

Drivers of market concentration in the Swedish brewery sector, 1910–1990

ABSTRACT

The 20th century generally saw a trend of industrial concentration, and national beer markets were no exception. Almost everywhere there was a long-run trend of “brewery deaths” and the creation of large powerful brewery firms, some of which achieved global dominance. The paper quantifies and analyses concentration in the Swedish brewery sector across the whole 20th century, and discusses plausible causes of this trend. The industry became one of the most concentrated beer markets by the time of the 1970s, with continuing dominance of four major firms until today. The paper highlights several factors behind this fact: that market concentration occurs over a long period of time, the influence of cartelization, national concentration beginning as regional dominance from a small number of firms, and national policy regarding mergers and acquisitions, and monopolistic dominance by firms. The historical experience in this paper also tells a cautionary tale for the future of Swedish microbreweries.

KEYWORDS

market structure; breweries; Sweden; HHI

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Introduction

Industrial concentration was one of the defining features of the 20th century. The beer market was no different, with a long-run decline in the number of breweries and the growth of large firms more or less everywhere. Beer went from being a market for local firms to global powerhouses, and for instance became more concentrated around big firms than the soft drinks market (Howard, 2013). While there has been a numeral reversal of trends the last two decades with the revival of the microbreweries (or “craft beer revolution”) during the last two decades, the microbreweries still hold most of the market power across the world. In the present day, only three huge multinational businesses produce more than half of all beer consumed (Swinnen & Briski, 2017, p. 2). The question is, how did we get here?

This paper looks at market concentration in the Swedish brewery market across the entire 20th century, from 1910 to 1990, and looks for drivers of the clear concentration trend that we will see. The number of Swedish microbreweries virtually exploded into the hundreds during the 2010s, reaching historically high levels in terms of the number of active breweries. However, production remains highly concentrated, with the four largest firms holding over 90 percent of the market. Consumption is also concentrated, with the ten largest beers, all produced by these four firms, making up close to 40 percent of all beer sold in the state monopoly stores. No Swedish microbrewery cracks the top 100 list of the most sold beers either.¹

The onset of the trend towards market concentration has been debated, with Gabrielsson (1970) arguing there was a clear concentration phase from 1952 to 1967, but maintained that there were enough movement within the market (in terms of changing market shares) for it to still be termed competitive. Sandberg (2010) tracks the concentration phase to when the two largest actors, Pripps and Stockholms Bryggerier, merged in 1967 to form a super-company who was given an almost monopolistic position. Box (2017) shows that the market was highly closed to new entries for a long time. However, neither of these, nor any other account of the Swedish brewery market, have quantified or analyzed market concentration in the long run. By applying a longer perspective, this paper can find a more multivariate explanation of the concentration, and at one point almost the death, of Swedish beer.

Market concentration in the beer industry

While we do not have exact concentration indexes for all national brewery industries in the long run, the concentration trend is notable more or less everywhere, although with somewhat different

¹ Systembolaget, försäljningsstatistik, 2019.

timing and intensity. One reason is that brewing became increasingly fitting for economies of scale, in several parts of the process, production, distribution, marketing, and advertising.² Decreasing transport costs further increase the possibilities of returns to scale, particularly in transport for retail possibilities (Vaizey, 1960).

In the American case, concentration measured as a Herfindahl-Hirschman Index (henceforth, HHI) witnessed an almost constant rise from 1950 until plateauing somewhere around 1990, peaking at quite concentrated levels (over 3000 in the index) (Iwasaki et al, 2008, figure 1, p. 265). The number of breweries decreased almost concurrently, from 358 in 1950 to 43 in 1980 (Garavaglia & Swinnen, 2018, table 1.1, p. 10). Tremblay et al. (2005, p. 313) classified the US beer market as oligopolistic from about 1970, when the four-firm concentration ratio (CR4) reached over 40%, and highly concentrated from 1982 (based on the HHI). There had been considerable concentration also in British beer, although less so than in the US, Canada, and France, peaking at moderately high HHI levels of 1800 towards the end of the 20th century (Slade, 2004, p. 134). At the end of the 1960s seven large brewery business groups made up over 70 percent of total British beer production (Hawkins & Radcliffe, 1971, p. 22). The concentration trend was a distinct feature even in the Belgian beer market, where the number of breweries decreased from over 3000 to around 100 across the 20th century, and average brewery size increased twenty-fold (Swinnen & Briski, table 4.1, p. 43). In contrast, the German market was notably less concentrated than the two Anglo-Saxon and the Belgian, having partly to do with the fact that beer consumption had clear regional dimensions, creating several large regional producers with similar shares in the national market as a whole (Adams, 2011). There was for instance a weaker concentration trend in Bavaria, in terms of the declining number of breweries, compared to the rest of the country (Swaminathan & Wiedenmayer, 1991, pp 52–53).

Indications from the US beer market in the long run point towards a connection between increased market concentration and lower profitability overall (Greer, 1971). In the US increased market concentration was partly driven by an increased will of antitrust authorities to allow already large brewing companies to merge with one another (such as Miller and Coors) to form mega-companies (Elzinga, 2011). The trend of concentration through mergers has also been an aspect of the British brewing industry, although not on the same scale as in the American case (Slade, 2004). Lynk (1984) for the US case pointed to the fact that the large brewers more easily could expand supply, and

² For such views, see for instance Vaizey (1960, pp. 83-87 and pp. 88-100), Hawkins and Pass (1979, pp. 60-78), and Gourvish and Wilson (1994, pp. 505-508).

therefore take market shares. They were also able to lower prices compared to the competitors, concluding that concentration occurs not because of “harmful exclusion”, but rather due to “beneficial competition” (Lynk, 1984, p. 54).

