

Institution: London School of Economics and Political Science		
Unit of Assessment: 16 - Economics and Econometrics		
Title of case study: Improving productivity through better management practices		
Period when the underpinning research was undertaken: 2003-2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
John Van Reenen	Professor of Economics	2005-2016; 2019 to present
Nicholas Bloom	Research Fellow; then International Research Fellow, CEP	2003-2005; 2005-2007
Raffaella Sadun	PhD Candidate, Department of Economics (Van Reenen Supervisor)	2004-2009
Period when the claimed impact occurred: 2014-2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact (indicative maximum 100 words)		
<p>Research by Professor John Van Reenen and colleagues has shown the very large effect of management on firm and national performance and developed a new methodology for quantifying management practices across diverse organisations, industries, and countries. Data generated using this methodology have been used to examine the impact and determinants of management quality and provide recommendations for how policymakers, business leaders, and public sector managers can improve it. The research has particularly informed UK policy debate around productivity, resulting in the launch of business- and government-led initiatives promoting effective management practices to boost productivity.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>There is a long history of research on the causes and implications of variations in productivity across firms. Differences in management practices are now widely recognised as having a central role in these productivity differences. Until recently, however, empirical economists had largely ignored management as a factor, in part because they lacked any robust way to quantify basic aspects of management practices. Research by John Van Reenen and colleagues has delivered a new method of consistently measuring management practices across firms, industries, and countries, and new insights into their links to productivity.</p> <p>Developing a new measurement of managerial capabilities: one of the most significant contributions of Van Reenen's work is its provision of an entirely new way to empirically measure managerial capabilities. Van Reenen and colleagues have subsequently used data generated using this method to help explain the large and persistent differences in total factor productivity (TFP) across firms and countries. Their work has particularly improved understanding of the role of management practices in that heterogeneity.</p> <p>The new methodology was first established in a paper co-authored with Nick Bloom (then at LSE, now Stanford), based on work done at LSE between 2003 and 2007 [1]. This presented data generated through an innovative survey tool - the World Management Survey (WMS) - to collect management practice information from hundreds of medium-sized firms in the USA, UK, and France. The WMS was established by Van Reenen and Bloom in 2004. It provided the first robust evidence on the dispersion of management quality across firms and countries and, crucially, on the relationship between management practices and productivity. The measures of managerial practice it produced were shown to be strongly associated with firm-level productivity, profitability, Tobin's Q (the relationship between the market valuation and intrinsic value of the firm), and firm survival. The unique WMS methodology (described extensively in [1]) allows interviewers to obtain information about key management practices used by organisations across different sectors, and to evaluate and score these from 1 ("worst") to 5 ("best" practice). This scoring builds up a picture of management practices in</p>		

several dimensions likely to improve a firm's productivity, particularly around monitoring, targets, and incentives.

WMS data insights: the WMS is now a major international research initiative which has, to date, supported more than 20,200 interviews in over 35 countries. Its focus has extended from medium-sized manufacturing firms to include (among others) hospitals, retail stores, and schools. Data generated using the WMS methodology have yielded vital new insights into the determinants of variation in management practices and the effects of that variation on the productivity of firms. Between 2010 and 2014, Van Reenen and colleagues reviewed the empirical and theoretical findings generated to date by the WMS [2]. This confirmed a very wide dispersion of management quality in all industries and countries. It also confirmed a significant link between management practices and productivity, suggesting that between one quarter and one third of cross-country and within-country TFP gaps could be attributed to management practices. This was confirmed in research with the US Census Bureau, based on a large-scale mandatory survey in 2010 and 2015 of management practices in 35,000 manufacturing plants in the USA [4]. A huge dispersion of management practices was observed across plants, 40% of which variation was within the same firm. Management practices were shown to account for more than 20% of total variation in productivity, giving them an influence similar to that of R&D and human capital [4].

As well as demonstrating their independent importance to productivity, the research has shown that management practices affect the outcomes of investment in other areas intended to improve a firm's TFP. LSE research between 2004 and 2012 used the WMS methodology to explore the US productivity growth acceleration in sectors making intensive use of information technologies (IT). US multinationals were shown to obtain higher productivity from IT than non-US multinationals; organisations taken over by US (but *not* by non-US) multinationals also increased the productivity of their IT. This, the researchers suggested, was due primarily to the better "people management" practices in US compared with European firms, implying that IT investments will produce disappointing results unless accompanied by improvements in management. The research team calculated in [5] that around half of the faster productivity growth between the USA and EU in the decade after the mid-1990s could be accounted for by managerial differences.

