

Innovation of and in Informal Actor Network

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Abstract

How the informal sectors create and share innovation in gaining competition is very important in tourism development. Commonly, informal sectors are embedded in their routines and lack of innovation capacities. Based on the case of pedicab drivers in Yogyakarta, it was found that as informal sector in tourism activity, the drivers have created product innovation. This street level of innovation is mainly done by seeing the tourists as the potential demand/profitable customers. They have created innovation on physical performance of the pedicab, the capacity of pedicab to serve the tourists, and the union as the organization of the pedicab drivers. Furthermore the pedicab has transformed not only as a transportation mode but also as one of cultural tourism attraction in Yogyakarta.

The study also shows that pedicab drivers unions have significant roles in creating and sharing innovation among them. Basically the unions were formed to organize the pedicab drivers that grown up significantly after economic crisis in 1998. In these unions the pedicab drivers can improve their capacity, such as by conducting a language course; sharing information about tourism issues and urban transport's rules; discussing strategies to improve their appearance, etc.

The union has strategic position both externally with other tourism actors in Yogyakarta and internally within the members. Externally, through the union, the pedicab drivers can have bargaining position to the policy makers and formal tourism actors, such as shop, attraction, hotel and restaurant. Through the union the pedicab drivers can communicate their aspiration and problems during their daily activities. Conversely, through the union, the policy makers and the formal tourism actors can communicate their programs and information related to tourism development to the pedicab drivers as one of noteworthy tourism actors. The union can get the figures of demand and trend of tourism through these external links. Furthermore the figures are needed to create the product innovation. In this case, the role of local champion (the leader of the union) is very important to facilitate the network between union and the formal actors. On the other hand, internally, the union is a means of social network among the pedicab drivers. The members who have similar characters could share the opinion, problems, knowledge, and information easily. This social network makes the process innovation done with fewer problems.

Keywords: informal actor networks, innovation mechanism, sustainable tourism development

Introduction

The globalization has increased competition among tourism destinations. New technology, more experienced consumers, and global economic restructuring are some of the challenges facing by tourism destination (Weiermair 2004). Consequently, positive image of a tourism destination is very important in gaining markets. Political instability, safety concerns due to terrorist attacks, and contagious diseases are some factors influencing negative image of a tourism destination.

The other criterion of highly competitive tourism is also based on the attractive attractions and attractive services. Hence a highly competitive tourism industry is not only based on appealing attractions but also on a variety of attractive services. Kaspar defined this characteristic as “consuming a bundle of tourism services as a whole” (Weiermair 2004). The tourist wants to have complete experiences of a tourism destination, not only the interesting tourism attraction but also comfortable accommodation and transportation, delicious culinary, etc. This bundle of tourism services usually is called as the tourism network.

One of attractive service in a destination is transportation. “Transportation services and facilities are integral part of tourism” (McIntosh, Goeldner, and Ritchie 1995). This is based on the basic activity of visitor/tourist moving from one place to other place for tourism purposes. Every visitor/tourist will need transferability in their mobility, ease to move from one place to other place, from their home to tourism destination, from one tourism attraction to other tourism attraction, etc. Therefore, they will need transportation services and facilities. The transportation modes are very varied (depend on the distance, comfort, and travel cost) such as airline, train, bus, car, etc (McIntosh, Goeldner, and Ritchie 1995).

One of the popular transportation modes in some tourism attractions is pedicab (a pedal-operated tricycle for carrying passengers). People who are travel in New York, Copenhagen, Kohl, India, China, Indonesia, and other places will find this transportation mode in some tourism attractions. Some tourists prefer to use this unique transportation mode during their visit in tourism destination. The pedicab has different names and appearances in each country, such as Cyclo in Cambodia and Vietnam, Cycle Rickshaw in India, Trishaw in Singapore, and Becak in Indonesia. Unfortunately in Indonesia, this transportation mode is included as informal sector that lack of legal support in its operation, even though their ease to adaptation character has supported them to survive during economic crisis in late 20 century.

