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**The Design and Implementation of Statistical Business Register (SBR) System of BPS**

**Abstract**

In BPS, Statistics – Indonesia, Subject Matter Areas (SMAs) produce economic statistics based on their specialties, such as forestry, agriculture, manufacturing, construction, and transportation. To produce the statistics, each SMA maintains their own business register separately. Thus, the sampling frames for the surveys are generally not coordinated resulting in the increase of response burden and survey cost. Furthermore, it is quite difficult to harmonize the surveys and integrate the survey data.

In Mei 2014, most of SMAs agreed to integrate their business registers to build a *single BPS Statistical Business Register* (BPS SBR). This initiative was done by matching businesses stored in the separated registers with those obtained from the Economic Census 2006. After this first initiative, BPS assigned 42 staffs to profile the top 100 biggest businesses in Indonesia to produce an appropriate statistical and reporting structure for the large enterprises. This profiling initiative is then followed by having 540 district offices to collect data from their respective administrative data sources in order to extend the scope of the BPS SBR.

To facilitate the above initiatives, BPS has built a *new web-based SBR system*. This paper describes the design and implementation of the SBR system in terms of three main features, namely, *matching*, *relating* and *approving*. The three features have been extensively used by more than 940 SBR staffs scattered throughout the districs. Especially for the matching and approving features, it has been used to match and approve around 442.000 businesses by those operators.

The matching feature is necessary because currently, there are no a single unique business ID in Indonesia. Businesses collected by the SMAs and district offices need to be matched with those that already exist the SBR database to avoid duplication. To incorporate various requirements from SMAs, the matching feature has three options, namely, "match without updating the original data", "match with fully replacing the original data with the new data", and "match with editing the original data with some parts of the new data". This GUI-based semi-automatic matching feature has been designed so that the matchers/operators only focus on the parts that are different between the two matched businesses.

The relating feature facilitates the profilers to relate businesses according to their hierarchical structures. The business hierarchy is built based on the concept of the statistical unit. Hence, it is possible to relate one enterprise group (EG) with several enterprises (EN), and in turn, to relate one enterprise with several establishments (ES) to construct a hierarchy of EG, EN, and ES. This GUI-based relating feature has

been designed so that the complex structure of large companies can be viewed in a visual tree presentation.

To ensure the quality of the matching and relating results, the SBR staffs are divided into two roles, namely, *operator* and *supervisor*. The operator actually does the business matching and relating, while the supervisor approves or rejects the results. To facilitate the supervisor task, the SBR system provides a special GUI for the supervisor. The GUI is design so that the supervisor can easily find the updated parts of the existing businesses, view the details of the newly added businesses, and observe the newly added relationships between businesses.