All in the family. The rise and fall of managerial capitalism in Norway, 1895—1940

This paper argues that the rise of the capital-intensive industries in Norway at the turn of last century was based on a nascent managerial capitalism, a strong modernizing indicator, that has been overlooked in interpretations of the Norwegian economic development. It is subsequent negative events in the interwar period that have shaped historians' more critical perception of the rise of the capital-intensive industry of Norway from the late nineteenth century onwards: That Norway lacked a strong bourgeoisie, that foreign capital was of the utmost importance, and that American post World War II managerial schooling of Norwegian enterprises reveals Norwegian backwardness.[1] This paper, however, shows how a capitalist class of Norwegian family firms and entrepreneurs filled and created new roles for both modern managers and forward-looking investors from the 1890s. A new industrial foundation based on modern methods, some of them of Norwegian origin, was created. Subsequent events, of which the 1920s crisis of the Norwegian export industry and the way that was tackled, hurt the export industry badly and created the foundation for those negative interpretations of Norwegian industry.

It should not come as a surprise that there has been no historical study of the rise of big business in early twentieth century Norway that took direct inspiration from Alfred D. Chandler's analysis of the divorce of managerial control from share ownership in the USA.[2] Indeed, if this kind of managerial capitalism is a theme of itself in Norwegian historiography, it is as part of those studies of Americanisation of Norwegian business after World War II.[3] Not only is Norway a small country, Norway have – and had at the time – a very small home-market and a very international economy. USA had the world's largest home market, and prior to World War II it was growing and with very little international competition. There was simply no way for Norwegian export businesses to invest in such huge marketing operations as those that characterised the nationally oriented big businesses of the USA. Yet this paper

[1] Francis Sejersted, *Demokratisk Kapitalisme: Revidert Utvalg*, [Rev. utg.]. ed., Sejersted, Francis (Oslo: Pax, 2002), 18; Hallgeir Gammelsæter, *Organisasjonsendring Gjennom Generasjoner Av Ledere: En Studie Av Endringer I Hafslund Nycomed, Elkem Og Norsk Hydro*, vol. 9114, Rapport (Møreforsking : Trykt Utg.) (Molde: Møreforsking Molde, 1991).
[2] Alfred D. Chandler, *Scale and Scope: The Dynamics of Industrial Capitalism* (Cambridge, Mass: Belknap Press, 1990).
[3] Rolv Petter Amdam and Knut Sogner, "The Diffusion of American Organisational Models to Norwegian Industries, 1945-1970," in *Americanisation in 20th Century Europe: Business, Culture, Politics*, ed. Matthias Kipping and Nick Tiratsoo (Lille: Centre d'Histoire de l'Europe du Nord-Ouest, Université Charles de Gaulle, 2002).

will take the divorce of managerial control from share ownership as its general starting point, and will subsequently show that similar processes to those described by Chandler also emerged in Norway. In Norway, however, the process was reversed in the interwar period.

In the first three parts of the paper, I set out the argument for a Norwegian-style managerial capitalism. In the first part an interpretation of Norwegian business at the turn of the last century is presented. Then I argue that that landmark events of Norwegian business entrepreneurship at the turn of last century include a larger Norwegian contribution than what has previously been acknowledged. In the third part I go into a number of cases which are more typically examples of managerial capitalism. In the last part I explain how this coming of managerial capitalism stagnated, stopped and even reversed in the interwar period.

The Norwegian capitalist tradition

The leading interpretation of the Norwegian economic development in the period in question, is the Norwegian historian Francis Sejersted's concept of "Democratic capitalism", emphasizing the role of long term political dimensions of the Norwegian society. According to Sejersted, Norway at the turn-of-the-century was unable – or unwilling – to take the steps that Sweden and other countries did to "organise capitalism", i.e. create the institutional foundations necessary to build a modern economy.[4] In Sejersted's words: "What modern institutions did Sweden have that Norway lacked? Sweden had a national heavy-industry sector that asserted itself internationally. The country had a banking system capable of serving such industry. Moreover, it had had technical universities for a long time. It also had a Companies Act that regulated the modern forms of capital association with limited liability. None of this was to be found in Norway."[5]

Norway had been shaped by its nobility-abolishing constitution of 1814 and strong local forces sceptical of the rise of centralised national power. Sejersted's analysis combine an interpretation of institutional trajectories with a diagnosis of mild economic backwardness. Norway had not prepared for the education of engineers, nor sorted out the legal regulations of business. And banks were local, not national. And that was part of the institutional

[4] Sejersted is inspired by Rolf Torstendahl, *Bureaucratisation in Northwestern Europe, 1880-1985: Domination and Governance* (London: Routledge, 1991).
[5] Francis Sejersted, *The Age of Social Democracy: Norway and Sweden in the Twentieth Century*, Sosialdemokratiets Tidsalder (Princeton: Princeton University Press, 2011)., p. 11.

tradition, banks should not become dominant entities redistributing means from locality to locality. The core of Norwegian society in general and the economy in particular was the petite bourgeoisie. Sejersted does not explicitly say so, but his is an interpretation of Norwegian capitalism as characterised by families.

