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GENERATIVE AI AND SOCIAL IMPACT: THE ROLE OF BUSINESS

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Generative Artificial Intelligence (AI) is unleashing changes in the world that were hard to imagine even a year ago. Some predict that it could be as transformative as the Industrial Revolution[1]. AI, more broadly, has been evolving over decades, but the new models and capabilities have brought it more overtly into our daily lives and mainstream public discourse.

In the spectrum between the unbridled optimism and the existential angst associated with the sheer speed, scale and uncertain impact of this rapidly evolving and transformative technology, is an immediate and urgent reality. If other systemic shocks and transformations are anything to go by - whether the global pandemic or the impacts of automation and decarbonisation - the gains and risks of AI will be mediated by deep-seated inequities such as income, gender, race and geography.

In this paper, we highlight the emerging understanding of the potential opportunities and risks that generative AI brings for the lives, livelihoods and access to learning of vulnerable people and communities. We then offer a practical framework to guide business action: leveraging core business, philanthropy and policy advocacy to mitigate the risks and realise the social impact potential of generative AI.[2] A human-centred, AI-enabled future that is more equitable and resilient is possible, but we need to act now.

This paper is intended to spark a conversation across our community and beyond on what is a rapidly evolving area.

"AI brings enormous benefits to the digital era, but it can also significantly compromise the safety and agency of users worldwide. Enhanced multi-stakeholder efforts on global AI cooperation are needed to help build global capacity for the development and use of AI in a manner that is trustworthy, human rights-based, safe and sustainable, and promotes peace."

The United Nations Secretary-General's Roadmap for Digital Cooperation[3]

WHAT IS GENERATIVE AI?

So, what is generative AI? At its heart, generative AI refers to systems – such as OpenAI's ChatGPT, Microsoft's Bing Chat, Google's Bard, and Anthropic's Claude – that are able to generate new content or predictions based on vast amounts of data and deliver this to users in eerily human-like responses. At the time of writing, the model on which ChatGPT is based, GPT-4, has been trained on 170 trillion parameters.[4]

Despite the long AI heritage on which these so-called "large language models" (LLMs) are built, their scale, underpinned by massively more data and modern computing power, has delivered some remarkable results that have surprised even its creators. GPT-4 scored in the 90th percentile in the Uniform Bar Exam, an exam in the US for those wanting to become lawyers.[5] Meanwhile, Google's AI taught itself Bengali, even though it was never trained to speak it.[6]

So surprising have the results been that prominent figures in the tech world recently called for a pause in developing more powerful models given their potential "risks to society".[7] Policymakers around the world are scrambling to understand how they can regulate and control the risks of AI without stifling innovation.

"ChatGPT will change our world."

Bill Gates[8]

TRENDS

The context for this conversation is being shaped by three trends.

1. RAPID GROWTH AND FAST-EVOLVING CAPABILITIES OF GENERATIVE AI MODELS

The technology is becoming ever-more sophisticated on what feels like a daily basis. New models are no longer limited to text inputs and outputs. Thanks to access to the web and a suite of plugins that they can intelligently use as tools, they are no longer held back by training data that, in the case of ChatGPT, went up to September 2021. Auto-GPT[9] is perhaps a sign of things to come. Using GPT-4 and ChatGPT, it can autonomously ask itself the series of questions needed to deliver a task on its own.

At the same time, generative AI is becoming more accessible for non-experts. A plethora of organisations – from the educational NGO, Khan Academy[10], to the French supermarket chain, Carrefour[11] – are embedding generative AI to improve the value they can offer to their customers, bringing generative AI into the mainstream.

2. GROWING CONCERN ABOUT THE SOCIAL, ECONOMIC, POLITICAL, NATIONAL SECURITY AND EXISTENTIAL IMPLICATIONS OF GENERATIVE AI

In May 2023, the Center for AI Safety published a one-sentence statement[12] signed by 350 leading AI figures, including Geoffrey Hinton, the "Godfather of AI", Sam Altman, the CEO of OpenAI, and Bill Gates. It called on all of us to take the risks of AI more seriously. In a June 2023 interview, Geoffrey Hinton commented, "I was always worried about things like what would happen to the people whose jobs were lost to AI and would there be battle robots and what about all the fake news it's going to produce, and what about the eco chambers being produced...? ...But the idea that this stuff will get smarter than us and might actually replace us, I only got worried about a few months ago."[13]

"Mitigating the risk of extinction from AI should be a global priority alongside other societal-scale risks, such as pandemics and nuclear war."

