National Zakat Management Information System: E-Sercive Quality and Its Impact on National Zakat Collection

Randi Swandaru
The National Board of Zakat (BAZNAS) the Republic of Indonesia

Paper to be presented at International Conference of Zakat 2019
3-4 October, Universitas Padjadjaran, Bandung, Indonesia

ABSTRACT

The purpose of this study is to examine the impact and the electronic service quality of the national zakat management information system (SIMBA) on the national zakat collection. This paper uses a multiple regression analysis in its explorative attempt to illustrate the impact of SIMBA implementation on the national zakat collection. It shows that SIMBA is positive and significantly impact the national zakat collection as well as the human development index that is used as a proxy for the human resource management quality of zakat institutions in the respective city. Nonetheless, the population is negative and significant to the zakat collection as endemic poverty and reluctance to pay zakat are indicated as the reasons. Moreover, this study has succeeded in adapting and conducting e-service quality survey to zakat information system realm. All the tests prove that the instrument in this study has a high degree of reliability and validity. The results show that some of the demographic factors significantly impact the perceived performance of SIMBA. Multiple regression analysis that is conducted in this study shows that e-service quality dimension is positive and significant towards SIMBA’ overall quality, perceived value, and loyalty intention. This study contributes to the zakat management system literature, especially in the impact of the national zakat information system, which is pivotal in enhancing zakat collection and poverty alleviation program funded by zakat.

Keyword: BAZNAS, electronic service quality, management information system, SIMBA, zakat.

INTRODUCTION

Despite its advancement, the growth of Islamic banking and finance (IBF) has derailed from its path towards becoming an instrument for financialization and failed to attain the social and the developmental golas as were expected. ElGamal (2006) argues that IBF development that replicating the conventional counterpart makes this peculiar banking model become less efficient in providing the same product. Current IBF model is also not significantly different in risk feature Abedifar et. al., (2015) and the reverse engineering approach to create an Islamic product may cause sharia non-compliance risk which will lead to reputational risk and systemic risk that may collapse the whole industry (Qattan, 2006).

To moderate this failure several studies such as (Asutay, 2007a; 2007b; 2012) argue that it is paramount to return to zakat and waqf that can deliver developmentalism that was expected from the IBF. Zakat, sadaqaat, and waqf that have endogenously embedded in Muslim society are considered as a solution to inequality and poverty problem. These institutions can mobilize Islamic religious fund among the society and help the less fortunate through social security scheme and economic empowerment...
program (Chapra, 2008). The nature of this model that promotes social justice and welfare inclusion makes it more effective than conventional finance that has excluded the poor through debt-based operation (Obaidullah & Khan, 2007).

Empirical findings by Shirazi & Amin (2009) shows that OIC countries can mobilize zakat fund ranging from 1.8% to 4.3% of their GDP which is very potential to combat poverty that endemic in Muslim countries. Moreover, a meticulous study indicates that about 20 OIC countries can solve extreme poverty by solely mobilizing and utilizing zakat funds from internal sources (Mohieldin et. al., 2012). Nonetheless, the current situation indicates that there are a lot of things that to do to achieve the full potential of zakat in Muslim countries. In Indonesia, the largest Muslim country, although the zakat collection increases over the years, it is still stuck at 1.68% of its total potential (BAZNAS, 2017)

Having a limited amount of mobilized zakat, current literature on zakat can be categorized into three groups. The first one is the literature that aims to optimize the utilization of zakat by looking for a zakat disbursement model that can significantly reduce poverty in Muslim countries. The second group is literature that trying to increase the actual collection by looking for determinants that significantly induce Muslim to pay zakat. The last group, which is more scarce than the other two, is literature that scrutiny the zakat management, operation, and performance.

Interestingly, the study in this field, especially on the zakat management information system is pivotal to effectively eradicate poverty and boost collection. For instance, a study by (Othman & Noor, 2012) in Malaysia finds that inaccurate database of asnaf, under-identification of asnaf, bureaucracy, and geographical challenge are some hindrances on the effective use of zakat for poverty alleviation. On the other side, a study by (White, 1952) shows that management information system can increase public trust to non-profit organization i.e. zakat institutions and safeguard the ethics within the organization by providing transparency, disclosure, oversight, and conflict of interest avoidance. In addition, Ahmed (2004) argues that the pivotal aspect to enlarge the contribution of the zakat and waqf institutions on poverty alleviation is knowledge development and information assimilation. Therefore, this particular study is aimed to scrutiny the impact of the national zakat information management system (SIMBA) on the Indonesian zakat management system and operation

AIMS, OBJECTIVES AND RESEARCH QUESTIONS

This paper aims to evaluate the performance of SIMBA by examining its impact on zakat collection. In addition, this study aims at examining the electronic service quality dimensions of SIMBA as perceived by the operators to capture the gap between the expected and the real service quality of this system.

In fulfilling the aims, the following objectives are developed:
1. Developing an advanced understanding of the zakat management systems;
2. Assembling secondary data on zakat transactions through BAZNAS and conducting a survey with SIMBA’ operators on their perceptions towards the system;
3. Examining the correlation between the implementation of SIMBA and the zakat collection in respective local BAZNAS offices;
4. Evaluating the performance of the national zakat information system using e-service quality
In line with identified aims and objectives, the following research questions are developed:

1. Has BAZNAS and SIMBA improved the collection of zakat as indicated in the total zakat collection?
2. Has the SIMBA system fulfilled the expectations of the operators?

LITERATURE REVIEW

Zakat Management System: A Worldwide Survey

There is a large number of academic and professional research on zakat that can be classified into three major categories. The following part provides a survey of such topical areas and points out the gap in the literature that significantly be fulfilled by this research.

First, the literature on zakat as a socioeconomic intervention. Most of the studies in this group elaborate how zakat can reduce poverty and inequalities with evidence from a lot of Muslim countries (see, among others: Abdelbaki, 2013; Kasri, 2014; Ali & Hatta, 2014; Kareem & Bankole, 2016). In addition, Huq (1993) elaborates how zakat not merely addressing poverty but also sustain economic growth, while Kahf & Yafai (2015) suggest that zakat that can give significant relief to governmental budget in providing social assistance and security. Similarly, risk-sharing contracts and zakat as part the redistributive instrument in Islam can induce financial inclusion (Iqbal & Mirakhor, 2012).

Secondly, studies that elaborate zakat estimation in Muslim countries and its determinant factor. Shirazi & Amin (2009) show that OIC countries can mobilize zakat fund ranging from 1.8% to 4.3% of their GDP in annual basis. In Pakistan, the total zakat collection is estimated up to 7% of its GDP Shaikh (2014) whereby in Indonesia it is about 3.4% of its GDP in 2010 Firdaus, et. al. (2012). Moreover, Sapingi, et. al. (2011) conclude that educational background positive and significantly correlated with the intention to pay zakat. On the contrary, lack of institutional support results in zakat ignorance (Ummulkhayr, et. al., 2017). Other than that, studies on the zakat collection discuss fiqh related matters. Kahf (1989) extends Qaradawi’s work on fiqh zakat by creating three zakat estimation approaches namely the traditional fiqh zakat by creating three zakat estimation approaches.

