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Antifragility in Food Production through the Adoption of Continuous Improvement Techniques

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Abstract

Food system is susceptible to disruptions that influence multiple locations within the system where the existence of COVID-19 unveiled the system's pain points. Food system is vulnerable to multifaceted uncertainties specifically on stress exerting on resources, environment that rendered food system stability in jeopardy. Magnitude of complexity involving food products is heightened because of perishability, safety concern and resiliency. Machine breakdown or scrap generation in production floors are irreversible, the emphasis of lean manufacturing as an initiative to enhance efficiency is staggering in the manufacturing domain. Manufacturing firms demand survivability and error prevention, a concept of antifragility showcasing how to prosper from disruption as a strategy. With respect to the VUCA and BANI environment, the capacity to absorb and recover to the pre-disruption state is inadequate. With the capability to learn and develop further after a disruption fulfil the antifragility feature. Quick reconfiguration of operations and agility requires capabilities development to respond to disruption, emergence of resilience characteristics is correlated with response capabilities. Capabilities as the determinant of operational performance in a disrupted production floor, greater degree of adaptability is required to remain technically viable. Within a disrupted production floor setting, the dynamic capabilities driven performance differential. One size fits all strategy appears inadequate to enable the capabilities, the production system must be reinvented, reconfigure, revamped to being tiptop in dealing with turbulent

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environment. An in-depth comprehension of how disruptions and perturbations are embedded and impact the production floor with different sets of dynamic capabilities must be examined.

Keywords
Antifragile, Food Production, Dynamic capabilities, Continuous improvement and Resilience.

Biographies
Tay Guo Xuan is a PhD candidate in Food Management at Universiti Putra Malaysia (UPM). He obtained his MSc (Quality and Productivity Improvement) from National University of Malaysia (UKM) and BSc (Food Science) degree from Universiti Tunku Abdul Rahman (UTAR). His research interest includes Continuous Improvement, Dynamic Capabilities and Production Management in the food sector. He works as a continuous improvement specialist in a private food manufacturing firms in Malaysia.

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Muhammad Shahrim Abdul Karim is a Professor at Universiti Putra Malaysia (UPM), Department of Food Service and Management. He has received B.Sc degree from New York University, MBA from Mara University of Technology, PhD from Oklahoma State University. Dr. Muhammad Shahrim Abdul Karim has numerous publications within the specialty and published in reputed national and international peer-reviewed journals. Dr. Muhammad Shahrim Abdul Karim is actively associated with different national and international societies and academies. He has gained recognition among the honourable subject experts with the contributions made. He has been appreciated by several reputed awards and funding support. His major research interest is in studies related to Culinary Management, Food Tourism, Heritage Food, Hospitality and Food Service Management.

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