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Abhandlungen

Alexander Donges and Felix Selgert: Patent Law and Innovation in Europe during the Industrial Revolution

Abstract: Human capital, access to markets, and innovation-friendly institutions were important preconditions for the acceleration of technological change during the industrial revolution. In this context, the recent literature discusses the role of patents. Given their dual nature, patents may have either stimulated innovation through the creation of financial incentives for inventors or they may have hampered innovation, because they created monopolies that restricted the free flow of knowledge. For this reason, the overall effects of patents on innovation and, eventually, long-run economic growth are not clear. In order to develop a better understanding of the determinants of innovation, this special issue of the Economic History Yearbook therefore focuses on the causes and consequences of patent laws and patent law reforms in the nineteenth and early twentieth century in different European countries.

JEL-Codes: K 11, N 43, N 73, O 14, O 3

Keywords: Innovation, Intellectual Property, Patents, Patent Law, Technological Change, Innovation, geistiges Eigentum, Patente, Patentrecht, technologischer Wandel

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Sean Bottomley: Patents, Invention and Democracy in Britain and the United States to 1852

Abstract: This paper surveys the American and British patent systems in the period prior to the latter's reform in 1852 and coinciding with the period of the first industrial revolution. It has been suggested that the British system's archaic application procedure, extortionately high fees and hostile courts were indicative of an oligarchic socio-political system that purposefully

sought to restrict access to patent protection, as was apparently typical across Europe. Conversely, the American system was an open and democratic one, intended to provide patent protection to as many sections of society as possible. This paper argues for a less stylized comparison. British courts were not so hostile to patents (and patentees) as has been commonly supposed. Neither was it so difficult to obtain patent protection: for all its faults, the evidence that the British patent system was designed to restrict access to its provisions is nugatory. Consequently, explanations for America's technological catch-up and eventual supplantation of Britain and Europe as global technological leader cannot invoke 'superior' patent institutions as a contributory factor.

JEL-Codes: N 40, O 30, O 43

Keywords: patent institutions, technological development, Patentsysteme, technologische Entwicklung

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Gabriel Galvez-Behar: The Patent System during the French Industrial Revolution: Institutional Change and Economic Effects

Abstract: The influence of the patent system on the economic performance of Western countries during the Industrial Revolution is an important but difficult question to address. With the United Kingdom and the United States, France was one of the first countries to adopt a modern patent legislation in 1791. The aim of this paper is to understand the paradox of such a system, which was based on a democratic and natural-right conception of invention but turned out to be restrictive. It analyses the legal framework and its evolution from 1791 to the late 1850s and reveals its contradictory aspects: a natural right inspiration vs a restrictive access due to the cost of the patent. It shows how the 1844 Patent Act reform did not end the criticism of the French patent system. Then, in a second part, it considers the diffusion of patents in time, in different regions and industries and stresses the heterogeneity of the patent system.

JEL Codes: N 73, O 14, O 34

Keywords: innovation, patent system, France, industrial revolution, Innovationen, Patentsystem, Frankreich, Industrielle Revolution

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change in historical perspective”, *Management and Organizational History* (2017, with R. Daniel Wadhvani, Joris Mercelis and Anna Guagnini).

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Alexander Donges and Felix Selgert: Do Legal Differences Matter? A Comparison of German Patent Law Regimes before 1877

Abstract: In this article, we give an overview of the differences in German patent legislations between 1815 and 1876. German patent laws differed in particular with regard to the application and approval system, the treatment of foreign applicants, and patent fees. Differences in the former two categories provide an explanation why the number of patents was considerably lower in Prussia than in other states. While the number of Prussian patents per capita almost stagnated between 1840 and 1872, it increased in Baden, Bavaria and Saxony. Formal differences in patent law do not fully explain this pattern, but Prussian patent policy does. The Prussian patent authority set high barriers to get a patent by applying a thorough technical examination and a strict definition of novelty. Furthermore, we show that states using a registration system granted a considerably higher number of patents than states with technical examinations.

JEL-Codes: D 2, K 11, L 51, N 0, O 14

Keywords: innovation, intellectual property, patents, patent law, technological change, Innovation, geistiges Eigentum, Patente, Patentrecht, Technologischer Wandel

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Alessandro Nuvolari and Michelangelo Vasta: Patenting the *Risorgimento*: Economic Integration and the Formation of the Italian Patent System (1855–1872)

Abstract: In 1864, the patent law of the Kingdom of Sardinia was extended to the newly created Kingdom of Italy. In this paper, on the basis of a new dataset containing all Italian patents granted over the period 1855-1872, we examine the formative years of this crucial institutional change. Firstly, we map the characteristics of the inventors before and after the 1864 reform. In particular, we look at their nationality and geographical distribution within the country, the technological fields in which they were active, the intensity of use of the system (sporadic versus “systematic” patentees), and their investments in patent protection (measured in terms of the fees they were paying). We find that the reform of the patent system prompted a reconfiguration of the geographical structure of Italian inventive activity, producing an increasing participation of the inventors of the other pre-unitary states, and, at the same time, becoming more attractive for inventors on a large international scale. This can be interpreted as a sign of an effective integration policy, at least in this specific domain of government activity.

