

Preface

Artificial Intelligence and Economic Theory: Skynet in the market borrows the word Skynet from the movie *The Terminator*. The advent of artificial intelligence has changed many disciplines such as engineering, social science and economics. Artificial intelligence is a computational technique which is inspired by natural intelligence such as the swarming of birds, the workings of the brain and the path finding behavior of the ants. These techniques have impact on economic theory. This book studies the impact of artificial intelligence on economic theory, a subject that has not yet been studied. The theories that are considered include asymmetrical information, pricing, rational expectations, rational choice, game theory, mechanism design, behavioral economics, bounded rationality, efficient market hypothesis, financial engineering, portfolio, rational counterfactual and causality. The benefit of this book is that it evaluates existing theories of economics and updates them based on the developments in the artificial intelligence field. This book makes an important contribution to the area of econometrics, and is an interesting read for graduate students, researchers and financial practitioners. In this book, Chaps. 1, 2, 3, 4, 5, 8, 9, 12, 13, 14, and 15 were written by Tshilidzi Marwala whereas Chaps. 7 and 10 were written by Evan Hurwitz. Chapters 6 and 11 were jointly written. We thank the three anonymous reviewers for their contributions.

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