FORECASTING THE NUMBER OF VEHICLE INSURANCE POLICIES USING EXPONENTIAL SMOOTHING METHOD AT PT JASARAHARJA PUTERA PALEMBANG

ABSTRACT

Forecasting a vehicle insurance policy can help reduce the risks that will befall a business or company in the future. The exponential smoothing used includes Single Exponential Smoothing, Double Exponential Smoothing, and Triple Exponential Smoothing. The smaller or lower the percentage of forecasting errors, the closer the value is to the actual value. To get the smallest and more accurate error calculation, Mean Absolute Deviation (MAD) is used. Mean Absolute Percentage Error (MAPE). Forecasting results using the three Exponential Smoothing models show that the smallest MAPE and MAD are in Single Exponential Smoothing (SES) with a MAPE of 30.42 and MAD of 74.85 while the largest MAPE and MAD results are in Double Exponential Smoothing (DES), namely with a MAPE of 31 .1 and MAD 79.6 while the Triple Exponential Smoothing (TES) is with MAPE of 30.2 and MAD 73.3. Of the three methods, the Single Exponential Smoothing (SES) forecasting value has the smallest error value, but from the real results of selling insurance policies, Double Exponential Smoothing (DES) is closest to the sales of vehicle insurance policies in 2022.

Keywords: Forecasting, Insurance Policy, Exponential Smoothing.

PERAMALAN JUMLAH POLIS ASURANSI KENDARAAN MENGGUNAKAN METODE EXPONENTIAL SMOOTHING PADA PT JASA RAHARJA PUTERA PALEMBANG

ABSTRAK

Peramalan polis asuransi kendaraan dapat membantu mengurangi risiko yang akan menimpa pada bisnis atau perusahaan kedepannya. *Exponential smoothing* yang digunakan diantaranya *Single Exponential Smoothing*, *Double Exponential Smoothing*, dan *Triple Exponenial Smoothing* semakin kecil atau rendah nilai persentase kesalahan peramalan maka nilai tersebut semakin mendekati nilai sebenarnya, untuk mendapatkan perhitungan kesalahan terkecil dan lebih akurat maka digunakanlah *Mean Absolute Devition* (MAD) dan *Mean Absolute Percentage Error* (MAPE). Hasil peramalan yang menggunakan ketiga model *Exponential Smoothing* terlihat MAPE dan MAD terkecil ada di *Single Exponential Smoothing* (SES) dengan MAPE sebesar 30,42 dan MAD 74,85 Sedangkan hasil MAPE dan MAD terbesar pada *Double Exponential Smoothing* (DES) yaitu dengan MAPE sebesar 31,1 dan MAD 79,6 sedangkan *Triple Exponential Smoothing* (TES) yaitu dengan MAPE sebesar 30,2 dan MAD 73,3. Dari ketiga metode tersebut nilai peramalan *Single Exponential Smoothing* (SES) memiliki nilai error terkecil tetapi dari hasil nyata penjualan polis asuransi *Double Exponential Smoothing* (DES) paling mendekati hasil penjualan polis asuransi kendaraan 2022.

Kata Kunci: Peramalan, Polis Asuransi, *Exponential Smoothing*.