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The rise of the entrepreneurial economy and the future of dynamic capitalism

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ABSTRACT

A major shift in the organization of developed economies has been taking place: away from what has been characterized as the managed economy towards the entrepreneurial economy, or what Kirchhoff (1994) has called dynamic capitalism. However, the factors underlying this observed shift have not been identified in a systematic manner. The purpose of this paper is to analyze the main factors leading to this shift and implications for public policy. In particular, we find that technological change is a fundamental catalyst underlying the shift from the managed to the entrepreneurial economy. However, it was not just technological change but rather involved a multitude of factors, ranging from the demise of the communist system, increased globalization, corporate reorganization, increased knowledge production and higher levels of prosperity. Recognition of the causes of the shift from the managed to the entrepreneurial economy implies a shift in public policy directions. Rather than to focus directly and exclusively on promoting new firms and small firms, it may be that the current approach to entrepreneurship policy is misguided. The priority should not be on entrepreneurship policy but rather a more pervasive and encompassing approach, policy consistent with an entrepreneurial economy, in order to foster dynamic capitalism.

1. Introduction

It has been nearly a quarter of a century since Bruce Kirchhoff's (1989, p. 161) prescient analysis of the shift towards an entrepreneurial economy: "There is growing interest in dynamic modeling of capitalism as recent experience has demonstrated the importance of innovation in shaping the structure and growth rate of capitalist nations." As Kirchhoff suggested, for a long time developed economies could be characterized as what Audretsch and Thurik (2001) subsequently termed a managed economy. The inventions of the division of labor, economies of scale and scope, paid labor and the fine-tuned cooperation between man and machine following the industrial revolution led to the rise of the large multinational enterprise. This enterprise was clearly the dominant form of organization until the 1980s. Statistical evidence, gathered from both Europe and North America, points towards the increasing presence and role of large enterprises in the economy in this period (Caves, 1982; Brock and Evans, 1989; Chandler, 1990). This was the era of mass production, when economies of scale and scope seemed to be the decisive factor in dictating efficiency. This was the world described by Galbraith (1956) in his theory of countervailing power, where the power of 'big business' was balanced by that of 'big labor' and 'big government'. Stability, continuity and homogeneity were the cornerstones of the managed economy (Audretsch and Thurik, 2001). Rising levels of prosperity absorbed the goods and services created by the typical multinational enterprise in this managed economy.

Before the fall of the Berlin Wall and the ensuing wave of globalization, the conventional wisdom predicted that small firms would wither away. In particular, with the rise of mainframe computing, it was predicted that this technology would be something of a final blow for small-scale operations (Audretsch, 2007b). Small firms were viewed as something Western countries needed to ensure decentralized decision making, obtained at the unfortunate cost of efficiency. Studies from the United States in the 1960s and 1970s revealed that small businesses produced at lower levels of efficiency than larger firms (Pratten, 1971; Weiss, 1976). Small firms were also paying lower salaries: empirical evidence from both North America and Europe found a systematic and positive relationship between employee compensation and firm size (Brown and Medoff, 1989). Based on R&D measures, small businesses accounted for only a small amount of innovative activity (Acs

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and Audretsch, 1990; Chandler, 1990; Scherer, 1991; Audretsch, 1995). The relative importance of small firms and self-employment had been declining over time in both North America and Europe (Scherer, 1991; Wennekers et al., 2010), in a sense fulfilling what Schumpeter (1942) had already predicted in the 1940s.

However, this managed economy has been replaced by the entrepreneurial economy. The managed economy is defined as an economy where economic performance is positively related to firm size, scale economies and routinized production and innovation. By contrast, the entrepreneurial economy is defined as an economy where economic performance is related to distributed innovation and the emergence and growth of innovative ventures (Kirchhoff, 1994; Audretsch and Thurik, 2000, 2001). This replacement did not just happen in a few regions, such as Silicon Valley and the Research Triangle in North Carolina, or a single country, such as the United States, but rather in most developed countries (Drucker, 1985; Baumol, 2002; Wennekers et al., 2005; Acs, 2006; Baumol et al., 2007; Audretsch, 2007b; The Economist, 2010a). Whereas the managed economy was characterized by a divergence of institutions and policy approaches to the underlying economic problem of that era, maximizing the efficiency and productivity of large scale production while minimizing any negative externalities from a concentration of economic power, the entrepreneurial economy is characterized by a convergence of institutions and policy approaches designed to facilitate the creation and commercialization of knowledge through entrepreneurial activity.

The recognition of the emergence of the entrepreneurial economy helped to trigger policy debates to promote entrepreneurship through "entrepreneurship policy". Governments, spanning the local, city, regional, national and even supranational levels, such as the EU, began a vigorous and targeted effort to spur the startup of firms and subsequent growth and survival.

