Who Leads Advocacy through Social Media in Japan? Evidence from the “Tsukuba Civic Activities Cyber-Square” Facebook Page

Sae Okura and Muneo Kaigo *
Faculty of Humanities and Social Sciences, University of Tsukuba, 1-1-1 Tennoudai, Tsukuba, Ibaraki 305-8572, Japan; okura.sae.xp@alumni.tsukuba.ac.jp
* Correspondence: mkaigo@japan.tsukuba.ac.jp; Tel.: +81-29-853-4037

Abstract: Although the importance of advocacy activities by civil society organizations (CSOs) in policy and decision-making procedures has been greatly emphasized in the literature of political science and social policy, we have relatively little understanding of the relevance and impact of the leading actors who structure the diverse networks and discourses through social media; further recognition is needed in both fields. The purpose of this study is to analyze civil society organizations at the local government level involved in advocacy activities through the use of social media such as Facebook and Twitter. Our study focuses on a specific Japanese Facebook community page—the “Tsukuba Civic Activities Cyber-Square”—aimed at enhancing civil society activities in Japan. This page is operated by the municipal government of Tsukuba, in collaboration with the University of Tsukuba and Intel Corporation. Our findings indicate that social networking services such as Facebook can provide civil society organizations with: (1) more political opportunities to advocate; (2) more chances to connect with the local government; and (3) create opportunities to exert greater presence, despite their limited financial and political resources.

Keywords: civil society organizations (CSOs); advocacy; political network; social media; Facebook

1. Introduction

The importance of advocacy activities by civil society organizations (CSOs), including public interest groups, citizens’ groups, non-profits, neighborhood associations and social movement organizations, in policy and decision-making procedures has been greatly emphasized in the literature of political science and social policy [1,2]. Salamon and Geller [2] indicated that “active participation in the policy process is a fundamental function of the non-profit sector in a democratic society”. Child and Grønbjerg [1] pointed out that it might be the “primary vehicles by which people … pressure government to respond to disadvantaged groups … and attend to unresolved problems”. Pekkanen and Smith [3] also pointed out that attention to advocacy by CSOs was growing because several valuable contributions have come from surveys in recent years. At the same time, Pekkanen and Smith [3] pointed out that advocacy behaviour generally resisted scholarly analysis for some critical reasons. That is, advocacy is difficult to: (1) measure because it covers a broad range of actions; and (2) to determine the causality.

At the same time, local and central governments are motivated to focus on the CSOs. After World War II, the demands from citizens for social services regarding problems related to childcare or nursing care, environmental problems, and employment measures, have increased and diversified. On the other hand, since the 1970s, the government has been withdrawing from spending on public policy or reducing the financial role due to financial stringency and the influence of neoliberalism policy.
In other words, while it becomes difficult that the government itself corresponds to the social needs, it becomes necessary as a trial that the role that the public sector has been taking on until now should be performed in collaboration with the private sector.

One of the ways to mediate the government sector with the private sector is through social media, such as Facebook. Social media enables an open government [4] and expands possibilities where residents are more involved in the provision of public services and have more influence on policy decisions [5]. Also, by connecting government and citizens via social media, public space is expanded [6–9] and it can become a path for information and knowledge related to public issues such as citizens’ daily living [10].

Despite the importance of their representative activities, the relevance and impact of the leading actors who structure the diverse networks and discourses through social media need further recognition in both fields. The purpose of this study is to analyze civil society organizations at the local government level involved in advocacy activities through the use of social media such as Facebook and Twitter. Although there are some different definitions of “civil society”, we followed a conception of “civil society” defined by Frank Schwartz [11] as the “sphere intermediate between family and state in which social actors pursue neither profit within the market nor power within the state”. Our study focuses on a specific Japanese Facebook community page, the “Tsukuba Civic Activities Cyber-Square”, aimed at enhancing civil society activities in Japan. This page is operated by the municipal government of Tsukuba, in collaboration with the University of Tsukuba and Intel Corporation.

