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Conflict Resolution Analysis on the Revitalization Plan of Tradisional Market: A study on Kiaracondong traditional market in Bandung city

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Conflict Resolution Analysis on the Revitalization Plan of Tradisional Market:

A study on Kiaracondong traditional market in Bandung city

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***Abstract*—Traditional market in Indonesia is in poor condition in terms of store image and market governance. One of the most crowded traditional market in Indonesia, Kiaracondong Market, is certainly not an exception. One common problem that has caused prolonged conflicts in Kiaracondong Market is the behavior of street vendors who sell in front of the market and block the flow of consumers. This behavior has provoked traditional market tenants that have been put at huge disadvantage. In response to that conflict, the municipal government of Bandung City decided to revitalize Kiaracondong market in 2017. Unexpectedly, this plan even adds more conflict between the three parties: municipal government, street vendors, and market tenants. This study aims to seek for stable solution for conflicts that rose from the revitalization plan of Kiaracondong market. The data used in the analysis are collected by interviewing the representative of street vendors, market tenants, and the municipal government of Bandung City. Then, the results are analyzed by using Graph Model for Conflict Resolution (GMCR). The results of stability and sensitivity analysis are also being discussed. Based on the analysis of the first phase of conflict, the stable solution found on which market tenants are suggested to hold the protest to municipal government about the behavior of street vendors. Meanwhile the street vendors are advised to continue to trade around Kiaracondong Market. In respect to stable solution for the second frame, market tenants are suggested to demand for free kiosk and approve market revitalization as planned by The Government of Bandung City.**

Keywords—traditional market; conflict resolution; street vendor; market revitalization; GMCR.

I. INTRODUCTION

Indonesian independence. Nonetheless, the number of traditional markets in Indonesia is decreasing at alarming pace. The number of traditional markets in Indonesia has been dropped from 13.550 on 2007 to 13.450 on 2009 [1]. The figure getting even worse on 2011 when the number of traditional markets in Indonesia plunge to 9.950 [1]. That was a 27 percent drop within 5 years. That setback was traced back to poor level of store image of traditional markets as can be easily observed from their shabby appearance [2].

Aside from the traditional market tenants who are financially capable to rent kiosks from traditional market management, many of the merchants are not supported by sufficient capital to rent kiosk. As the solution, most of those merchants occupy a significant portion of street sidewalk and roadside to do the trade. In Indonesia, this type of merchants is called as street vendors. In 2013 only, the number of street vendors in Indonesia has reached 22 million people [3] and more than 20 thousand of them occupied various public spaces on Bandung City and become a new type of nuisance [4].

Pertaining to the irritating behavior displayed by street vendors, the municipal government of Bandung City was hesitant to take harsh action to discipline the street vendors because becoming a street vendor have become a popular alternative to make a living for the poor. One consequence of this policy is the growing number of street vendors that consume public space such as sidewalk, bus terminal, and roadside that more than often create street congestion and discomfort for other street users. A particular area in Bandung City that is widely known for severe street congestion caused by street vendors is Kiaracondong Market [5]. This condition has forced the head of sub-district of Kiaracondong to urge the municipal government of Bandung City to revitalize Kiaracondong Market [6]. Finally, the municipal government of Bandung City that was represented by PD. Pasar Bermartabat declared that Kiaracondong market will be revitalized on 2017 [7].

The revitalization plan has triggered a new conflict on the already chaotic situation of Kiaracondong Market. Prior to the revitalization plan, there was a prolonged conflict between traditional market tenants who own kiosk in Kiaracondong Market and the street vendors around Kiaracondong Market. The conflict arises because the tenants feel harmed by the trade practice of street vendors that block the flow of visitors and "steal" their customers away. At first, the protest of market tenants was ignored by the municipal government of Bandung City. After the revitalization plan has been announced, both market tenants and street vendors opposed the plan. Street vendors feel that their revenues are being threatened by the plan. On the other side, the tenants worried that they have to fight with each other for the right to rent a new kiosk that is

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located on lucrative spot in Kiaracondong Market after the revitalization is completed.