Yet there are reasons for departing somewhat from Sejersted. Sweden was more industrialised than Norway, yet Norway had a large shipping sector that Sejersted hardly brings into his analysis. That shipping sector did not need technical universities in the same way as the heavy industry of Sweden. In a similar vain, even if Norway lacked the larger investment banks that Sejersted saw in Sweden, ownership associations like those found in Norway is an alternative way to amass capital.[6] And therein is a reason for scepticism against powerful banks, namely rich families.[7] Norway had up until the outbreak of war in Europe in 1914 roughly experienced the same economic growth as other European countries since the 1840s, creating wealth and divisive social structures.[8] There was certainly an element of vitality in the Norwegian economy at the time. Recent research has shown how Norway had the highest density of corporations among European countries in 1910: a nation of companies.[9]

Sejersted – as influential historians before him – emphasizes the modernising role of the state.[10] Here there is reason to portray the Norwegian development as pertaining to a civil societal model that Sejersted is not addressing, and one that would be wrong to characterize as backward. There were “rules of the game” and practices that concerned business that was not anchored in the state. In 1910 – the year Norway got its new Companies Act – there existed 118 companies in Norway with share capital of more than 1 million kroner.[11] These by Norwegian standards fairly rich companies reflected both long term economic growth and strong entrepreneurial activity since the 1890s. Contrary to what people in Norway were

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[6] Knut Sogner and contributions from Sverre A. Christensen, *Plankeadel: Kiær- Og Solberg-Familien under Den 2. Industrielle Revolusjon* (Oslo: Andresen & Butenschøn/Handelshøyskolen BI, 2001).
[7] Haagen Krog Steffens, *Norske Slægter 1912* (Kristiania: Gyldendalske Boghandel, 1911); *Norske Slægter 1915* (Kristiania: Gyldendalske Boghandel, 1915).
[8] Jørgen Modalsli, Rolf Aaberge, and Anthony B. Atkinson, "On the Measurement of Long-Run Income Inequality: Empirical Evidence from Norway, 1875-2013," (Statistics Norway, Research department, 2016).
[9] Leslie Hannah, "A Global Corporate Census: Publicly Traded and Close Companies in 1910," *Economic History Review* 68, no. 2 (2015).
[10] Jens Arup Seip, *Utsikt over Norges Historie: Første Del*, Gyldendals Fakkel-Bøker (Oslo: Gyldendal, 1974).; Francis Sejersted, *Demokratisk Kapitalisme* (Oslo: Universitetsforlaget, 1993).; Rune Slagstad, *De Nasjonale Strateger* (Oslo: Pax Forlag, 1998).; Pål Thonstad Sandvik, *Nasjonens Velstand : Norges Økonomiske Historie 1800-1940* (Bergen: Fagbokforlaget, 2018).
[11] Det statistiske centralbyraa, *Aktieselskaper 1910. Med Oversigt over Utviklingen Fra 1891* (Kristiania: Aschehoug, 1912).

concerned with in those days following very recent (1905) political independence of Sweden and newfound intense foreign interest in Norwegian natural resources, 109 of these 118 "million kroner companies" were registered as Norwegian (though the most capital-rich indeed had foreign owners). These 109 companies are representatives of the strong surge of Norwegian capitalism.

Norwegian capitalism grew out of a strong private – civil, and quite possibly family-dominated – tradition of freedom of contract established in 1688.[12] Until the 1910 Companies Act, all matters of business law were founded in private contracts and a judicial system that ruled with strong emphasis on respect for these contracts. There were, of course, laws about bankruptcy and mortgage. Central to a capitalist culture in Norway was the way freedom of contract was applied. In the words of law professor Oscar Stoud Platou with regards to the situation as it had unfolded until the end of the nineteenth century: "..the Danish-Norwegian development went its independent way, in all probability under influence of the three Hanseatic states' customary law; one could freely establish companies, whose members' only liability was its deposit [stock] – anonymous, unnamed limited liabilities companies – the so called "freedom of contract" system."[13] The longevity of the freedom of contract system in Norway and Denmark is quite remarkable internationally.[14]

Starting companies was much more difficult elsewhere in Europe with a high degree of state involvement. Such a free system – without an overarching company law – could not function without common principles, strong peer trust and the importance of reputation. That the Company's act came so relatively late as it did – but seven years prior to Norway's legal sister Denmark – is by Sejersted seen as an indicator of Norway being a laggard in modernisation.[15] But it may have been the other way around, that a law was not really needed because the system was functioning so well. The law came at a time, it must be emphasized, when the size of the capital deposit to an increasing number of industrial enterprises was growing tremendously, hence a growing need to protect with a law the assets of the limited liability company.

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[12] Nils Rune Langeland, *Siste Ord: Høgsterett I Norsk Historie 1814-1905*, vol. 2 (Oslo: Cappelen, 2005); Oscar Stoud Platou, *Forelæsninger over Norsk Selskabsret. Om Aktieselskaber, Kommanditselskaber Paa Aktier, Og Foreninger*, vol. 2 (Kristiania: I kommission hos T. O. Brøgger, 1911).
[13] *Forelæsninger over Norsk Selskabsret. Om Aktieselskaber, Kommanditselskaber Paa Aktier, Og Foreninger*, 2, 18.
[14] Inger Dübeck, *Aktieselskabernes Retshistorie* (København: Jurist- og Økonomiforbundets Forlag, 1991).
[15] Sejersted, *The Age of Social Democracy: Norway and Sweden in the Twentieth Century*.

While the general framework of Sejersted is sound, there are reasons to question his interpretation of Norway as backward. He is also underestimating a more powerful and resourceful part of the bourgeoisie, and there are identifiable families that took important roles at the turn of last century. Members of Norwegian families collaborated within the family and with members from other families.[16] Andresen (two branches), Astrup, Fearnley, Kiær, Kiøsterud, Løvenskiold, Olsen (Fred.), Schjelderup, Solberg, Treschow, Wilhelmsen are some of the more known of these families. The whole idea of important families was found in books written by historians of that day and age, outlining the various ways family members had made contributions to the Norwegian society and business.[17]

Norway was like most countries at the time economically dominated by people coming from fairly affluent backgrounds. At the turn of the century, new technology in production and transport demanded an increasing need of capital, which of course could most easily be fulfilled by people with the necessary means themselves or the connections to solve it for them. Or to bring in foreign investors to Norway. And if the attention is turned to table 1, it is easier to understand how Sejersted sees the Norwegian bourgeoisies as weak.