2. Literature Review: Advocacy Activities by Civil Society Organizations in Japan

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation, as well as the experimental conclusions that can be drawn.

2.1. Definition of Advocacy

The notion of “advocacy” has a wide range of contemporary meanings, and it is often used interchangeably with similar words such as “lobbying”, and “political activity” by various authors in the bridging fields involved in studying advocacy (Figure 1). As mentioned earlier, Pekkanen and Smith [3] pointed out that advocacy behavior generally resisted scholarly analysis for some critical reasons. That is, advocacy is difficult to (1) measure because it covers a broad range of actions; and to (2) determine causality.

![Figure 1](image_url)  
**Figure 1.** Conceptual relationship between lobbying, policy advocacy, protest, public education and political activity. Source: Pekkanen and Smith [2].
Some researchers use the term advocacy to describe what others call “lobbying” [12]. Beth Leech [13] argues that a broader definition of lobbying is necessary. On the other hand, Salamon and Geller [2] introduce an analytical distinction between “policy advocacy” and “lobbying.” According to their definition, “policy advocacy” is the more general term and “aims to influence government policy at the federal, state, or local level and can encompass a range of activities, including conducting research on public problems, writing Op-Ed pieces on issues of public policy, building coalitions, or participating in a group working to formulate a position on a matter of policy.” Lobbying is a specific subset of policy advocacy and involves communicating the organization’s positions to policymakers, either directly (direct lobbying) or by mobilizing the general public (grassroots lobbying). Salamon and Geller [2] also pointed out that the key difference between lobbying and other forms of advocacy is that lobbying involves taking and promoting a position on specific legislation. Bass et al., [14] also has pointed out that lobbying and advocacy are often regarded as synonymous, but advocacy is a broader concept that involves lobbying.

As the purpose of our study is not the creation of a new definition for “advocacy”, it may be more useful to define advocacy by the activities that a non-profit engages in to influence public policy, either directly or indirectly [2]. Furthermore, “advocacy” does not influence policy change by itself, but the “activities” that a non-profit engages in is an attempt to influence public policy. Therefore, we focus not on influence or policy change, but the communication activities such as requests by the civil society organizations directed towards the municipal government on Facebook.

2.2. Who Advocates? Japan’s “CSOs” through a Comparative Perspective

The appearance of Japan’s civil society differs slightly depending on whether you compare it internationally or confirm details of the organizations within the country. This paper will review some of the noteworthy or special features of Japan’s civil society that are relevant to this study.

First, there are some special or noteworthy characteristics of Japan’s civil society that have been observed from the viewpoint of international comparison. When describing the special characteristics of Japan’s civil society, resources have been found to be a significant problem. Robert Pekkanen [15] indicates how Susan Pharr has coined the phrase “four smalls” when describing the special characteristics of Japan's civil society at the Association for Asian Studies Annual Meeting in 2005. The expression “four smalls” refers to small membership, small numbers of professional staff, small budgets, and small geographic scopes. Leng [16] also makes references to Pharr’s comment on this “four smalls” issue when discussing Japan’s civil society. Robert Pekkanen [15] investigated the reason why Japan’s civil society is composed of many small groups but few large professionally managed national organizations from a political institutional perspective. He demonstrates that political institutions such as regulatory frameworks, financial flows, and political opportunity structures are the main factors underlining civil society in Japan. In his conclusion, Japan is lacking in advocacy activities that bring about social change, and has labelled this “Members without Advocacy” [15]. Pekkanen has made a comparison of the number of employed personnel of civil society organizations in Japan with other nations. Through his analysis, Japan was found to have the second smallest number of organizations having employed personnel of all the OECD countries, with Germany having the smallest [15]. Furthermore, previous study results also confirmed that Japan’s CSOs have fewer employed staff than CSOs in the US, Korea and Russia [17].