Differ from the two discussed topic above, the third group, studies on the zakat management system and its performance are quite limited if not scarce. One can expect the reason is that this particular type of study needs a stronger involvement and attachment to operational activities of zakat in the sense of assembling primary data. Nonetheless, there are some studies that scrutiny the performance of zakat institutions such as Noor (2012) and Embong, et. al (2014) who use balance score card for assessing the performance of the zakat institutions in Malaysia. Moreover, Wahab & Rahman (2012) measure the productivity growth of zakat institutions in Malaysia using data envelopment analysis. Using the same methodology, Hamzah & Krishnan (2016) finds that excessive usage of staff has caused inefficiency in the zakat institutions in Malaysia. Similarly, Rusydiana & Al-Farisi (2016) tells that high operational cost is the source of inefficiency in zakat institutions in Indonesia. Wahab & Rahman (2013) emphasizes the importance of information and communication technology as well as the computerized zakat system to improve zakat institutions’ efficiency.

Other than that, research on the zakat management information system is an area
that needs much further development. This aligns with several findings in some studies in which zakat institutions do not successfully address the poverty and equality problem (Mahamod, 2011; Embong & Nor, 2013). Inaccurate database of asnaf, under-identification of asnaf, bureaucracy, and geographical challenge are some hindrances on the effective use of zakat for poverty alleviation (Othman & Noor, 2012) that can be resolved by optimizing the zakat management information system.

This emphasizes the importance of management information system which is able to tackle the entire process of zakah giving, such as an information system benefiting from the latest technology that can robustly conduct such identification and ease the zakat management in modern time. This identification is important both for muzaki and mustahiq. For muzaki, the identification may be relevant for deducting or reducing the amount of tax payment. On the distribution side, such identification is important to avoid redundant disbursement so that it can attain equitable and fair zakat distribution. Such identification is also important to monitor the progress of zakat recipient and the effectiveness of the zakat program.

Several studies also have revealed the importance of management information system (MIS) in the non-profit organization (NGO) such as zakat institution. Dash & Mishra (2014) argue that MIS can ease NGO in data documentation and analysis, performance monitoring and strategic decision making. Moreover, MIS will help NGO to increase credibility and accountability by presenting their activities to the public. It might also help in safeguarding the four pillars of ethics in NGO, namely disclosure, transparency, avoidance of conflict of interest, and oversight as elaborated by (White, 1952)

Moreover, management information system can ease the zakat administrator to run the operation efficiently as it can lower the cost of dissemination of information (O’Connor & Martinsons, 2006). In this regard, management information system can reduce unnecessary cost by enlarging the usage of internet and online transaction system. This is absolutely relevant to the fact that the amount of zakat that can be utilized to organize zakat is limited to one eight in accordance with Hanafi’s ruling. Therefore, integrating management information system to the zakat operation is essential to enhance the zakat management system.

**The Emergence and Development of SIMBA**

The current zakat act has several direct implications to the national zakat management system.

i. First, it provides the legal and political assurance from the state for every Moslem to perform zakat under positive law. It also emphasizes the role of zakat in national socio-economic development, especially in bringing public welfare and social justice (Constitutional Court of The Republic Indonesia, 2012).

ii. Secondly, it acknowledges equally the role of the state and civil society in administering zakat. It does not impose zakat to the Moslem or perceive it as state income, but put government budget to enhance the benefit of zakat to the society. On the other hand, it recognises the role of civil society both in administering and supervising zakat activities. Nasar (2014) argues that zakat management in Indonesia is not considered as totalitarianism where the state is the only legitimate body to manage zakat and not also considered as secular where the practice of zakat left behind to the society without any support from the government; Lastly,

iii. It induces to the unified and integrated zakat management system whereby
Zakat institutions conduct their activities under a standard regulation and integrate their report into an agreed platform to create a national report and database. Mustahik database integration is one of the benefits of a unified and integrated zakat management system that can avoid redundant distribution, prevent inequality disbursement between regions, and become a baseline of performance measurement or policy making (Beik, 2014). This aligns with Ahmed (2004) states that the performance of zakat institution to combat poverty hinges on the information exchange in which the zakat institution can gain trust from the customer and increase its credibility.

Kustiawan (2014) and Hafidhuddin et. al. (2015) articulate the zakat act No.23/2011 into a house building block as illustrated in Figure 1, which is also adapted in the years strategic planning of national zakat management (BAZNAS, 2016a).

Figure 1. Zakat Management System Building Blocks

Source: BAZNAS (2016a:26)

The emergence of SIMBA should be considered as a logical consequence of Zakat Act No. 23/2011. This act assigns BAZNAS as the leader of national zakat management. Having this role, BAZNAS is charged with several tasks as identified below that will be impossible to conduct without a robust national zakat information system⁠¹:

(i) To implement the principles of zakat act, i.e. sharia-compliant, trust, expediency, justice, legal certainty, integrated, and accountable to the national zakat management system;

---

¹ The tasks are derived from (Zakat Act, 2011). See article 1,2,3,6,7,15,19,23,26,28, and 29
(ii) To increase the service effectiveness and efficiency of national zakat management;
(iii) To eradicate poverty by optimizing the zakat fund utilization and consider some principles such as equity and fairness in each region;
(iv) To provide a zakat transaction receipt for payers that can be used as tax deduction; lastly
(v) To conduct national zakat hierarchical reporting system.

On October 2012, with the help of Bank Rakyat Indonesia Syariah under its CSR scheme, BAZNAS launched SIMBA as the national zakat management information system (Republika, 2012). SIMBA has two main functions: recording collection and disbursement of zakat and creating a report based on the submitted data which works under the zakat information management system. In addition, SIMBA also consists of supporting organizational information system that maintains several information systems such as finance, human resource, logistic, public affairs and others. It is a web based system that connects each BAZNAS office in every region to BAZNAS headquarter in Jakarta. Therefore, this feature allows SIMBA to create a real-time online report of national zakat activities in each level in every region. This model is even more suitable to produce the national zakat hierarchical report as mandated by the zakat act. Figure 2 shows the structure of the national zakat reporting system.

![Figure 2. National Zakat Reporting Structure](source: BAZNAS (2016a: 33))
Besides representing a reporting structure,

RESEARCH DESIGN

A number of research design methods are available; exploratory research, explanatory research, descriptive research, survey research and case study (Sekaran & Bougie, 2013). This research is constructed as an exploratory study which aims at exploring participants’ views on the operation of zakat management information system. In addition, since it focuses on a particular organisation, that is BAZNAS, this study should also be considered as a case study. Furthermore, since further data analysis on the primary data through econometrics specification is conducted, this study also benefits from being an explanatory study.

