Digitization of Society: A Survey of Mobile Home Service Recommender Development

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ABSTRACT

Mobile home service recommender application offers smart and efficient interaction to unify digitally the multi background residents in the community to delineate their in house issues such as to get handyman for home service. The current process of getting home service need data that can be considered and matched according to the issue. Using embedded recommender logic inside the mobile application, it can match the resident's profile and problem preferences by analysing the behaviour of each item and finally generate personalized home service recommendation solution. This paper conducted a preliminary study in digitizing home service using recommender approach. It aims to investigate the current behaviour of people on getting home service and their readiness to use tailored mobile home service searching application. It collects data from 339 respondents using social media platform. The result from the survey shows that mobile application is common in people life. It also reveals that residents are commonly facing issues on piping, home appliance, furniture, gas cooking, baby care, grass and home maid. To get solution, people are very depending on home service. However, the current way of getting the home service is inadequate to assist them. It also disclosed that people prefer to use mobile application to improve the home service searching. Either conventional or advanced recommender, mobile application can provide on the go and portable service to produce home service personalized recommendation. As conclusion, this paper offering scholars with the state-of-the-art knowledge to embark the recommender approach for home service platform toward digitization of society.

Keywords: *digitization, home service, mobile, recommender, survey*

INTRODUCTION

Residence or home is not only a single entity dwell by a person but it composes of physical and social component in a community and it owns multidimensional characteristics (Maksid & Hamsa, 2014).

Residents in a residential area can be described as a community in certain setting, which may concern with problem especially in the context of geographical extent and neighbouring services (Kathleen M. MacQueen, Eleanor McLellan, David S. Metzger, Susan Kegeles, Ronald P. Strauss, Roseanne Scotti, Lynn Blanchard, 2001; Mini & Sathyamurthi, 2017).

Home service is crucial in residential area. Usually, home service is needed when the residents are facing home context issues such as home repair or maintenance, home supplement and security, personal and family needs, maid and special request for living needs and satisfaction.

The process of hiring the candidate for the home service either a person or a company need certain amount of data that can be considered and matched according to the problem. Thus, a person in the neighbouring can get into the community to get solution (Koh & Chew, 2015).

Regarding to the discussion above, digital platform seems applicable to offer smart and efficient interaction to unify digitally the multi background residents in the community to delineate the multi-character problems (Kathleen M. MacQueen, Eleanor McLellan, David S. Metzger, Susan Kegeles, Ronald P. Strauss, Roseanne Scotti, Lynn Blanchard, 2001; Royakkers, Timmer, Kool, & van Est, 2018).

Furthermore, people nowadays have intimate relationship with digital platform such as social media application, onboard or mobile application, web application, cloud service, big data analysis, embedded chip, robot and self-learning or intelligent application (van Est, R., Rerimassie, V., van Keulen, I., 2014).

Recommender approach can match the resident's profile and problem preferences by analysing the behaviour of each item and finally generate personalized recommendation for home service solution (Resnick, Varian, & Editors, 1997).

Instead of conventional recommender, advanced recommender approach can be used to develop the application such as social network-based recommender systems, fuzzy recommender systems, context awareness-based recommender systems and group recommender systems (Lu et al., 2015).

Currently, there are a lot of commercial online home service marketplace such as Amazon Home Service, Handy, MyTime, Redbeacon, Serviz, TakeLessons, Talklocal and Thumtack (Chaney & Commerce), 2015). However, via mobile recommender application, it will accommodate the residents to explore available of options from the community (Jugovac & Jannach, 2017; Lu, Wu, Mao, Wang, & Zhang, 2015).

Due to this discussion, a survey has been conducted to discover the behaviour of people especially in the residential community and their willingness to use mobile application to search skilled person such as handy man for home service.

Methodology

The survey aims to discover the readiness of people who are living in setting to manage home service contact using mobile application.

This online questionnaire was disseminated from 12th April 2019 to 4th May 2019 using social media platform such as Whatsapp, Instagram, Twitter and Facebook.

