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This paper will examine the first global industrial cartel, the Incandescent Lamp Cartel, as an answer of private economic actors to the changing international political and economic environment in the interwar period. This cartel is not only a good example because of its durability (founded in December 1924, practically functioned until 1942/43), its being successful in reaching the cooperation's main goals concerning stable high sales prices and conserving more or less the original power constellation of the founding members, but also because this cartel served like a model for other cartels in the electrical industry e. g. the European radio cartel.

#### ECONOMIC NATIONALISM

The interwar era is usually classified as the classic era of economic nationalism. It should be considered that because of the multiplicity of its features, the ambiguity and amorphousness of the subject, different points of views and different definitions were used to analyse the problem. How Henryk Szlajfer put it, for example: "Does economic nationalism embrace any striving for self-sufficiency, including limitations on the flow of capital and labour?"<sup>1</sup> Economic nationalism was usually seen as a concept opposite to economic liberalism allowing or encouraging state intervention in the economy, including a "doctrine of progressive development" in which all economic activities are subordinated to the state's developmental goals<sup>2</sup>. Practically identically, with a special emphasis on East-Central Europe,

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<sup>1</sup> Szlajfer, Henryk (ed.): Economic nationalism in East-Central Europe and South America 1918-1939, Geneva: Librairie Droz, 1990, p. 25

<sup>2</sup> Helleiner, Eric/Pickel, Anfreas. Ithaca: Cornell University Press, 2004 p. 5, 26

Szlajfer and other scholars like Schultz, Berend, Kubu etc.<sup>3</sup> identified economic nationalism as "a structurally determined response of the underdeveloped economies and societies to crisis and to the very fact of their underdevelopment."<sup>4</sup> However, the concept of economic nationalism includes the whole process during which the inhabitants of a particular area aim to create an ethnic homogenous economy<sup>5</sup> resulting in an economic policy favouring the economic actors of their own nation over those of foreign nations. Therefore, I will use for the following analysis this interpretation of Ágnes Pogány and look for its practice using the systematisation of Helga Schultz.<sup>6</sup> According to this systematisation, a nationalist economic policy can be seen oriented outwards imposing high tariffs and other, non-tariff restrictions on foreign trade, various restrictions on foreign direct investment etc. The inward-oriented form of economic nationalism can not only be directed against ethnic minorities but, aiming a self-sufficient economy functions quasi as a modernisation strategy, too, resulting in plans for industrialisation, an import substitution policy etc.

The tendency of moving from a free-trade to a more protectionist economic policy could be traced back well before the First World War all over Europe and also in the United States. However, the war and the turbulences of the global economy afterwards reinforced this tendency leading to its most intensive period during and after the World Economic Crisis, as this kind of economic policy promised to compensate some disadvantages of the economic subjects of the particular nation compared to their foreign rivals. The dissolution of the Austro-Hungarian Empire after the First World War put an end to the slow adhesion of its different regions. The new national states all aimed to construct independent national economies, which naturally turned into protectionism. The particularly severe impact of the

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<sup>3</sup> Kubu, Eduard/Schultz, Helga (Hrsg.): Wirtschaftsnationalismus als Entwicklungsstrategie ostmitteleuropäischer Eliten. Die böhmischen Länder und die Tschechoslowakei in vergleichender Perspektive. Praha-Berlin 2004

<sup>4</sup> Szlajfer, Henryk: Editor's introduction p. 9 in: Szlajfer, Henryk (1990): pp. 1-13

<sup>5</sup> Pogány, Ágnes: Gazdasági nacionalizmus Magyarországon a két világháború között: gazdasági homogenizáció és antiszemitizmus (Economic nationalism in Hungary between the two world war: economic homogenisation and anti-Semitism), paper prepared for the conference „Economic nationalism in East Central Europe”, Frankfurt (Oder) 17th-20th March 2005

<sup>6</sup> Schultz, Helga: Wirtschaftsnationalismus in Ostmitteleuropa – Thesen und Fragen in: Kubu/ Schultz (2004): pp. 17-29, here p. 24

World Economic Crisis on the weak East-Central European economies and political tensions between ‘the follower states’ made this region ‘the hotbed’ of economic nationalism.

The main assumption of this paper is that, on the one hand, international cartel agreements eluded national borders, on the other hand, they consciously used and benefited of national institutions and conceptions and doing so reinforced them. The analysis will focus on the following questions:

1. How did international cartels undermine economic nationalism, like the efforts to create a national industry? How did cartel members try to influence national economic policy like customs and quota regulations?
2. How did international cartels strengthen economic nationalism through the methods of division of the world market or making publicity for themselves as national producers and so on?

The paper aims to show how economic nationalism finally contributed to the creation of international cartels as a transnational system of private market actors.

The analysis will primarily be based on archive materials of one of the founding members of the Incandescent Lamp Cartel, the United Incandescent and Electrical Company (Tungsram), Budapest. As one of the smaller members of the cartel but still with a say in defining its tactics and as a company of the East-Central European region the analysis of the cartel from the point of view of Tungsram can add some special features to the findings.

#### THE UNITED INCANDESCENT LAMPS AND ELECTRICAL LTD., UIPEST (BUDAPEST), HUNGARY

The United Incandescent Lamps and Electrical Ltd. was founded in 1896, unifying five small companies of the Jewish Hungarian family Egger located in Vienna and Budapest and moving the centre of the Eggers’ business activities to the Hungarian part of the Austro-Hungarian Monarchy. The company produced a whole range of electrical products from which incandescent lamps and telephon and telegraph systems were of the greatest importance. After its quite successful wolfram lamp trade mark, especially in English speaking countries the company was soon called “Tungsram”. Because of the cumbersome company name I will use this notation, too. Tungsram became a rapidly growing lamp producing company, with a position in the European cartel for carbon filament lamps, called Verkaufsstelle Vereinigter Glühlampengesellschaften, equal to that of Philips

& Co. just besides the two giants Allgemeine Elektrizitäts AG. (AEG) and Siemens & Halske. After a vertical integration and the acquisition of a rival in Vienna during the First World War, Tungsram became for the interwar period the biggest Hungarian enterprise specialized on the production of incandescent lamps, radio tubes as well as telephone and telegraph equipment.<sup>7</sup> In the interwar period big shareholders of Tungsram were the Hungarian Commercial Bank of Pest, the Österreichische Industriekredit AG., International General Electric Company, New York, International Telephone and Telegraph Ltd., Osram, Berlin, and, in a much smaller extent, members of the founding family and managers of the company. From 1921 to 1944 the chief executive of this managerial company was Leopold Aschner, the former commercial director of Tungsram.

