***
17. Satisfaction with overall services ← Satisfaction	.786	*
Service quality ↔ Information and English guidance	.849	***
Goodness of fit	Chi-square= 73.317; df= 49; Cmin/df= 1.496; Probability level= .014; NFI= .947; IFI= .982; CFI= .981; RMSEA= .045	

***significant at 1%; **significant at 5%; *significant at 10%

5. USER PERCEPTION OF NEW TRANSIT OPERATION

In this paper, path analysis was employed to reveal the relationship among variables. Parameter estimates for foreigner user of TransJogja is presented in **Table 5** and **Fig 7**, respectively. The model has the chi-square as much as 73.317 (df = 49) resulting in the models being rejected at .05. This model has the normed chi-square (chi-square/df) as much as 1.496 or less than two as a perfect fit. The values of the NFI, IFI, and CFI for the model are 0.947, 0.982, and 0.981, respectively, which these values are near one, meaning the model is a perfect fit. Further, the RMSEA of this model is 0.045, with

value near to zero as a perfect fit. Based on these results, it is clear that the model has a good fitness, since all parameter fit values are obtained, which implies a good fit model.

Referring to Standardized Regression Weights in **Table 5**, it is clear that all determinants of Service Quality, all determinants of Information and English Guidance, all determinants of Satisfaction and all determinants of Willingness Take Trip by Transit are valid, which these values are more than 0.5.

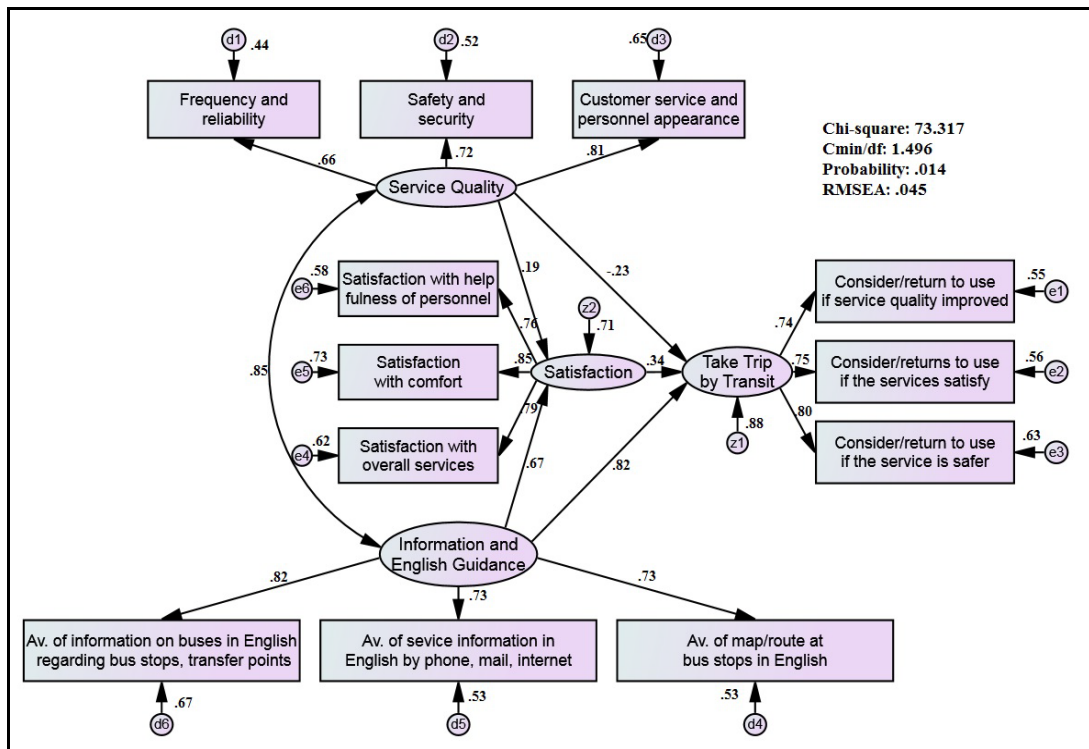


Fig 7 Direct and indirect relationship among variables.

