
Biological Agents Index

Microbial Macroeconomics

Making an impact, and achieving feasible goals by adopting best practices in international relations, public administration and microbiology for evaluation, assessment, and implementation of contagion risk management interventions.

FIFTH EDITION

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This book is dedicated to my father who passed away from leukemia in 2014. To make donations to the Olisa Cancer trust please do so online at www.BiologicalAgents.com/donations

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PREFACE

Until now, this millennia has seen major and meteoric advances in socio-economic and biological sciences like, but not limited to, concepts in Game Theory; Organizational Theories like Transformation, and Computational Biology. In addition, there have been numerous discoveries that have brought increases in the understanding and links between the emergence of new and old cases of infectious disease (incidence and prevalence), economic development, and democracy. Interestingly, these links have been drawn between outbreaks of conflict, famine, and contagions. What is known is that democracies reduce risks of conflict, increase economic development, and reduce prevalence to infectious disease. Consequently, infectious disease intervention programs should contain both socio-economic and biomedical inputs and outputs in order to achieve effective outcomes. Accordingly, to effectively manage these programs, managers should be familiar with concepts in macroeconomics, microbiology, and new public management. For the most part, origins of modern socio-economic and biology concepts date as far back as the 1950s, '60s, and '70s. More recently, Arab Spring movements and global economic recession of '010s, and increasing globalization have ably assisted in shaping the way global interventions against contagions are planned and managed. There have been numerous lessons learned. For one thing, it is more cost effective and cost beneficial to replace labor with technology (new public management). Secondly, and consequently, highly effective governments tend to outsource social and public programs and play a greater role in regulation and oversight. Subsequently, the private sector (corporations and non-profit organizations) are increasingly participating in program implementation. Increasingly, international monetary institutions, with the goal of achieving sustainability, are replacing public sector financing with tripartite agreement strategies to fund private sector cooperatives while at the same time tasking public sector agencies in developing countries to play enabling roles.

Biological Agents Index (Fifth Edition) has been written for performers in government agencies, public, non-profit, and private sectors and for students of management and public policy. *Biological Agents Index* stresses the need for increased reliance on information technologies for cost-effective management and discusses best practices of using bioinformatics in implementing, assessing, evaluating socio-economic and biomedical technology programs, specifically pharmaceutical, public health, and clinical laboratory diagnostics platforms. Like *Lean Six Sigma*, the Index can be used to identify constraint within infectious disease intervention processes. This information can be used to reduce threats to validity and variation when implementing specific programs. If correctly used, the index can ably assist the user in the implementation of leaner processes, and in conducting more accurate program evaluations.

During the preparation of this edition, previous and current authors and works have been cited at the end of each part. In addition, other contributors have been documented in the acknowledgement section. This edition has been written to provide the user basic skills needed to be effective in the evaluation of socio-economic and or biomedical technology intervention programs against infectious disease in urban and rural communities. In addition, this edition can supplement the user's education and experience in contagion risk management or serve as a handbook for future reference. To achieve these goals, this edition has been arranged into three parts with five chapters. The first part discusses basic concepts in macroeconomics, new public management, and microbiology. In addition, the chapters in Part One outline basic management concepts in strategic planning and attempts to demystify microbiology and its components: bacteriology, virology, biotechnology, immunology, and bioinformatics. Furthermore, suggestions are made on how concepts in Part One can be used as tools in the implementation, analysis, and evaluation associated with strategic planning concepts like inputs, outputs, and outcomes, and program assessments and analysis. Part Two of this book offers suggestions on the best way to approach managing best practices in the area of infectious diseases infection control and health promotion programs using administrative processes like outreach, rural economic development, sanitation, and laboratory quality management. Finally, Part Three delivers series of realistic synopses and case studies that places the reader in realistic management crisis situations.

This book is currently being reviewed for a sixth edition. Readers with suggestions for improvement and interested scholarly contributors can submit book chapter inputs or paper publications to: info@biologicalagents.com.

Bobby Olisa, Publisher