Table 1 is an attempt to highlight the largest economic entities of the Norwegian economy at the turn of last century. It is based on a thorough investigation by Statistics Norway over Norwegian joint stock companies. Mutuals are therefore not counted. In order to find an approximate value for the real business entities, I have added independent companies with the same owners (or just about) together into one entity using the number from Statistics Norway, and these bundled-by-the-author entities are in cursive fonts in the table.

Table 1. Largest Norwegian business entities by capital 1910 in million kroner

1. *Norsk Hydro (synthetic fertilizer)*	84.6
2. DnC (commercial bank)	16.0
3. *Kellner-Partington (pulp and paper)*	14.1*
4. *Hafslund (electricity and smelting)*	13.2**
5. Sydvaranger (iron ore)	12.0
6. *Kiær-Solberg group (pulp, paper, planks, metal)*	10.6
7. Centralbanken for Norge (commercial bank)	10.5

[16] Knut Sogner and Sverre A. Christensen, *Plankeadel: Kiær- Og Solberg-Familien under Den 2. Industrielle Revolusjon* (Oslo: Andresen & Butenschøn, 2001); Knut Sogner, *Andresens: En Familie I Norsk Økonomi Og Samfunnsliv Gjennom to Hundre År* (Oslo: Pax, 2012).

[17] Steffens, *Norske Slægter 1912*.

8.	*Orkla (pyrite mining)*	8.0
9.	Sulitjelma (pyrite mining)	7.0*
10.	Union (pulp and paper)	6.0
11.	Bergen Kreditbank (commercial bank)	6.0

Source: Det statistiske centralbyraa. Aktieselskaper 1910, Kristiania: Aschehoug 1912
*Taxed assets, not share capital. Foreign owned
**Partly taxed assets, and therefore not solely based on share capital. Share capital not included in the above source. Source for Hafslund's share capital: Carl Just, *Aktieselskapet Hafslund 1898-1948*, (Oslo: Fabritius 1948)

Table 1 shows directly and indirectly the strong foreign influence in the Norwegian economy at the turn of the last century. Three of the eight largest *industrial* entities were wholly or partly foreign companies. Of the remaining five, three had large foreign share capital. Only the Kiær-Solberg group and Union were Norwegian through and through, although all the three commercial banks were.

The largest company by a very long way, was Norsk Hydro. Building a production system from scratch for producing synthetic fertilizer for the global market, was a huge investment anywhere.[18] Producing electricity, fertilizer in several steps, transport systems etc., commanded the greatest capital investment in Norway at the time. And the strong foreign influence of the early ownership of Norsk Hydro has in a subtle way come to symbolize Norwegian inadequacy. The Swedish historian Olle Gasslander in his book on the Wallenberg-family and their bank Stockholms Enskilda Bank's industrial influence, emphasizes that even if Sweden, too, industrialised with the help of significant amounts of foreign capital, the Wallenbergs and other Swedish banks were able to borrow foreign money and invest directly and indirectly that money in Swedish industry.[19] In Norway, on the contrary, foreign money was channeled directly into ownership positions of companies like Norsk Hydro. The Wallenbergs were in Norway too, as foreign investors in Norsk Hydro, Orkla and Sydvaranger.

While Sejersted's interpretation takes inspiration from Gasslander's analysis, it is the purpose of this paper to continue to modify Sejersted's view of the Norwegian development. The important distinction between "loan" and share capital" that Gasslander introduced is to be

[18] Ketil Gjølme Andersen, *Flaggskip I Fremmed Eie: Hydro 1905-1945*, vol. 1 (Oslo: Pax, 2005).
[19] Olle Gasslander, *Bank Och Industriellt Genombrott: Stockholms Enskilda Bank Kring Sekelskiftet 1900*, vol. 1 (Stockholm1956); *Bank Och Industriellt Genombrott: Stockholms Enskilda Bank Kring Sekelskiftet 1900*, vol. 2 (Stockholm1959).

supplemented by the term "managerial control" in order to paint a wider picture that includes a greater Norwegian contribution to the country's economic development.

Giantism in a small country

Although the influence of foreign capital and foreign interest were great in the capital-rich new Norwegian corporations at the turn of last century, there was also a very strong Norwegian managerial influence. In several of these large investments, a Norwegian engineer played leading roles. That entailed getting the production system off the ground, but also included sophisticated dealings with the formation and development of that ownership group that included foreign capital. A pattern is clearly emerging: Building big business in Norway was steered by Norwegians, and they were very concerned how their business should be positioned internationally.

The first such instance is not included in table 1. Christian Christophersen, originally a machine importer, took a leading role in Scandinavia in general and Norway in particular in organizing sales of, in particular, the new pulp and paper products that was rapidly emerging in the 1890s.[20] He was instrumental in the formation of the three Scandinavian cartels of 1893 and 1894 for wet pulp, dry pulp and paper, but more than anything he organised the sales of these products for Norwegian producers. Norway had been the world's largest exporter of timber, planks and boards, and took a leading role from the 1870s in the new product wet pulp, in particular for the use in newspaper paper. When, in the 1890s, Norway began to export dry pulp and ready-made paper, Christophersen took a leading role in organizing sales. He represented a number of producers, in particular he was strong in the British market. Exacly how large a business he ran is difficult to say, but he was the agent for all of Union – traditionally the largest Norwegian-owned producer of pulp and paper and big enough to be part of table 1 – and several other producers. In all probability, he ran the largest Norwegian economic entity of its time. When his business collapsed in 1899 that became the starting point for the economic crisis in Norway known as the "Kristiania crash". Christophersen had

[20] Kåre Fasting, *Den Norske Papirindustris Historie: 1893-1968* (Oslo: Norske papirfabrikanters felleskontor, 1967); Arnljot Strømme Svendsen, *Union 1873-1973: En Norsk Treforedlingsbedrifts Liv Og Eksistenskamp* (Oslo: Aschehoug, 1973).

lost his financial control and had overstretched through his complex number of tasks as financer and owner of some of the companies he represented.

