

INEOS REPORT

Strategic Change and Organisations

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INEOS's Current Strategy	2
PESTEL Analysis of External Business Environment	2
Current Resources and Capabilities	5
VRIO Analysis	9
Financial Strategy	10
Diversification Strategy	11
Operational Strategy	12
Proposed Strategy For The Future of INEOS	12
Strategy in Lieu of Sustainable Leadership	13
Operational Strategy	13
Financing Strategy	14
Strategy to Address Risks & Threats To Industries INEOS Operates In	14
REFERENCES	17

INEOS's Current Strategy

Andy Currie, the then-Director of INEOS Capital and Chairman of INEOS Enterprises, described INEOS's strategy in the period as follows: "INEOS is well skilled in commissioning and operating low cost, high yield commodity plants and has the size and scale that is essential for success in this business. By building on the readymade synergies with our existing European refining operations, coupled with our existing client base and market contacts, we firmly believe that we have the competitive edge" (INEOS, 2006). As per the definitions of Božac et al. (2017) organisation's typically adopt one of the two or hybrid of the following strategies:

- *"A prescriptive corporate strategy is one where the objective has been defined in advance and the main elements have been developed before the strategy commences" i.e. "after analyzing the environment and resources and formulating vision, mission and objectives, the development of strategy ensues, followed by the rational choice of options and the implementation of the selected option."* (Božac et al., 2017)
- *"The emergent approach, as opposed to prescriptive, is the one whose ultimate goals are unclear, planning is short-term, it is more reactive to events, strategy is adapted to people's needs and its elements are developed during its development and implementation"* (Božac et al., 2017)

The primary difference between the two sets of strategies lies in the purpose of the organisation and therefore its available options and the choice of option are re-evaluated within a feedback loop in the emergent strategy, while objectives largely remain fixed with prescriptive strategies. However, no organisation or leader utilises solely one or the other strategy. Jim Ratcliffe's strength lies in planning and strategizing acquisition and value-addition in specifically doubling cash flows of acquired businesses. This classifies the primary set of corporate strategies as prescriptive. Like any organisation, INEOS requires to adapt to unforeseen circumstances such as the 2008 financial crisis and the strikes at Grangemouth. These circumstances affect the strategic development processes. However, based on the history of INEOS, long-term objectives remain, while adaptations are made to strategy in relation to how those objectives are to be accomplished given both planned and unforeseen events

PESTEL Analysis of External Business Environment

Political, governmental, and legal forces: A crucial force is the set of regulatory changes that affect its business. This is particularly true in relation to those working against its fracking business in Scotland, in response to which INEOS engaged in a legal battle with the Scottish government. Moreover, it lost this battle. It has also similarly had to engage in a legal battle with the National Trust for access to Clumber Park (Friends of the Earth. 2016). INEOS has also been in the political limelight in the UK with a noteworthy instance of Prime Minister's question time referring directly and negatively to INEOS. The Labour MP, Mike Amesbury, asked Prime Minister Theresa May: "Does the Prime Minister know what it feels like to get an unsolicited

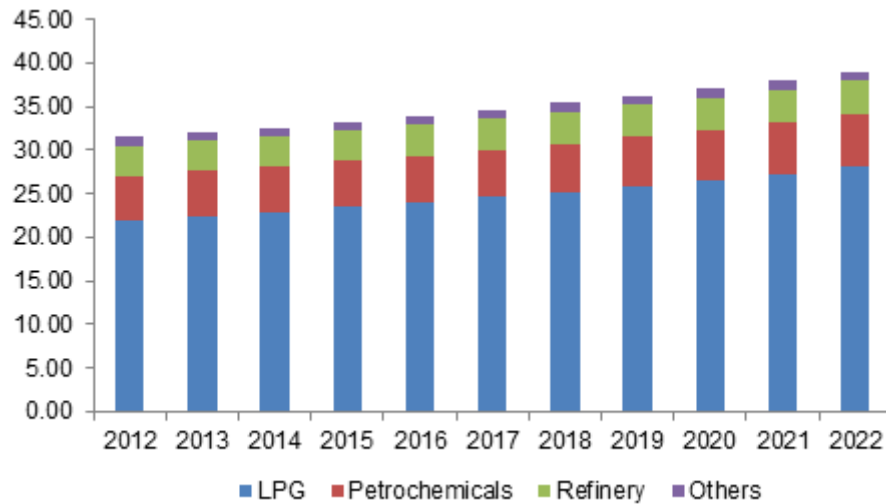
letter from a group who won't take no for an answer and will she join the Welsh and Scottish governments by saying no to fracking in England?" (Hayhurst, 2018).

The strategy in response has generally been to stand its ground and push on political and legal fronts against such obstacles to its objectives. As per a report by Food and Water Europe, "Ratcliffe himself has lobbied parliamentary leaders, and a company official's letter to the UK Department of Energy & Climate Change claimed that Ratcliffe is very well connected and has had a number of meetings with Ministers in various Departments" (Jervis, 2017).

