Strategic Performance Management Using Big Data Analysis: A Case Study of Multinational Corporations

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This paper begins by establishing a theoretical framework that integrates 'strategic performance management' with 'big data analytics. Strategic performance management has evolved from early annual assessments—which essentially 'managed the past'—towards dynamic, strategy-oriented continuous feedback mechanisms [1]. Mainstream approaches include the Balanced Scorecard (BSC) and others [2]. Big data is characterised by the '4Vs', and its analytical techniques are categorised into four levels: descriptive, diagnostic, predictive and prescriptive [3]. Big data drives enterprises to shift from experience-driven to data-driven decision-making, significantly enhancing operational efficiency and profitability [4]. Building on this, this paper proposes a new paradigm of "Data-Driven Strategic Performance Management" (DDSPM) [5], which achieves deep integration of strategy formulation, performance optimisation and real-time monitoring through a closed-loop system, though it also faces challenges such as privacy protection [6].

Secondly, this is validated using Alibaba Group as a typical case study. Alibaba's development has progressed through the founding phase, the ecosystem phase, the data-driven phase and the deepening phase, establishing a "performance × values" dual-track evaluation model [7]. Its OneData data middle platform supports the processing of over 200 PB of data daily, with sales forecast accuracy exceeding 95% [8]. Across all stages of strategic performance management, big data is utilised for strategic formulation, target setting, real-time monitoring and evaluation feedback; data-driven decision-making has led to a productivity increase of approximately 5%. The supporting framework encompasses technical infrastructure, middle-platform architecture, the dual-track performance system and a data-driven culture [9].

In summary, big data is driving the transformation of strategic performance management from an experience-driven to a data-driven approach. Enterprises need to deeply integrate data analytics capabilities and establish corresponding organisational and governance frameworks.

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