
Abstract

Excise duty is a type of tax charged on certain products and services. Determining an excise product class can be a difficult task since the regulation written in legal language can be difficult for the users to interpret. Excise duty recommender system aims to simplify the users’ effort in product classification task and reduce errors in tax payment. This paper describes an initiative to develop excise product ontology to provide explicit and formal definitions of excise products and their classifications. It focuses on ontology design approaches for some excise products to support excise duty recommender system development. Two excise products were used as case studies: beverage and petroleum products. Steps in defining product mapping rules and developing the recommender system are described. A Semantic Web-based system architecture was adopted to enable future support for data sharing and reuse based on the Linked Data technology.

Keywords Excise product ontology; Tax recommender system; Semantic Web-based information system

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