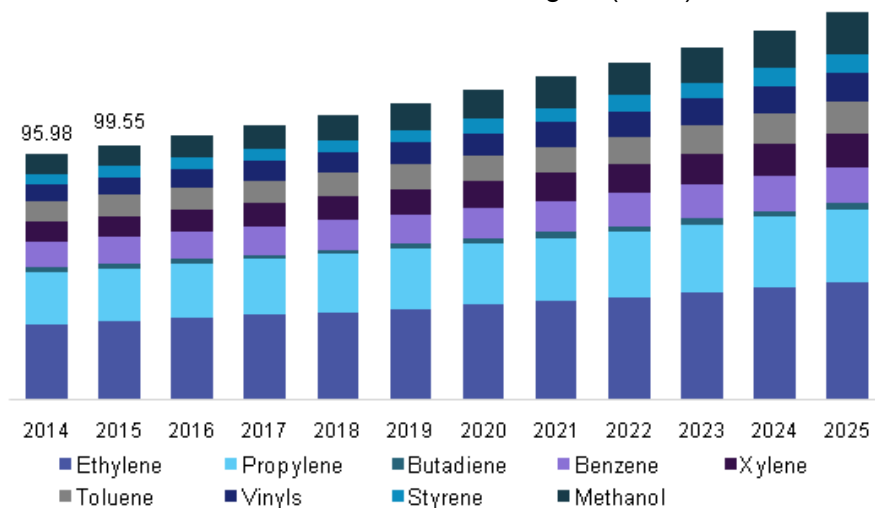
Technological forces: There a number of developing threats to its fossil fuel businesses. A number of concerns have been raised, as to the cybersecurity of highly automated oil and gas. This industry is said to be especially vulnerable to breach of cybersecurity (Bronk, 2014). Moreover, since the 2000s, given that the unanticipated rise of climate change policy has resulted in an increasing push/incentive on development of renewable energy, it is likely that solar power or some other renewable energy technology may make oil and gas obsolete.

INEOS has dealt with these forces strategically by a) a highly paid cyber-security force in its work staff in its UK and b) it has invested heavily in innovation in dealing with technological risks of obsolescence. For instance, as a result it developed the INEOS New Planet BioEnergy technology which generates energy through "renewable biomass including yard, vegetative and agricultural wastes" (INEOS Bio, 2012).

Economic Factors: The financial crisis of 2008 was a considerable force in INEOS's external environment. As the case study notes, it severely affected the company causing it to "nearly go bust". it has dealt with and is still dealing with threat related to unstable economic environment and volatility in currency exchange, particularly now given the uncertainty associated with Brexit negotiations. INEOS also notes a number of other economic factors specific to the petrochemical industry in its annual reports, particularly in relation to the cyclical nature of supply and demand (INEOS Group Holdings S.A., 2017; INEOS Group Holdings S.A., 2016). It states that margins are highly dependent on "industry utilization" and that with increase in utilization rates both prices and margins rise (INEOS Group Holdings S.A., 2017; INEOS Group Holdings S.A., 2016). However, this occurs in the peaks of cycles. The market for petrochemicals has been growing steadily both in Europe and in Asian markets like China and is expected to continue to grow at this pace as reported in a number of research studies such as those by Grand View Research (2016) and Global Market Insights (2016).



Source: Global Market Insights (2016)



Source: Grand View Research (2016)

Its financial strategy has dealt with these in part by expanding into emerging markets (e.g. petrochina). Similarly, engaging in strategic alliances such as the Morgan Stanley-INEOS alliance allows it hedge currency risk and other market related risk.

Social-cultural, demographic and natural environment forces: The company has had to deal with considerable negative publicity in regard to its business practices, even though matters such as Grangemouth battle were matters of negotiation between parties e.g. labor relations. Given the lack of negotiating power of low-wage workers in its workforce, it is often seen by the unions as an unsympathetic corporation led by greedy rich men (based on case study details). This is a significant PR issue which the company has not dealt with sufficiently. Moreover, being part of the petrochemical industry, it has long underestimated the push on renewable energy development which will affect the future of its petrochemical business. INEOS is viewed very poorly in the public eye owing to it being a large corporation dealing in fracking (Friends of the Earth. 2016). The negative associations to the practice of fracking has caused considerable

outroar in the public. For instance, earlier in the year a set of 15 individuals that together owned over 80,000 acres of land in Yorkshire, publicly supported the National Trust in its fight against INEOS in relation to anti-fracking. Given the nature of the petrochemicals (Friends of the Earth. 2016), INEOS is exposed to significant controversy and risk of legal action owing to pollution. The Pollution Inventory of the Environment Agency recorded that Runcorn, acquired by INEOS released “16.5kg of mercury, 21.7kg of lead, and 134.1kg of chloroform into ‘controlled waters’” among other chemical waste released. Moreover, in mid-2015, INEOS was charged a fine of £166,000 due to a spill of “3.8 tonnes of caustic soda into the Manchester Ship Canal” (Friends of the Earth. 2016).