II. Literature Review

Conflict is a process that begin when one party perceives that there is another party that might improve the probability of negative outcome or might affect negatively something that of concern [8]. One useful concept to study of how conflicting parties might rationally make decisions by interacting with each other is Graph Model for Conflict Resolution (GMCR). As a tool of analysis, GMCR laid its ground upon conflict analysis and game theory [9]. As widely known, game theory aims to identify strategic action that might serve as the most advantageous response of each party by accounting for strategy taken by another party [10].

Game theory rest upon five basic assumptions [11]. Firstly, the game structure is determined by option selected by each player. Secondly, every player knows all of the options that are available. Thirdly, the payoff is determined by the choice made by each player. Fourthly, the payoff known by each player. Moreover, the players form a preference or do not feel indifference about each payoff. Each player can comfortably assign rank to each option based on its meaning to them. Fifthly, each player acting rationally as they try to satisfy their own interest. These five basic assumptions dictate the operationalization of GMCR as explained on the following paragraph.

As conflict resolution method, Graph Model for Conflict Resolution (GMCR) frames conflict situation to identify a stable outcome. GMCR is a simulation tool to find strategic action that might resolve the conflict. It also serves as a simulation tool for interactive decision making that prove to be useful in mediation and negotiation preparation [12]. The general procedure to operationalize GMCR is displayed on Fig. 1. The primary concept that is vital to the implementation of GMCR procedure as being used in this study are stability, instability, and equilibrium [13].

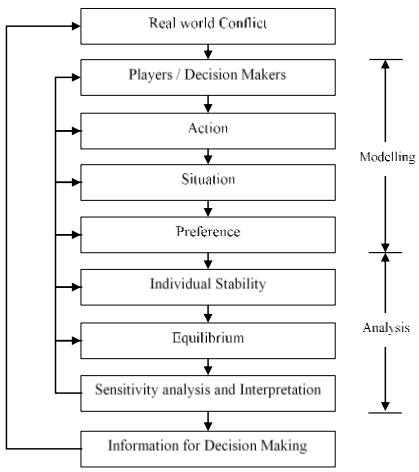

Fig. 1. General procedure of Graph Modelling for Conflict Resolution (GMCR).

Stability occurs when there is no incentive available for player to move from particular state. The equilibrium is reached when a state is stable for all players. Instability said to be occurred when player able to get a higher pay off by moving to another position. There are several types of stability and two type that particularly of use in this study are Nash Stability and Sequential Stability (SEQ) [9]. Nash stability is achieved when player cannot improve his payoff by changing his strategy (selected option) [9]. In short, moving to different state brings no benefit to player [14]. Meanwhile SEQ is achieved when a more preferred state is available yet moving to that more preferred state may trigger opponent countermove to improve the opponent's benefits [14].

Ref. Alamanda et al. [11], several elements of GMCR that are directly involved in the operationalization of GMCR are players, options, state, and preference as explained as the following:

- Players are conflicting parties that act as decision maker that pursue to satisfy its own self-interest. In this study there are three players involved: the municipal government of Bandung City, street vendors of Kiaracondong market, and tenants of Kiaracondong market.
- Option covers all alternative action or moves that are available to and can be taken by the player. The options available to players in respond to the revitalization plan of Kiaracondong Market are discussed on the subsequent chapter.
- State or situation is the combination of options taken by each player. However, not all states are feasible to be pursued. Feasible state represents vast array of scenarios that are deemed to be logically worthy to be pursued by players.
- Preference represent the favorability of an option compared to a set of other options for particular player.
- Payoff is known reward or incentives that available to each player as the result of pursuing particular option.

Based on the basic assumptions of game theory and the above elements, the basic assumptions that regulate the operationalization of GMCR according to Alamanda et al. [11] are as follow:

- There are more one player and each has more than one option.
- Not all of the states should be pursued by each player since not all of the state are feasible. State is the combination of all options available to all players. The number state is a product of the number of players and the number of available options.
- Each player assumed to be rational and able to assign rank to each state based on its preference. Because each player assumed to be rational, they will not switch to a less feasible state.

- Each player act in sequence yet in each of their action they always take into account the likely countermove of their opponent (unilateral improvement).

III. METHODOLOGY

Qualitative research rest upon naturalistic approach that is the attempt to investigate an object in its natural setting and interpret the results, in order to produce meaning [15]. Several activities that closely related to qualitative research that can be of help to define qualitative research are analyzing experience of individual or group, interactions and ongoing communication, and documents or similar trace of interactions [15]. Based on similarity of the characteristics, this research can be grouped as qualitative research since it departs from the conflict that arise from revitalization plan of Kiaracondong Market. The conflict also being analyzed from the perspective of the informants in its natural setting to investigate the way they perceive the social situation.