The pedicab/rickshaw in developing countries, especially in Southeast Asian Countries is well-known as one of transportation mode for daily activity of the community. They often use it to travel from their home to their office, market, school, etc. The booming of tourism activities has

influenced the pedicab's function; it also serves the tourist/visitor who comes into a tourism destination. Moreover, the unique characteristic of this pedicab makes this transportation mode as one of tourism attraction. In Indonesia, the pedicab that serves tourist/visitor is called as "becak wisata". The existence of "becak wisata" in Indonesia, especially in Yogyakarta is very interesting since they are an outcome of tourism innovation after the multidimensional crisis in Indonesia.

The appreciation of tourism networks and informal sector in tourism development is the background of this research. This networking can be seen as strategic action of the tourism actors to broaden positive image of a tourism destination in order to gain markets. Therefore this research aim is to figure the innovation of and in tourism actors' network with case study on pedicab in Yogyakarta and to give recommendations to the government in order to leverage this tourism networks to support tourism development.

Theoretical Considerations

The modern theory of innovation was firstly developed by Joseph Schumpeter (1883-1950) who argued the need of dynamic lenses in studying economic, social and technological changes. In his work Schumpeter viewed that those changes were driven by innovation that be fulfilled by entrepreneurs and/or enterprises who make new combination of existing resources, such as capital, knowledge, etc (Fagerberg, Mowery, and Nelson 2005; Lundvall 2007). Hence, Jean-Paul Flipo describe that the main motivation of innovation is creating new value toward consumers as the main arbiters of business competitiveness (Decelle 2004). Similarly, Bullinger sees innovation as the strategy towards retaining existing markets and gaining new markets (Weiermair 2004).

Innovation can be classified in different ways. Basically, innovation is divided into five groups based on the object of innovation: new products (product innovation), new method of production (process of innovation), new sources of supply, the exploitation of new markets (market innovation), new ways to organize business (organizational or management innovation), and a framework within which people interact (institutional innovation) (Fagerberg, Mowery, and Nelson 2005; Hjalager 1997).

As mentioned above, recently tourism acts as an engine in the economic development. Its contribution in national or local income and employment generations are the examples of its input to the economic development. As an engine to the economic development, tourism has some unique characteristics such as intangibility. A consumer needs to come to the place where tourism product is available in order to consume it. What is more, the tourist consumes not only the product, but also other product, such as accommodation, transportation, restaurants, etc. As a

result, a tourist takes advantage of the many resources available (Weiermair 2004). From the tourism actors' point of view, they share the same consumer, the tourist.

These characteristics of tourism product have influenced the characteristic of innovation in tourism. The further studies on service sectors, including tourism sector in Denmark show that innovations in this sector are more incremental than radical; there are small and incremental changes in processes and procedures, and only few of service providers introduce new product to the market. Firms at the "edge" of tourism such as cultural institutions, municipal sport installation, and transport firms were the most innovative. The tendency of incremental innovation in tourism is based on the characteristic of tourism activities/business that is small in size with limited activities and resources. It has internal obstacles to create innovation such as human resources (lack of skilled staffs); financial (lack of appropriate source of finance and innovation costs too high); and management (resistance to change within enterprises). The study in Balearic Islands shows that human resource is the main obstacle in innovation. On the other hand the tourism enterprises have also external obstacles in innovation, such as legislations, regulations and standards (Jacob et al. 2003; Hipp, Tether, and Miles 2000; Carlsen et al. 2008).

In order to make innovation they need to rely on the support from external stakeholders (Mattsson, Sundbo, and Fussing-Jensen 2005; Jacob et al. 2003). These obstacles have urged the tourism enterprise to make interaction with other enterprises in order to reduce the risk and cost of innovation. Sharing consumers in tourism activities is also the reason why tourism actors need to make collaboration with others to make innovation. Thus, innovation in tourism is mostly collectively done by some tourism actors. New products in the tourism market mostly are the result of collective innovation from the tourism actors. Therefore, networking in order to make collective innovation in tourism is very important.

