11 Standardization: The Evolution of Institutions versus Government Intervention*

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1 INTRODUCTION

Standards of compatibility have gained considerable attention in recent economic modelling in industrial economics (for example, Gilbert (ed.), 1992) as well as in public policy (see Commission of the European Communities, 1991). Within large technical systems (e.g. railway systems, telecommunications systems) the complicated procedure of standard-setting has gained particular attention (e.g. Weinkopf, 1993, Genschel and Werle, 1992). Hierarchical control of standard-setting within network monopolies is considered no longer appropriate due to the recent trend towards vertical disintegration, deregulation and internationalization (for further discussion, see Knieps, 1993). As a consequence of the growing number of interfaces between decentralized subsystems, alternative external institutions, in particular committees, markets and regulatory commissions, play an increasing role within the standardization processes.

The aim of this paper is to analyze the role of competition among standard institutions as an alternative to the design of an ‘ideal’ standard institution. For this purpose it seems to be of particular importance that the chosen case studies (telecommunications and railway systems) point out the importance of variety and search for new solutions which can most successfully be found by a variety of competing institutions. Moreover, the question arises whether common rules with respect to standard-setting should be designed and enforced by regulatory authorities in order to harmonize the competition process between standard institutions.

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In section 2 the increasing trend towards committee-based standardization procedures in telecommunications and railway systems is demonstrated. Actual competition among committees, entry of new committees, division of labour and co-operation between committees, mergers of committees may arise to solve pure co-ordination problems as well as possible conflicts of interest, inherent in standardization processes. As one corner-solution the independent actions of market participants may occur.

The next section assesses whether committee-based standardization procedures should be left unregulated or be sustained by regulatory authorities. Government interference can encompass different modes, among others the application of common rules to all standardization bodies and the requirement of transparent and nondiscriminatory standards (as proposed by Commission of the European Communities, 1991: C 20/15, C 20/10).

In section 3.1 the question is analyzed whether the design and enforcement of common rules for committees by government regulation can be recommended. It will be argued that the enforcement of common rules to all standardization bodies might distort incentives to collective action by a committee. This may lead to an inferior non-co-operative production of standards. Co-ordination of different standardization bodies including the support of co-operation, seems also superfluous. If the cost duplication effect is larger than the heterogeneity advantages of different committees, then it is likely that mergers of committees will follow.

In spite of the recent trend towards vertical disintegration, deregulation and internationalization large technical systems may entail parts, where the incumbent carriers are able to disturb the process of competition among standard committees, for example by their ownership of railroad tracks. It is argued in section 3.2 that, nevertheless, government agencies should refrain from interference into the standard-setting process. Neither active standard-setting nor the design and enforcement of rules to market power biased committee procedures can be recommended. Instead, remaining market power in large technical systems should be directly disciplined. Examples could be the abolishment of legal entry barriers to telecommunication networks or access-regulation of owners of railroad tracks.