ERP system implementation with accounting modules in national amil zakat institutions

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Abstract. Rumah Yatim is an authorized zakat institution in Indonesia with national-level task of collecting and distributing mandatory zakat to the eligible person fairly and evenly. Therefore, there are many issues that prevent zakat optimization such as lack of awareness to pay zakat, inaccessibility of required channel, disrupted of productive program and overlapping funds as the cause of incoordination. This study offers the system design in related to the accounting module to present the compliance and standards in order to convince relevant party and public eyes upon the credibility and reliability of zakat management. It was carried out by developing an Enterprise Resource Planning (ERP) system using the Odoo Quick Start method as the popular mechanism within small and medium enterprises (SMEs). The results of this study are an ERP system designed based on the customized Odoo module that has been aligned with the business processes and function within the institution. It has the purposes to make it easier and quicker for solving problem compare to the previous process in order to create effective and efficient management for the institution to carry out their agenda and activities based on meaningful and resourceful accounting performance.

1. Introduction

Zakat is related to the mandatory alms for Muslim in relation to their belongings towards specific amount of wealth such as gold, silver, cattle, rice and so on, which should be issued every year of hijri calendar to those who have the eligibility rights to receive in accordance with Islamic Shari'a. Therefore, as one of the pillars in Islam its implementation must be determined and regulated by the State. In Indonesia, there is an OPZ (Zakat Management Organization) to manage zakat, which is based on Law No. 23 of 2011 concerning Zakat Management, the government recognized that there are two types of OPZ, namely the National Zakat Agency (BAZNAS) which is an institution that manages zakat nationally and the Amil Zakat Institution (LAZ) is an institution formed by a community that has the task of helping collection, distribution and utilization of zakat. Actually, there are various bodies develop accounting standards that can be utilized to develop business zakat assessment such as Accounting and Auditing Organization for Islamic Financial Institution (AAOIFI) by issuing the Financial Accounting Standard (FAS) no. 9 or Indonesian Institute of Accountant (IIA) that established statement on financial accounting standards no. 109. It is important to develop accounting standard especially in the context of zakat management, which often some institution execute classification wrongly like zakat assets and paid as one of a number of expenses in the income statement [2]. On the other hand, enterprise resource planning (ERP) is a cross-functional system that integrates every process in company management. ERP is a company information system designed to coordinate all resources, information, and activities needed for business processes and to unite all departments and functions in a company into a computer system that can accommodate all specific needs of different departments so that they can improve company performance and incomes [3] [11]. Interestingly, based on data from BAZNAS regarding the potentiality
and the realization of zakat in Indonesia, it shows the increases in each year in term of the collection but the utilization still present disappointing performance with optimistic level, it could not even reach 1% realization as shown in the detail below (table 1) based on 1.8% (min) and 4.34% (max) of gross domestic product (GDP) [1]. Therefore, with the increase in the zakat funds realization every year, at least showing the positive impact of BAZNAS and LAZNAS that bring a lot of people to have more trust to the zakat institutions for the zakat management.

Table 1. Potential and realization of zakat funds in Indonesia.