#### THE INCANDESCENT LAMP CARTEL (PHOEBUS)

After a fierce competition at the end of the 19<sup>th</sup> century, a process of concentration and cooperation of the incandescent lamp producers were to observe, culminating in national cartels and even in a European one. The foundation of a global cartel and its special features, however, lay in the shift of power in the lamp industry during the First World War and in the resulting modified interests and strategies of the main producers.

The First World War led to shift of power in favour of the American enterprises. The General Electric Company, New York (GE), built up a monopolistic position on its home market: together with its licensees<sup>8</sup> supplied around 90% of the US-American market and Canada, which, in turn, came up for around half of world incandescent lamp consumption. During the First World War, General Electric, previously more concentrated on its home market, increased exports considerably and after the war wanted

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<sup>7</sup> In 1928 the third department became the „Hungarian Standard Electric Ltd.” and after a few years of joint equity shares and management with Tungsram it became wholly integrated in the concern of the International Standard Electric Corporation, New York, part of the concern of International Telephone and Telegraph Corporation (ITT).

<sup>8</sup> Westinghouse and 16 resp. 18 smaller companies in the Incandescent Lamp Manufacturers Association, later on in the National Electric Lamp Company In: Leonard S. Reich: General Electric and World Cartelization of Electric Lamps, In: Kudo, Akira/Hara, Terushi: International Cartels in Business History Tokyo 1992 pp. 213-228, here p. 214

to fix these new market positions by continuing its efforts binding the biggest lamp fabrics on the world to GE through licence agreements and owning stock in them. This should contribute to realise the overall priorities of GE, namely, securing the US- (and Canadian) market from any challenging rival and GE's position in the world even after the expiring of its key patents concerning lamp production.<sup>9</sup> During the negotiations with Osram (see below) about a licence agreement the representative of IGEC, "the international arm of GE", put it simply: "But, after all we have to control the light bulb business in the world."<sup>10</sup>

The three big German lamp producers, Siemens & Halske, AEG, and the Auer Company (Deutsche GasGlühlicht A.G.), leading exporters before 1914, were cut off the world market during the war. Immediately after the war their originally outstanding technical level could not keep pace with the American development and they suffered from a lack of capital. In addition, their sequestered affiliates emerged themselves as rivals on their main markets like in France and in the United Kingdom. Therefore, the lamp making departments of the companies were merged<sup>11</sup> into the Osram G.m.b.H. K.G. (henceforth Osram) and a co-operation with the American rivals (GE and Westinghouse) turned out to be their key strategy to re-establish themselves as a global player.<sup>12</sup> Not only a technical co-operation was achieved (due especially to Siemens & Halske's and Auer's technical expertise) but also financial support was provided for through capital investment<sup>13</sup> and credits on very favourable terms. Having regained foothold on foreign markets by 1924 securing positions through the division of the world market were seen best

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<sup>9</sup> Reich (1992) and George W. Stocking/Myron W. Watkins: Cartels in action, Twentieth Century Fund New York, 1946 p. 317, 327

<sup>10</sup> A. W. Burchard, President of IGEC, cited by Schröter, Harm: A typical factor German international market strategy: agreements between the US and German electrotechnical industries up to 1939 pp. 160-170 in: Levy-Leboyer/Teichova/Nussbaum: Multinationals in a historical perspective, Cambridge: Cambridge University Press 1986, here p. 165

<sup>11</sup> That means patents, trade marks, technical expertise, innovations, production capacity and sales organisations In: Stocking/Watkins (1946) p. 317

<sup>12</sup> Schröter (1986) p. 169-170

<sup>13</sup> By 1929 IGEC owned already 16,67% of Osram, this share was extended to 29% practically for a withdrawal of Osram from Mexico In: Luxbacher, Günther: Massenproduktion im globalen Kartell Berlin: Verl. für Geschichte der Naturwiss. und der Technik, 2006, p. 314

achieved as through this co-operation. Especially after the experience of the War, the setting of an international cartel was seen as an alternative to foreign direct investment (as means to secure presence on foreign markets) in a larger scale.

The Philips company, founded in 1891 as a specialist lamp producer firm, prospered during the war due to the neutral status of the Netherlands.<sup>14</sup> „Holland's neutrality enabled Philips to expand its export of lamps to continental Europe and to other foreign markets at enormous profit.”<sup>15</sup> Agreements with the main rivals had to secure and further ameliorate this position. The basis of them formed the agreement with GE, signed in 1919, respecting each other's home markets and exchanging patents and know-how.<sup>16</sup>

As during the First World War in neutral countries and in the more fortunately situated Allied countries producers seized the opportunity of the falling away of Central European competitors a world wide surplus capacity of around 50% was built up<sup>17</sup>. The situation aggravated after Germany's re-entrance into the world market which led not only to acquiring a share in going concerns but also to establishing new factories. A fierce competition was therefore clearly in view. Technology intensified competition and increased its hazards as well because „[l]amp producing became a largely automatic process involving large investment of fixed capital in extremely specialized plants with a relatively high proportion of overhead costs and low labor costs per unit of output.”<sup>18</sup> „An increase in the importance of fixed capital in the production process, plant capacity excess of normal requirements, and an inelastic demand, all made competition more hazardous and cartelization more attractive to the postwar incandescent electric lamp industry”, summarize Stocking and Watson the factors underlying the above outlined motives of the global players for a long-term

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<sup>14</sup> Heerding, A.: The history of N. V. Philips' Gloeilampenfabrieken. Vol. 2. A company of many parts, Cambridge: Cambridge University Press, 1988

<sup>15</sup> Stocking/Watkins (1946) p. 318, Heerding, A.: The history of N. V. Philips' Gloeilampenfabrieken. Vol. 2. A company of many parts, Cambridge: Cambridge University Press, 1988

<sup>16</sup> Philips paid a licence fee to IGEC which in contrast took a 20 percent participation in Philips' enlarged share capital.

