Management Matters in Australia:

Just how productive are we?

Findings from the Australian Management Practices and Productivity global benchmarking project

NOVEMBER 2009

Report commissioned by

Australian Government

Department of Innovation, Industry, Science and Research

ISBN 978 0 642 72626 1

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This unique research project for the Department of Innovation, Industry, Science and Research benchmarks management practices in Australian manufacturing firms against the global best. The project was undertaken by a research team from the University of Technology Sydney, Macquarie Graduate School of Management and the Society of Knowledge Economics, and is part of a world-wide study led by the London School of Economics, Stanford University and McKinsey & Co. The findings suggest that while some of our firms are as good as any in the world, we still have a substantial 'tail' of firms that are mediocre, especially in their approach to people management. This is a key differentiating factor between Australia and better performing, more innovative countries.

The research also finds that there is a clear link between the quality of management – scored across 18 dimensions of people, performance and operations – and enterprise productivity. Since the late 1990s, Australia's productivity performance has slipped from being one of the OECD leaders to a laggard. This structural deterioration in our economy was masked in recent years by windfall gains from the commodities boom, which reversed the longstanding decline in our terms of trade and reduced the policy focus on management and productivity.

It is generally acknowledged that Australia has handled the world economic downturn well, overcoming our vulnerability as a small open economy with an effective fiscal stimulus package. However, this study suggests that it may now be appropriate to link these short-term measures to the need to build longer-term competitive advantage through targeted, supportive public policy initiatives. The study demonstrates that a cost-effective way of improving the productivity performance of Australian firms is to promote a transformation in the calibre of the management and leadership of our organisations. This is the key to a more innovative, dynamic and sustainable economy into the future.

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Executive Summary

This report reviews management practices in Australian manufacturing firms and the link between these practices and the productivity performance of firms. The Australian Government's recent innovation white paper, *Powering Ideas – An Innovation Agenda for the 21st Century*, recognises that the improvement of Australia's productivity performance will depend ultimately on the innovation capacity and performance of firms and organisations. The white paper contends that "Australia's innovation system will need to work better if we want to maintain the way of life we value so much", and notes the implication that: "One future focus of the Australian Government's industry and innovation policies will be on building innovation capacity and performance at the enterprise level".

However, policies to build innovation capacity and performance require an evidence base, and it has become apparent that there is little reliable data in Australia on management practices and their relationship to firm performance. A major international study undertaken recently by the London School of Economics (LSE) and McKinsey & Co examined management skills and capabilities across 15 countries and found clear linkages between the quality of management and the performance of firms and organisations, but this study did not include Australia.

There has not been any such analysis on a comparable scale in Australia since the comprehensive 1995 Karpin Report on leadership and management skills, *Enterprising Nation*, and an earlier series of Australian workplace employment relations surveys, which is why the current study was commissioned to replicate the LSE methodology in Australia. The key objective of the research is to identify determinants of high performance and to benchmark Australian firms against the global best. It is designed to provide an information base for policy development and services to "improve innovation skills and workplace capabilities, including management and leadership skills — building on Enterprise Connect and the Education Revolution".

How Australian management rates

This report is based on the results of a qualitative survey of 439 medium and large-sized[1] manufacturing firms in Australia, with an extension to a smaller sample of services firms. These firms were contacted in early 2009 and taken through a structured conversational interview to examine their management practices across eighteen different dimensions, corresponding to three categories of management capability: people, performance and operations.

Our study found that while Australian management practices are not in the top rank of performance worldwide, they are also not among the worst. They currently rate as only moderately above average when benchmarked globally, leaving significant scope for consistent and sustained improvement across key areas. The research also shows that the

[1] LSE defines medium firms 100 to 5000 employees, Australian Bureau of Statistics (ABS) define small firms as firm size less than 20 employees, medium size firms from 20 to 199 employees, and large size firms with employees 200 and greater. The small size firms in Australia are not in scope.

quality of management practices has a measurable impact on labour productivity, as well as sales and the number of employees in firms. As a result, *a single point increase in the management score – a measurement derived from the 18 management characteristics in our scoring grid – is associated with an increase in output equivalent to a 56% increase in the labour force or a 44% increase in invested capital.* The study also found that there is considerable variance in management practices within Australian firms. The following are the key findings with regard to the determinants of management practices:

- Size is an important factor in management performance, with larger firms scoring better than smaller firms
- Ownership is also a factor and multinationals clearly outperform domestic firms in management performance
- Australian publicly listed companies are also more likely to adopt modern management practices than other types of company ownerships
- Family run businesses tend to exhibit inferior management performance
- International exposure is important as there is a significant positive correlation between the management score and share of exports
- The level of education and skills among both management and non-management personnel impacts management performance
- There is a highly significant positive relationship between the management score and the overall degree of plant manager autonomy
- Organizational hierarchy is also positively correlated to the management scores, a finding possibly indicating limitations in flatter structures
- Flexible people management is shown to be a key element of successful management, and well-managed firms tend also to exhibit superior innovation capabilities
- While the international study found increased labour market flexibility correlated with the people management score, the Australian findings do not support this
- High management scores are positively correlated with various measures of success including: sales, productivity, employee numbers and market valuation
- Just as in other countries, Australian management tends to overrate its own performance against the benchmarks
- Unlike the global survey, the Australian research did not find a link between the level of competition and management performance, which may be an anomalous result

- While the findings relate to manufacturing firms, there are implications also for services-based firms and organisations, which reflect their growing significance in the economy.

Implications for enterprises

A key finding of our research is that focussing on the critical mass of poorly managed manufacturing firms within the country is the most effective way of enhancing Australia's overall management capability and performance. Many Australian enterprises are stronger in operations management than people management. While they are able to link employee performance with clearly defined accountability and rewards, they lag in their deployment of advanced people management practices. These include attracting, developing and retaining talent, and identifying innovative but practical ways of developing human capital to improve performance and add value to organisations. To improve, Australian managers must give more attention to building their people management skills and the relationships within their organisations.

Multinational firms set the benchmark for consistently high standards of management in Australia and across all countries, cultures and markets in the global data set. This may be because of greater investment in management and workforce capability which sets them apart from other firms and brings a return in superior productivity outcomes and competitiveness. By contrast, family-owned and -managed firms lag behind other public and privately owned firms in terms of their management performance. This may be because they lack the necessary long-term commitment to building professional management capability with key positions attained by merit rather than family affiliation. This long term commitment and strategic approach is required for success in both domestic and global markets. It should also be acknowledged that some family firms have different drivers that may result in relatively 'poorer' productivity performance, but do deliver other benefits.

The study clearly indicates that higher skill levels both at managerial and workforce levels in manufacturing firms are positively and significantly associated with the ability to develop and deploy superior management practices. It follows that engaging better educated personnel both as managers and shopfloor workers, and constantly upgrading their skills through training and development initiatives, will contribute to enhanced management performance within firms. In addition, increased autonomy at the operational level also drives better management performance. Firms can benefit by introducing more flexibility in their management styles, decentralising decision-making processes and fostering self-managing work environments. This can unlock the creative potential of workforces and induce a greater sense of accountability, leading to a more productive workplace culture.

Implications for policy-making

In today's rapidly changing economic environment, governments play a key role in harnessing the creativity of their people, their enterprises and the economy as a whole. Through the national innovation system and links between stakeholders, government can instil, drive and support the development of good management practices and behaviour, especially targeted towards small and medium sized firms. The LSE study not only concluded that "Governments can play their part in encouraging the take-up of good management behaviour" but it also maintained that "Doing so may be the single most cost-effective way of improving the performance of their economies"[2].

While there are limits to the role of public policy in encouraging and facilitating organisational improvement, according to the World Economic Forum, Australia is among those countries that have reached "the innovation-driven stage" of development. Seeding and improving the productivity of its economy through initiatives and investments in management skills and capabilities would be worthy of greater attention. In this light, a start has been made to explicitly incorporate management and leadership development into Australia's innovation system, but there is scope for greater emphasis on the innovative and management capability of firms and organisations in fast moving local and international markets. This is particularly the case for smaller firms, who face information asymmetries and resource constraints in acquiring and implementing world class management practices.

Considering the important role that multinational corporations (MNCs) can play in lifting overall performance and productivity in Australia, there would be considerable merit in looking at more strategies to augment the role of these companies in supply chains and networks and to more fully gain from their presence in Australia. This might be achieved through more targeted foreign investment attraction in key activities, and also through local industry development policies which encourage collaboration and industry clustering between domestic firms and foreign MNCs. This industry policy will complement rather than substitute for the market, and can play a major role in strengthening the overall competitive advantage of Australian businesses. Supportive public policy can also encourage Australian-based firms to grow their domestic operations internationally and become more globally competitive[3].

Clearly, investing in education and skills is a key requirement for those performing managerial roles now and into the future. Governments world-wide have a role not only in funding and guiding education systems, but also in the development of specific programs to develop management capability. Such programs must be accompanied by a fair, flexible and balanced system of labour market regulation. The relationship between regulation and management structures and behaviour is highly complex. While the study has indicated a relationship between the labour market 'rigidity' index as measured by the World Bank and people management, research also suggests that the dimensions and determinants of people management are primarily under management control and will only be improved if organisations change their practices with a view to creating more innovative and collaborative workplaces.

Managing for long-term prosperity

Every economy and industry sector, whether manufacturing or services, is affected by external factors which may be unpredictable and uncontrollable. A high level of management quality and expertise enables firms and organisations both to develop internal

[2] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 10.

[3] It should be noted that as the focus of this research has been on medium and large firms, it has limitations with respect to the application of policy to small firms; caution is required in extrapolating any policy implications to the cohort of small firms with less than 50 employees.

dynamic capabilities and sustainable competencies and to accommodate the impact of these external factors. This study shows that there is considerable room for improvement in the quality of management practices in Australian manufacturing firms. Further, the study translates these findings into the services sector and recommends that the fostering of capabilities in managing services innovatively, smartly and swiftly will also translate into higher productivity, in turn with additional benefit for Australia's long-term economic prosperity.