339 respondents which 205females and 134 males involved in this survey as shown in Figure 1. Majority of them are under 25 years and there are 79respondents aged 36 years old and above. Female respondent is dominant in age between 26 to 35 years old.
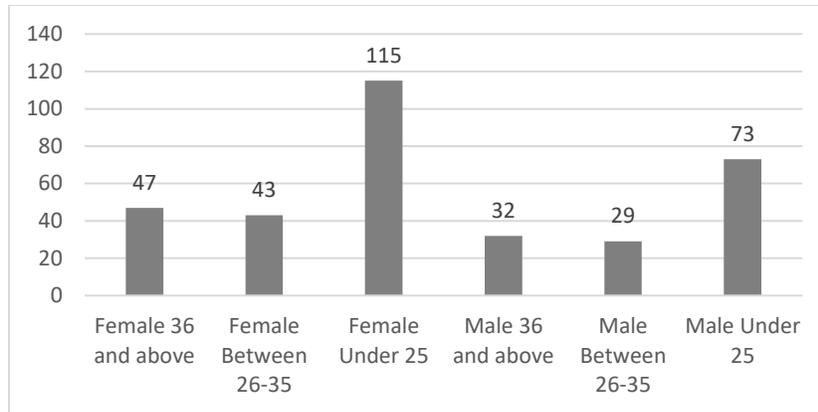
Figure 1: Respondents' Demographic

Findings and Discussion

i. Internet Availability

The respondents were asked on their capability to get connected to the Internet.

From the response, the survey found that 94% from the respondents were always connected to the Internet.

ii. Internet Access Method

The respondents were asked on how they get connected with the Internet.

Figure 2 depicts that most of the respondents connect to the Internet using mobile device. The WiFi from stationary Internet access point at home and public places also preferable for them to connect. However only a few of them willing to change their Internet access source.
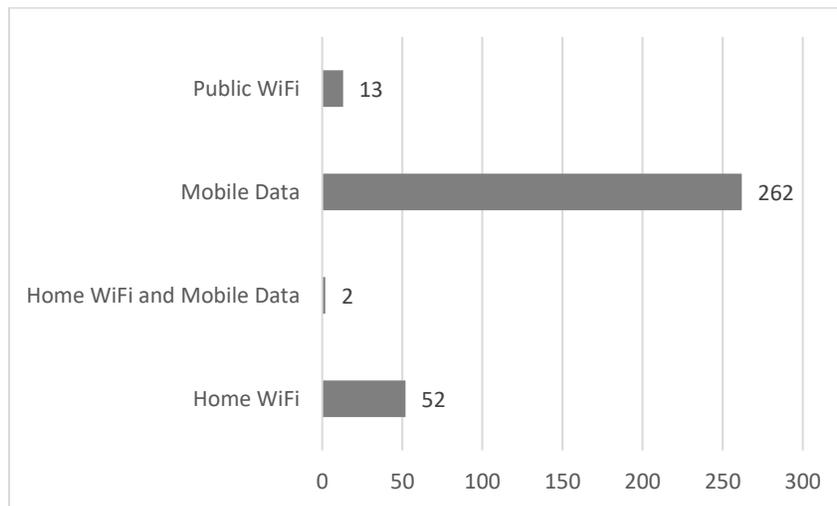

Figure 2: Internet Access Method

iii. Issues for Home Service

The respondents were asked to expose problems that they need to request home service.

In Figure 3, there are six dominant problems that respondents need to request home service. It exposes that home service providers in certain residential area must be ready to offer plumber, handy man worker, cooking gas home delivery, babysitter, yard cleaning worker and housemaid. The rest of the issues are common, but it still can be solved via Do It Yourself (DIY) method or granted from the customer services of the subscribed service or purchased product.

iv. Getting Home Service Contact

The respondents were asked about their action upon facing problems that triggered them to contact home service provider.

