

The Leading Information Technology Companies and Corporate Digital Responsibility

'Like generations before, we – governments, businesses and individuals – have a choice to make in how we harness and manage new technologies.'
(United Nations 2020)

The emergence of digital technologies is seen to be vitally important in driving future economic development, but these technologies may also have damaging implications for society. This contradiction begs the question of how leading information technology companies, that play an important role in developing, disseminating, promoting, and facilitating the digital technologies, address their digital responsibilities. The aim of this exploratory paper is to shed some light on this question by reviewing how the leading information technology countries publicly approach corporate digital responsibility (CDR). The paper describes how the companies emphasised their commitment to CDR, and evidenced that commitment, before offering some wider reflections on the role of CDR within the economy and society.

Keywords: *Corporate digital responsibility, digital technologies, Information technology companies, economic growth.*

Introduction

In recent decades, the concept of Corporate Social Responsibility (CSR), simply defined as the *voluntary integration of social and ecological responsibilities into a company's business activities*, has attracted increasing attention in the academic business and management literature. Though the concept underlying CSR is not new (e.g. Agudelo 2019; Sadler 2004), Chong (2017), suggested that CSR reports *'are taking the business world by storm'*. Most large companies certainly look to manage their social and environmental responsibilities through their corporate social responsibility strategies and programmes, but some commentators have suggested that with the continuing emergence of digital technologies, companies should treat *'Corporate Digital Responsibility (CDR) with the highest strategic priority, helping to create positive futures not only for their business, but also for the societies they are part of'* (Anderson 2019). In a similar vein, Thierry Driesens (2017), Chief Information Officer, Deutsche Post DHL, argued *'as the world becomes more digital, companies will be faced with an ever-growing need to adopt a robust corporate digital responsibility (CDR) approach to protect both customers and employees. CDR is about making sure new technologies — and data in particular — are used both productively and wisely.'* Not least because the emerging digital technologies can *'threaten privacy, erode security, and fuel inequality'* (United Nations 2020). More prescriptively, Lobschat et al. (2020) argued *'organizations must determine how to operate responsibly in the digital*

age.’ With these thoughts in mind, this commentary paper looks to provide an exploratory review of how the leading information technology companies publicly address the challenges of the emerging digital technologies. As such, the paper looks to add to the literature to on DGR by providing some specific illustrations of how large companies have looked to put digital corporate responsibility into practice.

Social Responsibilities in the Business World and Corporate Digital Responsibility

Agudelo et al. (2019) traced the origins of the social component in corporate behaviour back to Roman Laws and suggested that the idea of corporations as social enterprises was carried also on with English Law in the Middle Ages. Sadler (2004) argued that *‘the definition of the functions of the corporation with relation to wider social and moral obligations began to take place in the centres of capitalist development in the 19th century.’* Howard Bowen, a US economist, is widely credited with first coining the term CSR, and he defined the social responsibilities of business executives as *‘the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action, which are desirable in terms of the objectives and values of our society’* (Bowen 1953).

As the emerging digital technologies are increasingly reshaping and disrupting business practices and changing consumer behaviour, so this has, in turn, seen many companies rethink their approach to social responsibility to reflect such changes. However, there is no generally agreed definition of CDR. Lobschat et al. (2019), described CDR as *‘novel concept’*, and defined it as *‘the set of shared values and norms guiding an organization’s operations with respect to the creation and operation of digital technology and data.’* For Schneevoigt (2020), CDR is a *‘a voluntary commitment’*, which *‘starts with the need to conform to legal requirements and standards — for handling customer data, confidential, intellectual property and so on — but it also extends to wider ethical considerations and the fundamental values that an organization operates by.’* More simply, Driesens (2017) argued that CDR *‘is about making sure new technologies — and data in particular — are used both productively and wisely.’*

In looking to identify the scope of CDR, Wade (2020) argued it *‘spans four areas — social, economic, technological, and environmental — that should be merged under one organizational umbrella.’* More specifically, Wade (2020) argued that the social dimension, for example, *‘involves an organization’s relationship to people and society. The vital topic of data privacy protection of customers, employees, and other stakeholders is included in this area. It also incorporates aspects of digital diversity and inclusion, such as bridging an increasing divide between digital haves and have-nots across geographies, industries, social classes, and age demographics.’* The economic dimension, *‘concerns responsible management of the economic impacts of*

digital technologies’, and looks to explore ‘how companies share the economic benefits of digitization with society through taxation of digital work, and if, and how, the original owners of monetized data are fairly compensated’ (Wade 2020). In looking to explain the growing importance of CDR, Driesens (2017) identified ‘four drivers’, namely, ‘the increasing concerns from customers and governments about the use and abuse of personal data; the impact and challenges of automation and robotics; the potential for unethical use of new technologies; and finally, the so-called digital divide.’

