The urban neighborhood amid the changing to information society in Indonesia. Case study of the city of Bandung

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Abstract. The influx of information technology to the developing world has increasingly shown its impacts when information technology usage has become a part of daily life. Like its features, online apps have altered the way people interact and do daily activities, especially in urban areas. Conceptually the neighborhood was developed as part of the town planning practice and theory for developed worlds, though it is a universal phenomenon. Therefore, the neighborhood idea requires several adjustments to fit the dynamic third-world country context.

The study aims to observe the characteristics of urban socio-spatial changes in correlation with the use of online apps and review the extent to which it will modify the essential elements used in defining a neighborhood. It uses an exploratory approach to explain the relationship between spatial character changes and socio-cultural community in two neighborhoods in Bandung city as case studies. The compiled data's correlational analysis shows several changes in the neighborhood elements characters, either spatial or social related, but they are responses to the inadequate public facilities. In conclusion, to some degree, it has not been significant enough to indicate the neighborhood changes and requires further research to see the advanced information technological impact on urban life.

1. Introduction

The influx of information technology to a developing country has changed urban community behavior, including in Indonesia. Its various online apps have provided more alternatives for urban society to fulfill their daily needs by better and easier facilities for some reason. People can use online services to do several activities, such as getting public rental transport, buying groceries and goods, ordering foods, taking or delivering parcels, booking tickets, or consulting with doctors in more accessible and efficient ways. The transformation of daily urban activities indeed is happening in an urban neighborhood nowadays.

Changes in urban behavior patterns need attention as they will slowly change the neighborhood - the core of urban life, through the dialectic process with its physical environment. The relationship is so complicated because of its dynamic nature that it causes the neighborhood's concept to often be dismantled, scrambled, and reformulated according to the circumstances. However, it is not a simple problem to understand the neighborhood's essence as it is multidimensional in nature.

According to Timms, the difficulty arises as the neighborhood consists of two main elements of man and environment accompanied by its relationship that reflects their social and cultural value [1]. In regard, Talen says the components present two different realms: the physical world of building and space and the social world in human interaction and morphology on one hand and social sciences on the
other [2]. Differently, according to Chaskin, the neighborhood is a spatial unit but not as a purely physical concept because, in this view, a socio-spatial phenomenon that has no fixed limits can describe it. He identified three alternative ways to consider neighborhood boundaries: understanding how people identify their area, how a particular group uses facilities in the field and analyzing how people perceive a city [3]. Kallus and Law-Yone also provide specific findings concern four aspects of the neighborhood; they are: a) neighborhood delineation problems, b) the character of the neighborhood as an open system, c) the correlation between the neighborhood and the interpersonal network, and d) how neighborhoods are experienced and used differently by diverse populations [4]. In this case, Soja argues that space is not only a reflection of social structure but a tangible expression of a combination of interacting material components and structures [5].

Meanwhile, Osti explains that the dialectic interaction will produce a socio-spatial relationship in several scales start from a family, bounded solidarity, to land use control where distance, border, and density as spatial form elements that will meet with social relation in which facts of face to face, close relationship, and dominance happened [6]. Also, Talen points out its locality through various local terms describing the universality of the idea and its presence in all cultures, both in urban and rural contexts, planned or unplanned, and deliberate or spontaneous developments [2].

Because of its intricate process, Gold stress that it is essential to view the neighborhood as a socio-spatial unit for a comprehensive understanding of urban life [7]. In the approach, Talen adds that urban life dynamics fundamentally determine urban space's nature according to the existing urbanization process [2]. Thus, urban life is not just for the sake of local relationships, but more about freedom from the need for closeness, socio-physical contact, and daily life. Instead, it is a dialectical component defined by the general relationship in the production process, which simultaneously involves social and spatial. Soja and Haas also agree that socio-spatial interactions describe the demand for the re-inclusion of socially produced spaces as something more than just a result of previous conditions [5, 8]. Through this interaction, individuals then draw their neighborhoods' boundaries through their spatial experiences and daily social activities.

