

Huawei aligns with SDGs to achieve differentiation and competitive advantage in the smartphone industry

Dominic Appiah

Royal Holloway, University of London. United Kingdom

Wilson Ozuem

University for the Creative Arts. United Kingdom

Gordon Bowen

Anglia Ruskin University. United Kingdom
School of Management

Cindy Millman

University for the Creative Arts. United Kingdom

Abstract

Recent years have witnessed a growing intensity of competition in business. Aligning an organisations' differentiation strategy with the SDGs not only contributes to a sustainable future but also brings tangible benefits such as market growth and competitive advantage. The case study focuses on Huawei and SDG initiatives. Founded in 1987, Huawei has emerged as one of the leading global provider of information and communications technology (ICT) infrastructure and smartphone devices. With 194,000 employees operating in over 170 countries. By incorporating specific sustainable development goals (SDGs) relevant to the smartphone industry, Huawei has differentiated itself in line with Porter's generic strategies for growth, with particular emphasis on differentiation as a strategy for growth to create a unique identity in the smartphone industry. The case study explains Porter's generic strategies for growth, with particular emphasis on differentiation as a strategy for growth. The case then goes on to explore how Huawei's differentiation strategy aligns with the UN's 2030 Agenda for Sustainable Development, through the SDGs adopted in 2015, to drive sustainable competitive advantage in the smartphone industry. In addition, the case study explores how Huawei contributes to specific SDGs to drive innovation in the telecommunications sector as well as strengthened their market position as industry innovators and achieved sustainable competitive advantage in the smartphone industry both in China and globally. The case study suggests that businesses should consider aligning the SDGs in their strategic planning to inspire change, create a positive impact on the environment and most importantly achieve market growth and drive sustainable competitive advantage. Finally, the case study provides questions that encourages students to engage in critical thinking to demonstrate how the Porter's generic strategies model is applied in real life situations in the context of Huawei and its SDG initiatives to achieve competitive advantage in the smartphone industry.

Key words: *Sustainability, differentiation, SDGs, smartphones, competitive advantage, digital innovation, market growth*

Learning Outcomes

By the end of this case study, readers should be able to:

1. Explain the United Nation's Sustainable Development Goals (SDGs) achieved by Huawei according to the case study and what these SDGs aim to achieve
2. Demonstrate how Huawei have committed to achieving specific SDGs
3. Describe the concept of differentiation as strategy for growth
4. Evaluate how differentiation drives sustainable competitive advantage

Introduction

Huawei has focused on artificial intelligence (AI) which could be used every day in society through its smartphone devices. The tech giant acknowledges the significance of technological innovation that gives people equal access to the benefits that technology brings to society. To help achieve this, Huawei has created unique identity based on its unique product features to bring multiple accessibility features to more people and especially those who belong to vulnerable social groups.

The United Nations (UN) Sustainable Development Goals (SDGs), are an urgent call for action by all countries (both developed and developing) in a global partnership. The SDGs are a collection of 17 goals established by the UN to address global issues such as poverty, hunger, health, education, gender equality, climate change, and more. They provide a blueprint for governments, businesses, and individuals to work towards a more sustainable and equitable world by 2030. The 17 SDGs are summarised as: Goal 1: No Poverty: End poverty in all forms. Goal 2: Zero Hunger: End hunger, achieve food security and improved nutrition and promote sustainable agriculture. Goal 3: Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages. Goal 4: Quality Education: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. Goal 5: Gender Equality:

Achieve gender equality and empower all women and girls. Goal 6: Clean Water and Sanitation: Ensure availability and sustainable management of water and sanitation for all. Goal 7: Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all. Goal 8: Decent Work and Economic Growth: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Goal 9: Industry, Innovation, and Infrastructure: Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation. Goal 10: Reduced Inequality: Reduce inequality within and among countries. Goal 11: Sustainable Cities and Communities: Make cities and human settlements inclusive, safe, resilient, and sustainable. Goal 12: Responsible Consumption and Production: Ensure sustainable consumption and production patterns. Goal 13: Climate Action: Take urgent action to combat climate change and its impacts. Goal 14: Life Below Water: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development. Goal 15: Life on Land: Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss. Goal 16: Peace, Justice, and Strong Institutions: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels. Goal 17: Partnerships to Achieve the Goal: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

This case study explains Porter's generic strategies for growth, with particular emphasis on differentiation as a strategy for growth. Then we explore how Huawei's differentiation strategy aligns with the UN's 2030 Agenda for Sustainable Development, through the SDGs adopted in 2015, to succeed in a competitive marketplace to drive sustainable competitive advantage in the smartphone industry both locally and globally.