| Year | Potential (million dollars) | Optimum (millions rupiahs) | Adjusted Gross (million dollars) | Total Indonesian GDP (million dollars) | Realization Zakat (million rupiahs) | GDP Growth (%) |
|------|-----------------------------|------------------------------|----------------------------------|----------------------------------------|-----------------------------------|----------------|
| 2005 | 5.14–12.4                   | 173,278.6                    | 285.9                            | 295 (0.17%)                            | 5.7                               |
| 2006 | 6.5-15.82                   | 220,977.1                    | 364.6                            | 373 (0.17%)                            | 5.5                               |
| 2007 | 7.77-18.75                  | 261,948.2                    | 432.2                            | 740 (0.28%)                            | 6.3                               |
| 2008 | 9.18-22.14                  | 309,222.5                    | 510.2                            | 920 (0.3%)                             | 6                                 |
| 2009 | 9.71-23.41                  | 327,041.3                    | 539.6                            | 1,200 (0.37%)                          | 4.6                               |
| 2010 | 13.59-32.77                 | 457,651.8                    | 755.1                            | 1,500 (0.33%)                          | 6.2                               |
| 2011 | 16.07-38.75                 | 541,230.3                    | 893                              | 1,730 (0.31%)                          | 6.2                               |
| 2012 | 16.52-39.83                 | 556,321.7                    | 917.9                            | 2,200 (0.4%)                           | 6                                 |
| 2013 | 16.42-39.6                  | 553,048.9                    | 912.5                            | 2,700 (0.5%)                           | 5.6                               |
| 2014 | 16.03-38.66                 | 539,897.2                    | 890.8                            | 3,300 (0.6%)                           | 5                                 |
| 2015 | 15.49-37.36                 | 521,775.1                    | 860.9                            | 3,700 (0.7%)                           | 4.9                               |
| 2016 | 16.78-40.46                 | 565,049.3                    | 932.3                            | 4,220 (0.75%)                          | 5                                 |
| 2017 | 18.28-44.09                 | 615,778.3                    | 1,016                            | 4,400 (0.71%)                          | 5.1                               |

In managing zakat funds, Rumah Yatim has an operational rule and procedures in executing the accounting mechanism of cash by receipts and expenses from the zakat funds obtained. Unfortunately, the financial data management system still using manual writing performance, which the person in charge put a lot of effort for the documentation that bring large area of errors, mistakes, misclassification or even misconception regarding certain treatment in zakat procedure and process. For example, when the data is stored or written in the Excel format, there is a tendency of misconfiguration in term of formula or location and huge possibility of mistype the exact number. It also beg the question of the owner and the permission mechanism of editing the excel document that lead to the reliability and security issues. The process of tracking the history of written process become difficult to implement, bringing more obstacles to have quality process of forecasting, prediction and plan within the context. On the other hand, in term of structure, the accounting unit is not integrated with the counter or cashier to record the receipt of zakat funds to be included in the financial statements. With these problems, Rumah Yatim need an ERP-based information system as a solution to the existing problems in order to deliver automatic process and integration service, which have personalization features for the purpose of effectiveness and efficiency. ERP stands for three-word elements, namely enterprise, resource and planning that reflect a concept that emphasize the planning phase before the implementation take place within the organization. To implement ERP software, the financial data management will be carried out using Odoo software as the open source that is using Python programming language, while Quick Start become the research method used.

2. Literature review

Accounting is the process of identifying, measuring, recording, communicating or reporting transactions that occur within an organization based on the certain requirement related to interested parties and stakeholders. Meanwhile, transactions are financial events that affect the company’s financial position in term of budget plan to fund various activities. The product of the accounting process is a financial report consisting of several types of reports, which is published in the form of balance sheets, income statements, cash flow statements and other additional reports such as changes in capital and earnings reports [2]. In practice, there are several problems associated with the accounting process within zakat
institution such as the standards validation process, institution ownership percentage, Amil (collectors) proportions, measurement of zakat determination, classification of liabilities, adjustment method for zakat capital, zakat condition of expense, rule of disclosure, the basis for amount of zakat to share, equity of investment, the restriction imposed, representation account of holders, etc [2] [4]. It is recommended that the state establish the principle to have maximum exposure and limited exemption for standards in term of zakat management to support the optimum result. Thus, the relevant body should have consequential and categorical issues to find common ground in develop the regulation while some sceptical citizen also can submit judicial review about the regulation substance [5].

