

The Potential Impact of the  
United States Craft Beer Industry on  
The German Brewing Industry

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## **Abstract**

The primary purpose is show that the German beer industry may be a three to four decades behind the United States craft brewing industry (in terms of development of craft beer demand) and Germany thus can look to United States for information on how to develop a new specialty niche. It is possible that United States craft beer can impact the German beer industry and perhaps accelerate a market convergence leading to a situation where the United States and Germany will have much more similar beer industries than exists today. Even if German beer producers do not actively seek out this transition, it may be forced by United States craft beer expansion into German markets.

The secondary purpose of this paper is to educate the reader on the history of both the German brewing industry, as well as the American craft beer industry. After an introduction into both of these markets, it is shown that the certain characteristics are necessary for the expansion of a specialty industry such as craft beer. A small discussion shows what is necessary for small firms to succeed in a new niche market through resource development and market concentration.

## Introduction

### Early Beer History

It is no secret that beer has played a very diverse role all throughout human history. It can even be shown that the first evidence of beer leads researchers to believe that it was first “brewed” in China as early as 7000 years ago (Swinnen 2011). Eventually the basic knowledge of fermentation began to spread. At some points throughout history, such as in ancient Sumeria, beer was used as a type of currency. This is likely due to the fact that ingredients for fermented beverages were more prevalent than most other useful materials – timber, metals, tools, etc.

It was not until about 3000 BC that beer eventually migrated into Europe, although it is unknown if a rudimentary fermentation process was discovered or the trade was learned from Eastern neighbors (Swinnen 2011). As Roman influence spread out throughout Europe during this era, beer drinking began to be more centralized in some specific areas; this is likely due to the increased prevalence of wine in Roman culture. One of these areas is what is now modern day Germany.

Throughout the middle ages, beer began to gain an even stronger threshold in these areas. As Christianity began to take hold across Europe, monasteries were established in greater and greater numbers. It was these monasteries that would be the first institutions to brew beer on what could be described as a “commercial scale” (Swinnen 2011). This is no surprise, as beer was a preferential product for a variety of reasons, as Swinnen describes:

*“First, monks preferred beer over water, as the water in the Middle Ages was often polluted. Second, apart from nutritional reasons, beer was often used in monasteries for spiritual and medicinal purposes. Third, an average meal in the monasteries of the early Middle ages was rather frugal, and beer provided a welcome nutritious additive for the monks and their guests.<sup>1</sup> Fourth, although beer contained alcohol, it was seen as a liquid like water, and was, as such, not forbidden during a fasting period (Swinnen 2011).”*

### German Beer History

As monastic brewing became more prevalent, varying techniques became commonplace. The German region eventually became known for its traditional “German Style” ales that originated in monastic breweries. However these monasteries could not

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<sup>1</sup> Beer of the early Middle Ages was much different than beer of today, containing less alcohol, and more nutritional benefits (Swinnen 2011).

maintain a hold on the early brewing industry forever. Monasteries considered beer production to be an important source of revenue, necessary for monastic upkeep (Snyder 1997). This profitability did not go unnoticed. Trade routes developed, cities expanded, and towns craved the production of beer as much as other needs of everyday life; a town brewery was as common as a bakery or butcher (Snyder 1997).

As the official brewing industry expanded, government regulation was seen to be a necessary input. The *Reinheitgebot* or “German Beer Purity Law” was enacted in 1487 and decreed that German beer could only be produced with three ingredients: barley, hops, and pure water (later, yeast was added upon the understanding of the chemistry behind the fermentation process) (Swinnen 2011). This was actually still in place regarding any beer in Germany until 1988 when a European court ruled that it was a somewhat unjust regulation, and thus now imported beer does not have to be limited to the purity law; all beer brewed in Germany must still follow this law.

This is not necessarily a good thing for German beer. Some experts argue that the purity law has stifled German brewing innovation (The Economist 2014). Although the origins of the law reside in taxation purposes, it eventually became a staple used to describe the authenticity of a German brewed beer. With the new advent of technology and transportation techniques, measuring the purity or authenticity of a beer is no longer a question to many consumers.