<sup>17</sup> Stocking/Watkins (1946) p. 323

<sup>18</sup> Stocking/Watkins (1946) p. 324

and close cooperation. As by the end of the war the world's leading lamp manufacturers were closely organized on a national basis<sup>19</sup> and a considerable community of interest also had developed among the more important national groups through exchange of patents and through stock ownership, Osram and IGEC, after having reached an agreement between themselves, could successfully promote the setting up of a world cartel for incandescent lamps. According to a self-portrayal of the industry, "protectionism and unrestrained economic nationalism" after the war led to "the relapse into long ago overrun methods of national trade policy", fostered by the breakup of Europe in many small economic units disregarding "the natural division of labour and location of industries". So the decline of international economic cooperation, highly valued in this portrait of a leading Phoebus-officer and former Osram-director William Meinhardt, and the negatively valued growing state interventionism, together with the disintegration of the international credit mechanism, currency deterioration and inflation in many countries etc. would have led to "an unhealthy concurrence" in the lamp industry and the markets were "in entire disorder". Therefore, the leading companies were forced to come out of their "splendid isolation"<sup>20</sup>. Thus, though profit and other motives were naturally not openly admitted, depressed market conditions and growing political risk because of economic nationalism promoting new rivals and maintaining restrictions on foreign business activities may have actually been strong incentives to the setting up of the cartel quasi as a self-help instrument of the industry.

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<sup>19</sup> The British industry: The British Thomson-Houston, the General Electric Company Ltd., Siemens Brothers and Edison Swan established a close relationship. Including six smaller companies, the Electric Manufacturers Association was founded in 1917 which functioned as a national price and patent cartel. After the merger of BTH, Metropolitan Vickers (controlled by Westinghouse), Ferguson Company and Edison Swan into Associated Electrical Industries Ltd. in 1928, Associated, GEC and Siemens remained the big three of the British electrical industry. The French industry ranked fifth in dollar value of lamp exports. After merger of the lamp departments of the biggest electrical companies, Compagnie des Lampes S. A. (Paris) emerged in 1921 as the main French lamp producer further concentrating control of the industry by acquiring the stock of assets of competing companies and expanding its operations in foreign countries through subsidiaries". Stocking/Watkins (1946) p. 319-321

<sup>20</sup> Meinhardt, William: *Entwicklung und Aufbau der Glühlampenindustrie*, Berlin: Carl Heymanns Verlag, 1932 p. 102-103 William Meinhardt, lawyer, was director of Osram, later on one of the founder and leading functionary of Phoebus.

The incandescent lamp cartel, called shortly Phoebus after its central "executive organisation", the Phoebeus S. A. Compagnie industrielle du développement de l'Eclairage, Geneva, included all the main lamp producers in the world. (see figure1) In the figure attached representing the equity shares of GE in all the leading members of the cartel the above mentioned shift of power in the industry can be seen. The leading members of the cartel were Osram, Philips, Tungsram, British Associated Electrical Industries (BTH Co. Ltd., Edison Swan Electric Co. Ltd. And Metropolitan Vickers Electrical Co. Ltd.), Compagnie des Lampes, IGEC (London), and three subsidiaries of GE in Brazil, China and Mexico, the so called Overseas Group.<sup>21</sup> Anticipating an antitrust process GE did not join Phoebus itself. So the cartel served for the division of the world market except North-America, practically reserved for GE, and Russia. The exchange of patents and technical information among the members<sup>22</sup> facilitated the standardization of quality and lamp types creating one of the first global standardised mass products. Common price policies were outlined in the so-called Local Meetings, and the use of electric lamps was propagated through coordinated marketing efforts. Outsiders were fought by holding back technical information, modern lamp making machinery etc. from them, using "Kampfmarken" (fight trade marks) in price wars, and by a wide range of other legal and illegal measures. Therefore, GE and the lamp producer organised in Phoebus could actually control around 80 to 90% of the world market.

#### PHOEBUS UNDERMINING ECONOMIC NATIONALISM

The cartel divided the world market through a detailed quota allocation system. Practically founding members received their home markets as

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<sup>21</sup> The cartel members were listed here following their voting power in the General Assembly in the 1930s, after the joining of Tokyo Electric Co., a GE-licencee too, and some other smaller but technologically quite advanced companies and after the rearranging of voting power according to changes because of purchasing smaller cartel members for their quotas and the like. Luxbacher pointed out that founding members and lately joined ones formed an A- and a B-league of Phoebus, with different voting power and access to technological information. Luxbacher (2006) p. 389-391

<sup>22</sup> The basic agreement of the cartel was "The General Business and Patent Development Agreement" with detailed rules concerning the way and price of making use of each other's patents and technical know-how.

exclusive territory (divided between the national producers belonging to Phoebus) and a quota in the so-called European and Overseas common territories, i. e. in countries without a big lamp producer belonging to Phoebus in 1924.<sup>23</sup> Quotas were based on the companies sales in 1922/23 related to the entire Phoebus-sales. The quota allocation was enforced through compensations and sharply increasing penalties for under- respectively overselling and through an own jurisdiction. Questions about import and export of lamps into or out of a specific country were so negotiated beforehand. Therefore, this quota allocation system practically by-passed national tariff policies, how Luxbacher put it.<sup>24</sup>