The socio-spatial understanding of the neighborhood utterly different from the idea of scientists and planner ones. Talen says that they have formulated an ideal neighborhood as a planned territory and its inhabitants to generate a reciprocal relationship and see the socio-cultural and economic aspects as essential elements to improve the urban neighborhood's quality [2]. Although social cohesion determines a neighborhood's function, it usually will depend on public and social facilities such as a minipark, a shopping area, schools, or clinics to become a community meeting place. However, in Indonesia, the utilization of neighborhood facilities, which is an essential factor for the community social life in Indonesian urban life, is shifting because the introduction of online services is getting extensive.

The influx of information technology with its online apps has naturally transformed urban life. Moraes and Lepikson state that this technological information age brings society's improvements through its intelligent technology for mainly urban citizens [9]. Castells identifies that the information society process will depend on five-factors in which the community considers information as a product and a resource, the social and development integrated technology, the networking value, social flexibility in corporations, and everyday life, as well as convergent and integrative technological systems [10].

It seems that information technology development finds its appropriate place in a developing country such as Indonesia. The online app's ability to help the urban community overcome daily working burden has been filling the gap on inadequate public and social services. Nowadays, it is common for Indonesian urban people to use online services for facilitating social and economic activities such as transport services, shopping, ticket booking, consulting with doctors, and other public services. Of course, smart technology cannot replace all activities, but it will replace more jobs and daily activities. However, Drewe et al. remind that these conditions need support from integrated work organizations, community composition, and places that are only available in compact urban areas. In that condition, the city will be an essential factor because it becomes a place of interaction with material components (physical structures) and social components, as mentioned in the city's definition [11].

Concepts of the neighborhood, according to Allen, have followed a trend from theoretical to empirical studies. Throughout the 1980s and 1990s, theorists attempted to create workable theories that defined neighborhoods and found the term escaped definition. From the 1990s to the present day, empirical researchers explored particular places to find phenomena that could be applied generally.
Despite various attempts to define the neighborhood, researchers widely accepted that neighborhood is an amorphous concept that exists variably in entire suburbs, to walkable areas or, most often, to an undefined spatial area [12]. Therefore, this study on understanding the urban neighborhood's idea will be a starting point to re-defining the neighborhood as its elements' characteristics change as the impacts of information technology advance. This paper aims to observe urban socio-cultural behavior that changes due to online application usage and its relationship with the urban neighborhoods' spatial character in today's information society and review how modified essential elements affect defining dynamic urban neighborhoods in a developing country.

Then, a study will be conducted on neighborhoods in the city Bandung area to represent the urban neighborhood issues in developing countries, especially Indonesia. The above reference studies on the topic produce some basic questions: (a) how is the changing of essential neighborhood elements amid the rapid information society's wave, and how are their new characteristics? (b) to what extent are the socio-spatial changes in urban communities in developing countries - such as Bandung - resulting from information technology's utilization will modify the distinctive elements commonly used to define the urban neighborhoods? The information technology forces seem to have changed many aspects of urban lives, not only on the economic side of the society but also at social interaction and virtual traveling and movement through enhanced mediated network systems.

The alternation also has involved and accompanied extensive changes in spatial processes and forms. Those changes indeed natural consequences from the utilization of information technology that removes humans from the production process, which changes a socio-technical to a full technical system with two possible characteristics. First, the technology will separate households and neighbors and increase social isolation, possibly due to a greater reliance on online life than in the physical world. Second, the industry can make the neighborhood more democratic by improving access to decision-makers, information, and alternative viewpoints. Because society covers socio-cultural aspects; therefore, this neighborhood change may be in line with social behavior changes. According to Talen, social change in neighborhood life dynamics is visible in the history of systematic urban neighborhood growth [2]. While no universally accepted concept of precisely an information society, most theorists agree that today humans are entering a new and different phase from before, where a society relies heavily on information technology [13].