Background Information of Huawei

Huawei, founded in 1987 is a global provider of Information and Communication Technology (ICT) and the manufacturing of smartphones. Headquartered in Shenzhen, China, it has 194,000 employees working and serving around 3 billion people in more than 170 countries. The company has a vision of creating omnipresent connectivity for all people. As the industry is being revolutionized, Huawei has focused on artificial intelligence (AI) which could be used every day in society. In 2023, the company invested CNY164.7 billion back into research and development (R&D), which accounted for 23.4% of its annual revenue. Overall, the company's R&D investments over the past decade amounts to CNY1.11 trillion. By the end of 2023, Huawei held a total of 140,000 active patents and had signed over 200 patent licensing and cross-license agreements with many of the world's largest patent holders.

In 2019, the Trump administration blacklisted the firm and banned its equipment over spying concerns (Gao and Chan, 2024). The sanctions almost wiped out Huawei's consumer mobile business, however, the company bounced back with the support of the Chinese government to achieve technological independence from the West. Huawei originally used Google's Android operation system for its smartphones, but the tech giant invested in its own operating system, known as the HarmonyOS, which was installed on its new smartphones and its ecosystem of gadgets (Pham, 2021).

Differentiation as strategy for competitive advantage

Competitive advantage is linked to customer satisfaction because keeping customers satisfied is what leads to customer loyalty, hence competitive advantage is best explained as what makes a company's products or services more desirable to customers than that of rival companies. (Barney and Hesterly, 2019; Caldwell and Anderson, 2017; Charan, 2021; Khalfallah, 2020). Porter's (1980, 1985) approach to competitive advantage included the development of three generic strategies that could be used either individually or in combination to outperform

competitors. These strategies are cost leadership, differentiation and focus on a particular market niche. Each strategy is examined briefly below:

Cost leadership: entails being the lowest cost manufacturer or provider of services for a given quality level. Such a strategy is characterised by tight control of costs and overheads, minimisation of operational costs, reduced labour costs and reduced input costs. Competitive advantage for a service organisation comes from offering the cheapest service.

Differentiation: entails offering a product or service that is perceived as unique throughout the industry and as such offers unique attributes that are valued by customers. This uniqueness may permit the organisation to charge premium prices for its products and/or services. To succeed, the increased income generated from higher prices must cover the cost of offering the unique product or service. Possible strategies for achieving differentiation include warranties, brand image, features, service and quality and value. As with most services, unique attributes cannot be patented and a differentiation strategy is always open to imitation by competitors. Other dangers include changing customer tastes and changing legislation.

Focusing: on a particular market niche involves concentrating on a narrow customer or product segment. The basic premise is that by concentrating on a particular segment an organisation can achieve either a cost advantage within a limited market or differentiation based on meeting customer requirements. This strategy is best suited to situations where customers have distinctive preferences or specialised needs.

Huawei's differentiation in practice

The emphasis of a differentiation strategy is centred on achieving (even at considerable cost) superior quality products across the value chain (Holt, 2022). Porter's (1985), insist that the adoption of a differentiation strategy entails promoting higher product quality which is as result of higher costs of investment across a number of functional areas in an attempt to support the differentiation strategy.

In its sustainability progress report (2022) there is enough evidence that Huawei is committed to providing improving the overall service experiences and making their services accessible to all especially the less disadvantaged, though the inclusion of AI subtitle for the hearing impaired, screen reader for the visually impaired, as well as simple mode and magnification gestures for the elderly. "Accessibility" is now one of the core tenets of Huawei's products which aligns with its vision of "digital inclusiveness". Below are the key areas of operation where Huawei is committed to making improvement in the smartphones segment in line with the specific SDGs.

Adapting technologies for education

The 2030 UN's SDG 4 which is centred on ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all. In line with SDG 4, Huawei developed a comprehensive online learning platform known as 'EduCenter' which enables the sharing of learning content across a range of channels, to provide both flexibility and accessibility for users seeking free education irrespective of location and time. By June 2022, Huawei's 'EduCenter' launched more than 590,000 online courses, 36% of which were free, and more than 2.3 million attendees enrolled in courses released on the Huawei's Developers Training platform.

Developing eco-friendly technology

Huawei has showed commitment to its vision to create "tech for a better planet", as well as its commitment to protecting the environment through innovation, reducing carbon emissions and other negative impacts on the environment for future generations. This is in line with SDG 13 which is aimed at climate action. This is centred on taking urgent action to combat climate change and its impacts. To achieve this, Huawei use premium and eco-friendly renewable materials, with the aim of removing dependence on direct mineral sources. Huawei used ten

different types of renewable materials including paper, gold, aluminium, cobalt, and tin in its production. Also, with continuous efforts in reducing plastic use and packaging, the packaging of its flagship P50 smartphone series contains less than 1% plastics, an 89% reduction over the P40 series, an industry-leading achievement.