German beer consumers have actually been very well off in recent years. New developments paint Germany as one of the least profitable locations to produce beers in the world; regulations and cost increases drive total costs up, while competition and decreasing beer consumption have driven prices down (Chambers 2014). This is the opposite scenario experienced by a similar, yet very distinctive, industry: the United States Craft Beer Industry. As times get tougher, it is possible, and would certainly be ironic, that German beer producers may turn to the United States for a lesson on beer.

## US Craft Beer

The United States has a much less traditional take on beer. This is likely due to the more turbulent history of alcohol in America. In Figure 1, it is clear that the number of breweries throughout American history has varied dramatically. Since the early 1980s, the United States has been experiencing what is called the Microbrewery Movement – or a transition of preferences towards more expensive, lower production, specialty beers known as craft beers. This transition has created a market potentially able to sustain a very large number of very small producers – aka microbreweries.

What makes craft beer such an interesting case study is that its consumption seems to be inversely related to downward shifts in the economy. In fact, as Sam Calagione states in his book, “(US) Craft beer is actually *growing* in a recession!” (Calagione 2011). The United States craft beer industry, albeit a somewhat

recent development as compared to Germany's rich history, is a lucrative market that has been expanding at unprecedented rates (Clemens 2011).

### **Potential Market Cross Over**

This success of US Craft Beer is not going unnoticed. German brewers have been making trips to the United States in order to learn from their American counterparts, but not yet on a grand scale (Nicola 2014). There is apparently a somewhat hesitant attitude within German beer producers to incorporate lessons from American craft breweries. After all, Germany has far more experience in terms of beer. One German brewer describes this as “minds blocked by tradition” – the same tradition reminiscent of the *Reinheitsgebot* that embodies German beer history (Redding 2013).

This recent, but still low, interest in US craft beer from Germany breweries has the potential to shift German beer markets considerably. To understand this possible future impact, there must be a complete understanding of what work has already been completed in regard to German beer markets, US beer markets, new product successes, and market organization. If it is possible to show German beer markets have a potential for change, then it is conceivable that the US Craft Brewing industry can be a model and stimulus for that change.

## Review of Prior Work

Since the mid twentieth century, brewing has experienced quite a shift worldwide. Figure 1 shows the evolution of the number of breweries in the United States, but a similar shift is also happening elsewhere. For instance, in Germany, the number of breweries is over 1300, although this number has been declining for the past seven years (Nicola 2014). At this point, only 670 of those 1300 breweries are craft beer specific. This number is on the rise; it has increased by nearly 30% since 2005 (Nicola 2014). The long run trend in both countries is expansion (but a transitional shift is already visible in Germany).

What has made this long run expansion possible? In 1994, Terrence R. Gourvish described the long run shifts in the US and Germany (as well as the UK) attributable to three major factors: 1) government regulation, specific to mergers, integration, and taxation; 2) firm behavior, specific to the tendency of smaller producers to maintain independency and profitability; and 3) consumer preferences, which vary largely in different regions (Gourvish 1994).

Gourvish found that some fundamental differences characterized the US and Germany, not the least of which was that in the US there was a greater shift towards high capacity production facilities while Germany never experienced that particular situation. During the few decades after World War II, the United States beer production became more and more consolidated via integration and mergers, thus lowering the total number of breweries to historic lows while maintaining similar production levels. In Germany, on the other hand, concerns of brewing integration enabled smaller players to remain profitable in limited markets (Gourvish 1994).

Tremblay, Tremblay, and Iwasaki also chose to focus characteristic nature of the concentration of the US brewing industry. The dynamics of the US industry changed dramatically after the late 1970s when favorable regulatory conditions and consumer demand led to a powerful entry into the craft beer industry throughout the last quarter of the century (Victor J. Tremblay 2005). Prior to that, as Gourvish had described, the US beer market was dominated by large-scale macrobrewers. Their 2005 paper was a bit short sighted in the fact that they predicted the “microbrewery boom appear(ed) to be over” because we now know the total number of breweries has nearly doubled since that time, after a small decline (Victor J. Tremblay 2005) (Beer Institute 2013).