To deal with this, it recently acquired Dong, which will be a subsidiary focus on the alternative source of energy. Moreover, it has begun diversifying its business into other areas outside of petrochemical manufacturing so as to minimise the effect of industry-wide risks. It has sought to deal with negative publicity by participating several corporate social responsibility initiative (e.g sustainable business policy development). This is evidenced in its annual reports (INEOS Group Holdings S.A., 2017) Lobbying and PR for pushing against green taxes and other obstructive policy is a major element of INEOS’ strategy. Ratcliffe is known to publicly criticise such regulations, stating: “The UK said it wanted to be the greenest country on the planet. That’s fine but you end up putting very high environmental taxes on users....You can’t have an energy policy that means you can only have a bath when the wind blows”. INEOS have hired the help of established PR company Burson-Marsteller to help with lobbying efforts (Friends of the Earth. 2016)..

Current Resources and Capabilities

1. Capital and financial resources: INEOS made over \$60 billion in sales revenue as of financial year ending 2018 (INEOS Group Holdings S.A., 2018). It has access to capital from not only sales, but also from banks owing to its reputational resource of being considered a highly robust company. This access to capital is crucial, and was key in allowing it to become the European leader in Oil and Gas exploration, starting from scratch.

Financial Audit

a) Analysis of ROCE:

All values shown are for **3 month period ending March 31, 2018** (INEOS Group Holdings S.A., 2018)

Depreciation and amortisation- € 109.0 million

EBITDA and before exceptionals = € 618.1 million

Exceptional finance costs = €23.6 million

EBIT = 618.1 - 109.0 - 23.6 = € 485.5 million

Total assets = € 11,342.1 million

Current Liabilities = € 2,235.9 million

ROCE (INEOS) = EBIT x 100 / (Total assets-current liabilities) = 485.5*100/(11,342.1-2,235.9)= 5.33%

While the value of ROCE indicates financial performance over the last financial year, it may only be evaluated in relation to the competition. The largest chemical company in the world, BASF, boasts of a much higher ROCE at 13.8% (See calculation below). Moreover, ROCE of greater than 10% is typical among the top 20 chemical companies. Given that INEOS operates its assets at close to full capacity, this is not a high ROCE in contrast with other companies in the industry. However, it must be kept in mind that ROCE is maximised in public companies, as strategy is tailored to the interests of shareholders and maintenance of high stock prices. This may be the reason for higher ROCE in BASF. However, given that INEOS utilises a high risk, high leverage strategy for growth, this reason seems unlikely to explain the difference, and that INEOS generates low profits in relation to its assets. Moreover, given that these are financially encouraging times, and INEOS's ROCE is only 5.33%, it is likely that in the event of a financial crash its performance would be far worse as evidenced in 2008. Financial performance is therefore poor in relation to the rest of the industry.

$$\text{ROCE (BASF)} = 8522 \times 100 / (76496 - 14,880) = 13.8\% \text{ (BASF, 2017)}$$

b) Analysis of activity ratio

Net Asset Turnover is calculated as follows for the same set of periods for INEOS and BASF

$$\text{Net asset turnover (INEOS)} = \text{Sales} / (\text{Total assets less Current liabilities}) = 3,990.6 / (11,342.1 - 2,235.9) = 0.438 \text{ (INEOS Group Holdings S.A., 2018)}$$

The net asset turnover similarly is found to be low at 0.438. It means that for every 1 Euro in assets, INEOS generates 0.438 Euros in sales. On the other hand, in the case of BASF, the net asset turnover is found to be far higher at 1.04.

$$\text{Net asset turnover (BASF)} = 64475 / (76496 - 14,880) = 1.04 \text{ (BASF, 2017)}$$

c) Analysis of Liquidity ratio:

$$\text{Current ratio (INEOS)} = \text{Current assets} / \text{Current liabilities} = 4,603.4 / 2,235.9 = 2.0588$$

The current ratio for the last financial year at INEOS is just above the range of 1.7-2.0 that is considered optimal for businesses. Specifically, it indicates that the business can generate cash required to pay current debts by selling of assets, and yet not have a significant portion of its resources being constituted of assets. This is an advantage as it may be invested in growth of the company without minimising utilisation of assets.

2. 171 production facilities located across 24 countries: These facilities offer it an unparalleled access to economies of scale. It has significant bases for operations in Belgium, USA and the UK and a foothold in emerging markets with operations in Singapore, India, China, Japan and Indonesia among others. Given the advantages of lowered cost of production and transport, its

total chemical production capacity is estimated at 21,700 kta, 58% of which is spread across its facilities in Europe and 42% in North America (INEOS Group Holdings S.A., 2018). It reports an inventory of €459.0 million in raw materials alone, €21.7 million in work in progress and €792.5 millions in finished product (INEOS Group Holdings S.A., 2018). It estimates its total assets at €11,342.1 million (INEOS Group Holdings S.A., 2018).

3. Global leading patent technologies: INEOS owns a number of patents that add value by providing it a competitive edge in the petrochemicals industry. These include acrylonitrile process technology and its fluid-bed maleic anhydride technology, which are some of its most valued assets (INEOS Nitriles. 2012). This is so much so, that INEOS engaged in a legal battle with Sinopec for misuse of its patents outside of contractual agreements (Sternberg, J. 2014). Moreover, its patents on inorganic chemicals, particularly those assigned to INEOS Silicas Ltd. are some of the most valuable in the industry. Similarly, it developed and patented the INEOS New Planet BioEnergy technology which generates energy through “renewable biomass including yard, vegetative and agricultural wastes” (INEOS Bio, 2012)..

