

***Pulang kampung:* communication technology network**

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Abstract *Pulang Kampung*, popularly known as *mudik bareng*, is the activity or event of *boro* people. It means going back to their village. The activity allows many people to meet and gather with parents, extended families, and neighbours who have also travelled from their village and worked diversely at the migrant regions. This study focused on how one of the *boro* communities from Pule village at Jakarta mobilise their group members to the program using communication technology of cellular phone. This study applied the community mobilisation and coordination concepts which lead to the communication network model. The network model was analysed by density, centrality, and eigenvalue of social network analysis to depict the coordination and mobilisation map of communication technology network of cellular phone among the group member of *boro* community. In addition, the network was explored and discussed with types of kinship and community leadership.

Keywords: communication network; communication technology; cellular phone, kinship

INTRODUCTION

Pulang Kampung is the activity of people who are going back to their village. This activity is related to annual tradition to celebrate Eid ul-Fitr (*Lebaran*) after fasting (*Ramadhan*) month. This time is an opportunity for people to gather with their parents, extended families, and neighbours who have also travelled from their village and worked diversely at other migrant regions. In different countries such as Malay, Singapore, and Brunei, *Pulang Kampung* is called "*Balik Kampong*", "*Balik Kampung*" (lit. return to the village) which means a massive exodus during festive seasons such as *Hari Raya Aidilfitri* (Lee, 2010).

Since *Pulang Kampung* is an important event, nowadays, there is a trend of individuals, groups, communities, companies, and

government asking and encouraging specific community called *boro* people at migrant areas to participate in going back to the village together or homecoming together (*Pulang Kampung Bareng* or *Mudik Bareng*) program. *Boro* has a meaning as a *pengembara* or traveller who is going outside from the host region to the destination region. In Javanese, *boro* comes from word *ngelemboro*, *ngelemboro niku lungu/kesah*, which means migrate temporarily or seasonally (personal communication with Parimin, 2010). Mostly terminology of being a *boro* person is for any entrepreneur works not an official or government jobs. Jakarta, as megacity in Indonesia, is the destination of *boro* people to work and find a better life (Maksum, 2009).

Furthermore, the Ministry of Manpower and Transmigration Republic of Indonesia appeals to all companies to facilitate *Pulang Kampung Bareng* for their workers and their families. According to Transportation Agency of DKI (*Daerah Khusus Ibukota* - Special Region of Capital) Jakarta, until August 8, 2012, there was 17 organisers of *Pulang Kampung Bareng* which transporting 77.428 passengers carried by 1.493 intercity and interprovince bus (AKAP – *Angkutan Kota dan Provinsi*), 1 train, and 1 ship (Qanitat, 2012).

Furthermore, *Pulang Kampung* program was announced via various media, both mainstream media and new/online/social media to attract more participants. In mainstream media, the program had been put in mass media such as newspapers, magazine, television, and radio. While in other conventional media, the program had been promoted on posters, pamphlets, (street) banners, and billboards. Moreover, with the existence of new media including website (such as news online etc.), mailing list, weblog, and social media such as Facebook and Twitter, other tools of communication technologies such as blackberry messenger (BBM), and text messaging (SMS) had been used to spread out the information of *Pulang Kampung Bareng* program.

Compared to *Balikbayan*, a tradition from Filipinos (Blanc, 1996), which is a transnational family communication (Uy-Tioco & Cabalquinto, 2020), this study focused on micro activities from a specific community that lives across the region within the country. However, this study did not focus on how the promotion, publication, and spreading the information of the program into both mainstream and new media. Some studies found that media, including social media, is only a stimulant or catalyst (Bora, 2012) or a tranquiliser (Wete, 1988) for the program. For that reason, this study focused on how participants were mobilised in the program via communication technology, especially cellular phone. The cellular phone is now a massive communication technology used by over six billion people or 87% of the population (mobiThinking, 2012). At the same time, the cellular phone has been used by non-profit organisations to mobilise their community. Therefore, this study looked into how communication

technology, primarily cellular phone, mobilise the community on Pulang Kampung program.

Several studies found that the success of the program is based on how the community mobilise themselves (Nadeau, 2010) and the participation of community leaders (Layne et al., 2008). Since the community leaders are a vital part of making any program successful, many organisation and governments develop community leadership program (CLP).