On the other hand, the survey results focused within Japan reveal that producer groups, such as economic groups, labor unions and agricultural organizations, and political groups, are more dominant in advocacy while welfare groups, educational groups, civic organizations and professional groups are more passive in voicing their interests [18,19]. Path dependency theory could explain this feature of political structure in Japan. After World War II, capitalist developmental states such as Japan had been protecting the producer sector associations such as economic groups, labor unions, and agricultural organizations to achieve economic growth (convoy system). In this process, stronger information and human networks had been built among these associations, the bureaucracy, and the Liberal Democratic
Party (LDP) in Japan who were continuously in political power since its founding in 1955. In contrast, the non-profit and civic sectors excluded from this convoy have been discouraged from appearing in the focal areas of the Japanese political network. This older political structure (kyū kouzou) can be observed in a survey conducted in 2006–2007 and is a special and noteworthy characteristic of Japan’s civil society [19].

In addition, the survey results also indicate that there are routes of information flow available through the traditional community—neighborhood associations (jichikai or Chonaikai). The survey results clarified that neighborhood associations, not political parties or politicians, try to exert influence over policies by directly contacting administration [20]. Furthermore, previous study results also confirmed that groups with capital resources such as employed personnel, budgets and several individual members actively carry out activities in comparison to groups without resources [21].

Through these previous studies, we can summarize that Japan’s civil society advocacy ability is assessed as vulnerable based on the number of employed personnel when compared to the numbers in other nations. Based on previously mentioned typology of area of policies, groups such as welfare groups, educational groups, civic organizations and professional groups have fewer opportunities to contact political actors directly. On the other hand, Japan’s civil society organizations have obtained local routes of information flow through economic groups, labor unions and agricultural organizations, political groups and neighborhood associations.

2.3. Advocacy and Media in Japan

Civil society organizations with limited resources have traditionally gained the help of mass media to communicate their messages. Around the end of the Liberal Democratic Party (LDP) dominated Japanese politics era of the 1970s, views of Japan’s political system as being more pluralistic began to emerge. Among these views were the referent pluralism championed by Ikuo Kabashima [22], who emphasized the influence and important role of mass media.

Kabashima, using data from the March 1980 study “Elites and the Idea of Equality” and citing a deep relationship between the class structure of influence as acknowledged by the elite and the actual class structure, illustrated that (a) there was a high degree of coincidence in the ranking of evaluations of each group’s influence; and that (b) all the group leaders except the mass media leaders saw the mass media as the most influential group in terms of Japan’s overall political and social systems. Kabashima also underlined the two principles of (a) neutrality, i.e., mass media leaders were politically neutral in all areas of political party support, political ideology, view of socio-economic equality and traditional values; and (b) inclusiveness, i.e., in examining the relationship between the influence of interest groups, and the degree of contact with the following four groups of influence: (a) LDP leaders; (b) bureaucratic elite; (c) opposition leaders; and (d) mass media. The mass media had direct connections with a diversity of group leaders that went beyond differences in size and relative newness of group and political ideology, so Kabashima argued that the mass media was positioned outside the core of the traditional authority group comprised of the LDP and the bureaucratic elite, and served to inject into the political system the preferences of groups that tended to be excluded from the main authority [22–25].

Recently, social media has been added alongside mass media as a way of sending certain information from the civil society organizations to the political system. To reiterate, social media is one way to connect civil society organizations with local and central governments that are struggling with limited budgets. Furthermore, as online election campaigns have been allowed since 2013 in Japan, attention to political and policy-related Internet usage including social media and civic engagement is greater [26]. Social media users can be considered to be positioned outside the traditional authority groups, but they can create flows of information, and one can observe such changes in the behaviour patterns of civil social organizations. Such changes, however, remain far from having been the subject of sufficient discussion until recently; therefore, this study will attempt to observe and measure these new changes in information flows.
As mentioned earlier, previous studies have suggested that Japanese civil society organizations with limited financial and political resources have difficulty in influencing public discourse and political processes. Specifically, civil society organizations such as welfare groups, educational groups and civic organizations have pointed out that they have fewer opportunities to contact political actors directly. However, social media has equipped civil society organizations and stakeholders with new tools that allow them to effectively share information and communicate with the government and distribute information about their specific interests and missions. Our study attempts to discover the ways in which social media usage will affect the behavioural patterns of civil society organizations. The following two research questions were established to investigate any divergence in the behavioural patterns of the civil society organizations.

