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## Data Science, Predictive Analytics, and Big Data: A RevolutionThat Will Transform Supply Chain Design and Management

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**Abstract:** The supply chain management (SCM), data science, predictive analytics, and big data (together referred to as DPB) confluence offers a wealth of study options. We show how the increased use of these terminology might help supply chain education and research. Data science necessitates both domain expertise and a broad range of quantitative skills, despite the paucity of research on the topic and the abundance of open issues. We suggest further study into the competencies required of SCM data scientists and examine the relationship between domain expertise and the efficacy of SCM data scientists. This expertise is crucial for the advancement of future supply chain executives. We suggest data science and predictive analytics definitions that are particular to SCM. We examine real-world instances of DPB uses and propose both DPB-based research issues derived from these applications and from management theories. Last but not least, we provide a detailed explanation of the steps researchers might take to respond to our request for research on the confluence of SCM and DPB.

**Keywords:** Data Science; Predictive Analytics; Big Data; Logistics; Supply Chain Management; Design; Collaboration; Integration; Education

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