Therefore, defining a neighborhood whose social life is changing and attach to its locality is a big challenge. How to describe the neighborhood clearly and convincingly when the characteristics of the essential elements change? The question is very logical as these changes are visible in Indonesian cities when advanced technology apps could facilitate burden work and begin to change daily activities.

The reinterpretation then becomes necessary as western urban planning theory considers neighborhoods to fulfill everything necessary within walking distance. Also, various studies about the neighborhood in a wide-angle view provide possibilities to understand neighborhood ideas in different ways. Given the developing country's context, it seems necessary to reformulate the neighborhood's idea due to its different socio-spatial context.

In the Indonesian context, the neighborhood is par with rukun warga - RW [2]. According to urban housing development guidelines of SNI 03-1733-2004, rukun warga or RW is a component of a kelurahan inhabited by about 2500 people and consisting of about 8-10 rukun tetangga (RT) [14]. This guideline demands public facilities and infrastructure that comply with its resident number and characteristics to support and enhance socio-economic, social, and cultural activities that meet universal design criteria. However, the reality indicates that development conditions are far from ideal as neighborhoods do not meet conditions as ideal neighborhoods.

Based on the research questions and a brief review of some relevant literature, we suggest two hypotheses. First, because the neighborhood characteristics vary, the online services will transform urban neighborhood element characteristics as the responses to neighborhood facilities condition and socio-spatial transformation will determine their new character changes. Second, urban neighborhood socio-spatial changes do not physically modify the distinctive elements commonly used to define the urban neighborhoods but of the scale and nature; however, that significantly alters neighborhood definition compared to the typical early understanding.
2. Research methodology
Gold succinctly refers to the neighborhood as a socio-physical entity due to the community interaction and all activities with its residence on several scales [7]. Within these multidimensional interactions, networks or social institutions regulate or control the relationships and processes. In this study, the neighborhood refers to a unit of RW territory, its residents, and socio-spatial processes. Rukun warga (RW) in Indonesia's local system is an area division under the kelurahan that is not an administrative division, but the local community's decision to provide community service and decided by political district administration. The neighborhood studies include structural problems such as income, demographics, housing, and social issues (such as social networks and relationships, collective bonds, daily activity patterns, norms, and behaviors). Betancur and Smith take aspects of people's lives, such as social status, income, ethnicity, educational background, family size, housing status, security, and social cohesion as indicators of a neighborhood [15].

Meanwhile, Robertson et.al. states that housing type, style, and tenure were also a core in defining a neighborhood's social identity [16]. Housing and its specific locality reflect status, and now with the growth of the private housing market, it is also essential to the accumulation of personal wealth. These indicators will then intrinsically interact with other public services, the physical environment, and the economy to produce a natural neighborhood area. The study does observation, surveys, interviews, and other means to generate data on structural and social issues to complement some of the secondary data already available.

It is prevalent that research to understand neighborhood behavior by exploring the population's perception and experience or the dialectic process of socio-behavioral changes to the spatial functioning. However, Chaskin identified that defining neighborhoods' process will depend on their scale and elements, socio-cultural context, development goals, community strategy, and housing development process [3].

This study chose an exploratory approach to explain the relationship between spatial character changes and socio-cultural community. This study chooses this approach to identify the community's choices, resources, and ability to determine its neighborhood's spatial delineation that will influence changes in social structures in households, communities, and cities, perhaps even on a larger scale. Then the results of these spatial and structural changes affect their fundamental values and abilities through the opportunity and existing meaning.

This study responds to understanding the neighborhood dynamics through urban community perceptions using a qualitative method [17,18]. The study of the relationship between changes in socio-spatial patterns of urban communities due to the utilization of online applications and its correlation with people's perception of public services and neighborhood facilities is to see the extent will make the social dynamics alternate the element of the neighborhood. Understanding the dynamics relationship is necessary to redefine neighborhoods in urban areas by looking at Bandung city's two urban villages. They represent the urban neighborhood development in Indonesia in different periods. Then the study distributes questionnaires and field observations that took place from mid-2018 to 2019. The closed questionnaire uses a 1-5 Likert scale by purposive sampling involved 200 respondents for both urban villages, with a 95% confidence level.