Nowadays, since the advance of information and communication technology (ICT) revolution, several studies showed the importance of ICT on mobilising the community. Some studies also showed the role of ICT on mobilising the community in politics, mainly social media, in the Egyptian revolution (Eltantawy & Wiest, 2011). Especially on cellular phone, several reports showed its role on mobilising the community on health (Dougherty, n.d.), on resource mobilising program (St-Pierre, 2010), and civic engagement in electoral and voter registration campaign (Stein & Verclas, n.d.). Indeed, the cell phone is a crucial factor in mobilising the community increases. Meanwhile, there was a report showing that two non-profit organisations use the technology effectively in philanthropy and innovation thought all aspect of the organisation. Moreover, World Bank (2012) reported case studies of cell phone usage in Sri Lanka, Chile, China, Kenya, South Korea, Bangladesh, Ethiopia, Philippines, South Africa, and Morocco, which have transformed livelihood and develop the community.

Cellular phone (cell phone) is a part of communication technology tools (Kelly & Minges, 2012). Many studies have shown that the existence of cell phone is now more important to facilitate social relations (Haddon, 2006; Ito, 2005; R. S. Ling, 2004) and the existence of the users (Emery, n.d.; Fox, 2006; Srivastava, 2005). Moreover, a cell phone could be a communication technology tool for micro coordination and hyper-coordination (Ling & Yttri, 2006).

Interestingly, the cell phone also demonstrates the membership of social network and participation in the community (Green, 2003). It also developed group membership and increased the number of community networks (Taylor & Harper, 2003). Other studies also showed that the cell phone could develop, maintain, and strengthen the relationship bond in social networks (Campbell & Kelley, 2006). An important finding from other studies is that cell phone could develop not only the personal relationship but also family and kinship relations (Irwansyah, 2010; White & White, 2008). The cellular phone could be used for anything related to culture in different countries (Licoppe & Heurtin, 2006; Mante, 2006; Varbanov, 2006). Therefore, this study observed and focuses on the depiction of the cell phone usage to a developed communication network for mobilisation and coordination among community members. Moreover, the community has a program called *Pulang Kampung Bareng* which has a specific value in Indonesia culture.

METHODOLOGY

This study purposively chose to survey one *boro* community (Schultz-Jones, 2007) which have been using cell phone frequently for several tasks such as health, skill, marriage, natality and mortality (Irwansyah, 2010) to maximise the scope of information obtained (Lincoln & Guba, 1985). This community has its own specific *Pulang Kampung Bareng* program as a part of their annual activities (personal communication with Parimin, 2010). This community had 116 members based on the head of the family (either man or woman) who had been asked totally (total sampling) about *Pulang Kampung Bareng* program.

The main questions asked to all of the community members were, 'to whom you called' and 'from whom you got a call about the information of *Pulang Kampung Bareng* program'. Because there is a member list from a community organisation, the community members provided 115 names (excluding his/her name) on the matrix list to make remembering the member's name easier. The informants were also asked whether the names are biological or psychological kinship to identify the type of relationship. The terminology of biological kinship (Picot, 2016; Schnettler & Steinbach, 2011) was adapted from Lewis (1998). It is also known as kindred (Koentjaraningrat, 1961) or organic membership (Simmel, 1964). Meanwhile, the terminology of psychological kinship (Antfolk, Karlsson, Soderlund, & Szala, 2017) was also adapted from Lewis (1998). It is also known as neighbourhood kinship (Haryono, 1999) or rational membership (Simmel, 1964). The community members were also asked about their demographic profiles such as sub-village origin, age, sex, education, and occupation, temporary place of stay at Jakarta region, cell phone ownership, and cell phone usage. Demographic profiles were asked to confirm and explore the background of community members.

Data from the survey were analysed by social network analysis (SNA) to depict the network of mobilisation and coordination among community members (Otte & Rousseau, 2002). This study explored (1) density, and (2) centrality to find out the cellular phone usage on mobilisation and coordination among the group member of the community. Density could be defined as the number of observed ties between alters divided by the number of personal ties (Wasserman & Faust, 1994). The density of SNA aimed to identify the level of coordination of community leadership decentralised and identified the cohesion and integration of network from 0 to 1. Closer to 1 means higher density (Scott, 2000).

Centrality is the extent to which an actor is central to network (Brass, 1995). The centrality of SNA identifies the community leadership of the network and to observe the access and control toward the network tool (Mizruchi & Galaskiewicz, 1994). Specifically, the centrality can be identified from access and control toward cell phone use in (1) degree of connection, (2) betweenness, and (3)

closeness (Borgatti, Mehra, Brass, & Labianca, 2009). Degree of connection is the number of direct links with other actors directly related or connected with one another (Scott, 2000). The higher the number of connections is in the network; the more centralisation of the network is constructed. Degree of connection could also be measured by the number of in-degree (prominent or high degree prestige) and out-degree (influencer) (Freeman, 1989). The more significant number of in-degree means the more popular the person is. On the other hand, the more significant number of out-degree, the more influential the person is (Panda, Abraham, Dehuri, & Patra, 2012).