Besides this general understanding, and partly for the sake of putting it into practice, cartel members were able to find different means to overcome tariff barriers, import restrictions and other means of outward economic nationalism through coordinated actions. For example not only sales prices were fixed in the local meetings, i. e. between the cartel members interested in a specific group of countries, preferably – if outsiders' competition allowed it - on a level that enabled to make a profit despite of increased tariff rates. Phoebus-partners also exerted themselves to make import quotas allocated to their partners and not outsiders. These efforts reached from information about plans of the respective home government to unified lobby of cartel members to this aim. E. g. in September 1933 Osram was ready to inform Tungsram about the expected tariff increase and suggested the Hungarian company suitable measures to deal with the problem.<sup>25</sup> During the Great Depression, even in the liberal Britain a movement was launched in favour of home industry, the so called "Buy British goods"-propaganda. Tungsram was reported to be particularly severely suffering from the consequences of Austrian (!) products being distrusted because of the remembrances on the War, guessed the director of the sales organisation in London.<sup>26</sup> Therefore, and furthermore anticipating a devaluation of the pound, and also a tariff increase and import

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<sup>23</sup> The shares of the leading members in 1924: Osram 27,5%, Philips around 25%, Tungsram 5,6%, after purchasing an Austrian rival in 1930/31 7,22% and in 1937 10,13%. Source: Hungarian National Archives (HNA) Z604\_7\_9 Kontingentpräliminare des Ujpest-Konzerns für die XIII. Fiscalperiode. /1. VII. 1937. – 30. VI. 1938./, Ujpest, 24. V. 1938

<sup>24</sup> Luxbacher (2006), p. 371

<sup>25</sup> HNA Z 604-51-65 Letter from Osram to Tungsram, 30. 9. 1933

<sup>26</sup> HNA Z 604\_5\_4 Letter to director Liebel 1st October 1931.

restrictions to protect the British industry and diminish unemployment, the British Tungsram sales organisation suggested Ujpest to set up a lamp factory in the United Kingdom as speedily as possible to not lose the market completely and to supply the market with "British products". Before actually founding the factory, however, Tungsram tried to persuade British cartel-members to restrict their own sales or to allow diminishing sales prices enabling Tungsram to reach its quota. This request had, however, been refused as market conditions were still favourable enough for the British cartel members.<sup>27</sup> Tungsram represented simply such a small share in British lamp business that it could easily be let alone to fight against the nationalist boycott movement. Lamp producers having joined later on to the cartel and with a much smaller quota than Tungsram may therefore have suffered from this kind of differences of interest between the parties still more.

Another way of by-passing tariff barriers was of course local production. The following example should show how it could be realised cost-efficiently for the cartel-members. In 1929 China achieved tariff autonomy, and the new Chinese customs regulations imposed heavy tariffs on foreign imports to protect nascent Chinese manufacturers and Chinese national products. Furthermore, authorities were strongly recommended to buy only national products, i. e. produced by a Chinese-owned company, managed by Chinese supervisors using Chinese raw materials, and processed by Chinese labor<sup>28</sup>. To economise a large part of tariffs and other sales and distribution costs, the main foreign lamp companies, GE, Osram, Philips, founded the China Lamp Company Ltd. (Culco). Not only sales were coordinated, but the China General Edison Company, a subsidiary of GE, produced lamps locally with the trademarks of the partners (possible due to standardizing efforts within the cartel) and only a part of lamps were produced in and exported from the partners' headquarters. In 1934, Tungsram also considered it a more promising way of operating in China than having a local representative there and thanks to a loan from IGEC London was able to buy shares in Culco. From then on, though only a junior partner, Tungsram could

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<sup>27</sup> HNA Z604\_5\_4 Letter from P. J. Brewer (British Group) to R. Mayer (Tungsram) London, 21st September 1931

<sup>28</sup> Huei-Ying Kuo: Rescuing Businesses through Transnationalism: Embedded Chinese enterprise and Nationalist Activities in Singapore in the 1930s Great Depression In: Enterprise & Society 7. 1 (2006) 98-127

maintain its position on the growing Chinese market by concentrating most of its efforts on its core markets.<sup>29</sup>

Furthermore, in so called 'pools' some cartel members coordinated their activities in order to diminish sales and distribution costs. On the basis of home market and common territory shares, in the original agreement, each company had a global quota divisioned in country groups facilitating the maintainance of each company's position in markets they favorably supplied. Dividing markets again within the pools by allocating the pool members' country quotas in the common territory under themselves they endeavoured to "have allotment rights allocated to them preferentially in such countries in which – for reasons of *politics (accentuation from M. H.)*, economy, and manufacture – they may more easily sell than other Parties" [of the cartel].<sup>30</sup> Negotiations between Osram, Philips, Tungsram and Overseas-British-Thompson-Houston about coordinating their sales efforts in the Overseas Common Territory even by founding a Joint Sales Office revealed that furthermore risks of exchange control regulations were planned to limit. „If governmental decrees render a transfer of funds from a Joint Sales Office impossible, the Pool Accountant shall, '(...) make provisions for distributing absolute losses equitably among the Parties", says the memorandum of the Overseas Lamp Company from the 20<sup>th</sup> November 1931.<sup>31</sup> To have a closer look on the 'political reasons' enabling some cartel members more advantageous selling on special markets let see the pool agreement of Osram, Philips, and Tungsram in 1932. These companies quota jointly covered around 90% of cartel sales in the European common territory, i. e. countries outside the United Kingdom, France, the Netherlands and Belgium, Germany, Austria and Hungary.<sup>32</sup> According to this and previous arrangements between

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<sup>29</sup> China „A" 1937 (Partners' sales in mainland China in 1937 related to each other in the following proportion: China General Edison Co. 42,11%, Osram China Company 32,7 %, Philips China Company 16,97%, Tungsram 7,05%, China G. E. C. Ltd. 1,19%. Tokyo Electric Co., a licensee of GE and member of Phoebus had a considerable share in Manchuria. Source: HNA Z604\_44\_53: Special Meeting of the China Lamp Committee, Shanghai, 12th November 1937

<sup>30</sup> HNA Z609\_107\_83 Phoebus Sales Committee Meeting (LVI), Berlin, 25-26<sup>th</sup> September 1931,

