

ABSTRAK

PT. DEF (*Pharmaceutical Processing Industry*) merupakan perusahaan farmasi yang memproduksi dan mendistribusikan obat-obatan baik di Indonesia maupun Internasional. Dalam memenuhi permintaan *customer*, PT DEF menerapkan *Sales and Operations Planning* (S&OP) untuk merencanakan produksi. Namun, setelah munculnya pandemi Covid-19 PT DEF mulai menghadapi suatu permasalahan dalam pemenuhan bahan baku dan peningkatan jumlah permintaan produk sehingga dilakukan perubahan pada sistem S&OP agar *demand* dan *supply* mencapai keseimbangan. Untuk mengetahui apakah sistem *Sales and Operation Planning* yang baru dapat meningkatkan keseimbangan terhadap *supply* dan *demand*, diperlukan adanya suatu alat pengukuran untuk menilai tingkat efisiensi dan efektivitas dari sistem yang baru. Saat ini perusahaan belum memiliki alat pengukuran efisiensi dan efektivitas dari sistem *Sales and Operation Planning*.

Maka dalam penelitian ini diharapkan dapat memberikan usulan rancangan metodologi pengukuran efektivitas dan efisiensi untuk mengukur implementasi S&OP, agar perusahaan dapat mengetahui sudah seberapa baik S&OP yang diterapkan dan seberapa berpengaruh S&OP terhadap output yang ingin dicapai. Pendekatan masalah pada penelitian ini diselesaikan dengan metode *S&OP performance scorecard* dan *S&OP business scorecard*. Metode *S&OP performance scorecard* digunakan untuk mengukur sudah seberapa baik proses S&OP dikelola. Sedangkan metode *S&OP business scorecard* digunakan untuk mengukur efektivitas dari proses S&OP.

Hasil penelitian menunjukkan bahwa rancangan metodologi pengukuran S&OP yang diimplementasikan sudah valid karena dapat mengidentifikasi dan mengukur efisiensi serta efektivitas dari praktik S&OP. Hal ini dibuktikan dari hasil pengukuran efisiensi sebesar 80% dimana nilai tersebut masuk ke dalam interval $\geq 80\%$ yang berarti S&OP sudah dijalankan dengan baik dan berkinerja tinggi menurut APICS. Sedangkan dari hasil perbandingan antara bulan Januari dan Februari pada pengukuran efektivitas terjadi peningkatan ataupun penurunan hasil mendekati target dari masing-masing indikator. Dimana terjadi peningkatan *forecast* dari 8 produk ke 10 produk, penurunan *stock availability* dari 171% ke 146%, peningkatan *product availability* grup A dari 90% ke 115%, peningkatan *capacity utilization* 97,5% ke 99,6%, penurunan *day of inventory* dari 308 hari ke 281 hari, peningkatan rencana vs realisasi dari 39,8% ke 85,7%, peningkatan *demand plan* vs realisasi dari 30,6% ke 110,1%, terjadi peningkatan realisasi biaya supply dari 67,67% ke 78% dan terjadi peningkatan omzet dari 100,1% ke 100,9%. Hasil tersebut membuktikan bahwa proses S&OP yang diterapkan sudah efisien dan cukup efektif.

Kata kunci: *Sales and Operation Planning*, Rancangan metodologi pengukuran efisiensi dan efektivitas, Industri kimia, *S&OP performance scorecard*, *S&OP business scorecard*.

ABSTRACT

PT. DEF (Pharmaceutical Processing Industry) is a pharmaceutical company that produces and distributes medicines both in Indonesia and internationally. In fulfilling of customer demands, PT DEF applies Sales and Operations Planning (S&OP) to plan production. However, after the emergence of the Covid-19 pandemic, PT DEF began to face a problem in fulfilling raw materials and increasing the number of product requests, so changes were made to the S&OP process to demand and supply plans reached a balance. To find out whether the new Sales and Operation Planning system can improve the balance of supply and demand planning, a measurement tool is needed to assess the level of efficiency and effectiveness of the new system. Currently, the company doesn't have measurement tool for the effectiveness and efficiency of the Sales and Operation Planning system.

Thus, this study is expected to provide a proposed measurement methodology design to measure the implementation of S&OP, so that the company can find out how well the S&OP has been implemented and how influential the S&OP process is in the output to be achieved. The approach to the problem in this study was solved using the S&OP performance scorecard and S&OP business scorecard method by measuring the efficiency and effectiveness of S&OP. S&OP performance scorecard method is used to measure how well the S&OP process is being managed. While the S&OP business scorecard method is used to measure the effectiveness of the S&OP process.

The result showed that the design of the implemented S&OP measurement methodology is valid because it can identify and measure the efficiency and effectiveness of S&OP implementation. This is evidenced by the result of the efficiency measurement of 80% where the value enters into the $\geq 80\%$ interval. Which means the S&OP has been carried out in a mature and high performing according to APICS. Meanwhile, from the comparison results between January and February on the measurement of effectiveness, there was an increase or decrease in the results approaching the target of each indicator. Where there is an increase in the forecasts from 8 products to 10 products, a decrease in stock availability from 171% to 146%, an increase in product availability in group A from 90% to 115%, an increase in capacity utilization from 97,5% to 99,6%, a decrease in days of inventory from 308 days to 281 days, an increase in production plans vs production realization from 39,8% to 85,7%, an increase in demand plan vs production realization from 30,6% to 110,1%, an increase in financial adherence from 67,67% to 78%, and an increase in turnover from 100,1% to 100,9%. These results prove that the applied S&OP process is efficient and quite effective.

Key words: *Sales and Operation Planning, Design methodology for measuring effectiveness and efficiency, Chemical industry, S&OP performance scorecard, S&OP business scorecard.*