Piyarat Kamonrattanakul 2009: Development of Performance Network for Garment Industry. Master of Engineering (Industrial Engineering), Major Field: Industrial Engineering, Department of Industrial Engineering. Thesis Advisor: Associate Professor Kongkiti Phusavat, Ph.D. 104 pages.

Performance measurement represents a key component in a management process that helps enable in-dept and timely analysis, planning, and improvement. Nowadays, a strong management is necessary for an organization under intense competition. The study is based on the need expressed by top and operational managers at one garment company, to be referred to improve productivity measurement and analysis at the production level. This need stems from a lack of an explicit linkage between information from performance measurement and target setting at the operational level. As a result, the performance network concept is selected to help address this concern. Several networks, consisting of ratios, have been developed and tested. Altogether, the data collection and regression analysis are so applied for extending productivity analysis into target setting and stuation of performance network

The findings indicate the following. There are significant interrelationships among ratios from different levels in one performance network. Specifically for target setting, one of the findings illustrates that for a productivity ratio(Product just in time to Labor hours) is to be increased by 10%, the following targets also have to take place. For examples, one of the ratios at the network's level 1; i.e., the Labor hours to Total Product in plan ratio, should be in 0.7885. Moreover, one of the ratios at the network's level 2; i.e., Man to Total Product in plan ratio, should be in 0.0049 and for a profitability ratio(Making cost to Total cost) is to be increased by 10%, the following targets also have to take place. For examples, one of the ratios at the network's level 1; i.e., Making cost to Utility cost ratio, should be in 5.48. Moreover, one of the ratios at the network's level 2; i.e., Labor cost to Utility cost ratio, should be in 5.4084. The scorecard show that the productivity is driven Total Product in plan to Raw Material ratio and the profitability is driven Labor cost to Total cost ratio. The performance network concept could potentially improve the linkage between productivity measurement and analysis. Nevertheless, some of the key shortcomings include the reliance on quantitative data and a database that needs to generate accurate and time data on the continuous basis.

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