Chapter 1
Introduction: Europe's Innovation Emergency

Abstract The European Union suffers from an innovation deficit, which must be remedied if the EU is to improve the quality of life of its citizens and remain competitive in the global marketplace. In order to do so, more productive entrepreneurship is required. We analyze how Europe's institutional framework conditions could become more supportive of entrepreneurship and innovation, and outline a reform strategy to achieve this objective. To be viable, the strategy emphasizes the large cross-country differences across the union. Each EU member state has evolved its particular bundle of institutions, many of which are complementary to one another. If these complexities are not acknowledged, well-intended reforms may become unpredictable or even detrimental to entrepreneurship and economic development.

Keywords Deregulation · Economic growth · Entrepreneurship · European Union · Innovation · Institutional complementarity · Institutional reform · R&D · Varieties of capitalism

In *The Moral Consequences of Economic Growth* from 2005, Harvard professor Benjamin Friedman has a message that seems even more pertinent today than when the book was first published: economic stagnation is harmful for a society's moral and democratic values. Dire economic times and a lack of economic opportunities contribute to political populism of all colors. Friedman's (2005) message is a starting point of this volume, and makes what has been labeled "Europe's Growth Challenge" (Åslund and Djankov 2017) seem even more acute. In what follows, we shall argue that innovation is key to improving the prospects for inclusive and encompassing growth across Europe.

Today, the European Union suffers from an acknowledged lack of innovation. A flagship initiative of the Union's well-known 2020 strategy was the so-called "Innovation Union", launched with a tone of urgency in 2010: "We need to do much better at turning our research into new and better services and products if we

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are to remain competitive in the global marketplace and improve the quality of life in Europe. We are facing a situation of 'innovation emergency'" (European Commission 2015).[1] In spite of this urgent tone, little has been accomplished in the intervening years. The Union's own composite innovation index, measured by the European Innovation Scoreboard, has only increased modestly since the strategy was formulated (European Union 2016; see also Fig. A.1 in the Appendix).

Increasing innovation therefore remains an imperative, but the way to achieve it is a larger issue. In our view, the common concept that increased R&D spending is the tool that promotes innovation exposes an overly mechanistic view of how the economy functions. New knowledge and inventions are only the first steps in the innovation and commercialization process, and for increased R&D to translate into economic growth, entrepreneurs must exploit the new knowledge and inventions by introducing new methods of production or new products into the marketplace (Bhidé 2008). Hence, if Europeans are to benefit from innovation and investment in knowledge and capital to the greatest extent possible, their economies must become more entrepreneurial (Acs et al. 2009; Baumol 2010).

At first glance, the means of achieving this goal are clear from an economist's perspective. At least since Baumol (1990), there has been a recognition that entrepreneurship and innovation are shaped by a society's rules of the game—its institutional environment (Aldrich 2011; Estrin et al. 2013). Entrepreneurs and other actors in the so-called entrepreneurial ecosystem or skill structure are crucially dependent on this environment. In this study, we seek to determine how Europe's institutional framework conditions could become more supportive of entrepreneurship and innovation, and outline a reform strategy to achieve this objective.

When political and economic institutions are structured to reward productive entrepreneurial activities (such as starting and expanding firms that provide goods and services that people want) at the expense of non-productive and even destructive activities (such as rent seeking or excessive lobbying), then many researchers argue that more innovation and economic growth will occur, at least in the long run (Mueller and Thomas 2000; Hwang and Powell 2005; Acs et al. 2008; Urbano and Alvarez 2014). Thus, we will focus on economic institutions that have previously been identified as particularly relevant for enabling productive entrepreneurship (Hall and Jones 1999; Béchard and Grégoire 2005; Henrekson and Johansson 2009; Bjørnskov and Foss 2013). In summary, we propose institutional reforms pertaining to nine broad areas:

(i) *The rule of law and protection of property rights*. These are the most fundamental rules of the economic system, and all member states must ensure that they are stable and secure. With regard to intellectual property rights, an important balance must be struck between the interests of investors and the need for knowledge diffusion.

[1] See http://ec.europa.eu/research/innovation-union/index_en.cfm?pg=why.