In 1999, a team of researchers decided to specifically focus on the implications of the US Craft Beer Industry on the malted barley market. Malt is a very important ingredient in the brewing process, as the grains provide the beer with its flavor, color, and sugar for fermentation. They concluded that the niche for varying malts was a potentially increasingly profitable market for producers to enter (Chris T. Bastian 1999). Craft brewers, by definition, are more adventurous and explorative than their macrobrewer

counterparts. It is for this reason that craft beer represented a larger market for expansion of various malt production. The authors point out that producers who had invested heavy capital into the production of large scale mass-produced malts will be slower to take advantage of this niche, if at all (Chris T. Bastian 1999). Craft brewers tend to favor high quality, low production inputs; therefore it represents a specialty market for malt barley producers.

In order to see a contextual implication of the US and German beer industries, Glenn R Carroll and Anand Swaminathan point out that 1997 was the year in which the US surpassed Germany in total breweries (Swaminathan 2000). This was a large transition from the 43 American breweries in operation just a few decades earlier. A major implication they found was that microbrewery mortality drops when the market concentrates (Swaminathan 2000). They primarily attributed this to resource-partitioning, that is allowing production inputs to be divided among producers so no one producer out competes another. This is a very interesting conclusion in relation to microbreweries, because it means that a higher concentration of breweries (aka an increasing number of different producers) actually allows a higher share of those breweries to stay in business. The idea that an increasing number of competitors leads to increased firm survivability should be a key consideration when looking at developing markets.

Expanding markets will no doubt lead to new products, or in the case of craft beer, a larger number of beer styles and brands. Marcus Apslund and Rickard Sandin wrote of this very topic in their examination of the Swedish beer market. They found one of the major determinants of new product survival was consumer preferences, which can be largely unpredictable (Sandin 1999). It is no surprise that firm survival was also largely dependent on product survival. A possible conclusion could therefore be that product survival, and thus firm survival, is largely dependent on consumer preferences; that is to say that an expansion of craft breweries on a large scale will largely consider the willingness of consumers to purchase new and unfamiliar beers. This is a challenge to be faced in the German beer industry.

Challenges are abundant in other ways for German brewing as well. In 2008, Matthias Heyder and Ludwig Theuvsen examined the difference between the Eastern and Western German brewing industries. Following World War II, Germany was divided into two regions. The economic and political ramifications of this division are subjects of a different discussion, however the impact on specific industries is useful. To put it briefly, the two researchers found that Western and Eastern German brewers experienced different strategic managerial practices, by region (Theuvsen 2008). The findings show that the Eastern brewers are characterized by larger facilities and high output potential, while the Western brewers have stronger brands. The authors state that the Eastern brewers could better serve the low-price mass-production markets, while the Western half

of the country is likely to fulfill the more specialty and premium beer markets (Theuvsen 2008). This is of particular interest when discussing the potential for craft beer expansion, which is a premium product.

The Germany-US comparison is not original to this work. In 2006, William James Adams published a comparative analysis on the two beer markets. Adams drew several conclusions on the differences in the countries. Like previous authors, Adams points out that American craft beer was almost non-existent in the few decades after World War II, however also makes it clear that this same decline did not fully occur in Germany (Adams 2006). The more interesting of the differences, he pointed out, was in the US and German macrobrewers. The United States beer market has become an oligopoly with Anheuser-Busch dominating the market; Germany, on the other hand, has a more symmetric industry with no one single macrobrewer maintaining a dominant market share (Adams 2006).

Adams states that if the German and American beer markets eventually converge, there will likely be a handful of large producers with a large number of craft producers in each market (Adams 2006). This is an important observation because of two things: 1) American craft brewing has finally caught up to (and overtaken) German small scale brewing and 2) German macrobrewers are in the same situation that American macrobrewers were in roughly 40 years ago. This means that if the German macrobreweries engage in the same sort of competitive marketing campaigns that American macrobrewers entered into during the 1970s, then the landscape of the German macrobrewing industry may turn out to be similar to that of the United States (Adams 2006). Adams ends his discussion stating “the future structure of the beer market may be surprisingly similar in Germany and United States” (Adams 2006).

