

Summary of Evidence Session “Management”¹

Hal Varian, John Van Reenen, and Ian Davies, 28th of May 2012

The LSE Growth Commission has been organising a series of evidence sessions with leading thinkers from academia, business and policy to inform the development of a strategy for the UK to support long run growth. The fifth session in this series was held on Monday, 28th of May. Professors Hal Varian, John Van Reenen and Ian Davis gave evidence on the importance of good management practices for growth, drawing on lessons from international experience and state of the art academic literature. This note provides a summary of the main evidence and arguments made.

Hal Varian opened the discussion by highlighting the importance of innovation and in particular on “combinatorial innovation”. The component parts of modern technologies, such as gasoline engines and integrated circuits can be combined and re-combined by innovators to create new devices and applications. The internet and the web are interesting examples of combinatorial innovation. In the last 15 years we have seen a huge proliferation of web applications, all built from a basic set of component technologies. In such an environment experimentation is vital for innovation.

Within an organisation employees should be encouraged to contribute to innovation (process or product). This requires managers to create a climate that fosters innovation. For example, Google has introduced the ideas mailing list that captures suggestions from all its staff. Engineers are allowed to use up to 20% of their time at work to develop their own applications and programs. Also, in order to succeed, firms must be able to attract, hold, and motivate the best performers. For example, Google provides different services for their workers (such as food, bicycle repair, haircuts, oil change, car wash, dry cleaning, etc.) within the office campus with the aim to facilitate their work-life balance and enable them to be more effective.

¹ **Disclaimer:** This summary document represents the views of the evidence givers and not necessarily those of the commissioners.

Across organizations, it's important to create an environment where entry and exit should be easy and favourable to the Schumpeterian process of creative destruction. This can be done by reducing the cost of starting a business and the cost of failure. Also, workers mobility should be encouraged to spread tacit knowledge across firms within an industry.

Hal Varian further pointed out that nowadays not all innovation is about big ideas, new products but about process innovation. It is just as important to improve production and business processes. The Japanese 'Kaizen' provides a good example of a system that allowed for continual improvement in the production process. In the IT world, the diffusion of "cloud computing" that offers "software as service"² lends the flexibility to alter existing processes. This architecture reduces support costs and makes it easier to update and improve applications. Indeed these models turn what used to be a fixed cost for a small web application into a variable cost, dramatically reducing entry costs. Using this system it becomes also relatively easy to experiment³. For example, Google ran 10,000 experiments last year (5000 in web search and 5000 in ads) which resulted in 400 changes in the web search system and about the same in ads. What is crucial for future improvement it is to build a system that allows for experimentation since the very beginning.

The role of clusters in fostering innovation has long been acknowledged. Silicon Valley is a natural example of an innovation cluster. Hal Varian examined which factors could have contributed to the creation of this environment. Firstly, Silicon Valley offers all the services necessary to start a business: engineers, managers, lawyers, caterers, logo designers, etc. Ian Davis defined it as a 'One-stop shopping for start-ups'. Moreover, Silicon Valley offers positive entrepreneurial opportunities and role models. Engineers can easily leave a company to join start-ups in the same vicinity and contribute to entrepreneurial activities. Finally, Hal Varian noted that Silicon Valley could not exist in its current form without immigration.

Hal Varian's final remark was about micro-multinationals – an organizational model made possible by the development in IT technologies. Nowadays, even the smallest company has access to a computing and communications infrastructure that even the largest multinationals could not afford 15 years ago. Moreover, these small companies can be formed by employees located around the world: the fact that the perfect engineer lives 9000 miles away (and often is an old friend from school) is not a huge problem anymore. Reflecting on the UK, Hal Varian suggested its

² It typically means software which are hosted in a remote data center and accessed via a web interface.

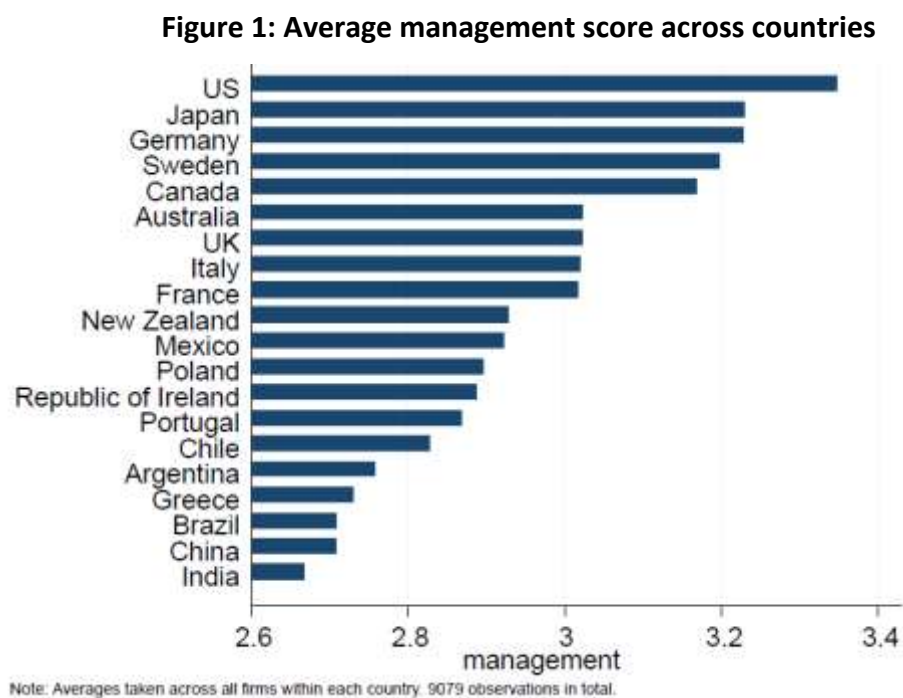
³ Ideally, experiments lead to understanding of casual relations that can then be modelled (Varian, 2010).

