National Qualifications 2022

X810/77/11

Business Management Case Study

WEDNESDAY, 18 MAY

9:00 AM – 11:45 AM

It is recommended that you spend 15 minutes reading over the information provided in the Case Study before responding to the questions.

The questions can be found in the question paper X810/77/21.

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Royal Dutch Shell plc

Royal Dutch Shell plc (Shell) is a British-Dutch oil and gas company with its headquarters in the Netherlands. It is one of the six oil and gas 'supermajors', the second-largest natural gas company in the world measured by its 2020 revenues, and the largest multinational company based in Europe.

Shell is a vertically integrated company which is active in every area of the oil and gas industry, including exploration and production, refining, transport and distribution, marketing, power generation, and trading. It also has renewable energy activities in biofuels and wind, and has 44,000 retail service stations worldwide.

Business segments

Shell organises its business operations into four major segments.

1. **Integrated Gas and New Energies** — manages liquefying natural gas, converts gas to liquids and develops low-carbon opportunities.

2. **Upstream** — manages the exploration and production functions of the business which search for and recover crude oil and natural gas. It operates the infrastructure necessary to deliver oil and gas to the market.

3. **Downstream** — manages the manufacturing and distribution of oil products and chemicals. Manufacturing includes refinery and shipping of crude oil, which is then supplied primarily through its worldwide retail service station network.

4. **Corporate** — manages the delivery of Shell's major projects, provides functional area services and technology capability covering both upstream and downstream activities. It is also responsible for providing strategic leadership across Shell in the areas of health and safety, environmental management, contracting, and procurement.

Environmental strategy

Executive pay

In 2020, Shell announced, after pressure from its main investors, that it has partially linked its carbon emission targets to its executive pay. With climate change being one of the most systemic risks facing society today, Shell has ongoing discussions with its investors over the precise figures for its carbon targets and what percentage of pay might be relatively adjusted when they are achieved. It is estimated that as many as 1,650 highly-promoted employees are affected by this decision.

With Shell becoming the first of the energy supermajors to link executive pay to carbon goals, it has bolstered its commitment to cutting emissions generated by both its activities and the products it sells. Its latest ambition is to set carbon reduction targets that cover periods of three to five years and run to 2050 when it hopes to reach net-zero emissions. These targets will be reviewed on an annual basis.

Expanding into the electricity market

Shell aims to become the largest electricity provider by 2030, as it prepares for a global shift in energy supplies towards lower-carbon sources. Shell's current product portfolio is approximately 65% oil, 25% gas and 10% chemicals. With the gas market becoming over-supplied, Shell aims to restructure its portfolio to 30% each for oil, gas and electricity, with 10% still in chemicals. Its strategy is a response to an expected shift in the world's energy requirements: to significantly increase the use of electricity, up from approximately 20% today to about 50% or more in the future.

Like other leading European energy suppliers, including Total and Repsol, Shell has been investing heavily throughout the electricity supply chain. From 2020, Shell has invested approximately $2 billion per year in new energy technologies to support its move into the competitive electricity market. Recently, Shell has invested in renewable projects, such as wind farms in the Netherlands and solar power in Singapore. Despite this, for the foreseeable future most electricity generation will come from gas. Investors have questioned if energy suppliers will be able to make the same yield of revenues from electricity, which traditionally deliver low and highly-regulated returns, compared to their core business of oil and gas.

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Operations in Nigeria

Nigeria is Africa's leading oil producer and the eighth biggest oil exporter in the world, accounting for approximately 4.1% of global oil exports. Despite this around 70% of people in Nigeria live below the poverty line.

Over the years, critics have accused Shell, the largest oil operator in Nigeria, of causing widespread pollution and environmental damage in the region. Each year Shell generates billions of dollars in oil revenue from its activities in Nigeria.

Government relationship

Shell has an involved relationship with the Nigerian government. According to one of its top executives in Nigeria, Shell has staff members seconded into the relevant ministries of the Nigerian government so that it can inform decision making with its extensive expertise in the oil industry. In addition, there are media reports suggesting that Shell made payments in the past to the Nigerian military in order to prevent protests.

Oil infrastructure

Many pipelines in Nigeria owned by Shell are old and corroded. Shell has acknowledged its responsibility to maintain the pipelines although, in many cases, it continues to deny responsibility for subsequent damage to the environment. This has led to mass protests against Shell from the local inhabitants and international organisations such as Amnesty International and Friends of the Earth.

Operational oil spills can be caused by corrosion, a lack of regular maintenance of the equipment and overall under investment in the equipment being used by Shell. Since 2011, around 18.7% of the spills reported by Shell are labelled to be operational spills. In this case, Shell pays compensation to people and communities impacted by the spill.

Taxation dispute

In 2019 the Nigerian Government entered a dispute with several major foreign oil and gas companies, including Shell, over a requirement to pay $20 billion in taxes. Shell stated that the tax dispute will delay its final investment required to develop its Bonga Southwest deep-water oil field facility, one of Nigeria's largest, enabling production to reach an expected 180,000 barrels per day.