Definitions, sources, and data

Measures of concentration typically include the Herfindahl-Hirschman Index (HHI) or some measure of the concentration ratio (CR). The latter totals the market share of the largest firms in a sector, and is denoted by the number of actors included; the CR₄ includes the four largest firms, and CR₈ the eight largest. The CR-measure is bounded between 0 and 100. The HHI normally includes all firms in a sector, and measures the relationship between the changes in market shares in the whole sector, which also makes it a beneficial measure compared to the CR, which by itself gives limited information about a market and its structure. However, the HHI and similar measures ignores skewness in the distribution of market shares (Tremblay et al, 2005, p. 309, footnote 4). Neither measure regards import competition, as it typically includes only domestic producers. The HHI is measured as the total of all included firms’ squared market shares ($MS_1^2 + MS_2^2 + MS_3^2$, etc). As such, when market shares are measured as whole numbers, this index ranges from a low of 0 to a high of 10000. A market with low concentration is of HHI equals 1000 or below, with moderate concentration ranging between 1000 and 1800, and above 1800 is defined as high market concentration, with 10000 showing a monopoly situation ($100^2 = 10000$) (Andersson et al. 2003, pp. 35–36).³ The CR₄ can on the other hand be used to detect risk of oligopoly situations, where the four leading firms controls more than 40 percent of a market ($CR_4 > 40$). In such cases, “oligopolistic behavior becomes likely” (Scherer & Ross, 1990, p. 82). In this paper, both the HHI and CR will be used and discussed concurrently.

A complementary descriptive measure is the number of producers in a market, which often is quite straightforward. In the present case of Swedish breweries, I have separated between three units of measurement, in descending order of size of population: 1) all present breweries, typically this refers to the number of physical productions sites, plants; 2) all active breweries, which in the Swedish case removes so-called “defense breweries”, which brewed very small quantities each year only to keep their license/concession from the state to produce strong beer; 3) all brewery firms, which entail the

³ The guidelines come from the US Department of Justice, as a way of analyzing the effects of horizontal mergers on market concentration. Typically, when markets are highly concentrated ($HHI > 1800$) mergers which increase the HHI in the national market by more than 50 points are questioned. However, Slade (2004, p. 136) notes that EU and national European authorities have typically been more concerned with dominance by a small number of firms.

owning companies, which may operate one or more physical producing units, i.e. brewery plants. The difference in size between these three definitions is summarized in figure 6. For the analyses of market concentration, the brewery firms will be unit of measurements, since it is only really on that level we can assess market shares and market power.⁴ One caveat applies, and that is when a company was acquired, but still operated under its own name and branding, as a daughter company. In these cases I do not aggregate to the level of the parent company. This separation is generally followed in the data, where “independent” daughter companies will publish their own production and balance sheet data. This will likely understate market concentration somewhat, as a larger number of smaller firms operated independently, but were owned by one of the larger firms, until quite late in the period.

This decision is partly data-driven, as for most parts of the 20th century, we only have proper data on the firm-level, not the brewery-plant level. In this paper production data has been used to calculate the concentration measures from 1924 to 1950, while total assets per firm has been used thereafter, and as an early point of reference in 1910. While production-data would be preferable throughout, market concentration should also be approximated by total assets, as long as the activities of the brewery firms were not too diversified (i.e., if other things than beverages were produced, there would be a larger discrepancy between breweries’ production figures and total assets). Production per beverage per firm was hand-collected and analyzed from the underlying statistics to the official industry statistics (SOS Industri).⁵ Total assets per firm has been taken from annual printed volumes of Swedish joint-stock companies (“Svenska aktiebolag”, various issues). This source has the disadvantage of excluding breweries with other company forms, such as *Åbro Bryggeri* which was run as a limited partnership company (“kommanditbolag”) until 1985. It means we lose datapoint for this brewery from 1951 until 1985. It shouldn’t make any larger difference for the total concentration measures, but Åbro did grow into one of the larger national players during the period, so it could mean that the HHI for instance is somewhat exaggerated as it stands without the inclusion of this firm.⁶

⁴ In any historical comparison of brewery sector size between countries, this separation between producing and owning units is hardly, if ever, addressed. It seems to me that most of the time when “number of breweries”, what is referred to is the number of production sites, rather than the number of firms, but rarely explicitly stated. See for instance Garavaglia and Swinnen, 2018. Marfels, 1980, p. 27 do distinguish between the number of enterprises and establishments for European brewery populations, and show notable difference between the two for Belgium, Germany, and the UK.

⁵ Digitalization of this material is more or less impossible.

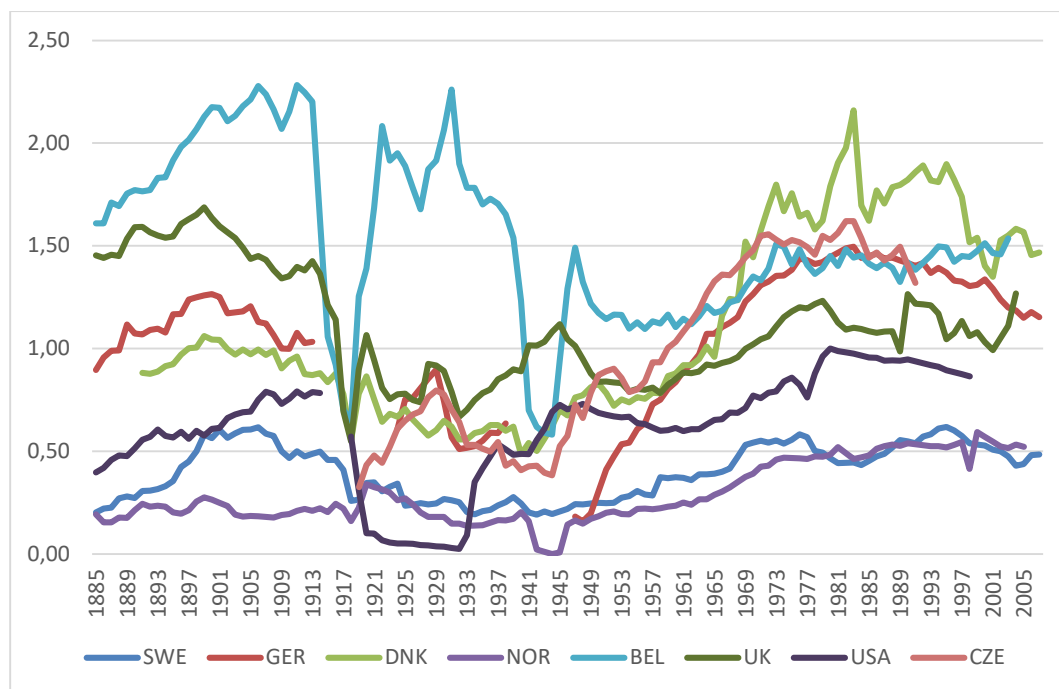
⁶ The idea is to use production data throughout the period of investigation, but it has not been possible to collect this information yet.