In this study, the data collected by interviews that follow semi-structured interview approach as explained by Flick [16]. The questions begin with open-ended questions and then continued by hypotheses-directed questions and confrontational questions. After the first round of interviews have been conducted, another round of interviews is conducted to validate the result of the first round of interviews. In this round, the informants provided with opportunity to further elaborate their answers on the first round of interview and correct the record-keeping mistakes if any. Consent also being asked from the informants at the end of this round. This approach is selected since the topic under study requires a great extent of knowledge that is not easily found. Hence identifying and approaching the appropriate informants in the pre-interview stage become the main challenge in data collection process.

As has been mentioned, one key challenge in this study is in identifying and approaching the appropriate informants from which researchers might retrieve meaningful perspective. In order to do that, this study put several measures to ensure the appropriateness of informants. Each informant was selected based on his ability to represent each conflicting party i.e. representativeness. This ability is manifested on several criteria namely position or role played, depth of familiarity or knowledge, and time spent to serve the interest of conflicting parties. These criteria ensure that the interest of each informant aligned with the interest of the party that he represents.

In respect to position or role played, this study attempted to identify individuals that on the position to make strategic decision for the party or player he represent. This is much easier to be conducted in a more formal organization such as municipal government. Although street vendors and market tenants also try to organize themselves, the nature of the organization is much less formal. The lack of written policy and procedures, membership boundaries, and the lack of clarity regarding the chain of command made it difficult to ensure the representativeness of informants. Although the degree of influence possessed by these informants justify them to make strategic decision, the representativeness of these informants is somewhat lesser than the informant that represent the municipal government.

In respect to level of familiarity or depth of knowledge of each informant to the conflict at hand can be easily measured by using source triangulation. Time spent by these informants to serve the party that he represents also become an important criterion. Time spent provide evidence that the decisions made by these individuals in the past can be accepted by most members of the organization. Members' acceptance become even more important in less formal organization since it is the natural reason that justify the sustainability of leadership. From this point forward, these informants act as players.

Each conflicting party and the informants that were chosen to represent that party are explained as follow:

- Municipal government of Bandung City that represented by PD. Pasar Bermartabat. PD. Pasar Bermartabat is a for-profit company owned by Municipal Government that received a mandate to manage traditional markets in Bandung City. One of traditional markets that is under the management of PD. Pasar Bermartabat is Kiaracondong Market. The key person of PD Pasar Bermartabat that is chosen as the informant in this study is the Sub Unit Head of Public Relation of PD Pasar Bermartabat. This individual established an active line of communication with tenants and street vendors in the mediation process. In short, this individual acts as an organizational interface for PD Pasar Bermartabat.
- Tenants of Kiaracondong Market that rent a kiosk from PD. Pasar Bermartabat. Most of merchants in Indonesia organized themselves in a paguyuban. Paguyuban is an association that its structure resembles the ties of kinship. The decision made by the leader usually is heavily influenced by agreements reached among its members. Unfortunately, the Paguyuban of Kiaracondong Market Tenants has been dissolved since the 1990's. Nevertheless, the market tenants were still holding a biweekly merchant forum when the data was collected. The individual that lead this forum is selected as informant of this study. Moreover, this individual also trusted to convey the aspirations of tenants in the mediation process.
- Street vendors of Kiaracondong Market. Street vendors do not rent a kiosk from PD. Pasar Bermartabat. The street vendors of Kiaracondong Market do not have a paguyuban of their own since they already have a paguyuban on a city level. One member of this paguyuban that is actively involved in the mediation process is selected as informant in this study. This individual also came from a family that also work as street vendors of Kiaracondong Market from generation to generation. This selected informant is also trusted by other street vendors to convey their aspiration.

