

THE EMERGENCE OF THE FOURTH INDUSTRIAL REVOLUTION

THE EMERGENCE OF THE FOURTH INDUSTRIAL REVOLUTION

An Historical Introduction to
Knowledge Management and
the Innovation Economy

BY

JON-ARILD JOHANNESSEN

Kristiania University College and Nord University, Norway



United Kingdom – North America – Japan – India – Malaysia – China

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Preface

In this book we use the constructs such as innovation economy, knowledge society and knowledge economy representing the same phenomenon, the emergence of the fourth industrial revolution.

This book is divided into five chapters.

In Chapter 1 we look at the following problem: it is difficult to identify wealth-creation processes in the knowledge economy because our way of thinking is so strongly rooted in the industrial economy. The question discussed in Chapter 1 is: what wealth-creation processes are driving the knowledge society? The knowledge society is the prelude to the fourth industrial revolution. If we can answer this question, we can say something about the emergence of the fourth industrial revolution. The objective of Chapter 1 is to develop an analytical model capable of explaining various aspects of globalization and the knowledge society. The finding in Chapter 1 is an analytical model that shows drivers towards the fourth industrial revolution:

- Three drivers for the technology;
- Two drivers for new organizational logic.
- Two drivers for new collaborative networks.
- Five drivers for the knowledge worker's performance.

In Chapter 2 we investigate the following problem: we know little about how robots, informats and infostructure will affect wealth-creation processes in the knowledge society.

The question we examine is: what factors will promote technological innovations in the knowledge society? The objective of Chapter 2 is to develop policies to ensure a continued rise in living standards in the knowledge society. The findings in Chapter 2 are four categories and 15 factors that will promote technological innovations in the knowledge society.

The problem raised in Chapter 3 is: innovation leads to economic, social and political crises. The question examined in Chapter 3 is: how are new ways of organizing work affecting value-creation processes in the knowledge society? The objective is to conceptualize factors that affect value-creation processes in the knowledge economy. The findings in Chapter 3 are three main categories of drivers of value-creation processes in the knowledge society, together with 15 types of drivers for each category.

In Chapter 4 we investigate the following problem: the knowledge economy is changing the ways in which we are accustomed to co-operating. The question examined is: which new structures for cooperation are affecting the development of value-creation processes in the knowledge economy? The objective of Chapter 4 is to develop concepts and models that will enable us to better

understand and exploit the new global division of labour which is driven by the knowledge economy, so that value creation is promoted.

The findings in Chapter 4 can be stated like this: value-creation processes are influenced by four sub-systems and three primary processes. In addition, in each of the various nations, the state plays a decisive role in promoting processes of innovation.

The problem examined in Chapter 5 is that the number of knowledge workers continues to grow, but we know little about what factors will promote knowledge workers' productivity.

The question investigated is: how can managers promote knowledge workers' productivity? The purpose of Chapter 5 is to develop aspects of a theory to promote knowledge workers' productivity. The findings in Chapter 5 are seven propositions (a mini-theory) for knowledge worker productivity.