Statement published in May 2023 by 350 computer scientists and tech executives, through the Center for AI Safety Safety[14]

In response to growing concerns, policy-makers are actively exploring new legislation. The US[15,16], UK[17] and EU[18], among others, have been setting out their priorities and approaches. The UN is developing a Global Digital Compact for adoption in September that aims to "outline shared principles for an open, free and secure digital future for all".[19]

3. EMERGING UNDERSTANDING OF THE NEGATIVE AND POSITIVE SOCIAL IMPACT OF GENERATIVE AI FOR VULNERABLE PEOPLE AND COMMUNITIES

Beyond the existential threats, discussions about the implications of generative AI for society have so far been dominated by ethical concerns: over the safety of the models before they are released (in terms of what they might enable malicious actors to do)[20], misinformation (including in the context of elections)[21], privacy (of all our data, and that of companies whose employees may load up confidential information)[22],

intellectual property (of the original authors and artists of the material that the AI has been trained on)[23,24], and the dominance of a small number of large companies[25].

Importantly, the social impact and development community is starting to explore the risks and opportunities of AI for vulnerable people and communities. As we'll discuss, this includes the positive opportunities to address a wide range of social challenges, from improving healthcare outcomes and enhancing education to creating new economic opportunities.

At the same time, as a community, we need to consider the potential risks and challenges related to, for example, bias in the data on which the AI has been trained[26] and the significant job displacement[27] that is already starting to happen. Critically, we need to understand how the opportunities and risks reflect deeper systemic inequities, such as income, gender and race.

There are existing discussions we can draw on: for some time, there have been calls for human-rights- and social-justice-based approaches to the wider field of AI and machine learning: respecting the principles of non-discrimination, participation, accountability, and transparency[28] and recognising that AI can both exacerbate and address social injustice.[29] There is also a growing body of examples of the impact of AI, more generally, for social good.[30]

Meanwhile, there is much to be learnt from the theory and practice on ensuring a just transition in the face of the multiple drivers reshaping the future of work, from automation to decarbonisation.

IMPACTS

Drawing on a framework we developed together in our work analysing the impacts of COVID-19[31] and of climate change[32] on vulnerable people and communities, we focus here on three areas of impact:

- **Lives**: The impacts on people's health and safety.
- **Livelihoods**: The impacts on people's jobs and incomes.
- **Access to Learning**: The impacts on people's access to education and skills.

LIVES: HEALTH AND SAFETY

AI holds the promise of transforming health outcomes: accelerating medical research and drug discovery, assisting clinical decision-making to enable early detection and diagnosis, and boosting health capacity in the face of a vast shortage of healthcare workers, especially in the Global South.[33,34]

In India, for example, AI helped planners predict hospital staffing needs during the first COVID wave in Mumbai and Jharkhand, India[35]. It can enable NGOs to better deliver maternal and child health information in low-income communities[36]. Google is working on a range of social impact use cases, from early diagnosis to improving emergency responses to natural disasters.[37]

AI has the potential to dramatically increase access to health information and services in a way that is also personalised.[38,39,40]

There are also clear risks to health. While headlines have been dominated by predictions of the greatest risk, human extinction as a result of AI, there are immediate challenges already impacting people's lives.

Existing racial and gender biases in AI systems and the algorithms they use have been well documented. President Biden's Executive Order, issued in February 2023, seeks to "prevent and remedy discrimination, including by protecting the public from algorithmic discrimination".[41] As generative AI permeates our daily lives, the impacts of these biases risk being amplified. One commentator recently flagged the racial biases in facial recognition software: "so far, all those arrested in the US after a false match have been Black".[42] Last year, the American Civil Liberties Union flagged the risk of "AI and algorithmic tools that exacerbate racial biases" being used in clinical decision making.[43]

While this reflects the biases of the humans who programme the AI and those who use it to make decisions[44] – it also reflects a lack of diversity in the training data that AI uses to generate outputs.[45] It is useful to keep in mind that the AI around us is essentially what Ted Chiang, the science fiction writer, has described as "applied statistics":[46] ingesting large data sets and making inferences and predictions from them. The inclusiveness and diversity of the data sets on which they are trained matters.