Furthermore, the two structural equations resulted by foreign users model are as follow:

$$Satisfaction = 0.194 \text{ Service quality} + 0.670 \text{ Information \& English guidance}$$

$$Willingness \text{ takes trip by transit} = -0.226 \text{ Service quality} + 0.820 \text{ Information \& English guidance} + 0.343 \text{ Satisfaction}$$

As the survey was administered to international visitors at a famous tourist destination, most respondents declared that they liked information and English guidance aspect more than service quality. In terms of satisfaction, respondent stated that nearly seventy percent of user satisfaction is solely influenced by information factor compared to less than twenty percent by service quality and about ten percent by other factors. Furthermore, the respondents have been demonstrated that the information and English guidance factor is the main consideration for taking trip by transit. In other words, the more improve information and English guidance is offered, the more increased satisfied customers as well as to increase travelers' willingness to use transit.

All standardized loading estimates for factors of service quality are significant and range from 0.66 (frequency and reliability) up to 0.81 (customer service and personnel appearance). The highest

magnitude of satisfaction is the satisfaction with comfort (0.85), whereas the lowest is the satisfaction with helpfulness of personnel (0.76). While all standardized loading estimates for factors of information and English guidance are significant and range from 0.73 (availability of map/route at bus stops in English) up to 0.82 (availability of information on buses in English regarding bus stops, transfer points). The willingness take trip by transit construct has three factors, with consider/return using if the service is safer reaching the highest magnitude (0.80) and consider/return using if service quality improved as the lowest (0.74).

There are five hypotheses in which two regression weights are significant at 1% ($p < 0.01$), while three regression weights are significant at 5% ($p < 0.05$). The first hypothesis, which positively relates the information and English guidance with satisfaction, is statistically significant, supported by the positive value. This implies that the better the information and English guidance, the more satisfy the users are likely to be to this transit. This result looked natural, but needed to be tested to establish the proposed measurement construct. The second hypothesis, regarding the positive relationship between information and English guidance and willingness take trip by transit is also statistically supported. It stands to reason that better information and English guidance would increase transit users' willingness take trip, also.

The third hypothesis regarding the positive relationship between service quality and satisfaction is also statistically supported. It stands to reason that higher service quality would be increase transit users' satisfaction as well. The fourth hypothesis concerning the positive relationship between satisfaction and willingness take trip by transit is also statistically supported, meaning the better information and English guidance would increase transit users' willingness take trip by transit.

The fifth hypothesis, the relationship between service quality and willingness take trip by transit is confirmed by statistically significant negative value (-0.23). The last hypothesis supports the finding that foreign users do not perceive the service quality as main consideration in the use of transit since the quality service perception in developed and developing countries are totally different.

Indeed, Jogjakarta has a unique and interesting cultural background. Its people's hospitality and the beautiful tourism objects have brought Jogjakarta to be internationally well-known. However, city has not sufficient and adequate information and English guidance on what foreign tourists need to go to travel.

6. CONCLUSIONS AND IMPLICATIONS

This paper developed and applied a conceptual framework highlighting the transport policy that influence service quality in order to evaluate the current progress of new transit system projects in Indonesian cities.

In in terms of urban public transport management, however, there are only two of four institutions at city level in Indonesia i.e. the city government as the regulator and operators as the service provider. There is no direct relation between the two institutions that can be used to develop the system. Over five years of transit operation, the provincial, city and regency governments are in complete support of the strategy of the conducted research and in particular the improvements proposed.

An inadequate organization structure of urban public transport in Jogjakarta has been thwarted effective urban transport management especially service quality. According to SEM results, rather than TranJogja service quality, the information and English guidance factor is the main consideration for the foreign users to travel by the transit. Based on the results of SEM analysis, the transport policies are interrelated to user satisfaction as well.

In order to maintain city culture and tourism resorts, more attentions are needed to keep the city

image as a livable, comfortable, safe and environmental friendly place. Urban transit system itself is considered as an additional tourism product, which adds to the total tourist experience. However, despite high investment costs and potential value, some urban transit systems are still not favored by international visitors as shown in this paper. Whereas, in order to attract more users, including international visitors, transport service providers should focus on understanding customer motivation, behavior, and satisfaction.

The next step is to enhance service performance of TransJogja to a level comparable to that of private transport, by improving efficiency in planning and operation stages. Then, the city should be able to establish and strengthen the city international image by establishment a comprehensive understandable and bilingual information system. And, to develop consumers oriented transportation system by prioritizing to safety, convenience, and comfort, followed by undertake benchmarking with other international cities.

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