

## **Operational Excellence Performance in Pharmaceutical Quality Control Labs: An Empirical Investigation of the Effectiveness and Efficiency Relation**

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**Abstract :** Performance measurement has evolved over time from a unidimensional short-term efficiency focused approach into a balanced multidimensional approach. Today, integrated performance measurement frameworks are often used to avoid local optimization and to encourage continuous improvement of an organization. In literature, the multidimensional characteristic of performance measurement is often described by competitive priorities. At the same time, on the highest abstraction level an effectiveness and efficiency dimension of performance measurement can be distinguished. This paper aims at a better understanding of the composition of effectiveness and efficiency and their relation in pharmaceutical quality control labs. The research comprises a lab-specific operationalization of effectiveness and efficiency and examines how the two dimensions are interlinked. The basis for the analysis represents a database of the University of St. Gallen including a diverse set of 40 different pharmaceutical quality control labs. The research provides empirical evidence that labs with a high effectiveness also accompany a high efficiency. Lab effectiveness explains 29.5 % of the variance in lab efficiency. In addition, labs with an above median operational excellence performance have a statistically significantly higher lab effectiveness and lab efficiency compared to the below median performing labs.

**Keywords :** empirical study, operational excellence, performance measurement, pharmaceutical quality control lab

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