In his book, the "Hidden Connection", Capra defined the complexity and the interconnectedness of all living things that shape a network. "The network is a pattern that is common to all life. Wherever we see life, we see network" (Capra 2002). Similarly, Castells with his famous "Network Society" concept also emphasizes the interconnectedness within a network by defining network as a set of interconnected nodes. Furthermore Castells describes that a network has no centre, a node as part of a network is the point where the curve intersects itself (Castells 2004). In addition, Burt in his concept of "Structural Holes" highlights that the interconnectedness among nodes are through ties (Burt 1995).

Based on the definitions of network above, structurally a network consists of nodes and interconnections among the nodes. Burt and other scholars identify these interconnections as ties.

These ties can be formal or informal, and deep/strong or weak. Formal ties refer to legally relationships among nodes; meanwhile informal ties occur when groups of nodes exchange ideas or share information without legal form. Strong or deep ties connect nodes within a network; sometimes these strong ties will create embeddedness within a network. Weak ties occur to reduce this over embeddedness by creating ties with other nodes in other networks. Granovetter in 1973 emphasize the power of these weak ties through his work “the Strength of Weak Ties” based on the range/length and power of these ties. Weak ties can offer more information needed by the nodes in the ties or even by a network where the nodes have strong ties (Burt 1995; Gulati 1998; Simard and West 2006; Atterton 2007; Felzensztein 2003; Granovetter 1973). From the interconnections/ties above the boundary of a network is not clear. When the nodes embed in a network the boundary is created by the ties among those nodes, however when a node has weak ties with other nodes in other networks, the boundary of the network can be enlarged including nodes in other networks (Burt 1995).

Based on the description on innovation and network above, these concepts are closely related. In order to make innovation enterprises have to be aware on the negative outcomes of innovation, i.e. market failures of their product innovation and increased costs (Simpson, Siguaw, and Enz 2006). Therefore there is a need for those enterprises to have interaction with other enterprises, thus economic network model describe how those enterprises make interconnections. Regarding to this correlation, Powell stated that networks can become the locus of innovation, as transaction of innovation resources has been done through networking (Powell and Grodal 2005).

Additionally, Hakanson also emphasize that network will appear when the resources in the actors are heterogeneous, thus the actors can change or exchange their resources to other actors. Similarly, Oerlemans’ study on network and innovation in North Brabant proved that innovative performance of enterprises that include both internal and external (other actors) resources is better than the enterprises that only include internal resources in their innovation (Oerlemans, Meeus, and Boekema 1998). Doloreux also emphasized that innovation cannot be produced in isolation (Doloreux 2002), actors need other actors in their innovation process. These actors enter into a network in order to fulfill their lack of resources to innovate and to share risks and costs of innovation with other enterprises in the network (Tether 2002).

The phenomena of networking are also found in tourism sector. There are three main reasons why actors in tourism sector need to be involved in a network. The first reason is from demand side. Tourism is a unique sector which consumers will consume not only single product but a bundle of products. Thus, consumers or markets of tourism concentrate in a certain destination. The second one is the fact that many of tourism resources or attractions are jointly used object, for instance

beaches, lakes, national park, historical area, etc. The tourism actors also share public infrastructure in the destination. Those attractions and infrastructures are used jointly not only among actors but also with the community (Scott, Baggio, and Cooper 2008; Braun 2005). The last reason is mostly the enterprises in tourism sector are small and medium enterprises that have lack of innovation resources/capacities (Jacob et al. 2003). Therefore they need to access other actors/enterprises' resources to share risks and costs of innovation in order to gain markets.

The consequence of exchange process of resources among actors in a network is the need of knowledge and learning process of the actors regarding to heterogeneity of resources. Actors need to know which external resources those are suitable for their business, and how to utilize those resources through learning process. In fact, most actors do this learning process during interaction with other actors, Lundvall labeled these activities as 'learning by interacting' (Oerlemans, Meeus, and Boekema 1998).

