6106 - Industry Clusters and Firm Competitiveness, Örjan Sölvell
Group Assignment

Scotland's Whisky Cluster

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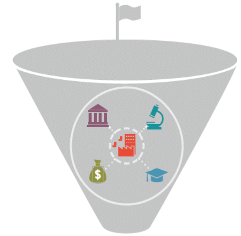
Introduction and Methodology



In this presentation, the Scotch whisky cluster in Scotland will be examined on different levels, following the Funnel Model. First, national and regional framework conditions will be examined as they frame the environment a business is acting in. Second, the Scotch whisky cluster will be analyzed in-depth with the use of several models. Retrospectively, the cluster's history and legacy will be analyzed to understand its heritage and growth, before current trends and developments will be evaluated to eventually draw an outlook in the future. Third, as one of the most traditional and formative cluster actors and one of the last family-owned distilleries, William Grant & Sons will be assessed exemplarily. Finally, based on all previous analyses and examinations, policy recommendation for identified problems and potential threats will be given in order to foster global competitiveness and long term growth of the cluster.

Analyzing Scotland's national and regional framework conditions, it becomes apparent that the country's heritage is deeply carved into its culture, social structures, legal system and the nowadays semi-autonomous political system. Scotland's economy is at an all-time high and even though it is still trailing behind the UK in wealth, employment and innovativeness, the country's competitiveness increases compared to the UK average with service sectors, North Sea oil and renewable energy as well as exports in the food and drinks sector building the corner stones of the upswing. However, political uncertainties through UK's Brexit referendum (entire Scotland voted 'remain') and the reinvigorated call for a second independence referendum make it hard to predict the country's future.

Diving deeper into the Scotch whisky cluster, the importance of the industry for the Scottish economy proves. The whisky production from Scotland's five whisky areas generates £5bn annually and Scotch whisky is widely regarded as the number one premium spirit in the world, being exported to over 200 countries. In the whisky category, Scotch is the global market leader by far. Whisky production has its roots in the late 15th century and the cluster as such emerged already in the early 19th century. Today, the cluster is in a very mature phase, showing a well-developed network of suppliers, distributors and related industries and limited cluster dynamisms. The Scotch Whisky Association as the industry's main voice proves to be the cluster's most important actor next to the whisky producers. Current trends show a rising global demand for whisky and a shift to higher-priced single malts in a wave of premiumization. The industry shows an on-going consolidation and strong FDI through multi-national conglomerates. However, emerging micro-distilleries could increase cluster dynamisms and bring innovation long term if regulations were adapted accordingly. New world competitors from emerging whisky consuming countries such as India constitute a long-term threat for the cluster and lead to shifts in global export and sales numbers. Porter's diamond analysis demonstrates beneficial factor conditions and supporting industries with potential for improvements in the other conditions that also become apparent through a 7-Gap-analysis. Using the Hollywood Model, it becomes apparent that Scotch whisky is a strong local cluster with durable inflows of capital (FDI) and extraordinary global reach with the potential to improve talent influx. A comparison to Kentucky's bourbon cluster highlights the cluster's maturity but also describes potential lessons to be learnt for the Scotch whisky producers.

To highlight the importance of local heritage and tradition, William Grant & Sons as the biggest independent, Scottish and family-owned Scotch producer is chosen to gain an inside view into a Scotch producer that is heavily integrated into the cluster. Glenfiddich, one of the company's core brands of their diverse product portfolio is the world's bests selling single malt. The Railway Model illustrates strategic decision the company went through during the last 130 years and the Radio Model is used to analyze the company's entry into the US whisky market. A SWOT analysis proves that the company's quality and know-how could be used to further foster competitive advantages and facilitate growth.

Finally, reduced cluster dynamisms and cluster-internal competition through continuous consolidation, losing global market shares to emerging new-world competitors and a lack of innovation are identified as current and potential threats for the cluster's long-term stability and growth. Detailed recommendations on how to counteract or solve these problems are given, identifying actors that need to get involved and elaborating on actions that need to be taken.

Scotland’s Whisky Cluster
Agenda

- National and regional framework conditions
- In-depth analysis of Scotch whisky cluster
- Overall description of William Grant & Sons
- Policy recommendations at cluster level

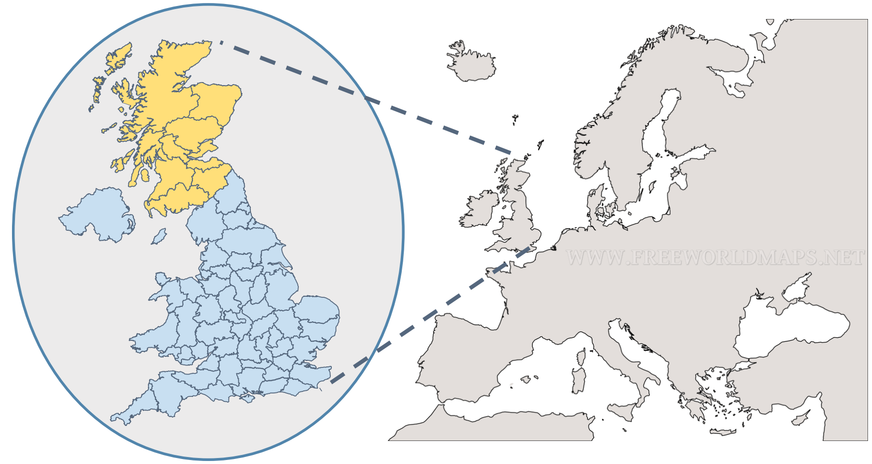
National Overview – Economy and Geography

Scotland's economy is at an all-time high but still trailing behind UK in wealth, employment and innovativeness

Economy Overview

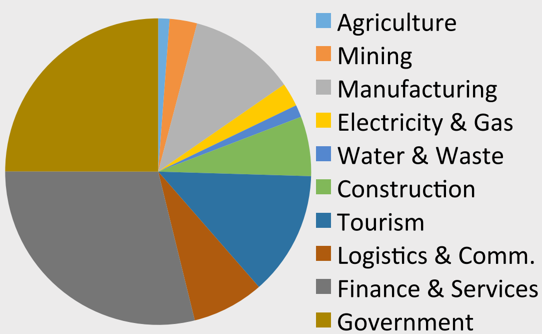
Indicator	UK (1)	Scotland (2-6)
Area	242,495 km²	78,772 km²
Population	65.1 m	5.2 m
GDP[1] (Growth)	1,900b GBP (2.1%)	147b GBP (0.7%)
GDP/capita	43,902 GBP	26,516 GBP
Export ratio	27.4%	54.0%
Unemployment rate	4.9%	5.3%
Patent applications / year	~24,000	~800

Geographical Location



Scottish Economy and Clusters

GDP by sector: Services (75%), Industry (24%), Agriculture (1%)



Key clusters:
- Financial services and Fintech in Edinburgh
- Scotch Whisky
- Oil & Gas
- Silicon Glen: Electronics and IT services
- Tourism

Key Take-aways

- Comparing the Scottish economical situation to the one of the UK in total, 3 factors are striking:
  1. Overall wealth is significantly smaller with a 40% lower GDP/capita and a historically higher unemployment rate
  2. Scotland is heavily export dependent which stresses the need for strong international relations, especially to the main trade partner EU
  3. Even though higher education has a high priority, especially in high-technology fields such as life science, engineering and ICT, the innovation rate is significantly lower than in UK as a whole
- Scotland's economy is highly service-focused with the exceptions of Scotch whisky and oil & gas exploration

Scotland's heritage is deeply carved into the culture, the legal system and the now semi-autonomous politics

Scottish Legacy & Culture (1)

1100s: Scotland becomes a feudal society under English reign

1603: Union of the Crowns – Scotland is reigned by Brits again

1746: Last upraise against the English crown – Brutally beaten down

1914: Glasgow emerges as industrial center during WWI

1999: Scottish parliament reconvenes, starting a new era

1100 1400 1600 1700 1800 1900 2000 Present

1400s: Fighting for independence with several changes of power

1707: Act of Union – Establishment of a UK parliament

1800s: Industrialization – mainly in mining, ship-building and textiles

1967: First drilling of North Sea oil

2014: Referendum for independence is turned down in democratic vote

- The Scottish history was influenced by century-long struggles for independence. This legacy of fighting suppression deeply shaped the Scottish culture and lead to a very close-knit community that takes a lot of pride in their heritage. This is illustrated by two thirds of Scots identifying themselves as Scottish instead of British (2). Another indicator is the fact that more than 500 active clans still exist today (3)
- Other traditions such as wearing a kilt, the highland games, bagpipes and traditional food and drinks (i.e. haggis or whisky) still have a high priority, and are cherished and celebrated frequently
- Scotland is until today fairly religious, the Presbyterians being the largest church in the country

Scottish Political and Legal System

- Scotland is part of the parliamentary democracy and constitutional monarchy of the United Kingdom. Since the devolution through the Scotland Act in 1998, Scotland has its own parliament that deals with any policy that is not considered a reserved matter (e.g. Health, education, local government or Scots Law). Decisions on reserved matters are still taken in Westminster. This includes defense, international relations or fiscal and economic policy
- Geopolitically, Scotland as part of the UK participates in the UN, the NATO and, until Brexit, in the EU. The EU's importance for Scotland has recently increased tremendously and became it's number one trading partner. Only logically Scotland voted against the Brexit in every community and has now difficulties to deal with the current uncertain situation (4)
- Scotland's legal system is called Scots Law and operates independently from the UK with own criminal and civil courts, only being subject to the Supreme Court of the United Kingdom for very specific matters. An important part of Scots Law is the Common Law of Scotland which was mixed together from several regional cultures and systems and has strong roots in the feudal era (5)

National Overview – PESTEL Analysis

Despite political uncertainty, environmental and economic performance are strong with a rising tech focus

As numerous factors determine and affect a national industrial landscape and the environment a cluster and cluster-internal organizations act in, a PESTEL analysis is conducted to identify, understand and analyze how these factors function and interact as a basis to later on understand how the Scotch whisky market works and how the cluster and its actors can achieve optimal performance and foster long-term competitiveness.

Political ●

- + Generally fair, stable country, low corruption (1)
- + Government focuses on fostering internationalization and competitiveness (2)
- ● Nationalists and the Scottish government call for another independence referendum (3)
- − Political uncertainty through Brexit
- − Complex federal legislation through UK governance

Economical +

- + GDP slowly rising, investments rise (4, 5)
- + Employment at all time high (6)
- + Free market with easy access to rest-UK (huge market, large population)
- + Diversified economy with both large public and private sectors (7)
- + Growth in exports predicted (8)
- + Oil price stabilized recently compared to the beginning of 2016 (9)
- ● Brexit could jeopardize export and trade
- − Lack of certain specialist workers (10, 11)
- − Slow recovery from the 2008/2009 economic recession (12)

Sociocultural ●

- + Strong cultural and social identification / heritage (13)
- + Many free public services (e.g. National Health Services) (14)
- + High education standards and the highest concentration of universities in Europe (15)
- + High standard of living (16)
- ● Population growing since 2002, immigration rising (17)
- − Some social and racist unrest with regard to migration and ethnic groups (especially since Brexit referendum) (18)

Technological ●

- + Amount and size of Technical Based Firms (TBFs) growing (19)
- + Effective laws with regard to intellectual property (20)
- + Strong life science sector (21)
- + Increasing focus on technology and innovation (19)
- − High level of external ownership
- − Still slow technological development in comparison to some other MEDC (More Economically Developed Country) (19)

Environmental +

- + Extensive water sources (rivers) and extremely fertile soil (strong agriculture)
- + Scotland has 25% of Europe's total offshore wind resources (22)
- + World's first large-scale tidal energy farm launched in Scotland in 2016 (23)
- + Scotland aims at 100% of electricity from renewable sources by 2020 (wind, tidal) (24)
- ● Global climate changes might endanger Scottish agriculture (25)

Legal ●

- + Plans to open up Scottish labor laws / enhance employment of foreign employees to bridge skill shortages (26, 27)
- + Criminal and civil crimes decreased over time because of strict laws (28)
- ● Scotland's legislation is under investigation to potentially adapt for another independence referendum (3)

