Companies struggle to measure productivity on the shop floor, especially labour productivity. The approaches currently used are insufficient to capture all essential factors influencing productivity.

Productivity is multidimensional and context dependent, and there are therefore many definitions and approaches to productivity measurement. There is a resulting low understanding of productivity and appropriate productivity measurement.
The literature provides non-uniformly structured collections of different approaches that fail to allow comprehensive comparison and evaluation.

This thesis provides a classification of productivity measurement approaches based on aspects of productivity. This overview serves to identify the gap between productivity measurement in practice and the approaches in the literature.

Based on the identified gap, a unified, practical approach to productivity measurement is developed. Rather than develop a new approach, the aim is to combine existing approaches into a unified approach for practical use. Two case studies validate the functionality and practicability of this approach.

This thesis focusses on labour productivity measurement on the shop floor, as labour productivity is the most popular type of productivity and is measured by most companies. Thus, the developed approach is intended for manual and semi-automated processes on the shop floor; however, a possible adaptation to automated processes is discussed at the conclusion.

Keywords: Labour productivity, productivity, productivity measurement, productivity management, efficiency, effectiveness

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