Method

To get deep picture on innovation of and in tourism network we used exploratory qualitative research with the case on "becak wisata" in Yogyakarta, Indonesia. The research was qualitative in nature, using in-depth interviews with key stakeholders in tourism development in Yogyakarta. Firstly, this research analyzed the figure of tourism network in Yogyakarta's "becak wisata". The analysis on tourism network itself have adopted actors network concept by Hakanson 1987 who introduced economic network model to analyze interdependencies and connectedness in business relationships. In his concept Hakanson underlines mutual orientation and commitment in the interconnections/relationships between two business organizations/companies. The relationship between them will produce interlocking activities and resources. Furthermore Hakanson figured that every relationship has different features. These features are affected by three different layer of substance of the relationship. The first layer is activities link such as technical, administrative, and other kind of activities that can be connected in a relationship. The second layer is resource ties that connect various resources element of the interrelated business organization. The resources can be tangible such as technology and material; and intangible such as knowledge. The last one is actor bond that ties actors and influence them in perceiving, evaluating, and treating each other (Håkansson and Snehota 1995; Oerlemans, Meeus, and Boekema 1998). All the layers configure interplay as shown in the Figure 2 below. However due to some limitations, this research will not discuss in detail about resource ties of the networks. Furthermore, the first layer, the activity links lead to the second step of this research, identification of the innovation of and in the network itself.

This step uses types of innovation as defined by Fagerberg et al and Hjalager, and also exploration of other aspect based on the existing condition.

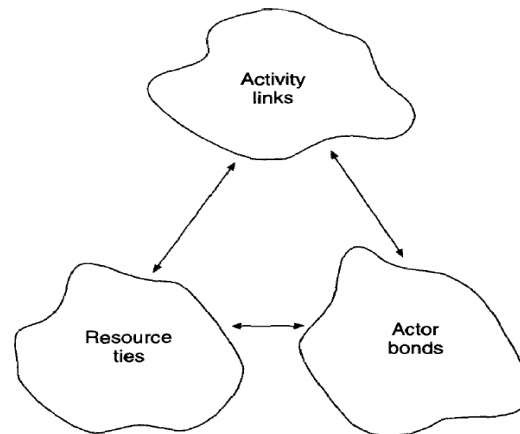


Figure 1. Interplay of Three Layers in Economic Network Model (Håkansson and Snehota 1995)

“Becak Wisata” in Yogyakarta as the Case Study

Yogyakarta as a tourism destination in Indonesia has more than 100 tourist attractions that consist of ancient temples, natural resources, religious interests, museums, and art/cultural tourism attractions. Those various attractions are the competitive advantages of Yogyakarta as one of the main tourism destinations in Indonesia, as well as Bali and Jakarta. Tourism itself contributes almost 31% of Yogyakarta’s domestic income (WalikotaYogyakarta 2007). In fact, compared to other tourism destinations, the progress of tourism in Yogyakarta is not satisfied yet. The average of tourist’s spending time in this place was only 1, 6 days less than half of tourist’s spending time in Bali, 3, 67 days (BapardaYogyakarta 2007). This fact was getting worse during Asian Economic Crisis (1997-1998), political instability (2004-2005), earthquakes and volcano eruptions (2006). The worst beat was earthquake on May 2006, destroying a lot of tourism attractions in Yogyakarta, especially ancient temple, museums, and royal palace as seen in the Figure 2.

The image of Yogyakarta had changed as unsafe tourism destination. Almost none of tourists visited Yogyakarta during that period (BapardaYogyakarta 2007). This decreasing number of tourism had effects on the community income, especially small enterprises and individuals who depend on tourism activities as their main income, such as street vendors, traditional transportation drivers, people who work in handicraft (making and selling), etc. The other impact was the

decreasing tourism object quality. Each object cannot overcome maintenance and operational cost of each object due to their low income.