Promoting diversity

With an average of 82,000 employees across its global operation, Shell aspires to sustain a diverse and inclusive culture where everyone feels respected and valued. Operating in 70 countries, Shell has more than 75 employee network groups in 27 countries so far, which offer support to female employees, employees with disabilities, employees with different religions and ethnicities, LGBT+ employees, young professionals, and others. Recent data shows that 71% of Shell's workforce feel positive about inclusion at work.

Shell's diversity ethos involves:

- setting company-wide targets to increase diversity among its global teams (since 1997)
- periodically reviewing human resource policies and procedures in each country to ensure they evolve with wider society and changes in law
- delivering education programmes and training without bias and championing equality
- offering ally and mentoring programmes to encourage senior management to pursue diversity.

(Exhibit 1 shows an extract of Shell's diversity progress.)

Information technology (IT) infrastructure

Shell began digitisation of its management systems in the early 2000s. It uses virtual learning applications, artificially intelligent robotics, and cloud-based software across its upstream and downstream businesses to improve its operational performance. Lockdowns caused by the global pandemic stopped the movement of people and saw Shell invest in technology to enable approximately 70,000 of its employees to work from home.

(Exhibit 2 shows an extract of Shell's IT infrastructure.)

(Exhibit 3 shows an extract of Shell's financial data.)

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Exhibit 1

An extract of Shell's diversity progress.

LGBT+ networks

Shell recognises that attitudes to LGBT+ issues vary around the world. Shell's approach is about reinforcing respect for its employees and raising awareness, rather than changing individual beliefs. Shell's first LGBT+ network was established in the USA in 1997 and was soon followed by networks, mostly in Western countries, around the world, such as the UK, the Netherlands, and Canada. More recently, Shell became the first company in South Africa to establish an LGBT+ network.

Gender pay gap

In its UK business, the average hourly pay for women in Shell was 18.7% lower in 2019 than for men. This statistic does not compare genders who are in the same job but averages out what men and women are paid across its five British business units in the UK overall. Despite complying with the Equality Act 2010 in the UK, these statistics reveal women are still concentrated at the lower levels of Shell's organisation hierarchy.

Shell attributes the lack of women in petroleum engineering and trading roles to the pay difference, but this does not detract from the fact that less than one third of its senior leaders in the UK are female. Shell has set diversity targets to reduce the discrepancy and has adjusted its recruitment strategies. It hopes women will occupy 35% of senior leadership roles in the UK by 2025, compared with approximately 30% currently.

Over its total global operation, Shell employs almost twice as many men as it does women and it has around 15% female representation in the organisation's highest paid positions.

Exhibit 2

Extract of Shell's IT infrastructure

Virtual learning environment

Shell's use of virtual, immersive learning technology provides employees with interactive lessons online, reducing the need for physical geological field trips. It has delivered more than 12,000 virtual lessons, which mimic the work environment and deliver automated, immediate feedback on performance.

Yammer communication

Shell subscribes to Yammer, a corporate private social networking app, so its employees can share ideas, be kept up-to-date, and get involved in activities going on within the business that interest them. Employees regularly publish 'how to' videos, using their smartphones to film best practice, such as using a new tool at a worksite, and uploading them to Yammer. During the global pandemic, when many of its employees were forced to work from home, this platform was integral to Shell's internal communications.

Online graduate recruitment

Since digitising its recruitment process, the number of applications Shell now receives has risen to over 100,000 applications for fewer than 1,000 places on its graduate programme each year. Candidates are taken through a computerised application, a number of online assessments and a virtual interview. It is only when Shell employs the graduates that it meets them in person.

Robotics

Shell invested in robotics to work in remote and sometimes dangerous oil and gas facilities. Operators are able to use the robotics to check equipment and respond to alerts faster whilst gathering accurate real-time data. During the COVID-19 lockdowns, crawler robots conducted automated ultrasonic scans of oil tanker roofs, gathering data on average 10 times faster than a human inspector. This allowed inspectors to stay at home during the lockdowns whilst also avoiding the risk of working at height.

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Exhibit 3

Extract of Shell's financial data

	2020 *$ m*	**2019** *$ m*
Revenue by business group		
Integrated Gas and New Energy	33,287	41,322
Upstream	6,767	9,965
Downstream	140,438	293,545
Corporate	51	45
Total Revenue	**180,543**	**344,877**
Revenue by geographical area		
Europe	50,138	98,455
Asia, Oceania, Africa	65,139	139,916
USA	50,856	83,212
Other	14,410	23,294
Total Revenue	**180,543**	**344,877**
Income statement extracts		
Revenue	180,543	344,877
Purchases	117,093	252,983
(Loss)/Profit for the Year (After Taxation)	**(21,534)**	**16,432**
Ratio analysis		
Current ratio	1.23:1	1.16:1
Return on Equity Employed (ROEE)	-13.58%	8.5%

[END OF CASE STUDY]