LIVELIHOODS: JOBS AND INCOMES

Policymakers have been concerned in recent years about the effects of declining productivity on global growth, and by extension incomes.[47] *The Economist* predicts that "as the contours of the post-pandemic landscape come into focus, a lost decade – a period of slow growth, recurring financial crises, and social unrest – for the world's poorer countries looks increasingly plausible."[48] This productivity slowdown is global but has been steepest in emerging and developing economies.[49]

This matters, not least because economic growth is the most powerful way of lifting people out of poverty across its multiple dimensions.[50] Data shows that, over 200 years, as incomes have grown, extreme poverty has fallen.[51]

It is through its impact on productivity and growth that generative AI offers its most powerful way to tackle poverty. Goldman Sachs predicts the new wave of AI could "drive a 7% (or almost $7 trillion) increase in global GDP and lift productivity growth by 1.5 percentage points over a 10-year period."[52]

"We believe this next generation of AI will unlock a new wave of productivity growth: powerful co-pilots designed to remove the drudgery from our daily tasks and jobs, freeing us to rediscover the joy of creation."

Satya Nadella, CEO, *Microsoft*[53]

"The big worry is that [the] huge increase in productivity...will cause the rich to get richer and the poor to get poorer, and that's going to be very bad for society."

Geoffrey Hinton, Cognitive Psychologist and Computer Scientist[54]

Social impact and development organisations can also benefit from the efficiency gains that will come from integrating AI into workflows, enabling them to do more with the time and resources they have. AI can also help them better manage and analyse large datasets to understand need and impact, and to deliver innovative services - such as real-time personalised advice to smallholder farmers.[55] Microsoft Philanthropies is working with NGOs to ensure they have access to the AI tools they need to scale the reach and impact of their programmes.[56] JUST: Access is using its AI speech technology to enable pro-bono lawyers to deliver more efficiently and faster.[57]

Of course, along with the productivity gains comes the very real threat of job losses. The same Goldman Sachs research suggests that generative AI "could expose the equivalent of 300 million full-time jobs to automation".[58] Looking at over 900 occupations, they estimate that around two-thirds are "exposed to some degree of automation by AI".[59] This does not mean that all these jobs will be lost; in many cases, AI will lead to the displacement of tasks, rather than the displacement of people. Most jobs, the researchers argue, will be "complemented rather than substituted by AI".[60] Nevertheless, job losses are coming. In the UK, telecoms company BT says it plans to reduce its workforce by 55,000 people by 2030, including 10,000 jobs it expects to replace with AI.[61]

As with other trends disrupting the labour market - such as the transition to a green economy, automation or the shift to online retailing - we know that the risks and opportunities do not fall evenly and typically reflect deep-seated inequities.

Call centres and business process outsourcing services, which are key employers in countries like India and the Philippines, are one of the areas likely to be dramatically impacted. With automated chatbots able to deal with simple customer questions without human intervention, for instance, the job impacts are likely to be significant.[62]

According to one study, AI will "disproportionately replace jobs typically held by women... [and] consequently, the impact of AI becomes skewed along gender lines".[63] Reflecting social biases, the research shows that women currently dominate roles such

as bill and account collectors, payroll clerks, and executive secretaries. As companies introduce AI into workflows, it is these jobs that will be most negatively impacted.

Along with job losses will come new jobs, but who has access to these will also not be equally felt. According to the World Economic Forum, only 22% of AI professionals are women[64], already setting up a gender bias in the distribution of new AI-related job opportunities.

At a global level, there are risks that AI could widen the gap between rich and poor nations. Research by the IMF suggests that "new technology risks widening the gap between rich and poor countries by shifting more investment to advanced economies where automation is already established. This could, in turn, have negative consequences for jobs in developing countries by threatening to replace rather than complement their growing labor force." [65]

"I think with AI we have the chance...over time [to] give every child in the world and every person in the world regardless of where they are [or] where they come from...access to the most powerful AI tutor, which can teach them anything they want on any topic...A promise of something like that is real...[and]...an example of a moonshot...I get super excited about it".