Christophersen ran the type of business that in USA at the time was merged into large companies.[21] At this time, when production facilities for wet pulp and paper were in their early development phases, there was probably very few technical advantages of creating large enterprises. When he failed, his "virtual corporation" disintegrated. The Norwegian factories in Christophersen's network continued according to their abilities after the collapse, and for some of them, who only used Christophersen as an agent, little was lost.[22]

Christophersen's actions came in parallel – and, clearly to some extent in response – to the British-Austrian establishment of The Kellner-Partington Paper Pulp Company in 1889 and the subsequent purchase of the Borregaard estate in South Eastern Norway later the same year.[23] Such a huge foreign investment in a central location of Norway was a shock to the Norwegian business community. Kellner-Partington, with plants in Austria and Norway, wanted to utilize scale advantages. But although Edward Partington and Karl Kellner themselves were engineers, their Norwegian business – run by the experienced Norwegian engineer Oscar Pedersen – became their most successful branch. Pedersen – originally Karl Kellner's contact – negotiated the Norwegian purchase, built and developed the Norwegian dry pulp plant that was based on Kellner's design. In subsequent years Pedersen built the Norwegian part of Kellner-Partington into a major pulp and paper producer, and the company integrated backward into owning large woodlands in south-eastern Norway. While Pedersen worked closely with Partington, he also exercised managerial control and initiative. In reality, his influence was a major factor of Kellner-Partington's success.

The foreign interest in Norwegian natural resources pushed Norwegian entrepreneurs into action. The Kiær-Solberg group was the main seller of woodlands to Kellner-Partington in south-eastern Norway.[24] Members of the Kiær og Solberg families had intermarried and done business with each other since the early 1800s. They ran several businesses, but primarily a huge sawmill with corresponding woodlands in the "plank city" of Fredrikstad along the

[21] For USA, see Alfred D. Chandler, *The Visible Hand: The Managerial Revolution in American Business* (Cambridge, Mass: Belknap Press, 1977).
[22] Trond Bergh and Even Lange, *Foredlet Virke: Historien Om Borregaard 1889-1989* (Oslo: Ad Notam forlag, 1989).
[23] Ibid.
[24] Sogner and Christensen, *Plankeadel: Kiær- Og Solberg-Familien under Den 2. Industrielle Revolusjon*.

Glomma river, downstream from the Kellner-Partington and Hafslund operations (see below). The right for Norwegian merchants and sawmill owners to float timber on the Glomma river pass the Kellner-Partington and Hafslund properties respectively was an important obstacle that was overcome in discussions of the establishments of these new enterprises. But, somehow, the writing must have been on the wall, and in 1895 four cousins of the Kiær and Solberg family established And. H. Kiær & Co. Ltd. with a share capital of four million Norwegian kroner, making it one of Norway's largest companies (almost qualifying for table 1 by itself, and would easily have been on an 1895 list). Other family members were also shareholders, with the four cousins as managerial partners with a right to extra profit.

The 1902 sale of woodlands to Kellner-Partington came as a huge surprise. That turned out, however, to be the starting point for the Kiær-Solbergs to make much larger purchases of woodlands, factories, mines and metallurgical companies in Trøndelag in mid-Norway (Trøndelag, the area around Trondheim). These holdings were later expanded by Swedish purchases connected by the railway to Trøndelag. The family owned by 1910, through the company And. H. Kiær & Co. Ltd and as individuals, significant parts in other properties, not least in the same industry in Northern Sweden. They also kept significant ownership of woodlands and factories alongside Glomma. The total capital behind all of this was, unadjusted for loans, much larger than what comes through in table 1. Their business model, so to speak, was modernization: scientific cultivation of the woods, improvement of factories, a shift from planks and board to wet pulp and paper. They also played important roles in organizing international sales from these industries as well as some metallurgical branches.

Hafslund, another traditional estate that just like Borregaard (that was bought by Kellner-Partington) was located alongside Norway's longest river Glomma, was from 1898 built into a major electricity-producer by the Norwegian engineer Knud Bryn.[25] The original idea was to use the electricity for large-scale industrial purposes like aluminium, and a smaller calcium carbide factory was indeed built, but the whole venture was integrated into supplying electricity to the rapidly growing capital of Norway, Kristiania (later renamed as Oslo). Although Norwegian actions had moved to keep foreign capital outside of Hafslund, the German company Schuckert came to own half of Hafslund when the dust of hardship settled

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[25] Carl Just, *Aktieselskabet Hafslund: 1898-1948* (Oslo: Fabritius & Sønner Trykkeri, 1948).

after the 1899 Kristiania crash. Expanding upon its start in the Hafslund waterfall, Hafslund, the company, added additional waterfalls and became quite a large corporation in the 1910s.