<sup>31</sup> HNA Z609-107-83 Memorandum. Overseas Lamp Company 20<sup>th</sup> November 1931

p. 17

<sup>32</sup> HNA Z609\_107\_83 Letter from Leopold Aschner to J. M. Woodward, Phoebus, Ujpest, 21<sup>st</sup> July 1932

the three companies, Tungsram had the right for around 90% of cartel sales in Yugoslavia and around 70% in Romania. Considering strong resentiments against Hungary in Romania and a lesser extent in Yugoslavia as well, one might ask why exactly these markets were allocated to Tungsram and whether the pool arrangement actually could help to overcome economic nationalism in these cases. It is true that Tungsram's position in Romania was extremely vulnerable, illustrated only by the denial of many Romanian radio apparatus factories denying to use Tungsram radio valves "for national reasons"<sup>33</sup>. However, the Balkan states were important markets for Tungsram not only because of their geographical neighbourhood but also because of their strategic importance, clearly recognised by the company's chief executive. Largely corresponding to pre-war Hungary's economic growth based on a territory including great parts of post-war Romania and Yugoslavia, and on an extension towards the Balkan states, Tungsram called the government's attention on various occasions to the dependence of Hungarian economic growth upon a privileged access to the Balkan states. In 1931, e. g., the secretary of trade was successfully applied for the assignement of the building of state radio stations to Hungarian enterprises, thus, preventing the German counterparts from making further publicity in the Balkan states against the Hungarian companies with the argument that the Hungarian industry is not much appreciated even in its home country. Together with Hungary's unlucky political situation, this kind of governmental actions could, so the argumentation, have pointed to an erosion of Hungarian industry's position as a production and distribution centre for the Balkan. Western capital, badly needed in Hungary, could therefore be withdrawn from Hungarian industry and relocated in the more absorptive Balkan states. Philips, concentrating more on Western Europe and overseas markets, agreed to practically allocate Balkan markets between Osram and Tungsram. However, to make use of this quota allocation, Tungsram not only had to increase its sales efforts and seek for efficient local networking in order to ensure smooth delivery to Romania or to receive the right of establishing a lamp factory there. Also arrangements with the pool partners were indispensable. So were Osram lamps produced by Tungsram for the Yugoslavian market. Another means of coordination to this order should also serve as an example to show how well organized

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<sup>33</sup> HNA, Z601\_296\_1058 Andor Raab: Report about my journey in Romania in November 1931, p. 10

cartels were sometimes able to counteract the very goal of economic nationalism, namely the development and promotion of a national industry. Besides following the rivals increased tariffs, import restrictions, and other forms of outward economic nationalism gave Tungsram, and its rivals as well, the decisive incentive for setting up lamp and valve factories all over Europe<sup>34</sup> as tariffs on semi-finished products were usually considerably lower. In Yugoslavia, e. g., in the 1930s three local lamp factories were established due to the industrial development policy of the government. Protected by the government, these factories threatened to exclude all Phoebus-sales Yugoslavian public submissions and to considerably reduce Phoebus-sales in general. Then in 1938 two of the three factories were jointly purchased by Osram, Philips and Tungsram, the one in Pancova was modernised by Tungsram for the production of its lamps. An agreement was reached relating to the third factory about its gradual switch-off of the lamp business for a financial compensation. This way, coordinated cartel efforts undermined economic nationalism by by-passing means to protect the emerging local industry from the much stronger foreign competitors.

#### PHOEBUS STRENGTHENING ECONOMIC NATIONALISM

Generally, though especially exports of companies later joined to the cartel were tried to restrict, both big and small cartel members profited from the quota allocation system allocating home markets practically for the local producers. Especially for members with relatively lower tariff protection it could be useful as an effective protection of their home market. The above mentioned further divisions of markets in the pool arrangements corresponded

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<sup>34</sup> Factories of Tungsram in the interwar period in foreign countries: Vienna (Austria, lamp factory 1917), Milan (Italy, lamp, 1910 or at the end of 1920s, ambiguous data), Warsawa (Poland, lamp 1921), London (United Kingdom, 2 valve factories 1930 and 1933, lamp factory 1936), Tilburg (Netherlands, lamp, radio valve, radio apparatus, 1931), Paris (France, lamp 1937), Bukarest (Romania, lamp 1936), Stockholm (Sweden, radio 1931), Pancova, Zagreb (Yugoslavia, lamp 1936, lamp 1938), Madrid (Spain, lamp 1937), Prague, Bratislava (Czechoslovakia, lamp 1938, lamp 1937), Buenos Aires (Argentina, lamp, 1938). HNA, Z601\_138\_687 and Koroknai, Ákos (Ed.): The history of Tungsram, Budapest 2004 p. 87 Because of contradictions in archival data, respectively between archival data and studies on Tungsram, here all fabrics mentioned in the various sources are listed. Production was definitively not started in Argentina before the outbreak of the war, other data should be checked in further archival sources.

partly to ethnic borders rather than political ones offering the possibility to rely on consumer's national sentiments. For example the pool agreement of Osram, Philips and Tungsram from 1932 allocated 60% of lamp sales in Gdansk to Osram. However, core-Poland, considered as a very promising market by all three companies (e. g. all had factory units there) were divided more or less equally between the partners: Philips 38,77%, Osram 32, 8% and Tungsram 28,43%.<sup>35</sup> The greatest share allocated to Philips may have been explained by the great efforts of Philips ruling out all other competitors and by its already established strong position concerning radio valves. The marketing efforts of Philips in Poland, reaching a level "over all imagination", according to a Tungsram salesman-report from 1932 was so successful as Polish people couldn't "even imagine any other valve supplier". „Philips are acting up everywhere as the only Polish radio valve factory, making strongly use of the national momentum in its propaganda, on this reason it receives all government grants and it is appreciated very much by costumers", explained the report.<sup>36</sup> So making extensive use of the argument of being a national producer in publicity and in negotiating with authorities a foreign company was able to build up such a strong position on a foreign market as usually only 'national champions' do. Similarly, in the above mentioned Yugoslavian case a strong incentive to the take-over of two of the local companies was the Yugoslavian industry policy supporting the local lamp factories in various forms of which the practical exclusion of foreign companies from public submissions. The take over of the local companies did not take place before having thoroughly examined the juridical situation, i. e. whether Tungsram Zagreb would be regarded as a local producer. Competing as a 'national producer' Tungsram could participate on public submissions, eventually apply for other 'government grants' as well. That means that inward economic nationalism turned to become a profit source for the remaining cartel member (and indirectly for the other partners in the pool).