In 2021, the space utilisation rate of the smartphone giant's product packaging boxes shipped from e-commerce platforms increased from 28% to 43% on average, resulting in a reduction in use of packaging materials by more than 400 metric tons a year. In line with its commitment to work with its partners in the industry to build a circular ecosystem, again in 2021 alone, the company collected and processed over 8,600 metric tons of waste through the Huawei recycling system. By cooperating with industry-leading recyclers, Huawei launched the official end-to-end second-hand device service, covering recycling, refurbishment, and resales of such devices.

Information accessibility for everyone

In line with SDG 10 which aims at reduced inequality, ensuring that there is reduced inequality within and among countries. Huawei's AI subtitle feature converts voice into text, allowing hearing impaired users to see the messages spoken by the other party. Contrarywise, it converts text into spoken messages, helping such users communicate with greater ease. When watching a video without subtitles, such as a live stream, the user can simply set the media sound as the source sound for the AI subtitle feature. The feature then converts the sound into subtitles and display the subtitles on the video. This is useful not just for the hearing impaired, but also for users who are trying to watch videos in noisy or distracting environments. To help visually impaired users perceive more of their surroundings, Huawei created the AI Lens feature, which recognizes and broadcasts text on objects that are photographed by users, allowing users better distinguish the objects that they encounter.

Again in 2022, to provide more support for the elderly users, Huawei introduced a tenth edition of the Parent's Mobile Phone Instructions and launched a series of tutorial videos to provide instructions for the elderly users on how to use their Huawei devices. Not just that but also to provide solution for their pain points in smart device use, it added more hand-painted illustrations to the instructions. In addition, users with mobility issues can use air gestures or wake up Celia, to remotely control their smart devices. For example, the user may ask Celia to switch on the air conditioner or adjust the light brightness at home, or even use air gestures to control their phone.

Also, in 2021, Huawei released the Harmony OS 2 to ensure that existing accessibility features worked well on all supported devices, providing steady and premium experiences for physically challenged users. It provides a wide range of features, such as image recognition, travel assistance, and photography assistant to enrich the lives of physically impaired users. The device comes with an unprecedented obstacle identification feature for visually impaired users, with the ability to detect obstacles while walking and notify the user of what the obstacle is and how far away it is, via voice broadcast and vibration reminders.

Huawei's competitive market position

It is important to emphasise the fact that smartphones have recently attracted the attention of all age groups from teenagers to the older generation due to their unique shopping features; this has had an impact on customer choice and purchase intentions, which has forced firms to innovate devices in an attempt to improve customer experience as well as survive in a competitive digital marketing environment (Appiah and Watson, 2024). With this continuous effort of achieving accessibility for all, Huawei's Harmony OS2 according to the sustainability progress report (2022) was ranked No. 1, with a score of 93.30 points, in China. In addition, the Harmony OS2 was the only device rated as five-star by China Telecom's rating of smartphone operating system (OS/UI) for elderly-friendly device in 2022.

Even though the Times of India (2024) reported that China's smartphone shipments fell a further 1% year-on-year in the fourth quarter of 2023, as the total shipments in the country reached 73.9 million units, Huawei's shipments soared 41% year-on-year as its newly launched devices gained momentum immediately after the launch. Huawei's major competitor Apple also experiencing a slight year-on-year uptick in shipments driven by the newly launched iPhone 15 series, however Apple's initial supply constraints impacted its overall performance. In the Times of India report (2024), it was indicated that Huawei emerged as the biggest dark horse of the fourth quarter of 2024, returning to the top five of China's smartphone market after 10 quarters. The increasing demand for Huawei's new devices in the Chinese market reflects local consumers' demand for innovation in software and hardware. The competitive landscape of the smartphone industry will further be vitalised by Huawei's influence, which will prompt both local and global players in the smartphone industry to accelerate their disruptive innovation.

Conclusion

In the rapidly evolving landscape of the global smartphone industry, Huawei stands as a testament to the power of differentiation and sustainable development to position itself as a leader in driving technological innovation towards a more inclusive and sustainable future. At its core, Huawei's differentiation strategy is built on delivering unique value through technological innovation, particularly in artificial intelligence (AI), to enhance everyday societal functions.

