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Business, Energy and Industrial Strategy Committee
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Written evidence submitted by Pro Bono Economics to the Business, Energy and Industrial Strategy Committee ‘Automation and the Future of Work inquiry’.

Executive Summary

1. During spring 2019, Pro Bono Economics commissioned two surveys, one of 1,000 doctors, soliciting their views on what the Fourth Industrial Revolution – and its various manifestations – might mean for the National Health Service, and how it can best prepare for it. A second questioned the general public on their appetite to volunteer more, if they had more free time.
2. This short paper presents a brief overview of the findings from those surveys that might be of interest to Committee members, along with some more general observations on the role volunteering might play in preparing UK society for the challenges and opportunities the labour market of the future may present.
3. The first survey – of doctors – suggests a strong appetite from respondents to have the NHS partner with companies at the vanguard of the technological revolution, along with academics, in a bid to best prepare for new technological innovations. This as a reasonable number of doctors feel a significant part of their job will depend on Artificial Intelligence and robotics by the year 2030.
4. Beyond doctors, there appears interest – as shown by our second survey – among the general public to volunteer more, if people had more time. More free time may be exactly what certain technological advances might bring. Under such a scenario the charity sector could become the place where individuals go not only to ‘do good’ but also to enhance the skills they will need – emotional intelligence (‘EQ’) – to compete in the labour market of the future, one changed significantly by automation.

Introduction

5. Pro Bono Economics is a charity with a core mission to help charities understand and improve their social impact. We achieve this by facilitating volunteering opportunities for professional economists keen to give their time on a pro-bono basis to charitable projects, active in any one of four fields. These are: i) education; ii) employment; iii) mental health; and iv) poverty.
6. Our approach to measurement is robust, transparent and focuses on the quality of data and supporting analysis. The resulting assessments highlight the economic and monetary value of initiatives whose effects might otherwise have appeared intangible.

7. Wherever possible Pro Bono Economics seeks to share the insights from our project work, along with those gained on broader discussions regarding the reputation of charities and the value generated by volunteering, to help inform relevant societal debates. It is our hope that by circulating them, those in a position to shape policy in the UK in the broadest sense can benefit from as much relevant information as possible.

The Fourth Industrial Revolution and the future of the NHS

8. On May 22nd 2019 Pro Bono Economics hosted its 10th Anniversary Lecture, during which our Co-Founder and Chief Economist at the Bank of England – Andy Haldane – delivered the keynote address: “The Third Sector and the Fourth Industrial Revolution”¹.
9. In support of this theme, Pro Bono Economics commissioned surveys from MedeConect Healthcare Insight and YouGov respectively, in a bid to solicit views from different groups of the public on the Fourth Industrial Revolution, its various manifestations, and how they might impact the charity sector.
10. The first, conducted by MedeConnect, questioned 1,004 doctors – 203 GPs and 801 secondary care doctors in the UK – between 26th April - 2 May 2019 regarding their views on how technology might transform the NHS in future.
11. Given the focus of this inquiry we have included certain extracts from this survey as some of the responses may be informative ahead of preparation of your final report.

Breakdown of survey respondents by role

Job role	Number
GP partner / principal	111
Salaried GP	53
Locum GP	35
GP Registrar	4
Consultant	571
Associate specialist	89
Speciality registrar	106
Other training grades	25
Foundation doctor	10
Total	1004

¹ Andrew G Haldane (2019) ‘The Third Sector and the Fourth Industrial Revolution’ - https://www.probonoeconomics.com/sites/default/files/files/Andy%20Haldane%20-%20Pro%20Bono%20Economics%20Annual%20Lecture%20%282019%29_0.pdf

Which of the following would you advocate to ensure that the NHS can take advantage of new technologies?