The trustworthiness, that consist of credibility, transferability, dependability, and conformability, of this study is ensured by using several measures as pointed out by Shenton and Krefting [17,18]. For establishing credibility, interview

coupled with observation are used to obtain the necessary data. Preliminary visits on Kiaracondong Market and informants involved are conducted before the first round of interview. This is conducted to improve familiarity of the investigator toward the environment and problem at hand and also to foster engagement and trust of the informants. To establish transferability, the report of this study presents the environment on which the study is conducted. To reinforce dependability, the report of this study also tries to elaborate the procedure used in this study to some extent. To establish conformability, triangulation is employed in this study including providing opportunity to informants to review and check the recording of the interview.

IV. Result and Discussion

A. Frame 1 (Existing Condition)

Conflict can be divided into several different situation or frame based on how conflict might evolve from one situation into another [9]. Based on the findings, the conflict on Kiaracondong Market can be divided into two conflict situation or frames. The first frame (Frame I) is the beginning phase when the market tenants feel that they are being harmed when street vendors swarm the area around Kiaracondong Market, "block" the entrants, and "steal" the customers away.

In Frame I, the local regulation that was issued by The Mayor of Bandung City, that is Perda Kota Bandung No. 04/2011, categorized public areas into several zones namely red, yellow, and green zone [20]. Each zone indicates different level of trade restriction for street vendors. In Frame I, Kiaracondong Market is marked by the municipal government as yellow zone. In yellow zone, there are some restrictions as to when and where the street vendors allow to trade. Restrictions that are often to be violated by street vendors of Kiaracondong Market. This act of violation cannot be tolerated by market tenants that eventually raise to be a conflict.

Based on the findings, in response to that condition, there are several options that are available to each player in Phase I. For market tenants, there are two options that are available and can be considered. In the first option, market tenants hold a protest to the government to force street vendors to comply to government regulation. As for the second option, market tenants turn themselves into street vendors which has higher potential earning. In respect to street vendors, there are two options that are found to be available. In the first option, street vendors can choose to comply with the restrictions imposed by government regulation. In the second option, street vendors refuse to become market tenants and continue to trade as street vendors.

For each option, there two response that can be made by each player. Either it is deciding to take the option (denoted by Y as abbreviation for Yes) or deciding to refuse the option (denoted by N as abbreviation for No). Based on the options, there are 24 or equal with 16 scenarios (2n on which 2 is the number of players involved and n is the number of options) that can be formulated. All of the scenarios available to each player for Frame I are displayed on Table 1.

TABLE I. The List of Players, Options and Scenarios for Frame I

Player	Option	Scenario															
		1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*	*14*	*15*	*16*
Tenants	Protest to turn street vendors into tenants (1)	Y	Y	Y	N	Y	N	N	N	Y	Y	Y	N	Y	N	N	N
	Turn into street vendors (2)	Y	Y	N	Y	N	Y	N	N	Y	Y	N	Y	N	Y	N	N
Street vendors	Turn into market tenants (3)	Y	N	Y	Y	N	N	Y	N	Y	N	Y	Y	N	N	Y	N
	Continue to trade as street vendors (4)	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N

B. Frame 2

The second frame is the phase when Municipal Government of Bandung City announce the plan to revitalize Kiaracondong Market. Initially, both market tenants and street vendors refuse the plan. From the perspective of market tenants, the revitalization will put them at risk since there are no guarantee that they will get the right to rent their kiosk back. Market tenants also refuse to pay to cover revitalization cost. From the perspective of both market tenants and street vendors, revitalization demands them to temporarily move from their current trading spots and hence threaten their potential earning. However, since the government refuses to back down from their initial intention to revitalize the market, both market tenants and street vendors alter their demand and ask for free kiosk from the government instead. Following the same rules as Frame I, available scenarios in Frame II are displayed on Table 2.

TABLE II. The List of Players, Options and Scenarios for Frame II

Player	Option	Scenario			
		1	*2*	*3*	*4*
Kiaracondong merchant	Demand for free kiosk (1)	Y	Y	N	N
Municipal Government	Revitalize the market (2)	Y	N	Y	N

C. Feasible Scenario and Scenario Preference

From all of the scenarios created and displayed above, some must be eliminated because it can be considered as unfeasible. Some scenarios are found to be not feasible according to the interview and documents that are reviewed. In Frame I, only 7 scenarios are feasible, namely scenario 2, 3, 4, 5, 6, 7, and 8 as displayed on Table 3. As for Frame II, feasible scenarios are found on scenario 1, 2, 3, 4 as displayed on Table 4.