Sundar Pichai, CEO, Google[66]

LEARNING: EDUCATION AND SKILLS

As with healthcare, access to education and the personalisation of this access is already being transformed by generative AI.

For students around the world, particularly those without access to affordable, good-quality education, AI chatbots could supplement teachers to provide learning that is tailored to their individual learning level and style.[67] The Khan Academy has announced a partnership with OpenAI to provide tailored tutoring to students.[68]

Add to this the ability of generative AI to understand and deliver responses in multiple languages - along with new developments in voice generation (such as Meta's Voicebox[69]) – and we have potential to tackle the inherent bias in access to knowledge faced by non-native English speakers.[70]

The impact of generative AI will also be considerably amplified by the prevalence of mobile phones, putting AI into people's hands. In Sub-Saharan Africa, smartphone adoption is predicted to rise from 51% in 2022 to 87% in 2030, and in Latin America, from 79% to 93%.[71]

For workers, Harvard Business School's Professor Lakhani predicts a transformation in the skills curve. With access to generative AI, those people with lower skills, on the left-hand tail of the skills distribution, would "become as good as the AI", whether that is with respect to writing skills or customer service skills.[72]

At a company level, AI provides HR managers a new tool to scope out job requirements and find the best candidates, and for employees to map out their own professional development.[73] Neugo Ltd are adding AI tooling to their remote business workflow platform to help companies screen and select candidates more efficiently through AI-driven CV assessment and AI-automated video interview assessment.[74]

Meanwhile, at a national level, AI can be used to help us understand the skills that will be needed in an AI-driven world. According to research by Microsoft, "82% of leaders say their employees will need new skills to be prepared for the growth of AI", including analytical judgment, flexibility and emotional intelligence.[75]

A priority from a social impact perspective is to understand the barriers that people may face in accessing these learning opportunities. One obvious barrier is digital exclusion. According to the International Telecommunication Union, 2.9 billion people have never used the internet, with 96% of them living in developing countries.[76] In the UK, which recently announced its ambition to become a global AI superpower[77], around 10 million people "lack the very basic foundational skills needed for our digital world".[78] The UN's Global Digital Compact seeks to address connectivity, among a number of other social issues.[79]

A deeper, and immediate threat that generative AI brings, is to truth and evidence-based knowledge itself. There are long-

standing concerns with the way in which social media enables and drives misinformation.[80] Current generative AI models are known to, what is euphemistically called, "hallucinate": confidently make things up without the user necessarily being aware. AI can also be used intentionally to create deep fake audio and video, indistinguishable from the real thing. As AI permeates our lives and is being used to deliver real-word outcomes, this is cause for concern.[81] It also highlights the importance of trust, expert verification, data integrity and intellectual property.

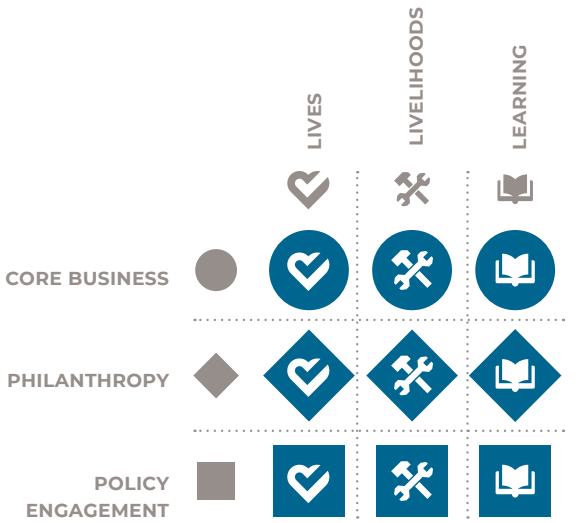
BUSINESS ACTION

Governments must take the lead in understanding and regulating the rapid evolution and systemic impacts of AI, both within their own countries and coordinating globally. At the same time, businesses have a critical role to play in mitigating the risks and strengthening the social impact of generative AI, and mitigating the risks.