The huge and dominating investment, however, was the establishment of Norsk Hydro for nitrogenous synthetic fertilizer.[26] Norsk Hydro was based on a Norwegian invention, the Birkeland-Eyde process, as well as on the electricity producing waterfalls of Norway. Again, the Norwegian entrepreneurial effort is striking. In this instance, Sam Eyde was the forceful and ingenious co inventor and innovator of the huge product system and the financial connections with which to realise an enormous task. Eyde, a German-educated buildings-engineer by profession, was born into one of Norway's rich shipowner-families and a man with manners to court the European high finance.[27] Eyde, who had considerable charm, was able to lure the Swedish bankers of the Wallenberg family into financing Norsk Hydro, and the Wallenberg opened the doors to the even bigger financial group of France, Paribas. And it was Paribas that through its network of customers financially lifted Norsk Hydro into existence (hence Gasslander's points about investing directly in Norwegan companies).

Norsk Hydro – planned for global sales with a major new innovation – was too big for Scandinavian financers alone. And the Wallenbergs were the preeminent institution for industrial finance, and when Eyde teamed up with them Norway was still in political union with Sweden. While such a venture hardly can be seen in itself as a failure of Norwegian banks at the time, a pattern was clear. Foreign capital, and thereby, it must be presumed, easier access to foreign markets, was important for the establishment of a new knowledge-intensive capital-rich industry at the turn of the last century. Another pattern was equally important, though, that of the Norwegian managerially and technically quite independent role in establishing these businesses.

Oscar Pedersen did exercise managerial control, but he collaborated very well with owner Edward Partington too – Pedersen was a man within his bounds, so to speak. Knud Bryn of Hafslund also seemed to have been mild-mannered, yet did play an architect's role. His room for action in the years following Hafslund's inception seems to have been hindered more by economic realities than ownership control. Christian Christophersen and Sam Eyde were both architects and powerful people, although in very different ways. Christophersen was a

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[26] Andersen, *Flaggskip I Fremmed Eie: Hydro 1905-1945*, 1.
[27] Ole Kristian Grimnes, *Sam Eyde: Den Grenseløse Gründer* (Oslo: Aschehoug, 2001).

networker, an organiser, a spider in a web. Eyde challenged his owners in several ways, and at times became unbearable for them. He was pushed aside a couple of times, but did make comebacks based on his superior insights into the operation, his people skills within the organisation, as well as his ability to play different ownership interests against each other. Eyde was a master of unearthing that different owners may very well have different interests.[28]

The three large mines from table 1 – Orkla, Sulitjelma and Sydvaranger – had complicated beginnings, but seem to have used well-known techniques rather than the ideas of adventurous managers.[29]

The establishment of Norwegian big business would not have been possible without the role played by strong Norwegian engineers. They commanded foreign capital interests' respect, most obviously because they were able to plan and deliver solid business results. To a great degree their command of the technical challenges and, of course, though not a theme here, the national regulatory challenges, they exercised managerial control. With the strong capital interests present in all of these large enterprises, this was hardly any kind of managerial capitalism. And as these years around the last turn of the century was characterized by new venture creation and all that entailed in terms of uncertainties, the managerial effort thus far analysed was more or less transitional.

Norwegian style managerial capitalism: United families of Norway

The situation described above with three largest companies of Norway being dominated by foreign capital, sat uneasy within the Norwegian society. This contributed to the Concession laws – between 1906 and 1918 – which made government approval of foreign acquisitions of waterfalls, mines and other real estate obligatory.[30] These foreign activities also contributed to

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[28] Andersen, *Flaggskip I Fremmed Eie: Hydro 1905-1945*, 1.
[29] Trond Bergh, Harald Espeli, and Knut Sogner, *Brytningstider: Storselskapet Orkla 1654-2004* (Oslo: Orion, 2004); Kåre Fasting, *Aktieselskabet Sydvaranger 1906-1956 : Trekk Fra Sydvarangers Historie* (Oslo: s. n., 1956).
[30] Lars Thue, "Norway: A Resource-Based Democratic Capitalism," in *Creating Nordic Capitalism. The Business History of a Competitive Periphery*, ed. Susanna Fellmann, et al. (Basingstoke Palgrave Macmillan, 2008).

an ambitious industrial strategy involving Norwegian families, and it was really through this family capitalism that a Norwegian-style managerial capitalism emerged in the 1910s.

Table 2 gives a summary of the coming of managerial capitalism, and the style of managerial capitalism is divided into two. In two instances something similar to a divisional model was introduced. The rest of the instances are examples of strong managerial influence over the initiation and development of long-term business strategies.

Table 2. Managerial capitalism in Norway

Organised "divisions" in a multi product company:	Hafslund (1919?-1928)
	Storebrand (1918--)
Manager-led expansionary activities	The Kiær-Solberg group
	Det Oversöiske Compagnie (1913-1920)
	Borregaard (1917--)
	Norsk Hydro (1920—1927)

Source: Various (to be specified)

The Kiær-Solberg family was involved in both of the two kinds of managerial capitalism.[31] Their large-scale effort of building a vast industrial complex would not have been possible without their managers in general and "tall and dark" in particular. "Tall and dark", that is the literal translation of the surnames of Iver Høy and Kristoffer Mørch, two independent managers who played important parts in the growth of the companies that Kiær and Solberg and associates involved themselves. Kristoffer Mørch was the overall technical expert of all the pulp and paper ventures, which were the complicated and capital-consuming parts of the family's operations. Mørch covered enormous ground, restructuring and building factories in Norway, Sweden, Finland and Russia, and corresponded with factory managers in all of these places. He also communicated with other engineers who built factories. He was behind some of the largest factories of his time, and his building of the Enso factories in Finland in the 1910s was probably the largest of his constructions. The Kiær-Solberg-family was from 1910 minority owners of the Norwegian-owned Finnish company Gutzeit, and were instrumental in

[31] Sogner and Christensen, *Plankeadel: Kiær- Og Solberg-Familien under Den 2. Industrielle Revolusjon*.

Gutzeits's purchase of Enso, and, as mentioned, through Mørch they commanded the capabilities to build a large modern plant at the Enso site.

