

A 'Systematic Literature Review' of Specific Types of Inventory Faced by the Management of Firms

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Abstract : This contribution regards a literature review of inventory management that is a relevant topic for the firms, due to its important use of capital with implications in firm's profitability within the complexity of a more competitive and globalized world. Firms look for small inventories in order to reduce holding costs, namely opportunity cost, warehousing and handling costs, deterioration and being out of style, but larger inventories are required by some reasons, such as customer service, ordering cost, transportation cost, supplier's payment to reduce unit costs or to take advantage of price increase in the near future, and equipment setup cost. Thus, management shall address a trade-off between small inventories and larger inventories. This literature review concerns three types of inventory (spare parts, safety stock, and vendor) whose management usually is beyond the scope of logistics. The applied methodology consisted of an online search of databases regarding scientific documents in English, namely Elsevier, Springer, Emerald, Wiley, and Taylor & Francis, but excluding books except if edited, using search engines, such as Google Scholar and B-on. The search was based on three keywords/strings (themes) which had to be included just as in the article title, suggesting themes were very relevant to the researchers. The whole search period was between 2009 and 2018 with the aim of collecting between twenty and forty studies considered relevant within each of the key words/strings specified. Documents were sorted by relevance and to prevent the exclusion of the more recent articles, based on lower quantity of citations partially due to less time to be cited in new research articles, the search period was divided into two sub-periods (2009-2015 and 2016-2018). The number of surveyed articles by theme showed a variation from 40 to 200 and the number of citations of those articles showed a wider variation from 3 to 216. Selected articles from the three themes were analyzed and the first seven of the first sub-period and the first three of the second sub-period with more citations were read in full to make a synopsis of each article. Overall, the findings show that the majority of article types were models, namely mathematical, although with different sub-types for each theme. Almost all articles suggest further studies, with some mentioning it for their own author(s), which widen the diversity of the previous research. Identified research gaps concern the use of surveys to know which are the models more used by firms, the reasons for not using the models with more performance and accuracy, and which are the satisfaction levels with the outcomes of the inventories management and its effect on the improvement of the firm's overall performance. The review ends with the limitations and contributions of the study.

Keywords : inventory management, safety stock, spare parts inventory, vendor managed inventory

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