4. Skillset of experienced and talented management and workforce: The workforce at INEOS is constituted of a number of the most experienced individuals, given that employment at INEOS is highly sought after within the petrochemicals and oil and gas industries in Europe. It offers a competitive advantage in attracting talent away from other competitors and to INEOS. Moreover, it was placed at no. 10 on C&EN's ranking of top 50 chemical companies, serving to attract talent from all over the world (Tullo, 2018). It is also rated higher than DuPont and Sinopec as places to work on the HR review website, glassdoor.com. This is thought to be attributable to a systematic program for commercial and engineering staff who are provided mentorship, regular appraisals and a host of perks.

5. Several strategic partners and subsidiary businesses: INEOS owns a number of subsidiary businesses that add value through contribution to cashflow. These subsidiary businesses are co-owned with other players in the industry e.g. Petrochina. These alliances add value by the creation of synergistic alliances, and also through lowered risk. This is not limited to petrochemicals operations, but also to other fields where INEOS requires partnerships for technical or strategic support. For instance, it recently partnered with DeSmet Ballestra Oleo through a contract for “Front End Engineering Design (FEED)” in relation its upcoming biodiesel plant in Grangemouth, estimated to provide a capacity of 500 ktes.

6. Its products: Its primary product resources include chemical products under baleycourt, melamines, sulphur chemicals, calabrian, paraform, chlorotoluenes, salt, compounds and solvents (ineos.com). It also co-owns with Petrochina, a crude oil refinery named Petroineos. Similarly, through ownership in PQ corporation, its product range includes inorganic chemicals, catalysts and engineered glass products. It owns a number of oil and gas businesses, and It also owns significant capability in the manufacture and transport of oil and gas. Its subsidiary businesses include non-chemical products from sports teams, respiratory care, telecommunication cables and infusion hoses to fashion labels, rolling shutters and surgery

equipment. While its product range is diverse, the revenue from products outside of petrochemicals and oil and gas is very small in relation to its total revenue.

7. Leadership: Jim Ratcliffe's leadership played a crucial role in the success of INEOS: It wasn't risky for Jim Ratcliffe to have left ESSO as he went on to join Advent international eventually becoming the director. However, thereafter for him to setup his own company was considerably risky. Ratcliffe is himself quoted as saying, " At age 40, ... you (speaking generally and of himself) had to put every penny you owned on the table if not successful, you were going to become destitute". Although there are some elements of luck involved as with any success story, it was mostly down to skill. His plans and purpose met with available opportunity so things began to fall in place. There are a number of major characteristics of his that support this argument. He is a calculated risk taker and an opportunity seizer – he believes there is no success story in business that doesn't have risk in it. He had to set up INEOS before going to the bank to ask for a loan. He has a history of successes, including director at Advent International, becoming a respected entrepreneur by age 45. Moreover, he made a series of successful decisions at INEOS particularly in relation to acquisitions. He amassed a fortune of more than £21 billion. With any outlier levels of success, skill plays a crucial role.

He is a very persuasive deal clincher. He is described by aides as an immaculate planner who always has very structured and detailed plan. He is said to be the pioneer of INEOS's early business strategy of adding value to parts of existing businesses that are undermanaged. He did this by deploying regular, detailed and well-structured. He looks at the mode of operation, the people, machines and equipment and see if the cash flow can be doubled within 5 years. To make successful acquisitions requires identifying such opportunities and risks involved. He questions conventional approaches and is therefore able to spot and capitalise on opportunities, a characteristic crucially required of an entrepreneur. He is a very persuasive individual who is highly competent at influencing financiers as well as at negotiating deals in his favour. Like J.D. Rockefeller he is very good at instilling confidence in financiers and banks into providing loans, even prior to INEOS having an established track record of success. He had all his plans well-thought out, detailed and tailored towards achieving his particular goals. This is a trait most bankers cherish. He is a person who deeply understands people, equipment and operation and knows to both evaluate businesses and how to add substantial value so as to double cashflow in a span of 5 years. He helps them to generate better ergonomics systems from their man-machine environment operation. He is a highly "disagreeable" individual (as a big-5 psychology trait), based on the descriptions of his personality by close aides, a trait shown in a number of studies to be correlated to business success. This is particularly shown in the Grangemouth incident, where he did not let the unions force him into agreeing with their demands. He doesn't tolerate those that are not loyal to him, expelling them from his inner circle immediately. He is certainly not risk averse, taking a plunge at age 40 in starting INEOS that could have bankrupted him. He is described by an aid as an "adrenaline junkie". He is similarly not afraid to create a bit of fear in others knowing fully well that it is the best way to get the best out of them. These are all attributes associated with successful entrepreneurs at the highest levels.

VRIO Analysis

The resources and capabilities can be summarised as offering economies of scale, technological advantages, reputational advantages and synergistic capabilities. The company is thereby assessed through the use of VRIO framework:

Value: The company's resources and capabilities add value to customers primarily through economies of scale in reducing costs. Transportation and production costs are lower owing to its large production and delivery network. Significant inventory allows for volatilities in customer demand to be addressed. Multiple distinct capabilities needed by the customer can be accomplished through a single partnership. INEOS operates in a B2B space and provides value above and beyond the sale of products. INEOS's official presentation to its potential customers explicitly states that INEOS can add value through plant performance assessment, plant capacity assessment, expert process engineering, layout analysis, vendor analysis and selection, technology knowledge, optioneering and financial analysis, hazard studies, feasibility studies, dynamic modelling, troubleshooting and operating skills (Lancaster, 2018).