This is especially the case for companies that develop and market AI technologies and solutions. There will be a growing need for such companies to engage constructively with governments and work in pre-competitive coalitions to establish and maintain industry-wide standards. Taking proactive action on responsible and thoughtful implementation of AI is relevant, however, for companies in all sectors that are embedding AI into their business activities and value chains.

Through their **core business** operations, **philanthropy**, and **policy engagement**, businesses can help to ensure that the benefits of generative AI are more widely shared and that risks are effectively managed with respect to people's lives, livelihoods and access to learning.

This can be visualised as a three-by-three matrix..[82] Some illustrative examples of business action are included in the table below to spark ideas. In our experience, the matrix provides a helpful framework for identifying and discussing areas for action with internal colleagues and external stakeholders.



ILLUSTRATIVE ACTIONS	**LIVES:** HEALTH & SAFETY	**LIVELIHOODS:** JOBS & INCOMES	**LEARNING:** EDUCATION & SKILLS
CORE BUSINESS *Put people first. Identify vulnerable stakeholders in the company's operations, value chain and communities, identify the most salient human rights and economic risks they face and develop plans to address these through enhanced policies, processes, products, services, technologies, financing mechanisms and business models.*	For healthcare companies, explore the use of AI to open up access to affordable, reliable and potentially personalised healthcare services for marginalised communities. For AI companies, invest in the digitisation of diverse content and create diverse training datasets that reflect the needs of diverse communities. Explore ways to harness AI to improve workplace health and safety, but be mindful of risks of bias and inaccuracy. Support employees who may feel a sense of insecurity and anxiety about the impact of AI, and keep in mind the impact on mental health.	Conduct an AI social impact assessment to identify the potential opportunities and challenges of how AI might impact the workforce across the value chain. Explore new ways of integrating AI responsibly into job functions and workflows of employees and others across the value chain to increase productivity, and share the benefits of these productivity gains with workers. Ensure that HR managers are conscious of the risks of bias in AI models when using them in recruitment and talent management. Ensure the use of AI is consistent with existing human rights and DEI frameworks and commitments, including with respect to job losses.	Raise awareness and deepen understanding of the potential benefits and risks of generative AI, including the risks of bias. Provide employees with the training / retraining and skills they need to thrive in an AI-enabled workplace and ensure these programmes are inclusive. Integrate AI into training, to make it more personalised. For education companies, explore the use of AI to open up access to affordable, good quality and potentially personalised education for marginalised communities. Provide descriptions of products and services, such as financial services, in customers' prefered languages to increase access.
PHILANTHROPY / COMMUNITY INVESTMENT *Explore ways to leverage corporate philanthropy, employee engagement and social investment.*	Fund AI projects that aim to improve health outcomes in vulnerable communities. Fund independent audits and research of AI systems, with respect to bias. Fund NGOs to incorporate AI into work and to build out reliable datasets that better reflect the communities they are serving.	Fund NGOs to incorporate AI into their work to increase efficiency and social impact. Support organisations providing training and re-training opportunities and financial support to help those displaced by AI, particularly people from marginalised communities.	Fund AI projects that aim to improve educational outcomes in vulnerable communities. Fund the training of teachers and NGO staff to effectively use AI. Fund research into AI for social good, and on the social impact of AI. Fund scholarships to increase diversity in the AI field.
POLICY ENGAGEMENT / ADVOCACY *Engage in policy dialogue, awareness raising and institution strengthening partnerships to support those who are most vulnerable.*	Advocate for policies and regulatory frameworks that ensure the safe and ethical use of AI and participate in debates to shape the safe use of AI. Support policy efforts to strengthen health and safety systems through the use of AI.	Engage in policy dialogue to support a just transition in the face of AI-driven labour market shifts, ensuring gains are more widely distributed, and with respect to labour rights and social protection for those who are negatively impacted.	Advocate for policies that support the education, training and digital inclusion needed to support a just transition. Advocate for policies and regulatory frameworks that mitigate against misinformation and that build public trust. Work with governments to build the skills for an AI-driven future.

LOOKING AHEAD

Generative AI is now a fact of our lives, livelihoods and learning. In the coming months and years it will become more pervasive. While AI has been around for decades, generative AI and its integration into a suite of new applications will dramatically accelerate this process.