This shift towards an entrepreneurial economy involves a move towards a more dynamic form of capitalism (Kirchhoff, 1994). Although Audretsch and Thurik (2000, 2001) identify how the manifestations and characteristics of the managed economy differ from those characterizing the entrepreneurial economy, the exact reasons triggering the shift from the managed to the entrepreneurial economy remain scattered (Audretsch, 2007b; Baumol et al., 2007). The purpose of the present paper is to explain why the shift from the managed to the entrepreneurial economy has taken place in the framework of a model. Also, some implications for public policy are given. In our model technological change is the crucial element of the explanation. However, as we will emphasize, the impact of technological change in leading to a shift from the managed to the entrepreneurial economy has been imbedded in a myriad of supporting factors, including increased globalization, corporate reorganization, increased knowledge production and higher levels of prosperity.

2. A model of the shift to the entrepreneurial economy

The present paper follows the tradition of Kirchhoff (1994) and his focus on the key role that entrepreneurship plays in generating innovation and economic growth by explicitly identifying those factors associated with the rise of information and communication technologies (ICT) influencing the shift from the managed to the entrepreneurial economy. While information and communication technologies can have different meanings for various contexts, the definition commonly applied by the OECD is useful. The OECD considers the ICT sector to consist of "a combination of manufacturing and services industries that capture, transmit and display data and information electronically" (OECD, 2002).

Our emphasis is on the explanation of why the rise of the entrepreneurial economy occurred, given that it took place around the late 1980s/early 1990s (Wennekers et al., 2010). Hence, we will not deal with later major developments like the rise of China and the multiple crises of 2008 onwards. Fig. 1 summarizes the links identified and analyzed in this paper. The starting point for this shift was the shock of the ICT revolution emerging in the 1970s (Castells, 1996), which not only triggered numerous intermediate changes but also ultimately led to the entrepreneurial economy. The numbers associated with the arrows refer to the corresponding sections in this paper that address each link explaining the shift from the managed to the entrepreneurial economy.

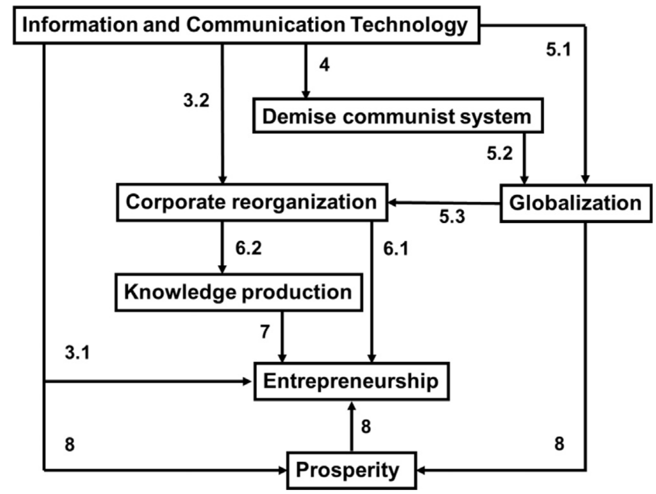

Fig. 1. Factors underlying the shift to the entrepreneurial economy. The arrow numbers refer to the sections below.

ICT can be considered a general-purpose technology (Helpman, 1998; Jorgenson, 2001). The introduction of technologies of that type has a deep impact on industrial organization. This is the subject of Section 3 of the present paper. In Section 4, we show that these introductions can even lead to major changes in the worldwide political configuration.

The character of this globalization wave created new restrictions and opportunities for multinational corporations. Section 5 addresses the causes and consequences of globalization as it manifested itself over the last two decades. Section 6 concerns the new business model of large American and European corporations that resulted from the pressures of the ICT revolution and globalization. This new model was the result not only of the distance-destroying capacity of ICT but also of the political opportunity and determination to deregulate world trade (Thurow, 2002).

Making and using knowledge is the most important consequence of the decline of physical capital as the source of competitive advantage of developed industrialized economies (Archibugi and Lundvall, 2001; Foray, 2004). Knowledge production and its transformation into economic value are addressed in Section 7.

The final role of entrepreneurship results from the massive spurt in economic growth resulting from the introduction of ICT, the expansion of participation in the global economy (i.e., the absorption of the labor reserve of the emerging economies) and the reallocation of economic activities. The ensuing unprecedented high levels of economic prosperity in the formerly industrialized countries led to demand characteristics favorable to an entrepreneurial organizational structure. This is the subject of Section 8.

Our last section provides implications for public policy. The traditional approach to entrepreneurship policy has a primary and exclusive focus on promoting new firms and small firms. However, considering the forces underlying the shift away from the managed economy and the emergence of the entrepreneurial economy suggests that a considerably broader approach may be more effective, and in particular, one that re-orients all institutions towards