The development of the Swedish brewery market

Swedish breweries underwent large changes during the 20th century, from a large and vibrant industry before World War One, to segmented and stagnated during the interwar period, and growing but increasingly concentrated in the post-war period. This section describes beer production and consumption in Sweden, before talking about the general market structure and beginning to analyze market concentration in the long run. Some comparisons are made with beer markets in other countries, for some international perspective.

Production and consumption

Figure 1 below shows beer production in Sweden compared to seven other countries in the long run. A couple of things are noteworthy. First, the Swedish beer market was fairly small in comparative perspective, throughout the period. Production per capita was well below that of the more well-known beer producers such as Belgium, Czechoslovakia (Czech Republic), Denmark, Germany, and the UK, and more on the level of countries like Norway.⁷ Second, the decades prior to the 1910s was the heydays of Swedish beer production, where production values reached over one percent of total nominal GDP. There were then steady declines in output until the 1940s. The post-war period then saw increasing levels again until the peak at the end of the 1970s, at close to the highpoints of the pre WWI-period.



⁷ Beer production levels seem to be at least somewhat related to the restrictiveness of alcohol policy, but this issue is beyond the scope of this paper.

Figure 1. Beer production (HL/capita) in Sweden compared to other countries, 1885–2007.

Source: Mitchell, 2013, table D21, table D26, table A2.

In the long run, Swedish beer production was quite homogenous, but underwent some changes during the period. Before WWI, most breweries brewed the most common beer styles for consumers in Northern Europe, lager and pilsner. Lager made up about half of total production, while pilsner stood for about 25-30 percent, with smaller quantities of porter, and top-fermented British-style ale and bitter, and bottom-fermented German-style dark lager (Lundqvist, 1995, p. 47). With the problems of importing sufficient raw materials during WWI, production was increasingly geared towards lower ABV (alcohol by volume) pilsner. This trend was firmly established when the Swedish government outlawed domestic consumption of beer stronger than 4.0% ABV in 1923. During the entire interwar period the weaker pilsner made up over 90 percent of total beer volumes produced in the country, with porter decreasing in volume, and ale and bitter disappearing completely. Strong beer (class III in figure 2 below) was produced only in very small quantities for export, by the largest breweries. In 1953 somewhat stronger beer (up to 5.8% ABV) was allowed again and increased in volume in slow pace. In 1965 the sale of “middle beer” (“mellanöl”) up to 4.5% ABV was legalized outside of the state retail monopoly, and quickly became the dominant beer in production, import, and consumption (see also figure 4). This more liberal era was ended in 1976, and from there on stronger class III beer came to increasingly dominate the market, particularly with the Swedish entry into the European Union, when the country was forced to drop the 5.8% ABV upper bound of produced and imported beer. Import-penetration levels of foreign beer were extremely low for most of the period, and only increased over ten percent relative to domestic productions levels in the 1960s (SOS Handel).⁸

⁸ Mostly “middle beer” from Denmark was imported. Only during the 1980s did beer imports become broader in terms of country of origin (data from SOS Handel).

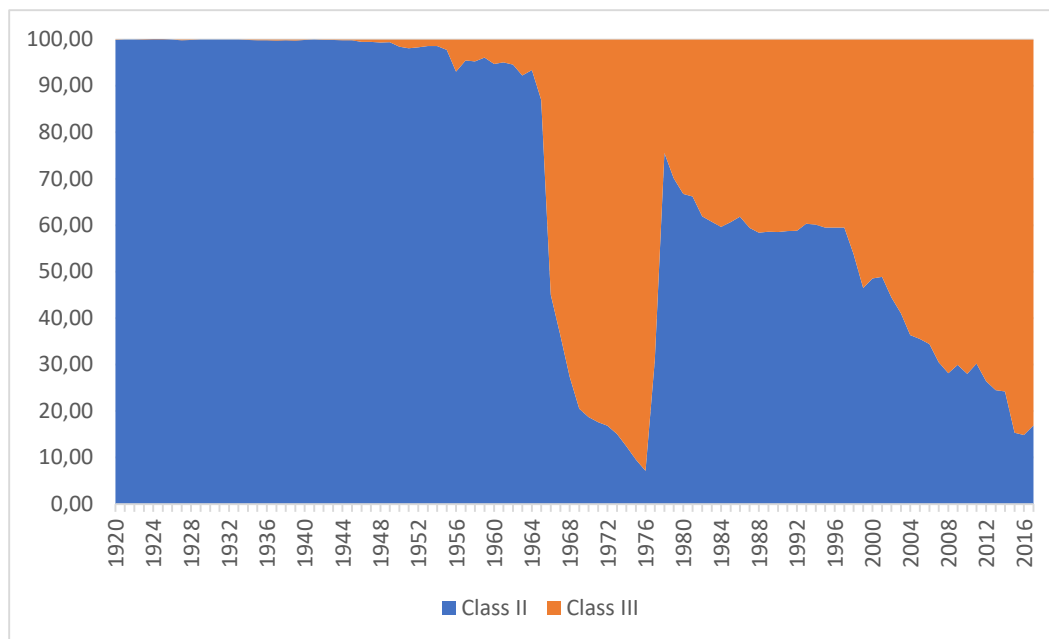


Figure 2. Swedish beer production by class, 1920–2017.