Understanding the policy implications of variation in management practice: crucially, variation in the quality of management practices has been shown to be systematically related to structural characteristics that can be influenced by policy interventions. The first of these is product market competition. This improves management both through a Darwinian selection effect driving out badly managed firms, and by incentivising incumbent managers to improve their performance. Van Reenen and colleagues have demonstrated the importance of competition to performance in both private and public sector organisations. Research between 2006 and 2015, for example, showed the strong incentive effects of competition on management quality - and subsequent health outcomes for patients - in hospitals [3]. It was shown that adding a rival hospital increases management quality by 0.4 standard deviations and increases survival rates from emergency heart attacks by 9.7%.

WMS data also suggests that firms owned and managed by second or later generation descendants of the founders (especially eldest sons) tend to have the worst management scores. In [2], the researchers therefore recommended avoiding tax incentives to protect family firms. This is in contrast to the practice, common among governments around the world (including the UK), of providing tax subsidies for family firms. This, the LSE research suggests, distorts the tax regime, increases inequality, and in fact *reduces* productivity. [2] also recommended reducing barriers to the market for advice, noting that poor information is a factor in inhibiting the spread of better management practices. The WMS data reveals that many good managers underestimate their managerial quality whereas many poor managers overestimate it, illustrating the importance of performing "diagnostics" to evaluate the performance and practices of firms [2].

Author contributions: findings are described in a series of papers co-authored with Bloom and Sadun while Van Reenen was Director of the LSE Centre for Economic Performance (CEP). The exception is research published in [4], some of which was conducted at LSE between

2010 and 2016 and some at MIT between 2016 and 2018. Sadun (now Harvard) and Bloom (now Stanford) were Van Reenen's PhD students.

3. References to the research (indicative maximum of six references)

[1] Bloom, N., and Van Reenen, J. (2007). Measuring and explaining management practices across firms and countries. *The Quarterly Journal of Economics*, 122(4), pp. 1351-1408. DOI: 10.1162/qjec.2007.122.4.1351.

[2] Bloom, N., Lemos, R., Sadun, R., Scur, D., and Van Reenen, J. (2014). The new empirical economics of management. *Journal of the European Economic Association*, 12(4), pp. 835-876. DOI: 10.1111/jeea.12094.

[3] Bloom, N., Propper, C., Seiler, S., and Van Reenen, J. (2015). The impact of competition on management quality: evidence from public hospitals. *The Review of Economic Studies*, 82(2), pp. 457-489. DOI: 10.1093/restud/rdu045.

[4] Bloom, N., Brynjolfsson, E., Foster, L., Jarmin, R., Patnaik, M., Saporta-Eksten, I., and Van Reenen, J. (2019). What drives differences in management practices? *American Economic Review*, 109(5), pp. 1648-1683. DOI: 10.1257/aer.20170491.

[5] Bloom, N., Sadun, R., and Van Reenen, J. (2012). Americans do IT better: US multinationals and the productivity miracle. *American Economic Review*, 102(1), pp. 167-201. DOI: 10.1257/aer.102.1.167.

4. Details of the impact (indicative maximum 750 words)

The WMS has generated robust, large-scale data about management practices across firms, industries, and countries. Those data have supported the first empirical analyses of the relationship between differences in management practices and the marked heterogeneity of firm productivity. Insights of the body of work by Van Reenen and colleagues have important implications both for policymakers and for private and public sector organisations. Impacts described here relate particularly to the very significant contribution of the research to debate about the so-called UK “productivity puzzle” and its subsequent influence on the Industrial Strategy, which focuses on the promotion of better management practices through initiatives like the Business Basic Programme. Associated impacts are described on efforts to increase UK productivity through new, business-led initiatives.