Another example should show which means still could be used to achieve the same goal in the very direct kind of business language. In 1937, with the help of the above mentioned China Lamp Company (CULCO) Phoebus cartel members, fearing the revealing of the scale of its operations leading potentially to government retorsions and boycotts, developed a plan to at

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<sup>35</sup> HNA, Z604\_107\_83 Künftige Umsatzverteilung im C. T.

<sup>36</sup> HNA, Z 604\_5\_5 Reisebericht Andor Raab, Januar-Feber 1932

least maintain their shares in the Chinese lamp business (35% of annual sales and 61% of sales value!). Their main competitors were medium grade outsiders supported by „the growing wave of nationalism backed up by government decrees compelling government and municipal authorities to use native lamps” and cheap grade outsiders, i. e. Chinese factories competing with extremely low prices. The plan consisted of a further intensification of the quality propaganda and purchasing some of the cheap outsider factories or persuading them by various means to reduce their production. „We must then [by the time Culco’s power become publicly known] possess a sales organisation incorporated under Chinese law, registered in Nanking, paying taxes to the national government of China, having partly Chinese capital and having fairly influential Chinese on the Board who can intelligently present our case the the public and the authorities. (No disadvantage for the last consumer, on the contrary, too many cheap grade lamps mean waste of public money, CULCO lamps are China made etc.). This means that simultaneously with our trying to control the native lamp industry (officially encouraged by the Government) we stretch out our hands to the Chinese element in the spirit of sino-foreign cooperation (also officially encouraged by the government!).”<sup>37</sup> Thus, the use of both the nationalist rethoric and the creation of a surface of being embedded in local industrial networks for the sake of strenghtening cartel members’ position on the Chinese market is unmistakable.

Cartel members obviously lobbied jointly to influence means of nationalist economic policies. Anticipating the introduction of the new British tariff policy, e. g., Tungstram tried to persuade the British cartel members “to make a recommendation to the Board of Trade, that the duty should only be applicable to lamp-imports dumped upon this market and not to lamp-imports, which are sold on this market at the ordinary price level by well established English organisations, who do not displace but create home labour. You are quite aware that such procedure would not be without precedent even in this country and I feel that the position of all Phoebus members would be fully met by a specific anti-dumping duty, which would

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<sup>37</sup> HNA Z604\_44\_53 China United Lamp Company, Shanghai, 16th June 1937 E. Roessler, general manager, to the Advisory Committee: R. C. Henderson, London (IGEC), J. H. Gaarenstroom, Eindhoven (Philips), Chr. P. Jensen, Berlin (Osram), L. Fischmann, Ujpest (Vereinigte)

give the British Group all the protection claimed for in the memorandum.”<sup>38</sup> Remarkably Tungstram suggested to use the argument of its being a „well established English organisation” and its being aware and embracing of the Board of Trade’s concerns about the British industry’s difficulties by lobbying for a special threatment of its exports to Britain. That means, economic nationalism was meant to make use of by campaigning against a measure of this policy. Unfortunately documents have been found yet about how readily this suggestion was acted on/seized/taken up by the British cartel members. The very existence of such a request, and also a very similar suggestion concerning Sweden in 1933<sup>39</sup>, however, suggest that such coordinated lobby activities to influence national trade policies were not wholly unusual for cartel members.

Cartel membership was several times also a readily used argument to influence means of nationalist economic policies other than only tariffs and import restrictions mostly reflected in literature. So according to a draft letter from Tungstram to the Ministry concerning the draft bill about cartels the importance of cartels was followingly emphasised: “domestic lamp production not only wholly covers domestic demand in this industrial product but 92% of Hungarian production is exported. Obviously, this export of so great scale and of such outstanding importance for our trade balance is only possible because of our membership in the International Incandescent Lamp Agreement wich for our foreign sales offers such favourable market conditions that through the importance of the volume of export and the advantegeous foreign sales prices we are able to supply domestic protection on prices favourable for Hungarian consumers.”<sup>40</sup> Tungstram actually became the Hungarian enterprise getting an amount of foreign currencies equal to that of the whole amount resulted from Hungarian agrarian exports. This fact and the argument of the advantage of the Hungarian consumers may have been hoped to be considered by lobbying for the Hungarian government’s intervention by its German counterpart to forbid the campaign against Tungstram’s radio valves in

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<sup>38</sup> HNA, Z604\_5\_4 Letter from the Tungstram Electric Lamp Works (Great Britain) Managing Director to J. Y. Fletcher Esq. Chariman of British Local Meeting 2nd October 31

<sup>39</sup> HNA Z604\_5 Memorandum RV/ET Ujpest, 29. XII. 1933, betrifft Schweden

<sup>40</sup> HNA Z601\_22\_167 Draft letter to the Ministry concerning cartel issue 13th November 1931