Regional Diamond: Scotland

Scotland shows favorable framework conditions for a high competitiveness, mainly due to the closeness to the UK

Firm Strategy, Structure and Rivalry +

- + Strong in FDI, open to foreign companies (7, 8)
- + Professional services growing (esp. financial) (7)
- + Competitive core industries (2)
- + Nearly all industries in Scotland show higher productivity than the Western European average (10)
- – Dependencies on natural resources for food and drink sector (largest export sector) (9)

Factor Conditions +

- + Largest oil reserves in EU (1, 2)
- + Energy-rich (off-shore wind, tidal) (18)
- + Highest concentration of universities in Europe (3)
- + Increasing attractiveness for skilled labor and especially international students
- + Comparably low living costs compared to rUK[1], but access to UK market (4)
- + Rich of fresh-water and fertile soil for agriculture
- + English mother tongue facilitates trade
- – Currently weak labor force skills, especially in terms of advanced skills, lack of engineers (5)
- – Comparably weak R&D spending in the economy (6)

Demand Conditions +

- + Demand for Scotland's main industries stable or increasing (14, 15)
- + Growing middle class in emerging countries calls for premium quality in food and drink sector (e.g. Beef, Salmon, Lobster, Scotch whisky) (19)
- + Relatively easy to serve global customers via shipping and airfreight
- ● Demanding and sophisticated local and global customers

Related & Supporting Industries ●

- + Internationally recognized as the most important UK financial center outside London and the South East, leading to an easy access to capital (13)
- + Easy access to rUK market for suppliers and expertise
- ● Depth of supporting industries in Scotland varies considerably by cluster / sector of the economy (11)
- – Dependencies on supporting industries in rUK
- – Dependencies on English and close-by continental deep-sea harbors (12)

Policy ●

- + Focus on strengthening exports (14)
- + Extensive endeavors to foster Scotland's competitiveness (14)
- + Invest in people, infrastruct. and innov. (17)
- – High uncertainty of consequences of Brexit
- – Potential instability in call for independence
- – Complex federal legislation through UK governance

Key Take-Aways from Scotland's Diamond Analysis

Scotland's competitiveness increases compared to UK average. Service and university sector build the forefront

Scotland's competitiveness compared: Aberdeen strong, Edinburgh and Glasgow above UK average

- According to UK Competitiveness Index 2016, Aberdeen is the most competitive British city[1] based on the latest available data, although its competitiveness has fallen each year since 2013. The most present reasons for the recent decline is the city's activity In the oil industry that suffers from the decline in the North Sea oil sector due to falling global oil prices (1)
- From all city regions, Aberdeen City Region is ranked third and is the only non-South East England area in the top five. The main reason for the strong ranking is the city's skilled employment in the North Sea Oil industry 1)
- Besides Aberdeen, Glasgow and Edinburgh continue to improve their competitiveness and show strong performances. In 2016, all three larger cities in Scotland are above the UK average competitiveness, mainly due to financial and business services, education, life sciences and tourism (1, 9)
- Scotland as a region within the UK is now ranked the 6th most competitive region out of 11 with the second largest improvement of all regions (1)
- Scotland introduced the most competitive business rates scheme in the UK, a.o. investing £11bn in infrastructure to support trade from 2012-16 (2)

Scotland's excellence in financial and business services boosts long-term competitiveness

- Scotland is the most important UK financial center outside London and the South East and ranked as the best performing region for inward investment outside of London in the UK in 2014 (3). The financial services offered range from global custody, asset servicing, banking and investment management to corporate finance, life assurance and pensions (2)
- Throughout the years, the financial and business services sector accounted for 15-20% of all employment in Scotland (5) and is a significant contributor to economic growth (4)
- To support SMEs with high growth potential, the Scottish Business Development Bank (SBDB) is founded to boost business investments (2). To further boost employment, 30,000 new Modern Apprenticeships shall be provided every year by 2020 through the SBDB and its programs (2)
- With the Economic Strategy 2015, Scotland aims at the development of innovative financial mechanisms to support infrastructure investment. Led by the Scottish Futures Trust (SFT), improvements in efficiency and effectiveness of infrastructure investment in Scotland are aimed for (2)

Scotland's (higher) education system constitutes as a major factor of long-term competitiveness

- Scotland has the highest concentration of universities in Europe (19 Higher Education Institutes) and the institutions' overseas operations in countries worldwide are increasing. The demand for Scotland's tertiary education provision is at an all time high (6)
- Scotland's universities have been cited as a major determinant in as many as 45 per cent of all inward investment projects (FDI) into Scotland in recent years and contribute to conditions making Scotland the second most attractive place to invest in the UK (after London) (7)
- As an industry, university sector contributed £6.7 billion gross value added to the Scottish economy in 2012/13 and supported 142,000 jobs (7)
- Scotland's universities have been more effective at engaging with SMEs for innovative purposes than the rest of the UK as 29 per cent of all consultancy undertaken with SMEs in the UK is done by Scottish universities (that only account for 11% of all UK universities) (7)
- To also foster primary and secondary education and thereby strengthen the entire education sector, the Curriculum for Excellence (CfE) was developed as a reform to establish a coherent 3-18 years curriculum facilitating learning and fostering core competencies for future success[2] (8)

Key Take-Aways from Scotland's Diamond Analysis

The Brexit referendum and potential independence referenda can strongly impact Scotland's economy

Brexit and the economic consequences for Scotland

- Based on two recent reports on possible consequences of the Brexit referendum (one academic (1), one governmental (2)) that both compare and combine large amounts of current research and analyze multiple possible scenarios, it can be said that most economists agree that the decision to leave the EU will have a negative short- and long-term impact on trade, labor mobility and investment for Scotland and the UK. It is stressed that membership of the EU has made an important contribution to Scotland's economic performance as it has removed barriers to trade, attracted investment and allowed EU workers to migrate to Scotland
- Research identified and analyzed multiple options potentially available to the UK that can be grouped in three categories: (a) European Economic Area membership, (b) Free Trade Agreement with the EU (Norway or Switzerland model), (c) World Trade Organization trading rules
- Research suggests that all options would lead to a decrease of Scotland's economic growth compared to a full EU membership. The stronger the economic integration with the EU, the smaller the negative impacts
- As it is believed that those impacts will depend on a range of factors, e.g. whether the Scottish Government is able to secure a relationship with the EU, distinct from that of the UK, the Scottish Government has already established a 'Standing Council on Europe' with the sole purpose of working on possible options for Scotland's relationship with the EU
- Interestingly, most economists conclude that throughout all scenarios negative impacts of Brexit on the rUK will be greater than those on Scotland in terms of GDP, employment and other measures as the UK is even stronger connected to the continent via e.g. trade and FDI
- Drawing an average over all relevant estimations and research studies, it is estimated that alternative trading relationships with the EU could result in a reduction of Scottish GDP by up to £11.2 billion annually by 2030 compared to a non-Brexit scenario. Tax revenues would be reduced by around £1.7-3.7 billion a year by 2030, which is equivalent to a reduction of the Scottish Government budget of 6-13%. Public spending would be cut as a result. Reduced levels of trade alone are expected to result in a GDP reduction of 2-5% long term compared to non-Brexit scenarios
- This would significantly impact those sectors with close trading links with the EU, e.g. Food and Drink. Estimations show that Food and Drink would experience the second largest impact as a single sector after Wholesale and Retail Trade
- This could of course have severe impacts on the Scotch whisky industry!

An independent Scotland, competitiveness and the Brexit (5)

- In September 2014, the Scottish population voted with 55,3% to stay in the UK even though nationalist lobbyism was strong before the referendum (3, 4)
- Nationalists mainly argued with Scotland's great potential around natural resources, world class universities, life science, tourism, creative industries, digital and ICT sectors, oil, gas and renewable energy, world class food and drink exports and a highly competitive financial and business service sector
- Furthermore, compared to particularly successful similar sized countries in recent decades, Scotland could not harness its economic strengths and potential, being unable to use the full range of fiscal and policy levers to perform more successfully. Focus lay on growing income inequality in the UK: the gap in GDP per capita across regions in leading countries was the highest in the UK, more than twice as high as in the second country (France) (6)
- Even when excluding North Sea oil, GVA[1] per head in Scotland is 99% of the UK average and the highest in the UK outside London and the South East. Scottish international exports are well diversified across a wide number of sectors with key strengths in Food and Drinks (Seafood and Whisky)
- From 2006-07 – 2011-12, Scotland is estimated to have run a smaller overall fiscal deficit than the UK (5% of GDP in 2011-12). Expressed in monetary terms, this relatively stronger fiscal position was equivalent to £12.6 billion
- Unionist argued that over the last 30 years, Scotland has grown more slowly than UK as a whole and was dependent on UK's suppliers and infrastructure
- Researchers are divided about whether independence would lead to a Scottish economic ascent or not, however, most agree that the possibility to take taxation in own hands would benefit sectors such as FDI and exports.
- According to the Financial Times, Brexit offers a 'golden opportunity for proponents of Scottish independence to reappraise their economic prospectus with membership of the EU at the heart of it' (7)
- An independent Scotland committed to the EU would provide a historic opportunity for Edinburgh to develop further as a financial center by attracting inward investment as well as highly skilled migrants
- In September 2016, the Scottish government announced to publish a draft referendum bill in order to be prepared should it conclude that seeking the view of the Scottish people on independence is the best or only way to protect Scotland's interests in the wake of the EU referendum (8)

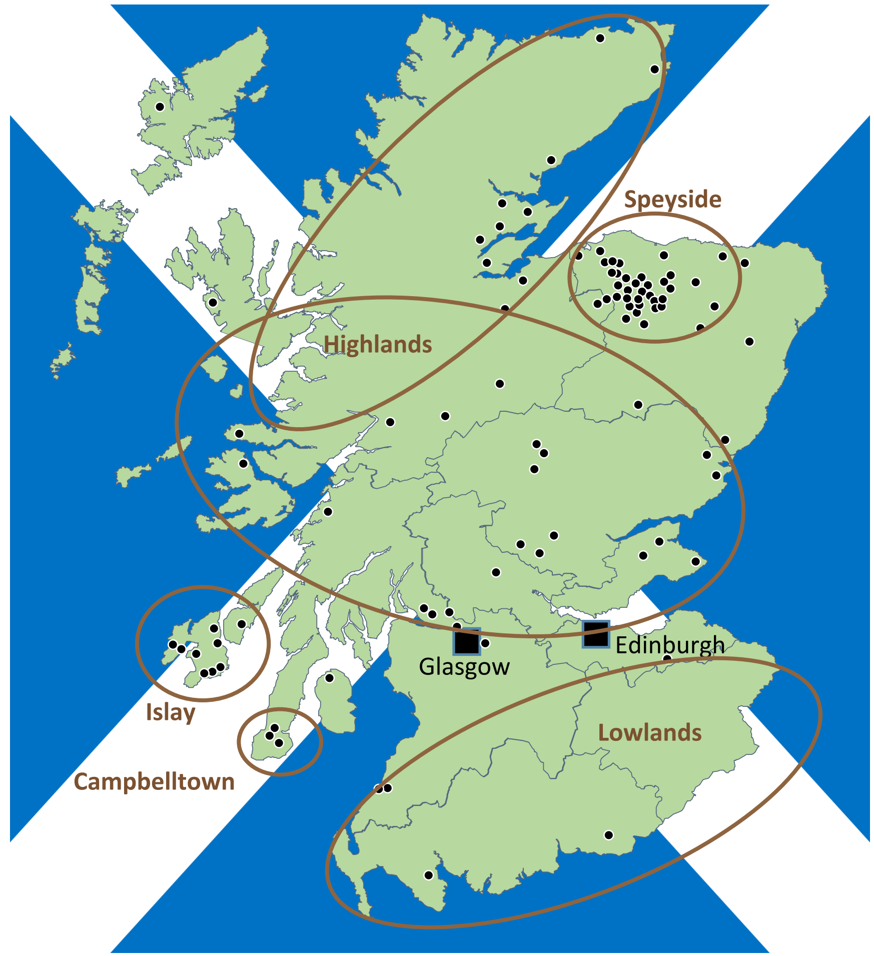
Cluster Overview – Products and Geography