Underpinning debate on the UK “productivity puzzle”: the research has played a central role in shaping policy narrative about the UK “productivity puzzle”, and in establishing management practices as a key focus for policy improvement. The sharp slowdown in productivity growth in the UK since the Great Recession has been the subject of growing policy debate in recent years. Van Reenen's research is central to the now commonly-accepted policy narrative that has emerged to identify causes and solutions to this puzzle. Its influence is evident in speeches, reports and policy documents, including a 2017 speech by Andy Haldane, Chief Economist of the Bank of England (BoE) [A]. Haldane affirms in a testimonial that work led by Van Reenen has informed understanding in the BoE, including of structural constraints on the supply side of the economy. Of particular note is the fact that: “*Van Reenen's work on the World Management Survey was the first credible attempt to measure and quantify core management practices in a consistent way across industries and countries. The data clearly shows that there is a management problem in the UK, in the sense that on average firms lag behind productivity leaders*” [B]. Use of the research in both mainstream media and business blog discussions further demonstrates its centrality to debate on the “productivity paradox” [C].

Establishing management practices as a key focus of policy and practice: beyond improving understanding of the link between management practices and productivity, the research has made clear that at least some of the structural catalysts for poor management practices can - and should - be influenced by policy interventions. Several major policy initiatives reflect and respond to this, including the Business Productivity Review conducted in 2018-19 by the Department for Business, Energy & Industrial Strategy (BEIS). This establishes management quality as a key policy focus to address low productivity in the UK, in line with recommendations made by Van Reenen and Bloom on the basis of WMS data [D]. The Productivity Review highlights the importance of “*enabling businesses to understand their*

performance" ([E], p. 22), since many managers misperceive their own abilities; again, this echoes findings reported in [2]. The research has also had important framing impacts on the UK Industrial Strategy, including by demonstrating the need for improvement in UK management practices and by providing a new and consistent way to measure and quantify these. Its significance in this context is confirmed by Haldane: "*on the Industrial Strategy Council (that I Chair), perhaps the key issue is why UK productivity is low and what can be done to raise it, in order to boost living standards. The work of Professor John Van Reenen and his former students such as Nick Bloom and Raffaella Sadun has been critical here*" [B].

As well as government policy interventions, the research recommends that industry bodies and firms themselves focus on improving management practices to enhance productivity. These messages have been widely embraced in both the private and the public sectors. Recent publications by the Confederation of British Industry (CBI), for example, identify management skills as a key area for improvement for British businesses [F]. According to CBI Chief Economist, Rain Newton-Smith: "*Van Reenen's work on measuring and understanding the drivers of management practices is essential reading for us [...] We have used this work in many of our initiatives [...] and more recently in our work on regional growth as well as the diffusion of innovation*" [G].

Impacts on the diffusion of management best practices: the focus on management quality informed by Van Reenen's work has informed the creation of business- and government-led initiatives aimed at increasing the diffusion of best practices to boost firm-level productivity. These include a series of measures announced in the Industrial Strategy in 2017, including the launch of the Business Basic Programme (BBP) and support for the Be The Business (BTB) initiative [H].

The BBP was launched in 2018 to test innovative ways of encouraging small and medium enterprises (SMEs) to adopt existing technologies and management practices to improve their productivity. The programme provides grants to businesses, academia, trade bodies, and other parties to support the development of ideas and design (proof of concept stage) and the delivery of impact evaluations (trial stage). Its first two funding rounds in June 2018 and January 2019 awarded GBP4 million to 26 evaluation projects focused on technology and management best practices adoption [I]. The first funded projects will report impact in 2021 (the original timeline was adapted to account for delays due to the COVID-19 crisis.)

BTB launched in 2017; it supports businesses to improve their management practices by providing access to interactive digital benchmarking tools, peer-to-peer mentoring and structured executive leadership and management training. It was created following the publication of a 2015 review by the Productivity Commission, which notes that: "*the WMS has finally allowed for robust analysis of the links between management practice and business performance*" and concludes that "*making up the management practice gap would go some way to making up the productivity gap*" [J]. The report further argues that "*getting objective benchmarks against which to compare business practice and performance is critical to driving improvement*", relying on "*evidence from the WMS [showing] that managers' intuitive evaluations of their own business practice are often wide of the mark*" [J]. BTB has recently extended its support to business through the publication of online advice and guidance helping SMEs adapt their business practices, prepare for recovery, and build resilience in the context of the COVID-19 crisis.