(ii) *Taxation*. Many types of taxes affect entrepreneurial decisions. While tax rates should generally be low or moderate, policy makers should strive for simplicity rather than (targeted) concessions, and for a high degree of tax neutrality across owner categories, sources of finance and different types of economic activities.

(iii) *Savings, capital and finance*. These institutions should be reformed to support increased private wealth formation and the creation of a dynamic venture capital industry, since these are crucial sources of financing, particularly in the early stages of entrepreneurial projects. As a large share of savings in the economy currently goes into pension funds, it would be helpful to allow at least part of these assets to be invested in entrepreneurial firms and not just in real estate, public stock and bonds.

(iv) *Labor markets and social security*. Institutions should facilitate the recruitment of workers with the necessary competencies and reforms should strive to remove onerous labor market regulations. Overly stringent employment regulations may also spur actors in the entrepreneurial ecosystem to devise arrangements that circumvent the regulations, ultimately resulting in the emergence of an underground economy. Furthermore, incentives are best served by government income insurance systems that encourage activation, mobility and risk-taking. Social security institutions should enable the portability of tenure rights and pension plans as well as a full decoupling of health insurance from the current employer, to avoid punishing those individuals who leave tenured employment positions to pursue entrepreneurial projects.

(v) *Regulation of goods and service markets*. Preventing market-leading incumbents from unduly exploiting their dominant market positions is essential. Lowered entry barriers are key to this reform area, as is the opening of those parts of the economy that are almost invariably closed to private production, such as healthcare and schooling. Within a well-designed system of public financing, sizeable private production and contestability should be encouraged.

(vi) *Bankruptcy law and insolvency regulation*. Entrepreneurial failure provides valuable information to other economic actors. Failed ventures must be discontinued so that their resources can be redirected to more productive uses. Bankruptcy law and insolvency regulation should therefore be relatively generous and allow for a "second chance". However, filing for bankruptcy should not be too easy, as that encourages undue exploitation and destructive entrepreneurship, harming creditors and the rest of the community.

(vii) *R&D, commercialization and knowledge spillovers*. R&D spending is only an input; for it to translate into economic growth, entrepreneurs must exploit the inventions and created knowledge by introducing new methods of production or new products into the marketplace. Therefore, instead of focusing on quantitative spending goals and targeted R&D support, policy should more generally make it easier to start and grow businesses.

(viii) *Incentives for human capital investment*. Policy should strive to create positive incentives for the individual to acquire knowledge and skills, whether through formal or workplace education. Incentives must also be developed by the education system itself to supply such opportunities. In this respect, the U.S. university system seems more responsive to the economic needs of society than European university systems. The U.S. system could be an important role model, as long as due attention is paid to European concerns regarding accessibility and equity.

(ix) *Informal institutions*. Informal institutions affect the workings of formal institutions but may also be important in their own right for fostering entrepreneurship. Norms and habits that facilitate cooperation and impersonal exchange must be strengthened, particularly with regard to trust. High-trust environments have been found to nurture market entry, enterprise growth and productive entrepreneurship. The extent to which policy can influence this development is nevertheless doubtful.

As our summary of the results suggests, our overall message is that policymakers in member states and at the centralized EU level should institute entrepreneurship-friendly institutions largely by undertaking economic policy liberalization. Ultimately, that was the original intent of much of the European Union project and the promotion of the so-called four freedoms of its single market (of goods, workers, services and capital). Convincing arguments have also been put forth that the Union's procedural logic will inherently push the institutional setups of member states in a liberalizing direction (Scharpf 2010).[2] However, the manner in which countries undertake reforms is fundamentally important.

A best-practice reform approach would be to identify a country (whether a member or non-member) that appears to be performing well in a particular institutional dimension and to promote and adopt this institution in other countries (Rodrik 2008). Indeed, this type of approach has been extensively promoted by organizations such as the World Bank and the IMF, especially in developing countries. This is problematic for several reasons.

First, first-order economic principles—such as the protection of property and contract enforcement—do not map onto unique policy packages; there is no unique correspondence between well-functioning institutions and the form that such institutions take (Berkowitz et al. 2003; Djankov et al. 2003; Evans 2004; Mukand and Rodrik 2005; Dixit 2007; Rodrik 2007). Therefore, reformers must creatively package those principles into institutional designs that are sensitive to local constraints and take advantage of local opportunities.

