

Institutions still in
guild hands.)the
arrival of



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institutions within this national setting. Third, we give a short overview of the city's economic performance in the 1980s and 1990s. Fourth, we shall describe the challenges of the 1980s and the specific responses by firms and supporting institutions, followed by an analysis of the challenges that pressured this regime in the 1990s. Finally, we shall examine the outcome of this transformation processes; in particular, whether the DQP regime had to be abandoned or not. The following account makes use of in-depth interviews carried out by the author and H. Farrell with firms and institutions concerned with the machine-tool industry in Stuttgart. In order to respect the confidentiality of the firms, citations and quotations from these interviews are referred to in the text by the codes: BW-F-

01/02/03/04/05/06/07/08/10/12/14/18; and BW-I-01/02/04/05.

Historical origins of the machinery industry in Stuttgart Until the mid-19th century Württemberg was a backward rural region, lacking the natural resources important to most early industrialization and embedded in agricultural protectionism. Important in achieving change was Ferdinand Steinbeis (Marquardt 1985). Like many of the early entrepreneurs of the region, Steinbeis was a Schwabian Pietist - a form of Protestantism which stressed independence (Bechtle and Lang 1999). As president of the new Central Office for Commerce and Trade, founded in 1848, Steinbeis introduced a new industrial code in 1862, which abolished the guilds. Central regulation of the code made it possible to establish more favourable conditions for firms.

(The equivalent organization of trade in neighbouring Baden was still in guild hands.) The arrival of the railway in 1840 reduced the isolation of

Württemberg and Stuttgart and opened a huge market for machines.

Imported locomotives had to be adapted for the mountainous environment of Stuttgart and other parts of the southwestern German territories. Firms emerged to produce machine tools for the construction of both locomotives and spinning machines.

Steinbeis' ambitious programmes helped to diffuse knowledge of machine construction throughout the region. The Central Office established a workshop where foreign machines were made available for study. Fairs were organized, and the Landesgewerbeamt (LGA), which still acts today as an organization of the Land government and carries out programmes for the support of SMEs, helped to settle firms which specialized in machinery construction (Semlinger 1993). Technical