Rarity: INEOS's patented technologies allow for it to be the most efficient producer of certain chemicals allowing it to nearly monopolise the European markets in those sectors of the chemicals industry. It is the global leader and unmatched in its supply and costs of "styrene monomer, polystyrene, ABS Standard and styrenic specialties" (ineos-styrolution.com) within its INEOS Styrolution operations. Its owned patents are what make this feasible and the rarity transferable if and only if, acquired by other businesses or if patents are leased. Especially in regard to its exploration and oil and gas operations, its capabilities are unmatched in Europe. Its fracking capabilities were until recently, rare and valuable. However, this may no longer be so given the uncertainty surrounding fracking regulation in the UK. INEOS has insisted both in its PR and in communications with the government that "done properly, responsible shale gas extraction, within a strict regulatory framework presents significant opportunity for the UK with minimal environmental impact. Done properly, responsible shale gas extraction, within a strict regulatory framework presents significant opportunity for the UK with minimal environmental impact." (INEOS Shale. 2018)

Imitability: It is highly expensive and risky for INEOS's competitors to duplicate its resources and capabilities across industries and sectors. The total asset value of INEOS is evaluated at 60\$ billion, which is not achievable to accomplish for new entrants. This significant level of asset value is substantial in relation to competition within Europe, however, it is not rare in considering competitors in the US. Availability of this amount of capital is not easy to "copy" through loans, shares and other such financing, and especially not without considerable risk. However, this is not limited only to access to capital. Its technological capabilities are very difficult to imitate, as it owns patents for the most efficient processes for sourcing of various chemicals (INEOS Nitriles. 2012). This allows it to have an SCA over far larger chemical corporations such as DuPont and Petrochina, that have not been able to develop more efficient patented methods for acrylonitrile process technology and fluid-bed maleic anhydride technology INEOS (Nitriles. 2012). Moreover, it has utilised its capital in exploiting the opportunity afforded by shale gas and has

become one of the early monopolies on shale gas discovery. This early advantage is hard to replicate.

Organization: The company is highly organised in utilising its resources and capabilities, evidenced by the fact that it is quickly able to ramp up cash flows of acquired businesses. Its homepage website (ineos.com) especially highlights this in relation to manufacturing: "Working hard to develop innovative, sustainable solutions to current and future challenges. INEOS gives high priority to manufacturing processes optimisation and efficiency.". It boasts of strong leadership and a culture that facilitates its sustained growth. Insight into the significant organizational infrastructure and planning into development can be found through INEOS's planning proposals such as for example, its planning application for a new plant in Grangemouth (INEOS, 2017).

Financial Strategy

While INEOS's strategy does involve acquiring and later selling parts of businesses, this is not exactly asset stripping. Firstly, such acquisition of parts of businesses is practice in both M&As and value investing outside the context of asset stripping. Moreover, value addition is not a substantial consideration outside of allowing self-sufficiency of operations of the branches. Lastly, asset stripping is associated with only short-term considerations of the company until sale. INEOS on the other hand a) for the most part, retains majority stake in its acquired businesses b) seeks to add significant value to undermanaged businesses and therefore the business model relies not on the stripping of assets, but on the value addition. Therefore, it is far closer to an entrepreneurial opportunity, than asset stripping.

INEOS's financial strategy involves doubling cash flow of acquired businesses in a 5 year period. This requires planning for the optimisation of operations of undermanaged businesses in accordance with Jim Ratcliffe's highly detailed plans. As discussed earlier, it constitutes a prescriptive strategy. This means that there must be a clear direction to the implementation of the strategy. Going public often requires a company to focus on short-term objectives in maximising returns or stock prices. Moreover, given INEOS's track record, it appears that the business would have been highly undervalued in relation to the growth it would go on to experience, with the advantage of hindsight. This means that retention of a larger share of the privately owned company, made Jim Ratcliffe wealthier than he would otherwise have been, with the company ownership shared only with others that were influential to its success. However, the risks that the business was then exposed to would also have been shared.

INEOS's 2017 annual report (INEOS Group Holdings S.A., 2017) states that INEOS's financial strategy is largely based on being highly leveraged by debt to grow and ensuring cashflow and lines of credit to pay the debts. Moreover, it also states that in the odd event, INEOS adopts a high risk strategy of taking on additional to refinance existing debt. The strategy keeps open the possibility of financing through debt in the form of securities with no pre-defined interest rates. Similarly, maturity dates and interest rates were both to be determined at the time of financing

rather than through stop-loss based options. However, INEOS also had a backup strategy formulated in the event that it was unable to obtain debt financing. It determined in such an event it would sell its assets, look to restructure debt, get additional equity capital, and take on opportunity costs of not acquiring undervalued businesses (INEOS Group Holdings S.A., 2016).