RESEARCH STRATEGY

This study applies two different approaches as its strategies to answer the research questions. Inductive approach is used to measure the impact of SIMBA on the national zakat collection. This study observes the existence or non-existence of SIMBA in 85 cities and attempts to offer a bottom up abstraction of its impact on the national zakat collection together with some other control variables. On the other hand, the deductive approach is applied to measure the electronic service quality perceived by the SIMBA operator’s opinions at nation-wide level; as this study established a number of pre-determined hypothesis to test.

ECONOMETRICS MODEL

SPECIFICATION AND VARIABLES

There are six key data in this research to measure the impact of SIMBA on the national zakat collection, namely total zakat
and *infaq* collection (*collection*), total local population, gross domestic regional product (*GDRP*), GINI coefficient (*GINI*), Human Development Index (*HDI*) and the existence of SIMBA in respective city, as depicted in Table. All these data are in local level creating 170 observations-strongly balanced panel data (85 regions during 2014-2015). Nonetheless, due to data availability constraints in some provinces where GINI coefficient for some cities is not found, GINI coefficient of its respective provinces are used to fill the gap as a proxy.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Notation</th>
<th>Source</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Zakat and Infaq Collection</td>
<td>LogCollection</td>
<td>BAZNAS</td>
<td>Log of Collection in Indonesian rupiah</td>
</tr>
<tr>
<td>Total Local Population</td>
<td>LogPop</td>
<td>BPS</td>
<td>Log of Population Number</td>
</tr>
<tr>
<td>Human Development Index</td>
<td>HDI</td>
<td>BPS</td>
<td>Index (1 to 100, 100=the highest score)</td>
</tr>
<tr>
<td>Real Gross Domestic Regional</td>
<td>GDRPcap</td>
<td>BPS</td>
<td>Indonesia million rupiah per capita</td>
</tr>
<tr>
<td>Product (GDRP) per capita</td>
<td></td>
<td></td>
<td>(million IDR/cap)</td>
</tr>
<tr>
<td>GINI Coefficient</td>
<td>GINI</td>
<td>BPS</td>
<td>Index (0 to 1, 1=the highest score)</td>
</tr>
<tr>
<td>SIMBA Implementation</td>
<td>SIMBA</td>
<td>BAZNAS</td>
<td>Dummy variable: 1 if SIMBA exist; 0 otherwise</td>
</tr>
</tbody>
</table>

Accordingly, the econometric model for this research is a linear regression as illustrated below:

\[
LogCollection_{it} = \alpha + \beta_1 LogPop_{it} + \beta_2 HDI_{it} + \beta_3 GDRPcap_{it} + \beta_4 GINI_{it} + \beta_5 SIMBA_{it} + \varepsilon_{it} \tag{1}
\]

where, \(\alpha\): constant; \(i\): city; \(t\): year; \(\beta\): slope; \(\varepsilon\): error term, the rest of the variables are defined in Table.

**RESEARCH METHOD FOR DATA COLLECTION**

**Questionnaire Survey Design**

The questionnaire is structured with close-ended questions consisting of four parts. Part I screens the respondents that do not have any experience in using SIMBA, while Part II measures respondents’ interaction with SIMBA including usage intensity and training participation. Part III consists of 4 main questions that measure the importance and perception of e-service quality dimensions; overall quality; perceived value; and loyalty of customers towards SIMBA. The responses to the questions regarding e-service quality dimensions and customer loyalty are recorded using 5-point Likert scale, whereas the SIMBA overall quality and the perceived value are recorded under 10-point Likert scales ranging from poor to excellent. Part IV records the demographic information of each of the respondents. The questionnaire can be viewed in **Error! Reference source not found.**. Differ from the initial service quality model developed by Parasuraman *et al.* (1988) that is used to measure people-delivered service, the e-service quality is developed by Parasuraman *et al.* (2005) to measure service that is delivered electronically via web sites. This questionnaire has been widely adapted to other virtual web based services such as social media service of university library.
Kim (2015) or e-government service website Jun et. al. (2009). In this study, the questionnaire is developed and adapted to zakat operation realm as a first draft questionnaire. Then, this draft is used as an initial document in a focus group discussion that involved one head division of BAZNAS IT & Reporting; one IT manager, and two BAZNAS system analysts, as they are involved in initial SIMBA development and understand all the features of SIMBA. The focus group discussion has contributed into the questionnaire mainly in adapting and translating the initial e-service quality statements into zakat operation realm. Furthermore, there were 13 people involved in a pilot test which helped to improve the semantical translation of several questions, as the questionnaire is administered in the Indonesian language. The modified e-service quality statements that are used in this study are depicted in Table 2.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Item</th>
<th>Modified E-Service Quality Statement for This Study</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Efficiency</strong></td>
<td>EFF1</td>
<td>SIMBA makes it easy to find which service I need</td>
</tr>
<tr>
<td></td>
<td>EFF2</td>
<td>SIMBA makes it easy to get anywhere on the site</td>
</tr>
<tr>
<td></td>
<td>EFF3</td>
<td>SIMBA enables me to complete a zakat transaction quickly</td>
</tr>
<tr>
<td></td>
<td>EFF4</td>
<td>Information provided in SIMBA is well organized</td>
</tr>
<tr>
<td></td>
<td>EFF5</td>
<td>SIMBA loads its pages fast</td>
</tr>
<tr>
<td></td>
<td>EFF6</td>
<td>SIMBA is simple to use</td>
</tr>
<tr>
<td></td>
<td>EFF7</td>
<td>SIMBA enables me to get on to it quickly</td>
</tr>
<tr>
<td></td>
<td>EFF8</td>
<td>SIMBA is well structured</td>
</tr>
<tr>
<td><strong>System</strong></td>
<td>SYS1</td>
<td>SIMBA is always available for service</td>
</tr>
<tr>
<td><strong>Availability</strong></td>
<td>SYS2</td>
<td>SIMBA launches and runs right away</td>
</tr>
<tr>
<td></td>
<td>SYS3</td>
<td>The pages of SIMBA display normally</td>
</tr>
<tr>
<td></td>
<td>SYS4</td>
<td>There is no error occurred during using SIMBA</td>
</tr>
<tr>
<td><strong>Fulfilment</strong></td>
<td>FUL1</td>
<td>SIMBA offers service when necessary data and materials are submitted</td>
</tr>
<tr>
<td></td>
<td>FUL2</td>
<td>SIMBA processes transaction within a suitable time frame</td>
</tr>
<tr>
<td></td>
<td>FUL3</td>
<td>SIMBA provides information that I expect quickly</td>
</tr>
<tr>
<td></td>
<td>FUL4</td>
<td>SIMBA gives reliable service</td>
</tr>
<tr>
<td></td>
<td>FUL5</td>
<td>Service that available in SIMBA is fully accessible and functioned well</td>
</tr>
<tr>
<td></td>
<td>FUL6</td>
<td>SIMBA is truthful about its offered services</td>
</tr>
<tr>
<td></td>
<td>FUL7</td>
<td>SIMBA makes accurate promises about its service</td>
</tr>
<tr>
<td><strong>Privacy</strong></td>
<td>PRI1</td>
<td>SIMBA protects muzaki and mustahik personal identity</td>
</tr>
<tr>
<td></td>
<td>PRI2</td>
<td>SIMBA does not leak the muzaki and mustahik information that I input to public</td>
</tr>
<tr>
<td></td>
<td>PRI3</td>
<td>SIMBA protects my submitted materials’ information</td>
</tr>
</tbody>
</table>