JEL-Codes: N 73, O 31, O 34

Keywords: patents, Risorgimento, innovation, Italy, Patente, Risorgimento, Innovation, Italien

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David E. Andersson and Fredrik Tell: From Fighting Monopolies to Promoting Industry: Patent Laws and Innovation in Sweden 1819–1914

Abstract: In this essay, we trace the evolution of four different patent laws in Sweden; from the first Swedish law of *privilegia exclusiva* in 1819 to the country becoming only the third country in the world to introduce novelty searches into the law of 1884. We discuss the ensuing contemporary public debates surrounding new proposals for legislation, as well as discernible effects of new patent laws. From being mainly a question about the “tyranny of monopolies” in the early laws to being one of “life and death for Swedish industry” in the subsequent laws, we show how changes in patent legislation resulted in three different types of innovation; technological, market and organizational. The results show that although the early laws implied severe litigation problems and considerably shorter patent terms, an early market for technology emerged as legislation had clearly established that intellectual property could be sold, bought and inherited. Concurrently the law of 1856 created a market for patenting services and patent agencies by requiring the use of Swedish agents by foreign patentees. Finally, foreign patenting increased as restrictions on patentees being non-Swedish citizens were gradually phased out.

JEL Codes: O 34, O 38, O 31, O 14, O 43

Keywords: patent laws, innovation, markets for technology, patent agencies, Sweden, Patentgesetze, Innovation, Märkte für Technologie, Patentagenten, Schweden

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Bjørn L. Basberg: Seeking International Coordination: The Norwegian Patent Law of 1885

Abstract: During the 1870s and 80s many countries revised their national patent laws. This was also a period when international co-operation was intensified to reach an agreement on patent legislation. It culminated in the Paris Patent Convention of 1880, leading to an increased harmonization of the various national patent laws. In Norway the revision of the patent law was set in motion in the 1870s, culminating in a new law in 1885. The paper analyses this process, and in particular how it related to legislative work that went on abroad.

JEL-Codes: K 49, N 63, O 25, O 30, O 31, O 38

Keywords: Patent history, patent legislation, patent convention, international cooperation, the Second Industrial Revolution, Patentgesetzgebung, Patentkonvention, internationale Kooperation, Zweite Industrielle Revolution

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Peter Scott and Anna Spadavecchia: Fundamental Patents, National Intellectual Property Regimes, and the Development of New Industries in Britain and America during the Second Industrial Revolution

Abstract: Several “new” industries of the second industrial revolution were characterised by one, or few, “fundamental” patents, without which manufacture of a viable product was not practicable. The degree of monopoly control that such patents conveyed was mediated by national socio-legal regimes, encompassing both patent law and its interpretation and enforcement. Using four case studies (two for the UK – a low anti-trust environment, and two for the USA – a high anti-trust environment) we show that fundamental patents were major determinants of monopoly power, industry structure, barriers to competition, and consumer prices. Impacts could extend beyond the life of the patents, owing to first mover advantages and path-dependent processes. Meanwhile national socio-legal environments, the nature of the fundamental patents, the strategies of the patent owners, and the nature of the specific product technology could have important (and sometimes unforeseen) consequences.

JEL-Codes: N 70, O 31, O 32, O 33, O 34, O 38

Keywords: fundamental patents, barriers to competition, anti-trust, intellectual property, patent regulation, grundlegende Patente, Wettbewerbsbarrieren, Wettbewerbspolitik, geistiges Eigentum, Patentgesetzgebung

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Forschungs- und Literaturberichte

Ulrich Pfister: *The Inequality of Pay in Pre-modern Germany, Late 15th Century to 1889*

Abstract: The study explores relative labour scarcity in a broad range of activities and relates it to the long-run dynamics of structural change, supply and demand of human capital, and the inequality between men and women. It builds on two recent compilations of wage data and complements these with additional information, particularly on wages in agriculture. From the second quarter of the seventeenth century the skill premium was stable; the first phase of industrialization did not lead to a differentiation of the individual return to human capital. Labour demand from the modern sector stabilized real wages of males from the second quarter of the eighteenth century at least and increased them from the mid-1850s onwards. This opened a wedge between the agricultural and the non-agricultural sectors already for considerable time before the beginnings of industrialization. Finally, the modern era saw two phases of labour market segmentation along gender lines, one in the later sixteenth and the early seventeenth centuries, the other from the 1840s to the 1870s.

JEL-Ccodes: J 22, J 23, J 24, J 31, N 13, N 33

Keywords: labour markets, standard of living, structural change, gender inequality, Arbeitsmärkte, Lebensstandard, Strukturwandel, Geschlechterungleichheit

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Mark Schiefer: *Ideologiepolei und Auftragsverwaltung. Über die Ursachen der Expansion der Staatssicherheit in der Planwirtschaft am Beispiel der DDR-Chemieindustrie*

Abstract: The Stasi, the secret police in the GDR, was an integral part of the planned economy. Over time, Stasi officers took on tasks related to economic planning and adopted the mentality and behaviour typical of the field. This paper takes a closer look at their aims and the ensuing consequences as illustrated by the GDR chemical industry. It focuses on a contradictory phenomenon: the co-existence of growth and inefficiency. Although the secret police enjoyed growing responsibilities, resources and partners, they were surprisingly inept at achieving their own economic and security targets. This phenomenon can be explained in two ways: Historically, by identifying the Stasi as the profiteer of economic crisis, or in terms of organization theory, by revealing some typical bureaucratic characteristics of the secret service (MfS).

JEL-Codes: P 2, P 27, P 21, P 31

Keywords: Stasi, Ministry for State Security, Secret Police, surveillance of the economic sphere, East Germany, petrochemical industry, buna plant, socialist economy, economic crisis, compensation, distributor, foreign trade, bureaucracy, organization theory, Principal-agent-theory, Niskanen, Staatssicherheit, MfS, Wirtschaftsüberwachung, DDR, Chemieindustrie, Buna-Werke, Planwirtschaft, Wirtschaftskrise, Kompensationsprojekte, Vertretergesellschaft, Außenhandel, Bürokratie, Organisationstheorie, Prinzipal-Agenten-Theorie, Niskanen

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