The culmination of all of these works helps describe the past and current situation of the United States craft brewing industry, as well as the German brewing industry. It has been described that firm behavior has developed different market concentrations in the United States and Germany. Favorable regulatory conditions made a microbrewery boom possible in the United States, while Germany did not quite have the setting necessary for a boom to take place. Craft beer provides niche markets for producers of brewing inputs that can allow for profitable, but limited, businesses all along the production stream. Resources not only allow for a potentially profitable segment of business, but can also allow for additional beer producers to remain successful based on resource partitioning, given consumer preferences allow it. Western Germany is more poised to be the home of craft breweries in the future, depending on whether or not the German beer market is capable of sustaining a boom like the United States experienced.



## Reasoning and Theory Development

### Theory Development

Craft and specialty beer has a unique role within the global beer market. It has been a subject of interest in the last few decades, especially in the United States. As we know from the discussions of Madeline Chambers and Stefan Nicola, German brewers have recently begun to show an interest in the craft brewing industry of the United States (Nicola 2014) (Chambers 2014). Because the last few years has seen a decrease in consumption of beer in Germany, brewers are eagerly searching out new methods to entice consumers. The United States craft brewing industry could serve as a source of inspiration for German brewers, however that is only one part of the equation.

In order to develop a complete view of how this potential transformation could occur, it must be shown that the German market is capable of incorporating many of the shifts that occurred in the United States during the last few decades. After the possibility is shown, the next step would be regarding the probability of it.

In the United States, the beer market has undergone a tremendous transformation thanks to the microbrewery movement. A market environment of less than 50 brewers is has grown by a factor of 60X to over 3000 breweries today. Therefore the market concentration has significantly been changed. America has a lot of microbreweries and a few macrobreweries with one controlling the majority of the market. Near the beginning of the microbrewery movement, the larger brewers were more evenly controlling the market; much like the current situation in Germany (Adams 2006). There is potential for mergers and acquisitions to transform the German beer market, at least on a macro level, into an environment reminiscent of modern day American macrobrewing.

Up to this point, Germany has been wary of the impacts on the overall market from this kind of large-scale macrobrewer concentration. If the regulatory bodies decided to lower regulations preventing this type of transition, then it simply increase the likelihood that the overall market may move to being more similar to the American landscape, just as Adams had alluded to in his discussion (Adams 2006).

One of the largest transformational shifts that must occur is in the general attitude towards regulation. The *Reinheitsgebot* has been in place in Germany for 500 years. Although rooted by intentions of purity and authenticity, the law has mainly prevented the exploratory craft beer movement to take hold on a large scale in Germany. The United States craft beer movement is characterized by untraditional styles of brewing and with sometimes odd ingredients and practices; simply go down to any American beer store and glance at the various craft beer styles. One would not be hard pressed to find beer brewed with milk, coffee, pumpkin, fruit, cucumber or even peppers. The *Reinheitsgebot* has largely stifled this type of experimental brewing. As German brewers see the success of the US craft beer industry, it is likely that this law may be seen as a

hindrance, rather than help, on a larger and larger scale. There must be a shift in brewing attitudes away from traditional ways of thinking for this idea to gain momentum. It is worth noting that the law did not regulate ingredient quality, but simply the ingredients themselves; if the ingredients were not of high quality to begin with, then the law may not have the effect it intended to (Adamson 2006).

There are additional reasons why German brewers would want to push the German brewing industry to mimic the American craft beer industry, and it has to do primarily with the inputs of the brewing process. Because it has been shown that the production of craft beer creates potential profitability in the supply chain of brewing inputs, there is likely potential in Germany for firms to take part in the entire production stream with success; which has been the case in America. Bastian and team showed that craft beer creates a large potential, specifically in malt production (Chris T. Bastian 1999). The more craft brewers in existence, the larger the demand for an increasing number of various specialty malts. This means that the American craft beer industry has created profitable malt markets that the German brewing industry has largely missed out on. Once it is realized that there is additional profit from more than just craft beer production, it becomes more and more likely for attitudes to shift.