Prambanan Temple



Taman Sari

Figure 2. Condition of some heritage sites after the earthquake in 2006

Alteration of pedicab: from traditional transportation mode to becak wisata

In 90's there was booming of tourism activities in Yogyakarta. It has impact on the community, particularly the informal sector. The pedicab drivers as one of informal sector in Yogyakarta had got the impact of the tourism activities. The tourists, especially foreign tourists prefer to use the pedicab as their transportation mode during their visit in Yogyakarta (Vanni 2004). They have found that using pedicab is a unique experience. This phenomenon urged the pedicab drivers to find tourists as their passengers. The money from this kind of passenger is more than their previous incomes; moreover they can get tips from the handicraft/food shops if they come with tourist who will buy the products. Furthermore, the pedicab drivers called tourists as "guest" not "passenger", as their effort to give more respect for the tourist as their special passenger.

The pedicab drivers realized that they need to provide valuable information about the tourism attraction in Yogyakarta for these special passengers (tourist). Not the entire tourists who come into Yogyakarta knows about attraction in Yogyakarta. They realized that tourist has interest on cultural tourisms that are centralized in Kraton (palace) Yogyakarta, therefore they makes collaboration with Kraton's management to create small tourism package for the tourists. The tourists who come to Kraton will be served by the pedicab driver when they want to visit surrounding Kraton, or if the pedicab driver find tourist who want to visit cultural attraction in Yogyakarta, firstly they will send the tourists into Kraton. The price of their services is quite cheap; with ± Rp 5.000,00 (less than US\$ 0, 5) the tourist can visit 3 different sites, such as Taman Sari

Garden, Bird Market, Great Mosque, Gondoman (tiger's stall), etc in surrounding Kraton (the sites are chosen by the tourist's request).

They have also realized that the tourist not only needs to visit tourism attraction, but also to stay at hotels or to buy handicraft shops or unique food shops. Therefore the pedicab drivers looked for any information, including the information which one will give more benefit for them through tips or gift if they can take tourist who will buy the products. The small tourism package is served by becak wisata to deliver tourist to tourism attraction but also to shopping activities.



Pedicab as traditional transportation mode



The "Becak Wisata"

Figure 3. The traditional pedicab vs. becak wisata

Time by time the pedicab drivers have innovated their services. They want to serve tourists as much as possible. They also learn English, Japanese language, Chinese language and other languages; of course it is only some basic words that are needed to serve the tourist, such as number, directions, etc. This innovation was not through formal mechanism, a pedicab driver who knows any valuable information including languages will give this information to other pedicab drivers, for free. Furthermore, they named their pedicabs as "becak wisata", it means pedicab for tourism activities. It can be found easily by the interactive and better performance, such as brighter color and more convenience seat.

The economic crisis, political and safety instability in late of 90's had decreased the number of tourists in Indonesia, especially foreign tourists (APEC 1999). The "guests" of "becak wisata" was also decreased. It urged the pedicab drivers to change their strategy. Before crisis, the guests will look for them, but now they have to look for the guests. It also influenced the attitude of pedicab drivers in serving the guests, such as the preference of trip will be more based on pedicab drivers, the trips that are more profitable for them, trips to several handicraft and traditional food shops that will give advantages for them. This phenomenon had made tourists inconvenience and moreover decreasing tourism image of Yogyakarta.

Union as strategy to give better service

This phenomenon had urged the local government and other local institutions to organize “becak wisata”. In 2002-2003, a hotel in Yogyakarta creates a union of “becak wisata”; furthermore it was called as union of hotel “becak wisata”. The member of this union is all “becak wisata” that serves the hotel’s guests who wants to visit some tourism attractions in Yogyakarta. There are an agreement between the hotel’s manager and “becak wisata” driver about the tariff (commonly their tariff is Rp 15.000,00 (± US\$ 1, 5) for three different sites in surrounding Kraton). The hotel’s manager guarantees that this “becak wisata” will bring the hotel’s guests back to the hotel safely.

