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Assessing Organizational Resilience Capacity to Flooding: Index Development and Application to Greek Small & Medium-Sized Enterprises

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Abstract : Organizational resilience capacity to extreme weather events (EWEs) has sparked a growth in scholarly attention over the past decade as an essential aspect in business continuity management, with supporting evidence for this claim to suggest that it retains a key role in successful responses to adverse situations, crises and shocks. Small and medium-sized enterprises (SMEs) are more vulnerable to face floods compared to their larger counterparts, so they are disproportionately affected by such extreme weather events. The limited resources at their disposal, the lack of time and skills all conduce to inadequate preparedness to challenges posed by floods. SMEs tend to plan in the short-term, reacting to circumstances as they arise and focussing on their very survival. Likewise, they share less formalised structures and codified policies while they are most usually owner-managed, resulting in a command-and-control management culture. Such characteristics result in them having limited opportunities to recover from flooding and quickly turnaround their operation from a loss making to a profit making one. Scholars frame the capacity of business entities to be resilient upon an EWE disturbance (such as flash floods) as the rate of recovery and restoration of organizational performance to pre-disturbance conditions, the amount of disturbance (i.e. threshold level) a business can absorb before losing structural and/or functional components that will alter or cease operation, as well as the extent to which the organization maintains its function (i.e. impact resistance) before performance levels are driven to zero. Nevertheless, while it seems to be accepted as an essential trait of firms effectively transcending uncertain conditions, research deconstructing the enabling conditions and/or inhibitory factors of SMEs resilience capacity to natural hazards is still sparse, fragmentary and mostly fuelled by anecdotal evidence or normative assumptions. Focusing on the individual level of analysis, i.e. the individual enterprise and its endeavours to succeed, the emergent picture from this relatively new research strand delineates the specification of variables, conceptual relationships or dynamic boundaries of resilience capacity components in an attempt to provide prescriptions for policy-making as well as business management. This study will present the development of a flood resilience capacity index (FRCI) and its application to Greek SMEs. The proposed composite indicator pertains to cognitive, behavioral/managerial and contextual factors that influence an enterprise's ability to shape effective responses to meet flood challenges. Through the proposed indicator-based approach, an analytical framework is set forth that will help standardize such assessments with the overarching aim of reducing the vulnerability of SMEs to flooding. This will be achieved by identifying major internal and external attributes explaining resilience capacity which is particularly important given the limited resources these enterprises have and that they tend to be primary sources of vulnerabilities in supply chain networks, generating Single Points of Failure (SPOF).

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