Chapter 6. The Pharmaceutical Industry

Abstract

The pharmaceutical industry is responsible for the development, production and marketing of medications and can deal in generic and/or brand medications. Its significance as a global industrial sector is without doubt, with industry revenues worldwide almost trebling between 2001 and 2017. North America is responsible for the largest portion of the industry’s revenues, due to the leading role of the U.S. pharmaceutical industry, although the Chinese pharmaceutical sector has shown the highest growth rates in recent years. Because of the global nature of the industry and its link to healthcare delivery, the pharmaceutical industry is seen by many as able to play a key role in the support and realisation of many of the SDGs.

Introduction

The global pharmaceuticals market was worth $934.8 billion in 2017 and will reach $1170 billion in 2021, growing at 5.8% per annum (The Business Research Company, 2018). The leading pharmaceutical companies come from the United States and Europe. Based on prescription sales, Pfizer is the world’s largest pharmaceutical company, whilst other top global players from the United States include Johnson & Johnson, Merck & Co., and AbbVie. Novartis and Roche from Switzerland, GlaxoSmithKline and AstraZeneca from the United Kingdom, and French Sanofi are the leading European pharmaceutical companies. However, as in many other industries, the Chinese pharmaceutical sector has shown the highest growth rates over previous years.

Richard Saynor, Senior Vice President at GlaxoSmithKline (GSK) has urged the big pharmaceutical companies to act decisively to improve global health and well-being to achieve the United Nations Sustainable Development Goals. He suggests that “on the part of pharmaceutical companies, we have a responsibility to help people gain access to high-quality healthcare and the medicines that they need, no matter where they live in the world or how much they can afford” (Pharma Boardroom, 2018, para.2).

This chapter examines the approach and contribution of ten globally operating pharmaceutical companies to the progression of the SDGs. Johnson & Johnson was founded in 1886 and is headquartered in New Jersey, U.S.A. It has annual revenues of US$81 billion and is generally regarded as the largest pharmaceutical company in the World. The corporation includes some 250 subsidiary companies with operations in 60 countries and products sold in over 175 countries. Merck Sharp Dohme was founded in 1891, and also has its headquarters in New Jersey. The company employs 69,000, and has annual turnover in excess of US$40 billion. Pfizer was founded in 1849, with its headquarters being in New York City. It has annual revenues of US$52 billion and employs 96,500 staff. Ely Lilly has its headquarters in Indianapolis, U.S.A. The company was founded in 1876, and now employs over 40,000 staff with annual revenues of over US$22 billion. Swiss company Roche was founded in 1896 and employees over 94,000 staff, with annual revenues of over 56,000 billion Swiss francs. Sanofi is a French multinational pharmaceutical company headquartered in Paris, France, with 110,000 staff and revenues of more than 34 billion euro. GlaxoSmithKline is a British multinational pharmaceutical company headquartered in Brentford, London, and was established in 2000 by a merger of Glaxo Wellcome and SmithKline Beecham. The company has revenues of over £30 billion and has more than 98,000 employees. AstraZeneca is a
British-Swedish multinational pharmaceutical and biopharmaceutical company. It now has its headquarters in Cambridge, UK, and has annual revenues of more than US$22 billion, employing 61,000 staff. Mylan is a global generic and specialty pharmaceuticals company registered in the Netherlands, with offices in Hatfield, Hertfordshire, UK and a "Global Center" in Pennsylvania, US. It is the second-largest generic and specialty pharmaceuticals company in the world. Hikma originated in the Middle East, but is now headquartered in London. The company specializes in generics and has annual revenues of more than US$2 billion.