Overall, the research findings indicate that national debate about the productivity performance of our economy should include thinking about how effectively Australian firms and organisations are managed. The openness of domestic and international markets, the role of infrastructure and the quality of our training and education systems are all vital, but so too are the management practices of organisations in adapting to and shaping future opportunities.

Management Matters in Australia: Just how productive are we?

Inside the productivity black box

Over the past decade, Australia has experienced a flattening trend in productivity. Although the Australian economy has experienced average annual GDP growth rates ahead of many other developed economies, our GDP per capita rank dropped over the past decade and is only now showing signs of relative improvement. After being one of the world leaders in productivity growth in the 1990s, since 2003-04 Australia's productivity growth rate declined to a level that was no better than what we were achieving in the 1960s[4]: "Sometime around 2002 Australian productivity went from growing substantially faster to growing substantially slower than the Organisation for Economic Cooperation and Development (OECD) average."[5] Added to this, in the innovation context, over the past 8 years Australia's performance slipped from 5th to 15th according to the World Economic Forum's Global Competitiveness Index[6].

At this time, perhaps no industry is under more pressure than manufacturing, which is central to our economy as it makes a substantial contribution to output, employment, productivity, exports, and hence economic growth. As an industry sector, manufacturing accounts for about 10 percent of the Australian economy, but remains a growth engine for knowledge-intensive products and processes. As such, the innovative performance of manufacturing industry is also very important to our overall economic prosperity. If the managerial capacity of manufacturing grows, then the ability of our economy to be innovative also increases. On the other hand, if manufacturing is not managed appropriately and is not able to deal with pressures faced today, then further contraction is inevitable. It is in this context that Enterprise Connect[7] has evolved, with a commitment that "the Government will use a survey developed by the London School of Economics and McKinsey & Company to investigate the correlation between management quality and firm success in Australia"[8]. This survey has been designed to cover medium and large manufacturing firms across Australia. It is seen as a vehicle to provide empirical data on Australian management and to provide insights to enhance Enterprise Connect's capacity to deliver advisory services to its clients.

The survey also provides an important opportunity to build on the international research results, which suggest that superior management behaviour and techniques and their adoption are correlated with higher productivity gains. The implications are that public policy should consider more explicitly how it can contribute to the development of

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[4] ABS *Australian System of National Accounts, 2007–08* (cat. no. 5204.0), Table 13.
[5] *Venturous Australia: Building Strength in Innovation* (Melbourne: Cutler & Company, 2008), p. ix.
[6] World Economic Forum's Global Competitiveness Report 2008-09, http://www.gcr.weforum.org/.
[7] Enterprise Connect is a division of Department of Innovation, Industry, Science and Research, Canberra, established by the government to boost the innovation capacity, productivity and performance of smaller and medium Australian firms, including by encouraging collaboration with larger firms and public research institutions.
[8] *Powering Ideas – An Agenda for the 21st Century*, (Canberra: Commonwealth of Australia, 2009) p.49.

innovation capability and performance at the enterprise level. This was the thrust of a number of reviews, including the review of Australia's Automotive Industry which argued that "given the competitive pressures the industry is experiencing, a greater emphasis on improving productivity, reforming work and management practices, and promoting a productive workplace culture will be required if the Australian industry is to remain competitive in the longer term. While volume, economies of scale and innovation (broadly defined) remain the key determinants of productivity in the industry, more needs to be done to encourage high-performance workplaces and cost-competitive supply chains"[9]. Likewise, the Review of the Australian Textiles, Clothing and Footwear Industries noted that all industries in high-wage, globalised economies like Australia's depend for their success on "the development of innovative capability at the level of the enterprise and workplace. This is driven not only by research and technology development but also by the increasing emphasis on business model transformation, market-led organisational change and the integration of firms into external collaborative networks and supply chains"[10].

Management practices can be measured

We know that the quality of management within firms is a driver of organisational productivity and, to that extent, also contributes to growth and competitiveness. A major problem has been the lack of reliable empirical data on management, which has impeded research geared towards analysing and understanding the linkage between management practices and corporate, industry and national economic performance.

To overcome this measurement hurdle, a research team at the London School of Economics (LSE) designed an innovative and robust research methodology to measure management practices in manufacturing firms[11]. This methodology has been operational since 2004 and has now been deployed in 16 countries/17 jurisdictions[12], including developed economies like United States, United Kingdom, Canada, Japan, and emerging economies like China and India. Through the close partnership with LSE, we collected management practice data in early 2009 from 439 medium and large-sized manufacturing firms[13] in Australia and an additional 50 manufacturing firms in India for interviewer calibration purposes. For the purpose of international benchmarking, firms with size between 100 and 5000 employees are included so as to remain consistent with the LSE methodology; however, the Australian domestic analysis is based on firm size ranging from 50 to 5000 employees.

The key to this methodology is the conversation-based interview scoring grid originally designed by McKinsey & Company, which defines and describes the criteria for scoring management practices from one (worst practice) to five (best practice) across eighteen key dimensions (Exhibit 1).

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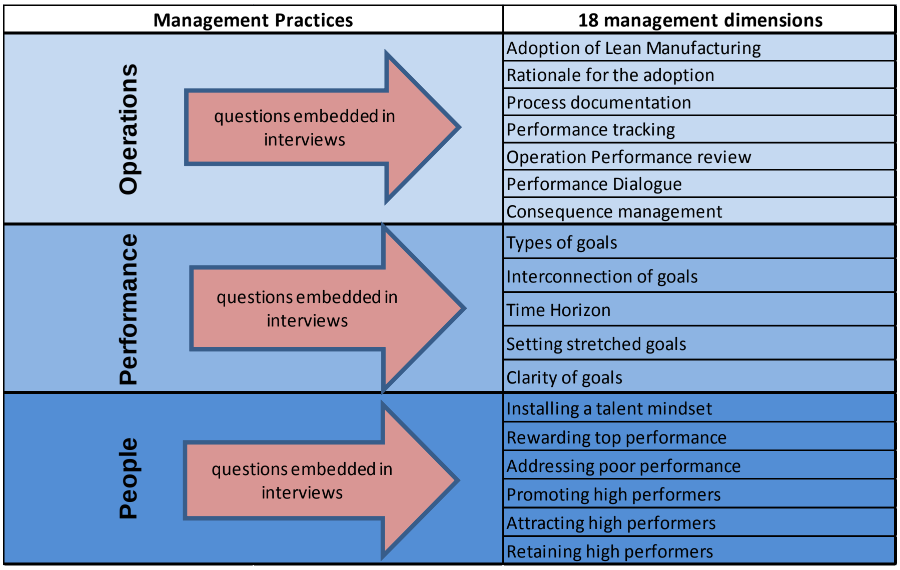
[9] *Review of Australia's Automotive Industry* (Canberra: Department of Innovation, Industry, Science and Research, 2008).
[10] *Review of Australian Textiles, Clothing and Footwear Industries* (Canberra: Department of Innovation, Industry, Science and Research, 2008), p. 84.
[11] Bloom, Nicholas and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries", *The Quarterly Journal of Economics* 122 (4): (2007), p.1351-1408.
[12] Northern Ireland is seen as a separate jurisdiction.
[13] LSE defines medium firms 100 to 5000 employees, ABS define small firms as firm size less than 20 employees, medium size firms from 20 to 199 employees, and large size firms with employees 200 and greater. The small size firms in Australia are not in scope.

Exhibit 1 - - Interview Scoring Grid – Management Practices dimensions



These eighteen dimensions collate into three distinct, but related areas of management - operations management, performance management, and people management:

Are we good at managing the operations of our businesses? Operations Management incorporates the firms' implementation of modern manufacturing techniques and management systems designed to not only increase efficiency and reduce waste, but also to create and deliver value to the overall business objectives. Best practice warrants a commitment to monitoring operations, continuous improvement initiatives and deep embedding of these practices in the culture of the company – making it 'a natural way of life'. Monitoring key performance indicators and methodologically tracking and reviewing the operational performance are core to any business success.

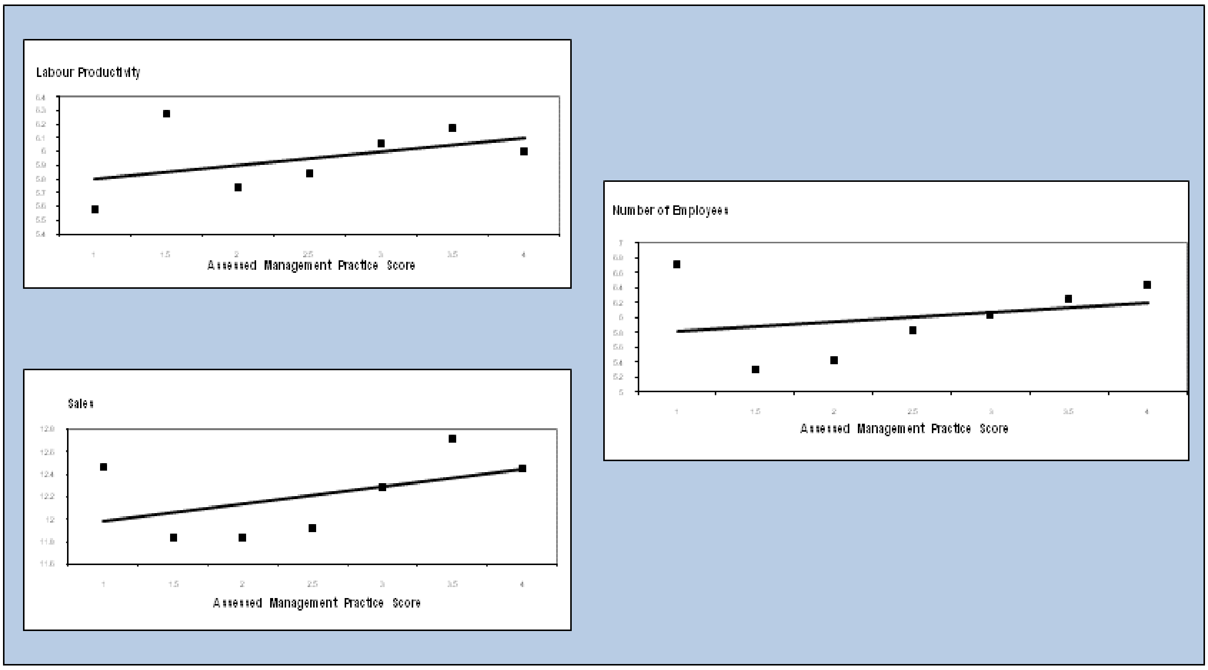
Do we manage business targets proactively? Performance Management encompasses the firms' processes around setting goals and targets, where good management requires these goals and targets to not merely be operationally or financially oriented but be more holistic and interlinked, leading to sustainable value creation. They also need to strike a balance between addressing both long-term and short-term corporate performance. Effective management is about setting realistic goals and targets which are challenging yet attainable; this will keep the team motivated and focused towards achieving these goals and targets, thereby driving performance.

