

TABLE 1.3: Evolution of Operations and Supply Chain Management

TIME PERIOD	INNOVATIONS AND EVENTS	PRODUCTION EMPHASIS	NOMENCLATURE (COMMON TERMINOLOGY)
1700–1900	<ul style="list-style-type: none">• Steam engine• Interchangeable parts• Division of labor• Improvements in manufacturing technology• Formation of transportation networks	Internal production in factories	Factory management
1900–1920	<ul style="list-style-type: none">• Applications of scientific principles to manufacturing• Time and motion studies• Moving assembly lines	Internal and mass production	Scientific manufacturing and management
1920–1960	<ul style="list-style-type: none">• Production of war goods• Hawthorne studies• Motivational theories• Introduction of computers and quantitative tools	Internal mass production	Production management and operations research
1960–1980	<ul style="list-style-type: none">• Just-in-time (JIT) and material requirements planning (MRP) systems• Statistical process control• Increasing global competition	Internal production with some outsourcing, and the production of services	Production and operations management
1980–2000	<ul style="list-style-type: none">• Increased computerization• Business process reengineering• Total quality management (TQM)• Six Sigma quality• Lean manufacturing• Enterprise resource planning (ERP)• The Internet and electronic commerce (e-commerce)• Emerging global economies such as China and India as a result of reduced governmental trade barriers• Increased global sourcing and adoption of supply chain management practices for both goods and services	Emphasis on managing both internal operations and supply chains	Operations and supply chain management
2000–present	<ul style="list-style-type: none">• Global and sustainable supply chains• Advances in communication and transportation technologies, agile manufacturing	Emphasis on managing both global supply chains and operations across supply chains	Operations and global supply chain management