TABLE III. FEASIBLE SCENARIOS FOR FRAME

Player	Option	Scenario						
		2	*3*	*4*	*5*	*6*	*7*	*8*
Market tenants	Protest to turn street vendors into tenants (1)	Y	Y	N	Y	N	N	N
	Turn into street vendors (2)	Y	N	Y	N	Y	N	N
Street vendors	Turn into tenants (3)	N	Y	Y	N	N	Y	N
	Continue to trade as street vendors (4)	Y	Y	Y	Y	Y	Y	Y

TABLE IV. FEASIBLE SCENARIOS FOR FRAME II

Player	Option	Scenario			
		1	*2*	*3*	*4*
Kiaracondong merchant	Demand for free kiosk (1)	Y	Y	N	N
Municipal Government	Revitalize the market (2)	Y	N	Y	N

After identifying feasible scenarios, the next step is to identify the preference of each player toward each feasible scenario. Preference is the most important information that are needed as the input to analyse the stability of solutions. Based on the preference of each player toward scenarios, the scenario is place from the leftside to the rightside of the table. The most preferred scenario is put on the far left. The rest of the scenarios are put afterward from the leftside to the rightside based on the preference of players toward them. Therefore, the scenario that is put on the far right of the table is the least preferred scenario.

In frame 1, from the perspective of street vendors, the sequence of the scenarios from the most preferred to the least preferred is 8, 7, 6, 4, 5, 3, 2 and from market tenants' perspective is3, 5, 2, 4, 6, 7, 8. In frame 2, the sequence of scenario based on the preference of Kiaracondong merchant is 2, 1, 4, 3. The most preferred scenario is scenario 2 in which the government does not revitalize the market. At the same scenario, the government provide free kiosk for both market tenants and street vendors (Kiaracondong merchants). From another perspective, the municipal government preferred scenario in sequence from the most preferred to the least preferred is 3, 1, 4, 2. The most preferred scenario for municipal government is when Kiaracondong merchants do not demand for free kiosk yet they are willing to accept revitalization.

D. Stability Analysis

The next step after identifying scenario preference for each player is stability analysis by using Nash stable (r), sequential stable (s), and unstable (u). Nash stable occurs when a player does not change her position because the alternative position offer a less payoff compared to her current position. Sequential stable occurs when the player decides to not change her position after considering likely countermove of her opposite player. Another condition that must be met to facilitate the occurrence of sequential stable is when the payoff received by the opposite player does not exceed the payoff on her current position. Unstable occurs when a player moves toward a position which offer a better payoff compared to her current position.

Stability analysis tries to identify which scenario that might bring equilibrium (E) to all of the players. In equilibrium, the payoffs are acceptable by all of the players. The equilibrium can serve as the solution for the conflicts that occurred in Kiaracondong Market revitalization. By using this concept, the results of stability analysis for conflict on Frame I is shown on Table 5.

TABLE V. STABILITY ANALYSIS OF FRAME I

Market Tenant							
		E					
Stability	r	r	u	u	u	u	U
State ranking	3	5	2	4	6	7	8
Uis			5	3	5	3	5
					2	4	2
							6
Street Vendor							
Stability	r	s	r	s	r	u	R
State ranking	8	7	6	4	5	3	2
Uis		8		6		5	

On Table 5, it can be seen that the equilibrium is found on scenario or state 5. In scenario 5, market tenants decide to hold protest to force street vendor to turn into market tenant. However, despite that act of protest, street vendors do not turn into market tenant and continue to trade as street vendors. It seems that the equilibrium rest upon status quo situation. This situation can also be called as bad ending in the perspective of market tenants because street vendors continue to trade around Kiaracondong Market.

In respect to the conflict between market merchants and municipal government in Frame II, the equilibrium is found on state or scenario 1. In this scenario, municipal government execute the revitalization plan and provide free kiosk in return to market merchants. The stability analysis of Frame II can be seen on Table 6.

TABLE VI. STABILITY ANALYSIS OF FRAME II

Market Merchants				
		E		
Stability	r	r	u	u
State ranking	2	1	4	3
Uis			2	1
Municipal Government				
	2	1	4	3
Stability	r	r	u	u
State ranking	3	1	4	2
Uis			3	1

E. Sensitivity Analysis

To determine the final scenario that can be serve as resolution for conflict that is triggered by revitalization plan of Kiaracondong Market, sensitivity analysis is conducted. Sensitivity analysis is the analysis to get some picture if the player moves from a scenario, usually existing scenario, to

another scenario. Several concepts that are found to be useful in sensitivity analysis are uniterally improvement (UI), uniterally disimprovement (Udis), simultaneous improvement (SI), and simultaneous disimprovement (Sdis).