Scottish single malt and blended whisky production from the five distinct areas generates £5bn annually

Overview of the Scotch Whisky Cluster

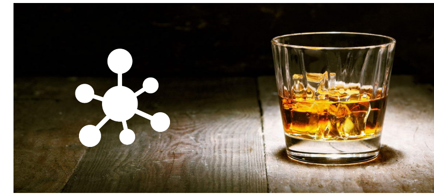
- Whisky is 'a spirit distilled from malted grain, especially barley or rye'. (4) Scotch whisky is legally defined as Whisky that is produced in Scotland from only malted barley and water under the addition of yeast and matured in an oak cask in Scotland for at least 3 years (5)
- 5 different types of Scotch are produced:
  - Single malt whisky (Premium product; ~20% of total sales) (7)
  - Single grain whisky (Almost exclusively used for blending)
  - Blended malt whisky (A blend of different single malts)
  - Blended grain whisky (A blend of different single grains)
  - Blended Scotch whisky (A blend of malt and grain whiskies; ~80% of total sales; All big brands produce blended Scotch)
- Scotch is produced in five main areas as highlighted on the right. All areas have their own distinct flavor and feeling to it. The strongest concentration of distilleries can be found around the river Spey in the North-East of Scotland with more than 55 of the around 115 active distilleries that exist in total
- 15% of Scotch is sold in the UK, 85% is exported into more than 200 markets (see following page) (8)
- Volumes are measured in LPA (Liters of pure alcohol) and the value is measured in GBP and, due to high export dependency, strongly influenced by currency effects
- The total contribution of Scottish Whisky production to the GDP reaches almost 5 bn GBP, of which 4.7 bn stems from Scotland (2)
- Recent increases in exports of single malt whisky and its price lead experts to estimate the CAGR[1] for the coming years (2015-2019) to be around 5% (3)
- More than 40,000 jobs are supported by the Scotch industry directly and indirectly throughout the whole UK (2)

Whisky Distillery Distribution in Scotland (1)



Cluster Overview – Value Chain and Exports

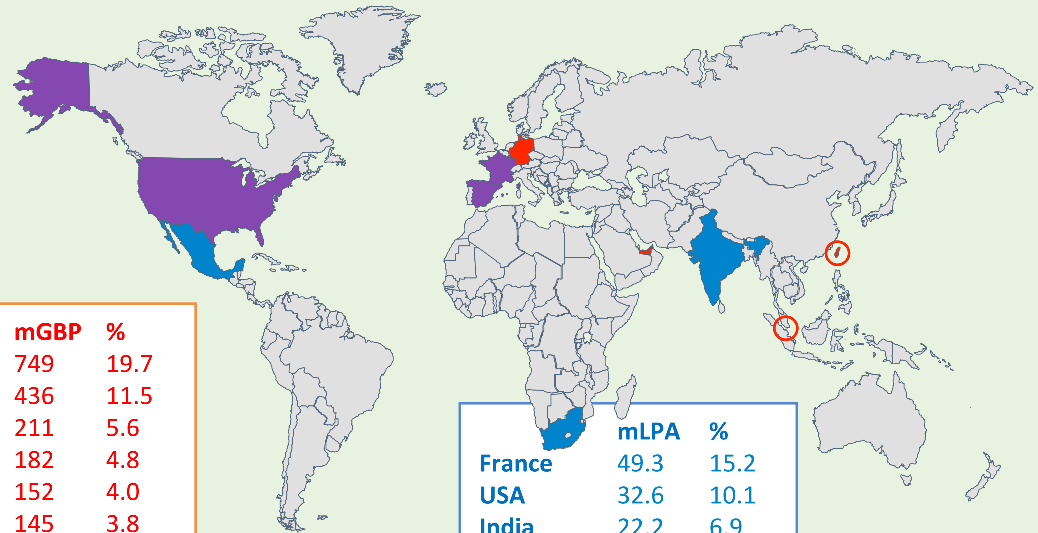
Whisky distilleries buy malted barley, process it, mature the spirit, and sell finished whisky into over 200 markets



The Scotch Value Chain (1)

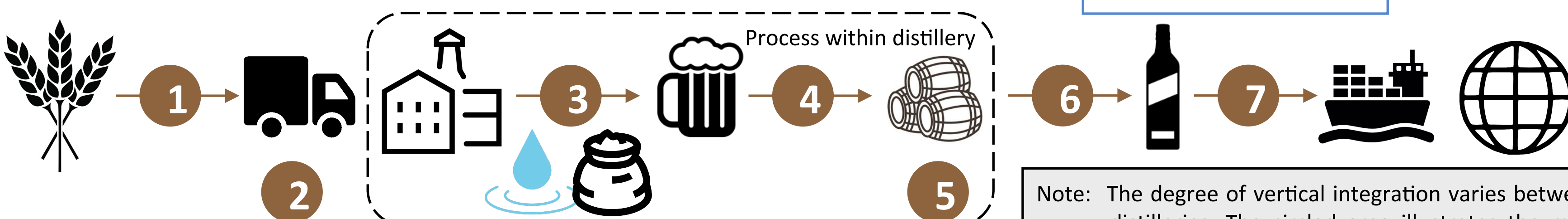
1) Grains are industrially malted (i.e. germination process to split starch into sugar)
2) Malted barley is transported to distilleries
3) The barley is grinded, mashed and fermented under the addition of water and yeast. The result is called 'wash' (which is basically beer)
4) The 'wash' is distilled to 65-70% pure alcohol and then filled into oak casks
5) The whisky matures in the casks for 3-21 years, losing alcohol with every year. This period has a big influence on taste
6) When mature, the whisky is blended, bottled and prepared to ship
7) The bottled whisky is sold domestically or shipped to top export markets (illustrated on the right) or one of the other 200 export countries all over the globe (2)

Top Exports Markets 2015 – Value (3) & Volume (4), (both)



	mGBP	%
USA	749	19.7
France	436	11.5
Singapore	211	5.6
Taiwan	182	4.8
Spain	152	4.0
Germany	145	3.8

	mLPA	%
France	49.3	15.2
USA	32.6	10.1
India	22.2	6.9
Spain	16.3	5.0
Mexico	16.0	4.9
South Africa	14.1	4.4



Note: The degree of vertical integration varies between distilleries. The circled area illustrates the most common variation. Other distilleries integrate malting, bottling and/or transport.

Cluster Mapping

Whisky producers are in the center of a complex network of suppliers, distributors and other related cluster actors

Ingredient Suppliers
- Grain (e.g. barley)
- Yeast

Production Suppliers
- Peat farmers / producers
- Industrial malt producers
- Distillation equipment manufacturers
- Bottle manufacturers
- Packing equipment
- Labeling equipment

Maturing Process
- Scottish oak brands / Barrel manufacturer
- Warehouses / Cellars for maturing process

Trade Groups / Lobbyism
- The Scotch Whisky Association (SWA)

Education & Research
- The Scotch Whisky Research Institute
- University research

Scotch Whisky Producers
- **Single Malt / Grain**
- **Blended Scotch**
- **Bulk Whisky**

Marketing Agencies

Media

Tourism
(The Malt Whisky Trail, Whisky Tours)
- Hotel / Rooms
- Restaurants / Bars

Related Industries
- UK beer industry
- UK cereal industry
- Institutional cluster / Alcohol education

Distribution
- Bottling plants
- Container and wood pallets producers
- Warehousing
- Regional distribution network
- Logistics: Trucking and shipping (harbors)

Sales Channels
- Factory / Distillery sales
- Store-based retailing
- None-store retailing
- Online retailing
- Restaurants and bars

UK customers

International customers

Cluster Mapping – Key Cluster Actors

Besides whisky producers, the SWA, the SWRI as well as malting and peat producers are dominant cluster actors

Scotch Whisky Producers

- Scotch whisky producers are at the heart of the industry. Two types of producing companies exist:
  1. Distiller-producers that distill and store their own Whisky before selling it (e.g. William Grant & Sons, Glenfiddich)
  2. Blenders that buy different unfinished whiskies (singles) from distilleries, blend them and store these blends in their own casks before selling them (e.g. Johnny Walker) (1, 2)
- Since the late 90s and throughout the 2000s, a trend to conglomeration and foreign ownership by large international companies (e.g. Diageo, Pernod Ricard, Bacardi) is observable (3)
- The variety in size and vertical integration is large as multinational conglomerates operate within several brand and quality sectors and co-exist with small, family-owned businesses

Education & Research: Scotch Whisky Research Institute

- Founded and funded by the large conglomerates and smaller distilling companies as a Research & Technology Organization
- Currently 13 members (all big players are present)
- Collective solving of common problems with scientific methods to deliver innovation, change and benefits to the industry (e.g. robust cereals and production efficiency)
- Another goal is to ensure sustainability of the supply chain, improve process efficiency and help protect the Scotch whisky category (5)

Scotch Whisky Association (SWA)

- In 1912 the 'Wine & Spirit Brand Association' was formed. In April 1942 it was renamed to SWA and became a limited company in 1960 (4)
- Today the SWA is a trade organization that represents the Scotch whisky industry
- Mission: Advance the global interests and profile of Scotch whisky, its members and of the industry as a whole
- One of the key priorities of the SWA is to safeguard the Scotch whisky category and prevent unfair competition. It also aims to secure a quality definition of 'whisky' in the main export markets
- Members: Almost only distillers and bottlers, very few other actors from the supply chain
- Represents almost entire Scotch whisky production (>95%, over 2,500 brands around the world)
- Strong relationship with government and international organizations to facilitate export
- Networking and information for association members

Production Suppliers: Malting Companies and Peat Producers

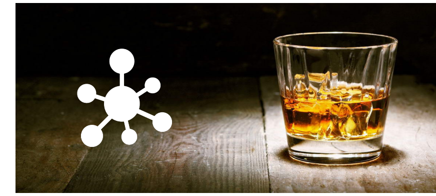
- Industrial malting companies (e.g. Crisp Malting Group) buy cereals from growers and produce malt according to distillers' requirements
- Peat is burned to create pungent smoke that barley grain is exposed to during drying. The smoke penetrates the grains and gives Scotch whisky its distinctive taste of smokiness. The duration of the drying process and the amount of peat used differs between distilleries and differentiates the whiskies' taste (6)

Analyzing the cluster history through the four lenses illustrates the development from hero to maturity phase