3. Result

3.1. Case studies
The study uses Bandung's city as the Asia Africa icon to represent the developing country. Apart from its history, the city of Bandung is also the capital of Indonesia's most populated province to represent Indonesia's urban settlement development problem. Meanwhile, the selection of two kelurahan as case studies for this research, Kelurahan Sukaluyu and Kelurahan Antapani Tengah, represents a different decade and characteristic of neighborhood development city Bandung (Figure 1).
Furthermore, Figure 2 provides a spatial comparison between the two studied neighborhood cases. Kelurahan Sukaluyu is part of the Cibeunying Kaler Sub-District designated as a residential area based on the RDTR (Zoning Detail Plan) of Bandung City. Its position in the city context is very strategic because it has very close distance and easy access to the central business district, higher education facilities, and main provincial government offices. The village area is mostly Sukaluyu housing estate developed in the late 70s next to previously existing self-built settlements. The village consists of 11 RW and 92 RT with 18,913 people and 71.58 ha. Each RW consists of 6-12 RT. However, for this study, only 5 RW in housing estate occupied by 8,050 people selected, namely RW 08, RW 09, RW 10, and RW 11 as sampling areas.

Meanwhile, Central Antapani Village, which is part of the Antapani Sub-district, has different conditions in terms of the development process. The neighborhood is also a planned residential area, but a bit far from the central city, and has less public transport access. However, the settlement known as Griya Bumi Antapani, a housing estate developed in the late 90s by Perumnas that also developed Sukaluyu housing estate, has not enough sufficient social facilities for its residents. The total area of Kelurahan Antapani Tengah is about 93 ha and covers about 23% of the Antapani Sub-district area. The study in this village includes 10 RW, namely RW 08, RW 09, RW 10, RW 11, RW 12, RW 13, RW 14, RW 15, RW 16, RW 17, inhabited with a population of 7,128 people.

3.2. Findings

The collected sampling data in Table 1 shows the significant communities' social conditions in two neighborhoods. The table uses the combination of building type and lot size variables to indicates
social status that along with education level and residential durations draw the socio-economic background of the communities.

The data shows that the community in the two neighborhoods socially, on average, tends in the mid to high-class category level. Besides, more than 59% of the community had lived in their neighborhood for more than 20 years. This figure illustrates the neighborhood's stability level, and it seems the Sukaluyu neighborhood tends to be more stable than that of Antapani Tengah.

The housing condition also indicates that the community's economic and social strata in Sukaluyu village tend higher than in kelurahan Antapani Tengah. However, in terms of community solidity, the neighborhood in kelurahan Antapani Tengah tends to be slightly more stable than the situation in the Sukaluyu.

The field survey finds that each RW or neighborhood has public and social facilities as a neighborhood's functional essential requirement that could generate social life, but the facilities' availability and quality differ for every RW. Most RW have elementary school or kindergarten, mosque, posyandu / health center, convenience store (warung), multi-function park, or open space used for a particular activity.

### Table 1. Socio-economic and settlement background

| Factors       | Variables          | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|---------------|--------------------|---------------------------|--------------------|
|               | Proportion Level (%)|                          |                    |
| Social status | Building type      |                           |                    |
|               | < 36m2             | 9                         | 21                 |
|               | 45m2               | 24                        | 12                 |
|               | 54 - 60m2          | 32                        | 16                 |
|               | > 60m2             | 35                        | 51                 |
| Lot size      | < 60m2             | 14                        | 11                 |
|               | 60 -100m2          | 46                        | 44                 |
|               | 100 -150m2         | 32                        | 19                 |
|               | > 150m2            | 8                         | 26                 |
| Education level | Below high schools | 19                        | 21                 |
|               | High Schools       | 30                        | 37                 |
|               | Higher educations  | 51                        | 42                 |
| Length of stay | 1-4 years          | 11                        | 17                 |
|               | 5-14 years         | 14                        | 18                 |
|               | 15-20 years        | 16                        | 0                  |
|               | >20 years          | 59                        | 65                 |

