

**Archibald, T. W.; Thomas, L. C.; Betts, J. M.; Johnston, R. B.**

**Should start-up companies be cautious? Inventory policies which maximise survival probabilities.** (English) [Zbl 1232.90264](#)

Manage. Sci. 48, No. 9, 1161-1174 (2002).

Summary: New start-up companies, which are considered to be a vital ingredient in a successful economy, have a different objective than established companies: They want to maximise their chance of long-term survival. We examine the implications for their operating decisions of this different criterion by considering an abstraction of the inventory problem faced by a start-up manufacturing company. The problem is modelled under two criteria as a Markov decision process; the characteristics of the optimal policies under the two criteria are compared. It is shown that although the start-up company should be more conservative in its component purchasing strategy than if it were a well-established company, it should not be too conservative. Nor is its strategy monotone in the amount of capital it has available. The models are extended to allow for interest on investment and inflation.

**MSC:**

[90B90](#) Case-oriented studies in operations research

[90B05](#) Inventory, storage, reservoirs

[90C40](#) Markov and semi-Markov decision processes

Cited in **10** Documents

**Keywords:**

[Markov decision processes](#); [inventory](#); [start-up firms](#)

**Full Text:** [DOI](#)