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Executive summary

The great French Enlightenment writer, historian and philosopher Voltaire (1694–1778) once eloquently stated that “uncertainty is not a pleasant condition, but certainty is absurd”. This definitely holds true in the innovation context. Innovation can be defined as a process that is fraught with uncertainty. The basic thrust of the present argument is that the potential value integral to innovation may or may not be materialized in the future. Given that the future entails uncertainty, it is reasonable to expect that uncertainty is inherent in every innovation process. Uncertainty results from the fact that, on the one hand, events in the future do not follow the course of past events, and, on the other, knowledge of the future is always incomplete. Hence, this article’s aim is to diminish lack of knowledge of the factors that create uncertainty in innovation proc-

esses. In this paper, it is asked: how does uncertainty manifest itself in the innovation process?

Based on the systematic review of 67 scientific articles and 12 monographs, this paper argues that uncertainty can be classified into eight categories which are technological uncertainty, market uncertainty, regulatory/institutional uncertainty, social/political uncertainty, acceptance/legitimacy uncertainty, managerial uncertainty, timing uncertainty and consequence uncertainty.

This paper contributes both to research and practice on innovation management. From the management point of view, the results of the systematic review of the literature can be used to identify and avoid possible bottlenecks in organizational innovation processes. This could mean, for example, that in a case where there is uncertainty concerning acceptance/legitimacy of technological innovation, there is now an awareness that managers should strive to ensure that stakeholders in the orbit of innovation should be given not only technical details of innovation but also the opportunity to discharge their concerns regarding the consequences of innovation. From a scientific point of view, the paper fills the research gap concerning issues that may relate to the failure of an innovation. Hence, the paper may be seen as valuable in an intellectual sense, because it rectifies the pro-innovation bias of innovation research. Increasing the understanding of uncertainty in respect of innovation perhaps might eventually also complicate current notions associated with successful innovation. Finally, because this paper is limited in considering uncertainty as negative for an organization’s innovation process, it would also be worthwhile, both intellectually and practically, to explore the potential positive effects of uncertainty. ■