Are we good at managing the talent of our people? People management and its role in enhancing firm performance and productivity cannot be over emphasised. In today's intensely competitive environment, organisations need to leverage their most valuable intangible asset – human capital – for a sustained competitive advantage. Underpinning this, effective people management is paramount, and is achieved when companies follow a structured and focused approach to the attraction, retention and development of talent. In particular, this is characterised by encouraging, motivating and nurturing people through a systematic approach.

Economic impact of management practices

In a high wage economy with rapid technological change, an aging population and shortfalls in skills, better management practices are linked with increases in productivity and output. Our results demonstrate the strong association management practices have with firm productivity performance, specifically labour productivity, sales and number of employees (Exhibit 2).

Exhibit 2 - - Management practice score correlates well with several productivity metrics



Note: Panel data for firms over the period 2004-2008, firms are grouped in 0.5 increments of assessed management score and performance measure variables are logged. Econometric Analysis (not reported here) reveals that this positive association is robust to the inclusion of controls such as region, industry and other factors which have been shown to explain productivity.

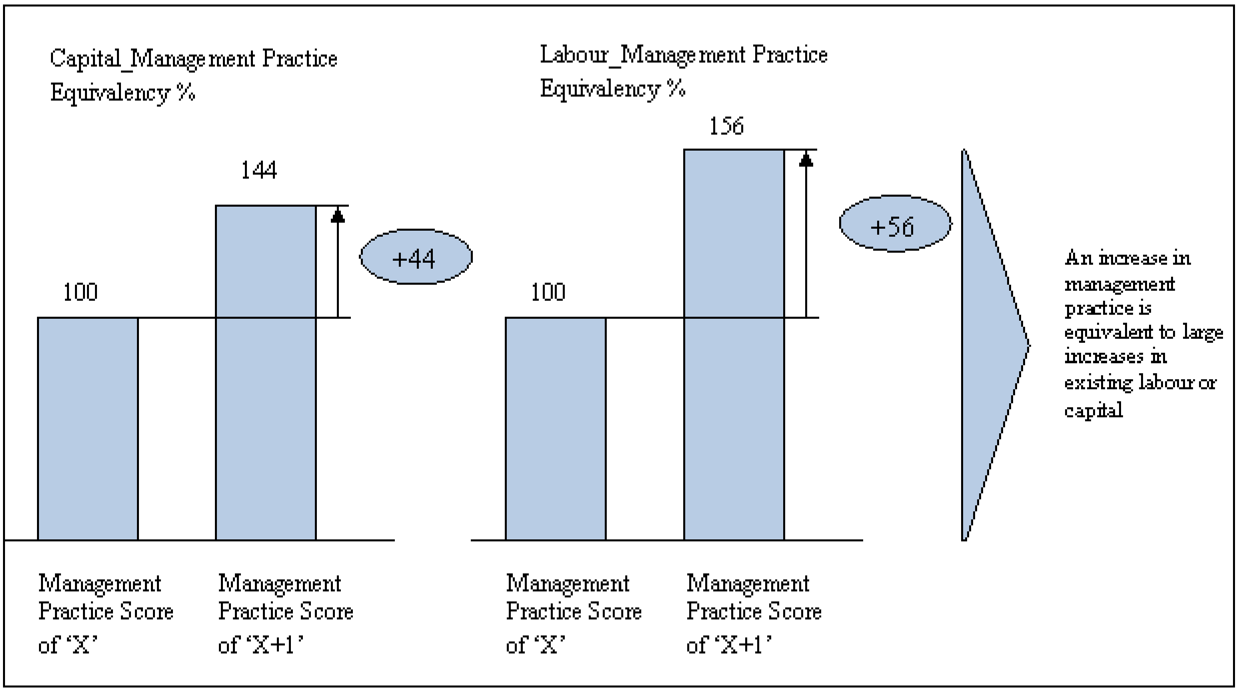
In the context of this research, a single point in the management score refers to a point as per our scoring grid, wherein improvements in any or all of the eighteen identified management dimensions can help achieve a one point increase in the overall management score. Our results show that a single unit increase in the management score is associated with an increase in sales per employee ranging from 8.4% to 16%, an increase in sales of 13%, and an increase in the number of employees of 19.5%. Importantly, the association between management practices and firm productivity performance is economically significant, which is consistent with the findings from other international research[14].

Further, the relative level of firm output associated with an increase of a single point in the management score is equivalent to a 56% increase in the labour force or a 44% increase in invested capital (Exhibit 3). Although the relationship is not necessarily causal, this finding does suggest that management practices have an economically significant association with sales output for manufacturing firms. One plausible argument this finding suggests is that

[14] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 5.

investing in management practices may be a cost effective way for firms to boost productivity, relative to hiring additional employees or direct investment in fixed capital.

Exhibit 3 - - Management Practice – Labour and Capital Equivalency Association



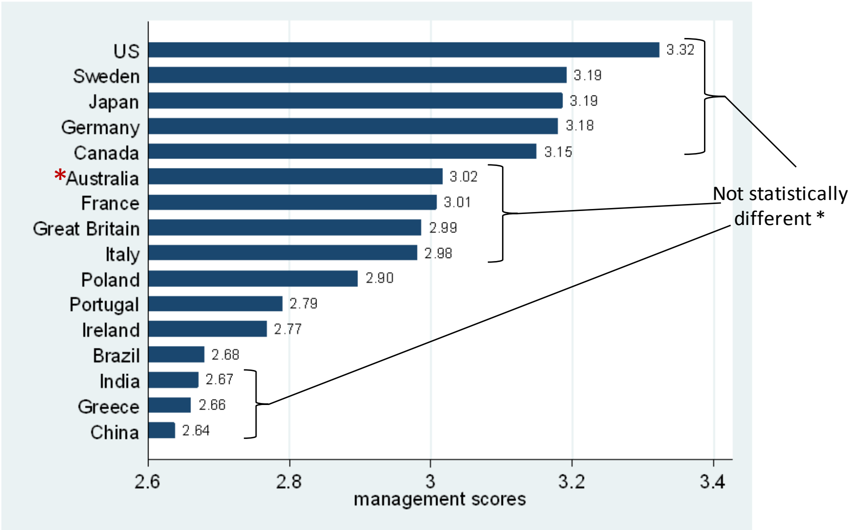
Note: Controls for country, sector, employees, skill and hours worked. Another method used to calculate this association generates larger labour and capital increases associated with 1 point improvement in management practices.

Australian managers perform around the global average

Australian management practices rate marginally above average when benchmarked internationally. Australia ranks sixth among the sixteen countries that have participated in this study to date. Australian management has statistical parity with France, Great Britain and Italy; however, we significantly lag behind the best performing country – the US – and our management score does not match the other four top tier countries - Japan, Germany, Canada and Sweden (Exhibit 4). Australia falls in the second tier of countries in terms of its management performance. Importantly, the top performing countries, the US and Sweden, are also amongst the top four competitive economies in the world[15], indicating that improving management performance is a key opportunity for longer-term sustainable growth for Australia.

[15] World Economic Forum's Global Competitiveness Report, 2007-08 http://www.gcr.weforum.org/ p.22.

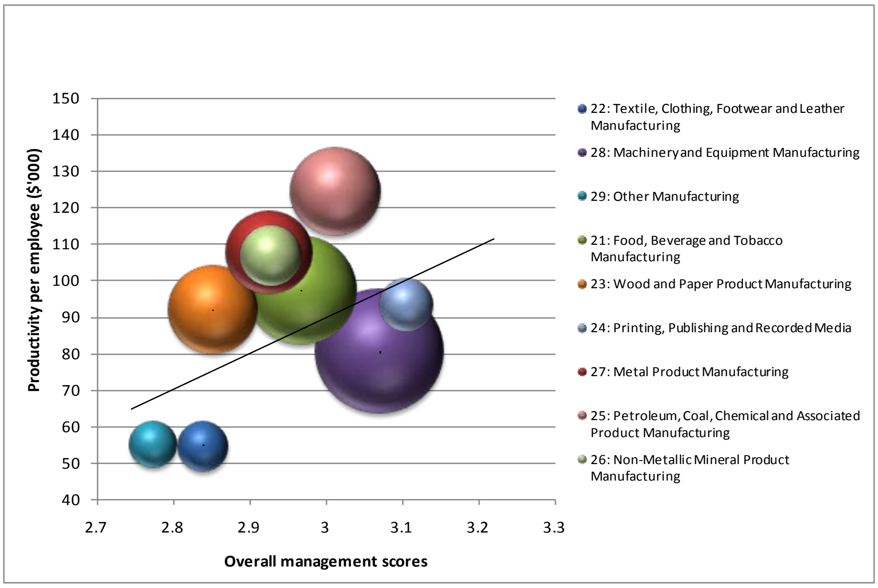
Exhibit 4 - - Overall management score by country showing tiers in performance



* At the 10% significance level.
Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research; Management Matters, Working paper 12, March 2009 Institute of Competitiveness and Prosperity, Canada.

