Preface and Acknowledgments

Israel has a vital high-tech industry that has been the growth engine of the Israeli economy for more than 30 years. The industry is characterized by a distinct entrepreneurial culture, which stems from two interrelated factors: legacy and necessity. That is, it is characterized by a legacy of ingenuity, innovation, and improvisation, and a need to build a new nation and ensure its survival. The search for reasons for the success of the high-tech industry has led many to believe that there is a virtue in natural-resource poverty if it leads to engaging in deep transformation of people and nation. Starting from scratch in nation building has also led some to believe that one could run a social experiment to engineer both society and economy. It is as if "the liability of newness" is turned on its head; deficiencies turn into advantages.

The search for reasons for the Israeli high-tech industry's success must also account for its entrepreneurial culture, which is characterized by a highly motivated, skilled, and innovative workforce that has benefited from substantial government financial and institutional support for R&D and venture creation. For example, most of the world technology leaders, such as IBM, Intel, Microsoft, and Motorola, have R&D centers in Israel. The high-tech industry also benefits from a strong venture capital industry, which is any new industry's "lifeblood." Moreover, there are more Israeli technology companies traded on the NASDAQ than there are in any other country outside North America. Thus, the depth and magnitude of the Israeli high-tech industry has provided the bedrock for the foundation of its growing start-up activity.

The hype concerning Internet prospects in Israel is echoed by the *Red Herring*'s statement:

> It used to be that when you arrived in Israel and stepped off the plane, you were greeted by bright-eyed Zionists ready to share their rugged, pioneering idealism. Now when you step off a plane, you are immediately greeted by a gargantuan

sculpture of a cell phone. ("Welcome to the New Zionist Dream. Welcome to Silicon Wadi," *Red Herring*, September 2000)

The path of recent Israeli history is a story of transformation and adaptation. This is why we decided to take on the endeavor of writing this book, which presents a historical analysis of and insight into the evolution of an entrepreneurial, innovative sector in Israel. We focus on the information technology and communication (ITC) sector, and when we explore its evolution, we find that it is embedded in the country's historical legacy as depicted by its ability to achieve impressive take-off because of a focus on the global market.

We follow a genealogical framework to analyze the sector's growth that acknowledges the major role of initial social, political, and economic conditions in determining the sector's evolution. We argue that two interdependent elements—social structure on the one hand and institutional support on the other—enabled the evolution of the Israeli high-tech industry to succeed. These characteristics allowed the ITC sector to exploit the new global opportunities that opened up to those who assumed a pioneering role in developing technologies and services.

The aim of this book is to provide a comprehensive account of the evolutionary process of a modern communications technology sector in Israel through a highly innovative historical-genealogical approach. This approach enables us to trace the initial conditions under which a genealogy's founding parent firm was established. Those, in turn, affect the way firms spawn new ventures and have been shaping both the genealogy's evolutionary trajectory and its structure. This approach also provides a new lens for looking at intergenerational dynamics and sheds further light on the evolutionary dynamics of emerging industries and firms. Furthermore, by focusing on genealogical evolution, we are able to empirically trace the specific features associated with the founding processes of new ventures in terms of their birth origin along multiple generations, which influence the potency of the entire genealogy. Our genealogical approach focuses on ancestral origin and the intergenerational evolution of diverse Israeli ITC firms, and on the way that evolution unleashed forces that shaped the emergence and growth of industries and the firms' competitive advantage.

The historical evolution of the ITC sector is intertwined with those of individual entrepreneurs, the pioneers who were able to mobilize the country's unique resources, human capital, and cultural diversity. These capabilities have led many students of the Israeli high-tech industry to attribute its success to the

nature of its social networks. In this book, we take a step further in understanding the growth dynamics of the industry. We hope to provide new insights by linking the past and the present and hinting at the future. We analyze the conditions under which the industry's pioneer founders operated, and we trace their genealogical trajectory. We decipher the process of firm founding and establish that it stems from parent-progeny relations, and we provide the reader with a complete account of the dynamics of evolution. We shed light on the question that has been asked by many researchers: How does entrepreneurial legacy and culture become so tenacious that the "DNA" of founding new and innovative start-ups leads to sustained growth over generations?

We also address questions of where new dynamic industries come from and what determines the early success of innovators in them. These questions are critical in light of the tremendous investments that such industries draw and the risk and uncertainty involved. The significance of the genealogical approach stems from its ability to facilitate the tracing of industrial evolution from early emergence to maturity. We hope that an understanding of the mechanisms and dynamics of genealogical emergence of the Israeli high-tech industry will help entrepreneurs, policy makers, and managers in the pursuit of starting and growing new technological industries.

This research was supported by the Israel Science Foundation (grant no. 1545/08). We acknowledge the financial support received from the following organizations: the Henry Crown Institute of Business Research at Tel Aviv University, the School of Business and Research Authority of the College of Management Academic Studies, and the William R. Berkley Center for Entrepreneurial Studies at the Stern School of Business. We are grateful for the insightful comments of Diane Burton and Brent Goldfarb. We also benefited from the comments of Joel Baum, Uri Bialer, John Carroll, Gino Cattani, Christina Fang, Moshe Farjoun, Avi Fiegenbaum, Steven Klepper, Joe Lampel, Robert Salomon, Rosemarie Ziedonis, and Ezra Zuckerman, who read various versions of a paper we had written as a part of this research project. We also thank our dedicated students who helped collect the data and construct the genealogies: Alon Gazit, Neta Kamin, Oren Ne'eman, Ayelet Noff, Snait Raz, Tali Stierler, Gidon Zundelevich, and Shir Zur. Without them, it would have been very difficult to complete this project. We extend our profound gratitude to the founders of the Israeli high-tech industry and the generations of women and men who are following their vision. Writing this book would not be possible without the generosity and guidance of many entrepreneurs and mangers that are building and sustaining the Israel high-tech industry. During our numerous encounters

with them we were exposed to their knowledge and their willingness to share it. We highly appreciate their help in providing us a window into their fascinating world. Finally, we thank Rena Henderson for copy-editing the manuscript; Julia Kim for her dedicated and superb technical assistance; and our editor, Margo Beth Fleming, without whose encouragement and support this project would not have come to fruition.