Methodology

In looking to conduct a review of how the leading information technology companies have publicly addressed the issue of digital responsibility, the authors chose a simple approach which they believe to be fit for purpose for an exploratory paper. The leading ten information technology companies, as listed by Alertify (2019), namely Microsoft, IBM, Oracle, Accenture, Hewlett Packard Enterprise, SAP, Tata Consultancy Services, Capgemini, Cognizant, and Infosys, were selected for investigation. In selecting these companies, to provide the framework for the review, the authors took the view that as the leading players in the information technology field, they might be seen to reflect leading edge thinking in recognising their responsibilities to the emerging digital technologies. Most large companies use the Internet to report annually on their social responsibility commitments, and to their achievements in looking to meet these commitments, in corporate social responsibility, corporate citizenship and corporate sustainability, reports. Whatever the title, the general content of these reports is similar and within this paper the authors use the generic term corporate social responsibility report as a shorthand device. A preliminary Internet survey revealed that the selected information technology companies addressed some of the issues associated with the emerging digital technologies in these reports.

With this in mind, the authors conducted two search procedures. Firstly, they undertook an Internet search using the key phrases, CSR and the name of each of the selected information technology companies, in October 2020, using Google as the search engine. This search revealed that all ten of the selected companies had posted CSR reports. Secondly, the authors then manually searched the most recent of these reports to learn how the selected companies had addressed their approach to digital responsibility. Content analysis has been widely used (e.g. Khan et al. 2018) to systematically identify themes and issues within CSR reports, but the authors were minded that employing this technique was not necessary or appropriate. Here, the authors were guided by the detailed signposting of issues in the reports and by the aim of the paper, which was to undertake an exploratory review of how the selected information technology companies had addressed the responsibilities associated with the emerging digital technologies, rather than to provide a comprehensive or comparative analysis across the industry.

The information generated by these two search procedures provided the empirical material for the paper. This material is in the public domain on the selected companies' websites, and the authors took the view that they did not need to seek permission to use it. The paper draws heavily on selected quotations from the information technology companies' websites in the belief that this approach conveyed corporate authenticity and offer a greater depth of understanding (Corden and Sainsbury 2006). When addressing the issues of reliability and validity of information drawn from Internet sources, Saunders et al. (2009), emphasised the importance of the authority and the reputation of the source, and the citation of a specific contact who could be approached for additional information. In collecting the information on the information technology companies' approach to digital responsibility, the authors felt that these two conditions were met.

Microsoft is a US multinational company, which develops, manufactures, licenses, supports and sells computer software, consumer electronics and personal computers. IBM is a US multinational technology and consulting company, founded in 1910, with operations in over 170 countries. Oracle is a US multinational corporation which sells data base software and technology, cloud engineered systems and software products. Accenture is a multinational company headquartered in Ireland and its business operations span strategy, consulting, technology, software, and business process outsourcing. Hewlett Packard Enterprise is a US multinational information technology company, and its operations include financial technology, computer software, cloud computing and artificial intelligence. SAP is a German multinational software corporation, with operations in over 180 countries. Tata Consultancy Services is an Indian multinational information technology services and consulting company. Capgemini is a French multinational corporation, which provides consulting, technology, professional, and outsourcing services. Cognizant is a US multinational corporation which provides a range of information technology services, including digital, technology, operations, and consulting. Infosys is an Indian multinational corporation which provides business consulting, information technology and outsourcing services.

Findings

All the selected information technology companies stressed their general commitment to digital responsibility. Accenture (2020), for example, argued '*as technology becomes ubiquitous, trust becomes paramount*', and '*to build – and maintain trust in today's digital age, businesses must use data and artificial intelligence ethically, across customer information, product development and workforce training.*' IBM (2020) argued '*as the digital transformation of business and society accelerates*', the company's '*long-standing commitment to good tech reflects our company's most deeply held values as well as our pledge to put responsible stewardship in the digital age at the core of our business strategy.*' Capgemini (2020) reported '*our commitment*

1 *to responsible business practices, ethics and transparency runs across*
 2 *everything we do.'*

