CHAPTER 7

Technoeconomics and lifecycle assessment of bioreactors: wastewater treatment plant management

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7.1 Introduction

Contemporary capitalism has been increasingly techno-scientifically and thus techno-economic analysis (TEA) is increasingly becoming a decision and norm. The escalated aspiration for techno-economic experts in the field of the decision-making process, for example, the economists having specialization and knowledge base about technological innovation is indeed a social uprising necessity. Besides, as per Harvie (2014) and Fuller (2016), the continuing transformation of social institutions and non-profit organizations like manufacturing Small and Medium enterprises (SMEs) into techno-scientific producers through academic publications showcases the consistent need for techno-economic concepts. Therefore, techno-economic knowledge drives towards the quality of life and has become significantly necessary in today's organizational structures, governance, political solutions, and crises-handling projects (Fuller, 2016; Harvie, 2014; Keen, 2015; Morozov, 2013). Techno-economic assumptions act along with technological frameworks in various sectors like in the pharmaceutical production area, universities, entrepreneurial technological or manufacturing organizations either in large scale or in small scale, high-end multiple production companies, etc. (Andalib, 2018; Fuller, 2016; Harvie, 2014). Furthermore, growing techno-economic optimism besides innovation modeling also inflects famous concepts around the relationship between capitalism and technoscience as well as put great impacts on the industrial relationships and connections between the leaders, managers,

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