Chapter 6
The German Case: A Cluster Under Threat

Abstract  The German photovoltaic cluster is a prime example of a rapidly grown cluster driven by Feed-in Tariffs (FiTs) and special funding programmes. The cluster was helped by cross-fertilization and mobility between chemical and semiconductor industry clusters in the region, and a strong regional tradition of mechanical engineering as well as a strong R&D culture. Stakeholder interviews and survey perceptions provided particular insights into the external threat of increasing competition from China, as cheap imports threatened local production, and some companies started migrating to low labour-cost countries, taking with them cutting edge know-how developed in the German cluster. This external threat coincided with an internal threat from the rapid reduction in FiTs, which disproportionately penalised those SMEs at the forefront of innovation. Managers felt that they did not have the necessary influence with policymakers to make the rapid and radical changes required to sustain SMEs, and to facilitate faster innovation in response to the external threat. This chapter outlines this and other perceived barriers to the development of the cluster, and their implications.

6.1 Background

Geographical Location

The Central German photovoltaic cluster is located in the triangle bordered by Saxony, Thuringia and Saxony-Anhalt, with a regional tradition of investment in engineering and technology (Fig. 6.1).
The Field Study

The field studies were conducted in 2007 and then again between October 2009 and October 2011, and a follow-up study was run in 2013. Semi-structured interviews were carried out with senior managers, transcribed and thematically coded until the stage of saturation (no new issues). A questionnaire was circulated (using an online tool) to validate the issues emerging from the interviews. This was done between November 2010 and January 2011, with a return rate of 23%. More than half of the survey respondents were micro and small enterprises (<50 employees), almost one third medium-sized (<250 employees) and less than one fifth large companies (>250 employees) (Fig. 6.2).

Fig. 6.1  Maps of Germany and Central Germany. Adapted by Roman Siegert from originals by David Liuzzi and reproduced under a Creative Commons Share and Share-Alike Licence from Wikipedia. Available on: https://upload.wikimedia.org/wikipedia/commons/e/e3/Karte_Deutschland.svg

Fig. 6.2  Size of enterprises—survey respondents (The definition of the size of an enterprise by staff number is based on Article 2 of the EU recommendation 2003/361. According to this, the staff headcount is the main criterion for size, however further criteria such as turnover or balance sheet total also play an important role. In the survey and the interviews, we only asked respondents for the staff number of their company)