Kristoffer Mørch's efforts made the Kiær-Solberg group into a "virtual corporation" consisting of several formally independent companies. He connected the various companies by integrating their technology. To run such a geographically extensive operation, with various different other minority owners involved, would have been impossible without Mørch's expertise. Yes, he was an employee who communicated closely with Elias Kiær, the principal of the Kiær-Solberg group, but the knowledge he submitted and put into various kinds of considerations was a driving factor of the Kiær-Solberg group. He was close with other preeminent engineers of the time and compared notes with them. There was a technical network that factory owners could tap into, and that had the competence to define future action. Mørch has written his (unpublished) memoirs, too, pointing out various differences of opinion between him and his owners.

While Mørch was not formally a manager with the right of attorney, Iver Høy was. Iver Høy was manager of Meraker Smelteverk, originally a small factory in mid-Norway (Trøndelag) producing calcium carbide that was acquired along with a large property of woodlands and mineral deposits.[32] When members of the Kiær family played important parts in the acquisition of the German shares in Hafslund in 1916, and Hafslund in 1919 bought the carbide factory that was independently and foreign owned, Iver Høy became that company's manager was well. And when the Kiær-Solbergs involved themselves in 1924 in the financial reconstruction of the large carbide and cyanamide producer of western Norway, North Western Cynamide, rechristening the bankrupt company to Odda Smelteverk, Iver Høy became manager of that company too.[33] Primarily located at Hafslund's headquarters in Oslo, Høy was one of three managers of Hafslund with power of attorney. He was quite an independent manager of three different factories, all with different owners (but with significant overlap and involving the Kiær-Solberg), and he was an experienced operator in the international cartels relevant for his companies. The industrial effort he led had quite an upside potential as both the Hafslund and the Odda operations possessed huge electricity

[32] Ibid.
[33] Knut Sogner, "Norwegian Capitalists and the Fertiliser Business: The Case of Hafslund and the Odda Process," in *Determinants in the Evolution of the European Chemical Industry, 1900-1939: New Technologies, Political Frameworks, Markets, and Companies*, ed. Harm G. Schröter Anthony S. Travis, Ernst Homburg, Peter J.T. Morris (Dordrecht: Kluwer Academic Publishers, 1998).

resources. In 1928 the Odda plant also invented an important new process to make three-component fertilizer.

The rapid rise of Det Oversöiske Compagnie – the overseas company – during World War I was an exercise in managerial capitalism.[34] Managing director Christian Lorentzen, a long-time friend of Elias Kiør, the managing partner of the Kiær and Solberg family, with a background as secretary to Christian Christophersen in the 1890s, organized a global trade company to sell Norwegian produce. Det Oversöiske Compagnie had offices almost all over the world, and was particularly tied up with Norwegian shipping interest. A large capital was raised and reached 15 millioner kroner in 1918, and the elite of Norwegian investors took part in the diverse ownership. Det Oversöiske Compagnie represented an ownership amalgamation of "the united families of Norway", which is to mean that leading investors and ship-owners flocked to be part of the company. The trust in the managing director was high. Several Norwegian factories making various kinds of wooden products were acquired. Det Oversöiske Compagnie functioned as a holding company for these factories, as well as having a formidable sales organization in cities in North and South America, east and west coast, South Africa, most of Asia, as well as in Europe. Lorentzen in 1917 wrote to a business associate heavily involved in wooden products that they should merge and then work to consolidate the whole of this business in Scandinavia – in the perceived continuation of the Christophersen model of the 1890s.

At that time of suggesting a Nordic consolidation of the wood-based industries of the Nordic countries, the largest paper and pulp company of Norway, Kellner-Partington, was for sale.[35] The Kiær-Solberg family had teamed up with the Fearnley family who controlled Union, but they lost the bidding war to a large group of smaller landholders. Rechristened Borregaard after the estate where Kellner-Partington started in Norway, the company was one of Norway's largest with factories in Austria and in England. The head of the consortium that acquired Kellner-Partington, the lawyer Hjalmar Wessel, had just seen himself as chairman of the board, but for various reasons in 1918 he became chief executive officer as well. Combining this with being chairman of the board of a large corporation with a fairly large group of owners, Wessel became a very powerful man. The reason he obtained such an influential position is of course to be found in the successful role he had played as leader

[34] Sogner and Christensen, *Plankeadel: Kiær- Og Solberg-Familien under Den 2. Industrielle Revolusjon*.
[35] Bergh and Lange, *Foredlet Virke: Historien Om Borregaard 1889-1989*.

among those who acquired Borregaard. This gave him a platform, and he developed Borregaard into a larger company, in particular emphasizing the building of an international sales force. When he suddenly died in 1933, his successor, another lawyer, inherited Wessel's powerful position.

In many respects, Borregaard's development mirrored that of Norsk Hydro. Once Sam Eyde in 1916 had been replaced as chief executive officer of Norsk Hydro by Harald Bjerke, the management of Norsk Hydro gained the confidence of its owners.[36] While the 1910s was used to build a sales organization, Norsk Hydro under Bjerke's leadership developed a research and development organization with central laboratory operating independently of its fertilizer business, and under managerial control.[37] This had few results, however, and was closed down by the new chief executive officer who replaced Bjerke when the board decided that the company's Birkeland-Eyde process was greatly inferior to IG Farben's Haber-Bosch process. In 1927, Norsk Hydro started to use the Haber-Bosch process, and amongst the prices Norsk Hydro had to pay was to have IG Farben as a significant owner. The subsequent commercial success of Norsk Hydro led, however, in the late 1930s to revival of managerially steered research and development.