Reference: Abadi, 2020

This survey also finds the public's perception of the condition and quality of social interaction and functional space in the neighborhood in both villages (Tables 2 and 3). The availability of various social and public facilities in the settlement can indeed create a social life. Although most people in neighborhoods in the two kelurahans tend to agree with their neighborhood's social quality of life, their perception of potential places for social interaction tends to be varied (Table 3).

Communities from two neighborhoods tend to have similar perceptions of the playground, elementary school, and sports ground potential as social interaction places. However, they show disagreement about the similar role of other places such as clinics, worship places, and convenience stores, including community gathering events. In addition to the special events, interactions also happen in some of the main neighborhood facilities. In the Sukaluyu neighborhood, some of the existing facilities are considered potential and often become a place to interact with each other. There is one facility that is less considered potential, namely, a clinic. While in the Antapani Tengah neighborhood, 48% of respondents agree that interaction between citizens occurs in that place.

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### Table 2. Quality of social interaction and spatial function in the neighborhoods

| Variables                                             | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|-------------------------------------------------------|----------------------------|--------------------|
|                                                        | SD | D  | A   | QA | SA | SD | D  | A   | QA | SA |
| Easy getting a new friend                            | -  | 3% | 51% | 36%| 10%| -  | 4% | 42% | 29%| 24%|
| Always meet neighbors in neighborhood public spaces  | -  | 19%| 62% | 18%| 1% | 4% | 16%| 39% | 31%| 10%|
| Participate in social neighborhood activities         | -  | 3% | 62% | 24%| 11%| 2% | 21%| 37% | 22%| 18%|
| Care about the environment, both social and physical  | -  | -  | 64% | 31%| 5% | -  | 10%| 51% | 25%| 14%|
| Satisfy with environmental management                 | -  | 3% | 75% | 15%| 7% | -  | 4% | 50% | 27%| 19%|
| Feel safe and comfortable in the neighborhood         | -  | 1% | 65% | 29%| 5% | -  | 1% | 37% | 39%| 23%|
| No serious noise problem from the streets             | -  | 17%| 38% | 37%| 5% | 2% | 5% | 49% | 31%| 13%|

Notes: SD (Strongly Disagree), D (Disagree), A (Agree), QA (Quite Agree), SA (Strongly Agree)
Reference: Abadi, 2020

### Table 3. Potential places for social interaction

| Social facility/event         | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|-------------------------------|----------------------------|--------------------|
|                              | SD | D  | A   | MA | SA | SD | D  | A   | MA | SA |
| Playground                    | 1.0| 24.0| 61.0| 14.0| 0.0| 0.0| 14.0| 54.0| 26.0| 6.0|
| Convenient store              | 12.0| 49.0| 36.0| 3.0 | 0.0| 0.0| 10.0| 44.0| 36.0| 10.0|
| School                        | 7.0 | 25.0| 61.0| 7.0 | 0.0| 1.0| 13.0| 66.0| 18.0| 2.0|
| Worship place                 | 23.0| 46.0| 30.0| 1.0 | 0.0| 0.0| 0.0 | 31.0| 39.0| 30.0|
| Social gathering              | 4.0 | 53.0| 42.0| 1.0 | 0.0| 9.0| 39.0| 28.0| 23.0| 1.0|
| Clinics                       | 3.0 | 27.0| 48.0| 22.0| 0.0| 28.0| 62.0| 9.0 | 1.0 | 0.0|
| Sport ground                  | 10.0| 44.0| 46.0| 0.0 | 0.0| 7.0| 38.0| 47.0| 8.0 | 0.0|

Notes: SD (Strongly Disagree), D (Disagree), A (Agree), MA (More Agree), SA (Strongly Agree)
Reference: Abadi, 2020

The collected data also shows how people in both neighborhoods meet their social and public facilities (Table 4). Residents of the Antapani Tengah tend to use social facilities outside their neighborhood areas to meet social needs and public services, in contrast to Sukaluyu communities whose preferences are varied, but the latter tend to prefer that inside their neighborhood. Indeed, residents of the Sukaluyu are willing to go outside their neighborhood areas to get better quality schools and health services. They consider that schools and health services in their neighborhood areas are not good enough to accommodate their relatively high demands.