**Overview of the Pharmaceutical Industry and the SDGs**

Most pharmaceutical companies are quite clear in their statements about which SDGs they are supporting in their business activities. GlaxoSmithKline (GSK), for example, “recognises that collaboration is essential when it comes to tackling global health challenges which is why Goal 17 – Partnering – underpins a great deal of our work” (GSK, 2016, para.2). Equally, however, the company notes “Goal 3 has a specific focus on health and this is where the majority of GSK’s work makes an important contribution. The goal is underpinned by targets that cover a wide range of health issues from maternal and child health to environmental health”. The company also adds that “although each of the 17 global goals is focused on a different issue, we believe that health underpins almost every development theme, each of which enables, or is enabled by, advances in population health” (para.3). Roche (2019) support a range of the SDGs, but say that “as a global healthcare company, we are committed to supporting the SDGs in line with our business strategy; in particular SDG3, which aims at ensuring healthy lives and promoting wellbeing for all” (para.1). The company identifies SDGs 3-9, 12, 13, 16 and 17 as those where they can make a particular impact. The focus on SDG3 is reiterated by Pfizer (2017), who state that “Pfizer supports the SDGs and works to align its scientific focus and corporate objectives to improve global public health impact and sustainable development. Achieving good health and well-being is integral to all 17 of the goals, and is specifically addressed in Goal 3, which states that every person deserves access to quality health care” (p. 46). Similar to Roche, Pfizer state that the company “is committed to helping achieve all 17 SDGs”, but that “we combine our resources with the expertise of our partners to directly support progress toward several SDGs: 3, 5, 6, 9, 11, 12 and 17” (paras. 5/6).

Merck Sharp Dohme (MSD) have a similar commitment. They note (MSD, 2018) that “as a global health care company that is committed to improving health and well-being around the world, SDG3 (Good Health and Well-Being) is at the core of our business and is aligned with our mission to save and improve lives. In addition, while we realize that all of the SDGs are essential to fostering sustainable development, we have prioritized eight global goals as those where we are positioned to have the biggest impact” (paras. 5/6). In addition to SDG3, they identify SDGs 5-8, 12, 13 and 17 as “our eight priority SDGs” (para.7). However, they go a step further than some other pharmaceutical companies in that they identify from the 169 UN targets, “11 targets for our priority SDGs that most closely align with our business” (para.8), and further “we have identified existing metrics that enable us to quantitatively demonstrate our progress in support of the global goals” (para.8).

Johnson & Johnson (2019) claim that the company “was among the first private sector companies to announce a commitment toward achieving the 2030 Sustainable Development Goals (SDGs)” and that they “commit to galvanizing partners, mobilizing employees, and engaging communities to profoundly improve the course of human health through 2030”
The company is focusing on three main SDGs: “we are dedicating our expertise, ideas and ingenuity to catalyze efforts toward achieving SDG3, Good Health and Well-being, which is at the heart of the Sustainable Development Goals and the core of our business. Our efforts will demonstrate the importance of Goal 5, Gender Equality, and will be founded in the principles of Goal 17, Partnerships for the Goals” (para.5). The company then identifies “five areas in which the Company is uniquely positioned to create sustainable and scalable impact” (para.6), these being “Health Workforce”, “Women and Children’s Health”, “Essential Surgery”, “Global Disease Challenges”, and “Environmental Health”. Whilst there are aspirations and targets in all five areas, this represents a somewhat different approach to achieving the SDGs. This approach is similar to that adopted by Eli Lilly, who in their 2017 Report on Progress (Eli Lilly, 2017), note that “throughout this report, we indicate where our work aligns to the Sustainable Development Goals announced by the United Nations in September 2015. These intersections are noted by icons adjacent to relevant text” (p.7). In this manner they identify 10 of the SDGs with which their business activities are aligned (Table 6.1).

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Table 6.1 SDGs addressed by pharmaceutical companies