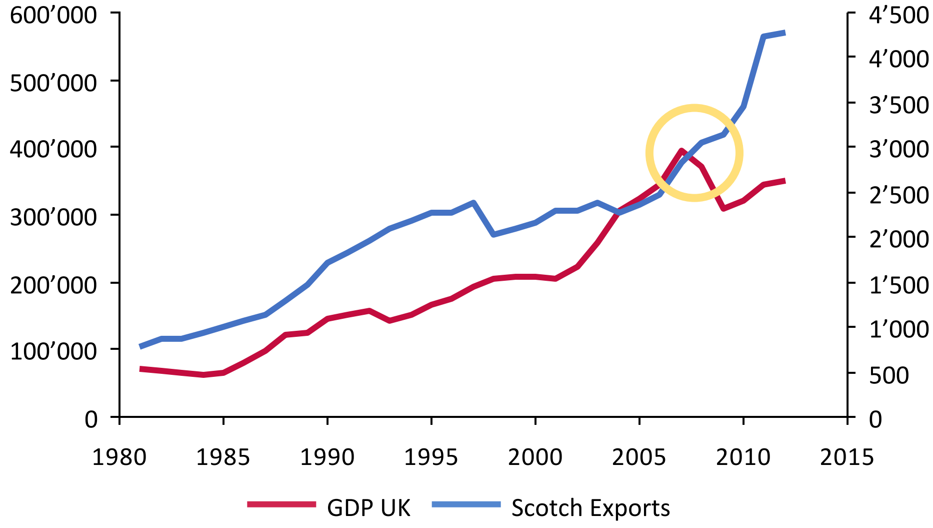
	Early Development (1494-1823)	Commercial Production (1823-1912)	Cluster Collaboration (1912-1988)	Consolidation and Internationalization (1988-Present)
Historical Milestones (1)	1494: First documented distilling 1600s: Distilling significantly improved by monks 1707: Act of Union – Taxes drive distilling into underground	1823: Excise Act – Legal distilling becomes profitable 1831: Invention of grain Whisky 1880s: French Beetle plague – Scotch replaces Brandy	1912: First association forms 1920s: US prohibition gives rise for illegal Scotch import (2) 1942: Scotch Whisky Association (SWA) represents globally	1988: 'Scotch' is protected by law 1998: Bacardi buys Dewar's 2000: Acq. of Chivas Regal puts Pernod Ricard 2nd in prod. 2012: Diageo invests £1bn over 5y
1 Degree of Agglomeration	• Highly isolated distilleries run by monks • Tacit knowledge • Production mainly for self-consumption / health issues	• Commercial distillation leads to initial centers along rivers • The first iconic distilleries like William Grant & Sons or the Old Puteney establish	• Successful distilleries serve as anchors and new distilleries are opened in vicinity • Higher degree of agglomeration in key areas (Speyside & Islay)	• Consolidation of ownership does not effect distribution of distilleries heavily • Vertical integration leads to closer agglomerations
2 Cluster Dynamics	• Very low dynamism • Linkages between actors are rare, exchange is infrequent • Knowledge transfer scarce	• Dynamics are increasing with profits and rising competition • Distilleries are all-out-of-one-hand producers – low dynamics along supply chain	• Association increases dynamics significantly • Parts of supply chain are out-sourced and shared interest is used for bargaining power	• Dynamic cluster with focus on cooperation • Consolidation decreases competition and dynamics between firms
3 Cluster Life Cycle	• Seed of cluster are the local invention of distillation and good conditions (soil, cereals, water, climate) • Act of Union threatened dev.	• Cluster begins to emerge • Hero phase with few successful distilleries dominating the national market • Amount of distilleries still high	• High fluctuation: New distilleries join, others close • Centralization around key areas begins to include the whole value chain	• Classic maturity phase with rising degree of concentration • International conglomerates enter market and professionalize smaller SMEs
4 Natural vs. Planned	• Initial distilleries developed completely naturally • Only institutional influence are restrictions of production and consumption	• Continuously low level of planning • Emerging distilleries are scattered throughout the country	• Degree of planning increases moderately through collaboration within SWA • Government involvement is growing (international trade)	• Legal protection and trade negotiation to promote international success • Subsidies for barley farming to keep value chain domestic
	Naturally isolated actors without frequent interaction	**Rising demand and competition drives cluster dynamics**	**Cluster organization strengthens relations and collaboration**	**Larger international firms dominate a maturing cluster**

Scotch Whisky Market Trends

Historical data shows stable growth while current trends go towards higher priced single malt whisky



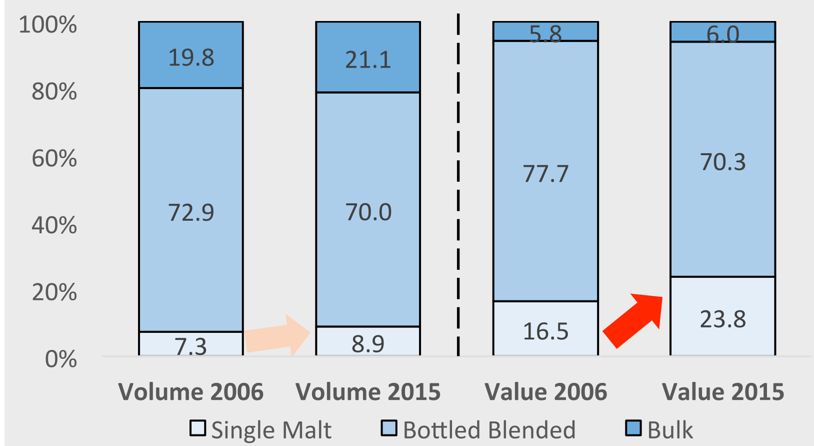
Scotch Exports [m£] and UK GDP [bn$] (1,2)



- The total Scotch exports are used as a proxy for global sales due to the fact that the export quota stayed relatively stable during the period from 1981 to 2012
- As shown above, the Scotch exports grew over time with a rate quite similar as the one for the overall economy (UK GDP). The CAGR over this period for UK's GDP amounts to 5.2% whereas the CAGR for Scotch exports was 5.6%
- Until 2008 the growth of Scotch sales somewhat lagged behind the overall economy. In the most recent years however, the economy suffered from the financial crisis whereas the numbers for Scotch grew more rapid than ever before. This was mostly due to the massively increasing demand in markets outside America and Europe (Singapore, India, China, South Africa)

Scotch Export Volume and Value Development (2006-2015) by Category (3)

- The category overview shows the domination of blended whisky. Further, it is evident that bulk whisky accounts for a big share (~20%) in terms of volume but a very low share in terms of value. Conversely, single malt has a big share of value but not of volume
- Within all Scotch whisky exports, a current trend towards higher-priced premium products is observable. This is especially illustrated through the relative increase in volume of single malt of 22% compared to the relative increase in value of 44%
- Even though the share of bottled blended whisky is decreasing, it is unlikely that single malt will overpass it. The demand in emerging markets is increasing rapidly and with the size of these markets, their share of the total exports will increase. Due to higher price sensitivity and lower income levels it is most likely that bottled blended and bulk whisky is continuously favored

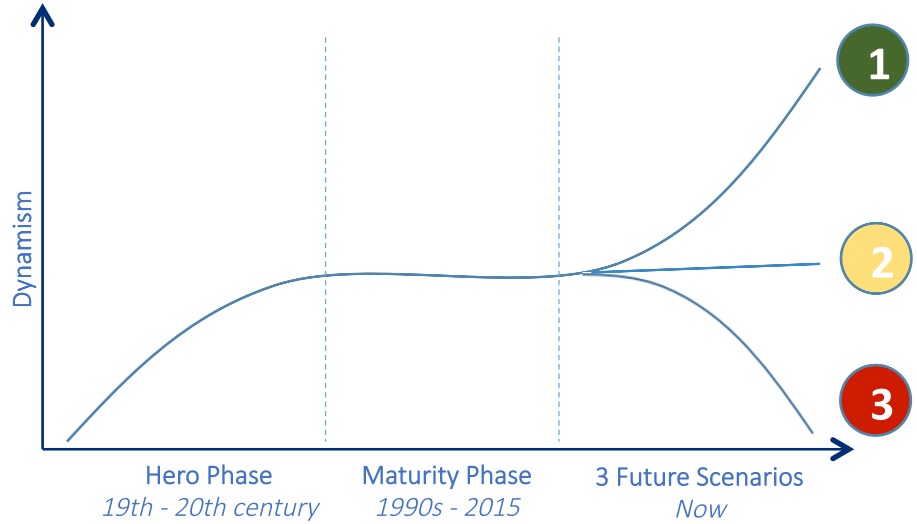


Cluster Analysis – Future Outlook

3 potential scenarios for developing cluster dynamisms, analyzed through the third lens of the Cluster Model

Scenario 1: Micro-Distillery Innovations

- The first possible future is based on new entrants in the Scotch market that increase cluster dynamics to a new level. Since the establishment of new major distilleries and whisky brands is a long-term issue, the most influential group for a short- to midterm rejuvenation of dynamics are micro-distilleries
- As will be discussed later in further detail, micro-distilleries are beginning to spread throughout the country, especially in urban areas where historically no distilleries were built due to a lack of fresh water. If they manage to scale this development up (in terms of spread and size), there might be enormous potential
- While new entrants increase dynamics most obviously due to higher competition, they also increase collaboration . Micro-distilleries have the possibility to innovate more freely and go new ways since the investments and the batch sizes are smaller



Scenario 2: Continuing Consolidation and FDIs

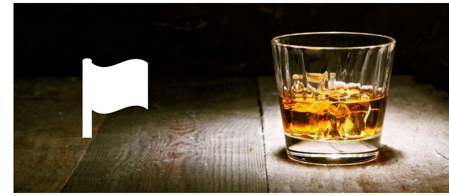
- The second possible future scenario is a continuation of what has been happening the past few decades. Consolidation goes on but slows down and the big investments from foreign companies fuel the cluster to keep the dynamics balanced
- With the likelihood of this scenario being rather high in the short- and midterm, it is questionable how much concentration of ownership is sustainable to stay globally competitive in the long run – especially since the consolidation happens in a period of rapid global growth and it is unknown what happens when growth slows down
- As long as the demand keeps shifting towards more expensive premium brands, the margins on Scotch are high enough to sustain big conglomerate-distilleries and also small family-owned ones. However, changes in global demand are hard to predict and might be very harmful for smaller niche-distilleries

Scenario 3: Foreign Whisky Exports

- The third possible future revolves around an increasing amount of consolidation in Scotland that decreases competition and cluster dynamics. If in addition to such a scenario, other upcoming whisky producing countries such as India or Singapore begin exporting their brands, Scotch is in danger of moving towards the museum stage
- Currently, the quality of the large volume brands in emerging markets is on the lower end and can therefore hardly compete with Scotch in international markets. But as other examples such as the development of global shares of the wine market have shown, once these distilleries set foot in the global market, it is only a matter of time until they are able to transfer the capabilities from high-quality locations to their home distilleries and start competing on a higher quality level. After all, since 2015 none of the top rated whiskies according to Murray J. is Scotch anymore (2015 & 2016) (1)

Diamond Model: Cluster Competitiveness

Factor conditions and supporting industries are beneficial while all other relevant areas reveal mixed results



Firm Strategy, Structure & Rivalry ●

- ✚ Strong collaboration within cluster (SWA, SWRI)
- ✚ Distinctive character of each whisky offers unique selling points
- ✚ Rapidly increasing amount of micro distilleries increase competition
- − Traditionally high market entry barriers through legislation (three years maturing)
- − Limited amount of distilleries (~100 malt & few grain) – limited competition
- − Increasing consolidation – foreign big players' shares increasing

Factor Conditions ✚

- ✚ Local access to all necessary natural resources (cereals, water and yeast)
- ✚ Skilled manufacturing labor force
- ✚ Higher education (Life Science Focus)
- ✚ High value creation per employee
- ✚ Easy access to capital through FDIs
- − Rising energy costs (8% of total costs) (1)
- − High logistics cost

Demand Conditions ●

- ✚ Strong branding of Scotch whisky throughout the world (2)
- ✚ Diverse taste leads to fragmented demand
- ● Lock-in effects (brand loyalty, consumers stick to usual brand)
- − Seasonal demand
- − Trade barriers and resistance against alcohol (2)

Chance ●

- ✚ Phylloxera beetle epidemy in France killed brandy and allowed Scotch to enter the market
- − Weather hazsards destroy buildings and storages
- − Climate change entails challenges

Related & Supporting Industries ✚

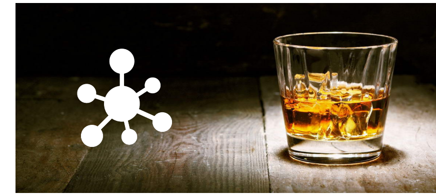
- ✚ Very local supply chain (1)
- ✚ Malting industry traditionally strong
- ✚ Agriculture (barley production)
- ✚ Cooperation with Life Science Cluster (e.g. Nestle, Syngenta for Crops and Seeds)
- ✚ Tourism
- − Insufficient local machinery production > only 30% of CaPex[1] is spent in Scotland (1)

Policy ●

- ✚ Legal protection of Scotch
- − High domestic tax
- − Political uncertainties with several stakeholders

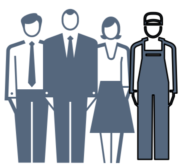
Cluster Diamond: Factor Conditions

Local access to resources, skilled labor force and high logistics costs constitute most relevant factor conditions



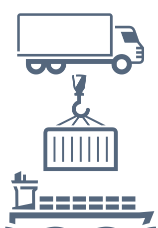
+ Local access to all necessary natural resources (cereals, water and yeast)