	Average rating ²
Increase the NHS 'real-terms' budget by renewed efforts to cut wasteful spend	4.2
Increase the NHS 'real-terms' budget by raising income tax for the highest earners	3.1
Increase the NHS 'real-terms' budget by a new targeted tax on internet giants with the proceeds going directly to the NHS	4.4
Partnering with companies and universities with AI and technology talent to benefit from their skills	4.3
Increase the number of skilled volunteers in the NHS	3.4
Buy-in expertise from expensive consultants	1.8

12. Responses to this question suggest that there is a considerable appetite among doctors to see internet giants taxed more than is the case at present, with the proceeds seemingly hypothecated so as to benefit the NHS directly. However, given the risks involved with hypothecating receipts from certain direct or indirect taxation – alongside historic Treasury scepticism about the merits in this course of action – this may not be realistic, especially considering ongoing efforts already underway to ensure 'fair taxation' of the digital sector.

13. Perhaps more noteworthy is the apparent interest among doctors for greater levels of collaboration with the private sector and academia here. This in pursuit of greater understanding and capability to seize the opportunities provided by technological innovation.

Thinking about your current duties and responsibilities, what percentage of your job is likely to depend on AI and robotics in ten years from now (2030)

Percentage of job	Total respondents	Percentage of respondents
1-25%	585	58%
26-50%	302	30%
51-75%	103	10%
76-100%	14	1%
Total	1004	100%

14. Over half of those doctors questioned felt that only 1-25% of their role would 'depend' on AI and robotics ten years from now. As a headline figure, this is one that would seemingly support the notion that it is the lower skilled professions that perhaps face the greatest risk of displacement in the face of increasing automation.

15. This does not tell the whole story however. Roughly 41% of doctors felt that more than 25% of their role would depend on AI and robotics ten years from now, in some cases by a significant margin. This provides some interesting context regarding the apparent appetite from doctors to partner with third parties to best enable the NHS to get the most from technological innovations.

² Respondents were asked to rank their responses in order of preference; the higher the overall rating (1-6) the greater the appetite for that course of action.

Volunteering as a means to provide the skills future labour markets will demand

16. One of the key points made by Andy Haldane within “The Third Sector and the Fourth Industrial Revolution” (see above) was the reasonable likelihood that advances in technology more broadly may reduce the length of the average working week and leave people with an additional endowment of free time. If we accept this there is also a decent chance that individuals will use such new-found freedom to volunteer more in the charity sector.
17. It is on this point specifically that Pro Bono Economics sought the views of the general public, via YouGov³. Asked to imagine if they had more free time, 43% of respondents reported that they would be more likely to volunteer, with only 5% reporting they would be less likely. This view was especially strong among those aged 25-34, with more than half saying they were motivated by the feeling of benefiting society.
18. This desire to engage in civic service is also likely to grow due to the rising demand for social skills in the workplace, skills that volunteering can enhance. Corporate Citizenship’s survey In Volunteering – The Business Case⁴ found that skilled volunteers reported developments in their communication, influencing and negotiation skills coming from their participation in such civic service. This corresponds with feedback received from the volunteers Pro Bono Economics regularly places in charities as part and parcel of our everyday activities.
19. This is significant as interpersonal skills – ‘EQ’ – are likely to be very important in the labour market of the future, one altered considerably by automation. A 2017 paper from McKinsey – Artificial Intelligence – The Next Digital Frontier?⁵ – estimates that jobs based around social and emotional skills will be more in demand than ever by 2030, as employers place more of a premium on ‘EQ’ over ‘IQ’.
20. We hope that some of the points here may be of interest to Committee members. If you would like to know more about any of those raised in this paper please visit our website (see [here](#)) or get in touch directly.

³ This online general population survey, conducted by YouGov questioned 2022 adults with fieldwork undertaken between 16th - 17th May 2019. The figures have been weighted and are representative of all GB adults (aged 18+).

⁴ Corporate Citizenship (2010) – Volunteering – The Business Case – https://www.educationandemployers.org/wp-content/uploads/2014/06/volunteering_the_business_case.pdf

⁵ McKinsey Global Institute (2017) – Artificial Intelligence – The Next Digital Frontier – <https://www.mckinsey.com/~media/McKinsey/Industries/Advanced%20Electronics/Our%20Insights/How%20artificial%20intelligence%20can%20deliver%20real%20value%20to%20companies/MGI-Artificial-Intelligence-Discussion-paper.ashx>