The “becak wisata” drivers who serve visitors, especially in surrounding Kraton also established the union of Yogyakarta’s “becak wisata”. This union was formalized in 2004 through the facilitation of local government, particularly the Tourism and Cultural Broad of Yogyakarta. The leader of this union is one of drivers elected by the members. Nowadays, 7 unions are established in surrounding Kraton Yogyakarta. The name of each union is based on the name of site, such as Gondomanan (tiger’s stall), Masjid Agung (Great Mosque), Keben (the backside of Kraton), etc. The member of each union is 20-80 drivers. The motive of these unions is to increase the image of Yogyakarta as the tourism destination and the “becak wisata” is one of the agents on it. It is also an effort to sustain the “becak wisata” as the one of cultural assets in Yogyakarta.

In these unions they can improve their capacity, such as by conducting a language course; sharing information about tourism issues and urban transport’s rules; discussing strategies to improve their appearance, etc. One of their strategies is by giving safety guarantee for the passenger of the “becak wisata” through putting the name of the union and membership number of the driver within the union in pedicab’s. This guarantee is based on the objection from “guests” who frequently should choose other “becak wisata” because they could not recognize which one had served them. Furthermore, the characteristics of “becak wisata” under union’s management will be different from “becak wisata” under hotel’s management. Some points in the Table 1 and Figure 4 below show the differences.

“Becak wisata” is the example of correlation between tourism with transportation; and tourism with urban social development. It has transported tourists/visitors from one tourism attraction to the others or from tourism attractions to tourism accommodation. Furthermore this transferability of tourism activities will increase the tourism activities in a tourism destination.

Table 1. The difference between Independent Union and Union Under Hotel Management

Aspects	The Independent Union	Under hotel management
Physically	Name of the union on the becak wisata	Name of the hotel on the becak wisata
	The pedicab driver uses uniform with name of union and his membership number	The pedicab driver uses uniform with name of hotel and his membership number
Passenger	Tourist/visitor who met in attraction's site	Hotel's guests
Location	In the attraction sites, based on the name of the union	In front of the hotel
Tariff	Based on agreement between driver and passenger, usually all of unions have standard tariff	Based on agreement between driver and hotel's manager

The “becak wisata” also give benefit for the drivers, mostly the low income people who seek better quality of life through tourism sectors. The income from the tourists/visitors that is better than traditional pedicab income can improve their quality of life. This is also evidence that tourism activities have positive economic influences for the community, in this case the pedicab drivers. Table 2 shows the advantages and disadvantages of traditional pedicab and becak wisata.

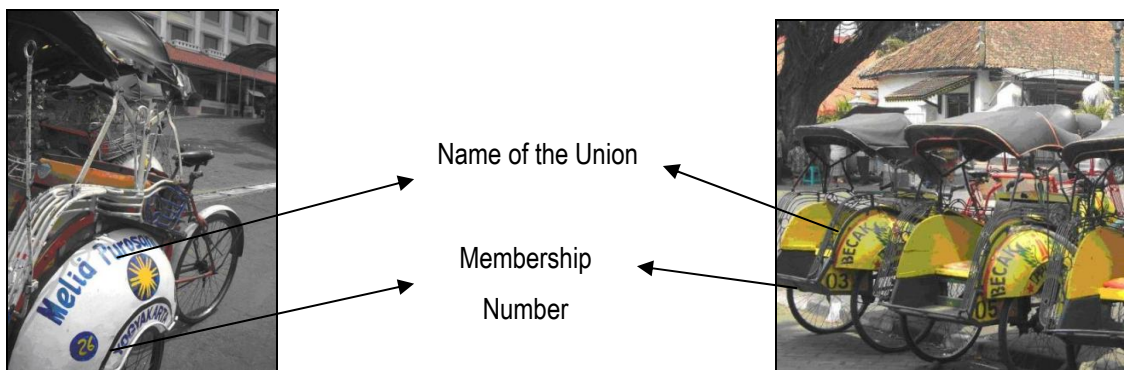


Figure 4. Each “Becak Wisata” has identities as guarantee for the “guest”