- Scotch whisky is only allowed to contain water, malted barley (to which only whole grains of other cereals may be added) and yeast. The composition and origin of all used cereals and the locally sourced water are crucial for the distinctive taste of each individual Scotch (1)
- Naturally, Scotland's climate is extremely beneficial for the production of whisky as the land is filled with lakes and rivers, offers fertile soil and sufficient rain. Also, Scotland's climate in the highlands is perfect for the formation of peat that is used in smoking kilns and gives malt a distinctive, smoky aroma (2)
- The rich local availability proved to be pivotal in the development of Scotland's whisky tradition but also holds a dependency risk: Any disruption of these natural elements could be potentially dangerous to the Scotch industry (2)



+ Skilled manufacturing labor force

- Providing and supporting jobs in both rural and urban areas, the industry is well on top regarding worker skills through its long heritage and high expertise, which is key to ensure continued economic success. Extensive efforts by the SWA, producing companies, the Scottish government and other stakeholders are taken (3)
  - 96% of Scotch whisky companies provide training to employees, 78% of companies do not face any general recruitment issues
  - The industry engages well with schools focusing on the diverse roles and opportunities available in the industry
  - Modern apprenticeship programs (mainly in-house apprenticeships) are offered by Scotch whisky companies
- Challenge: Scotland faces an engineering shortage affecting many industries, including Scotch whisky. Efforts are undertaken to build and sustain engineering and management skills



− High logistics cost

- As over 90% of Scotch whisky produced is exported to about 200 markets around the world, logistics are highly complex and of severe importance. The Scotch whisky industry makes use of all modes of transport, which is necessary to connect all sites in the value chain, including those in remote rural areas (currently around 165 Scotch whisky sites: distilleries, blending and bottling complexes, malting companies, cooperages and warehouses)
- 15 distilleries are located on Scottish islands (mainly Islay) and require additional short-distance vessels to the mainland
- Scotch whisky is transported to the UK market by road and rail; to Europe by road, rail and short-sea feeder services; and markets beyond Europe by deep sea vessels from the major ports located in England and the near continent. As no deep sea shipping services call into Scotland, the industry relies on large deep sea ports in England and the near continent (Antwerp, Rotterdam), which is costly and creates dependencies on other countries (4)

Cluster Diamond: Firm Strategy, Structure and Rivalry

Increased competition by micro distilleries increases the cluster's competitiveness, counteracting conglomeration

+ Strong collaboration within cluster (SWA, SWRI)

- Historically, actors within the industry had strong incentives to collaborate due to shared interests such as taxation regulations, brand protection and supporting legislations. The predecessor of today's Scotch Whisky Association (SWA, 1942) was already formed in 1912 (1)
- Today's role of the SWA is i.a. to advance global interests and profile of Scotch, its members (95% of Scotch whisky production) and the industry as a whole as well as safeguard the Scotch brand and prevent unfair competition in global markets (2). Furthermore, a close collaboration between the SWA and the Scottish government is crucial to benefit both, the industry and the wider Scottish economy (3)
- 'Scotland Food & Drink' and SWA agreed on Export Collaboration Charter to facilitate cross-industry knowledge exchange and co-operation (4)
- As blended whisky contains single malts from multiple distilleries, distillery collaborations have always been vital for Scotch production (5)
- To create a shared platform for world-class scientific research across the industry, the Scotch Whisky Research Institute was founded in 1974 and has ever since conducted research in fields such as sustainability, conversion efficiency, alternative technologies and product integrity (6)

+ Rapidly increasing amount of micro distilleries increases competition

- Following the rise of artisan whisky in the USA and driven by the global success of Scotch whisky of all types, the first new distilleries for a century are opening in Glasgow and Edinburgh in a trend mirroring the rapid rise of craft brewing across UK industries (beer, gins)
- Aiming at bringing whisky back to the cities and answering on a more sophisticated and specialized demand, entrepreneurs target a younger, urban audience in search of locally produced, artisan spirits as well as connoisseurs (7, 8)
- Historically, market entry barriers are high as new distillers needed to bridge at least 3 years of maturing before being able to sell 'Scotch'. Entrepreneurial micro-distilleries bring in immediate cash by building visitor centers with viewing windows in prime locations in cities, selling 'new make' spirit and using innovative measures such as smaller barrels to decrease maturation time with an intense wood contact (9)
- The Scotch Whisky Association estimates that more than 40 small new distilleries are setting up across Scotland (7).
  Reflecting the development, in 2014 the Scottish Craft Distillers Association (SCDA) was formed (10)

− Increasing consolidation – foreign big players' shares increasing

- Since 2000, the Scotch industry has undergone major consolidations with multinational conglomerates acquiring many smaller distilleries (11)
- The industry's giant is Diageo (formed in 1997 by a merger of the Guinness Group and Grand Metropolitan), owning 29 distilleries in total and accounting for nearly one-third of the industry's total capacity. The company grew through acquisitions and the introduction of new brands. In 2012, the company announced a £1 billion investment to further increase capacity by at least 30% (12)
- Other major players are Pernod Ricard (10+ distilleries), Edrington Group, Bacardi and William Grant & Sons (5+ each) (12)
- Even though the amount of family owned companies decreases, the best-selling single malt in the world (Glenfiddich) is produced by one of the few remaining family-run whisky companies: William Grant & Sons. Owning 5 Scotch brands (13) it became the largest independent whisky company in Scotland, with the third-largest malt distilling capacity in the industry in the 2000's (14)
- The top 5 companies account for around 80% of malt production ownership and over 95% of grain production ownership (15)

The strong brand of Scotch drives growth while barriers and regulatory uncertainties affect demand conversely

+ Strong branding of Scotch throughout the world

- A big advantage is the provenance and reputation of Scottish whisky. It is like «the conversation», an independent media outlet wrote (see quote on the top right): Scotch, and single malt in particular, have become some form of a feeling and consuming; it is a lifestyle rather than simple product consumption. This revolves around the traditional way of whisky distillation and, on the down-side, also limits the possibilities to innovate to some extent because customers do not want to drink a spirit from efficient industrial production but one from a traditional place with heritage and history

> «With iconic images of warehouses full of oak casks, their contents calmly maturing to their peak, gleaming copper stills and sites set in idyllic settings, it's difficult to consider such locations as merely [spirits] factories" (1)

- This is backed by the demand in emerging markets in which whisky in general has a very high status. Especially in China and India, successful marketing campaigns about prestige and heritage have been able to attract the growing middle class to consume Scottish whisky as a reflection of their newly affluent status (2)
- In Africa, in particular in former British colonies, Scottish whisky has always enjoyed a similar brand status. With a growing GDP per capita in urban areas, the strong brand reputation is likely to turn into further profits. The two major rivals (Diageo and Pernot Ricard) already set up their distribution channels (3)

– Trade Barriers and Resistance against Alcohol

- On of the biggest barriers is present in India in the form of a 150% tax burden for Scotch whisky imports in an attempt to promote domestically produced whisky (4). The high tax is the major reason why exports into India lead on the volume ranking (top 3) but are far from the top from a value perspective (top 12) in 2015. This situation also became a political issue when supporters of the Scottish independence accused the UK government in an attempt to promote their cause. They blamed the UK for failing the negotiations with India to reduce said barriers. Other countries with extremely high Scotch taxes are Egypt (3000%), Indonesia (150%) and most states on the Arabian Peninsula (100%) – of which the latter is also one of the biggest and fastest growing markets (5)
- Another critical issue is the enforcement of the protection of «Scotch» as a brand. This affects many countries but especially in China, the amount of inferior spirit being sold falsely under the Scotch-label is immense, leading to lost profits but more importantly to reputational damage for whisky producers due to lower quality or health incidents. Being a threat for all whisky producers, the collaboration in fighting low-quality replicates and in locally enforcing the protection of the brands is of key importance
- With the consumption of alcohol being a sociocultural, political and partly religious topic, the demand is very dependent on regulations around the world. The current trend moves towards more liberal and softer regulations on a global scale and trade barriers are being reduced. However, uncertainty on the trend stability remains and puts high pressure on demand projections of whisky producers whose production lags behind 3-20 years due to maturing processes

The collaboration with tourism and the local supply chain support the Scotch industry in a vice versa effect

Tourism (1)

- The Scottish tourism cluster is a main pillar of the whole economy and hence also a big focus area for the government. The 200,000 employees working in tourism-related industries welcomed around 14.6 million tourists in 2015 and generated about 5% of the Scottish GDP
- The interdependence of tourism and whisky industry in Scotland is very high. More than 50 Scotch whisky visitor centers and distilleries that are open to the public are some of the main tourist attractions and raise attractiveness of Scottish tourism significantly (2). In fact, more than 1.3 million people visit Scotch-related facilities annually, of which 60% are from outside the UK. On the other hand, being a hotspot for visitors, Scottish tourism also supports the renownedness and popularity of Scotch whisky and helps to carry the brand into the world
- Geographically, the two clusters are in close proximity which is another factor leading to close collaborations that include things such as bundle offers of hotels and whisky-tours
- The "Scotland Whisky" initiative was launched in 2003 to connect whisky and tourism. More precisely it plans to: (3)
  - ➢ underpin Scotland's credentials as a quality destination using Scotch whisky's global renown
  - ➢ develop the domestic Scotch whisky experience, to enhance its position as a commercial opportunity for the tourism trade and motivating factor for tourists to travel to Scotland
  - ➢ integrate Scotch whisky as a key element of Scotland's tourist experience

Local Supply Chain

- With an overall 81% of operating expenditures spent on Scottish suppliers (90% in the UK), the production of Scotch can be considered very local which, to a large extent, is due to regulations on local sourcing, production and bottling as well as transport and distribution
- While the sourcing of ingredients does not make up for the biggest part of total costs from a value perspective, there is a growing local concern for decreasing sourcing from within Scotland. The rural policy center of Scotland stated in 2014 that there is a development towards larger geographical spread in the origin of ingredients, especially barley (4). According to them, this is mainly due to two reasons:
  1) The demand for barley for Scottish whisky and beer is growing rapidly and local farmers are not able to keep up. With the demand surpassing local s upply, many distilleries turn towards the UK or even further places such as Germany or Denmark
  2) A new rule states that farmers with land above a certain size must grow at least three different crops with none of them surpassing 75%. This "Three crop rule" results in limiting the amounts of barley produced per farmer and might decrease total output in Scotland over the coming years
- A further specialty of the cluster is the availability of specialized cask manufacturers in Scotland. On top of that, the trade of used barrels is well established - between Scotch distilleries but also between producers of other spirits. For example casks in which sherry was aged are very popular due to the unique effect on the final taste of the Scotch whisky

Cluster Diamond: Policy

While legal protection is a crucial factor in supporting Scotch, high domestic taxes reduce profitability

+ Legal protection of Scotch

- The name Scotch whisky is protected by UK law with the ‘Scotch Whisky Regulation 2009’ which repealed the original ‘Scotch Whisky Act of 1988’ when Scotch was first legally defined (6). The current version from 2009 requires a set of conditions for a whisky to be called Scotch. The key conditions are:
  - The whole production process from malt to whisky has to happen in Scotland
  - The whisky has to age in oak casks not exceeding a volume of 700 liters for a minimum of 3 years in Scotland
  - No substance can be added except for water and plain caramel coloring
  - The whisky needs to have a minimum alcoholic strength of 40%
- Under EU-Law Scotch whisky is protected as a geographical indication with the current version being from 2008. (7) The EU provides the label “PDO” (protected designation of origin) when there is a link between the characteristics of a product and its geographical origin. More specifically, it is a term for “foodstuffs which are produced, processed and prepared in a given geographical area using recognized know-how.” (8)
- The Legal Affairs Department of Scotch Whisky Association takes legal action if the name “Scotch Whisky” is misused. A recent case in India ended with the court prohibiting the Indian whisky producers to sell their products with references to Scotch, Scotch whisky or Scotland (9)

− High domestic tax

- The domestic tax on Scotch whisky consists of two components:
  1) Excise duty: Currently £27.66 per liter of pure alcohol (1)
  2) Value Added Tax: 20% of sales price (2)

