

INTISARI

Penelitian ini bertujuan untuk menentukan klasterisasi piutang dan penyisihan piutang tidak tertagih paten di Ditjen KI Kemenkumham RI. Sumber data yang digunakan merupakan data sekunder yang terdiri atas laporan keuangan Ditjen KI Kemenkumham tahun 2015 dan dokumen eksternal berupa LHI BPK Kemenkumham RI Tahun 2015. Data sekunder dianalisis untuk menentukan klasterisasi piutang paten menggunakan *self organizing maps (SOM)*. Hasil klasterisasi tersebut kemudian diolah menggunakan *Backpropagation* untuk memprediksi besaran piutang tidak tertagih pada tiap-tiap klaster. *self organizing maps* dan *Backpropagation* keduanya merupakan bagian dari Metoda *Artificial neural network*. Hasil analisis kemudian dibandingkan antara penyisihan piutang tidak tertagih berdasarkan PMK No 69/PMK 06/2014 dengan penyisihan piutang tidak tertagih menggunakan metode *Artificial neural network*. Berdasarkan perhitungan menurut PMK No. 69/PMK 06/2014 untuk 815 data yang digunakan, terdapat piutang tidak tertagih paten sebesar Rp13.157.128.995,00, sedangkan jika menggunakan metoda *Artificial neural network* piutang tidak tertagih paten sebesar Rp 7.740.667.293,00. Perhitungan estimasi penyisihan piutang tidak tertagih menggunakan *Artificial neural network* dapat mengurangi *potensial lost* ataupun kerugian negara sebesar Rp5.416.461.702,00, atau 41%.

Kata kunci: Penyisihan piutang tidak tertagih, *Artificial neural network*, *self organizing maps (SOM)*, *Backpropagation*

ABSTRACT

This study aims to determine the clustering of accounts receivable and allowance for patent doubtful accounts in the Directorate General of Ministry of Law and Human Rights of the Republic of Indonesia. Source of data used is secondary data consisting of financial statements of Directorate General of Intellectual Property of Ministry of Law and Human Rights year 2015 and external documents in the form of LHI BPK Ministry of Law and Human Rights of the Republic of Indonesia year 2015. Secondary data were analyzed to determine clustering of patent receivable using self-Organizing Maps (SOM). Clustering results were then processed using Backpropagation to predict the amount of doubtful accounts in each cluster. self organizing maps and Backpropagation were both part of the Artificial neural network Method. The results of the analysis were then compared to the allowance for doubtful accounts based on PMK No. 69/PMK 06/2014 with allowance for doubtful accounts using the Artificial neural network Method. Based on the calculation according to PMK No. 69/PMK 06/2014 for 815 data used, there were patent doubtful accounts amounting to IDR 13,157,128,995, whereas if using Artificial neural network method of patent doubtful accounts amounting to IDR 7,740,667,293. The calculation of estimated allowance for doubtful accounts using Artificial neural network could reduce potential lost or state losses by IDR 5,416,461,702, or 41%.

Keywords: Allowance for doubtful accounts, Artificial neural network, self-Organizing Maps (SOM), Backpropagation