Table 2. Advantages and Disadvantage of Traditional Pedicab and Becak Wisata

Item	Traditional pedicab	Becak Wisata	
		The Independent Union	Under hotel management
Income Advantages	<ul style="list-style-type: none"> ○ Rp 3000-5000 from the passenger ○ sometimes plus tips ○ the amount are depend on agreement between driver and passenger and the trip distance 	<ul style="list-style-type: none"> ○ Rp 5000 from tourist/ passenger, sometimes plus tips from tourists ○ Plus tips from handicraft and traditional food shops 	<ul style="list-style-type: none"> ○ Rp 15000 organized by hotel, sometimes plus tips from tourist ○ Plus tips from handicraft and traditional food shops
Other Advantages	Passengers could be found easily in every places	Passengers/tourists are easily found in attraction sites	<ul style="list-style-type: none"> ○ High income for drivers ○ Better services for hotel's guests
Disadvantages	Drivers' income for each intake is the lowest, it urges drivers to find passenger as much as possible	Drivers' income for each intake is less than other driver under hotel management	Passenger/tourist depend on hotel's occupancy

Discussion

The innovation of “becak wisata” or pedicab for tourism activities in Yogyakarta is very interesting. The mechanism has been done spontaneously by the pedicab drivers to gain more passengers in order to improve their income. Furthermore, based on the figures above, we can define the types of “becak wisata” innovation as follow:

1. *product innovation*

The product innovation can be seen from the new physical performance and service provision by the pedicab drivers. The new physical performance can be seen from the name of their union and also their membership number on the pedicab, and also uniform of the drivers itself. On the other hand the new services are such as new routes to tourist sites, traditional food shops, and hotel; hospitality; tourism information and also ability to speak foreign language with the customer. This new performance and service has changed the pedicab's role of as a traditional transportation mode into one of tourism attraction (as part of cultural tourism) in Yogyakarta, especially for foreign tourists who never go by a pedicab. Furthermore their new performance as tourism attraction and also their services to provide tourism information give new role of becak wisata, as the agent

tourism marketing. As an agent of tourism marketing, the becak wisata has strategic role to persuade tourist to visit a tourist sites, shops, and accommodation. This spontaneous innovation also gives benefit for the tourist providers and accommodation providers who gets customer from them.

2. market innovation

Through the alteration of traditional pedicab into a “becak wisata” or pedicab for tourism activities, the pedicab drivers have changed their consumers, from resident as the passenger into tourist as the guest. Their market is not only tourist who visit a tourist attraction but also hotel guest that stay in the hotel where the pedicab driver is managed. This market innovation is to respond of the pedicab driver to the changing of demand. Serving tourist is more profitable for the “becak wisata” drivers.

3. process innovation

The market innovation of “becak wisata” also gives significant impact on the way the pedicab drivers in serving the consumer. Previously they serve common resident with few interaction. But now, they have to have hospitality manner to serve the guest. This is the way to give positive image of Yogyakarta as a tourist destination. Basically the “becak wisata” drivers in Yogyakarta are Javanese who already has hospitality manner with other people. However, in serving guest, especially from foreign countries with very different behavior will be a challenge for them. To overcome this problem, the drivers discuss it with the union member, in case they can not solve it, the union will invite local government or other actors, such as a hotel manager who are known very well in the union to solve this problem.

4. management innovation

The pedicab drivers has innovated their pedicab with no formal mechanism. A pedicab driver who knows any valuable information including languages will give this information to other pedicab drivers, for free. In some circumstances, transfer of knowledge' process among the pedicab drivers are organized under the union, especially if the knowledge or information is very important, such as information on new issues or new government regulation related to their services. Through this union, the pedicab drivers also make important decisions, such as the name of their union, their new physical performance, tariff agreement, and their leader.