An important point is that the chairman of Norsk Hydro, Marcus Wallenberg, who was also chairman of the mining company Orkla in the same period, from around 1910 to 1940,[38] created space for the building of managerial hierarchies. Perhaps it was important that the Wallenbergs in the first half of the 1920s almost sold all their shares in Norsk Hydro.[39] But a more probable explanation is that Marcus Wallenberg was very concerned with building strong and trustworthy managerial hierarchies that could be counted on to work independently in a responsible way. Wallenberg, who by the 1920s had a long track record as board member and banker for Norwegian corporations and was therefore well integrated into Norwegian business circles, was a man who could command the necessary respect to deal managers rooms for manoeuvre. He fronted the company before the Parisbas-network and an increasingly large group of Norwegian investors.

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[36] Andersen, *Flaggskip I Fremmed Eie: Hydro 1905-1945*, 1.
[37] Ketil Gjølme Andersen and Gunnar Yttri, *Et Forsøk Verdt: Forskning Og Utvikling I Norsk Hydro Gjennom 90 År* (Oslo: Universitetsforlaget, 1997).
[38] From 1909 to 1941 in Norsk Hydro and from 1913 to 1943 in Orkla.
[39] Andersen, *Flaggskip I Fremmed Eie: Hydro 1905-1945*, 1, 265.

In Norsk Hydro a situation of calm and prosperity opening up for managerial initiative occurred when Sam Eyde was sacked. Such a situation also occurred in Orkla once Swede Nils Erik Lenander was found internally in 1921 as a suitable candidate for chief executive officer of Orkla.[40] Lenander led the development of an important process development to disentangle the various minerals in the mined pyrite, leading to "the Orkla process" that could separate pure sulphite out of the pyrite mineral. Orkla could thereafter operate both in the pyrite cartel and the cartel for pure sulphite, this giving a much better bargaining position and a role to coordinate between the two cartels. Lenander did a magnificent job, but he did cooperate very closely with his board. Lenander probably had it in him to be a more independent leader and he did come with suggestions to expand Orkla in new directions in 1930. But this was turned down by the increasingly Norwegian-dominated and controlling board.

The last instance of a managerially dominated company is the property insurance company Storbrand.[41] Possibly the largest Norwegian private insurer of the 1910s, in a business that was not very concentrated, Storebrand "divisionalised" from 1918 in order to organise a more diversified business. Going from Norwegian fire insurance to maritime insurance and international fire insurance, Storebrand reorganised gradually to accommodate increasingly independent businesses. The 1918 change was one of principle, clearly decentralising responsibilities, budgets and accounts, and was at the outset partially completed. By the 1930s the divisionalised structure was more fully accomplished. Storebrand was a pioneering Norwegian insurance company established as a private company in 1847, and the changes commenced in the 1910s propelled Storebrand into a rather successful international reinsurance company with a New York office.

The Norwegian-style managerial capitalism is quite comparable to the American-style. The Storebrand- and Hafslund-cases are principled developments in the direction of divisional structures making managers both responsible and in command. The Norsk Hydro-case, the virtual company of the Kiær-Solberg family, the growth of Det Oversöiske Compagnie and Borregaard after 1917, are significant examples of how managerial influence – managerial capitalism – was established in large Norwegian business entities in the 1910s and 1920s. One

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[40] Bergh, Espeli, and Sogner, *Brytningstider: Storselskapet Orkla 1654-2004*.
[41] Espen Ekberg and Christine Myrvang, *Ulykkens Frukter: Storebrand of Forsikringsbransjens Historie 1767-1945*, vol. b. 1 (Oslo: Universitetsforlaget, 2017).

might classify this as a kind of natural development of the rise of capital-intensive business, but the extent and nature of its footing in Norway points to some kind of ideological background. Leaders and owners must have talked to each other about ways to deal with size and complexity of action.

The fall

But the Norwegian development of managerial capitalism was not to take root and develop into something more elaborate and lasting. Norsk Hydro as a managerially important company survived, somewhat, although its 1927-crisis stopped managerially led research and development for roughly a decade. Borregaard, too, continued more or less as before during the interwar period, balancing its problem business in Norway by taking advantage of its successful Austrian operations. These two companies started the post World War II period as Norway's strongest. Storebrand, too, the insurance company, survived intact. But in none of these cases managerial capitalism can be said to have deepened. In all of the other cases, managerial capitalism was abandoned.

The export business of Norway was generally hit very hard during the interwar period. There are mainly two reasons why this became so important. Because of Norway's large international involvement, also in shipping, the Norwegian banks were hard hit, too, when the export industry was in deep trouble following the crisis commencing in the summer of 1920.[42] The two largest Norwegian banks came under state supervision in 1923 and was eventually discontinued. Norway also "constructed" its own "high exchange rate"-induced crisis in 1925—8 because of its policy to peg the Norwegian krone back to prewar value against gold. Among those countries that steered their currency back to the old prewar value, and did not devalue, Norway had the longest way to go, probably the highest interest rates, and consequently the worst development of terms of trade.[43]

Det Oversöiske Compagnie was first to go.[44] The company went bankrupt already in late 1920 when the losses of the Java office set in motion a more profound breakdown, which, of course, was a consequence of loss of markets everywhere in that difficult year. That a

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[42] Sverre Knutsen, "Staten Og Kapitalen I Det 20. Århundre: Regulering, Kriser Og Endring I Det Norske Finanssystemet 1900-2005" (Det humanistiske fakultet, Universitetet i Oslo Unipub, 2007).
[43] C. H. Feinstein, Peter Temin, and Gianni Toniolo, *The European Economy between the Wars* (Oxford: Oxford University Press, 1997).
[44] Sogner and Christensen, *Plankeadel: Kiær- Og Solberg-Familien under Den 2. Industrielle Revolusjon*.

valuable company should fall to pieces like a house of cards almost instantly in a time of crisis may not shed a positive light back on earlier efforts, not least since its chief executive officer had been somehow involved in a similar breakdown in 1899. But, as they say, these things happen.