educational achievements, communications infrastructure, computer literacy and entrepreneurial spirit, put it well placed to become a leader in the world of micro-multinationals.

John Van Reenen explored the link between management practices and growth from a more microeconomic perspective. Economists have long speculated on why such big and persistent differences in productivity performance exist between firms and plants within countries, even within narrowly defined sectors.

Until recently, the absence of high quality management data, measured in a consistent way across countries and firms, had been a major problem for empirical industrial economics. Van Reenen et al (2007, 2012a, 2012b) have overcome this problem by measuring management practices with a new double-blind survey tool. This survey is run on randomly drawn samples of organizations across a range of different industries and countries and uses open questions to obtain accurate responses regarding the quality of managerial practices inside each firm. By systematically executing this approach on over 10,000 organizations over the last decade, they have assembled one of the first large internationally comparable management data sets that cover both manufacturing and service sectors.

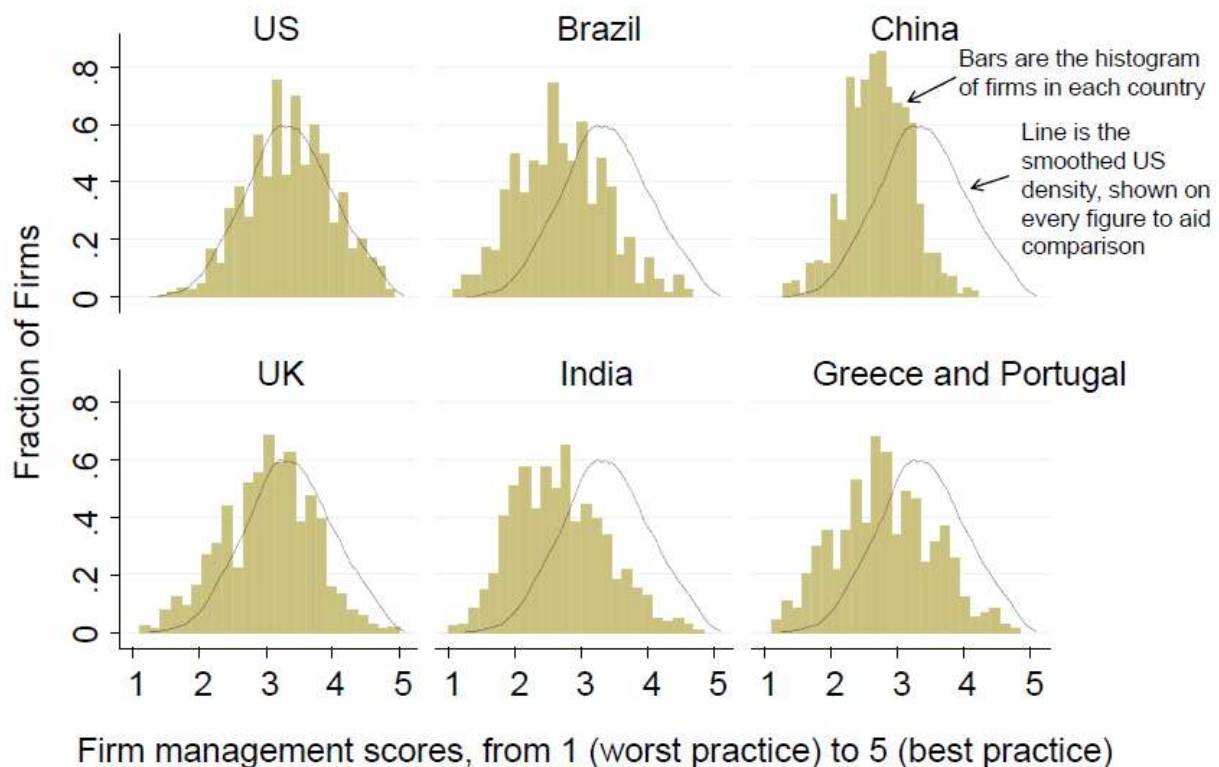
Based on this survey, Van Reenen showed that US manufacturing firms score higher than other countries, followed by Japan, Germany and Sweden firms (Figure 1). Firms in developing countries, such as Brazil, China and India are typically less well managed. The UK is ranked in the middle, followed by Italy and France.