The perception and choice of various public and social facilities in both communities correlate with their social backgrounds (Table 5). On community in the Antapani Tengah, the correlation analysis shows some degree of relationship between social status and education levels with the facilities' choice either outside or within the neighborhood. The analysis produces such a robust negative correlation between social status and all choices on facilities, which means the higher the social status, the greater possibility of choosing facilities outside the environment. Simultaneously, the moderate level of negative correlation between education level with children's school choice indicates more educated parents' potential to choose the education facilities outside their neighborhood.
Table 4. The chosen social facilities

| Social facilities/event | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|------------------------|---------------------------|--------------------|
|                        | Inside        | Outside | Inside | Outside |
| Playground             | 45%          | 55%     | 90%    | 10%     |
| Convenience store      | 52%          | 48%     | 87%    | 13%     |
| Elementary schools     | 49%          | 51%     | 38%    | 57%     |
| Worship places         | 45%          | 55%     | 96%    | 4%      |
| Social gathering       | 42%          | 58%     | 84%    | 16%     |
| Clinics                | 45%          | 55%     | 33%    | 67%     |
| Sport ground           | 45%          | 55%     | 71%    | 29%     |

Reference: Abadi, 2020

Table 5. Society perception correlation upon the choice of social facilities

| Social facilities/event | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|------------------------|---------------------------|--------------------|
|                        | (1) (2) (3)               | (1) (2) (3)       |
| Playground             | -507** -257* 0.073 -332** -341** .425** |
| Convenient store       | -594** -221* 0.001 -368** -366** .404** |
| Elementary School      | -586** -311* 0.047 .013 -.120 .132 |
| Worship place          | -554** -0.185 0.053 -.134 -.131 -.080 |
| Social gathering       | -486** -0.118 -0.008 -.253 -.192 -.401** |
| Clinics                | -554** -0.163 0.067 .318** .132 -.014 |
| Sport ground           | -571** -0.185 0.053 .023 -.005 -.121 |

Note: (1) Social status (2) Education level (3) Length of stay
Reference: Abadi, 2020

The correlation analysis for the neighborhood at kelurahan Sukaluyu displays a more complicated relationship between social status, education levels, and length of stay with a choice of public and social facilities either outside or inside the environment. The analysis produces such moderate unfavorable correlation levels between social status and several choices on facilities, such as playgrounds, convenience stores, the clinic, and the social gathering event. While the education level has a relatively similar correlation level with playground and convenience store choices only. However, the length of stay in the neighborhood correlates positively with the choice for playgrounds, convenience stores, and social gatherings at a slightly higher level than the first two factors. This correlation indicates that the longer staying in their neighborhood, the more likely it is to choose facilities and socialize inside the environment.

This study's critical question is how the current lifestyle changes, especially in looking for help to fulfill daily needs and the widespread use of online apps in the urban neighborhood that have provided comfortable and efficient services, will impact how the community defines their neighborhood boundary. The urban community response to this technological advance of online service demonstrated a relatively similar pattern but to a different degree (Table 6).