The virtual corporation of the Kiær-Solberg family did not go down quickly, and in a sense the main people survived. That that empire slowly was dissolved, had a lot to do with the awkward situation evolving in Russia. During the 1910s, a paper and pulp company was built in Dubrowka near St. Petersburg. The investment was large, but the real problem was that the investors – led by the Kiær-Solberg-family – had guaranteed for its quite significant bank loans. So when the Bolscheviks nationalized the plant in 1918, Dubrowka's investors sat with a huge debt in Norwegian kroner, a debt that increased in value as the Norwegian krone appreciated in value during the 1920s. Gradually, the Kiær-Solberg-family sold assets, which meant that a virtual big company was dissolved into pieces. The reverse happened in Sweden in the 1920s, as the more solid Swedish banks consolidated the paper and pulp industry into larger entities.[45] The fall of the Kiær-Solberg empire was the most significant backlash of managerial capitalism in the interwar period in Norway.

The most dramatic individual incident was, however, the shareholder revolt of Hafslund in 1928 onwards. Hafslund was a solid company, but not as profitable as some of its owners wanted. In 1928 costs were cut, the organization simplified, and the divisionalised model dissolved. Its founder, Knud Bryn, who was anyway an older man, was removed as chief executive officer. In 1937, Odda Smelteverk was sold. Odda Smelteverk, with large plants and an internationally admired process for making three-component fertilizer, was until the Wall Street crash seen as possible platform for a great industrial expansion. Instead, the process has been used elsewhere, by Norsk Hydro amongst several large companies. The entity of three factories that Iver Høy had led, was dissolved too. First, the Kiær-Solbergs sold Meraker Smelteverk, and then Odda Smelteverk was sold in 1937.

Elias Kiær, the managing partner in Kiær-Solberg operation, kept his head above water. He kept his Hafslund shares with their footing in the stable electricity market, and continued – and was quoted as – an unhappy seller of Odda Smelteverk. He was no longer a mighty man.

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[45] Glete

He died a fairly wealthy man in 1939, but that wealth was of a far less magnitude to his assets of 1917. His son was prepared for grand things in life and did become president of the Norwegian association of industrial enterprises. But while his father worked full-time as investor in numerous companies, Hans Th. Kiær was factory manager in a company he owned. For some time Kristoffer Mørch, the technician who had had such profound influence on his father's investments, worked as technical director in this company – only. Thorry Kiær – engineer by education and son of another of the Kiær-Solberg directors – had worked at two Kiær-Solberg plants, but in 1937 became employed chief executive officer of Orkla. Sven A. Solberg, son of the Solberg director, also became a chief executive officer in a company partly owned by himself. His father had been a large investor and the one working most closely with Elias Kiær. In sum, the fall of the Kiær-Solberg family at the same time weakened the consolidation of important industries *and* the development of a professional corpse to run the same industries, while the next generation of the family took roles themselves as more or less traditional owner-managers of companies in non-consolidated industries.

In sum, most of the nascent development in the direction of decentralization of power to managers, stagnated, stopped or were reversed during the problematic years of the 1920s and 1930s. Norsk Hydro, Borregaard and Storebrand survived, but did not develop much. Hafslund introduced shareholder power, Det Oversöiske Compagnie bankrupted, while the Kiær-Solberg-steered "virtual corporations" in paper and pulp and in metal smelting were unbundled into independent corporate entities, turning the clock back to old fashioned family capitalism. The Norwegian development of managerial capitalism was led by Norwegian families building larger entities, yet the strong role of family capitalism had a dual character. On the one hand, in times of boom and growth, family capitalism facilitated the coming of managerial capitalism. On the other hand, in times of crises and losses, family capitalism retracted into traditional control positions. Power positions were prioritized at the expense of the organizational capabilities included in larger entities. That prioritization seems to have been pragmatic, not to say desperate, as a fall back position in times of crisis.

Conclusion

This paper argues that the sorry state of Norwegian business in the interwar period should not be seen as blatant national weaknesses. Norway had a long capitalist tradition emphasizing self-regulation. Because of Norway's international economy, and vast natural resources, Norway became a hunting ground for international capital at the turn of the last century. This fostered two reactions: A regulatory state emerged to protect Norwegian natural resources, as well as developing laws and regulation governing business. The other development was the rise of new organisations driven by professional managers, supported by foreign and Norwegian capital, taking greater advantage of scale and scope of business entities.

My interpretation is that Norwegian business development was forward-looking, current, internationally directed, positioned for a fruitful future in a stable international business environment in the continuation of the "gold standard capitalism" of fixed exchange rates and free trade organised by Great Britain. The rise of managerial capitalism in Norway in the 1910s may be seen as a modernising indicator. The breakdown of the international economy – staring by World War I, continuing into the 1920s – affected Norwegian business in a profound way. Managerial capitalism was deeply affected by these developments, bringing productive processes to a halt, to reverse, or to disappear.

One could argue that what differed between Norway and Sweden was not difference in institutions, but rather lack of policy experience on behalf of the Norwegian government after Norway became an independent nation in 1905. The handling of the banking crisis of the early 1920s was probably clumsy and clearly not as cunning as Sweden's.[46] The handling of government finances during World War I, which contributed to the difficult exchange position that came to haunt Norwegian exporters later in the 1920s, is also arguable. But, again, those of points made just to illustrate that Norway's rise as home to a capital-intensive industry at the turn of last century is a complex and interesting story.

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