[2]As explained at length by Scharpf (2010), a substantial asymmetry exists between the clout/scope of the rulings of the European Court of Justice (ECJ)—automatically binding throughout the entire EU—and the high consensus requirements of political action at the European level. It is difficult for member states to protect a national regulation or policy that allegedly impedes any of the four freedoms.

Second, not all institutions that affect entrepreneurial activity can be influenced through policy measures even in the long run. This is true for many informal institutions, such as trust and reputation (Greif 2005) or the way people speak of businessmen and entrepreneurs (McCloskey 2016). Affecting these institutions by means of policy may only be possible through indirect means, as these institutions often only change incrementally over time and/or through bottom-up processes that may be rapid but difficult to anticipate and engineer.

The sharp difference in the initial conditions of member states is a third reason why the first-best approach to institutional reform may become problematic. Countries around the world obviously differ greatly in their capacity to achieve high standards of living for their citizens. In the European Union, GDP per capita in the richest member countries (Ireland and the Netherlands) is two to three times higher than that in the poorest EU countries (Romania and Bulgaria). On a deeper level, each of the Union's 28 member countries has evolved its particular bundle of institutions, many of which are complementary to one another. According to the *varieties of capitalism* (VoC) perspective (Hall and Soskice 2001), institutional complementarities mean that one cannot simply adopt institutions that work well in another country and expect them to work in the same way in a different institutional context. Instead, a prudent and viable reform approach must acknowledge these complexities, or change might become unpredictable or even detrimental to entrepreneurship and economic development. This challenge may explain, for example, why European attempts to imitate policies aimed at stimulating venture capital have (thus far) been unsuccessful (European Commission 2011, 2013). Reforms that fail to take institutional complementarities into account risk rendering the overall institutional system less efficient (Braunerhjelm and Henrekson 2016; Rodrik 2008).

The use of the VoC perspective also allows us to highlight the limitations of our analysis. For example, institutional complementarities are not necessarily confined by the borders of national polities but can work across borders (as in the case of the EU itself) as well as within them. Concerning the latter, institutions at the local level are certainly important. Granted, they commonly evolve and operate against the backdrop of the national institutional framework, particularly in non-federal states, but local initiatives and policies have plenty of room to influence the local entrepreneurial climate in any country.[3] While such considerations are important to recognize, they are beyond the scope of this study, which instead focuses on the national (and supranational) level of political reform.[4]

These problems do not reduce the need for an institutional climate in Europe that is more conducive to entrepreneurship, and they should not make us lose sight of policy liberalization as a long-term goal for the promotion of entrepreneurship and

[3]This pertains to both formal institutions, such as taxes (e.g., Haughwout et al. 2004) and regulations (Tannenwald 1997), and to informal institutions, such as the attitudes and social legitimacy derived from entrepreneurship (Elert 2014).

[4]Regarding local institutions that foster entrepreneurship, the reader is referred to Andersson and Henrekson (2015), and Stam and Bosma (2015).

innovation in Europe. Properly acknowledged, these issues can inspire humility and hope regarding what can be achieved in both the short and long terms. They should lead to the recognition that the reform journeys that countries undertake may look very different—more or less bumpy, long and winding, etc.—even though they ought to lead in the same basic direction (if not to the same endpoint). It is beyond the scope of this study to develop a detailed reform roadmap for each EU country, let alone account for regional differences within these countries. Therefore, we seek to identify the general direction that should be taken while emphasizing those differences between the EU countries that must be reckoned with by those assigned to suggest or implement specific reform packages.

The remainder of the study is structured as follows. In Chap. 2, we define and discuss what we mean by the type of entrepreneurship that European countries should strive towards in order to promote innovation. We also identify the actors/functions/competencies in the economy that, in addition to the entrepreneur, are relevant to yielding the desired results. Furthermore, we discuss the VoC approach and how it informs our analysis. In Chap. 3, we draw on these insights and discuss the institutional prerequisites for the development of a vibrant entrepreneurial economy or entrepreneurial ecosystem. Our analysis suggests how institutional framework conditions ought to be improved and how such policy changes will depend on countries' differing starting conditions and institutional complementarities. Finally, in Chap. 4, we provide a summary of the argument and present our main conclusions.

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