The pedicab drivers are also bonded with formal tourism actors, such as hotel, restaurants, attractions, and local government and other informal tourism actors (for

example street vendors). With those actors, they are involved in some collaboration actions, such as between pedicab and hotel. The hotel uses pedicab as one of traditional transport mode and also attraction provided by hotel, and vice versa pedicab driver has hotel visitors as its passengers. They are also tied in their sharing resources, i.e. passengers, services, and information. The pedicab drivers also has network with local restaurants and handicraft shops. With those actors the pedicab drivers receive reward when they can transport tourists into the shops or restaurants. The local government in this case also involves in supporting the networks by providing tailor made training for the pedicab drivers, such as training on foreign languages, in order to provide better services for the passengers (Damayanti 2009). These actors bonds are managed both by the union (independent and hotel management) and also based on individual agreement among the actors. On the other words, the union gives opportunity to its member to have network with other actors beyond the union as long as the network gives no disadvantages for the union.

The other important finding in this innovation is the role of a local champion within the pedicab driver community, i.e. the union leader . The initiation of the process of innovation has been taken by the leader of the union and a hotel manager in Yogyakarta. They discuss the way to make innovation of a pedicab as a traditional transportation mode to be something that can give advantages for both parties. Furthermore they discuss their strategy to make a “becak wisata” to the all member of pedicab driver union in order to get support and also valuable information to finalize the strategy. The role of local champion in this process of innovation is very important, since as the part of the community (pedicab driver) he has access and trust from the driver in order to persuade them to create innovation. Furthermore the union leader also needs the trust from his external network, in this case with hotel management and also local government to get support on the pedicab driver activities.

5. institutional innovation

As mentioned above, the union has important role in the innovation of pedicab in Yogyakarta. Through the union, the members have decided some agreements related to their existence. Each member has obligation to fulfill the agreement, if not there will be consequences for them. For example about tariff for the passenger, the pedicab drivers are not allowed to give lower tariff than the agreement, if so the union will give punishment for the driver. All the agreement is institutionalized through and within the union.

Implication on Tourism Development Policy

Those figures of innovation of and in pedicab actors' network in Yogyakarta are the challenge for the tourism policy making in particular the challenge to positivism, linear thinking and the notion that policies and plan can predict and control and shape the development (Scott, Baggio, and Cooper 2008; Stevenson, Airey, and Miller 2009). The innovation is created mainly through informal/bottom up mechanisms in the field. The actors themselves have formed the networks to overcome their problems on decreasing of tourist in Yogyakarta. Therefore, as the follow up of those phenomena, the government needs to develop cooperative and supportive policies, as follow:

- Fair legal framework (bureaucracy and judiciary) that give opportunities for the also informal actors to involve and contribute in the tourism development. This fair legal framework is stimuli and also guarantees for informal actors to improve their services in order to provide more attractive tourism destination.
- Supporting program in increasing local actors' capacities, such as information, technology, knowledge, management skill, etc. Based on the model of actor network above, each actor who is bonding with other actors will share resources as the prerequisite of their activities links. The pedicab driver with limited capacities cannot contribute as much as the other actors, such as hotel management. Therefore the government should provide program to increase the local actors' capacities in order to increase their competitive advantage in the networks.

Conclusion

The innovation of pedicab in Yogyakarta to be a "becak wisata" or pedicab for tourism activities is a reaction of tourism actors in Yogyakarta to overcome their problems, i.e. gaining markets especially after economic crisis and earthquake that gave significant impact on their income. Quick called these phenomena as *resilience*, the ability of the community in this case pedicab drivers' union to absorb disturbance, i.e. multidimensional crisis by creating higher value of a pedicab (Quick 2008). The innovation is the way to maintain not only the pedicab driver income and also the existence of the pedicab as one of traditional transportation mode in Yogyakarta.

This research also gives emphasis on the informal actor networks, i.e. the "becak wisata" union both independent union and under hotel management union. This tourism actors' network is an innovative strategy to overcome tourism collapse. Through the networks, the local actors can have

broader access to markets. The networks themselves are dynamic; mostly they are formed by informal mechanism. This mechanism should be facilitated by legal framework. Therefore, the governments have to promote the tourism actors' network in order to support the sustainability of a tourism destination.

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