There are five main actions as shown in Figure 4. Generally, the main actions can be concluded as platform. The platform such as consumerism, friendship, neighbourhood, telephone service, advertisement and Internet application are used to get the potential informer or directly connecting them to the home service providers.
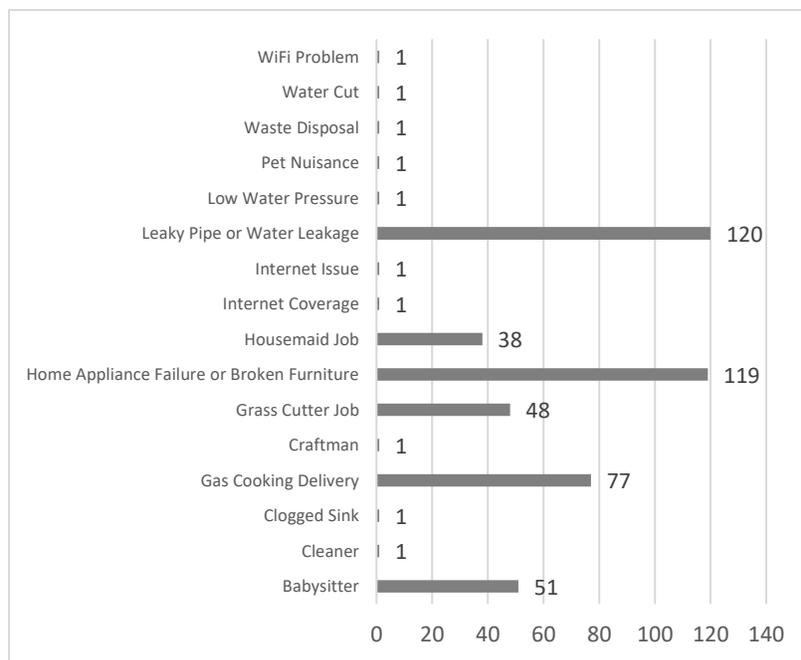

Figure 3: Issues in Home Service

The chart also depicts that both female and male respondents are highly interested in Internet application to find contact. Aside of this, majority of the female respondents are highly to ask known person such as their neighbours, friends and regular shop or subscribed service providers. A call to somebody could be possible but roadside sign ages are not effective.
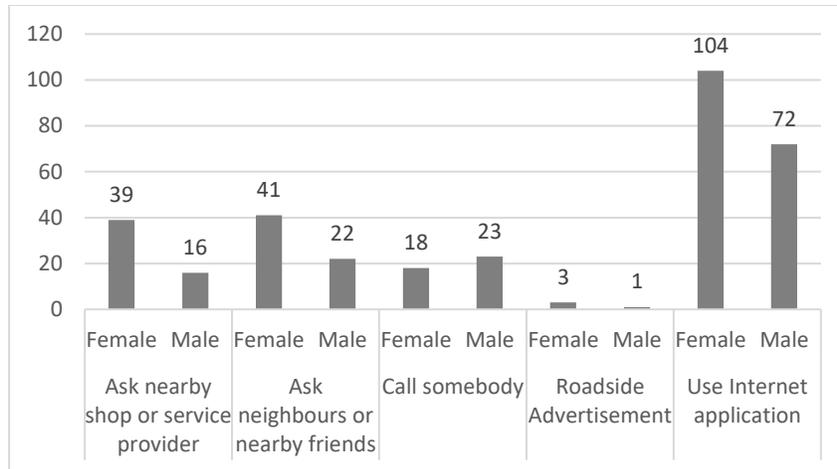
Figure 4: Actions to Contact Home Service