This approach has not only carved out a competitive edge for Huawei in the Chinese smartphone industry but has also underscored its commitment to making technology accessible to all, especially the vulnerable social groups. By integrating AI-driven accessibility features such as AI subtitles for the hearing impaired and screen readers for the visually impaired, Huawei is dismantling barriers to digital inclusivity and inequality. This commitment to

accessibility is a clear reflection of Huawei's dedication to the SDG principle of leaving no one behind.

Huawei's contributions to the SDGs extend beyond digital inclusivity. Through initiatives like the 'EduCenter' platform, Huawei democratised access to education. Furthermore, the company's commitment to eco-friendly technology showcase how innovation can pave the way for environmental sustainability. Again, by using renewable materials and reducing waste, Huawei sets a precedent for responsible consumption and production. These efforts not only contribute to Huawei's differentiation strategy but also highlight its role as a catalyst for global sustainable development set out in the UN 2030 agenda.

Huawei's market performance, especially its impressive growth in the face of overall industry declines, underscores the effectiveness of its differentiation strategy. By focusing on innovation and sustainability, Huawei has not only navigated challenges but has also tapped into new customer segments, enabling Huawei to emerge as a dark horse in the competitive landscape, challenging incumbents and reshaping market dynamics. Huawei's trajectory offers valuable insights for competing firms in the smartphone industry and beyond, proving that the ability to align business and marketing strategy with broader societal goals exemplifies how strategic differentiation, rooted in sustainability and inclusivity, can drive both business success and positive social impact. In a nutshell, Huawei's continuous improvement to its smartphone devices illustrates the power of differentiation through innovation and sustainability. By aligning its business strategy with the SDGs, Huawei has not only secured competitive advantage but also contributed to the global pursuit of a more sustainable and inclusive future.

Discussion Questions

1. List the UN SDGs and what they are addressing.

2. Huawei is committed to the implementation of specific SDG goals. How ambitious and realistic is their commitment to the specific SDG goals?
3. Huawei's competitive strategy is linked to SDG goals. Discuss how the specific SDG goals selected by Huawei could give rise to a competitive advantage.
4. The SDG goals that Huawei is pursuing could lead to a competitive advantage. How sustainable is the competitive advantage for Huawei? Explain the reasoning for your choice.
5. Drawing on Porter's generic strategy for growth framework, with relevant examples discuss how Huawei can sustain its competitive position using SDG goals.

Further Reading

Apple gains top position in China smartphone market for first time in 2023. Available at <http://timesofindia.indiatimes.com/articleshow/107195843>.

Gao, Y. and Chan, E. 2024. Huawei's Pivotal Role in the US-China Tech War, from 5G to Chips. Available at: <https://www.bloomberg.com/news/articles/2024-04-29>.

Huawei Consumer Business: Sustainability Progress Report (2022).

Available at: <https://consumer.huawei.com/en/sustainability/sustainability-report>.

Pham, M. 2021. How Huawei recovered its brand reputation after 'bombshell' ban. Available at: <https://www.marketingweek.com/huawei-brand-reputation-bombshell>.

UN Sustainable Development Goals. Available at: <https://sdgs.un.org/goals>.

References

Appiah, D., and Watson, A. 2024. Smartphones and Digital Customer' Journey. In Ozuem et al (2023) Digital Transformation for Fashion and Luxury Brands: Theory and Practice. London. Palgrave MacMillan.

Barney, J.B. and Hesterly, W.S. 2019. Strategic Management and Competitive Advantage: Concepts, Global Edition. Harlow. Pearson Education.

Caldwell, C. and Anderson, V.A. 2017. Competitive Advantage: Strategies, Management and Performance. New York. Nova Science Publishers.

Charan, R. 2021. Rethinking Competitive Advantage: New Rules for the Digital Age. New York. Currency.

Douglas A., Douglas J. and Davies, J. 2010. Differentiation for competitive advantage in a small family business. *Journal of Small Business and Enterprise Development* Vol. 17 No. 3, pp. 371-386.

Holt, K. 2022. *Differentiation Strategy: Winning Customers by Being Different*. Oxon. Routledge.

Khalfallah, B. 2020. *Competitive Advantage Champion: The Practical Handbook to Differentiate your Business*. Washington. KDP Publishing.

Kireru, N.J., Ombui, K., Omwenga, J. 2016. Influence of product differentiation strategy in achieving competitive advantage in commercial banks: A case of equity bank limited. 2016. *International Journal of Business & Law Research* 4(2):40-52.

Porter, M. 1980. *Competitive Strategy: Techniques for analysing industries and companies*. The Free Press, New York, NY.

Porter, M. 1985. *Competitive advantage: Creating and sustaining superior performance*, The Free Press, New York, NY.