Betweenness is the extent to which an actor mediates, or falls between any other two actors on the shortest path between those two actors; usually averaged across all possible pairs in the network (Freeman, 1989). Betweenness centrality views an actor as being in a favoured position to the extent that the actor falls on the geodesic paths between other pairs of actors in the networks. The more people depend on an actor to make connections with other members, the more power the actor has (Panda, Abraham, Dehuri, & Patra, 2012). The actors who have the highest score of betweenness show the shortest path and may thus have some influence over the spread of information across the network (Newman, 2003).

Closeness is the extent to which an actor is close to or can easily reach all the other actors in the network (Freeman, 1989). The actor who has a low value of closeness means the person cannot control and has only limited access to the network (Freeman, 1979). "High closeness centrality indicates the greater autonomy of a person", while "low closeness centrality indicates higher individual member dependency on the other members such as willingness to other members to give access to the network's resources" (Panda, Abraham, Dehuri, & Patra, 2012, p. 38). The value of in-Farness and out-Farness could also measure closeness. The higher value of in-Farness is the more geodesic distance between actors to be reached, while the higher values of out-Farness are the more geodesic distance between actors to reach other actors (Abraham, 2012). The value of mean for closeness on binary data refers to the percentage of all possible ties (Panda, Abraham, Dehuri, & Patra, 2012). The more closeness and less farness value, the better the relationship among members in the network are (Abraham, 2012).

This study used reciprocated ties to confirm validity (Krackhardt & Kilduff, 2002). This kind of validity can be produced when the questions were reliable to measure and generate reciprocal choice (Prell, 2012). The questions "to whom..." and "from whom..." could show reciprocal choice and ties of nominations to fulfil the validity and reliability of research design (Campbell & Kelley, 2006).

RESULTS AND DISCUSSION

Demographic profile

Pulang Kampung Communication Technology Network consisted of 116 informants who had dominant from Jetak sub-village (Pule Village, Wonogiri district, Central Java province) (58.65%), aged between 21 and 60 years old (93.26%); male (55.77%), high school-graduate or below (86.16%), worked as food and beverage seller including meatball and herb seller (60.18%) and stayed at Jakarta region (80.12%). The informants mostly own a cell phone for less than 10 years (84.62%). They used the cell phone for voice call and text messaging (49.04%), voice calls only (24.04%), and other applications.

Density on Pulang Kampung communication technology network

This study showed that 100% of the total informants developed a single network. The network had 185 ties with 0,014 of density or 1.4% of total informants. Consequently, this study showed low density which indicated that the leader is much decentralised. As a result, the leader mobilised the community member indirectly. The mobilisation on Pulang Kampung event depended on other members in the network. The leader coordinated with several members who contacted one another to mobilise other members on the community.

Centrality on Pulang Kampung communication technology network

The first result of centrality is revealed by the degree of connection. This study showed 53 degrees of connection which consisted of 34 out-degrees and 19 in-degrees ($M = 1.741$). It indicated that the network was not centralised enough. The result also showed that the leader had more influence than prominence. Then the second of centrality is indicated by betweenness. This study showed 1523.800 of betweenness ($SD = 42.991$, $M = 157.735$). The result showed that the geodesic paths were very high value which referred to the shortest path and means that the actor had some influence to spread the information in the network. Finally, the result of centrality is indicated by closeness. The study showed 13340.000 for in-farness and 5492.000 for out-farness. These results confirmed that there was more geodesic distance between actors to reach other actors.

Moreover, this study shows 2.135 of in-closeness, which referred to integration and 2.094 of out-closeness, which referred to radiality. It indicated that the network has low on closeness either on in-closeness and out-closeness. Therefore, the network had a low relationship which indicated less integration with centralisation index of about 84.39%.