3 Such commitments to CDR are addressed across a range of interlinked
 4 themes, including privacy and cybersecurity, the digital divide and inclusion,
 5 human rights, and artificial intelligence. The increasingly high profile issue of
 6 cybersecurity features in many of the leading information technology
 7 companies' CSR reports. In addressing privacy and cybersecurity, Microsoft
 8 (2019), for example, reported '*we recognise privacy as a fundamental human*
 9 *right*', and '*we commit to working collaboratively across industry,*
 10 *governments, educational institutes and NGOs in the fight to protect privacy*
 11 *and cybersecurity for individuals and businesses around the globe.'* More
 12 specifically Microsoft emphasised the vital importance of the cloud in
 13 providing a secure location for the storage of sensitive and confidential
 14 information. At the same time, Microsoft (2019) explained that its approach to
 15 '*product development and privacy practices*' was built around '*six key*
 16 *privacy principles*', namely '*user control*', '*legal protection*', '*transparency*',
 17 '*no content-based targeting*', '*security*', and '*user benefits*.'

18 For Hewlett Packard Enterprise (2019) '*protecting the privacy of personal*
 19 *information is a priority for business and society. HPE aims to be at the*
 20 *forefront of technology and practices that protect data and comply with all*
 21 *regulations across global markets.'* Further, Hewlett Packard Enterprise (2019)
 22 reported that its '*products and services enable customers to harness the*
 23 *potential of data. We integrate privacy and security protocols that keep this*
 24 *data secure, maintaining customer trust and protecting our reputation.'*
 25 Accenture (2020) argued that data privacy was '*a corner stone of trust in the*
 26 *digital era*', and that '*safeguarding the data of our clients, our company and*
 27 *our people, is one of our most important responsibilities.'* Tata Consultancy
 28 Services (2019) outlined its global data privacy policy with covers all its
 29 operational areas. More specifically, the company reported on its mandatory
 30 training on data privacy, which was designed '*to foster a culture of awareness*
 31 *and responsibility among employees*', that the company's project delivery
 32 teams are '*factoring in data privacy in the design of new systems*', and that
 33 '*standard data masking technologies*' are being used to protect sensitive
 34 customer engagements.

35 In claiming that '*data protection and IT security are of paramount*
 36 *importance to us*', SAP (2019) reported that '*organizations around the world*
 37 *trust SAP with their data – either on their own premises, in the cloud, or when*
 38 *using mobile devices while on the move.'* SAP acknowledged that '*our*
 39 *customers need to know that we will keep that data safe, process it in a manner*
 40 *that complies with local legislation, and protect it from malicious use.'* To that
 41 end, the company reported '*we have implemented safeguards to help protect*
 42 *the fundamental rights of everyone whose data is processed by SAP, whether*
 43 *they are our customers, prospects, employees, or partners. In addition, we*
 44 *work towards compliance with all relevant legal requirements for data*
 45 *protection*' (SAP 2019).

1 The selected information technology companies approached the Issues of
 2 the digital divide, namely those who have no, or very limited, access to the
 3 Internet, and more generally of inclusion, in a variety of ways. Capgemini
 4 (2020), for example, recognised that *'digital transformation is driving major*
 5 *changes in our society, impacting everything from how we communicate to how*
 6 *we access public services. However, these far reaching technological advances*
 7 *could also have unintended consequences especially for those who are not able*
 8 *to engage in a digital world.'* Further Capgemini (2020) claimed that *'as a*
 9 *responsible business, our ambition is to help make the digital revolution an*
 10 *opportunity for all, creating a digitally literate population who can stay*
 11 *connected, productive and engaged.'* Under the banner 'Closing the Skills Gap
 12 in the Digital Economy' Accenture (2020), for example, reported on its success
 13 in exceeding its target of equipping more than 3 million people with the skills
 14 to get a job, or build a business, by 2020, in 2019.

15 IBM (2020) emphasised that *'as a global technology company we believe*
 16 *we have the responsibility and a great opportunity to help close the broadband*
 17 *gap that exists in the US and across the globe'* and reported *'we partner with*
 18 *equipment makers, Internet and energy access providers to make affordable*
 19 *broadband access a reality for communities around the world.'* Though
 20 recognising that *'broadband adoption has slowed, and that progress is*
 21 *especially slow in low income countries and rural areas'*, and that *'most of the*
 22 *connected population relies on low speed basic cellular services'*, IBM (2020)
 23 affirmed its continuing commitment to *'closing the global digital divide.'* More
 24 specifically IBM reported setting itself the goal of extending Internet access to
 25 40 million unserved and underserved people within three years. In *'Addressing*
 26 *the Gender Gap in Technology'*, Oracle (2019) reported on its activities in
 27 increasing diversity and creating opportunities for women, and on its
 28 investment in science, technology, engineering, art, mathematics and computer
 29 science education for girls.