There is huge variation in management policies within countries as well. This spread is particularly notable in developing countries, such as Brazil and India, which have a large tail of very badly managed firms (Figure 2). The distribution of managerial practices in UK is similar to the US except it has a thicker left tail of badly managed firms which indicates a lower level of creative destruction in the UK than in the US.

Differences in management quality could be explained by different factors. John Van Reenen made a distinction between ‘deep’ and ‘proximate’ causes. The former includes information and management performance benchmarks, incentives to improve firms’ management and rules of collective action in organizations. Among the ‘proximate’ causes Van Reenen provided evidence that competition is associated with better management practices, both within (giving the incentives to improve) and between (through the process of creative destruction) firms; amongst private sector firms, family-owned firms tend to be badly managed; firms with professional (external, non-family) CEOs tend to be better managed; the level of education of both managers and non-managers is strongly linked to better management practices; publicly owned organizations have worse management practices across all sectors we studied; while multinationals appear to adopt good management practices in almost every country in which they operate.

Figure 2: Management Practice Distribution for Selected Countries



On the on the nature of the effect of management on performance, John Van Reenen presented an experiment recently conducted on 28 large Indian textile factories in India by a Stanford-World Bank research team. During the experiment, free management consulting was provided to a set of randomly selected treatment plants to help them adopt modern management practices and their performance was compared to a set of control plants (see Bloom, Eifert, Mahajan, McKenzie, & Roberts, 2011). The Indian experiment revealed that the adoption of these management practices for monitoring, targets and incentives was highly profitable, leading to an average increase in productivity of 18% (around 325k higher revenue pa).

In terms of policy implications, this evidence seems to be broadly in favour of structural policies to boost competition (also through trade), reform the taxation system (ex. inheritance tax) and foster reallocation by removing barriers (SME policy, EU State Aid etc.). Another important point is the need to improve the quality of management in the public sector. Finally, firm level management interventions such as evaluation methods, benchmarking, manufacturing advisory service and managerial training would play a critical role in improving a firm's management performance.

Ian Davis shared John Van Reenen's views about the importance of management practice for growth, along with other macro factors such as competition, regulation and education. He suggested the most important management practices for productivity are⁴: a) talent management – putting the right people with the right skills in the right role; b) performance management – installing clear, measurable performance targets (with appropriate incentives and consequences) and establishing a strong performance culture; and c) lean production or service delivery management – establishing efficient operations, focused on quality, timeliness and elimination of waste.

In analysing the drivers of good management practice, Ian Davis reiterated John Van Reenen's view that Multinational enterprises (MNEs) not only have the best management practices and productivity, they are also amongst the most demanding of customers. Their insistence on cost effective, high-quality products means that they place stringent demands upon their suppliers in terms of quality, delivery and cost. The greater the presence of MNEs in a country, the higher the management practice performance of domestic firms. The regeneration of the UK automotive sector would be an example of this. Further, firms that export and expose their performance to the international market competition do better than those who choose to

⁴ Other aspects of management (e.g. strategy finance, marketing) are clearly important but appear to be highly correlated with the three highlighted practices.

compete solely in their domestic market. There is also substantial evidence of the key role that skills, such as training or college degrees, play in management and productivity. In addition, formal managerial skills acquired through a formal graduate management education, such as an MBA, play a key role. The number of managers with post-graduate management degrees is highly correlated to both management practices and corporate performance. This skill base should be complemented with external assessments or benchmarking of managerial practice and performance. This enables managers to understand their relative performance and identify both where to improve and what benefit they will gain from improving. A good example of this would be in the hospitals sector where benchmarking data show huge differences in productivity and outcomes. Without such benchmarking managers find it difficult to assess their own management performance accurately.

Extrapolating from the research findings just described, Ian Davis suggested that the UK should increase the presence of multinationals and encourage more MNEs to locate here. More importantly, domestic firms should be encouraged to test and benchmark themselves in the international arena, echoing Van Reenen on the deep role that information plays in driving good managerial practice. The UK should also aim to improve access to post-graduate management education, perhaps via cost-effective student loans for MBA. It should support the development of best practice or innovation hubs (in line with Hal Varian evidence on Silicon Valley). Finally, government should become more demanding on public sector management (also emphasized by John Van Reenen).

The session concluded with interesting questions from the commissioners and the audience that re-emphasized some of the messages presented by the speakers, such as the importance of policies that foster competition (also for public services, giving for example the choice to patients to choose among some hospitals), a macroeconomic environment that supports creative destruction, the need for more transparency and more information to improve awareness about relative performance.

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