Hikma (2018) focus on fewer of the SDGs, noting that “while our activities contribute to a broad range of sustainable development themes, we have prioritized five SDGs that align most closely with our business and social engagement strategy” (p.3), these being SDGs 3, 4, 5, 8, 9 (Figure 6.1). Astra Zeneca (2016), on the other hand, adopt a broader perspective, saying that “as a healthcare company, we have an important role in contributing to the delivery of the UN Sustainable Development Goals (SDGs)” (p.8). They identify SDGs 3-9 and 12, 13,
15, 16 and 17. They also note that “as we move forward with our strategy we will look to deepen our alignment and commitment to the SDGs” (p.8). Sanofi (2017) are more specific confirming that the company “supports the more ambitious health objectives of the new Sustainable Development Goals (SDGs) covering 2016-2030” and that “as a healthcare company, we are committed to scaling up our engagement to achieve health-related goals, such as those concerning infectious and non-communicable diseases and universal health coverage. We are ready to provide our support through the development of new medicines and vaccines, but also through innovative partnerships in a wide range of areas: R&D, training for healthcare professionals, integrated access schemes for patients and disease management programs, etc.” (p.1). The report then highlights how the company is supporting 13 of the 17 SDGs with clear initiatives and direct action (Table 6.1).

Figure 6.1 Hikma’s focus on five SDGs (Hikma, 2018, p.2)

**Actions and Activities regarding Specific SDGs**

Sanofi (2017) “supports the more ambitious health objectives of the new Sustainable Development Goals (SDGs) covering 2016-2030”, and “are committed to scaling up our
engagement to achieve health-related goals, such as those concerning infectious and non-communicable diseases and universal health coverage. We are ready to provide our support through the development of new medicines and vaccines, but also through innovative partnerships in a wide range of areas: R&D, training for healthcare professionals, integrated access schemes for patients and disease management programs, etc. … Our involvement at the highest level of the company in the Access Accelerated Initiative (AAI) is a way to upgrade our contribution to the SDGs in the fields of non-communicable diseases (NCDs). Through the AAI, Sanofi and other pharmaceutical companies pledge to commit to helping achieve the United Nations Sustainable Development Goals, and in particular, to reduce premature deaths from NCDs by one-third by 2030. During the launch of the initiative in January 2017 at the Davos Summit, Sanofi committed to contributing in the fields of diabetes, mental health and child cancer” (p.1). The company illustrate their support for the SDGs by citing a range of initiatives, projects and programs, and this is paralleled by most other pharmaceutical companies reviewed here.

For SDG1, for example, Pfizer’s “RxPathways” program helps eligible patients in the United States, Puerto Rico and the Virgin Islands get access to Pfizer medicines by offering a range of support services. More than 40 brands are now offered for free through the program and over the last 5 years, the program “has helped nearly 2.5 million patients to access more than 30 million Pfizer prescriptions”. In addition, Pfizer’s has a number of other projects aimed at increasing access to medicines, including its “International Trachoma Initiative and Diflucan Partnership Program (which provides treatment for AIDS related fungal infections in developing countries)” (UN Global Compact & KPMG, 2016, p.14). Similarly, through the ZINA health project in Madagascar, “Sanofi and the NGO Positive Planet are committed to developing innovative solutions to help provide access to healthcare for disadvantaged populations, particularly in Madagascar, through the creation of micro-insurance systems” (Sanofi, 2017, p.2).

SDG3 is arguably the most supported by the pharmaceutical companies, and some see this as central to their business vision. All ten companies included in the study supported this SDG, as did Japanese multinational Takeda, the largest pharmaceutical company in Asia. The company note “SDG3 aligns with Takeda’s mission, which is to strive for Better Health and a Brighter Future for people worldwide through leading innovation in medicine. Therefore we believe that all of Takeda’s business activities will contribute to achieving the aforementioned goal” (Takeda, 2018, p.6). Other pharmaceutical companies are very specific in detailing particular targets relating to the SDGs and how they are monitoring their own performance against these targets. Sanofi (2017) cites the Ghana Accessibility and Affordability Programme (GAAP) which is “is a public private initiative (involving Ghana authorities, the Bill & Melinda Gates Foundation, other pharma companies and other partners), which aims to provide access to effective, safe and affordable medicines for the treatment of non-communicable diseases (NCDs). The initiative is targeting underserved Ghanaians of low and middle-income socio-economic status suffering from NCDs such as diabetes, hypertension and cancer” (p.4).