Source: SOS Industri; SCB.

Note: Class II: 2.8–4.0% ABV, Class III: >4.0% ABV. Between 1965 and 1976 Class III included “middle beer” (mellanöl), typically between 3.5% and 4.5% ABV.

Beer consumption per capita (see figure 3 below) closely followed the general economic cycles (in terms of real GDP/capita), until 1965 when the liberalization of middle beer sales caused a literal boom-period. Consumption also increased notably during the 1980s, which has less straight-forward answers, but can perhaps be connected to a boom period for pubs and restaurants. The percent of all consumed beer sold in establishments with an alcohol license (restaurants, bars, pubs, etc.) increased steadily during two decades, from only five percent in 1977 to 20 percent in 1996. Beer consumption peaked in 1994 at slightly above 50 liters per capita, and has slowly dropped since then, perhaps due to increased competition from wine, which has continued to increase after Sweden’s entry into the EU.

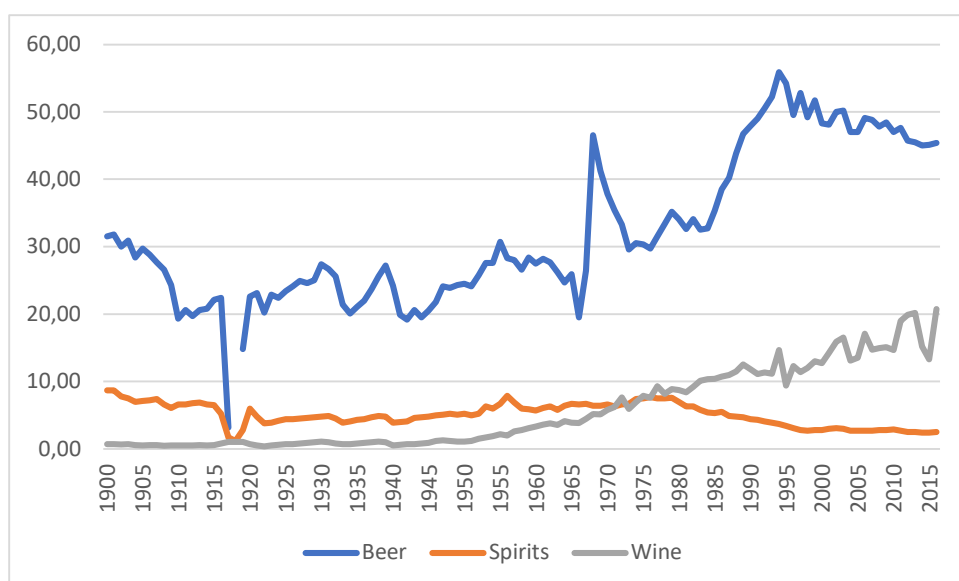


Figure 3. Beer consumption (L/capita) compared to spirits and wine, 1900–2016.

Source: Statistisk årsbok, various issues.

Swedish beverage consumption became increasingly geared towards stronger beer towards the end of the 20th century (see figure 4 below). Class III beer consumption was more than ten times larger in 1990 than it was in 1960, while it would overtake the weaker class II in level only after 1995. The 1980s also saw a clear popularity increase of soft drinks, whose consumption rose by 40 percent in liter per capita. The short stint of the middle beer was monumental in its dominance among consumers, and almost eliminated class II beer. When it disappeared as its own class, consumers increasingly moved over to stronger class III beer.

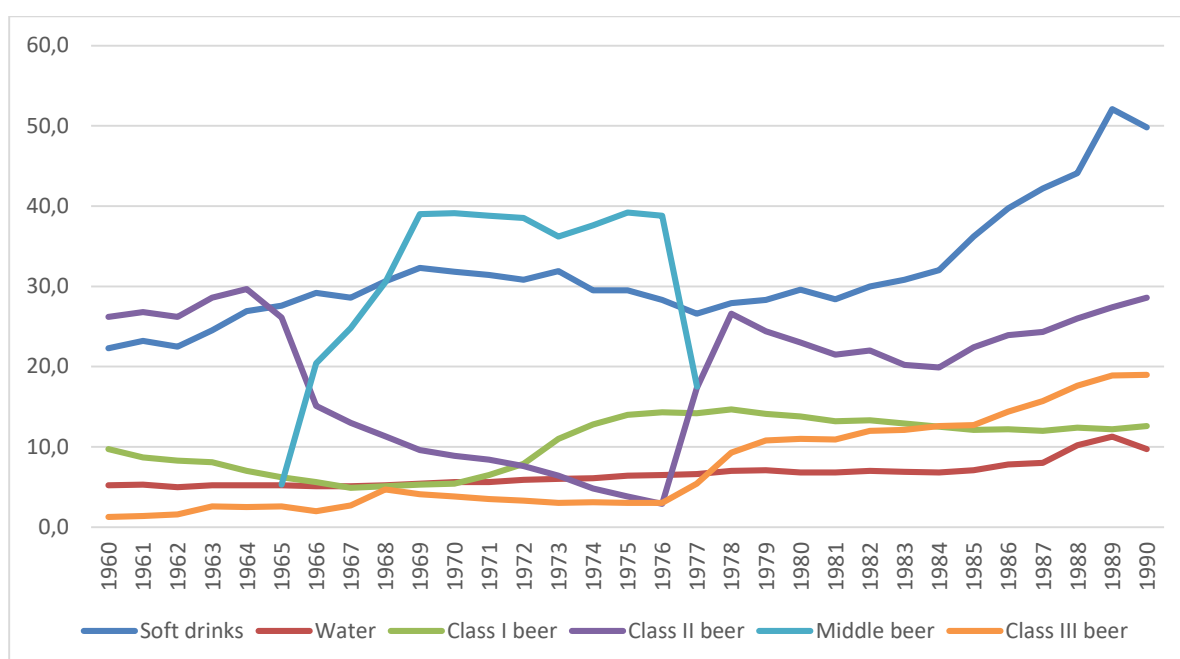


Figure 4. Beverage consumption by type (L/capita), 1960–1990.