Table 6. Level of perception (in %) to online services acceptance

| Variables                  | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|----------------------------|---------------------------|--------------------|
|                            | SD  D  A   MA  SA         | SD  D  A   MA  SA  |
| Get readily taxi demands   | 40.0 38.0 22.0             | 7.0 7.0 26.0 27.0 33.0 |
| Reduce public transport    | 10.0 37.0 27.0 20.0 6.0 | 4.0 17.0 42.0 19.0 18.0 |
| dependence                |                           |                    |
| Affect neighborhood        | 25.0 59.0 16.0             | 73.0 17.0 6.0 1.0 3.0 |
| security                  |                           |                    |
| Fulfilling some demands    | 5.0 43.0 36.0 16.0         | 1.0 3.0 21.0 21.0 54.0 |

Notes: SD (Strongly Disagree), D (Disagree), A (Agree), MA (Moore Agree), SA (Strongly Agree)
Reference: Abadi, 2020
The communities in the two kelurahans have similar perceptions of the benefit and the limitedness of using online transportation or other services in their daily lives. They have positive responses that online transport apps will help transport readily, reduce the dependence on conventional public transportation, and help fulfill their demands and disagree that online apps will disturb their neighborhood security. However, there is a small gap between agreeing and disagreeing, particularly on online transportation's benefit of reducing public transport dependency for the kelurahan Antapani Tengah community.

The community’s perception upon the usage of online apps seems to relate to their social, economic conditions as appear in the correlation analysis between the socio-economic variables to the perception of the online services' usages - particularly transport - that shows different trends (Table 7). In general, this table shows a moderate rate correlation between social background factors and the utilization of online apps both positively and negatively.

Table 7. The characteristic of online services utility to household socio-economic variables

| A related use of service apps variables | Household socio-economic variables | Kelurahan Antapani Tengah | Kelurahan Sukaluyu |
|----------------------------------------|-----------------------------------|--------------------------|-------------------|
|                                        |                                   | (1)          | (2)         | (3)         | (1)          | (2)         | (3)         |
| To get readily transport demands        |                                   | .291***      | .281**     | .014        | .206*        | .312**      | -.157       |
| To minimize public transport dependency |                                   | .306**       | .153       | -.454**     | .310**       | .354**      | -.188       |
| To effect neighborhood security         |                                   | .176         | .004       | -.196       | .180         | .255*       | .047        |
| To help fulfilling daily needs          |                                   | .039         | .155       | -.095       | -.021        | -.017       | -.243*      |

Note: (1) Social status (2) Education level (3) Length of stay
Reference: Abadi, 2020

The length of stay in the neighborhood has a critical influence on the community’s perception of kelurahan Antapani Tengah. The correlation between the variables with the perception of the reduction in public transport dependency produces a negative relation at a moderate level. This correlation indicates that the lengthier of stay, the less dependency on public transport. However, that same perception correlates positively with social status. This correlation means that the higher the social status, the more agreeable to online transport's ability to reduce public transport dependency.

Meanwhile, the correlation of perception of the kelurahan Sukaluyu community towards smart technology applications for public services is slightly different. The education level and the social status correlate positively with the perception of a reduction in public transport dependency at a moderate level. This correlation means the higher the social status, the higher the education level, the less public transport dependency. Besides, there is also a tendency in Sukaluyu people that their education level significantly influences their perception of online services perception related to three prospects online apps' services. These factors positively correlate with the perception of the fulfillment of readily public transport demand and the negative impact of online transport on neighborhood security.

4. Discussion
Understanding and defining a dynamic neighborhood is a challenging research subject. Many previous literature works have well laid the socio-spatial factors out and their implication on defining the neighborhood. This study will look closely at the influence of online services utilization in an urban community on changing neighborhoods' essential elements and how they transform understanding of the urban neighborhood. Glass describes a neighborhood as a territorial group that meets common ground for primary group social activities and organized and spontaneous social contacts [19]. By this understanding, a spatial boundary becomes an essential attribute for a neighborhood to group the people in a particular area to feel their various daily activities and neighborhood within close or walking distance. The problems arise as this research reveals that utilizing online transport services has pushed some residents out of their neighborhoods to fulfill their demand. However, the way to get the necessary utterly different from the time before as today people can stay at home while doing anything else to wait for their orders. Advanced technology has accommodated and changed the pattern of daily activities in social life. The socio-spatial
transformation happens on all scales and disrupts the nature of distance, border, and density of spatial forms in the neighborhood.