RQ1: Who are the leading actors who use social media such as Facebook for interaction with local governments?

RQ2: Are Japanese civil society organizations effective advocates when using Facebook?

3. Research Design and Methodology

3.1. Data Collection

In this paper, we focus on a specific Japanese Facebook community page—the “Tsukuba Civic Activities Cyber-Square”—aimed at enhancing civil society activities in Japan. According to a survey reported by the Local SNS study group (Chiiki SNS kenkyūkai) in March 2013, 466 Facebook pages were being managed by Japanese local governments at that time [27]. The authors cross-examined the list of Facebook pages created by the study group, and confirmed that out of the 466 on the list, 425 pages were still active and that six pages were related to civic activities. Among those, the “Tsukuba Civic Activities Cyber-Square” had the most “Fans” and the second highest level of “engagement” when compared with the six Facebook pages. Such dimensions of consistent activity indicate how the “Tsukuba Civic Activities Cyber-Square” can be considered a representative case for examining civic engagement via social media in Japan. (Detailed frequency regarding engagement and number of fans can be confirmed from Kaigo & Okura [28].)

Facebook metrics data of the “Tsukuba Civic Activities Cyber-Square” were obtained through the Insight interface of Facebook community page functions. Node XL was employed to measure network statistics based on the data derived from the Facebook user accounts. Additionally, qualitative content analysis software (KH Coder) was also used in this study to identify policy-related articles in the community page content and discourse in Japanese. Our rationale for utilizing this data is based on the assumption that there are direct and indirect connections between non-profits and governments enhancing policy-making processes.

3.2. Users of the Tsukuba Civic Activities Cyber-Square

The “Tsukuba Civic Activities Cyber-Square” Facebook Page was created on 1 February 2012, to activate social networks within the Tsukuba community and enhance civic activities (Table A1). By investigating the residential profiles of users, we have found that more than 50% of users are inhabitants or have their main social activity in Tsukuba, Ibaraki or other cities in the vicinity. This data indicates that the Facebook page is basically used by local individuals and groups.

The on-going social experiment of the Tsukuba Civic Activities Cyber-Square has been testing how advertisements and offline gatherings could lead to the further enhancement of civil society. Through the qualitative analysis of Tsukuba Civic Activities Cyber-Square posts, we identified how interviews among civil society organizations in Tsukuba have been conducted and their opinions have been featured on the Tsukuba Civic Activities Cyber-Square in news article formats with photographs. Various organizations that focus on environmental protection, welfare, education and neighborhood associations that operate on maintaining communities in Japan have been featured in the Tsukuba Civic Activities Cyber-Square. This paper analyzes how these policy-related articles and their reactions
via social networking services reflect the actual network and advocacy activities through the Tsukuba Civic Activities Cyber-Square.

3.3. Methodology

We employed social network analysis to identify vital actors who exist in the social network community of Tsukuba Civic Activities Cyber-Square. The indicators of (1) closeness centrality; (2) betweenness centrality; and (3) clustering coefficient can be used to measure the level of how actors are involved with each other in a network.

Closeness centrality and betweenness centrality indicate the patterns of how actors make ties. These centrality measures can be used to see the ties among those in non-profit advocacy networks [29]. According to Borgatti [29], the (1) closeness centrality can be used to measure the degree of how much an actor directly communicates with other actors. The (2) betweenness centrality can explore the degree to which an actor is playing a bridging role among other actors [29]. The bridging role here is critical as this is the focal point where important information flows from the leading non-profit organization to others. This will lead to subsequent information flows to other followers or members in subgroups and is crucial.