Source: Jordbruksverket.

Note: Class I: <2.25% ABV, Class II: 2.8-3.5% ABV, Middle beer: 3.5–4.5% ABV, Class III: >4.5% ABV.

When the middle beer did not exist as its own category, it was included in Class III.

Market structure

In most beer markets, there was a long-run trend towards decreasing brewery populations during the 20th century. In figure 5 below this is shown for Sweden compared to Belgium, UK, and USA. There was almost a constant drop during the century, before the trend of “brewery deaths” peaked in the 1980s, although in Sweden it didn’t bottom out until the turn of the millennium (see also appendix for the underlying data to figure 5). The brewery-death was less pronounced in Germany than the larger beer markets presented here (see data in Garavaglia & Swinnen, 2018, p. 10). In all four countries the brewery-population was more sizeable before WWI than even after the “craft beer revolution” in modern times. In Belgium this was very much the case, and the drop in number of breweries also became more pronounced. The Swedish brewery-population was fairly large compared to in Denmark and Norway during the interwar period, but a lot smaller than the Belgian. During this time the number of breweries stayed largely flat, but with an almost complete stop to new entries (Box, 2017, figure 1, p. 717). This was due to the fact that state enforced a concession requirement quite strongly, which effectively stopped most breweries wanting to brew stronger beer to open up (Sandberg, 2022). Swedish breweries were also organized in a cartel until 1955, which did their part to stop new competitors from entering their market (Sandberg, 2010).

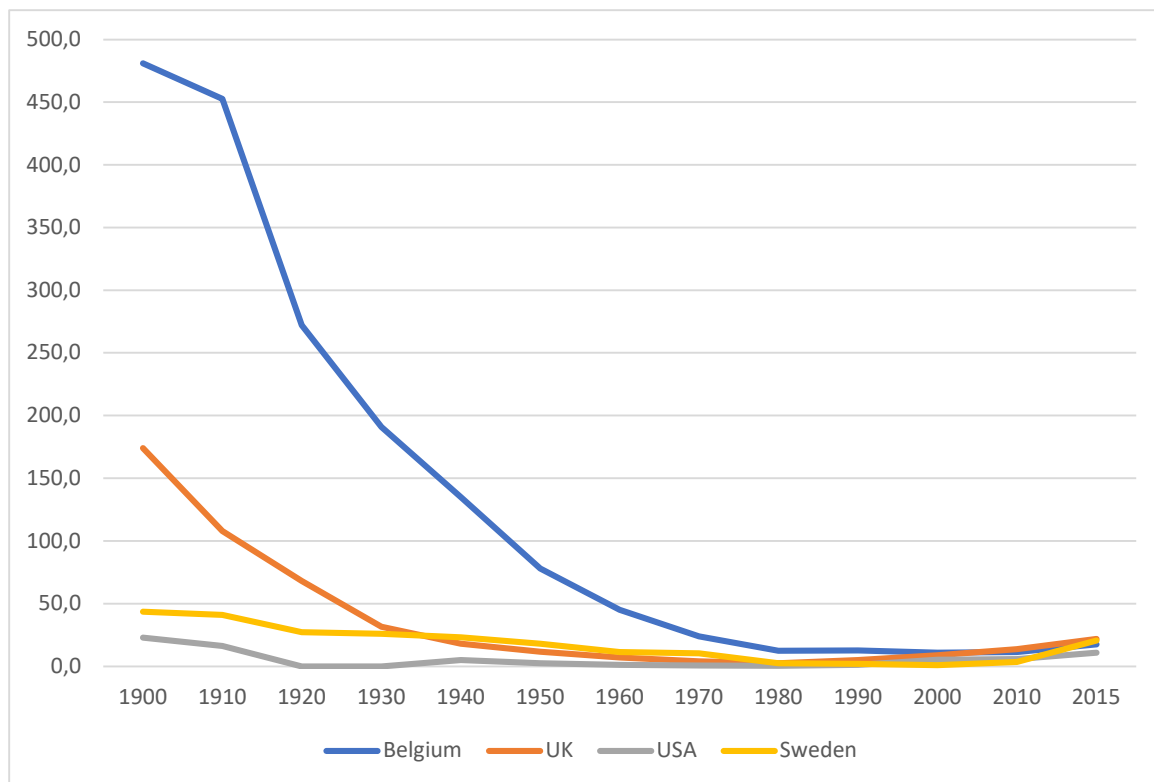


Figure 5. Number of breweries per million inhabitants in Belgium, UK, USA, and Sweden, 1900–2015.

Source: breweries: Belgium, UK, USA: Poelmans & Swinnen, 2011, table 1.2, p.; Garavaglia & Swinnen, 2018, table 1.1, p. 10. Sweden: see text. Population: Mitchell, 2013, table A2. For 2015 figures, Statista, SCB.

Note: Number of breweries for the US is zero in 1920 and 1930 because of Prohibition.