The LSE study has illustrated a strong relationship between management practices and organisational productivity, as well as national productivity[16]. Examining this correlation in the context of manufacturing industries in Australia, Exhibit 5 illustrates a positive association, if not direct causality, showing that as management practices score increases across industry sectors productivity per employee also increases.

Exhibit 5 - - Better managed manufacturing firms have higher labour productivity



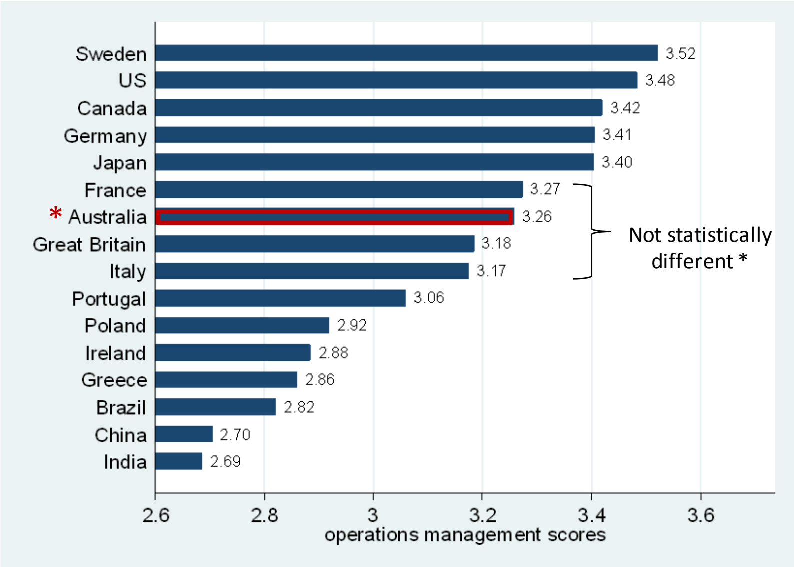
Source: Australian Bureau of Statistics 8221.0 and Australian management practices research.
Note: The size of the bubbles in the graph above signifies the industry-wise sample size of interviews conducted.

[16] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 4.

Global benchmarking: What do we do well and what can we do better?

Australia fares reasonably well in the area of operations – with its seventh ranking in operations management practices (Exhibit 6). Sweden leads in operations management practices followed by US, Canada, Germany, Japan and France. Once again Australia belongs to a tier-2 group of countries; its operations practices are not statistically different from those of France, Great Britain and Italy.

Exhibit 6 - - Operation management scores by country - A global comparison

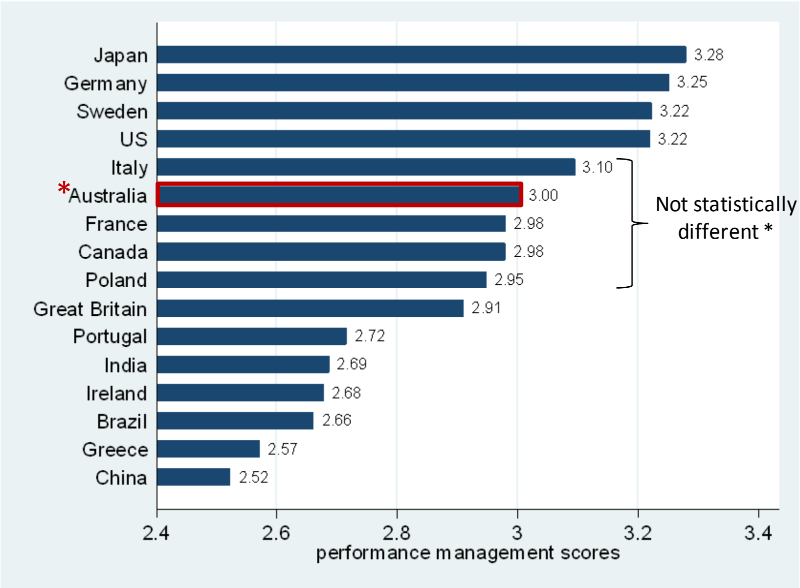


* At the 10% significance level.
Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research; Management Matters, Working paper 12, March 2009 Institute of Competitiveness and prosperity, Canada.

At a more granular level of the individual dimensions within the area of operations management, Australia is moderately placed in terms of its global ranking (Exhibit 9). Australian firms' operations management practices are statistically no different from the top leaders in only two out of the seven dimensions. Australia trails and performs statistically worse than the respective best performers in the remaining dimensions; more focussed attention to these will enable Australia to emerge even stronger in the sphere of operations management (Exhibit 10).

Australia does relatively well in the area of performance management, ranking sixth among the sixteen countries. Australia is currently at the same level as a group of countries including Italy, France, Canada and Poland, but performs statistically significantly worse than the top tier countries. While Japan is the global best performer in this area, countries such as Germany, Sweden, US and Italy also outperform Australia (Exhibit 7).

Exhibit 7 - - Performance management scores by country – A global comparison



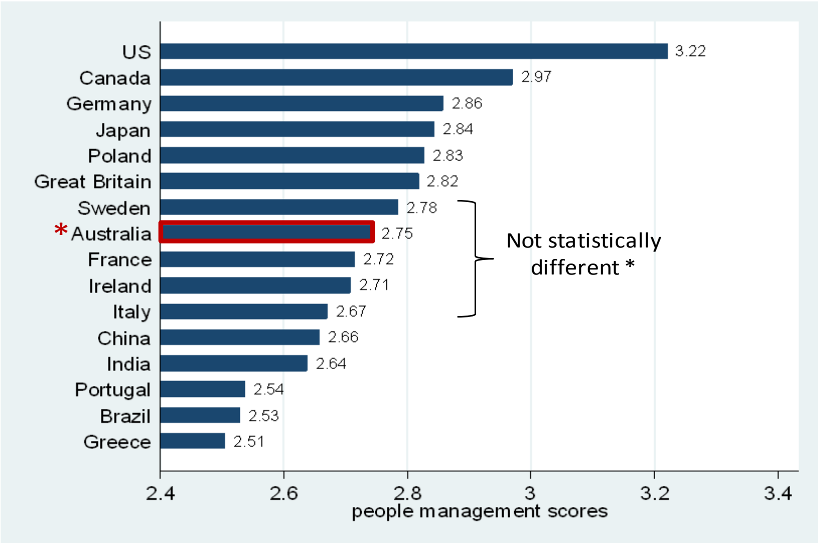
* At the 10% significance level.

Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research; Management Matters, Working paper 12, March 2009 Institute of Competitiveness and prosperity, Canada.

While Australia ranks well overall in the area of performance management, its standing in the individual dimensions within this area varies considerably (Exhibit 9). In fact, the country is statistically on par with the global best performer in only one of the six dimensions. This suggests potential scope for improvement in the other five dimensions, wherein Australia's performance is statistically worse than the top nations (Exhibit 10).

US manufacturing firms lead in people management, but for Australian manufacturers this emerges as a relatively weak area with Australia ranking eighth in the world. The US, Canada and Germany deliver exceptional performance in this area of management and emerge ahead of Australia. Australian performance is statistically no different from Sweden, France, Ireland and Italy (Exhibit 8).

Exhibit 8 - - People management scores by country – A global comparison



* At the 10% significance level.

Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research; Management Matters, Working paper 12, March 2009 Institute of Competitiveness and prosperity, Canada.

While Australia ranks low in almost all the people management dimensions, Australian manufacturers seem to be comparatively better at linking employee performance with clearly defined accountability and rewards (Exhibit 9). Relative to the best performing nation, the Australian scores in the area of people management are statistically worse across all of the six dimensions (Exhibit 10). Moving forward, Australian businesses must improve their human resource-related practices with a target of attracting, retaining and promoting best talent and more importantly addressing poor performance.

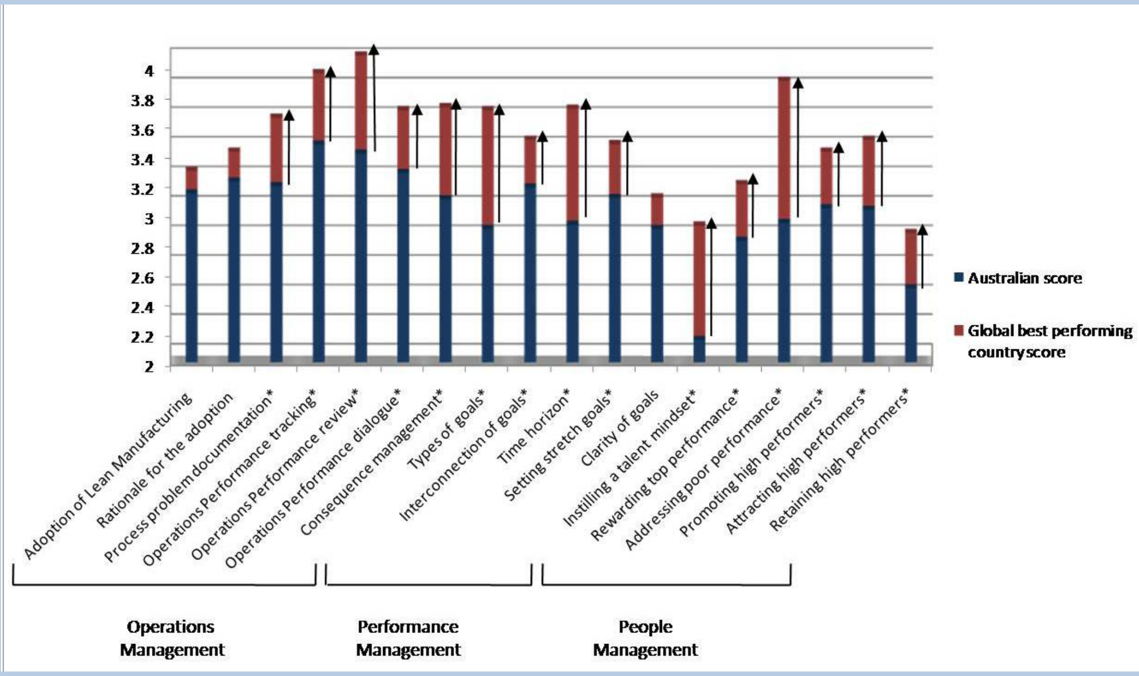
Exhibit 9 - - Management practices performance by each dimension