Then, the questionnaire was conducted using an online platform called ‘surveymonkey’ starting from 9 August to 14 August 2017. It is necessary to mention that the respondents in this study are the operator of SIMBA as the end-user of the system. Hence, the population of the survey is all SIMBA operator in Indonesia. The survey
closed with 193 respondents giving their answers to the self-administered questionnaires; however, only 133 questionnaires deemed to be useful for analysis due to non-completion of the rest.

Secondary Data Collection

Two main data sources for the secondary data used in this study are from Indonesian Office for Statistics (BPS RI) and BAZNAS. The year 2014-2015 are chosen in this study because this period represents the best availability of national zakat collection as well as the availability of the control variables (i.e. population, GINI, HDI, and GDP per capita). Consequently, this research is unable to use data from all regions. Having cleaned all the data, eventually only 85 regions that have proper data. Consequently, this research in total has 170 observations—strongly balanced panel data (85 regions during 2014-2015).

Multiple Regression Analysis

This method is applied to measure the impact of more than one independent variables on the dependent variables (Sekaran & Bougie, 2013). In this research, it is used to measure the 22 multiple items in four different dimension of e-service quality towards the dependent variables as illustrated in Figure 3.

RESULT AND DISCUSSION

The Regression Results

The initial analysis commences in this section with the regression analysis in measuring the impact of SIMBA on the national zakat collection, for which the key findings are shown in Table 3. As can be seen, all variables are statistically significant in explaining the log collection per capita of zakat and infaq except the GDRP per capita and GINI coefficient. There are 170 observations captured in the regression model and resulting R-squared is at 0.409 which implies that the model in this research can explain about 40.9% of the variation observed, which is quite satisfactory. The implementation of SIMBA is significant at 1% level and has coefficient at 0.3068. It means that SIMBA significant in positively increase the national zakat and infaq collection by 0.3068 in magnitude. This relevant with findings in Wahab & Rahman (2013) that argues that information technology can increase the performance of zakat institutions, in this regards is zakat collection.

Table 3. Regression Results
Dependent Variable: Zakat Collection

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model1</th>
</tr>
</thead>
<tbody>
<tr>
<td>LogPopulation</td>
<td>-0.9503*** (0.0942)</td>
</tr>
<tr>
<td>GDRPCap</td>
<td>0.0003 (0.0003)</td>
</tr>
<tr>
<td>GINI</td>
<td>1.6777 (1.057)</td>
</tr>
<tr>
<td>HDI</td>
<td>0.0210* (0.0106)</td>
</tr>
<tr>
<td>SIMBA</td>
<td>0.3068*** (0.1072)</td>
</tr>
<tr>
<td>Constant</td>
<td>6.7968*** (0.9220)</td>
</tr>
<tr>
<td>Observations</td>
<td>170</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.409</td>
</tr>
</tbody>
</table>

Notes: Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure 3. E-Service Quality Model

Source: Santouridis et. al. (2012)
Moreover, the log population is also significant at 1% but has a negative coefficient. This can be interpreted that population brings a burden instead of a favour to the total collection. A further explanation can be emanated from the fact that 70 out of 85 cities observed in this study are outside Java, where the poverty rate is high (Wibisono, 2017). Other than that, there are still a lot of people that do not want to pay zakat via zakat institutions but directly to the poor as stated by Teten Kustiawan, BAZNAS Managing Director, in Republika (2013). In addition, the HDI that used as the proxy of human resources quality in respective regional BAZNAS office is significant at 10% level. Nonetheless, the magnitude of this proxy is quite low (0.021) to the dependent variable. However, it implies that one unit increase in HDI can increase zakat collection by 0.021.

As the results in Table 5.1 show, the GRDP per capita is not significant with p value 0.275 and very small coefficient at 0.0003 which means statistically there is no correlation between zakat and infaq collection with GDRP per capita. Error! Reference source not found. summarises the respondent demographic distribution. The respondents consist of 60.9% male and 39.1% female. Moreover, the respondents of this study can be categorized into four generation in referring to PewResearchCenter (2010); Alexander & Sysko (2012); and (Deloitte, 2015). The first group is baby boomer who born before 1965 (age>55 years). This group is represented by 0.8% of in the sample. Secondly, about 9.8% respondents who are born in 1962-1982 (age: 36-45 years) who are usually called as generation X. The most dominant respondent’s group (88.7%) is millennials or generation Y that is born in 1982-2002 (age: 20-35 years). The last group is generation Z that is born after 2002 or aged less than 20 years, which is only 0.8% of the respondents.

In addition, similar to gender distribution, most respondent (60.9%) are married, while the singles constitute 39.1% of the sample. As can be seen in Table 5.2, most of the respondents are highly educated with 69.9% have a bachelor degree and 4.5% have postgraduate degrees indicating a good sign for their capability in comprehending and responding to the questionnaire. Only 7.5% and 18% of the respondents have diploma level and high school education, respectively.

As for skills training, 53.4% of respondent attended SIMBA training for 2 to 4 times and 9.8% attended more than 5 training sessions. About 32.3% respondents trained at least once and only 4.5% of the participants have never been in training throughout their career. Moreover, most of the respondents have an intensive interaction with SIMBA as 69.9% use SIMBA in the

Respondents Characteristics

Out of about 240 total SIMBA operator throughout the country, 193 have responded the questionnaire with only 133 responses that are valid for data analysis. Error! Reference source not found. summarises the respondent demographic distribution. The respondents consist of 60.9% male and 39.1% female. Moreover, the respondents of this study can be categorized into four generation in referring to PewResearchCenter (2010); Alexander & Sysko (2012); and (Deloitte, 2015). The first group is baby boomer who born before 1965 (age>55 years). This group is represented by 0.8% of in the sample. Secondly, about 9.8% respondents who are born in 1962-1982 (age: 36-45 years) who are usually called as generation X. The most dominant respondent’s group (88.7%) is millennials or generation Y that is born in 1982-2002 (age: 20-35 years). The last group is generation Z that is born after 2002 or aged less than 20 years, which is only 0.8% of the respondents.

