DISRUPTIVE TECHNOLOGIES: A CONCEPTUAL FRAMEWORK THAT ENABLES COMPANIES IDENTIFY TECHNOLOGICAL FORCES THAT SIGNAL MARKET DISRUPTIVE TECHNOLOGICAL INNOVATIONS

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Abstract

The capability of enterprises to transform their businesses quickly in an ever changing age of disruption is critical for survival in today's dynamic market. Information Communication Technology (ICT) plays a critical role in quickening the pace of disruption as consumers are exposed to more information and more choices which results in a demand for greater value. The ability of organizations to understand the technological forces at play so that they can detect and understand market disruption signals earlier and adapt their businesses transformation plans accordingly is key to enhancing the performance of today's businesses. This enables first to be proactive and not reactive. Cloud and mobile computing have emerged to be major disruptive technologies today, enabling technologies such as 3D printing, Internet of Things (IoT), data analytics, artificial intelligence and robotics. This research therefore looks at the characteristics of such technologies and impact in the market and develops a framework that can enable a firm to be proactive in identifying these disruptive signals and plan for their organization's transformation. Both primary and secondary data was considered. Descriptive and inferential statistics was used in analyzing the data and in drawing the conclusion. The framework identifies current technological state, industry specific factors, predicted market impact and opportunities for growth as key aspects that every firm should consider before adoption of new presumed disruptive technologies. The validation of the framework is based on an expert review and opinions.

Key words: Disruptive technologies, business enterprise, ICT, cloud computing, analytics