The visualization of advocacy networks allows us to see the patterns and other facets of the diverse organizations that are involved with the Tsukuba Civic Activities Cyber-Square Facebook page. Node XL can analyze these network indicators and identify such subgroups in non-profit advocacy networks [30]. Cluster analysis can identify the subgroups and this type of analysis can allow us to understand the networking of subgroups and view how they may be leading non-profit advocacy [31]. The results illustrate how advocacy activities are supported by actors in a network because we are focusing on who is leading each subgroup. These will provide evidence about the patterns of advocacy activities in a subgroup by the leading actor through the centrality indices.

4. Results

Through the available data based on various interview articles about civil society organizations and the reactions posted through the Tsukuba Civic Activities Cyber-Square Facebook page, this study identified four policy-related articles and analyzed the interactions of: (1) neighborhood association networks (specifically those located in Tsukuba); (2) disaster networks (during the Hojo tornado); (3) social welfare networks; and (4) volunteer networks.

4.1. Neighborhood Association (NHA) Networks

Figure 2 describes the network among the actors who interacted with the neighborhood association related article. The cluster (blue dots) in the centre of Figure 2 consists of: (1) heavy users of the Tsukuba Civic Activities Cyber-Square who frequently interact with the articles; (2) Tsukuba municipal hall workers; and (3) representatives of the neighborhood associations. These actors are indicated by the blue dots (Users who have clicked “Like” more than once on the Tsukuba Civic Activities Cyber-Square, as was reported by a part-time worker of the Tsukuba municipal hall responsible for interviewing the Tsukuba Civic Activities Cyber-Square during Fiscal Year 2013 and 2014).

These three categories of actors display high centrality, and individuals of Tsukuba City are connected in the vicinity of those who are in these three categories. Figure 2 shows the linking among the representatives of the neighborhood associations and Tsukuba municipal hall workers in the network.

Through our qualitative analysis, we discovered a noteworthy comment by the neighborhood association representative stating how important it is to be connected in a horizontal relationship and that it is important for the city’s government to explain what the neighborhood associations are to other members in the community. Specifically, one representative of a neighborhood association (NHA) posted a comment mentioning “I heard that municipal government would be holding a meeting with the social welfare council, NHA, and social workers. Very Good. A horizontal
network is important. Please publicize the fact that the ward assemblies (Kukai) and neighborhood associations (jichikai) are the same organizations”.

Other NHA participants also posted comments such as “Recently, communities with children and families are growing rapidly in Tsukuba. I would like to make a “home” where the children can return to when they become adults”. The municipal hall workers responded with gratitude to pointing this out to them and they promised that they will endeavour to spread this information.

Figure 2. Node XL analysis result map of neighborhood associations (12 June 2015).

4.2. Disaster Networks

Figure 3 describes the network among the actors who interacted with the articles related to the tornado disaster of Tsukuba City’s Hojo area in May 2012. The cluster of actors in green are the Tsukuba municipal hall workers and heavy users linked to this group of actors. The cluster of actors in dark blue are welfare workers and heavy users who are linked to this group of actors. The cluster of actors in light blue are actors in education and research and heavy users who are linked to this group of actors.

Figure 3. Node XL analysis result map of Tornado in Hojo, Ibaraki (12 June 2012).