In addition, similar to gender distribution, most respondent (60.9%) are married, while the singles constitute 39.1% of the sample. As can be seen in Table 5.2, most of the respondents are highly educated with 69.9% have a bachelor degree and 4.5% have postgraduate degrees indicating a good sign for their capability in comprehending and responding to the questionnaire. Only 7.5% and 18% of the respondents have diploma level and high school education, respectively.

As for skills training, 53.4% of respondent attended SIMBA training for 2 to 4 times and 9.8% attended more than 5 training sessions. About 32.3% respondents trained at least once and only 4.5% of the participants have never been in training throughout their career. Moreover, most of the respondents have an intensive interaction with SIMBA as 69.9% use SIMBA in the
daily basis and 11.3% on weekly basis. Only 16.5% and 3% of respondents use SIMBA every month and year respectively.

It should be noted from Table 5.2 that most of those high education level; intensive training; and high workload respondents are paid poorly: about 15.8% are paid below IDR 1,000,000 and 45.1% earn between IDR 1,000,000 to IDR 1,999,999. For the record, 35.3% respondents live in Sumatra and 30.8% live in Java, where the average minimum wage is IDR 2,019,236, (Deny, 2016) which implies that they are underpaid reflecting the nature of the economy in the country. Bearing in mind that 60.9% respondents are married which makes this situation even more difficult for them as the limited salary can be a huge constraint in their life. In this sense, BAZNAS should pay attention to it in order to prevent human resources drain out.

Table 4. E-Service Quality Dimension and Dependent Variables Descriptive Statistics

<table>
<thead>
<tr>
<th>Factors</th>
<th>Number of items</th>
<th>Mean</th>
<th>Mean of Summed Score</th>
<th>Std Deviation (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-S-Qual Dimensions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Efficiency</td>
<td>8</td>
<td>4.43</td>
<td>4.33</td>
<td>35.43</td>
</tr>
<tr>
<td>System Availability</td>
<td>4</td>
<td>4.24</td>
<td>4.18</td>
<td>16.96</td>
</tr>
<tr>
<td>Fulfillment</td>
<td>7</td>
<td>4.41</td>
<td>4.35</td>
<td>30.87</td>
</tr>
<tr>
<td>Privacy</td>
<td>3</td>
<td>4.55</td>
<td>4.46</td>
<td>13.65</td>
</tr>
<tr>
<td>Criterion Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Quality</td>
<td>1</td>
<td>8.45</td>
<td></td>
<td>8.45</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>4</td>
<td>8.57</td>
<td></td>
<td>34.29</td>
</tr>
<tr>
<td>Loyalty Intentions</td>
<td>5</td>
<td>4.63</td>
<td></td>
<td>23.15</td>
</tr>
</tbody>
</table>

The e-service quality questionnaire can capture the gap between respondent’s expectation and the perceived performance of each e-service quality item. Gap analysis visualization can help to analyse which item or dimension that is perceived important, performed well or bad, and how much is the gap. This study provides two visualization models which are radar chart and quadrant chart.

Figure 4 illustrates that most of the item’s performance scores are lower than its importance scores. Only item SYS4 (+0.03) and FUL1 (+0.05) that exceed their importance score. SYS4 represents that there is no error during its service while FUL1 represents that SIMBA offers service after
necessary data is submitted. On the contrary, the largest gap perceived by the operator is in item FUL6 (-0.18) and SYS2 (-0.19). FUL6 score illustrates that SIMBA is not quite truthful about its offered services while SYS2 score illustrates that SIMBA is perceived does not launch and run right away once it is accessed.

**Figure 4.** Radar Chart of 22 Items’ Importance and Performance Score

Adapting Lynch *et.al.* (1996) model in applying quadrant chart for strategic planning, this study creates the four quadrants by putting the mean of importance score as *x*-value and putting the gap between the importance and performance score as the *y*-value. Having said that, the first quadrant is an area where the item is perceived important and scores high while quadrant two is an area with high importance but low score. Moreover, quadrant three is where item is perceived not so important and scores low whereas quadrant four is an area with high score but low importance. Figure 5 illustrates the plot of each item in the quadrant chart.
Table 5 summarizes the recommendation for each item. BAZNAS as the main stakeholder should retain items in quadrant one which is perceived important and have a high score. Those items are the information structure, service availability, website display, and SIMBA performance in safeguarding the information that is submitted to it. Moreover, there are ten items in quadrant two that need to be improved in terms of its performance in contrast to its importance. In addition, there are six items in quadrant four that have been perceived good but less important which essentially need to be repositioned in its importance value. Lastly, in Pareto optimality, BAZNAS should not focus or ignore EFF5 and EFF8 in quadrant four as they have low score while not perceived important by the respondent.

Table 5. Items and Recommendations for Each Quadrant

<table>
<thead>
<tr>
<th>Quadrant</th>
<th>Recommendations</th>
<th>Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retain</td>
<td>EFF4; SYS1; SYS3; PRI2</td>
</tr>
<tr>
<td>2</td>
<td>Improve Performance</td>
<td>EFF1; EFF6; EFF7; FUL2; FUL3; PRI3; SYS2; PRI1; FUL6; EFF3</td>
</tr>
<tr>
<td>3</td>
<td>Ignore or Improve Importance</td>
<td>EFF5; EFF8</td>
</tr>
<tr>
<td>4</td>
<td>Reposition</td>
<td>EFF2; FUL1; FUL4; FUL5; FUL7; SYS4</td>
</tr>
</tbody>
</table>

Reliability

Cronbach’s Alpha Statistical Test is applied to measure data reliability using SPSS 20 program. With a possible range from 0 to 1, the higher result of this test represents the higher data reliability it offers. Error! Reference source not found. shows that the overall Cronbach’s Alpha coefficient is 0.973 and for each dimension is ranging from 0.829 to 0.954 which is higher than 0.7, the minimum value to accept that the data is reliable (Nunnally & Bernstein, 2013). The result of this test is also in the range of the previous study by Kim (2015) who studied e-service quality in library service and the original e-
s quality questionnaire by Parasuraman et. al. (2005). Error! Reference source not found. provides the detailed reliability test results of all the 22 e-s quality item. The test shows that there is not any item that has a low correlation to the total score which implies that it has high internal consistency. Hence, this finding supports H1.

Validity

Factor analysis is conducted in this study to measure the data validity. It is a multivariate method that ensures the dimension in the instrument has accurately represented the theory or concept that is applied the study, which is e-service quality. It also indicates whether the item in a particular dimension is already fit and appropriate or should it be categorised under other dimensions (Sekaran & Bougie, 2013). In this sense, factor analysis is conducted whether the 22 items of e-service quality has correctly categorised under their specific dimensions. Each item is considered valid if the Kaiser-Meyer-Olkin (KMO) sampling adequacy exceeds 0.5 while the Bartlett’s Test of Sphericity is significant (p-value < 0.05; see: Yusoff, 2010). Other studies on service quality use a stricter threshold on KMO results such as Mohd-Shariff (2013) and Kim (2015) which use 0.6 and 0.7 respectively as the threshold on their study.