30 Inclusion within the workplace also received attention from the many of
 31 the selected information technology companies, and here the focus is, in part at
 32 least, on fully harnessing the potential of the digital technologies. IBM (2020),
 33 for example, argued *'a diverse and inclusive workforce leads to greater*
 34 *innovation, agility, performance, and engagement, enabling both business*
 35 *growth and social impact.'* In a similar vein, Hewlett Packard Enterprise
 36 (2019) claimed *'we drive business impact and market differentiation by*
 37 *investing in diverse talent and advancing inclusion across our value chain'*,
 38 and under the banner 'Empowering our People', asserted its belief that
 39 *'inclusive environments empower team members, fostering a culture of*
 40 *innovation.'* Accenture (2020) reported that *'to support our people – both*
 41 *inside and outside of work – we are focussed relentlessly on equipping them*
 42 *with leading edge technologies.'*

43 Human rights present a fundamental and complex set of issues for all
 44 companies, and more widely for human societies, but the emerging digital
 45 technologies do have a part to play. Microsoft (2019), for example, reported
 46 *'we aim to respect human rights in the way we do business and to advance*

1 *those rights with the power of technology*, and that the company was *'working*
 2 *with the UN Human Rights Office to help them develop technology to predict,*
 3 *analyse, and respond to human rights situations.'* IBM (2020) argued that it
 4 *'firmly opposes uses of any technology for human surveillance, racial*
 5 *profiling, violations of basic human rights and freedoms, or any purpose*
 6 *inconsistent with IBM's values and principles of trust and transparency.'*

7 Artificial Intelligence (AI), the artificial creation of human-like intelligence
 8 that can learn, reason, plan, perceive, or process natural language, also features
 9 in some of the selected companies' CSR reports. Microsoft (2019), for
 10 example, reported building *'AI responsibly, taking it a principled approach to*
 11 *guide the development and use of artificial intelligence with people at the*
 12 *centre of everything we do.'* More specifically, Microsoft (2019) argued that
 13 *'designing AI to be trustworthy requires creating solutions that reflect ethical*
 14 *principles that are deeply rooted in important and timeless values.'* These
 15 principles are listed as *'fairness', 'reliability and safety', 'privacy and*
 16 *security', 'inclusiveness', 'transparency', and 'accountability.'* Further, the
 17 company emphasised through its *'AI for Good'* initiative, *'we seek to combine*
 18 *Microsoft's technology and expertise with the talent of groups around the*
 19 *world to solve humanitarian issues and create a more accessible and*
 20 *sustainable world'* (Microsoft 2019). Cognizant (2019) reported on the
 21 company's *'fast track technology training program'*, focused for example, on
 22 *'machine learning and artificial intelligence.'*

23 Under the banner *'Ethical Ai'*, IBM (2020) claimed *'the promise of AI*
 24 *technology can only be reached if it is used ethically and responsibly'*, and
 25 argued that *'Ai should augment (not replace) humans, and any use of AI should*
 26 *be transparent, explainable, fair and robust.'* Microsoft reported on how its
 27 ethical principles were put into action and included an outline of how AI had
 28 contributed to epidemiological modelling and contact tracing technologies as
 29 part of the battle against the COVID-19 pandemic. Hewlett Packard Enterprise
 30 (2019) explicitly recognised that *'artificial intelligence brings new human*
 31 *rights risks, including discrimination from algorithmic bias, and labor impacts*
 32 *associated with automation'* but on a more positive note, reported using AI to
 33 drive operational efficiency and to shrink the physical and environmental
 34 footprint of its data centres, on experimental work with servers on the
 35 International Space Station, and to contribute to the solution of a range of
 36 social and educational problems. In a similar vein, Infosys (2020) reported
 37 employing *'artificial intelligence 'to improve productivity and profitability of*
 38 *the organization, help employees with better work-life balance, reskill*
 39 *employees and deliver value to our large client base.'* SAP (2019) reported
 40 reviewing the *'ethical and societal implications of the latest advances in*
 41 *technology, such as artificial intelligence', 'creating software that allows users*
 42 *to reach their full intellectual potential'* and *'contributing to the public debate*
 43 *about these subjects.'*

Concluding Reflections

This exploratory paper has reviewed the ten leading information technology companies' commitments to digital responsibility, and as such the paper provides some illustrations of how large companies have looked to put CDR into practice. More specifically, the paper outlines some of the digital issues the leading information technology companies have addressed including, privacy and cybersecurity, the digital divide and inclusion, human rights and artificial intelligence. However, two wider sets of issues also merit reflection and discussion, namely the relationship between corporate digital responsibility and economic growth, and the thorny question of whose best interests are served by CRD.