MSD (2018) identify three main UN targets they are pursuing to progress SDG3. For target 3.1 (Reduce the global maternal mortality ratio to less than 70 per 100,000 live births), for example, the company cites the “MSD for Mothers” project, a “10-year, $500 million global initiative to create a world where no woman dies giving life”. The company states that in 2017, over 2.9m women received “improved quality of care through MSD for Mothers”, and that by “contributing our scientific and business expertise, as well as our financial resources,
we are working to ensure that women have access to two of the most powerful means to end preventable maternal deaths: quality maternity care and modern contraception”. The company also claim that meeting women’s needs in these two areas would reduce maternal deaths by 73 percent from 2017 levels, noting “over the past six years, MSD for Mothers has reached more than 6 million women in over 30 countries around the world, contributing to the global effort to save women’s lives, strengthen health systems and meet the United Nations’ Sustainable Development Goals” (MSD, 2018, para.9).

For target 3.7 - ensure universal access to sexual and reproductive health care services, including for family planning, information and education, and the integration of reproductive health into national strategies and programmes - the company claim that “in developing countries that have high rates of maternal mortality and low rates of contraceptive prevalence, we have created a sustainable business model to promote access to contraceptive health programs. These activities are focused primarily on sub-Saharan Africa and countries in Asia and Latin America with high unmet need. Through this model, we work closely with core global partners and their regional and local affiliates” (para.10). As regards target 3.B - support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, and provide access to affordable essential medicines and vaccines - MSD cite a number of initiatives. The company is “working to find new ways to bring our medicines and vaccines to more people around the world than ever before, and to make them as accessible and affordable as possible for the patients who need them.” In addition, they “strive to commercialize our products in a way that both develops our business and meets local needs in a responsible and efficient manner”; and to this end, “we have differential pricing for 42 of our products, and 125 countries have implemented inter- or intra-country pricing for at least one of our products” (para.11).

Roche (2019a) similarly support SDG3 via a number of projects and initiatives. To improve global access to healthcare, they cite the Access Accelerated initiative, which they are “proud to support and co-lead”. This is a “first-of-its-kind cross-industry collaboration between 24 healthcare and biopharmaceutical companies” which aims to “to improve the prevention, care and treatment of non-communicable diseases (NCDs) through our medical solutions”. The company notes that it is “committed to helping achieve the United Nations Sustainable Development Goals and have targeted the reduction of premature deaths from NCDs” (para. 2a). Roche also support Personalised Reimbursement Models (PRM), which “deliver benefits to multiple stakeholders by making full use of drug utilisation data”. By using this data, PRM allows medicines to be priced in line with the benefit they deliver to patients in different indications and combinations. Roche believe that “PRM will accelerate patient access to innovation and reduce financial pressure on prescribing by enabling the benefit of a medicine to be better reflected in its price”. The company has also introduced International Differential Pricing (IDP), which “aligns the prices public healthcare systems pay for our new medicines with the relative incomes of emerging markets and developing countries” (para.2b).

Astra Zeneca (2015), in the context of SDG3, cited “The Young Health Programme” which they define as “our global community investment initiative. It has a unique focus on young people and primary prevention of the most common non-communicable diseases (NCDs). We have engaged over 1.4 million young people through our Young Health Programme since 2010” (p.14). They also reference their Healthy Heart Africa (HHA) programme as their “flagship access to medicines programme”. They claim, “through HHA we are helping to tackle a silent killer in parts of the world where access to healthcare is at its lowest. Over one million patients were screened for hypertension through Healthy Heart Africa
in 2015. We currently run affordability projects in countries across Latin America, the Middle East and Africa, Asia Pacific and the US” (p.14). Ely Lilly (2017) similarly note that “Lilly has an important role to play in improving global health. Our commitment includes working to extend the Lilly promise of caring and discovery to millions more people around the world, and partnering with leading experts and organizations to expand our reach. Our global health efforts focus on communities with limited resources and people who aren’t typically reached by our traditional business operations” (p.13). To accelerate the company’s global health efforts, they cite the “Lilly 30x30” project, which they position as “a bold goal to increase access to quality health care in communities with limited resources for 30 million people on an annual basis by 2030”. Initiatives will “include activities across three key areas: Pipeline, Programs, and Partnerships” (p.14), for which considerable detail is provided.