Area of Management	Australia's global ranking (out of 15 countries)	Global best performer (out of 15 countries)
Operations Management		
Overall score	7	Sweden
Adoption of Lean Manufacturing *Best practice* : All major aspects of Lean have been implemented *Worst practice* : Other than just-in-time, no other aspects of Lean have been introduced	2	US
Rationale for the adoption *Best practice:* Lean was introduced to meet business objectives *Worst practice* : Lean was introduced to catch up to competitors	5	Sweden
Process problem documentation *Best practice* : Exposing problems is integral to individuals' responsibilities rather than ad hoc solutions *Worst practice* : No process improvements are made when problems occur	6	Sweden
Operations Performance tracking *Best practice* : Performance is continuously tracked and communicated to all staff using a range of visual tools *Worst practice* : Tracking is ad hoc, and measures being tracked do not indicate directly if overall business objectives are being met	6	Sweden
Operations Performance review *Best practice* : Performance is continuously reviewed, based on indicators tracked; follow-up ensures continuous improvement *Worst practice* : Performance is reviewed infrequently and only success or failure is noted	7	Sweden
Operations Performance dialogue *Best practice* : Regular performance conversations focus on addressing root causes. Purpose, agenda, and follow-up steps are clear to all *Worst practice* : Relevant data are often not present at meetings or discussion is based on data that is not meaningful. Agenda and purpose are not clear	6	Japan
Consequence management *Best practice* : Failure to achieve agreed targets drives retraining or moving individuals around. *Worst practice* : Failure to achieve agreed targets does not carry any consequences	7	US
Performance Management		
Overall score	6	Japan
Types of goals *Best practice* : Goals are a balance of financial and non-financial goals *Worst practice* : Goals are exclusively financial or operational	9	Japan
Interconnection of goals *Best practice:* Corporate goals increase in specificity as they cascade through the business units *Worst practice:* Individual workers are not aware of how their contribution is linked to corporate goals	4	US
Time horizon *Best practice* : Short-term goals are set so that they become a staircase to reach the long-term goals *Worst practice:* Top management's main focus is on short term goals	9	Sweden
Setting stretch goals *Best practice:* Goals are demanding for all divisions, and are grounded in solid economic rationale *Worst practice:* Goals are either too easy or impossible to achieve	5	Sweden
Clarity of goals *Best practice:* Performance measures are well defined and well communicated; worker performance is made public to induce competition *Worst practice:* Performance measures are complex and not clearly understood; worker performance is not made public	4	Japan
People Management		
Overall score	8	US
Instilling a talent mindset *Best practice* : Senior managers are evaluated and held accountable on the strength of the talent pool they actively build *Worst practice* : Senior management do not communicate that attracting, retaining, and developing talent is a top priority	12	US
Rewarding top performance *Best practice:* The firm provides ambitious stretch targets with clear performance related accountability and rewards *Worst practice:* People within the firm are rewarded equally irrespective of performance level	4	US
Addressing poor performance *Best practice* : Poor performers are moved to less critical roles or out of the company as soon as weaknesses are identified *Worst practice:* Poor performers are rarely removed from their positions	9	US
Promoting high performers *Best practice:* Top performers are actively identified, developed, and promoted *Worst practice:* People are promoted primarily upon the basis of tenure	8	US
Attracting high performers *Best practice:* The firm provides a unique value proposition to encourage talented people to join the company instead of the competitors *Worst practice:* Competitors offer stronger reasons for talented people to join their companies	8	Japan
Retaining high performers *Best practice* : Managers do whatever it takes to retain top talent *Worst practice* : Managers do little to try and keep the top talent	6	US

Note: Canada is excluded from the statistical analysis of individual questions as the firm-level data of Canada was not available
Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research.

In summary, specific dimensions within the broad management areas of operations, performance and people management have been identified where Australia's score statistically significantly trails behind the global best performing nation, with the gaps as shown by vertical arrows in Exhibit 10. Immediate and prioritised attention in improving the indicated management practices will help Australia bridge the gaps to match up with the global best, thus eventually lifting the overall performance of Australian management practices in manufacturing firms.

Exhibit 10 - - Gaps in the Australian management performance by each dimension



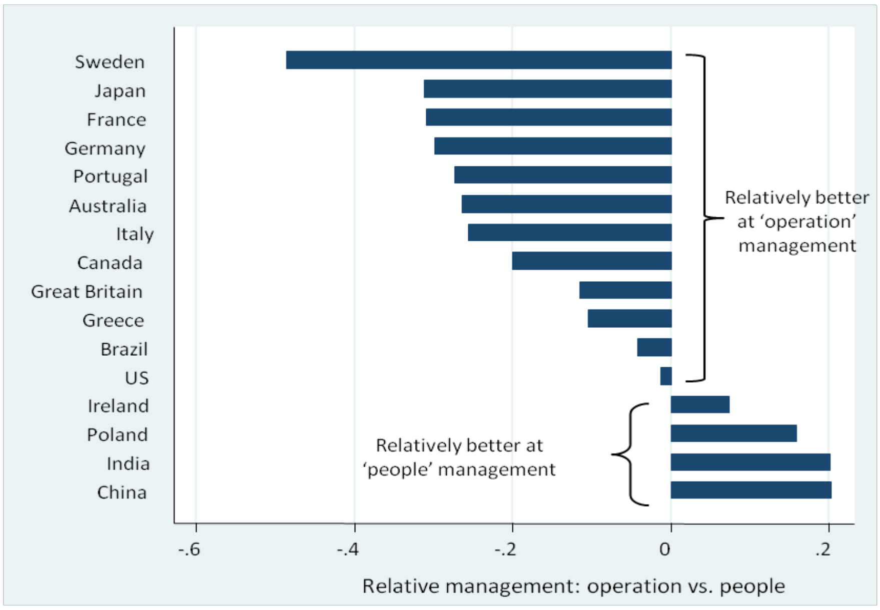
* Australian score statistically significantly different from the global best performing country's score.- based on statistical analysis at the 10% significance level.

Note: Canada is excluded from the statistical analysis of individual questions as the firm-level data of Canada are not available.

Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research.

Looking at the relative positioning of countries in operations management and people management, Australia emerges as being more operations-oriented while people management is a potential area for improvement (Exhibit 11). The results also reinforce that Australia's standing in operations management is in parity with its performance management. Australia is relatively better in the area of performance management vis-à-vis people management although not as emphatically as countries like Sweden and Japan. Again, this demonstrates that improving talent management is where Australia needs to give priority.

Exhibit 11- - Country level relative management: operation vs. people



Note: the relative management operation vs. people is measured as the difference between the average score of the area of operation and of people, normalised.

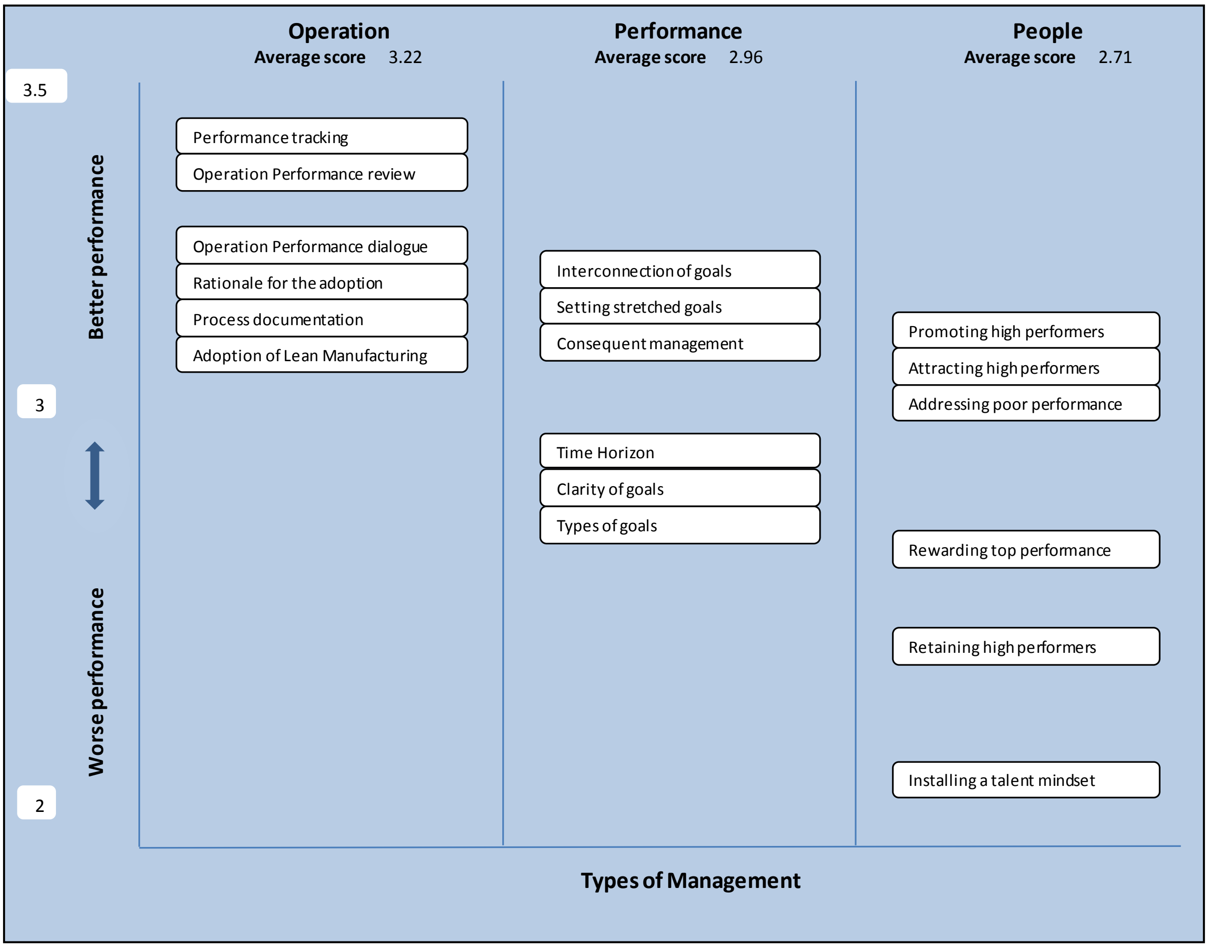
Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research; Management Matters, Working paper 12, March 2009 Institute of Competitiveness and prosperity, Canada.

