PART II

General Applications

With the basics presented in the last five chapters of Part I, we may now apply the general theory to major problem classes of management science. Consequently, the general ideas will no longer be illustrated with simple well-defined toy models but will be used to conceptualize important areas in business administration.

Six of these general problem areas will be considered: production planning, design, implementation, supply chain management, service operations, and costs. Not surprisingly, all six areas are closely related to each other. Hence, e.g., a production planning problem could be considered as a particular design or as an implementation problem, and the same is true for the field of service operations. What is important, however, is the perspective in which each area is investigated. Thus, for production planning (Chapter 6), the problem of aggregation - disaggregation will play an important role, for design problems (Chapter 7), the concept of an explicit anticipation will be of considerable significance, and for the implementation problem (Chapter 8) the planning itself is displaying features of distributed decision making.
This latter observation is obvious since planning decisions have to ac­count for implementation decisions, and implementations presuppose a planning decision. Supply chain management (Chapter 9) will combine many of the concepts and ideas developed up to Chapter 9, and the same is true for the chapter on service operations (Chapter 10) which particularly shows the interrelation between team and non-team based coordinations.

Of particular theoretical interest is a possible foundation of modern managerial accounting (Chapter 11) based on the ideas developed thus far. In fact, the broader concept of DDM might replace traditional cost theory. This is for at least three reasons: First, DDM solves the important problem of connecting the operational accounting level with the tactical level of investment calculus. Second, the cost evaluation problem typically is a DDM problem, and third, the modern concept of motivational and behavioral costs involves a multi-person setting which again is described in DDM but not in traditional cost theory.