Error! Reference source not found. displays the result of KMO and The Bartlett’s test. The overall KMO value in this study is 0.943 whereby the each dimension’s KMO value ranges from 0.698 to 0.924 which exceeds 0.5 and 0.6, the minimum threshold for KMO test that used by Yusoff (2010) and Mohd-Shariff (2013). Even, it still exceeds 0.7 the threshold used by Kim (2015). Only privacy dimension that is slightly under 0.7 at 0.698 which is still tolerable. In addition, all dimension are significant on the Bartlett’s Test of Sphericity with p-value less than 0.05.

Loading factor results on the Principal Component Analysis for each item in this research are ranging from a low of 0.694 (SYS4) to a high of 0.944 (PRI1) as illustrated in Error! Reference source not found.. They are greater than 0.30 and 0.35 as indicated by Yusoff (2010) and Overall & Klett (1972) respectively. Having said that, there is no item been excluded from each respective dimension. Therefore, the data is valid and it accepts H2 because it exceeds the minimum required value for KMO, The Bartlett’s test, and Principal Component Analysis.

Mann-Whitney U Test

Mann-Whitney U Test is applied to identify whether there is a significant difference between across control variables, such as gender and marital status groups, towards the perceived performance of the 22 items in e-service quality questionnaire and the SIMBA’ overall quality, perceived value, and loyalty intention. Accordingly, the results in this part respond to research questions H3a; H3b; H4a; and H4b. It should be noted that Mann-Whitney U test is a non-parametric equivalence of t-test; and since this study used purposeful sampling, the data is considered as non-normal; and therefore, the use of non-parametric data is advised.

Gender Group

Table 5.9 displays that there is no gender impact towards the perceived performance of 22 items in e-service quality as there none of the items that are significant at 10% confidence level. Hence, this data support hypothesis H3a that there is no significant difference between genders in perceiving the performance of SIMBA.

In a similar manner, findings in Error! Reference source not found. support hypothesis H4a that there is no significant
difference between male and female respondents in perceiving SIMBA overall quality, perceived value, and loyalty intention. Accordingly, BAZNAS should not treat gender differently in developing and enriching SIMBA in the future.

**Marital Status Group**

*Error! Reference source not found.* provides data that support hypothesis H3b that there is no marital status impact on the perceived performance of 22 items in e-service quality. Nonetheless, *Error! Reference source not found.* shows that there are significant differences between single and married respondents at 5% significance level for LOY1 (71.17) and at 10% for LOY2 (70.77); and LOY4 (70.43). They show that married respondents are more loyal towards SIMBA than single respondents. They are more tend to say positive things, recommend other, and use SIMBA again in the future. Therefore, these results reject hypothesis H4b that tells there is no significant difference between marital status towards SIMBA' overall quality, perceived value and loyalty intention.

**Kruskall-Wallis**

As a non-parametric test, Kruskall Wallis test is applied to measure statistical difference across age group, education level, salary, usage intensity, training participation, and location towards e-service quality perceived performance and SIMBA’ overall quality, perceived value, and loyalty intention by the respondents. Since these control variables come more than two options instead of Mann-Whitney U test, Kruskall Wallis test is used. Accordingly, the results in this part respond to research questions H3c to H3h; and H4c; and H4h.

**Age Group**

*Error! Reference source not found.* proves hypothesis H3c that there is no statistical difference across age category in perceiving SIMBA e-service quality performance. On the contrary, *Error! Reference source not found.* shows that there is one dimension that significantly different from other age categories which is operator’ intention to say positive things about SIMBA to others. This is represented by LOY1 (0.062) that is significant at 10% confidence level. It implies that respondents who are at the age of 36-40 (mean: 84.5) and 41-45 (mean: 84.5) are equally more eager to say positive things about SIMBA in comparison to other age categories. One might infer that SIMBA is perceived better by the older employee that is usually has reached management level such manager or executive members. Hence, this data reject hypothesis H4c which tells that there is no significant difference among age group towards SIMBA' overall quality, perceived value and loyalty intention.

**Education Level**

*Error! Reference source not found.* supports hypothesis H3d that different education level does not significantly affect respondent in perceiving SIMBA e-service quality performance. Similarly, hypothesis H4d is supported by *Error! Reference source not found.* as there is no significant difference in the operator’s overall quality, perceived value, and loyalty intention upon SIMBA. This might imply that SIMBA has successfully designed and developed to meet its goal across in various operator’s educational background.

**Income Level**

*Error! Reference source not found.* shows that item EFF5 (0.067) is significant at 10%, which tells that respondents with income more than IDR 5 million per month (mean:
86.86) acknowledge that SIMBA loads its pages fast while they are using it in comparison to other income levels. This rejects hypothesis H3e which argues that there is no significant difference among income level in perceiving the performance of SIMBA. On the other hand, Error! Reference source not found. supports hypothesis H4e as there is not any significant difference in various income level in perceiving SIMBA overall quality, perceived value, and loyalty intention.

Usage Intensity

Error! Reference source not found. shows that there are two items that significant at 5% and 10% namely, EFF5 (0.047) and SYS4 (0.082) with mean 86.27 and 88.25 respectively. Respondents that use SIMBA monthly perceived that SIMBA loads its pages fast while those who use it yearly do not find any error while utilising it for recording zakat transaction. This rejects hypothesis H3f which tells that there is no significant difference among usage intensity group in perceiving the performance of SIMBA.

In addition, item LOY5 (0.030) is significant at 5% as shown in Error! Reference source not found.. It indicates that operators that use SIMBA in a daily basis (mean: 70.21) are more likely to use SIMBA again in the upcoming months that those who use it less frequent. Hence, this rejects hypothesis H4f which argues that there is no significant difference in usage intensity towards SIMBA' overall quality, perceived value, and loyalty intention.

Training Participation

Error! Reference source not found. shows that there are two items that is significant at 5% namely, EFF3 (mean: 77.15) and SYS2 (mean: 71.08). Respondents that have never been in SIMBA training state that SIMBA helps them to complete zakat transaction quickly and they do not find any error while using SIMBA than the other respondents who have been in the training. Therefore, it rejects hypothesis H3g which argues that there is no significant difference among training participation group in perceiving the performance of SIMBA.

In addition, Error! Reference source not found. displays that item VAL1, VAL2, and VAL4 are significant at 5%. Respondents with more than 5 times training experience feel that the information provided in SIMBA and the overall convenience in using SIMBA is excellent, which is a better result than what other group perceived it. Meanwhile, respondents that have only been once in SIMBA training perceive much better value is using SIMBA than any other group. Lastly, item LOY3 is significant at 10% and respondents that have never been in training (mean: 81.38) tend to more eager to tell their friends to use SIMBA than other respondents that have been participating in SIMBA training. Therefore, it rejects hypothesis H4g which claims that there is no significant difference among training participation group towards SIMBA' overall quality, perceived value and loyalty intention.