With the sheer speed, scale and scope of disruption that is coming, it is imperative that we think deeply now about what this could mean for the most vulnerable people and communities.

The complexity and systemic nature of AI's impacts mean we must work together across silos and sectors to better understand these impacts, and to mitigate the risks of AI while realising its positive potential.

That includes businesses working together with each other, and with civil society and government to share good practices on AI adoption and integration as they emerge. Importantly, this should include the voices of those people proximate to the challenges we are addressing..

We also need to urgently work together to craft regulatory frameworks within countries and ensure global coordination between them. These are needed especially to put safeguards in place to protect against the risks of AI, as well as policies to ensure that the benefits are shared and that people negatively impacted by AI are supported through training and social protection. A promising approach is being led by the UN Secretary-General who has proposed a multi-stakeholder advisory committee on global AI cooperation, to "address issues around inclusion, coordination and capacity-building."[83]

> ***"A set of leaders will do the efficiency story and will get super lean. And a set of leaders will say, I've got all these people, what can I do with them and what more can I do? So either we'll be in a world of efficiency and scarcity or one of abundance... I would encourage abundance thinking rather than efficiency thinking."***
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> **Professor Karim Lakhani, *Harvard Business School*[84]**

Generative AI presents a transformative opportunity for society, potentially revolutionising healthcare, education, and economic opportunities. However, we must navigate this new era keenly aware of the risks and challenges. We must be mindful of and address the systemic inequities that AI can both exacerbate and address.

As we move forward, it is our collective responsibility to ensure that the benefits of AI are accessible to all, and that its potential risks are understood and mitigated. The future of AI will be determined by the decisions made by today's policymakers, and leaders in business and civil society. It is up to everyone to work collectively to shape the spread and use of AI in a way that serves the best interests of society, including the most vulnerable people and communities..

THIS PAPER IS INTENDED TO SPARK A CONVERSATION ACROSS OUR COMMUNITY AND BEYOND ON WHAT IS A RAPIDLY EVOLVING AREA. WE INVITE YOU TO SHARE YOUR PERSPECTIVES THROUGH THIS TWO-MINUTE SURVEY, AT ONE OF OUR UPCOMING EVENTS, OR BY EMAILING US AT TEAM@BUSINESSFIGTHSPOVERTY.ORG. WE WILL UPATE THIS PAPER BASED ON THE INPUTS WE RECEIVE.

BUSINESS FIGHTS POVERTY AND GENERATIVE AI

At Business Fights Poverty, we are committed to building insights at the intersection of business and societal issues, and to deepening understanding through collaboration and collective learning.

We use generative AI as a tool to help us better distil and disseminate the collective insights of our community. Our approach is human-centred, AI-enabled and social impact-focused. We appreciate that AI can help provide access to key insights as an input into our critical thinking, problem-solving and relationship-building as a community. We are also mindful of the limitations and risks of AI.

We have developed the following principles to guide our use of AI:

1. **Human-Centred Collaboration**: Utilise AI as a complement to human expertise, using a co-piloting approach that leverages the unique qualities and skills of our team members and community alongside AI-powered solutions.
2. **Inclusivity and Diversity**: Ensure AI applications promote inclusivity and represent diverse perspectives, actively working to eliminate structural biases and provide a balanced representation of views in our outputs.
3. **Rigour and Quality**: Prioritise research rigour and content quality over speed and quantity, using AI to enhance our work rather than seeking shortcuts or compromising on excellence.
4. **Trust and Credibility**: Maintain honesty and transparency in our use of AI. Recognising the limits of AI, we lead with experts and researchers to ensure the credibility of the content we generate.
5. **Conscious and Mindful Usage**: Employ AI consciously, recognising that it may not always be the optimal solution depending on the task, and remaining committed to continuous review and improvement.
6. **Accessible and Engaging Content**: Use AI to expand the accessibility of our work, generating content in new languages, formats, and mediums to reach a wider audience.
7. **Community-Driven Innovation**: Leverage the wealth of original content generated by our community, recognising and acknowledging contributors where appropriate and integrating their valuable insights into AI-powered processes to enhance the overall quality of our outputs so that we drive innovation, deliver solutions and drive action by business.

Cover image generated using OpenAI's DALL-E2

Endnotes

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