Table 1 The Computation of Pulang Kampung Communication Network Using UCINET Version 6

No.	Description		Value	Informant
1	Density	Number of Nodes	116	116
		Score	0.014	
		Ties	185	
2	Centrality	Index	11.39%	
		Degree of Connection	53	#38
		*Mean	1.741	
		*Outdegree	34	
		*Indegree	19	
		Betweenness	1523.80	#38
		*Standard Deviation	42.991	
		* Mean	157.735	
		Closeness (Infarness; outfarness)	13340.00; 5492.00	#73
		*In-closeness (integration)	2.135	#100
		*Out-closeness (radiality)	2.094	#73
3	Eigenvalue	Score	0.597	#38
		Network centralization Index	84.39%	

Mobilisation and coordination on Pulang Kampung communication technology network

Mobilisation on the network could be identified by seeking the leader (Dougherty, 2012). Also, to identify the leader, the density may indicate the coordination of decentralised community leadership (Scott, 2000). This study showed that the leader in the network was the person who had more relationship to other members (#38). The person had 34 outdegrees and 19 indegrees.

The outdegree relates to the influential leader, while the indegree relates to a popular leader (Freeman, 1989). Therefore, the person had more influence on other members than the person becomes popular among members. One of the informants stated that:

"He encourages us to use the same SIM card to communicate among us. He said if we use a similar card, it will be cheaper or free in a specific time. He also said that 'no worries about pulse, just miss call me and I call back soon'...in terms of Pulang Kampung, he calls me to

remind my friend and me to remember the schedule and asking more friends from similar *kampung*. He said the more people go back together, the cheaper price of bus transportation we got."

Moreover, the mobilisation could be identified when the leader of the community asked their community members to follow his instruction. The leader encouraged members not only to know the event but also to make sure they do understand the benefits of the event. The leader also made a special and informal committee to initiate and organise their annual event. Since the leader of the committee was also a leader of the community; he had more responsibilities to make the event successful. According to his members, the leader often called the members. He asked questions such as participation of members, informing other people about the person who already participated in the event, or just asking about the family to maintain the relationship.

In Pulang Kampung event, the coordination among members could be identified from the use of cell phone. The organising team used cell phones to discuss and determine the meeting point to gather community members for going back together to their village. Since the community members were concentrated on two regions, West Jakarta and Cikarang (107 km from Jakarta), the committee called the members to ask for the agreed meeting point.

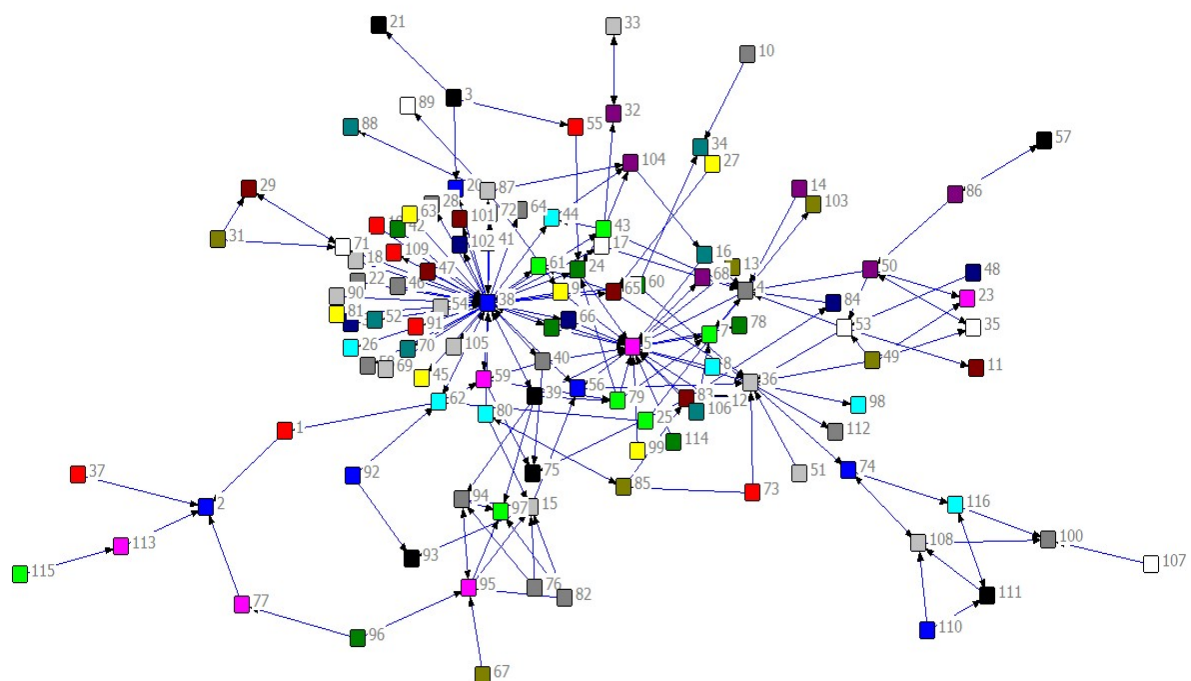
West Jakarta is the region where their community started to survive and work at first. The place, Daan Mogot, West Jakarta, was the nearby bus station which could transport them to their village on a round trip. As a result, they could rent or reserve several buses as the vehicle to support the Pulang Kampung event. The community members who stayed around West Jakarta were asked by cell phone to gather around the bus station. In the meantime, at Cikarang, known as industrial and manufacture region, the committee also provided several busses to support the event. So, the community members who stayed around Cikarang region could participate in the event. The distance between West Jakarta and Cikarang region was 107 km or around two hours by bus. Therefore, the leader and his committee could mobilise the community members to choose either at West Jakarta or Cikarang and participate in Pulang Kampung together event.