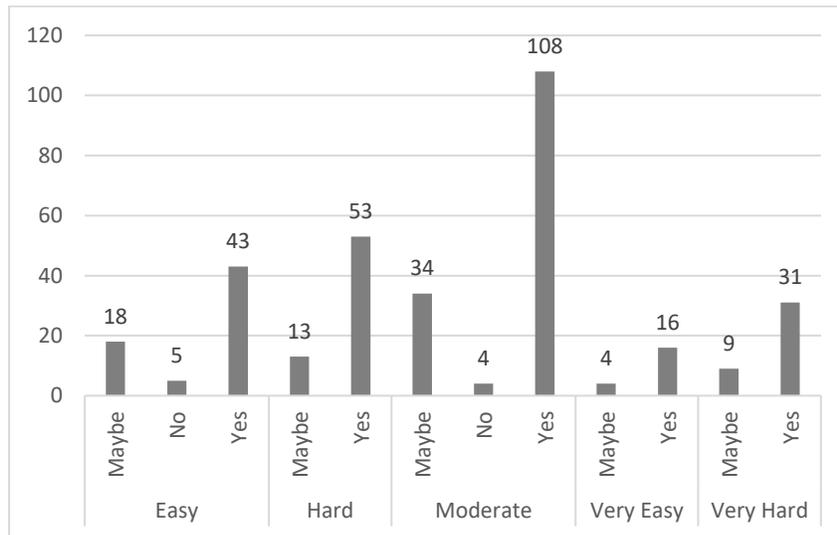## v. *Level of Difficulty and Importance of Home Service*

Figure5: Level of Difficulty and Level of Importance

As shown in Figure 5, it illustrates of two categories; the level of difficulty for respondents to contact home service and their judgement on the importance of home service. Based on the graph, it can be observed that only 338 from the 339 respondents are replied to this question. For each of the level of difficulty, it comprised of 3 parts of the response regarding the importance of home service.

It can be observed that level of difficulty is comprised of Very Easy, Easy, Moderate, Hard and Very Hard which each of the categories generates 6%, 19%, 43%, 20% and 12% of responses, respectively. It reveals that in the current method, getting home service is accessible but still inadequate to satisfy them.

The graph also reveals that respondents will give full effort to get home service contact. It reveals that home service is compulsory.

vi. *Mobile Application for Home Service Finder*
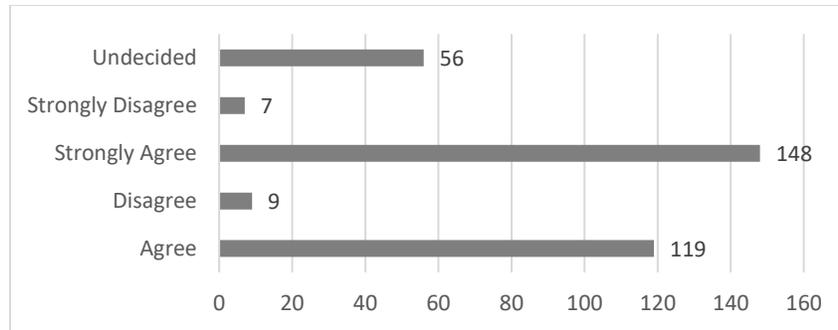The respondents were asked about using mobile application in getting home service instantly.

Figure 6:Capability of Mobile Home Service Application

From the result shown in Figure 6, majority of the respondents agreed that using mobile home service application will instantly help them. But, some of them still unsure about it and there are few of them are denying about the effectiveness of using the mobile application.

CONCLUSION AND RECOMMENDATION

This survey discloses that home service is compulsory to the people in residential area. Home servicecan support people that having issues in inhouse affair with skilled person to solve the related problems. There are many types of problem that need home service to participate due to lack of resident capability.

Secondly,this paper has identifiedthat residents need public datato get home service. It is because the data sharing among the community can converge the solution for the problem. Different issues need different data consideration before home service can be assigned. It needs special platform to allow people to keep communicate and sharing home service details.

This survey is clearly showing that people with different demographic characteristics are always connected to the Internet using mobile device. Thus, using mobile application is not an issue.

Last but not least, the current method in searching home service is tough. This is the reason using mobile application to find home service is popular among the respondents. They are expecting to get instant result in contacting home service.

From all the points given above, it can be suggested that mobile recommender application for home service is relevant in giving instant and effective solution for the people.

This paper recommends scholars with the state-of-the-art knowledge to explore the recommender approach in home service platform toward digitization of society.

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