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An International Journal  
Volume 16, 2004 - Issue 4

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# Financial bootstrapping and venture development in the software industry

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Pages 307-333 | Published online: 20 Feb 2007

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## Abstract

Access to finance has been identified as a significant constraint on the development of technology-based businesses. This article examines the financial bootstrapping strategies of venture capitalists and small firms in the software industry. The article argues that the importance of financial bootstrapping is often underestimated. The article also discusses the importance of financial bootstrapping for the development of technology-based businesses. The article concludes that financial bootstrapping is a critical factor in the success of technology-based businesses.

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appear to be considerable variations in the use of bootstrapping. Larger firms tend to make more use of bootstrapping for product development, and consider it more important than do smaller firms, who more highly value business development-related bootstrapping. Small firms are also more likely to use and value cost-reducing bootstrapping techniques, whereas larger firms make more use of the exploitation of value-chain based relationships.

Keywords: software industry entrepreneurial finance bootstrapping product development business development regional development.

## Acknowledgements

The research on which this paper is based was carried out in part with the support of the Northern Ireland Software Industry Federation and the software sector cluster group of the Northern Ireland Growth Challenge.

## Notes

1. These studies define bootstrapping to include both financial aspects, which limit, reduce or eliminate the financial outgoings of the business or provide additional financial resources without the costs and obligations of equity or debt finance, and non-financial aspects, which include the use of personal resources, such as the founder's own time and effort, on the basis of the founder's personal interest in the business. The latter aspect is often referred to as 'sweat and blood' finance, and the former as 'financial bootstrapping'.
2. It is important to note that the studies cited above are only in terms of the financial aspects of bootstrapping. For example, the studies cited above (e.g. [Gartner, 1985](#)) in their definitions of bootstrapping do not include references to the use of personal resources, such as the founder's own time and effort, on the basis of the founder's personal interest in the business. The latter aspect is often referred to as 'sweat and blood' finance, and the former as 'financial bootstrapping'.
3. Non-IC bootstrapping is defined as the use of personal resources, such as the founder's own time and effort, on the basis of the founder's personal interest in the business. The latter aspect is often referred to as 'sweat and blood' finance, and the former as 'financial bootstrapping'.

from this discussion (NISIF [2000](#)).

4. For example, in software product development, manufacturing costs are low (and often out-sourced overseas – O'Malley and O'Gorman [2001](#)), while R&D and marketing costs are increasing rapidly. Even by 1994, Microsoft was reporting R&D expenditure equivalent to 13% of revenues and marketing expenditure of 30% of revenues (Niosi [2000](#)).

5. As the experience of the rapid increase in venture capital investment in the late 1990s, and the subsequent collapse in technology markets after 2000, suggests, the US venture capital industry erred in the opposite direction and became over-exposed to technology investments.

6. The Massachussetts survey was undertaken in 1994/1995; the Northern Ireland survey was undertaken in 1996; and the smaller scale survey in South East England was undertaken in 2000.

7. These specifically fall into the category of bootstrapping represented by the acquisition of financial resources directly without incurring the cost or other obligations of conventional debt or equity instruments. As these 'soft' funding sources carry no cost of capital, they represent both an addition to the financial resource endowment of the business and a reduction in the related costs of acquiring access to those resources.

8. Equivalent data for the South East are not available on a consistent basis for this measure

9. Defined as a small scale.

10. No data for the South East sample of



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