Moreover, the advantages of taking the company public insofar as obtaining capital are far better served through partnerships and bank loans. This is since the interest rates of such loans have been significantly lower than the growth in the financial value of the company, over the past 25 years. Moreover, the current interest rates are some of the lowest in history. This is the crucial consideration in the choice of opting for bank loans over going public for the purpose of financing. Given Ratcliffe's highly regarded abilities to clinch favourable deals and financing with the banks, this is additionally favourable. On the other hand, although partnerships do provide the company with capital, this is a secondary consideration, with the primary consideration being synergies of partnerships, which add value to the company beyond just capital.

Diversification Strategy

Ineos has diversified its business activities into 'fracking', 'motorcycle riders' clothing (Belstaff), 'Landrover cars' and 'sport (Swiss football team)'. Diversification is the most risky means of growing a business in contrast to other means analysed in the Ansoff's matrix strategy tool. Igor Ansoff suggested that it is far less risky to grow the business by means of market development, market penetration and product development. Moreover, even within diversification Ansoff distinguishes between related and unrelated diversification with the latter analysed as highly risky. The investments of INEOS described constitute such unrelated diversification, also known as lateral diversification. Neither Jim Ratcliffe nor INEOS have any expertise or resources that would offer a competitive advantage in any of these fields. Based on Porter's generic competitive strategies, i.e. cost leadership, differentiation, cost focus and differentiation focus, it can be seen that INEOS can neither claim to be the cheapest or most differentiated in offering in any of these activities with the exception of fracking. Although diversification into fracking was sensible, unforeseen legal changes have deemed it a less favourable revenue stream than initially anticipated. Moreover, considerations of diversification at INEOS have not thus far been limited to product offerings but also to geographic diversification. However, considerations of risk diversification cannot be looked solely on the basis of likelihood of failure. Related diversification suffers from the fact that should a "systemic risk" be inflicted on the business environment in which the organisation operates, all its so-called-diversified will be affected equally. Thus, should INEOS only diversify within chemical manufacturing, it would not be fortified against technological or legal risks that would affect chemical industry as a whole. From this point of view, it is necessary for INEOS to diversify outside of its field. Nevertheless, the diversification strategy is less than ideal, owing to choice of industries. Fashion, sports and cars are each highly competitive and next-to-impossible for past underperformers or new entrants to gain traction. Fracking was a promising avenue for diversification, that proved unfortunate due to unforeseeable events.

Operational Strategy

As identified in earlier sections, the cyclical nature of supply and demand means that similar cycle occurs for profit margins. While it may seem that it can pass on the rise in price to its own customers, this is often not the case entirely. This is firstly owing to time lags occurring between repricing intervals, given that INEOS reprices every month. More importantly, INEOS's customers anticipate price fluctuations and accordingly maximise inventory by buying from INEOS when prices are low and reducing non-inventory demand (purchase) when prices are high. This affects its ability to feedback price. In response, INEOS's strategy has been to operate assets at full capacity to maximise utilisation, especially during the cyclical downturns. It is necessary for INEOS to carry this out so as to maintain cashflows at all times. Specifically, it utilises a three prong strategy to accomplish this: 1) "Improving utilization rates within the defined availability of an asset" 2) "improving availability of an asset by minimizing planned and unplanned facility downtime" and 3) "improving capacity of an asset through de-bottlenecking projects".(INEOS Group Holdings S.A., 2016; INEOS Group Holdings S.A., 2017).

Proposed Strategy For The Future of INEOS

There are number of means through which value added or SCA can be improved for each of the resources and capabilities identified previously. Insofar as products, it faces considerable competition on the global scale and faces considerable competition. Since it cannot compete solely on price, it must therefore seek to dominate emerging markets, particularly through partnerships in China and India. There is considerable scope for increased production, despite a high production base, and seek to increase automation so as to both maximise efficiencies in production and avoid risks of strikes as seen in Grangemouth. It should seek to own additional subsidiary businesses within Oil and Gas and exploration, so as to fortify its current leadership in Europe. It is currently highly adamant against climate change regulation and the possibility of lowered carbon owing to the inefficiencies of renewable energy technology. However, provided a very long-term approach is considered (50-60 years), the developed patents can create aggressive competitive advantages owing to the lack of technological development from within the oil and gas sector. Insofar as maximising its workforce, setting up operations in emerging markets to hire talent may prove valuable, given that such a strategy has proven useful in the social media sector.

Although INEOS gained controversy from the tussle with unions at Grangemouth, it would be incorrect to say that Jim Ratcliffe has a people management problem. As per Milton Friedman (1970), it is the social responsibility of a business to increase profits. This is not to say that needs of workforce should not be heeded to, as they in turn affect the capability of the company to make profits. However, wage rises are to be determined by forces of demand and supply, and the risks posed by strikes such as that of Grangemouth. Given that Jim Ratcliffe had his way with the unions, it is clear that this risk was manageable. Moreover, given this occurrence, unions at other branches are far less likely to engage in strikes. From a pragmatic standpoint, there is no evidence which suggests that Jim Ratcliffe has a people management problem. Moreover, given that the doubt cast on his people management strategy is put forward by the

unions and political forces, these opinions should not be given undue credibility. Moreover, the words of his aides indicates that he does not treat people as mechanical assets and is truly concerned with fostering their personal and professional development. However, there is always room for improvement. The strike at Grangemouth was costly to the company, and was not foreseen despite pre-existing tensions. The underlying problem is that of management of low-skill low-wage workers. In this regard, a number of lessons from Walmart's management as found to be effective by Sam Walton are suggested: 1) A significant emphasis on PR should be placed wherein the care given to workers is emphasised. This minimises the emotional agitation of low-wage workers. 2) Incentive plans could be devised for low-wage workers, to serve as a deterrent from disloyalty to the organisation. This could be in the form of a reward-scheme subject to a minimum term of service within the organisation.