4.3. Social Welfare Networks

Figure 4 describes the network among the actors who interacted with the articles related to welfare and medical services. The red circle within the network links is the Tsukuba Civic Activities Cyber-Square and the other light blue node is a welfare-related organization (involved in educating about child rescue procedures). The blue nodes within the interlinked network are organizations of individuals with disabilities, education communities and heavy users of the Tsukuba Civic Activities Cyber-Square. Through this network map, one can observe how the Tsukuba Civic Activities Cyber-Square linking the welfare-related organization involved in rescue education is linking other
users of the Tsukuba Civic Activities Cyber-Square community. Through our qualitative analysis, we found that the welfare group expressed their gratitude to the daily support of municipal hall workers, and the workers also expressed appreciation for their words and encouraged the group members to be more active. Specifically, the welfare group posted a comment mentioning “I truly appreciate your kind support to our activities”, with the municipal hall worker responding “I should say thanks to you likewise. Looking forward to your success in the next academic year”. In other cases, a member of a welfare group made a comment on the newsfeed stating “Please pay particular attention to community-based health care even if you are currently healthy, and take part in our team as soon as possible” (5 March 2016) and encouraged the municipal government to have more interest in the welfare problem.

4.4. Volunteer Networks

Figure 5 describes the network among the actors who interacted with the articles related to volunteering. Through this network map, one can observe how the links among users of the Tsukuba Civic Activities Cyber-Square, welfare organizations, and leisure-related organizations are of equal distance within the network. In contrast to the other networks that had a central actor, this represents how many of the actors are linked equally to each other.

Figure 4. Node XL analysis result map of Social Welfare (25 January 2016).

Figure 5. Node XL analysis result map of volunteering (28 January 2016).
Through our qualitative analysis, we found that volunteering groups expressed their gratitude and opinions through the newsfeed. For example, on 15 September 2016, one volunteering group made a comment mentioning “I would like to change information regarding volunteering. Children can join scientific activities just like adults. Let’s expand a grassroots network throughout Tsukuba!” and encouraged the participants of the Facebook page and the municipal hall workers to engage more in this specific type of volunteering.

4.5. Summary of Analysis and Comparison

Our analysis of network shapes among the organizations links can be generalized as follows (Table 1). In a social networking service community page focusing on civil society activities, networks among actors/organizations do not need a hub when it concerns volunteer activities. When it concerns disasters, the municipal hall workers and welfare organizations create a hub within the network. When it pertains to neighborhood associations (community maintenance and community building groups), representatives of those associations, municipal hall workers and other users of the community page are in the center of the network (Table B1). The neighborhood association representatives in our analysis were found not only to be a hub, but were also communicating requests and demands to be delivered to the local government through Facebook and were able to obtain a positive response from the local government that they will sincerely consider their request.

In other words, our study provides evidence of how social media can be a platform to provide opportunities of direct communication with local governments and advance advocacy activities, especially in an environment that traditionally does not have many such opportunities and where civil society organizations are lacking in numbers of employees when compared with other nations.

<table>
<thead>
<tr>
<th></th>
<th>The Center (Leading Actors)</th>
<th>The Periphery</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHA network</td>
<td>NHA</td>
<td>Users of the Tsukuba Civic Activities Cyber-Square</td>
</tr>
<tr>
<td></td>
<td>Civil servants in Tsukuba</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Users of the Tsukuba Civic Activities Cyber-Square</td>
<td></td>
</tr>
<tr>
<td>Disaster network</td>
<td>Welfare groups</td>
<td>Academic/educational groups</td>
</tr>
<tr>
<td></td>
<td>Civil servants in Tsukuba</td>
<td>Users of the Tsukuba Civic Activities Cyber-Square</td>
</tr>
<tr>
<td></td>
<td>Users of the Tsukuba Civic Activities Cyber-Square</td>
<td></td>
</tr>
<tr>
<td>Welfare network</td>
<td>Tsukuba Civic Activities Cyber-Square</td>
<td>Welfare groups</td>
</tr>
<tr>
<td></td>
<td>Welfare groups</td>
<td>Users of the Tsukuba Civic Activities Cyber-Square</td>
</tr>
<tr>
<td>Volunteering network</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