Germany. “[I]f the Hungarian government”, so the chief executive of Tungsram to the deputy undersecretary of state of the Trade Ministry on 20 February, 1934, “were to put adequate pressure on the German government to restrain the lobbying groups (Wirufa, Funkverband) from campaigning against the Tungsram tubes (...) then our prospects of selling tubes on the German market could be very good, which indirectly would also improve the chances of a deal with Telefunken and Philips to secure the growth of our radio valve exports for years.”<sup>41</sup> So the experience of a profitable membership in the lamp cartel, that means a great and steady export volumen, was used as an argument to lobby for a nationalist economic policy exerted in international economic relations aiming to achieve membership in another cartel agreement. The importance of the membership in international cartels<sup>42</sup> was also pointed out by lobbying for a moderation of the planned “balance bill”. This law, an extreme form of inward economic nationalism, planned to reduce the proportion of Jewish employees in industrial companies (and authorities, universities etc.) to 6% in a few years. Tungsram argued that its new status of a “Jewish company” would considerably decrease its exports as Germany, Italy [important export markets of Tungsram – H. M.] and probably other countries too will not be willing to accept products from such an enterprise. Also the smooth operation of the foreign sales agencies and the laboratory of the company would be seriously endangered by dismissing the employees having already built up contacts to local markets or to partner companies in the cartel and having special knowledge and experience concerning international cartels. Therefore the new legal nomination of a “Jewish company” should not be introduced at all and means were proposed to reach the original goals of the draft law in a way causing fewer problems to day-to-day business.<sup>43</sup>

To sum up, market division in the pool arrangements in some cases led to a reinforcement of economic nationalism not along political but ethnic borders. Cartel members also made use of economic nationalism by presenting themselves as national producers to get access to host market governments’

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<sup>41</sup> Cited by Jeney, Károly: The history of Tungsram, Budapest 1990, p. 73

<sup>42</sup> Osram, Philips and Tungsram founded a cartel for radio valves and related products in 1934, functioning similarly to Phoebus.

<sup>43</sup> HNAZ601\_23\_167 Letter from Tungsram to the Association of Hungarian Industrialists 4<sup>th</sup> January, 1939 and letter from Tungsram to Dr. János Makkai, Esq., member of Parliament 11<sup>th</sup> January 1939.

industry promotion, to counteract retorsions of national economic policies or to be excepted from tariff regulations. Cartel membership was also used as an argument lobbying for a kind of nationalist economic policy useful or at least tolerable for the specific company. In this way cartels also reinforced and partly reshaped economic nationalism.

#### ECONOMIC NATIONALISM CONTRIBUTING TO THE CREATION AND STRENGTHENING OF TRANSNATIONAL ECONOMIC COOPERATION

As we have seen not only the shift of power within the incandescent lamp industry during the First World War combined with the creation of a worldwide overcapacity and the growing investment costs of lamp production led to the setting up of the first global industrial cartel. Post-war turbulences, sequestration of foreign properties, the severe disruption of the international exchange system etc., and with a long-term effect, the disintegration of the world economy and growing protectionism created obstacles to foreign business activities that lamp making companies dependent on their foreign markets tried to overcome through the creation of a cartel. Furthermore, at the peak of economic nationalism, from the World Economic Crisis onward, a deeper and strengthened cooperation within the cartel members can be recognized. The above described examples let to propose the following hypothesis as an explication for it.

First, not very surprisingly, working together since 1924, partners had become able to identify each others’ reliability, needs, interests, capabilities and more appropriate or effective forms of cooperation.

Second, besides R&D, coordinated efforts of the cartel members were seen as the most effective means against the emerging lamp producers, often supported by their home governments’ nationalist economic policy. Legal, and often effective means were for example coordinated marketing efforts so launching cheap lamps on the specific market or organising publicity campaigns emphasising the superior quality of cartel members’ products along the same arguments like cost efficiency, protection of eyesight etc.. Not only enabled coordination to decrease marketing costs but a mutual learning process in this field can be recognized too. So, partly relying on Osram’s experience in Germany, it was made more and more intensified use of ‘unpartial’ scientific institutes’ test results concerning lamp quality or the lumen stamps, revealing the luminous efficiency of lamps, were introduced at the incentive of Tungsram as a norm for all the lamps in Europe. Philips was if not the first but probably the most innovative and successful in

profiting in its publicity from the argument of being a national producer which led its partners to introduce similar means or thinking about alternative strategies. Fearing of nationalist sentiments or even boycotts, Tungsram was very active in learning methods of and shaping joint cartel marketing based on product quality. Setting norms of lamp quality for the global market cartel members remained able to supply at least the quality segment of markets dominating the world market in value of sales.

Third, foreign exchange regulations, tariff barriers and other risks of foreign business operations were tried to overcome through FDI and cartel coordination respectively within it in form of the pools, the latter ones not as an alternative to FDI but as means complementing each others effect. E. g. investment decisions had not only to consider tariff protection, the acknowledged ultimate push to the setting up of factories, but could rely on cooperative arrangements too like China General Edison Company producing lamps for Osram, Philips and Tungsram as well. Investment costs could be reduced like in case of Tungsram Yugoslavia or distribution costs could be economised through joint sales organisations and storage capacities etc. Thus, though economic nationalism did enforce FDI, this kind of cooperation enabled partners to by-pass some regulations and concentrate production and distribution on their core markets.

Fourth, an extreme form of inward economic nationalism, the forced dismissal of Jewish employees led to strengthening of personal ties between the cartel members. For example in early 1936, the commercial manager of Osram was forced to give up his job and upon Osram's recommendation he was recruited by Tungsram as a sales manager by its subsidiary in Paris.<sup>44</sup> Because of the war, the same person left France for the USA and then Tungsram recommended him to IGEC, New York.

Of course, cartel membership was not always a successful strategy to cope with economic nationalism. Especially smaller cartel members' interests could be easily neglected like the vain request of Tungsram to the British cartel members proved. At the eve of the Second World War, signs to a development in this direction seem to have multiplied. For example according to a salesman report from 1936 Philips and Tungsram realised that in Sweden Osram purposely forced cartel members to keep lamp prices high in order to let smaller lamp producers from Germany getting foothold on the steadily

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<sup>44</sup> HNA Z601\_133\_22 Letter from Leopold Aschner to H. C. Minor, Ujpest 14<sup>th</sup> January 1936

growing Swedish market with their cheap products.<sup>45</sup> To reveal the exact range of this shift, however, further research is needed to clarify the influence of the NS-economic policy on the cooperation within the cartel.