“In the long run they are (nearly) all dead” quipped Marcus Box (2005, p. 87) regarding the Swedish industrial structure and firm survival over the 20th century. The general trend is as clear as it is brutal – very few companies survive in unchanged form over any longer period of time. The same was definitely true for the brewery population, where by the end of the 20th century, less than ten brewery firms remained in operation, from the over 120 that were active in the early 1920s. Only about six remained in more or less unchanged form across the century, i.e. they had never been bought up or reconstructed. Average brewery size (real production value per brewery) increased by more than 50 times between 1915 and 1990, and by ten times only between 1970 and 1990.⁹ Figure 6 also shows the difference between the number of brewery firms and brewery plants (production sites), which was notable throughout the period, although less so towards the end with a small number of firms who had largely rationalized production to few brewery plants. The number of clearly active breweries was smaller than all existing breweries for most years, showing that a

⁹ Production value and number of breweries from SOS industry. Deflated by CPI from Edvinsson & Söderberg, 2010.

number continued very limited operations only to keep their strong beer concession. The separation also show somewhat different trends, with the number of firms decreasing almost constantly, and was for instance more pronounced during the interwar period than for total brewery plants. The trend of brewery deaths was most pronounced between 1950 and 1975, going down from 87 to 13. This was largely the result of the larger firms acquiring many smaller and medium-sized competitors. This trend had started already during the end of the 1940s, when the brewery cartel noted problems with some cities having several independent breweries who competed with one another.¹⁰ The cartel facilitated the mergers of these independent breweries, so that only one larger firm would remain in each larger city. This trend of creating larger regional powerhouses would then continue the following decades, either through creating one larger firm through mergers, or with the largest firm targeting competitors in the nearby area for acquisition. The trend of brewery deaths thus had clear regional dimensions. Several breweries also faced serious economic troubles after the end of the liberalization of middle beer sales in 1975, where many saw their retail possibilities circumvented and had trouble getting back to only being able to supply the state monopoly retailer with strong beer (Hamberg, 1985). Foreclosures followed and the state created a public investment company, Brygginvest, to take over the ownership and control of several breweries. The plan for the state was to only have one existing brewery per larger region – in total four in the entire country, all to some extent publicly controlled. In the end the state chose to sell of their owning shares of the breweries, and those who weren't bought up were left to fail.¹¹

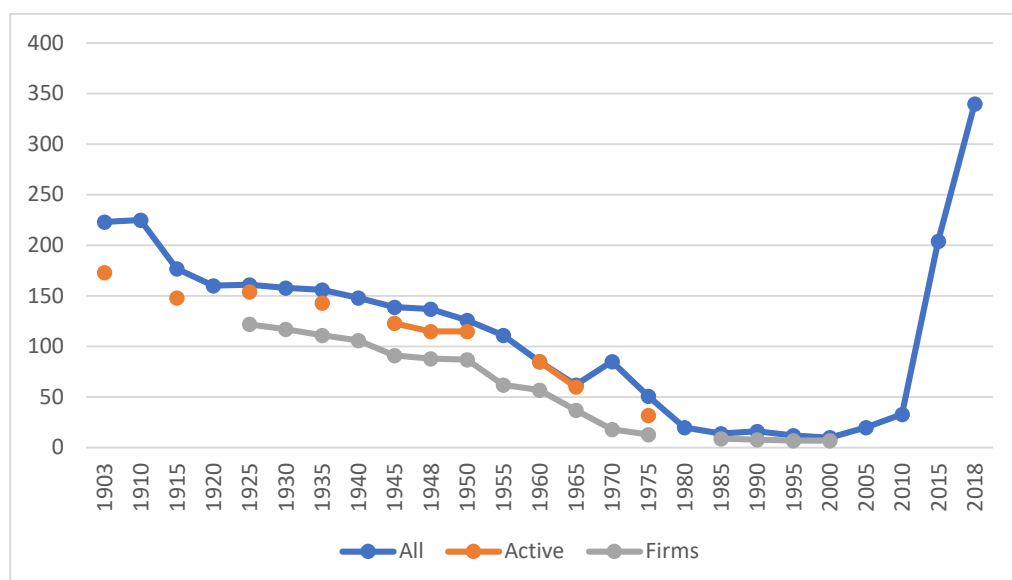


Figure 6. The number of Swedish breweries, 1903–2018.

¹⁰ Gävle and Örebro were singled out as cities with such “unsound competition”.

¹¹ The largest brewery Pripps was for instance bought by vehicle producer Volvo in 1993.

Source: All: SOS Industri, various issues; Sveriges bryggerier, Active: Lundqvist, 1995, table 2.2, p. 44,

Firms: calculated from sources described in the text.

Note: Only taxable breweries brewing beer stronger than 2.25% ABV before 1975.

Indices of market concentration in the beer industry

Before moving on to main portion of this paper, we start with some comparative perspective on market concentration in the beer industry. Here we only have spot-rates from the 1970s, but later we can make some comparisons between Sweden and the US in the longer run. It seems as if Sweden had one more of the more concentrated beer markets in 1970, beaten only by Canada (see table 1 below). The Swedish brewery industry was more concentrated than the textile and steel industries, but less so than the tobacco and petroleum industries.

	Canada	Sweden	France	UK	USA	Germany	Average
Beer	89	70	63	47	39	17	54
Cigarettes	90	100	100	94	68	94	91
Textile	67	50	23	28	30	16	36
Steel	80	63	84	39	42	56	61
Petroleum	64	100	60	79	25	47	63

Table 1. Three firm concentration ratio (CR3) in selected industries and countries, 1970.

Source: Scherer and Ross, 1990, table 3.8, p. 86.

Note: CR3 is the combined market share of the three largest firms.

The Swedish and the Dutch brewery industries were the most concentrated in Europe during the 1970s, with the four largest firms holding the large majority of market shares. These two were quite a bit ahead of the markets in the rest of the continent, with the German market again being notably less concentrated. Concentration increased quite rapidly in both Belgium and France during this decade.