Drilling down into Australian management

The landscape of management practices within Australian manufacturing firms (size ranging between 50 and 5000) requires special mention. The average overall management score for Australian manufacturing firms is now 2.98, primarily attributed to the inclusion of smaller sized manufacturing firms in the analysis. Operations management remains the strongest area in management practices for Australian firms, with an average score of 3.22. Among all the interviewed firms, ten percent of the firms have a score above 4.14 with a maximum of 4.84 while only five percent of the firms have a score less than 2, further confirming that a large portion of companies have successfully implemented modern systems and processes in managing their operations in a sustainable way.

The distribution of scores in the area of performance management is comparatively more negatively skewed. While 40 percent of firms scored between 3 and 3.8, five percent of firms fared very poorly, scoring below 1.6. However, with an overall average score of 2.96, the performance of Australian firms in this area is fairly good. A closer look at the distribution of scores in people management reinforces our inference that this is a weak area for Australian firms with an average score of only 2.74. There are very few firms that manage this area extremely well with a score above 4.3; and about 10 percent of firms have a score below 2, clearly indicating that there is scope for improvement in this sphere. Exhibit 12 displays the management performance of Australian firms across the 18 dimensions of the three areas of management ranging from worse to better performance.

Exhibit 12 - - Average management practices scores across the 18 dimensions



Source: Australian management practices research.

Research by Bloom *et al*[17] concluded that it is the 'tail' of poor performers, and not as much the outstanding performers, that largely determine a country's overall management performance. While the size of Australia's 'tail' of poor performance is shorter than in some other countries, the spread of the overall management scores indicates that a greater number of firms are assessed as poorly managed as compared to those firms with exceptionally superior management practices. Thus, focussing on the critical mass of poorly managed firms within the country is the most effective way of enhancing Australia's overall management capability and performance.

We next examine management practices across three dimensions – by state, by industry and by firm size. Within that, we will initially examine several other possible combinations of firm size originating from different perspectives, namely, a comparative study of medium vs. large firms as per ABS classification, firms interviewed and seeking advisory services from Enterprise Connect vs. rest of the cohort, and the manufacturing firms interviewed belonging to the Top Business Review Weekly (BRW) 2008 firms vs. the rest of the sample.

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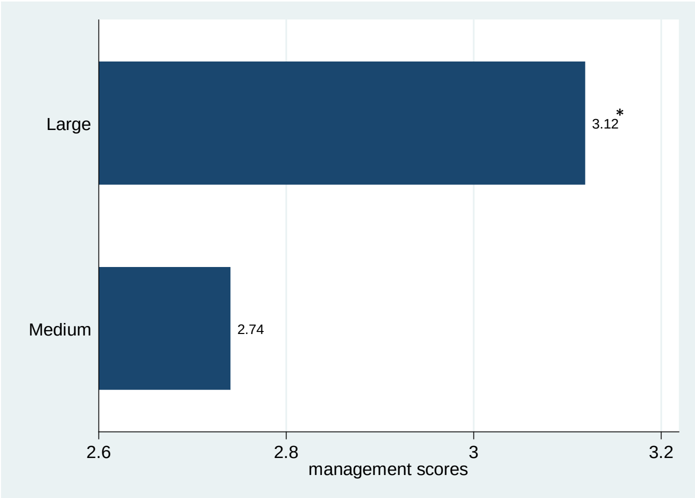
[17] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 6.

Management practices – comparison of medium vs. large firms

What impact does the size of a firm have on its performance? Using the ABS classification for manufacturing firms[18] with only medium and large firms falling within the scope of this study, our research determines that the performance of large Australian firms is statistically significantly better than that of the medium firms (Exhibit 13).

Exhibit 13 - - Overall management scores for medium and large sized enterprises



*: statistically significantly different from the rest of the sample.
Source: Australian management practices research.

Large sized firms significantly outperform medium sized firms in operations, performance and people management practices. Zoning into the level of key management dimensions within each of these three areas, the results emphatically suggest that the large-sized firms exhibit better management practices across all the eighteen dimensions as compared to the performance of smaller firms vs. rest of the cohort.

Performance of smaller firms vs. rest of the cohort

Focussing on the performance of smaller firms (size ranging between 50 and 99) amidst medium sized firms which constitute a significant proportion of the manufacturing organisations in Australia serviced by Enterprise Connect, the smaller firms notably underperform those firms with size 100 and above, across all the management areas; and the differences in scores between these two cohorts are indeed statistically significant (Exhibit 14). Also, the management practices in this cohort of firms are extremely heterogeneous and inconsistent. Across the economy, Australian industry has a larger proportion of relatively small size firms and hence the performance of this cohort is certain to have a significant impact on economy wide productivity performance.

[18] LSE defines medium firms 100 to 5000 employees, ABS define small firms as firm size less than 20 employees, medium size firms from 20 to 199 employees, and large size firms with employees 200 and greater. The small size firms in Australia are not in scope.

Exhibit 14 - - Management Scores for smaller firms (size 50-99) vs. rest of the cohort

Management score	Australian firms size 50-99	Australia firms size 100 and beyond
overall score	2.67	3.02
operations	2.89	3.26
performance	2.61	3.01
people	2.45	2.74

Source: Australian management practices research.

Top performers – Business Review Weekly (BRW) Top 1000 list

Australia does have top performing firms. The BRW Top 1000 list annually ranks Australian companies in terms of their performance. Of the 439 interviewed firms, 93 firms were matched as being listed amongst the Top 1000 BRW 2008 listing. These BRW listed firms performed impressively, scored considerably higher, and deploying management practices that are statistically significantly better than the remainder of the firms (Exhibit 15). Their management practices are much more homogenous and consistent as compared to the rest of the cohort.

Exhibit 15 - - Management Scores for interviewed firms ranked in the Top 1000 by BRW vs. rest of the cohort

Management score	BRW listed interviewed	Remaining interviewed firms
overall score	3.22	2.92
operations	3.47	3.16
performance	3.29	2.88
people	2.86	2.67

Source: Australian management practices research.

There are inherent attributes that substantiate differences in management practices across smaller firms and BRW-listed firms when compared to the rest of the cohort, which are summarised in Exhibit 16. Overall, the presence of family-owned and domestic firms, coupled with the lower levels of education and skills in the workforce seem to be pulling down the scores of the smaller firms (size ranging between 50 and 99). In contrast, superior management deployed in publicly listed firms and multinationals complemented by a better-educated workforce are driving the performance of the BRW-listed firms. The same relative findings emerge when comparing medium sized firms with large sized ones.

Exhibit 16 - - Summary of differences in management practices across different scenarios

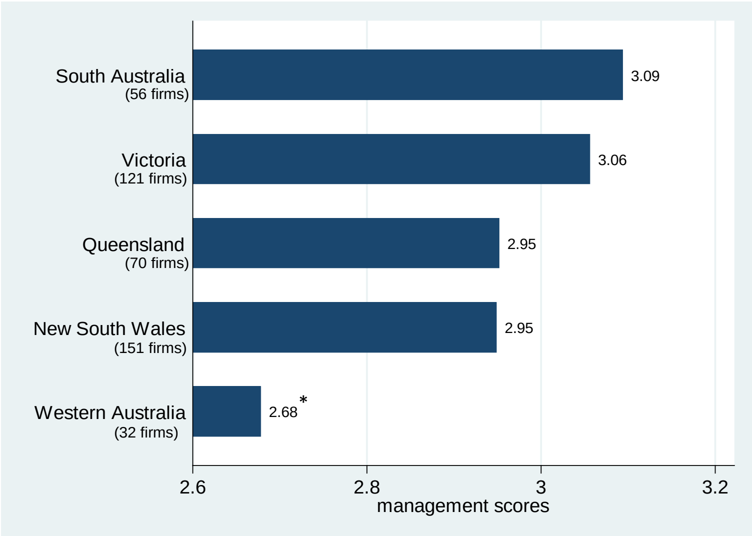
Scenario	Management score vis-à-vis rest of cohort	Proportion of Foreign vs. Domestic firms	Proportion of MNC's vs. Family firms	Level of Education/Skill
Medium firms (< 200 employees) vs rest of cohort (Large firms)	↓	↑ family firms ↓ publicly listed firms	↑ domestic firms ↓ MNC firms	↓ proportion of educated workforce
Smaller firms (50-99 employees) vs rest of cohort	↓	↑ family firms ↓ publicly listed firms	↑ domestic firms ↓ MNC firms	↓ proportion of educated workforce
BRW Top performers vs rest of cohort	↑	↑ publicly listed firms ↓ family firms	↑ MNC firms ↓ domestic firms	↑ proportion of educated workforce

Source: Australian management practices research.