The idea behind resource-partitioning will also mean that as more and more craft breweries enter into production, the likelihood of their success also increases (Swaminathan 2000). American craft beer has been an interesting case study because of the sheer number of breweries that have remained profitable. In the United States, we have a few areas where craft brewing has expanded tremendously – specifically in the North East, North West, Northern Mid-West, California, and Colorado. This is evident simply from traveling through one of these areas. Craft breweries are abundant. This fact supports the argument that a larger concentration of breweries allows a higher percentage of breweries to remain in business through resource-partitioning.

Germany has areas that also could allow this type of regional success to occur. Because it has been shown that Western Germany specifically is structured to support premium brewers, this would likely be the area to support the growth of a craft beer movement. The type of resource chain profitability, and resource-partitioning, will be more likely able to take hold in an area more suitable to premium beer production. Eastern Germany, because of its ability to house the more mass-producing macrobrewers will likely not be so enticed to venture into the low-production craft beer industry, at least initially.

One of the largest hurdles that German beer producers must overcome is consumer preference. This is one thing that producers have little control over. The Economist points out that in the current environment, the *Reinheitsgebot* may be necessary because German beer consumers expect the type of beer styles that it leads German brewers towards (The Economist 2014). If the German beer drinkers can be

convinced to venture away from these traditional beer styles, then a German craft beer movement seems all the more likely.

### **Theory Statement**

There is apt to be a movement in Germany, reminiscent of the microbrewery movement experienced by the United States. German brewers have become more interested in the development of various brewing techniques developed by their American craft counterparts. Following a string of necessary regulatory changes, and market shifts, it can be predicted that Western Germany will be the central location to this movement in the future, which is likely to take place in the next few decades. Of course, this will be contingent on the ability of German craft brewers to entice German beer drinkers to venture away from their traditional preferences and towards a more adventurous attitude that has already developed within the United States.

## Concluding Remarks

### Conclusion

Just as the last few decades has been a transformational period for the United States brewing industry, there could be a shift in the German brewing industry. Once producers see the potential for expanded profitability and product lines, there could be a period of large expansion. The traditional styles of German beer have waned in terms of popularity in Germany, and thus German beer producers are seeking out new ways of regaining the market power they once had (The Economist 2014).

Of course German beer producers are not the ones trying to (re)capture their piece of the German market. On July 19<sup>th</sup> of this year, Stone Brewing Company (America's tenth largest craft brewer) announced it would be opening a \$25 million craft brewery in Berlin. This marks the first time a brewery will open in Europe that will be wholly owned and operated by an American craft brewery (The Economist 2014). When we combine this with the knowledge that German brewers have been seeking out new ideas from American craft beer, there is likely a situation in Germany where beer is on the cusp of a major transformation.

The largest hurdle that these brewers, both German and American, face is the palate of the beer consumer. German beer drinkers have long since been restricted in their purchases by old laws and traditions. If they can be convinced that new products offer up potential for greater utility from beer consumption, then perhaps brewing innovation will increase and craft beer will once again be the driving force behind a major market transformation.

### Possible Issues or Shift Prevention

Although there are many reasons why craft beer has the potential to take a strong hold of the German beer market, there are also reasons why it may not be possible. Simply put, the tradition of the German brewing industry could prevent a major shift from taking place at all. In an environment where brewing laws have maintaining their status for centuries, a major transition may take much longer than the theory lined out in this paper would suggest.

The history of beer drinking goes back thousands of years, but no area is more rooted in the tradition of it than Germany. When discussing the history of the developing of the global brewing industry, one cannot ignore the role that Germany has played. It is, without a doubt, the home of beer. Brewing on a commercial scale originated there many years ago and will continue to play a pivotal role in the country for the foreseeable future. Although one would think that German producers would want to expand in any way possible, the history of traditional German brewing may be the force which would prevent a craft beer movement from expanding into Germany.

The impact of the United States craft beer industry has expanded at a rapid pace, and we already know that it wishes to continue to grow into Germany. American craft brewers wish to expand into this foreign market, but German producers may not be so welcoming. It is dependent on attitude shifts in regards to the historic tradition of German beer.

### Future Research

As the craft beer movement continues to expand within the United States, there are a multitude of topics that one could wish to expand upon. As we have discussed, the macrobrewers have had just as large a role in the market as microbrewers (in all reality, a much a larger role). It would be a worthy topic to discuss the impacts of the craft movement on these large macrobrewers. The behavior of the market in the United States could then be a model to show how the markets of foreign nations could develop as craft beer makes its way into various countries.