5. Conclusions

Our analysis discovered that diverse patterns of usage were evident in non-profit advocacy among the leading actors connected to the Tsukuba Civic Activities Cyber-Square. Our results show that civil society organizations such as welfare groups that were once categorized as “silent” groups, displayed equal amounts of advocacy in comparison to other civic organizations and traditional community such as neighborhood association. The results of the qualitative content analysis suggest that these organizations are not just attempting to exchange and share information with the local government via Facebook, but are also able to advocate their concerns and issues they would like to pursue. To illustrate this dynamic, a member of a welfare group made a comment on the newsfeed to encourage the municipal government to show more interest in welfare issues. In another case, one volunteering group encouraged the participants of the Facebook page and the municipal hall workers to engage more in volunteering.

Our findings indicate that social networking services such as Facebook could provide civil society organizations with: (1) more political opportunities to advocate; (2) more chances to connect with the local government; and (3) create opportunities to exert greater presence, despite their limited financial and political resources.
Acknowledgments: The authors would like to acknowledge that this study was supported by the Japan Society for the Promotion of Science Grant-in-Aid for Scientific Research (C) grant number 25330394.

Author Contributions: Both authors equally contributed to the creation of this paper.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Overview of history of the “Tsukuba Civic Activities Cyber-Square” Facebook Page.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Launch Time of the Facebook Page</td>
<td>1 February 2012</td>
</tr>
<tr>
<td>2</td>
<td>Facebook group page manager</td>
<td>Division for volunteering support policy of the municipal government of Tsukuba, Ibaraki, Japan</td>
</tr>
<tr>
<td>3</td>
<td>Main target area</td>
<td>Tsukuba, Ibaraki, Japan</td>
</tr>
<tr>
<td>4</td>
<td>Objectives</td>
<td>To activate social network within a community and promote more civic engagement by developing information infrastructures</td>
</tr>
<tr>
<td>5</td>
<td>Accumulated “Likes” of the Facebook page (as of 17 April 2016)</td>
<td>2604</td>
</tr>
<tr>
<td>6</td>
<td>Gender of users by age (as of 17 April 2016)</td>
<td>- 24: women 3%, men 4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25–34: women 11%, men 14%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35–44: women 12%, men 20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45–54: women 8%, men 13%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55–64: women 3%, men 6%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>65+: women 1%, men 4%</td>
</tr>
<tr>
<td>7</td>
<td>Residential Profiles of users (as of 27 January 2014)</td>
<td>Tsukuba, Ibaraki, Japan: 54.2%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chiyoda-ku, Tokyo, Japan: 8.7%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tsuchiura, Ibaraki, Japan: 4.4%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mito, Ibaraki, Japan 2.9%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>etc.</td>
</tr>
</tbody>
</table>

Appendix B

Table B1. Min., Max., Avg. and Median Betweenness Centrality and Closeness Centrality.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Betweenness Centrality</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum Betweenness Centrality</td>
<td>65</td>
<td>220.176</td>
<td>42</td>
</tr>
<tr>
<td>Average Betweenness Centrality</td>
<td>10.356</td>
<td>20.217</td>
<td>1.826</td>
</tr>
<tr>
<td>Median Betweenness Centrality</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Minimum Closeness Centrality</td>
<td>0.008</td>
<td>0.011</td>
<td>0.023</td>
</tr>
<tr>
<td>Maximum Closeness Centrality</td>
<td>0.014</td>
<td>0.022</td>
<td>0.045</td>
</tr>
<tr>
<td>Average Closeness Centrality</td>
<td>0.012</td>
<td>0.016</td>
<td>0.043</td>
</tr>
<tr>
<td>Median Closeness Centrality</td>
<td>0.013</td>
<td>0.016</td>
<td>0.043</td>
</tr>
</tbody>
</table>

References

5. Linders, D. From e-government to we-government: Defining a typology for citizen coproduction in the age of social media. *Gov. Inf. Q.* 2012, 29, 446–454. [CrossRef]


© 2016 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (http://creativecommons.org/licenses/by/4.0/).