Comparing States and industry sectors

Comparing management practices across States, our findings suggest that while an absolute ranking can be discerned, only the management performance of Western Australia is statistically significantly worse than the rest of the cohort States; the difference in scores among the remaining States is not statistically significant (Exhibit 17).

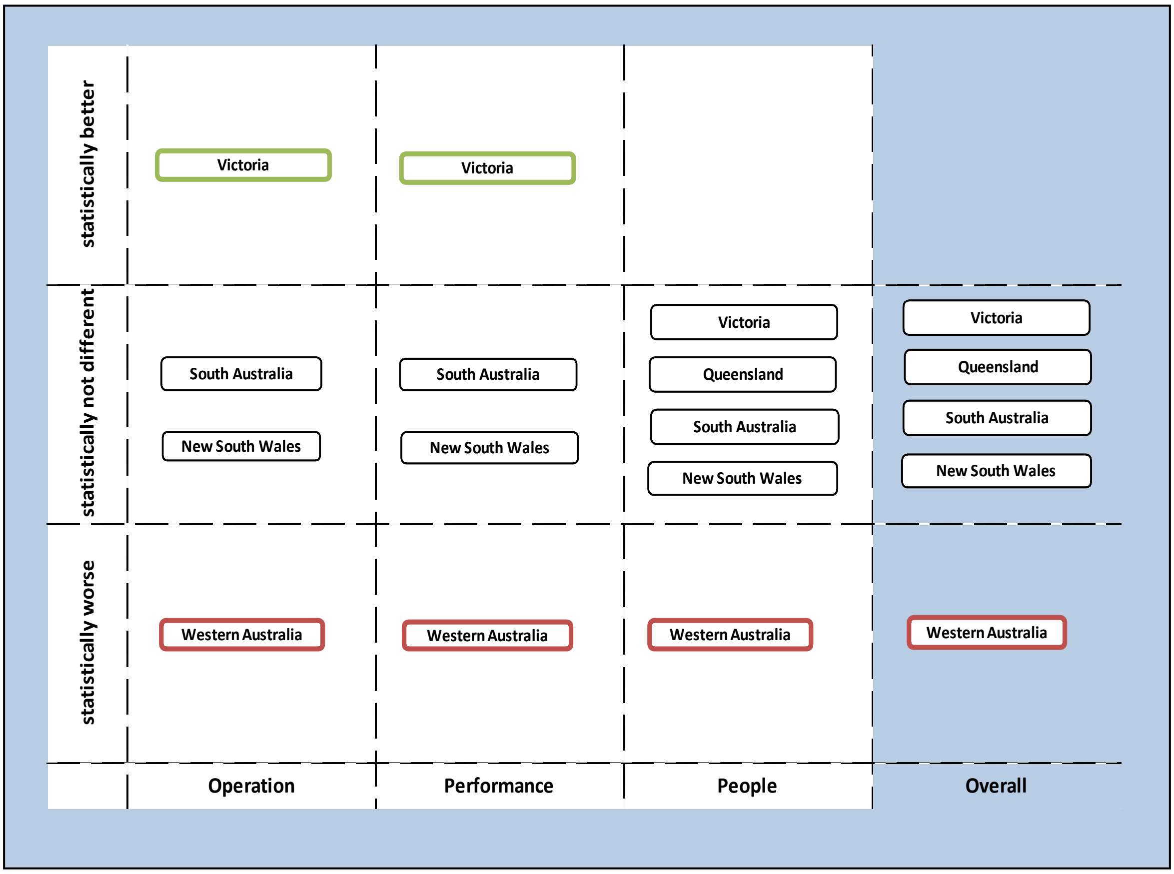
Exhibit 17 - - Overall management scores by state (sample size of firms interviewed in each state provided)



*: statistically significantly different from the rest of the sample.
Note: Tasmania not included due to negligible sample size and findings for Western Australia should be taken with caution due to a small sample size.
Source: Australian management practices research; Tasmania and Northern territory not included – sample size too small.

A snapshot of the relative performance of the States across the three management areas of operations, performance and people management shows that there are variances across States in these areas (Exhibit 18). Victoria outshines the rest of the States in operations and performance management and Western Australia trails in all three dimensions. All the States besides Western Australia are statistically on par as far as their people management practices are concerned.

Exhibit 18 - - Relative state performance across the three management areas



Note: Tasmania not included due to negligible sample size.
Source: Australian management practices research; Tasmania and Northern territory not included – sample size too small.

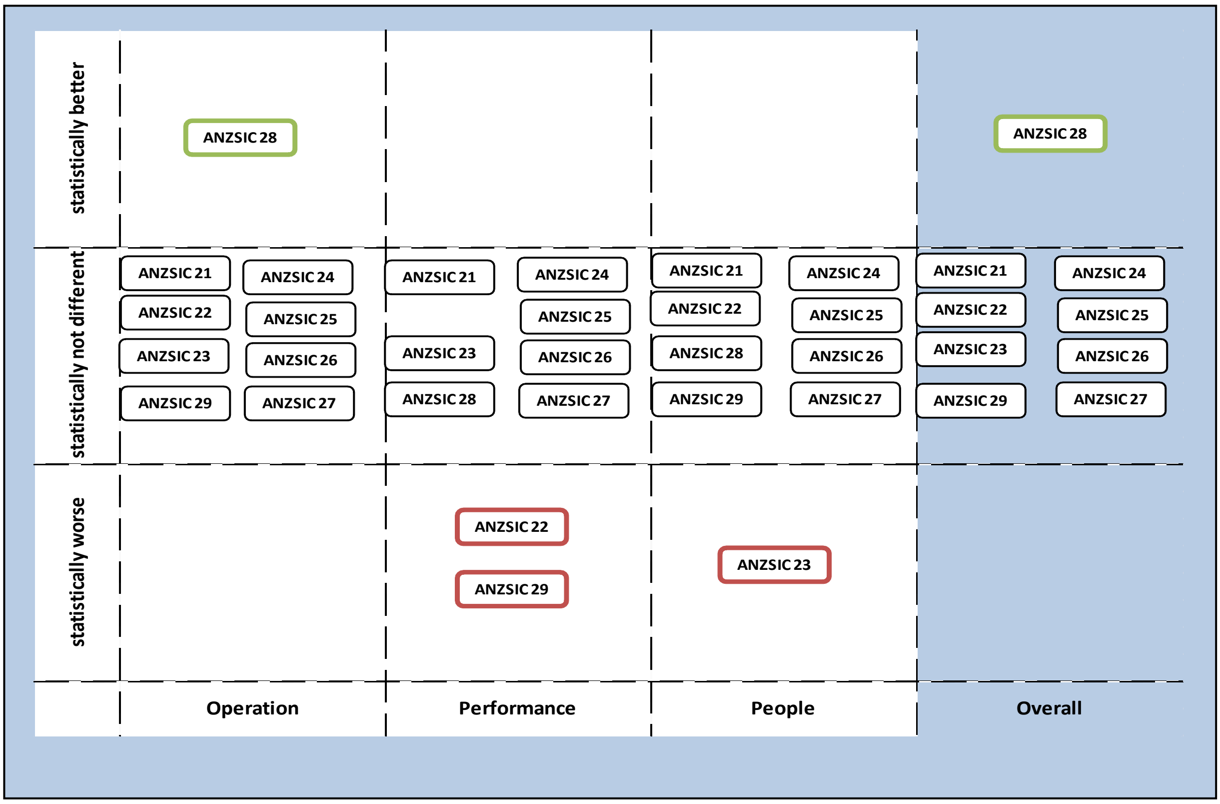
Next, examining the relative ranking of the overall management score across ANZSIC manufacturing industry sectors, our findings reveal that only Machinery and Equipment Manufacturing (ANZSIC Code 28) performs statistically significantly better than the rest of the industry sectors (Exhibit 19).

Exhibit 19 - - Overall management scores by industry

*: statistically significantly different from the rest of the sample.
Note: While the absolute value of the average management score of Printing, Publishing and Recorded Media (ANZSIC code 24) sector is highest, rigorous statistical tests show that the difference in scores is not of statistical significance with the rest of the sample.
Source: Australian management practices research.

The performance by industry sector across the three management areas is summarized here (Exhibit 20). In terms of operations management, Machinery and Equipment Manufacturing (ANZSIC Code 28) tops the ranking and is significantly better than the rest. In performance and targets, most of the industry sectors are not statistically different except for Other Manufacturing (ANZSIC Code 29) and Textile, Clothing, Footwear and Leather Manufacturing (ANZSIC Code 22); both these sectors are indeed statistically significantly worse than the rest. In the area of people management, most sectors are equivalently placed, however, Wood and Paper Product Manufacturing (ANZSIC Code 23) is worst and the difference is indeed statistically significant.

Exhibit 20 - - Relative industry performance across the three management areas



Source: Australian management practices research.
Note: 21: Food, Beverage and Tobacco Manufacturing; 22: Textile, Clothing, Footwear and Leather Manufacturing; 23: Wood and Paper Product Manufacturing; 24: Printing, Publishing and Recorded Media; 25: Petroleum, Coal, Chemical and Associated Product Manufacturing; 26: Non-Metallic Mineral Product Manufacturing; 27: Metal Product Manufacturing; 28: Machinery and Equipment Manufacturing; 29: Other Manufacturing.

In conclusion, firm size is found to have a strong correlation with management scores in the Australian context, indicating that large companies are more likely to adopt good management practices than small companies.[19] These findings are also valid at the individual state level and the industry sector level. The firm size alone explains 9 percent of the variability of management score.