Strategy in Lieu of Sustainable Leadership

However, the integral role played by the leadership of Jim Ratcliffe cannot be sustained beyond the next 15-25 years, as the company will require to be led by others. This requires that the company first be a conglomerate holding company, similar to Berkshire Hathaway and go public. This would ensure that the necessity of Jim and other leaders in securing financing is minimised. The organisation decision making culture must be shifted from that of control by one leader to that by a board of directors, and the process must commence soon, so as for the organisation be ready to deal with the future in time. Moreover, the pitfalls of large corporations such as ENRON and General Motors must be avoided i.e. where short-term progress at the expense of long-term risks to the company are not incentivised.

Operational Strategy

Given that INEOS is highly leveraged and requires debt to finance its operations, and also requires to deal with volatility in demand, it may seek to reconsider its monthly repricing. Instead it may seek to minimise its risk by utilising an options based selling strategy. Options may thus provide the right for both parties, i.e. INEOS and its customer to buy/sell at a specific price per unit in the face of volatility. This way through the management of its inventory, INEOS may be able to minimise the risk of downturns in demand, whilst also minimising the risk for its customer. It may similarly utilise options for its own purchase of raw materials. It may also benefit INEOS in its crude oil refinery operations to utilise Joly et al. () to scheduling through solution of nonlinear and mixed-integer (MIP) optimization models as opposed to operating refineries to maximum capacities as is the current strategy. For INEOS to grow its profit margins in the long run it must rely on automation to replace human low-wage workers. In order to accomplish this, it must set up AI research centers focused on solving this objective technologically. Given that GE has established itself a B2B business allowing business to automate their solutions, INEOS can similarly establish itself within petrochemicals sector or more broadly in manufacturing. Automation will serve to simultaneously reduce cost and maximise manufacturing capacity and if patented, the technologies would yield further revenue through leasing of patents. Moreover, INEOS's current strategy as it states requires disposal of non-core businesses, which should include Belstaff. Given the highly competitive nature of the business of fashion and the low volume of sales revenue contributed to by the business, INEOS should look to add value to the business and sell to a larger brand. INEOS notes that a

significant competitive force in recent times is that of companies “with facilities in the Middle East, which enjoy substantial cost advantages due to access to low-cost gas feedstock available in this region”. It also notes that its business of export within Europe faces is threatened by those in North America owing to supply being far greater and at low-cost of ethane in this region. It should therefore seek to expand its operations in those regions for those sectors to enjoy the said benefits, even at the costs of these new operations competing with its European ones.

Financing Strategy

It may be of benefit to INEOS to make the company go public in the future. Although INEOS currently manages through debt, whilst retaining control of the company and this is ideal, it exposes itself to considerable risk at higher levels of leverage. Moreover, the debt needed to sustain its current rate of growth will make it highly fragile to a financial crisis, as evidence in 2008. It must therefore find other means to finance its operations other than risk and going public is inevitable in the long run. Moreover, its success also depends on its customers being able to access credit also affected during crisis. To address this, it is necessary that it co-own the business with some of its customers, so as to ensure maintenance of business under these circumstances.

Strategy to Address Risks & Threats To Industries INEOS Operates In

1. Shift from plastic to paper-like substitute: The non-biodegradable nature of plastic is increasingly becoming a concern for environmentalists. The chemicals industry is exposed to a significant risk of a technological substitution of plastic to something that has the biodegradability of paper but the current benefits of plastic (Shen et al., 2010). While the probability of this threat can be debated, it is the consequence that has significant implications. Such a product would immediately be endorsed and pushed forth by governments, and leading to significant disincentives for the use and manufacture of plastic. Therefore, INEOS’s strategy for the future must include:
 - a. Investment into technological innovation: INEOS must invest in R&D in the development of technologies that may disrupt the industry. This is seen to occur in the automobile industry where fossil-fuel run car manufacturers like BMW have invested in and developed electric self-driving cars. Similarly INEOS must develop products that can compete with plastic whilst also dominating the competition on the infrastructure needed to source raw materials and manufacture the said substitute.
 - b. Acquisition of disruptive startups: INEOS must proactively acquire startups that while small have the technological capabilities to produce substitutes. This will require a near-opposite strategy to INEOS’s current strategy of buying undermanaged businesses. Such acquisitions will constitute a high-risk low-cost strategy, but will serve to hedge the business against disruption.