Firstly, within the information technology companies' commitment to digital responsibility there is a common emphasis on continuing growth, and as such this can be seen to be at odds with these companies' commitments to sustainability and environmental stewardship. The former relying on the continuing exploitation of the earth's scarce natural resources, and the latter being concerned to maintain and protect environmental and ecological resources for future generations. Thus, while Accenture (2020), for example, reported that some of its digital responsibility commitments were essential for growth, the company also emphasised its commitment to environmental stewardship. That said, for Accenture (2020) the emerging digital might be seen to offer an opportunity to reconcile these competing goals, in that the company claimed *'this is the decade of delivering on the promise of digital and technology - a time to redefine growth and work in new ways to help to address the unprecedented challenges the world is facing - from the future of work and climate change to equality, human rights and responsible innovation.'*

More generally, attempts to reconcile continuing economic growth and sustainable development are often couched in terms of decoupling and technological innovation. The idea of decoupling, seen as either relative or absolute decoupling (the former refers to using fewer resources per unit of economic growth, while the latter refers to a total reduction in the use of resources), underpins the vast majority of current corporate sustainability strategies and programmes. However, decoupling is seen by some critics as an elusive goal and Conrad and Cassar (2014) suggested that *'a substantial body of research has cast doubts on whether countries can truly grow their way out of environmental problems'*, while Alexander et al. (2017) argued *'the decoupling strategy cannot lead to a growing global economy that is just and sustainable.'* Arguably more radically Jackson (2009) concluded a discussion of what he described as *'the myth of decoupling'* by arguing that *'it is entirely fanciful to suppose that deep emission and resource cuts can be achieved without confronting the structure of market economies.'*

Approaches to reconcile economic growth and sustainability rooted in technological innovation are often focused on increasing energy efficiency, reducing greenhouse gas emissions, reducing waste, and facilitating the transition to a more circular economy, and such approaches certainly strike a

positive chord with the information technology companies CSR reports. However, Huesemann (2003) argued that *'improvements in technological eco-efficiency alone will be insufficient to bring about the transition to sustainability'* and Schor (2005) suggested that *'the popularity of technological solutions is also attributable to the fact that they are apolitical and do not challenge the macrostructures of production and consumption.'*

Secondly, there are issues about whose best interests are served by CDR. For their part, several of the leading information technology companies emphasised their responsible use of digital technologies and look to evidence the exercise of that responsibility as a force for good, as an integral part of their wider commitment to CSR. However, in claiming that *'there has been little attention given to the responsibilities of new businesses and business processes in the digital economy'*, Grigore et al. (2017) argued *'almost entirely absent in such corporate social responsibility research is a consideration of new areas of responsibility that are emerging from digital technologies.'* Further, Grigore et al. (2017) proceed to identify some of these new responsibilities relating to *'commodities, contractual agreements and ownership; exploitation of immaterial labor and fair distribution of rewards; access and equality, and; the use of low cost labor and/or artificial intelligence.'*

However, there are questions, posed, more often outside the business and management literature than within it, about whose interests are best served by these commitments and responsibilities, and some deeper concerns about the role of CDR within modern societies. On the one hand, many of the policies pursued under the CDR banner are seen to be important in supporting corporate strategy and in promoting and facilitating business strategies and goals. On the other hand, there are arguments that companies pursue CDR policies and programmes to present a socially responsible image that legitimises their business activities to their stakeholders and more widely within society.' Hanlon and Fleming's (2009), earlier arguments that *'corporate social responsibility is good business in that it serves to affirm the legitimacy of the companies'* and *'this is important in the context of the widespread cynicism and political opposition that corporations have attracted in the last few years'* certainly resonate in reviewing the role of CDR.

Finally, the authors recognise that their review has its limitations, not least that it draws its material exclusively from the corporate websites of the leading information technology companies and does not include any face to face interviews, or focus group sessions, with representatives from those companies. However, the authors believe that it provides a valuable platform for future research. Looking to the future, several broad research agendas can be identified. There are, for example, a series of research opportunities around how information technology companies develop their digital responsibility strategies and the role of their stakeholders, including suppliers, employees, customers, and non-governmental organisations, in that development process. The ways in which the information technology companies communicate their commitment, and their approach, to digital responsibility to employees, the general public and to customers, and in the case of their customers, if, and how,

their approaches influence consumer buying and contracting behaviour, also merit research attention.

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