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On general measure repleteness and completeness

The concepts of general lattice repleteness and completeness-expressed in terms of (0,1)-valued measures-have been studied extensively in an earlier paper. The corresponding generalizations of these concepts in terms of arbitrary nonnegative measures are studied in the present work. The concepts of measure repleteness and strongly measure repleteness are given particular attention. Various relationships between these generalized concepts are obtained, mainly in the framework of measure extension/restriction. Many of the results generalize, strengthen, or extend results found in that earlier paper. Several of the applications involve topological lattices. For example, measure compactness and Borel measure compactness are special cases of measure repleteness involving topological lattices. These two subjects have received considerable attention by several topological measure theorists.