	Belgium	Germany	France	UK	Italy	Netherlands	Sweden
1970	56	37	67	57	66	89	85
1975	66	35	78	60	69	92	81
1980	73	32	87	61	68	93	

Table 2. Four firm concentration ratio (CR4) in some European beer markets, 1970–1980.

Source: Marfels, 1980, table 33, pp. 41–42; Sweden: this paper, see text.

Note: CR4 is the combined market share of the four largest firms.

The Swedish beer market was almost exclusively regional before 1955, with almost no national competition, and a non-interference gentlemen's agreement between the breweries in the three largest cities, Stockholm, Göteborg, and Malmö (Sandberg, 2010). Therefore, it makes sense to try to measure regional market concentration before this time. A couple of things are noticeable from this exercise. First, concentration was rather high in a couple of regions already by the early 1920s. This was the case in Stockholm, where Stockholms Bryggerier had consolidated already by 1910, by joining several smaller breweries together, and then acquiring the rest of the competition. The company held almost the entire market in the capital and surrounding areas, and its power increased markedly between 1934 and 1944. A couple of sparsely populated areas with only a small number of actors were also highly concentrated, such in the northern Jämtland, and in Västerbotten (see number of breweries per region in the appendix). In Jämtland, Östersunds Bryggeri would gain a regional monopoly by the 1940s, and would become one of the larger long-lasting national players in the postwar period. Second, market concentration increased in most regions between 1924 and 1944. This was mostly so in Göteborg, where Pripps first merged with the largest competitor Lyckholm in 1928 to create a national powerhouse. They then continued buying up smaller competitors the following decades, and also acquired some breweries in neighboring regions (Attman, 1961). In other regions, the already largest firms were able to gain market shares to the detriment of the smaller, without necessarily acquiring them. Third, some more densely populated regions with several breweries competing with one another, such as Örebro and Gävle, would become notably more concentrated after 1944 when mergers were implemented with facilitation of the national brewery cartel.

<u>Region</u>	<u>1924</u>	<u>1934</u>	<u>1944</u>
Norrbottnen	3618	3473	3344
Västerbotten	4226	4328	4937
Västernorrland	2105	1944	1841
Jämtland	4281	8046	10000
Gävleborg	1231	1262	2722
Kopparberg	2132	2253	2267
Västmanland	1954	1928	2241
Örebro	2539	1922	1868
Värmland	1628	1634	2087
Skaraborg	1731	1530	1619
Älvsborg	1906	1598	1733
Göteborg	3422	7599	9284
Halland	3577	3765	3988
Skåne	3692	3342	3670
Blekinge	3415	4864	5098

Gotland	10000	10000	10000
Kalmar	2886	2283	2895
Kronoberg	4803	7052	5445
Jönköping	2101	2552	3352
Östergötland	3701	3873	3530
Södermanland	2930	3429	3321
Uppsala	6731	6335	8359
Stockholm	7103	6972	8295
National average	3553	3999	4430
Standard deviation	2007	2439	2731

Table 3. Regional market concentration (HHI) in the Swedish beer market, 1924–1944.

Source: calculated from production data by firm, in archives of the National Board of Trade (Kommerskollegium).

Figure 7 displays two measures of national market concentration, the HHI and the CR4, in the long run, from 1910 to 2018. For the first forty years, concentration was fairly low, and largely stagnant, with the four largest firms together holding 40–50 percent of the national market. The CR4-measure was above the threshold of where there is a risk of oligopolistic behavior, which also characterized the relationship between the breweries, with non-interference agreements between the largest actors, and a cartel which divided up sales in the territories where they could operate. This could possibly explain stagnating concentration levels for such a long time – there was simply no struggle or fight over national market shares. The cartel tried to ensure that enough breweries could survive and continue to operate, even if that would entail all breweries during the last ten years of the lifespan of the organization. Then between 1950 and 1970 we see the concurrent concentration trend in both the HHI and the CR4, which also goes together with the concentration in terms of the number of existing brewery firms. The rise of market concentration occurs at roughly the same time as in the American case, although more rapidly and to higher levels in the Swedish case. The increase in the HHI during this time is extremely rapid, and rose by more than five times in 20 years. This was a result of a major trend of mergers and acquisitions, where the major firms purchased small and medium-sized actors.¹² With the merger of Pripps and Stockholms Bryggerier in 1966 we reach the situation where the new Pripps have an almost monopolistically dominant position on the national market, with about 70–80 percent of its shares. This in itself causes a huge rise in the HHI between 1965 and 1970, although there are more examples of mergers and acquisitions during the 1960s pushing the index upwards. Then Pripps would start to lose a part of this dominance during the following years, as

¹² However, we do not yet know the driving factors of this M&A trend.

other big national players take more and more of their market shares.¹³ These firms included Åbro, Grängesberg (from 1982, Spendrups), and Kopparbergs, which today are the four huge national brewery actors, together controlling over 90 percent of national sales. The HHI and CR4 was growing concurrently until 1975, but the fact they diverge trend thereafter likely point towards increased competition between these four large national firms, and changing market shares over time (even though this has not been quantified yet). Even though the HHI went down somewhat between 1997 and 2018 the change must be said to be on the margin. There has been a huge growth in the number of microbreweries after 2010, but neither of them have been able to take any significant chunks of the national market. Most of them are very small businesses who cater to specialized segments of the consuming public.¹⁴ In 2018 the ten largest microbreweries combined for only three percent of the national market.¹⁵



Figure 7. Market concentration in the Swedish brewery sector, 1910–2018.

Source: see text.

¹³ This drop concurs with, even though we don't know it is directly caused by, the fact that Pripps became publicly owned in 1975.

¹⁴ Microbreweries generally operate in geographically small niched markets, but in the UK and US there have been successful cases where they grown to compete with the microbreweries for national market shares. See Cabras and Bamforth, 2016.