2. Worldwide ban on fracking: INEOS is a leader of a small number of exploration companies that seek to discover sources of shale gas. However, fracking has gotten considerable negative attention as a source of air and water pollution (Friends of the Earth, 2016). It is not unlikely that owing to initiatives by international bodies such as United Nations, fracking either become highly regulated or banned in various countries. Given that INEOS has considerable assets in this operation, this is significant. Therefore, INEOS's strategy for the future must include:

- a. Development of clean fracking technologies: The primary concern of environmentalists lies in the pollution caused rather than fracking itself. Investment into the development of clean fracking technologies will allow INEOS to make a case for its existence in the future. It may then be able to quantitatively show that its operations do not contribute to pollution, and may thereby legally win permits despite opposition from environmentalists.
- b. Expand operations into deep water fracking (Bassarath et al., 2015): While there are significant issues in obtaining permits to carry out offshore drilling and fracking on land, this may not be as significant an issue with deep water fracking. However, it will also need to place considerable emphasis on risk prevention as BP's own operation infamously brought it under the limelight in the Gulf of Mexico oil spill. Nevertheless, deepwater fracking will serve as a form of related diversification.
- c. Exploration into arctic fracking: In 2016, a Spanish company Repsol discovered the largest oil resource in the arctic in 30 years (Repsol, 2017). Hence, an estimate of 1.2 billion barrels is made in relation to the potential of the arctic. However, this is important for another reason, in that such regions are less likely to cause opposition from local communities, owing to the smaller number of inhabitants.

3. Regulations against fossil fuel processing: Given the limited availability of fossils, particularly petroleum, there are expected to be a number of regulations limiting or altogether banning the use and processing of petroleum. This is also further supported by the need for minimising carbon emissions. Moreover, this is very likely given that the slow pace of development in renewable energy technology may not keep up with the growth in population and hence, depletion of fossil fuel resources. Therefore, INEOS's strategy for the future must include:

- a. Significant lateral diversification: While INEOS has already begun the process of lateral diversification, this needs to further be maximised. This will require a complete turnaround in relation to strategy. It can however, still utilise its strategy of buying undermanaged businesses and adding value, but focus on other products in the manufacturing space outside of petrochemicals or oil and gas. While competitive, it may decide to buy businesses in steel, automobile parts etc. However, as opposed to retaining the businesses it may instead choose to float them on the stock exchange, given that they do not add to its existing business.
- b. Technologies utilising corn, sugarcane and palm fruit: A number of petrochemicals may also be obtained from these (Ezeonu and Ezeonu, 2016), however currently with far less efficiency. Investment into the development of patented technologies to instead source the chemicals using these sources would provide a very significant competitive edge in the next 30 years. However, the technology needs to be considerably developed so as to be capable of producing the volumes desired.

4. Reduced costs for competition: INEOS currently enjoys its position within the competitive landscape of petrochemicals in Europe, given that economies of scale offer it a cost advantage. However, given technological advancement, as with other industries, costs will drastically reduce, allowing competitors to compete more effectively on cost alone. As a result, it is anticipated that INEOS will require to further reduce its own costs so as to maintain its profit margins. This will likely expose it to a number of related risks, such as strikes by unions owing to low wages, reduced annual rate of growth, reduced market share percentage and threat from petrochemical companies in established markets such as Petrochina.

- a. Significant levels of automation: Currently, INEOS relies on a substantial number of low wage staff in its manufacturing operations. However, such jobs are thought to become obsolete within the next 10-20 years. Moreover, as the wages are substantially reduced so as to maintain profit margins, union strikes are likely to become more frequent. Hence, INEOS must aggressively invest in automating such jobs. Such an investment will also serve to aid scaling of operations and improve quality control, owing to the elimination of human factors.
- b. Expand operations in emerging markets: While domination of emerging markets may not be feasible, establishing manufacturing there will allow for an increased competitive edge on price alone, particularly as transportation technology becomes radically cheaper over the next 10 years. This is essential for it to be able to compete on price without relying on partnerships.
- c. Transform into a conglomerate holding company: INEOS is already moving in this direction with the ownership of Belstaff and other forms of lateral diversification. Given the risks of chemical industries, particularly with the risks of loss of sustainable competitive advantage, it may seek to hold shares in companies in various industries, in a manner similar to Berkshire Hathaway. This is since the process of finding undermanaged businesses and adding value through optimised operations can be applied across industries.

5. Risk of drastic improvement in efficiencies of renewable sources of energy: From a business standpoint, Oil and Gas relies on the dependency of the market on such sources of energy whether for heating or domestic fuel. This dependency is owing to the fact that clean renewable sources are highly inefficient. However, the innovation in this field nearly guarantees that an efficient technology will become available in the next 30-50 years. This will substantially reduce the market for oil and gas, greatly affecting INEOS's oil and gas operations.

- a. Invest heavily in developing INEOS's New Planet BioEnergy technology: This is a novel patented technology of INEOS which generates energy through "renewable biomass including yard, vegetative and agricultural wastes" (INEOS Bio, 2012). However, it is inefficient. It shows great promise. Development of the efficiency of this technology to a feasible cost-benefit would provide it a margin of safety in the consequences of this risk.
- b. Diversify: INEOS must invest to make this a feasible technology. It may also diversify by investing in businesses with competing renewable technologies such as solar, wind, tidal etc. Investing in such technologies may also prove to reduce its own costs of operation in the long-run.

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