  The combination of these two lead to the fact that an average-priced bottle of Scotch whisky (13£) contains 76% tax and only around 3£ of the price the end-consumer pays reaches the brand-owner (3). The fixed character of the excise duty creates a stronger incentive for more expensive whisky since the profit margin rises with an increasing price
- The Scotch Whisky Association is lobbying at the UK Government to lower the tax, stressing the importance of domestic sales. The public supports the proposal for lowering tax distinctly: according to the SWA, 76% are in favor of a further cut (4)
- In recent years, several tax decision have been made that favor the whisky industry (5), for example the decision to not increase excise duty following inflation rates in 2014 or the excise duty cut by 2% in 2015
- Since taxes are paid solely on volume and price, further favorable changes in taxation would of course not lead to a domestic shift in consumer behavior from one type of spirit to another. However, favorable changes would create a shift of profit from the public hand to brand owners that in turn could re-invest the money to foster competitiveness also in global markets

Cluster Dynamics: Gap Analysis

The 7-Gap-Model highlights the importance of the SWA and the opportunity to reduce the gap to other clusters

Firm-to-Cluster Gap

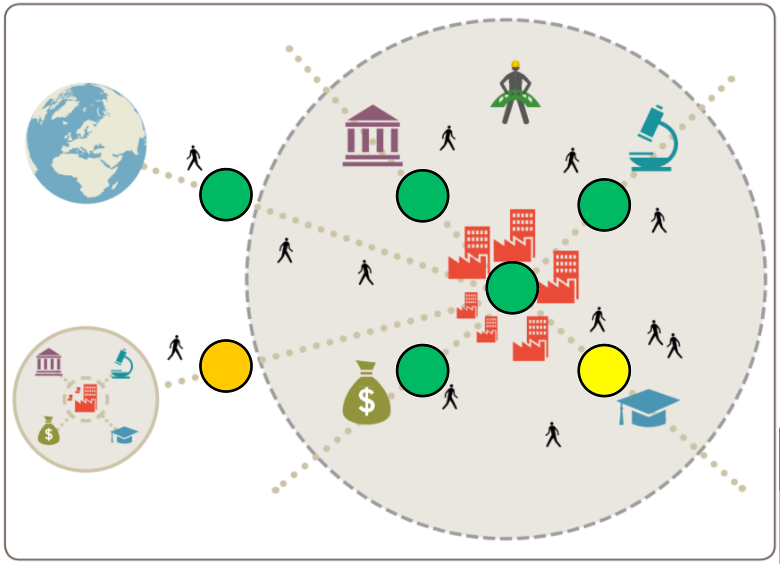
There are interactions between the firms and the rapidly growing life science cluster in Scotland. However, a link to the English beer cluster seems inexistent which is surprising considering the similarities of the value chains as well as the ownership structures (partly same players)

Firm-to-Global Market Gap

The association's active lobbying efforts throughout the world illustrate the importance of exports for the whisky cluster and demonstrate the gap-closing ability of the SWA. The B2C nature of the whisky market then also requires a high degree of global firm-to-customer interaction

Firm-to-Public Gap

This gap is mostly closed by the SWA representing the whisky industry and its strong ties to the government. Further, the mere size of the industry as well as its century-long heritage and the connected deep-founded pride in it create a high interest in collaboration from both sides – the firms and the public institutions.



Firm-to-Firm Gap

The gap between firms is very small. There is a lot of collaboration (e.g. within SWA or SWRI), also regarding the production. Many blended whiskies use compounds from several distilleries and the trade of used oak casks to enhance taste is very active. The close geographic proximity suggests a lot of informal exchange between employees

Firm-to-Capital Gap

With a very strong financial sector in Scotland, high FDIs and many foreign food and beverages companies investing in Scotch, it can be assumed that the gap to capital is rather small. If there is any at all, it mainly affects the financing options of small and/or micro-distilleries

Firm-to-Education Gap

The amount of interaction between education and firms is very limited. However, due to the nature of the jobs and the pride the firms take in training their work-force on their own, there is also only a moderate need for more interaction

Firm-to-Research Gap

The distillation process itself is neither very innovation-dependent nor research-heavy. However, there is a lot of collaboration through the SWIR, mostly regarding the production of crops and seeds (genetic modification, optimization of fermentation process) that bridges this gap

The model shows a strong local cluster with durable inflows of capital and extraordinary global reach

Hollywood Model

To further examine the Scotch whisky cluster in regard of its globalization and localization, the Hollywood Model is used. To evaluate the cluster's local dynamisms in regard of global markets, the factors of (local) attraction and (global) reach need to be assessed. Attraction can be described through proxies such as the inflow of new capital, new ideas and new talent, while reach can be described through inter alia linkages to world markets.

Global Markets

As shown before, Scotch whisky is widely recognized as the number one most premium spirit in the world. As the export rate is extremely high with around 85% (1) and Scotch is exported into over 200 countries, Scotch whisky has without a doubt global reach. The consumption of Scotch whisky is associated with status in many societies and a truly global brand. Many countries tried and keep trying to produce whisky of a comparable quality and richness of taste with Scotch whisky maintaining its signet of excellence. Furthermore, global players such as Diageo and Pernod Ricard are present to a large extent, driving the mass production of Scotch for the export to global markets forward

Local Cluster

Due to the regional protection and restrictions in production and maturing, the Scotch whisky cluster is of course strictly local. Additionally, even within Scotland a process of localization towards the area of Speyside is observable. As described, the Scotch whisky cluster is (one of) the oldest whisky clusters with extraordinary strong heritage and cultural identity.
Glenfiddich, Johnny Walker and many more are inseparably connected to Scotland as the region of origin in consumers' minds, marketing the local region with every sold bottle throughout the world. The Scotch whisky cluster shows an extremely mature and diversified winning network of cluster actors and related industries

Attraction of Resources

The Scotch whisky cluster does not only attract significant amounts of capital in form of FDI and driven by multi-national conglomerates like Diageo, Pernot Ricard and Baccardi, but also talent from manifold destinations for both, finding employment within the cluster and for learning from the Scot's expertise in distilling and blending. Inter alia the Germany Slyrs distillery sends employees to Scotland to gain knowledge and learn (2). The Warenghem distillery from France uses a similar program to train its employees (3). With the inflow of human resources and an exchange of knowledge and best practices, of course also new ideas are sourced

Conclusion

Even though the Scotch whisky cluster indeed shows characteristics according to above outlined three main pillars of the Hollywood Model, we do not consider it a prime example for the model. While it is arguably the leading local whisky cluster in the world with global reach in a global market, the majority of human resources from the outside usually only enters the cluster for education purposes before leaving again, which rather drives globalization instead of localization of the industry. This is supported by the characteristics of the whisky industry: as a primarily manufacturing industry, it requires mainly physical, financial and human capital – these types of capital are rather mobile and thus facilitate globalization. We will line out recommendations later on that we believe could help the Scotch whisky cluster in gaining even more local attraction while expanding the cluster's global reach. One goal is to attract and incentivize talent to stay in the cluster and strengthen its competitiveness long term.

Global Whisky Clusters

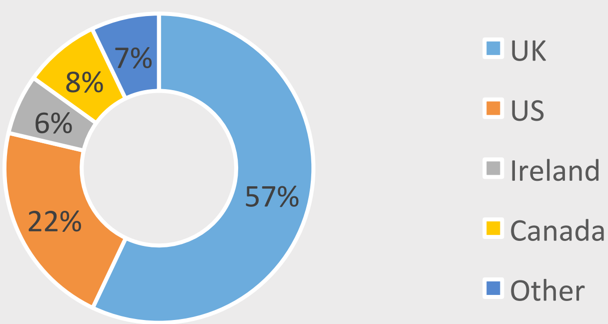
Irish and Scotch whisky have highest export figures with Scotch whisky being the global market leader by far

Global Whisky Competition

- All big clusters have protected geographical names and originate from commonwealth countries due to historical roots of Whisky on British Isles
- Increasing production of Whiskies outside the traditional clusters, such as India, Singapore and Japan

	Scotch Whisky	U.S. Bourbon	Irish Whiskey	Canadian Whisky
Characteristics	• Distilled in Scotland • Must be stored 3 years min. • Based on malt or grain • Matured in oak casks	• Produced in the US • Must be stored 2 years min. • Made from at least 51% corn • Mat. in new, charred oak casks	• Produced on any Irish islands • Must be stored 3 years min. • Based on malt or grain • Matured in wooden casks	• Produced in Canada • Must be stored 3 years min. • Usually based on corn or rye • Matured in wooden casks
Age of cluster	Very traditional, since 16th/17th century	Developed in 19th century	Similar history as Scotch through British legislation. Cluster since 16th/17th century	Established in 18th/19th century
Competitive situation	• World market leader • Strong growth in premium 'single malt' segment • Increasing consolidation	• Increasing global market share • Strong domestic growth • Strongest growth in premium segment	• Only 4 mature distilleries • Dominated by MNCs • Fast-growing small producers with significant startup activity	• Stagnating/decreasing sales • Mainly export to the US with low exports to other continents
Export share of Sales	93% (1)	30% (2)	>95% (3)	>75% (4)

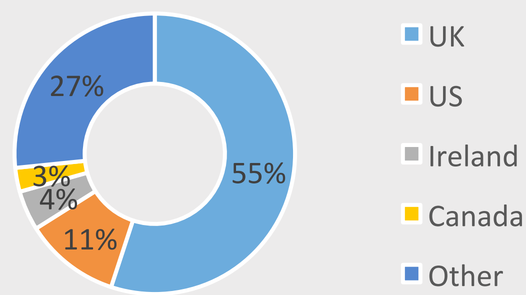
Global Whisky Production(6)



Implication

Comparing productions with exports, it becomes apparent that the ratio of whisky consumed in a production home country compared to the export ratio varies highly. A much higher ratio of US whisky is consumed in the US than Scotch in Scotland that is much more export oriented

Global Whisky Exports (5)

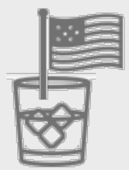


Comparing Scotch Cluster with Kentucky Bourbon Cluster

Scotch cluster should use identifiable trends from the bourbon cluster to leverage the cluster's competitiveness

The US (Kentucky) Bourbon Cluster (1)

- Renewed growth in past decade through increased domestic demand and a growing global market
- Wages are increasing for cluster participants and capital investment from abroad has expanded the capacity of the cluster
- Strong ties to tourism and related industries foster a harmonious and self-reinforcing cycle of economic growth
- However, strong endowments, flexible labor laws, and low tax rates lead to challenges for the cluster. Kentucky faces above average unemployment and struggling educational institutions
- State legislations also partly restrict the growth of the cluster through high excise taxes, the number of dry counties[1] in Kentucky (39) and restrictions on the amount of bourbon tourists
- High entry barriers, e.g. high licensing fees, favor incumbents and restrain aspiring craft distillers and other innovative companies while other states reform laws to encourage craft distilleries to open

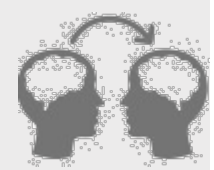


Trends in Clusters (2)

- Technavio (2) identified three trends impacting the global American whiskey market through 2020: Marketing strategy and promotions; New product launches; Rising exports, of which the first two are briefly examined
- Sales are boosted through new marketing strategies and campaigns aiming to increase awareness. Examples are: Brown-Forman adopted a strategy of educating bar staff and consumers about the American whiskey segment abroad. Also, the company introduced three new flavor code profiles to attract new consumers for American whiskey. In 2015, Jim Beam officially partnered with Snapchat for marketing efforts and executed a three-dimensional sound program for on-premise sampling and trial in the US to spread awareness and reach new customers (3)
- Companies are launching new products to gain a large consumer base and meet the growing demands of the market. Vendors are also experimenting with new packaging and labeling designs, a major purchase criterion for consumers. In 2015, Jim Beam launched the new Jim Beam Apple to attract younger customers