¹⁵ These microbreweries include the internationally know Omnipollo, and well-knowns breweries among Swedish beer-enthusiasts, Oppigårds, Dugges, Nils Oscar, Nynäshamns Ångbryggeri, Poppels, and Brewski.

Note: Herfindahl-Hirschman Index (HHI) and CR4 (combined market share of the top four firms). Data for 1980–1990 has not been collected and calculated yet.

Conclusions

The Swedish brewery industry grew to become one of the more concentrated across the span of the 20th century. This paper has highlighted a long-term view on the timing and causes of this trend towards industrial concentration. Early on, smaller breweries in two of the largest cities, in Stockholm and Malmö, joined together in larger firms, which would also occur in Göteborg in the 1920s. These three brewery firms in the three largest cities would then divide the market between them, and others, in the national brewery cartel which lasted for half a century. The cartel would further push concentration, and incentivize mergers in cities where too many breweries competed with one another. As economies of scale continued in the postwar period and beer culture increasingly became geared towards industrial lager and pilsner, to the detriment of more niched styles, national concentration took off rapidly. Regional market concentration had already been under way, but the postwar conditions paved the way for the national equivalent. On the surface, this occurred mostly through numerous mergers and acquisitions, putting brewing power in the hands of a small number of firms. This is analogous to how brewery industry occurred in the American and British cases, and it must be highlighted how Swedish legislation continuously allowed the creating of large firms with very dominant market positions. Towards the end of the period Swedish alcohol and industrial policy combined to push for the continuance of a small number of actors, easier to control and surveillance. Both cartelization and restrictive state concessions kept the number of new entries to a minimum during almost the entire period.

Today Swedish microbreweries are very numerous, and they are basically left fighting for the niched scraps left over by the brewing giants. With historical experience, of a high number of firms with small market shares to fight over, this should be alarming for the coming years, and we are likely to see a new era of “brewery deaths”. This is particularly so in the face of stagnating beer consumption, and difficulties of microbreweries reaching into the state retail monopoly’s assortment (Skoglund & Selander, 2021). This further highlights how the institutional environment shapes the industrial structure, particularly in the face of restrictive alcohol control policies.

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Appendix

	Belgium	UK	USA	Sweden
1900	481,0	174,2	23,0	43,7
1910	452,6	107,8	16,4	40,9
1920	272,0	68,1	0,0	27,1
1930	190,9	31,7	0,0	25,9
1940	134,9	17,9	4,9	23,1
1950	78,0	11,6	2,6	18,0
1960	45,0	7,0	1,2	11,3
1970	23,9	4,1	0,7	10,5
1980	12,4	2,6	0,4	2,4
1990	12,6	5,1	1,1	1,9
2000	11,0	8,8	5,3	1,1
2010	11,5	13,7	5,7	3,5
2015	17,6	21,8	10,9	20,6

Table A.1. Breweries/million capita in Belgium, UK, USA, Sweden, 1900–2015.

Source: see figure 5.

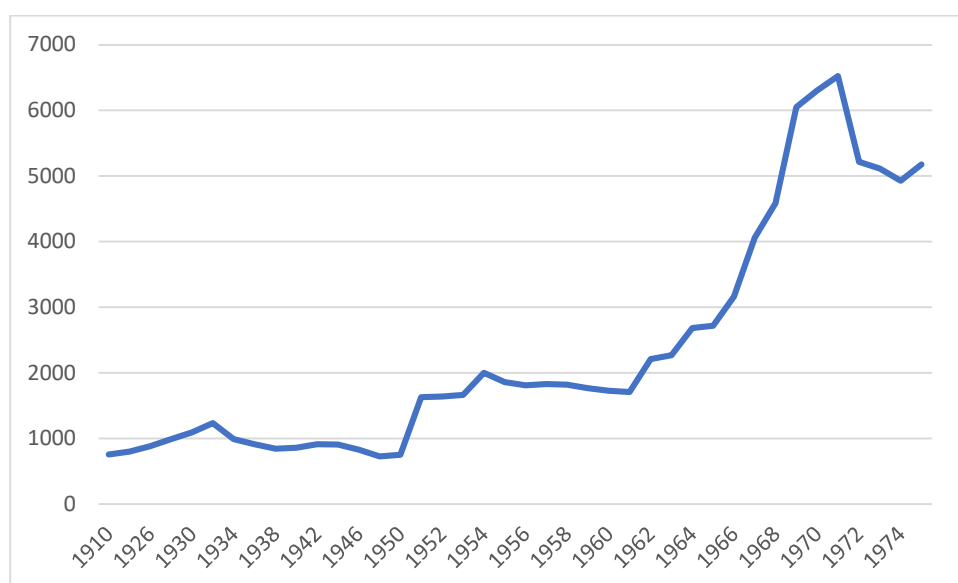


Figure A.1. HHI in the Swedish beer market, 1910–1975.

Source: see text.

	1924	1934	1944	1950
Norrboten	4	4	4	4
Västerbotten	3	3	3	2
Västernorrland	6	6	6	6
Jämtland	4	3	1	1
Gävleborg	10	9	6	5
Kopparberg	7	6	6	6
Västmanland	7	7	5	3
Örebro	8	8	8	5
Värmland	8	7	6	6
Skaraborg	7	8	7	6
Älvsborg	7	7	7	6
Göteborg	4	3	2	2
Halland	3	3	3	3
Skåne	5	6	6	6
Blekinge	4	3	3	3
Gotland	1	1	1	1
Kalmar	8	8	4	2
Kronoberg	2	3	3	3
Jönköping	9	8	7	7
Östergötland	8	4	4	2
Södermanland	5	5	5	5
Uppsala	2	2	2	1
Stockholm	6	6	4	4
Total	128	120	103	89

Table A.2. Number of brewery firms per region, 1924–1950.

Source: see text.

Note: Total is slightly higher than the national sum total since some firms were present in more than one region.