Preface

This Special Issue, together with four coming issues, is the result of the Tenth International Working Seminar on Production Economics, held February 16–20, 1998, in Igls/Innsbruck, Austria. Approximately half of the papers presented are contained in these issues, which are organised according to the following topics:

- Production Planning and Control
- Scheduling and Rescheduling
- Inventory Control and Related Issues
- Productivity, Performance and Valuation
- Strategic Planning for Production Systems

Achieving sustainable competitive advantage and increasing the economic value of a firm in the global economy of the 21st century will be complex, challenging, and knowledge-based. It can be envisaged as revolving around the interplay of three basic forces: (a) a dynamic environment, filled with opportunities and threats, (b) an innovative and agile organisational system, and (c) strategic management and strategic leadership whose role is to mediate between these two forces, to optimise existing processes and systems and, at the same time, to discover new opportunities and capitalise on them.

Production Economics can contribute in many ways: (a) by creatively solving technological problems and to optimising existing systems, processes, products, and services, and (b) by discovering new opportunities and to take advantage of their potential. The first is a management, the second a leadership task. Management works within a given paradigm or system and deploys a great number of decision and action methods in order to achieve competitive advantages. Improving the production process in a plant and optimising its logistics is a management task. Leadership creates a new paradigm and works on the system. It is a natural, unforced ability to inspire people, to look for new opportunities and then to transform them into profitable products, processes, and services. Invent- ing a new market and creating a better product is a leadership task.

The production economist needs both – management and leadership abilities, if radical changes are to be implemented in order to achieve dramatic improvements in performance.

The papers contained in this issue reflect management and leadership tasks of the production economist in the relation of about 75 to 25%. This is probably also the division of tasks in business life, where most of the day-to-day problems are managerial tasks. It should make us reflect on whether this proportion is correct and suited for a firm operating in a turbulent environment. The more intensive the change, the more important is the future in comparison to the present. Alertness for opportunities, new mental models which tell the production economist what is and what is not important for achieving competitive advantages or new scientific insights, what they like and do not like, what they should and should not notice, a short- or long-term perspective; these and similar issues are leadership issues which probably need more research.

What emerges from all the contributions is however the insight that the firm is a cognitive system. In order to evolve, a cognitive system must be creative and continuously generate new knowledge. Going through the different articles of these issues, the reader becomes astonished by the variety of new approaches, methods, tools, and attitudes originating from creative minds from all over the
world. Individual creativity, however, is not the same as social creativity. Knowledge creation in a cognitive system requires interaction between its members and an environment which allows creative individuals to exchange ideas. There is a marvellous story that explains social creativity. “If you have a penny and I have a penny and we exchange pennies, you still have one cent and I still have one cent. But if you have an idea and I have an idea and we exchange ideas, you now have two ideas and I now have two ideas.” In the same way, the many different points of view, concepts, and methodologies give the reader new ideas which can be exchanged with others or developed for creating new knowledge.

We hope these issues not only create knowledge, but also enhance individual creativity, so that the cognitive system – a firm, a strategic business unit, a plant, a university department, or a non-profit-organisation – can evolve in an environment, which by definition is turbulent.

The following members of the Programme Committee were responsible for the scientific lay-out of the Seminar:

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