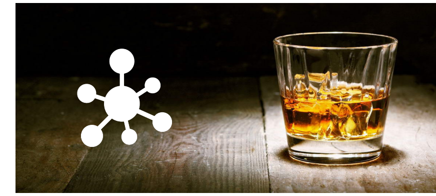
Lessons to learn for Scotch Cluster from Bourbon Cluster

- With a growing number of global whisky consumers, it is vital to not only maintain the current customer base through highest quality standards, a rich traditional heritage and a maintained global perception of being the number one premium spirit, but also to attract new customers to not lose market share long term
- Thus, actors in the Scotch whisky cluster should follow the American examples outlined above and adapt their strategies to own needs. Using more modern marketing and sales channels such as Social Media and respective apps could help attract younger, more urban customers and serve as a comparably cheap channel to leverage marketing globally as digital content is easy to spread
- Launching new products, introducing new taste compositions might also be a suitable way to attract new customers. Especially in rising whisky consuming nations with growing middle classes and in which whisky is consumed as part of a social status, tastes might be different. Introducing new products, maintaining the Scotch character but fitting local tastes might be beneficial in gaining share in these markets



Global Trends

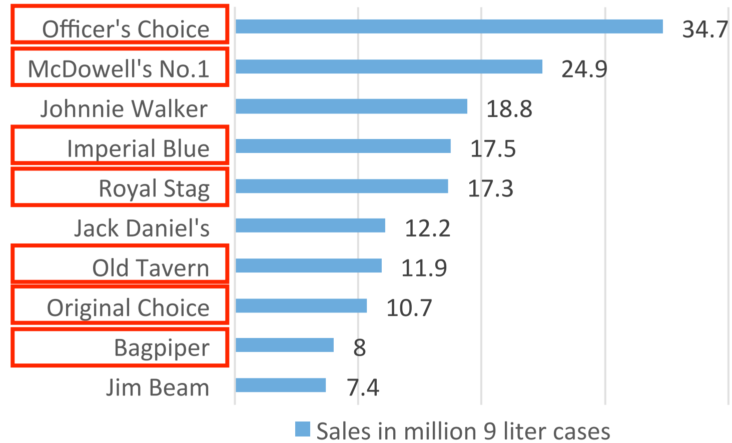
Scotch is losing shares of global whisky sales - mainly to Indian brands that dominate the market by volume



World Whisky Sales over Time (1)

- As shown before, Scotch sales are growing faster than ever before. At the same time the share of global sales is shrinking at a high pace. This is due to the enormous increase in demand of whisky worldwide, as previously discussed
- The rapidly growing demand in emerging markets leads to a higher attractiveness for local producers, which is exactly what can be seen today. New whisky distilleries emerge in regions with high or fast-growing demand such as Taiwan, Belgium, Australia, Sweden, India, Singapore and Japan (1)
- By far the biggest market by volume is India, where domestic Whisky production multiplied in the past decade. As impressively illustrated on the top right, 7 out of the 10 top-selling whisky brands by volume worldwide are Indian, with only one Scotch and two US whiskeys being able to keep up

Leading Whisky Brands 2015 by Volume (2)



- The implications for Scotch producers are not extremely significant since these brands have competed in the local Indian market only
- However, with the major spirits conglomerates buying into the Indian market (3 of the top 5 brands are owned by Diageo or Pernot Ricard), the transfer of knowledge and capabilities is fostered
- In analogy to the classic example of the wine industry in which new world producers entered the competition through the low-price segment and slowly started eating into the shares of historically dominant clusters and producers, also for the global whisky market, it has to be considered what might happen once these Indian bulk producers aggressively enter the world market with lower prices and solid quality due to lower factor costs and economies of scale
- In such a case, Scotch would not only lose global sales shares but also global exports, which would hurt the industry significantly

Firm Level – Company Overview and Product Portfolio

William Grant & Sons is a leading spirits company with a very diverse portfolio and strong Scotch whisky brands

Company overview (1)

WILLIAM GRANT & SONS
INDEPENDENT FAMILY DISTILLERS SINCE 1887

COMPANY OVERVIEW:

- Established in 1887 in Dufftown, family-owned William Grant & Sons is a luxury spirits company
- The company is involved in whisky, rum, gin, tequila, vodka and brandy categories

FINANCIAL INFORMATION:

- The company had 0.4% (90,000 thousand liters) of spirits volume sales in the world in 2015
- Net sales climbed 6% to nearly £883 million in 2015, operating profit increased 10% to £150 million in the same year

PRODUCTION:

- The company is the biggest independent, Scottish and family-owned Scotch producer
- William Grant & Sons has 7% of all Scotch production
- The company has 6 distilleries mainly in Scotland and Ireland, moreover it operates special sites for vodka or rum

DISTRIBUTION:

- The company distributes its products worldwide via mixed distribution platforms
- It has wholly owned distributors (in key markets, such as the UK, USA, China, Taiwan, France and Singapore), joint ventures and third party partnerships

The diverse portfolio – including 4 main brand categories – attracts customers with different needs and purchasing powers and helped the company to become a market leader (2)

Core Brands

The core product portfolio consists of different whiskies, rum, gin and liqueur. The core brands, including i.a. Glenfiddich (single malt) and Grant's (blended), account for the majority of turnover and profit. The company focuses its promotional spend on these brands to create a unique premium identity

Launch Brands

This category consists of 4 different brands: Milagro tequila, Reyke vodka, Solerno liqueur and Gordon Highlanders whiskey. The company believes that there is scope to develop these brands and to make them more successful which is why launch brands are strongly supported

Local Brands

Local brands include Clan MacGregor whisky, Gibson's Canadian whisky, Raynal/Three Barrels brandy, OVD rum, Taboo high-strength premix, and Wood's 100 rum. They have a low priority in terms of promotional spending, and are generally brands that provide routes to markets for the core and launch brands

Agency Brands

William Grant & Sons also represents a number of other premium spirits brands on behalf of third party brand owners in key markets around the world

Firm Level – SWOT Analysis of William Grant & Sons

While strong core brands drive global sales, diversification should be used to enter Asian and African markets

Internal analysis (1)

Strengths

- The company is traditionally one of the market leaders in the Scotch whiskey market (3rd in the blended category, 1st in the single malt category)
- William Grant & Sons is strongly integrated in the local Scotch cluster
- With the successful shift from volume towards a value-based approach, the company can satisfy more sophisticated consumer needs
- The inherited expertise and know-how in manufacturing create a competitive advantage which is hard to imitate
- The company’s broad portfolio might contribute to bigger international growth

Weaknesses

- Even though the company has a broad portfolio, it overwhelmingly relies on Scotch whisky (blended Scotch made up 50% of volume sales in 2015)
- The company is relatively narrowly focused on North America and Western Europe compared to global competitors such as Diageo or Pernod Ricard who have a more global presence
- Lacking sales and distribution channels in Africa hinder the entrance into rapidly growing African markets
- Lacking presence in rapidly growing Asian markets (e.g. India, China)
- The focus on value can hurt the company’s presence in the largest core markets (UK, France) where price discounting is a major factor

External analysis (1,2)

Opportunities

- The demand for Scotch and Irish whiskey is increasing
- Chinese demand for single malt Scotch is growing, thus, the category has a massive growth potential
- Premiumization in the single malt whisky category can also strengthen the company‘s position
- The new markets in Europe (especially in Germany) offer great growth potential for English gin
- Organic growth will play a bigger role in the industry, since the spirit market is getting consolidated
- Large shareholder funds are available in order to further broaden the brand portfolio of the company in niche categories

Threats

- The market for blended Scotch in Western Europe is slightly declining
- There is intense competition on price in different core categories (for example gin in Spain or rum in the USA)
- Apart from the undisputed global market leaders (such as Diageo or Pernod Ricard), the local spirits producers in Asia also threaten William Grant & Sons’ market shares
- The global spirits market continues to consolidate; thus, the opportunities for M&A activity become more limited
- Weak economic situation in the core markets (for example France) may hinder growth

In general, William Grant & Sons should keep relying on heritage and outstanding quality of core brands to satisfy more sophisticated consumer needs in the whisky – esp. premium single malt – category. Furthermore, the company should use shareholder funds and their strong core brands to enter more mature Asian and African markets and build presence. With growing middle classes, demand will increase allowing the company to grow with the market. At the same time, the company should keep diversifying its portfolio both in niche categories to attract new customers and in lower price segments to counteract growing price competitions in several core categories and markets. Lower priced launch brands or local brands could be used to facilitate market entries in less mature growing markets in which the purchasing power is still relatively low (e.g. India) and thus contribute to building a growing presence

Firm Level – Glenfiddich History and the Railway Model

Glenfiddich's success comes from progressive strategic decisions made by committed train operators at stations

Glenfiddich, one of the most famous brands of William Grant & Sons, is heavily integrated in the Scotch cluster

- William Grant & Sons' core focus is led by the Scotch portfolio: Glenfiddich (Gaelic for Valley of the Deer) is one of its most iconic brands
- The company has played an important role in the Scotch cluster for a long time; Glenfiddich was one of the first distilleries in the 19th century when commercial production started
- Even though Scotch innovation is limited by the SWA regulations, Glenfiddich was pioneering, for example it released several collectable and rare whiskies
- In addition, Glenfiddich was the first single malt to be actively promoted outside Scotland
- The company built strong relationships with other members of the cluster, for example craftsmen, different distillers or even chefs and bartenders
- The share of Glenfiddich has fallen since 2011 as competitors sell more unaged products, however William Grant & Sons put more emphasis on the premium, aged variants
- Growth prospects for the category are around 4% over 2015-2020 as premiumization will drive the single malt market

The leadership of Glenfiddich made pioneering strategic decisions over the company's history (1,2)

1887. William Grant opened his distillery

1917. Due to declining sales during world wars, Grant closed the distillery for 2 years

1939-45. Management decided to close the distillery because of the lack of raw materials

1961. Collaboration with Hans Schleger started in order to radically change the packaging design

1969-71: Opening of the 1st visitor center and launch of the Glenfiddich Food & Drink Award to improve public relations

1990. Janet Roberts opens Kininvie to support 3rd label production

1892. Grant built Balvenie distillery to launch a new brand called Grant's whisky

1923. Grant Gordon joined the firm and surprisingly increased production in spite of prohibition

1957. Grand started collaboration with Copperman to improve production

1963: Sandy Grant Gordon expanded the market by exporting single malt outside the UK. He also built a new distillery called Girvan

1987. Launch of premium products during centenary

2000s: The acquisition of 30% of Highlen Distillers is followed by strong portfolio diversification

Besides the distinctive taste, the main reason for Glenfiddich's long standing success is the company's innovativeness. As first movers for product design – in form of the unique triangular bottle – for single malt exports, and for including tourism through visitor centers, the company always stayed ahead of the competition

The model shows the company strategically strengthened its international position to become a global leader

William Grant & Sons built a strong global brand image as a leading whiskey producer over the last decades (1,2)

1905: Exports to Canada began; sales offices in Canada and the US were established

1909: Worldwide sales trip of Charles Gordon to promote the company

1914: International business thrived, more than 60 agencies were established in 30 countries

1st and 2nd world war: Decline in international demand caused erratic sales

1963: Export of Glenfiddich outside the UK started, the single malt category was introduced to the new markets

1964: The company acquired the U.S. based distributor Popper Morson to increase control

1990s: The company strengthened its position via further acquisitions

2006: William Grant & Sons opened new offices in Taiwan and Shanghai to manage sales, marketing and distribution of the company's brands in Asia

2010s: The whiskies category consolidated, the top 10 producers (including William Grant and Sons) account for 80% of global volumes

William Grant & Sons is present worldwide with more than 21 offices (3)

- Western Europe is the most important region with 42% of global volume sales. The UK, France, Germany, Belgium are the key markets
- With 29%, North America is the second most important region
- The company has the biggest market share in Australasia due to the success of its own operations
- Eastern Europe is becoming more and more important, especially Poland emerges as a core country in the region

The Radio Model is used to analyze the Glenfiddich single malt market entry into the US in 1963 – the company's first step to become a global player