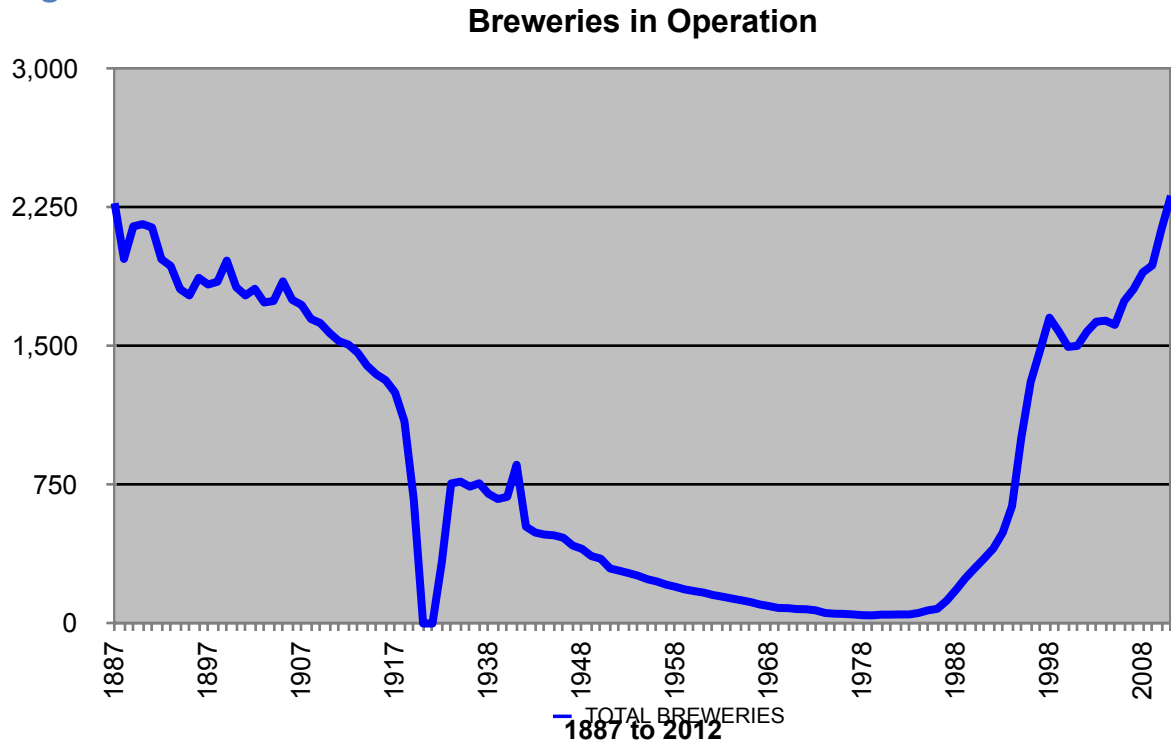
Regulation in Germany could also be more pertinent topic, as the German beer tradition is almost entirely rooted in regulatory measures such as a *Reinheitsgebot*. To my knowledge, no other nation has experienced the type of long standing regulation that Germany has in regards to beer production. To examine how this regulation helped form the market for German beer specifically could be a topic worth examining in comparison to how regulations have determined market transformations in other countries.

The other side of the story, on which this paper does not comment, is the effect *on* the United States craft beer industry *by* the German brewing industry. There are styles of beer, such as kolsch and alt that have remained more or less specific to Germany, although this is beginning to change (Daniels 1996). If the line between US and German craft beer continues to blur, then we may see an increased German influence on the US craft beer market. This will be an interesting topic of research in the future, given this paper's predictions hold true.

The expansion of the craft beer industry will also impact wine and spirit markets on a global scale. Investigating the expansion's effects on consumption of other forms of alcoholic beverages would key in understanding the role that craft beer plays in the overall market for alcohol. As of now, craft beer is still a small player, however if trends continue then it will not be for long.

## Tables and Figures

Figure 1



Source: *Brewer's Almanac*, 2013.

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