#### CONCLUSION

Geoffrey Jones summarised the developments of the interwar years the following way: „The macroeconomic conditions of the interwar years, and the heightened risks of investment, also encouraged entrepreneurs to pursue collaborative strategies as an alternative to FDI. After 1930, multinationals were less drivers of global integration, than part of the process of disintegration. International cartels restricted flows of international trade, although there is some evidence that they continued to provide a channel for flows of knowledge”<sup>46</sup>.

My findings may slightly modify this description. Firstly, the collaborative strategies could not always provide a real alternative to FDI as practically prohibitive tariffs and other means of governments protecting and supporting national industries led even companies very unwilling to invest, to the founding of lamp factories in whole Europe and even overseas. However, investing abroad seems not to have eliminated the willingness of cartel members to cooperate, only their negotiating position against other members changed.

Secondly, as though the founding of the international cartel was by no means an inevitable consequence of growing protectionism in the interwar years, but for companies producing such a true mass product like incandescent lamps dependence on a fare larger consumer market than their home markets was obvious and a cooperation of the rivals to overcome post-war risks and volatility of the economic environment had been considered as an effective strategy. Once established the cartel developed not only to a collusion for diminishing competition and increasing profits but it became the means to develop and introduce mechanisms of transnational business cooperation to overcome difficulties made by economic nationalism, too. In the very era of deglobalisation, partly caused by growing economic nationalism, private business actors' reaction to new barriers of their foreign

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<sup>45</sup> HNA Z609\_2 Andor Raab: Reisebericht Speziallampengeschäft in Schweden Ujpest, 8. VII. 1936

<sup>46</sup> Jones, Geoffrey: Multinationals and Global Capitalism. Oxford: Oxford University Press, 2006 p. 30-31

business activities could be the setting up of international cartels which, though considerably restricted trade flows, actually developed private economic co-operation in a deeper and multiple form. Thus, economic nationalism paradoxically seems to have strengthened transnational economic cooperation.

Figure 1.

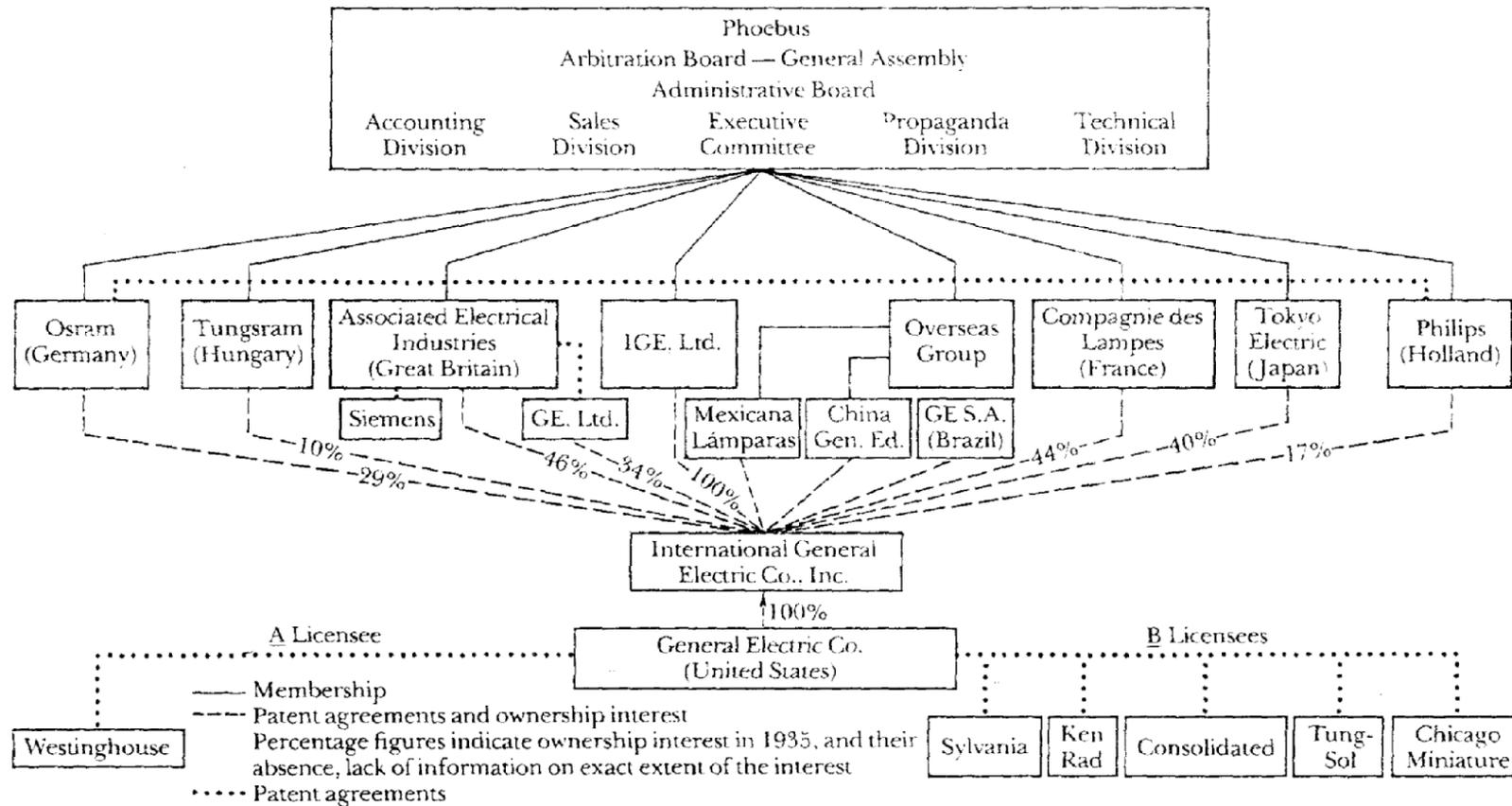


FIG. 1 Structure of the Phoebus Cartel, 1925-39

Source: George Stocking and Myron Watkins, *Cartels in Action* (New York, 1946), p. 334.