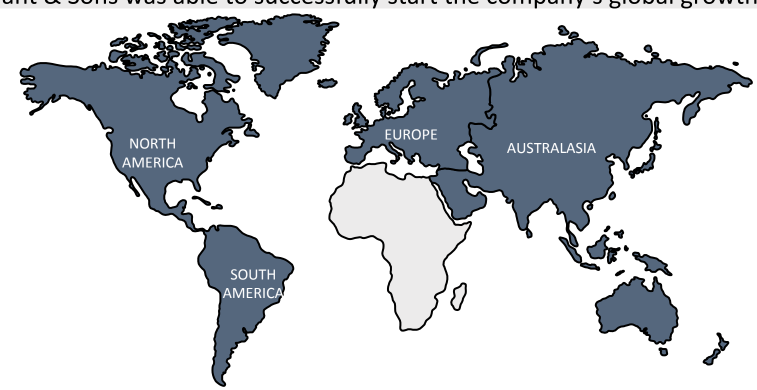
WHY?
Entering the US as a new geographical market was motivated by economies of scale and the prestige of global presence

BRING?
Glenfiddich offered an exciting new taste – single malt whiskey instead of blended – in unique packaging for the customers

MEET?
The company knew the US market (regulations, norms, industry structures), especially the strong local competition, but demand for the new product was uncertain

HOW?
Glenfiddich established the single malt category in the US. It was actively promoted by the newly acquired distributor and the wholly-owned subsidiary

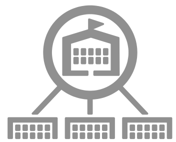
Bringing a premium branded, unique product to a sophisticated consumer base establishing a new category that quickly gained popularity, William Grant & Sons was able to successfully start the company's global growth



Policy Recommendations

High consolidation, losing market share to new world competitors and a lack of innovation threaten the cluster

Based on the in-depth analyses of Scotland's national and regional framework conditions, the Scotch whisky cluster and one exemplary anchor company, three major threats for the cluster were identified. In the following, each current or potential issue will be outlined and recommendations that we believe will make a difference will be given, explicitly naming the cluster actors that need to become active to solve or counteract each respective problem



Problem	High consolidation within cluster reduces cluster dynamism and competition	Losing market share to new-world competitors	Lack of innovation within cluster
Short description	The Scotch whisky cluster faces an ongoing consolidation of smaller companies into multinational conglomerates. While this creates producers with more global market power, cluster dynamism is reduced through a lack of cluster-internal competition, leading to a lack of innovation. In the long term, it is questionable how much concentration of ownership is sustainable to stay globally competitive	As middle classes around the world grow and demand for whisky rises, more and more countries – such as India, Japan, Singapore, and Taiwan – start to produce whisky and foster the establishment of whisky clusters. This can lead to two problems: first, market share in these countries could decrease due to local competition, price undercutting and rising import taxes. Second, global export share could decrease as these nations will start to export their whisky sooner or later, thus increasing global competition. With growing diversity in whisky from different locations, tastes might change in the global consumer base	This problem goes partly hand in hand with the rising degree of consolidation already described. As Scotch whisky has such a strong heritage and cultural importance and demand for (high quality) alcohol around the world has been stable or rising in recent decades, the need for innovation was low for a long time. As Scotch whisky has seen global growth (see slide 15) for many years, the need to reinvent practices and products was low. The reduced dynamism leads to rigidity and inhibits the cluster to follow or create new trends
Cluster actors involved in problem constellation	• Whisky producers (conglomerates) • UK competition authority	• International competitors • Emerging (artificial) clusters	• Incumbent distilleries • Regulators (SWA, governments)
Cluster actors potentially able to solve or counteract problem	• UK Competition and Markets Authority • Governments • Scotch Whisky Association	• Scotch Whisky Association • Government • Education facilities	• Scotch Whisky Association • Incumbent Scotch whisky producers • Research institutions • Life Science cluster

The CMA should prevent further consolidation while the government should subsidize small Scottish distilleries

Description of the problem and respective cluster actors

The Scotch whisky cluster faces an ongoing consolidation which leads to reduced cluster dynamism. Long term it is questionable how much concentration of ownership is sustainable for the cluster to stay globally competitive. Not only are family owned distilleries consolidated into big multinational conglomerates – which on the one hand might lead to increased global market power but on the other hand also to a lack of innovation and cluster-internal competition – but also do larger companies engage more frequently in vertical integration, further reducing cluster dynamisms. Furthermore, some of the big conglomerates also own non-Scotch whisky brands from around the world which might lead to conflicts of interest in certain global markets that are not beneficial for the competitiveness of the Scotch whisky cluster. Even though multinational conglomerates let brands act relatively autonomously to not take away local pride and heritage, they often use the brands to diversify their product portfolio by marketing only certain niche segments, thereby reducing competition which in turn (according to Porter) reduces cluster dynamisms. Another actor who is involved in this development is the UK Competition and Markets Authority (CMA) whose task it is to make markets work well for consumers, businesses and the economy (1)

Recommendations to solve or counteract the problem

UK Competition and Markets Authority:
We recommend the CMA to examine whether a further ongoing conglomeration of Scotch whisky producers does endanger a free and liberal market. We recommend to tighten regulations for further consolidations to maintain a healthy market, prevent unfair competition and ensure consumer protection. With growing market strength of big players, it becomes more and more difficult for smaller distilleries and family-owned companies to remain competitive

Government:
We recommend the Scottish government to subsidize distilleries under a certain size, in accordance to European law (3). We do not promote unfair market conditions, but as Scotch whisky is a crucial part of the country's cultural and social heritage and identify, it is important to maintain and foster smaller local companies, preserving regional traditions. Furthermore, as Scotch whisky is a major contributor to Scotland's economy, it is important to secure long-term stability (2). International conglomerates might only stay in the market as long as profits are high and are more likely to sell out or close businesses when margins drop. Those subsidies would help in maintaining a healthy level of smaller companies that have strong traditional and cultural ties to the matter, adding to a more healthy long term perspective for the cluster and thus Scotland's economy

Scotch Whisky Association:
We recommend the SWA as the main voice of the industry to become more active in promoting product and brand diversity as well as help smaller distilleries with expertise, education and networks. As the high diversity and richness in taste paired with strong local heritages and traditions is one of the competitive edges of Scotch whisky, it is important for the cluster to help these smaller distilleries stay independent Meetings, seminars and get-togethers within the Scotch whisky community and together with educational institutions could help to spread expertise and foster both formal informal exchange of ideas and best practices. Fostering collaboration among smaller distilleries could increase economies of scale.

Losing Market Share to Emerging Competitors

The SWA must promote Scotch's premium status, reduce trade barriers and help building global education centers

Description of the problem and respective cluster actors

Middle classes around the world are growing and in many societies the consumption of whisky serves as a sign of status. Thus, the global target group is increasing. This is also partly driven by a development of whisky gaining popularity as a bar drink and in cocktails. As the global demand for whisky as a premium spirit is rising, more and more countries start to produce whisky and foster the establishment of whisky clusters. This becomes particularly present in countries such as India, Japan, Singapore and Taiwan.

These developments can lead to two problems and challenges for the Scotch whisky cluster: First, market shares in these countries are likely to decrease due to local competition, lower prices of locally produced whiskies and increasing import taxes for Scotch that governments apply to strengthen their artificially established new local clusters. Second, global export share could decrease long term as these nations will start to export their own whisky sooner or later, increasing global competition. With growing diversity in whiskies from different locations, tastes might change in the global consumer base and the relatively premium prized Scotch whisky might loose market share due to price undercutting from competitors

Recommendations to solve or counteract the problem

Scotch Whisky Association:

To counteract these potential threats, the SWA must take on a central role in manifold ways. First of all, we recommend the SWA to keep working actively on maintaining the premium reputation Scotch whisky has throughout the world to diversify from emerging local competitors in respective countries. Therefore, we recommend joint marketing campaigns in countries such as India, not marketing specific whisky brands but Scotch whisky as a whole segment. Secondly, we recommend the SWA to further extend lobbying work towards foreign governments to reduce import taxes for Scotch (e.g. 150% in India or 3000% in Egypt (1)) and ensure free market access. With over 650 market barriers in 120 export markets, lobbying against restrictions and for equal sales terms worldwide will remain vital for the industry (1). Finally, the SWA should also work with the Scottish and British governments to lower excise taxes in the UK (currently 76%) to generate an increase in revenues which is highly supported by the general public (2). This would enable Scotch whisky producers to re-invest capital for long term growth and to compete on a lower price if needed in respective countries. Accordingly, we recommend the Scottish and British governments to work together with the SWA to discuss fair taxes

Educational institutions:

We recommend to establish a 'School of Scotch Whisky for Professionals' that offers different classes ranging from weekly seminars and summer schools to full-time apprenticeships for people who are working in the whisky or want to do so. Thereby, Scotland would attract students and prospective distillers from around the world to learn about Scotch whisky traditions and best practices. Thus, reputation of Scotch whisky could be further increased, establishing a mindset of 'The best distillers are from Scotland' around the world. Furthermore, through incoming students from around the world, fresh ideas would be sourced and innovation fostered to thus increase cluster dynamisms long term. In addition, educating top notch labor would increase labor competition, also benefitting the whole cluster

Lack of Innovation

Micro-distilleries as the main innovation driver should be supported by the SWA and incumbent whisky producers

Description of the problem and respective cluster actors

As described, this ongoing problem goes partly hand in hand with the rising degree of consolidation. As Scotch whisky has such a strong heritage and socio-cultural meaning and demand for (high quality) alcohol around the world has been stable or rising for a long time, the need for innovation and novelty creation was low. For decades, Scotch whisky has seen global growth (1,2) without the need to reinvent practices and products. Furthermore, entry barriers for new companies are comparably high. New market entrants need to stay in the market for at least three years before being allowed to sell Scotch whisky due to maturing regulations and the required capital to even establish a distilling company according to the strict regulations is very high. Furthermore, the time and effort needed to build brand recognition are significant, especially as whisky consumers tend to be very loyal to preferred brands. Additionally, as most industry profits come from exports, new entrants face huge marketing costs to promote a new brand in several countries right from the beginning.

Research shows that conglomeration in clusters often leads to a decrease in innovation (3), a trend also observable within the Scotch whisky cluster

Recommendations to solve or counteract the problem

We identified micro-distilleries as the main driver to increase innovativeness within the cluster as they achieve to establish a new market segment and create a new, trendy lifestyle, targeting a younger, urbanized consumer segment and bringing distilleries back into larger cities

Scotch Whisky Association:

We recommend the SWA to help emerging small distilleries by offering workshops and seminars for knowledge exchange and expertise if needed. Furthermore, we recommend to actively lobby for and develop a plan to change regulations (4) regarding the production of Scotch whisky. Micro-distilleries e.g. experiment with smaller cask sizes (50 l) to allow for a faster and more intense maturing process and many further innovative ideas (5). Thus, regulations should be adapted so that micro-distilleries can sell whisky branded as Scotch earlier and become competitive faster. This measure would incentivize innovativeness within the cluster and thereby increase cluster dynamisms

Incumbent Scotch whisky producers:

We recommend incumbent Scotch whisky producers to get involved in micro-distilleries. One way to do so could be to hold competitions for the most innovative new distilling technique that micro-distilleries develop. Winners could get granted funding to scale the innovation which could then also be used for larger industrial production. Another possible competition could search for the best taste of a micro-distilled Scotch whisky which could then go into industrial production with the help of a larger company. These ways of offering funding, machinery and expertise in exchange for first-buyer rights would benefit both, the micro-distilleries and larger companies and thereby the whole cluster

Research Institutions and Life Science Cluster:

We recommend research institutes to foster close collaboration with Life Science companies to develop innovative crops that are more sustainable and that can enrich the variety of tastes and thereby enable Scotch whisky producers to enlarge their range of products (6)

Final Thoughts and Outlook

Considering the growing global demand for whisky and the increasing urge for premiumization driven by growing middle classes around the world, we believe that Scotch whisky faces a golden future if the cluster and its actors accomplish to overcome the outlined challenges and threats. We believe that the outlined recommendations can make valuable contributions to increasing cluster competition and dynamism, enhancing innovativeness, reducing global trade barriers and thereby foster the cluster's global competitiveness long term