

ABSTRAKSI

Analisis sistem antrean dalam rangka peningkatan pelayanan di Waroeng Spesial Sambal “SS” Samirono Yogyakarta bertujuan untuk menurunkan waktu tunggu konsumen yang berada di dalam sistem. Lama waktu tunggu konsumen diakibatkan antrean pada bagian dapur dalam memproses pesanan konsumen. Rata-rata waktu memasak makanan di jam 16:00-22:00 adalah 21,87 menit. Berdasarkan observasi, proses pengolahan pesanan di dapur dilakukan oleh enam koki/*server*. Tujuan penelitian ini adalah menguji pengaruh penambahan dan pelatihan koki/*server* di Waroeng Spesial Sambal “SS” Samirono Yogyakarta.

Desain penelitian yang dilakukan adalah studi kasus dengan pendekatan analisis simulasi menggunakan metode *discrete event simulation* dengan bantuan program *ProModel* terhadap antrean di Waroeng Spesial Sambal “SS” Samirono Yogyakarta. Data yang digunakan sebagai input simulasi diperoleh dengan cara observasi sistem pelayanan selama 30 hari dan wawancara.

Hasil pengujian yang didapatkan yaitu sistem antrean menggunakan struktur banyak saluran satu tahap (*multichannel single phase*). Berdasarkan hasil observasi selama 30 hari jumlah kedatangan konsumen terbanyak terjadi di hari ke 26 di waktu pukul 16:00-22:00 dengan jumlah kedatangan 232 dan jumlah konsumen 618 orang. Hasil analisis antrean awal diketahui performansi sistem nyata seperti: prosentase utilitas dapur sebesar 83,93%, waktu menu berada diantrean dapur yaitu 30,23 menit dan waktu menu diproses di lokasi dapur adalah 40,71 menit. Untuk memperbaiki sistem antrean awal di stasiun kerja dapur maka disusunlah 12 skenario alternatif yang terbatas pada menambah dan atau melatih *server*/koki. Berdasarkan hasil simulasi, acuan standar pelayanan dan perhitungan biaya dari 12 skenario tersebut dapat disimpulkan bahwa skenario 12,11,10, dan 8 merupakan skenario yang mungkin diterapkan bila dibandingkan dengan skenario lainnya. Hal ini ditunjukkan oleh waktu mengantre yang memenuhi standar rasa puas konsumen dan total biaya pelayanan relatif rendah. Hasil analisa lama waktu tunggu dan profit dengan penerapan skenario alternatif adalah skenario 8 lama waktu tunggu 7,29 menit dan memberikan tambahan profit mingguan sebesar Rp741.846,- s.d Rp9.109.231,- ; skenario 10 lama waktu tunggu 2,88 menit dan memberikan tambahan profit mingguan sebesar Rp966.846,- s.d Rp9.334.231,- ; skenario 11 lama waktu tunggu 2,48 menit dan memberikan tambahan profit mingguan sebesar Rp1.191.846,- s.d Rp9.559.231,- ; skenario 12 lama waktu tunggu 0,49 menit dan memberikan tambahan profit mingguan sebesar Rp1.641.846,- s.d Rp10.009.231,-

Kata kunci: sistem antrean, koki/*server*, simulasi, *discrete event simulation ProModel*, skenario, profit.

ABSTRACT

An analysis of queue system in order to improve services in Waroeng Special Sambal "SS" Samirono Yogyakarta aims to reduce the consumers' waiting time within the system. How length customers' waiting time is due to the queue in the kitchen in the processing of customers' orders. Based on the observation, in the kitchen, the order processing process is performed by six cooks / servers. The purpose of this study is to test the influence of addition and training for cooks / servers in Waroeng Special Sambal "SS" Samirono Yogyakarta.

The research design is a case study with an approach to the simulation analysis using discrete event simulation method with the help of ProModel toward the queue at Waroeng Special Sambal "SS" Samirono Yogyakarta. The data used as input of simulation is acquired by observation for 30 days and interviews.

The test result obtained is that the queue system used structures of many channels in one stage (multichannel single phase). Based on observations for the 30 days of number of consumers' arrival occurred in day 26 at a time of 16:00 - 22:00 with the number of arrivals and the number of consumers reaching 618 and 232 people, respectively. From the result of the initial queue analysis, the performance of real system is achieved, such as: kitchen utilities percentage of 83.93%, the time the menu is in the kitchen queue is 30.23 minutes and processed in the kitchen is 40.71 minutes. To improve the initial queue system in kitchen work station, then 12 alternative scenarios were drafted, limited to add or train server / chef. Based on the simulation result, the benchmark service standards and cost calculation of the 12 scenarios can be concluded that the scenario 12,11,10, and 8 are scenarios that might be applied rather than the other scenarios. This is indicated by a queue time that meets the standards of consumer satisfaction and a relatively low total cost of services. The result of the length of waiting time and the profit analysis with the application of these alternative scenarios is that scenario 8 has 7,29 minutes of waiting time and give additional per-week profit as many as Rp741.846,- to Rp9.109.231,- ; scenario 10 has 2,88 minutes of waiting time 2,88 minutes and give additional per-week profit as many as Rp966.846,- to Rp9.334.231,- ; has 2,48 minutes of waiting time and give additional per-week profit as many as Rp1.191.846,- to Rp9.559.231,- ; scenario 12 has 0,49 minutes of waiting time and give additional per-week profit as many as Rp1.641.846,- s.d Rp10.009.231,-

Keywords: queue system, cooks/server, simulation, *discrete event simulation ProModel*, scenario, profit.