International impacts: although this case study focuses on domestic impacts, the WMS and associated research has also had significant impacts on international policy and industry understanding. These are observed in a 2017 World Bank report, which notes that: "*the WMS initiated by Bloom and Van Reenen...has permitted a quantum leap in the comparative quantitative analysis of management practices and their implications for productivity and innovation*" [K]. The international use of WMS data is further corroborated by Haldane, who writes: "*I am particularly pleased that in his most recent work [Van Reenen] has forged partnerships with statistical agencies around the world (such as our own ONS). This will help management data become part of the data infrastructure that we can use as policymakers to inform policy decisions*" [B].

By raising awareness of the role of management practices on firm productivity and growth worldwide, the research has influenced the operations and policies of businesses, governments, and development institutions. WMS data has enabled a host of countries to benchmark the quality of their management practices, including by helping them diagnose weak practices. Industrial policy documents in Australia [L], France [M], and New Zealand [N], for example, have used the data as a diagnostic tool to identify weaknesses in domestic firms' practices. They cite [1], [2], and [5] to highlight the role of good management in supporting productivity and competitiveness. The WMS methodology has also been used in impact evaluations measuring the effects of improved management practices on firm productivity, notably in India and Kenya. Findings from these evaluations were used by firms offering consulting services and management training. These include businesses such as Accenture and industry bodies such as the African Management Institute, which describes the work by Van Reenen and his co-authors as "*crucial to our practice in making managerial interventions*" [O]. In addition, since 2014 WMS results have been referenced in key documents associated with 15 operations projects financed by the World Bank, representing USD2.6 billion in direct International Development Association/International Bank for Reconstruction and Development lending.

These impacts represent significant contributions to understanding of the importance of management practices to performance. The work has underpinned the development of both policy and industry interventions to improve management practices, to enhance productivity, and thereby contribute to improvements in people's quality of life.

5. Sources to corroborate the impact (indicative maximum of 10 references)

[A] "[Productivity puzzles](#)", speech given by Chief Economist, Bank of England, 20 March 2017. For reference to [1], see para. 5, pp. 6-5 and para. 3, p. 13.

[B] Supporting statement from Chief Economist, Bank of England, 18 September 2020.

[C] Examples of the use of the underpinning research in mainstream media and industry discussion of the productivity paradox: [BBC News](#), 21 May 2015; [Chartered Management Institute](#), 22 February 2016; [McKinsey Quarterly](#), 1 September 2014.

[D] BEIS (2018), [Business Productivity Review – Government Call for Evidence](#). See Section 4 for reference to [1] and [4], to WMS data, and to ONS data collected using the WMS methodology.

[E] BEIS (2019), [Business Productivity Review](#).

[F] CBI (2014), *A better off Britain - Improving lives by making growth work for everyone*, see p. 46 for references to [1] and [5]; CBI (2017), [From Ostrich to Magpie – Increasing business take-up of proven ideas and technologies](#), see p. 10 n. 5 for reference to [A] and p. 17 for reference to the WMS.

[G] Supporting statement from Chief Economist, CBI, September 2020.

[H] BEIS (2017), [Industrial Strategy White Paper](#). See p. 169 n.178 for reference to [1]. [A] is also cited in underscoring the importance of management skills to improving UK productivity.

[I] BEIS (2019), [Business Basic Programme – Progress Report](#), October 2019.

[J] Productivity Leadership Group (2015), [How good is your business really? Raising our ambitions for business performance](#). See pp.16 and 19.

[K] Cirera, X., and Maloney, W. F. (2017). [The innovation paradox: Developing-country capabilities and the unrealized promise of technological catch-up](#). World Bank Group. See pp. 71-33 and para 2., p.xxi.

[L] Productivity Commission (2020), [PC Productivity Insights: Can Australia be a productivity leader?](#) See pp. 20-21 for reference to WMS data.

[M] Conseil National de Productivité (2019), [Productivity and competitiveness: where does France stand in the Euro Zone?](#) See p. 47 for reference to [2] and to WMS data.

[N] de Serres, A., Yashiro, N., and Boulhol, H. (2014). [An International Perspective on the New Zealand Productivity Paradox](#). New Zealand Productivity Commission Working Paper 2014/01. See pp.19-21 for reference to [1], [5], and WMS data.

[O] Supporting statement from Chairman, African Management Institute, 13 February 2020.