There is an interesting example in optimizing zakat by the Indonesian state by reducing taxable income based on Article 13 paragraph 3 of the Law No. 17/2000, which stipulates that payment of zakat to BAZNAS or LAZNAS can be used to reduce taxpayer’s retained earnings although there is controversy regarding this policy due to the taxes are considered forbidden in Islamic law [6]. In general, it is not permissible to use zakat for productive purposes with a loan contract by requiring the recipient to pay at a certain time, likewise, the institution must not treat it as an investment [7]. When acknowledging receivables, there are consequences that it must be returned while the results of the funds management are recognized as the alms addition. Therefore, it is a false acknowledgment as a receivable because it represents the commercial asset in the form of money owed to the company by the client or customer, while zakat is not a commercial asset because the zakat recipient is not a client [2] [7]. Although the collection has increased, unfortunately, it has not reached beyond the level, at most 25% of its potential and does not become a timely, equal, undisputed and effective distribution as expected by many recipients, payers and stakeholders of zakat [8] [9].

3. System development method
This research begins with interviews the sources, making observations, establish the plan based on objective, contextual analysis, product evaluation, conducting the plan, organizing the result and discussing the accounting module with the simulation of every related part come at last. In short, there are four steps namely kick off call, analysis, configuration and production, which the first consist of strategic planning and goals determination, while second have business and gap analysis, following by on boarding process and lastly the deployment to the site. It is important that every information system (IS) phase should emphasize the alignment business with information technology strategy for the purpose of organizational and IS infrastructure while the framework should consist of identification of the environment that relevant to IS research for the development and justification based on the foundation and methodologies [10]. Actually, quick start method is the simple method that the initial stage performs the system design in the rapid period of time through process of customization and configuration based on the context of utilization. The identification of business process utilizes the two concepts of existing (as is) and proposed (to be).

4. Discussion and result
In the first stage discusses all strategic planning for all stakeholders to provide an explanation of the services provided to eligible right of zakat recipients well as to determine weekly meetings to complete the project, which involves every stakeholder. Initially, the coordinators of study should provide an explanation of the methodology and strategy used to identify the activities aspects and business need related to the accounting module. The agreement has been done after several meetings based on the research scope and limitation as well as type of services to be provided. Furthermore, business blueprint is the stage for identifying which documents in the form of business processes carried out by the company with the improvement that will be carried out by the construction of an ERP-based accounting system. Thus, the analysis of the GAP should be established that provide several answers such as direct customer invoices although, it also can be delivered in the paper or written in the excel manually for the purpose of back up. Meanwhile, the application can automatically validate the vendor bill together with the item detail and schedule. In the current process, data bills are recapitulated using separated and isolated application controlled by the receptionist and the accounting unit. The customization of the
application should allow the disbursement transaction can be recorded and printed directly while general ledger report, trial balance and ledger partner also can be processed directly through the Odoo system.

In general, organizations use ERP providers or consulting companies to implement their custom ERP systems with at least three types of professional services provided when implementing an ERP system namely consultation, adjustment and support [11]. In this Odoo ERP implementation, the institution should assure that the employee understands well the business process and features in module to allow flexible modification. It is recommended that the institution keep in touch with the academicians or the community to provide reliable assistance, in which the public involvement can increase the transparency and accuracy of the data used. For the configuration stage, the system should be integrated with the current business process, hardware used and supported software as well as the proper arrangement of elements in a particular form or figure that are familiar and well known by the institution. In the customization process, the target of cash receipts made by the counter if there is a zakat payer wants to make a donation while it also can create the profile data about zakat payer. The transactions using zakat invoice can be printed directly and validated if the data have in line with the register payments. If it has been validated, the bill status in the draft will change to paid then the finance manager can put the data as the collection that can be used separately to the productive, technical, planning, voluntary and operational activities.

