

## Keynote Address to ACSAT 2018 Conference

Paradigms, Destructions, Disruptions, Transformations and Revolutions – The Challenge of Adopting Digital Technologies

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Abstract:

We begin this presentation with a review of contemporary terms that are commonly used to characterise the path of human progress and development in conjunction with the spectacular rise of digital technologies. Paradigm shifts became popularized to mark profound changes in society resulting from new technologies, despite Kuhn's original idea which restricted it to scientific communities. Creative destruction conceived by Schumpeter sees the process of industrial renewal as revolutionary and initiated from within, destroying the old while creating a new one. It has attained the status of an economic law in popular discourse, which declares that entrepreneurs as innovators are inherently destroyers of the old economy out to build the new economy in an incessant flow of destruction and reconstruction. Similarly, disruptive technologies as formulated by Christensen were specific in their treatment of innovation-enabling technologies which create new markets and value networks, yet became widely used to imply discontinuous change in society in general. The terms transformation and revolution were likewise appropriated to imply radical change in the social order driven by technological developments, generally ignoring the readiness or otherwise of society to adopt a new way of living and working. These views focus on specific aspects of the rapid changes taking place with an emphasis on the economic dimension. A strong case for a techno-centric form of economic development has been put forth as a legitimate framework for society-wide analysis, synthesis and prescription. In this scheme technologies are the driving force in bringing change to society, with clear winners and losers that are ultimately likely to produce wider gaps in society. Drucker was more perceptive in *The Age of Discontinuity* (1969) by declaring that knowledge has become the central capital. The new technologies which will give rise to new industries embrace the entire array of human knowledge, scientific as well as humanistic. Such a holistic view has the power to integrate the adoptive capacity of human subjects with their readiness to assimilate new technologies and practices under the onslaught of radical disruptions. The speaker argues that a techno-centric approach to the adoption and assimilation of digital technologies is misguided and doomed to failure. To the contrary, he proposes that a humanistic approach is more effective in planning for change, integrating technological opportunities within the wider context of human progress and development. The successes and failures of the First Industrial Revolution provide useful lessons which should be carefully studied for guidance, especially from the perspective of the social and technical processes that may give rise to broad acceptance of a post-industrial society. A transformation framework that integrates social, economic, political, cultural and legal dimensions and driven by the human spirit will lead to a more comprehensive development model. Organized around the principle of democratized and open sharing of information and knowledge through digital technologies, such a model will enable all to benefit and provide greater sustainability. Civilizational renewal is the ultimate purpose of this development agenda, based on creating value from intangible aspects of human life rather than limited to the physical and material side of economic production. The presentation concludes with a set of ideas on the way forward for a more balanced and sustainable future.