Location

Under this group, Kruskall Wallis test finds significant differences among the 22 items of e-service quality. At 1% significance level, there are five significant items (p value < 0.01) which are SYS4 (0.006); FUL4 (0.010); FUL5 (0.010); FUL7 (0.006); and PRI3 (0.009). Interestingly, across those items, respondents who live in Bali and Nusa Tenggara are the most satisfied respondent with mean rank ranging from 90.00 to 98.50, as depicted in Table 0.1.

At 5% significant level, there are eight significant items (p value < 0.05)
namely EFF2 (0.05); EFF5 (0.02); EFF6 (0.033); EFF7 (0.014); SYS3 (0.016); FUL3 (0.032); PRI1 (0.03); and PRI2 (0.053). Bali and Nusa Tenggara are the locations where most respondents satisfied with the performance of those items indicated by the highest mean rank in each group with mean rank ranging from 89.50 to 101.50. Nonetheless, Maluku & Papua rank the highest on item PRI2 with mean rank 94.00, while both Maluku & Papua and Bali & Nusa Tenggara share the highest mean rank on item PRI1.

Table 0.1: Krusskall-Wallis (Location-1)

At 10% significant level, there are three items that are significant (p value < 0.10) which are EFF4 (0.068); EFF8 (0.067); and FUL2 (0.09). Again, Bali and Nusa Tenggara are regions where respondents satisfied the most on those items with mean rank 92.95; 94.44; and 84.88 respectively. It can be inferred that respondents who live in Bali and Nusa Tenggara are those who are very satisfied with SIMBA e-service quality, then followed by those who live in Maluku and Papua at the second rank. Therefore, these findings reject hypothesis H3h which claims that there is no significant difference among residency location group in perceiving the performance of SIMBA.

Table 0.2 displays that there are four items that are significant at 1% namely QUA1, VAL1, LOY2, and LOY3. Respondents in Bali and Nusa Tenggara argue that SIMBA overall quality (QUA1) and information provided in SIMBA (VAL1) are excellent with mean rank: 103.88 and 97.00, respectively. Likewise, respondents in Maluku & Papua and Bali & Nusa Tenggara share the highest mean rank on item LOY2 (90.5) and LOY3 (88.0).

At 5% significance level, again, Maluku & Papua and Bali & Nusa Tenggara share the highest rank with mean rank 81.00 on the item of LOY4. Moreover, at 10% significant level item VAL2 and VAL3 are also significant together with Bali and Nusa Tenggara who have the highest mean rank 92.81 and 91.91 respectively. Hence, this rejects hypothesis H4h which argues that there is no significant difference among residency location group towards SIMBA' overall quality, perceived value and loyalty intention.

Table 0.3: Regression Model Summary

Multiple Regression Analysis

In this part, this study measures if there is a significant impact of the e-service quality dimensions on SIMBA’ overall quality, perceived value, and loyalty intention using multiple regression technique. Accordingly, the results in this part respond to research questions H5a; H5b; and H5c. In doing so, this study defines the three regression model as follow:

\[
QUA = \alpha + \beta_1EFF + \beta_2SYS + \beta_3FUL + \beta_4PRI + \varepsilon_1 \tag{0-1}
\]

\[
VAL = \alpha + \beta_1EFF + \beta_2SYS + \beta_3FUL + \beta_4PRI + \varepsilon_2 \tag{0-2}
\]

\[
LOY = \alpha + \beta_1EFF + \beta_2SYS + \beta_3FUL + \beta_4PRI + \varepsilon_3 \tag{0-3}
\]

where: QUA: Overall Quality; VAL: Perceived Value; LOY: Loyalty Intention; EFF: Efficiency; SYS: System Availability; FUL: Fulfilment; PRI: Privacy; \(\alpha\): constant; \(\beta\): Slope; \(\varepsilon\): error term
Having the regression model, the result is gained by applying the mean value of e-service quality dimensions as the independent variables and the mean value of three criterion as dependent variables in SPPS program.

displays the model summary of the regression. The adjusted R-square for model 1 to model 3 are 0.440; 0.449; and 0.377 which is quite satisfactory. The result of Durbin Watson test are 1.923; 1.990; and 1962 respectively. They are in the range of 1.5 to 2.5 and close to the ideal 2.0 which highly represents that there is no autocorrelation within the model (Karadimitriou & Marshall, 2015).

Moreover, Error! Reference source not found. shows the ANOVA test results upon the three regression model. It confirms that all of the three models are significant which means that the e-service quality dimensions have a significant impact on the overall quality, perceived value and loyalty intention. Hence, these findings support hypothesis H5a, H5b, and H5c which argue that the four e-service quality dimensions significantly impact the SIMBA overall quality, perceived value, and loyalty intention.

Error! Reference source not found. provides further analysis for these three models that have a direct impact on its respective dependent variables. It shows that in Model 1 there is only one dimension that is significant with p value 0.001 namely ‘efficiency’ with coefficient value 0.605. Moreover, there are two dimensions on Model 2 that are significant namely ‘efficiency’ and ‘fulfilment’ with p value below 0.05. They have coefficient value 0.359 and 0.404 respectively. Nonetheless, there is no dimension that is significant in Model 3.

CONCLUSION

Reflections and Conclusion

This study has evaluated the impact of SIMBA on the national zakat collection and its electronic service quality perceived by the SIMBA operators at a nation-wide level. Prior to that, the earlier chapters have established an understanding of the development of zakat management system in Indonesia and the importance management information system in zakat operation.

The regression results in its explorative attempt to illustrate the impact of SIMBA implementation on the national zakat collection shows that SIMBA is positive and significantly impact the national zakat collection. Moreover, the HDI that represents the human resource quality of management in local BAZNAS office is significantly contribute to increase zakat collection but still have a low magnitude in which BAZNAS central office needs to pay attention to increase it. On the contrary, the population is still a burden for zakat collection as endemic poverty and the ignorance to pay zakat are identified as the reasons. It is also found that the real Gross Domestic Regional Product (GDRP) per capita and GINI coefficient are not significantly impacting zakat collection.
Moreover, this study has succeeded in adapting and conducting e-service quality survey to zakat information system realm. All the tests prove that the instrument in this study has a high degree of reliability and validity which support the pre-determined hypothesis, as illustrated in Table 0.4.