| Business Process of Cash Receipt | Business Process of Purchasing Goods | Business Process of Targeted Cash Expenditure |
|---------------------------------|-------------------------------------|----------------------------------------------|
| **Counter/Counter** | **Manager of Accounting and Finance** | **Purchasing** | **Accounting** | **Person in Charge** | **Accounting** |
| Start | Create Customer Data | Create Vendor Bill | Request Payment and Check Journal Entries | Submit a request to travel | Print purchase report |
| Make Service Products | Select List of Supplier Bills | Enter in Draft | Print Purchase Report | Submit a request to travel | Print financial statements |
| Enter Customer Invoices | Validate | Data from Draft become Paid | Print | Make an invoice for a request for funds |
| Validate the Appropriate Invoices | Register | | | |
| Register | Data from Draft become Paid | | | |
| Data From Draft Become Paid | Receive Customer Invoices | | | |
| End | End | End | End | End |

**Figure 1.** Business process off providing goods, payments and cash expenditures.

Starting from the purchasing department, then the vendor bills will be accepted by the accounting department for the process of validation upon the vendor bill. If the validation is approved and appropriate, the process in the register payment will be done well. After the payment, the status will be change into paid. Then, the accounting unit can then print the purchase report for the submission to the
The use of Odoo ERP are expected to improved efficiency, business integration, better decision making, produce report in structured form quick response time to the customers, common database across the institution, improve the capability of analysis and planning and utilization of technology support [11]. Actually, many ERP have failed to meet with the expectation and demand due to the limited type of customization, the need to create business process re-engineering, large cost for installation, lack of technical support and incompatibility with institution culture and work. Thus, this study have recommended the process of configuration and customization of the business requirement and needs, especially the report form of the accounting module to match exactly with standards of zakat management such as invoices with 12.5% of operational funds of zakat for printing the report.

Table 2. Configuration and customization field.

| No. | Field name | Explanation |
|-----|------------|-------------|
| 1.  | Muzzaki (zakat payers) | Adjust the funds content used in the production process for the data entry and recognition align with other databases in the field. |
| 2.  | Funds of Zakat | Type of product or payment that zakat payer can give in based on specific context of his/her mandatory rule. |
| 3.  | Operational Funds | The amount of zakat funds that can be used by the company as operational costs to consume or spent |
| 4.  | Operational Funds Report | Report of the amount of zakat funds that can be used by the company as operational costs. |
| 5.  | Currency | A generally accepted form of payment, usually issued by a government and circulated within its jurisdiction. |

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(a)
A general ledger represents the record-keeping system for a company's financial data with debt and credit account records validated by a trial balance. In addition, problems occur because there are no records regarding waste of goods due to the lack of appropriate documentation. In fact, exchanging information between units can increase productivity but it has been done manually and poorly, which tends to be forgotten during the process. Thus, the zakat institution must be concerned with eliminating the missing data and reducing the overlapping data in terms of approval and clarity form for payers and recipients [12] [13]. Asset valuation to determine the amount of zakat become critical issue with the general conditions needed for collection namely absolute ownership, accumulation, Nisa'b (minimum level of wealth inventory) that varies from one type of wealth to another, excess over basic needs, debt solvency and the running lunar year of the action to be taxed. To calculate the amount of zakat, assets must be valued as such the companies must adopt a policy of revaluing their key assets once in a while. In conventional accounting, a number of doubtful debts are deducted from the gross amount of

**Figure 2.** Operational funds (a), trial Balance (b), general ledger report(c).
receivables. However, for the calculation of zakat, only the actual amount of debt that has deteriorated must be deducted. In the case of bankruptcy, the owner of the company cannot access zakat if the creditor remains unpaid, while the valuation of assets for the purpose of zakat must follow the periodicity of the full year of the month's assets except for agriculture and mining [14].

5. Conclusion
With the results of the research that has been carried out, the following can be concluded that the Odoo ERP system accounting module can be integrated with other modules to deliver effectiveness and efficiency. Having implemented this type of module, the warehouse unit can order goods to the procurement unit to provide information regarding the goods that have been received and facilitating the bills. On the other hand, the financial statements can be generated real time from current transaction activities to general ledger or other specific journal. It is expected that the accounting unit understands the financial rules in the use of zakat funds, which the related person should learn how to configure and customize ERP Odoo in accordance with the best practices of the modules that will be applied.

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