Hikma (2018) cite a number of projects and initiatives for the SDGs that they specifically support. For SDG4, for example, they note that “within our organization, we have instilled a culture of continuous learning and development for our employees. We also engage frequently with our local communities to improve educational access and quality to those that need it most” (p.8). A specific project in support of this SDG is support for the Sweimeh School for Girls which is located in the Balqa province, where less than half of women are enrolled in basic education (49%) and the female illiteracy rate is more than double that of males. In 2015, Hikma “decided to adopt the Sweimeh School for Girls, initiating a comprehensive effort to improve the school’s infrastructure, elevate educational standards and improve the students’ academic results”. “Some of Hikma’s major contributions to improving the school include:

• Complete renovation of the school nursery
• Rebuilding the students’ garden and play areas
• Renovating old and damaged infrastructure
• Providing access to clean, sanitized and safe water supply
• Providing access to refrigeration for the school cafeteria
• Renovating the surrounding infrastructure – such as paving the roads – so that students can safely access the school” (p.10).

Concerning SDG6, GSK (2016b) note “we are committed to ensuring water is managed sustainably and equitably as a shared public resource. We carry out environmental testing on all our pharmaceuticals, including relevant consumer healthcare products, to generate data to support our submissions to Regulatory Agencies. We also set our own environmental emission limits to minimise GSK pharmaceuticals/compounds discharge from our manufacturing sites” (p.4). For SDG7, “Sanofi has taken the initiative to achieve a 20% reduction in the combined scope 1 and scope 2 CO2 emissions for industrial and R&D sites and sales force vehicles. To reach this goal, Sanofi has formed strategic partnerships with energy sector leaders, implemented renewable energy projects at our sites in India, and continued our vehicle policy, including the increase in eco-driving sessions” (Sanofi, 2017, p.11). SDG12 aims to protect local ecosystems, and in this context, Sanofi (2017) has been “supporting take-back programs that collect unused and expired medicines from patients and inform consumers about their safe disposal. Sanofi has supported such programs in 15 countries, including Brazil, Colombia, Mexico, the Philippines, Saudi Arabia, Venezuela” (p.12).

GSK also illustrate how some companies are aligning their own internal objectives and goals with the SDGs. For example, GSK (2016a) note “climate change is one of the world’s most pressing issues and a major threat to people’s health and global economic development. By using resources more efficiently and collaborating with others to tackle these challenges,
GSK has ambitious goals in place to reduce carbon, water and waste across its value chain from the sourcing of raw materials and the impacts of its own labs and factories, to the use and disposal of its products by patients and consumers. For example, more than 500 of our suppliers are now sharing practical ideas to improve energy efficiency impacts through our online supplier exchange platform. We are also making changes to chemical manufacturing processes. For example, one of our sites in Singapore now uses enzymes in the manufacturing of amoxicillin (one of the world’s most widely prescribed antibiotics), a process which significantly cuts carbon emissions and reduces waste” (p.2). They link these initiatives to SDGs 3, 12, 13, 15 and 17.

For SDG13, Ely Lilly (2017) has “set aggressive targets for improving energy efficiency and thereby reducing our GHG emissions”. They “have an established global energy management program to ensure continuous improvement and advance progress towards our goals”. They outline their “multi-faceted approach”, which includes a range of initiatives. These include “designing for energy efficiency in new or updated processes and facilities”, “evaluating and incorporating alternative energy sources, new technologies, and best practices for energy use and GHG emission reductions”, and “participating in local, regional, and national forums to understand and integrate energy management best practice and to support responsible and cost-effective decision-making and policy development” (p.30).

Sanofi (2017) cite the AAI initiative noted above in the context of SDG17. Under the Access Accelerated coalition, Sanofi will work together with 21 industry partners, the World Bank and the UICC. The objectives are to:

- “Share best practice gathered from our longstanding commitments and own projects
- Design and set up targeted pilot projects, with the objective of scaling up these projects over time
- Identify what is working and what is not, so that we can collectively improve on our efforts to overcome barriers to primary care delivery for NCD patients
- Nurture disease-specific partnerships, starting with the development of effective, sustainable cancer care delivery models in a number of pilot cities” (p.16).