The leader chose the date of the event based on suggestions from his committee, which accommodated the proposal date of community members. The leader and his committee called and received text messaging about suggesting the date. Then, the leader and his committee decided to choose a specific date at which community members were available to participate. The committee called or texted the community members to inform the date of the event. They also made reminders for the community members while the date was approaching the event.

Kinship vs kin-based phone leadership

This study found that the most centralised person is the person (#38) who became a young leader of the group community based on the kinship. The person was the brother, brother in law, and uncle of other community members. Some of them were a part of the big family based on biological kinship. However, most of them bonded in the community because they come from the same village, district or region. Therefore, the central person had biological kinship and psychological kinship among community members. The central person had two characteristics. The first was a personal relationship. The central person was flexible and more comfortable to approach than other people in the group community in one of the regions. The person had also built intimacy or personal relationship with his group members, and they were still in their origin village, district, and region before they became a *boro* community. Consequently, in their home village, they already exchanged their phone number. As a result, while they were on West Jakarta or Cikarang region looking for a temporary place for work destination, everyone at the community already knows him.

Figure 1. *Pulang Kampung* Communication Network Using Cell-phone



The second element is the frequency and duration of the call. The central person was the most active member of the community. Person #38 suggested that other community members used the same service provider. One of the advantages of the same service provider was that the community could get some free time or discount to call service. The central person was one of a community member who understood

that they could take advantage of such a service. The central person stated:

"I use the provider because many of our community members use the same provider. I know using the provider promotions will be cheaper if we use the same provider to call and send SMS in a specific time. So, I suggest them to use the same provider as I use. I also told them to use other feature promotions from the provider if they want to contact me".

This study also showed that communication activities of the leader or central person and his committee on the Pulang Kampung network formed psychological kinship. When people are far away from their home, they will develop psychological relations (Jones, 2004), which is similar to Javanese wisdom culture (Rahyono, 2011). Moreover, members of the community had a cell phone as part of their extension for communication. This study revealed that constant contact was made to communicate the informants' idea, especially about how to plan, organise, mobilise, and influence other's member of the community. Perpetual contact itself is a social logic of communication technology due to the practical reason of act (Katz & Aakhus, 2006). The logic is, the situation might cause the community to think and act together for a long time (Goodwin & Wenzel, 1979). As a result, the cell phone was essential in communication and coordination among members of the community, which confirmed previous studies (Katz & Aakhus, 2006; Ling & Yttri, 2006).

Thus, Pulang Kampung communication technology network revealed how mobile technology shapes culture and society. This finding is relevant to the idea of society 5.0 that new technology gives a solution to social problems (Irwansyah, 2019). Such a solution can be applied for commercial, cultural, and psychological objectives.

CONCLUSION

The cell phone is essential for developing a network or make a successful event. Cell phones become the primary communication tool to mobilise and coordinate community members. This study confirmed that cell phone extends the ability to communicate with other people without border and time constraints. Other than that, the success of mobilisation and coordination depends on the decentralised leader who has density and centrality. The centrality of the leader is also crucial in developing a degree of connection and closeness among members due to personal relationship. The leader also maintains such a relationship by taking more frequency and duration of calling and message about the event. Moreover, the members of the community have a biological kinship and psychological kinship.

Although this study reveals the importance of communication technology in mobilisation and coordination, limitation occurred because the instrument based on self-report was conducted for more

than one month. Therefore, there were biases of recall, timeframe, judgment, the accuracy of person either biological or psychological kinship, which may affect the result of the study. Therefore, further study should focus on the season of the event.

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