ABSTRAK

Analisis Sistem Antrian Pada Bagian Kasir Di Perum Pegadaian CPP.Pademangan Kanwil Jakarta 2

Sistem Antrian merupakan suatu himpunan pelanggan, pelayan *(server)* serta suatu aturan yang mengatur kedatangan pelanggan dan pemrosesan masalah pelayanan antrian.

Perum Pegadaian merupakan salah satu BUMN yang bergerak di bidang jasa gadai sangat mengutamakan kepuasan nasabah, mengingat kondisi persaingan yang mulai dihadapi oleh perum pegadaian, dengan mulai banyaknya jasa gadai swasta dan instansi BUMN lain yang mulai menjalankan bisnis gadai syariah. Khususnya Perum Pegadaian CPP.Pademangan saat ini menunjukkan sering terjadi antrian yang cukup panjang di bagian kasir, sehingga perlu di lakukan analisis sistem antrian.

Dari hasil penelitian selama bulan April-Mei 2011, bahwa sistem antrian Di Perum pegadaian CPP.Pademangan menerapkan sistem antrian tunggal *"Single channel Single phase"*. Hasil Analisa sistem antrinnya sbb : Pola kedatangan nasabah, λ April 2011 = 18 Orang/jam ; λ Mei 2011 = 23 Orang/jam. Pola Pelayanan nasabah, μ April 2001 = 20 orang/jam dengan waktu pelayanan 3.218 menit/Orang dan μ Mei 2001 = 25 orang/jam dengan waktu pelayanan 2.556 menit/Orang . Utilitas dan Probabilitas sistem pada kasir, ρ April 2011 = 91.9 % dengan Po = 0.08 dan ρ Mei 2011 = 92.3 % dengan Po = 0.076 sehingga bisa dikatakan kasir hampir bekerja penuh. Panjang rata-rata nasabah mengantri dan jumlah nasabah yang diharapkan dalam sistem selama bulan April Lq = 12 orang/jam ; Ls = 13 orang/jam sedangkan Bulan Mei 2011 Lq = 13 orang/jam ; Ls = 14 Orang/jam. Untuk waktu tunggu rata-rata nasabah dalam antrian dan sistem selama bulan April 2011 Wq = 39.37 Menit/orang ; Ws = 42.50 Menit/orang sedangkan bulan Mei 2011 wq = 33.09 Menit/Orang ; Ws = 35.60 Menit/orang. Waktu menunggu tersebut dirasa cukup lama, jauh dari harapan nasabah, bisa dikatakan jumlah kasir kurang optimal. Dari hasil analisis perhitungan jika menggunakan 2 kasir *(server)* didapatkan hasil panjang dan waktu antrian yang relatif lebih rendah/pendek yaitu bulan April 2011 Lq = 8 orang/jam; Ls = 10 orang/jam; Wq = 26,6 Menit/orang; Ws = 33.3 Menit/orang. Sedangkan bulan Mei 2011 Lq = 7 orang/jam; Ls = 9 orang/jam; Wq = 18.2 Menit/orang; Ws = 23.4 menit/Orang.

Kata kunci : *Single Channel Single Phase; Multi Channel Single Phase*

ABSTRACT

Analysis of Queuing Systems In Part cashier Perum Pegadaian CPP.Pademangan Regional Office In Jakarta 2

Queuing system is a set of customers, the waiter (server) and a rule that governs the arrival and processing customer service issue queue.

Perum Pegadaian is one of the state-owned enterprises engaged in fiduciary services is customer satisfaction, given the competitive conditions faced by Perum Pegadaian began, with the starting number of private fiduciary services and other state agencies who began running the sharia mortgage business. Perum Pegadaian especially CPP.Pademangan currently showing frequent long queues at the checkout, so it needs to do the analysis of queuing systems.

From the results of research during the months of April-May 2011, that the queue system in Perum Pegadaian CPP.Pademangan implement a single queue system "Single channel Single phase". Results Analysis antrinnya system as follows : The pattern of arrival of customers, (λ) April 2011 = 18 people/hour; (λ) May 2011 = 23 people/hour. Customer service patterns, (μ) April 2001 = 20 people/hour with service time 3.22 minutes/person and (μ) May 2001 = 25 people/hour with service time 2.57 minutes/person. Utilities and Probability at checkout system, (ρ) April 2011 = 91.9%, with (Po) = 0.08 and (ρ) = 92.3% in May 2011 with (Po) = 0.076 so that it can be said cashier almost full. The average length of customers waiting in line and number of customers expected in the system during April (Lq) = 12 persons/hour; (Ls) = 13 persons/hour while the Month May 2011 (Lq) = 13 persons/hour; (Ls) = 14 persons/hours. For the average waiting time of customers in queue and the system during the month of April 2011 Minutes (Wq) = 39.37 Minutes/person; (Ws) = 42.50 Minutes/person while the month of May 2011 (Wq) = 33.09 Minutes/Persons; (Ws) = 35.60 Minutes/person. Perceived waiting time is long enough, far from customer expectations, to say the number of cashiers less than optimal. From the analysis calculations using two cashiers (server) obtained results of length and time queues are relatively lower / shorter the month of April 2011 (Lq) = 8 persons/hour; (Ls) = 10 persons/hour; (Wq) = 26.6 minutes/person; (Ws) = 33.3 minutes/person. While the month of May 2011 (Lq) = 7 persons/hour; (Ls) = 9 persons/hour; (Wq) = 2.18 Minutes/person; (Ws) = 23.4 minutes/person.

Key words: Single Channel Single Phase: Multi Channel Single Phase