Sanofi’s AAI commitment includes four flagship programs developed with specific partners: FAST – Fight Against Stigma, in the field of mental health, My Child Matters, in the field of childhood cancer, KiDS and diabetes in Schools, and the Access and Affordability initiative - testing the impact of differential pricing for NCD treatments in Ghana and the Philippines.

Discussion

The review of available literature and company reports raises a number of issues worthy of discussion. First, all the pharmaceutical companies reviewed had a positive and inclusive approach to the SDGs, recognizing the value of, and need for, partnerships, resonating with SDG17. For example, with reference to the SDGs as a whole, Hikma (2018) note “we are convinced that for us to succeed as a company, we need to enable and empower those around us to succeed as well” (p.3). GSK (2016) conclude “the UN Sustainable Development Goals set out a vision for ending poverty, hunger, inequality and protecting the Earth’s natural resources by 2030. Realising this ambition will require private sector, governments and civil society to play their part and work together in new and innovative ways”. The company “recognises that collaboration is essential when it comes to tackling
global health challenges which is why Goal 17 – Partnering – underpins a great deal of our work” (para.2).

Second, the companies reviewed also highlighted SDG3 as of particular importance for their active involvement - indeed, of the 17 SDGs, only SDG3 was identified by all ten companies as being one they would support and progress. However, recent research by Consolandi and Eccles (2018) suggests a somewhat different interpretation. Eccles (2018) notes “clearly there is substantial variation within the healthcare sector in terms of its importance to the SDGs”, and he suggests that the biotech and pharma industries are particularly important for progressing SDGs 4, 6, 9, 11, and 14. He also notes that “the SDGs for which biotech and pharma are least relevant” are SDGs 1, 7, 8, 13 and 16. Having used a methodology “fundamentally based on a mapping of Sustainability Accounting Standards Board (SASB) material issues to the SDGs”, Eccles concludes that “these findings show that an industry can contribute to the SDGs beyond the intuitively obvious, as illustrated by biotech and pharma for SDG3, which actually ranks behind their top five” (para.8). Eccles adds “the virtue of this approach is that it broadens the view of companies regarding which SDGs they can contribute to” (paras. 8/9). Overall, all the SDGs were supported by one or more of the ten companies included in the review, but Eccles analysis highlights the difficulties involved in assessing which SDGs are being actively pursued by the pharmaceutical companies.

Third, the nature of the industry’s products means it can do a great deal to support many of the SDGs through projects and programs that make these products more widely available than would otherwise be the case, particularly in the developing world. This is evident in the majority of examples cited by the pharmaceutical companies in support of SDGs 3 and 6, for example. At the same time, changing the way the pharmaceutical companies operate in terms of energy and water consumption, employment and procurement policies is also cited in support of SDGs 5, 8, 12 and 13.

**Conclusion**

The ten companies studied showed unanimous support for SDG3 and SDG5 and very strong support for SDG17 and SDG12. SDG3 speaks specifically of improving access to medicines for patients who need them most and ensuring healthy lives for all and SDG17 aims to foster partnerships at many different levels. As Saynor recently noted “this is where a holistic approach and a collaborative global response, involving pharmaceutical companies, the scientific community, policymakers, healthcare funders and professionals, as well as other stakeholders, will make a difference” (Pharma Boardroom, 2018, para.8).

The pharmaceutical companies have a vital and central role to play in advancing implementation of the SDGs in the next decade, but this will require progression and coordination of other initiatives, notably at local level in the developing world. The increase in antimicrobial resistance to drugs is a particularly challenging problem, which highlights the significance of the pharmaceutical industry in advancing SDG3. An estimated 700,000 people across the globe are dying each year of drug resistance to illnesses such as bacterial infections, malaria, HIV/AIDS or tuberculosis. HMG & Wellcome Trust (2014, p.5) estimate that without action, this figure could rise to 10 million people every year by 2050.

**REFERENCES**

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