Quality Management Practices and Performance Measurement in the Manufacturing Industry: An Instrument Validation
(Amalan Pengurusan Kualiti dan Pengukuran Prestasi dalam Industri Pembuatan: Suatu Pengesahan Alat)

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ABSTRACT

The aim of this article was to validate an instrument of quality management practices (QMPs) and performance measurement for the manufacturing industry in Malaysia. QMPs and performance were measured using the following six value indicators: Management commitment, training, process management, quality tools, continuous improvement and organisational performance. A total of 480 questionnaires were distributed and 210 questionnaires were valid for analysis. A confirmatory factor analysis (CFA) approach was employed using analysis of moment structures (AMOS) software. The results for the hypothesised CFA model showed the following fit statistics: Comparative fit index (CFI) = 0.924, Tucker Lewis index (TLI) = 0.913 and root mean square error of approximation (RMSEA) = 0.061. The values of CFI and TLI ≥ 0.9 and at the same time the value of RMSEA ≤ 0.08 showed that CFA model fits the data very well. Hence, the results of the study can be used by managers in manufacturing companies to consider and adapt their QMPs and performance assessments toward increasing competitiveness.

Keywords: Confirmatory factor analysis; manufacturing industry; organisational performance; quality management practices

ABSTRAK

Tujuan makalah ini adalah untuk mengesahkan alat amalan pengurusan kualiti (QMPs) dan pengukuran prestasi bagi industri pembuatan di Malaysia. QMPs dan prestasi diukur menggunakan enam petunjuk nilai berikut: Komitmen pengurusan, latihan, pengurusan proses, alat berkualiti, penambahbaikan berterusan dan prestasi organisasi. Sebanyak 480 kertas soal selidik telah diedarkan dan 210 kertas soal selidik adalah sah untuk dianalisis. Pendekatan analisis faktor pengesahan (CFA) telah diguna pakai menggunakan perisian analisis struktur masa (AMOS). Keputusan hipotesis bagi model CFA menunjukkan statistik padanan seperti berikut: Indeks padanan komparatif (CFI) = 0.924, indeks Tucker Lewis (TLI) = 0.913 dan penganggaran min ralat punca kuasa dua (RMSEA) = 0.061. Nilai CFI dan TLI ≥ 0.9 serta nilai RMSEA ≤ 0.08 menunjukkan bahawa model CFA padan dengan data. Oleh itu, keputusan kajian ini boleh digunakan oleh pengurus di syarikat pembuatan untuk mempertimbang dan menggunakan QMPs dan penilaian prestasi mereka ke arah peningkatan daya saing.

Kata kunci: Amalan pengurusan kualiti; analisis faktor pengesahan; industri pembuatan; prestasi organisasi