Today it is difficult to point out the socio-boundary because of online services; people can go far beyond the administrative and physical distance to get the daily needs and demands without exit their homes. Socially, the distance of daily activities seems to go further out of neighborhood boundaries, but physically it tends to be smaller as most people stay at home with their family and domestic works. People can easily control many people privately or communally from their closest neighbors to them out of the neighborhood without face-to-face contact. Although the community still considers social interaction among the neighbors to maintain the social attachment in the neighborhoods. Those phenomena confuse understanding the boundary concept, which is critical for defining the neighborhood as its characters utterly different from previously many, more from a geographic perspective.

Galster says that the use of physical boundary and distance to define space causes the neighborhood to an ambiguous spatial character as the neighborhood space varies in some degree of similarity, generality, and conformity [20]. The high acceptance level of online service on helping the urban community fulfill some primary demand is high but does not have a strong correlation to their social conditions seems to be in line with Galster’s statement of the neighborhood space character. As hypothesized, dissatisfaction with the neighborhood's social facilities conditions has been an essential pushing factor for the community to go out for better neighborhood facilities. Besides, the factors affecting community choice upon social facilities outside the neighborhood differ between communities also express varied reasons. These all show a contradiction from the previous concept of the neighborhood. A facet of inadequate facilities has not been considered an essential factor in previous work on the neighborhood studies but the residential mobility behavior theory. The most significant difference between the neighborhood models was the emphasis on bad neighborhoods' safety and social problems.

As a sociological entity, a neighborhood is distinguished from a residential area by its social organization degree. The study reveals that a new social trend concerning the usage of online services - in urban communities around the city of Bandung does not affect the importance of social relationships. Most people in the communities consider the importance of social place as the generator for social interactions. The alteration of daily and social activities caused by online services and other advanced information technology has not yet altered the existing socio-local value.

This fact is parallel with Franklin's idea that the transformation of a new built environment requires lengthy and complicated social, spatial, and conceptual processes [21]. The absence of dominant factors in response to the influx of information technology and its features illustrates residents' capacity to adapt to change, although at various levels and reasons, including the limitations of their neighborhood. This trend illustrates the adaptive character of a dynamic, flexible, and better society in two kelurahans in Bandung. Nevertheless, all communities with various socio-economic backgrounds still consider the importance of social interaction of local communities, which is a testament to local cultural values in urban areas.

The current situation in the urban neighborhood suggests that the influence of using smart technology in urban social life is exciting research as mobility will play a critical role in Indonesian urban productive life, which is still weak in service now. The technology's ability to support related transport demands has gradually changed social and cultural values as this online service expands its service reach beyond its neighborhood areas. By simple logic, if this trend goes well, there will be a social-spatial decline in society, but it magnifies the likelihood of coverage areas beyond the neighborhood. Although this case study focused on the city of Bandung, Indonesia, the results indicate that urban life will be more complex and need further studies.

5. Conclusion

The study on online application usage and its relationship with the urban neighborhoods' spatial character concludes that smart technology, to some degree, is altering urban neighborhood's main elements - community and physical environment - both socially and spatially. Socially the outside social daily activities tend to reduce mainly concerning the effort to fulfill basic needs as the transport online services replaced them. On the other hand, spatially urban people can reach other areas to get their demand though public infrastructure is still weak in service. Online transportation services have gradually likely changed social and cultural values to reach supply services beyond their neighborhood.
However, all current situations have not transformed an urban neighborhood because of its primary value - socio-local interaction - yet to change. The spatial change dimension does not happen; in fact, the choice is a natural response to the neighborhood's limitation of social and public services. The research also suggests that social status plays a vital role in that situation. Therefore, the necessity of having more intensive and various social background studies as urban life is getting more complex and demanding amid the advanced information technology waves. Besides the extensive diversity of Indonesian conditions, it is crucial to provide a more comprehensive picture of the urban neighborhood to define it accurately and understandably.

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