Uniterally improvement is a condition when the payoff resulted from a player's move to new position is higher than the payoff from that player's previous position. Uniterally disimprovement is just the opposite of uniterally improvement. Simultaneous improvement is when several players that move together provide better payoff compared to their previous payoff. The opposite is true for simultaneous disimprovement. For Frame I, the sensitivity analysis is shown on Table 7.

TABLE VII. SENSITIVITY ANALYSIS FOR FRAME I

Player	Option	Market Tenant			
Market Tenants	***Protest (1)***	Y	N	Y	Y
	Turn into street vendors (2)	Y	Y	Y	N
Street Vendors	***Turn into market tenants (3)***	N	N	N	N
	Continue to trade (4)	Y	Y	Y	Y
	Label	2	6	2	5
		Udis		UI	

As depicted by Table 7, if the market tenants unilaterally change its option selection from protesting (Y) to not protesting (N), the situation move to scenario 6. In this scenario, market tenants are put in unilateral disimprovement (Udis). Although from the point of view of street vendor, scenario 6 brings major improvement. If market tenants change its option selection from turning into street vendor (Y) to not turning into street vendor (N), the situation move to scenario 5. In this scenario, market tenants are put in unilateral improvement (UI). This scenario also bring improvement for street vendors. Any unilaterally change from street vendors put both street vendors and market tenants on unfeasible situations (scenario 1 and scenario 10). Moreover, because equilibrium can be arrived at by a single move of market tenants (UI), third party is not required to take a role as mediator.

For frame II, in which the conflict occurred between municipal government and market merchants, the sensitivity analysis is displayed on Table 8.

TABLE VIII. SENSITIVITY ANALYSIS FOR FRAME II

Player	Option	Kiaracondong Merchants		Municipal Government	
Kiaracondong merchants	Free Kiosk (1)	N	Y	N	N
Municipal Government	Revitalize (2)	Y	Y	Y	N
	Label	3	1	3	4
		UI		Udis	

As displayed on the table above, if Kiaracondong merchants change its option selection from not demanding a free kiosk (N) to demand for free kiosk (Y), the payoff for the merchants improved (UI). At the other hand, the position of government decreased. If the government change its option selection from revitalize (Y) to not revitalize the market (N), the payoff for the government is reduced (Udis) yet the payoff for the merchants is improved. Therefore, any unilateral move will decrease the payoff of the government. However, the decreased payoff is reduced if the Kiaracondong merchants demand for free kiosk compared to municipal government cancel the revitalization. Similar to Frame I, to arrive at equilibrium, the players do not need a mediator because it can be reach by a move from Kiaracondong merchants.

V. CONCLUSION AND RECOMMENDATION

As one of the largest traditional market in Bandung City, Kiaracondong Market plays a vital role in supporting local economy. Therefore, the conflicts that color Kiaracondong Market must be solved immediately. According to conflict resolution analysis, there are two conflicts. The first conflict is occurred between market tenants and street vendors of Kiaracondong. The conflict resolution analysis using GMCR found a stable situation for both conflicting parties. In this situation, market tenants advised to refrain themselves from turning into a street vendor and keep protesting. Moreover, street vendors are suggested to continue to trade as street vendors. This situation is able to improve the payoffs of both market tenants and street vendors.

In response to the first conflict, the government launch a revitalization plan of Kiaracondong Market. This plan triggers a new conflict between the government and market merchants. GMCR also manage to found a solution for this conflict. In the proposed solution, market merchants are suggested to take their option to ask for a free kiosk from the governments in return for their approval for market revitalization. In the solutions for both conflicts, no mediator is required because the solution can be reach by a single move from a single actor.

In this study, GMCR proves that it can be a powerful tool to solve both horizontal and vertical conflicts in fast growing cities in emerging country like Bandung. Hopefully, by resolving conflicts that often impede economic development, the vision of Bandung to become the best smart city in Indonesia can be more quickly realized.

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