Table 0.4: Hypothesis Decision for Reliability & Validity Test

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Code</th>
<th>Decision on Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>H1</td>
<td>Accepted (Cronbach Alpha &gt; 0.7)</td>
</tr>
<tr>
<td>Validity</td>
<td>H2</td>
<td>Accepted (KMO &gt; 0.7; Barlett Test: Significant; Loading Factor for PCA &gt; 0.3)</td>
</tr>
</tbody>
</table>

The empirical findings show that SIMBA operators are highly educated, have significant training experience and intensive interaction with SIMBA but are underpaid. It should bring an attention to BAZNAS in order to prevent human resources drain out. In addition, BAZNAS as the main stakeholder should pay significant attention to the SIMBA operator’s characteristic which dominantly millennials. They are tech savvy who are loyal to individual managers rather than to corporation and willing to deliver hard work along with virtually immediate reward. This group also consider the company’ commitment to people development and society contribution which is should be retained by BAZNAS as the organization value.

The gap analysis has revealed that there are two items in SIMBA e-service quality performance that exceed the operator expectation, namely SYS4 and FUL1. SYS4 represents that there is no error during service while FUL1 represents that SIMBA offers service after necessary data is submitted. This study also has identified and elaborated which e-service quality items that should be retained, repositioned, improved and ignored for SIMBA development.

The non-parametric tests, Mann-Whitney U test and Krusskall-Wallis test, are applied in this study to scrutiny the significant difference among demographic variables. SIMBA’ performance, overall quality, perceived value, and loyalty intention which indicates that SIMBA has successfully developed to meet its goal throughout different gender and education level. BAZNAS should pay attention to several operator’s characteristics that tend to be more

Table 0.5 summarizes the hypothesis decision for demographic variables. There is no significant difference between gender and among various education level in perceiving

The empirical findings show that SIMBA operators are highly educated, have significant training experience and intensive interaction with SIMBA but are underpaid. It should bring an attention to BAZNAS in order to prevent human resources drain out. In addition, BAZNAS as the main stakeholder should pay significant attention to the SIMBA operator’s characteristic which dominantly millennials. They are tech savvy who are loyal to individual managers rather than to corporation and willing to deliver hard work along with virtually immediate reward. This group also consider the company’ commitment to people development and society contribution which is should be retained by BAZNAS as the organization value.

The gap analysis has revealed that there are two items in SIMBA e-service quality performance that exceed the operator expectation, namely SYS4 and FUL1. SYS4 represents that there is no error during service while FUL1 represents that SIMBA offers service after necessary data is submitted. This study also has identified and elaborated which e-service quality items that should be retained, repositioned, improved and ignored for SIMBA development.

The non-parametric tests, Mann-Whitney U test and Krusskall-Wallis test, are applied in this study to scrutiny the significant difference among demographic variables. SIMBA’ performance, overall quality, perceived value, and loyalty intention which indicates that SIMBA has successfully developed to meet its goal throughout different gender and education level. BAZNAS should pay attention to several operator’s characteristics that tend to be more
loyal towards SIMBA in comparison to other characteristic groups. They are operators who are married, at the age 36-45 years old, and using SIMBA in a daily basis. Moreover, Bali & Nusa Tenggara and Maluku & Papua are the regions where respondent perceived highest score in SIMBA’ performance, overall quality, perceived value, and loyalty intention as those regions mostly are remote and serve a wide area of service. Therefore, BAZNAS may take these findings as an input to make a SIMBA development strategy and human capacity enhancement program for operator SIMBA in the future.

Table 0.5: Hypothesis Decision for Demographic Variables

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Code</th>
<th>SIMBA’ Perceived Performance</th>
<th>Code</th>
<th>SIMBA’ overall quality, perceived value, and loyalty intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>H3a</td>
<td>Accepted (no significant difference)</td>
<td>H4a</td>
<td>Accepted (no significant difference)</td>
</tr>
<tr>
<td>Marital Status</td>
<td>H3b</td>
<td>Accepted (no significant difference)</td>
<td>H4b</td>
<td>Rejected (significant difference)</td>
</tr>
<tr>
<td>Age Group</td>
<td>H3c</td>
<td>Accepted (no significant difference)</td>
<td>H4c</td>
<td>Rejected (significant difference)</td>
</tr>
<tr>
<td>Education Level</td>
<td>H3d</td>
<td>Accepted (no significant difference)</td>
<td>H4d</td>
<td>Accepted (no significant difference)</td>
</tr>
<tr>
<td>Income Level</td>
<td>H3e</td>
<td>Rejected (significant difference)</td>
<td>H4e</td>
<td>Accepted (no significant difference)</td>
</tr>
<tr>
<td>Usage Intensity</td>
<td>H3f</td>
<td>Rejected (significant difference)</td>
<td>H4f</td>
<td>Rejected (significant difference)</td>
</tr>
<tr>
<td>Training Participation</td>
<td>H3g</td>
<td>Rejected (significant difference)</td>
<td>H4g</td>
<td>Rejected (significant difference)</td>
</tr>
<tr>
<td>Location</td>
<td>H3h</td>
<td>Rejected (significant difference)</td>
<td>H4h</td>
<td>Rejected (significant difference)</td>
</tr>
</tbody>
</table>

The multiple regression analysis shows that the three models developed in this study are significant in explaining the SIMBA overall quality, perceived value, and loyalty intention, as depicted in Table 0.6. In this regard, BAZNAS should consider the findings of this study to enhance the electronic service quality of SIMBA in order to improve the effectiveness and efficiency of zakat operation.

Table 0.6: Hypothesis Decision for the Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Model</th>
<th>Correlation</th>
<th>Code</th>
<th>Decision on Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-Service Quality Dimension &amp; SIMBA’ Overall Quality</td>
<td>H5a</td>
<td>Accepted (significantly correlated)</td>
</tr>
<tr>
<td>2</td>
<td>E-Service Quality Dimension &amp; SIMBA’ Perceived Value</td>
<td>H5b</td>
<td>Accepted (significantly correlated)</td>
</tr>
<tr>
<td>3</td>
<td>E-Service Quality Dimension &amp; Loyalty Intention towards SIMBA</td>
<td>H5c</td>
<td>Accepted (significantly correlated)</td>
</tr>
</tbody>
</table>
LIMITATIONS AND FURTHER RESEARCH

There are limitations that should be recognised in this study, as it can be a major input for further study.

(i) Data availability constraints, as it makes only two year period in 85 cities are involved in this study;
(ii) The primary and secondary data collected in this research is limited to BAZNAS regional office and not capturing any data from LAZ at all. In fact, LAZ represents 27.93% of total national zakat and infaq collection (BAZNAS, 2017) which is quite significant.

Further study needs to be done to capture the impact of SIMBA in a much longer period with much more observations as SIMBA implementation is getting wider each year.

REFERENCES


Available at:
http://www.republika.co.id/berita/nasional/umum/14/08/21/nan5p9-aseth-muhammadiyah-lebih-dari-rp-20-triliun
[Accessed 30 July 2017].
Available at: https://www.rumahzakat.org/tentang-kami/sejarah/ [Accessed 4 August 2017].


Randi Swandaru
The National Board of Zakat (BAZNAS) the Republic of Indonesia
randi.swandaru@gmail.com