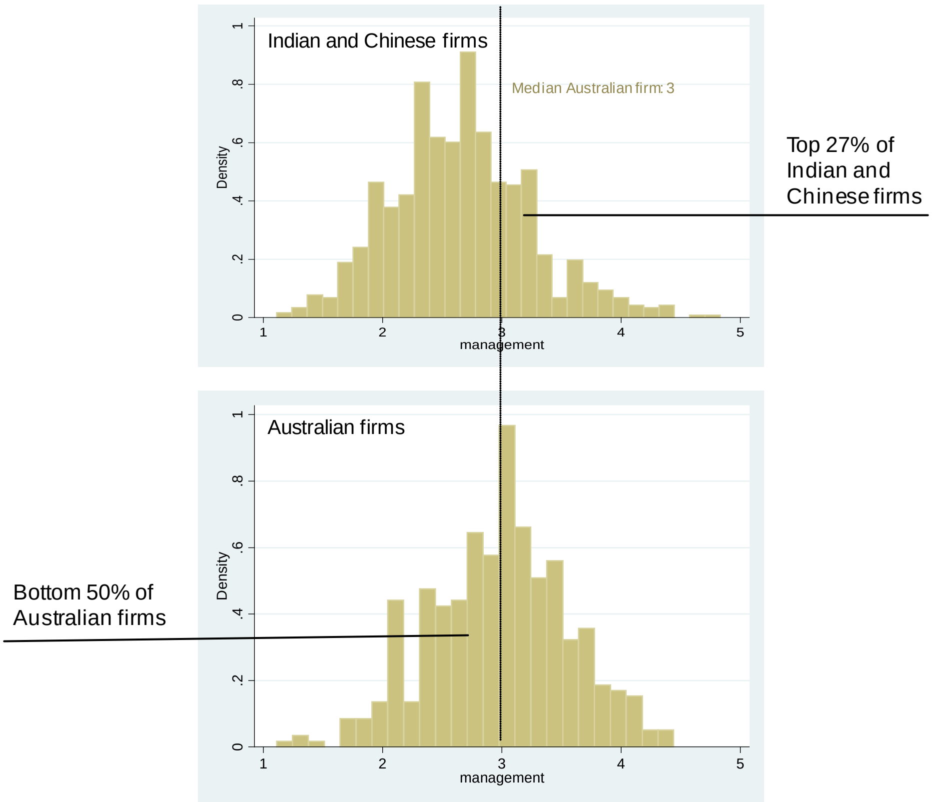
[19] Management Matters, DIISR Presentation (January 2009) London School of Economics.

Issues for Australian manufacturing enterprises

Emerging economies pose a challenge

Much has been said about the emerging strengths of Indian and Chinese firms, Indian firms more so in business services, and Chinese firms mainly in the manufacturing sector. Comparing Australian management performance with these countries reveals that the top 27% of Indian and Chinese manufacturers are better managed than half of Australian manufacturing firms (Exhibit 21). With these countries fast becoming global economic powerhouses, we could expect the proportion of relatively better-managed Indian and Chinese firms to increase. China is seen as a global emerging giant and is in the top 15 countries of the Global Competitive Index (GCI) this year, with India at 50th. The relative gap in GCI index between India and China with respect to Australia is closing. Reviewing Australia's standing, the World Economic Forum concludes in the same report, that "To progress even further, the country will need to improve on several measures of business sophistication and strengthen its innovation capacity" [20 & 21].

Exhibit 21 - - Australia benchmarked with India and China



Source: Management Matters dataset. For further survey work, see Nick Bloom and John Van Reenen, "Measuring and Explaining Management Practices Across Firms and Countries," *Quarterly Journal of Economics*, November 2007; Australian management practices research.

[20] Klaus Schwab and Xavier Sala-i-Martin, *The Global Competitiveness Report 2009-2010*, (World Economic Forum, 2009)
[21] *Powering Ideas – An Agenda for the 21st Century,* (Canberra: Commonwealth of Australia, 2009), p.21.

Management overrates its performance

Why do some Australian firms remain badly managed and what is stopping these firms from improving their performance? Evidently not all Australian firms regard good management as top priority. Why is this so? Managers were asked to rate their firm's performance according to their own perception of overall management calibre at their firm. In order to prevent any bias from skewing this rating, managers were asked to exclude their own personal contribution while evaluating their firms' management performance. Managers generally over-scored their firms' management capabilities. Findings suggest that managers' self-assessed scores were not well correlated with the firm's assessed management scores.

This is testimony to the fact that the majority of the manufacturing firms are oblivious to the actual current state of management, may not be making attempts to benchmark their own management against with best practices or even with other firms in their own sector, and are in the dark about the areas where they can improve their own performance. This lack of self-awareness among Australian managers is not very different from the outcome of the previous research in other countries which led the LSE researchers to conclude that "many organizations are probably missing out on an opportunity for significant improvement because they simply do not recognize that their own management practices are so poor"[22]. A missed opportunity is lost business.

[22] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 8.

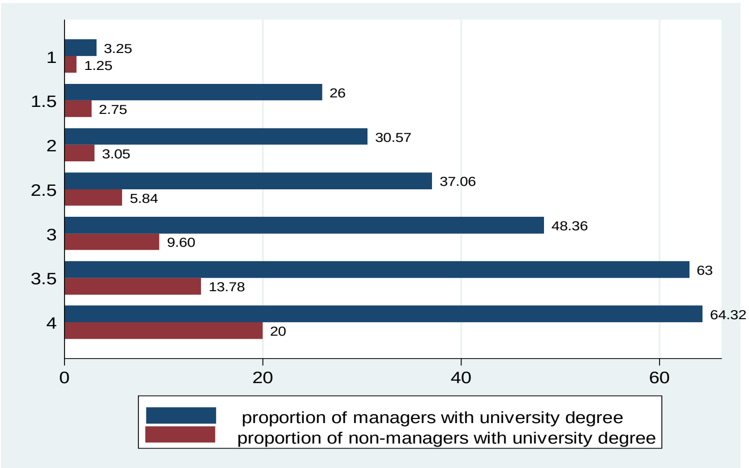
Why do Australian management practices vary?

We have seen that effective management is a key driver for enhanced performance and productivity within firms and at the industry level. While Australian management seems more homogenous in nature than many other countries, there is still significant variance in the way different firms are managed. What factors account for this inter-firm dispersion in management practices in the Australian context? Raising Australia's management standards in a consistent, integrated and holistic manner calls for aligned efforts and concerted initiatives, including by government and public agencies.

Education and skills are important

The findings in other countries suggest that "the availability of skilled people, both in management and among the workforce in general, is another important difference between better managed firms and the rest"[23]. In the Australian context, the positive impact of skills on management practices is evident, as 64 percent of managers in the highest scoring firms possessed a university degree or higher, as were 20 percent of the managers in the non-management work force. Among the lowest scoring firms, by contrast, only 3 percent of managers and only 1 percent of the wider workforce had degrees (Exhibit 22). The relationship between management and skill levels is indeed statistically significant; the proportion of managers and non-managers with university degrees can explain approximately 6.8 percent and 4.6 percent of variability of management score respectively.

Exhibit 22 - - Management scores by level of education



Source: Australian management practices research.

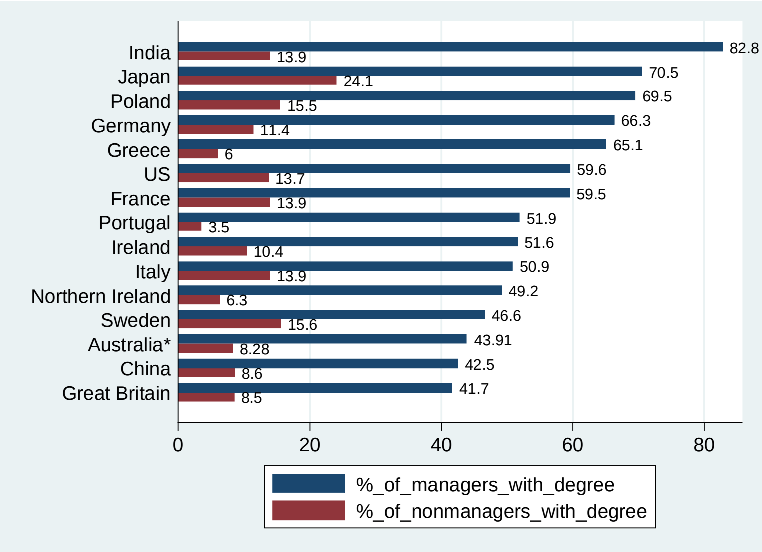
In particular, our findings support the hypothesis that firms in a high-skill environment will have better human-capital management practices than those in a low-skill environment[24]. These findings affirm the Australian Government's commitment to: "Improve innovation

[23] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters,* Nov 2007, p. 8.

[24] Bloom, Nicholas and John Van Reenen "Measuring and Explaining Management Practices Across Firms and Countries". *The Quarterly Journal of Economics* 122 (4): (2007), p.1351-1408.

skills and workplace capabilities, including management and leadership skills — building on Enterprise Connect and the Education Revolution"[25]. However, the skill level within Australian manufacturing is among the lowest in the world. With an average of only 44% of managers and a mere 8% of non-managers in the firm sample having a university degree, this is an area where Australia is clearly a laggard (Exhibit 23).

Exhibit 23 - - Level of education – A global comparison



Source: Australian management practices research.

Multinationals make a difference

Multinational corporations are known to "perform well wherever they are in the world, even in areas where overall management practice scores were particularly low"[26]. In Australia multinationals clearly outperform domestic firms, and the difference is statistically significant (Exhibit 24). Further, 'Foreign MNCs', Australian subsidiaries of foreign multinational companies, emerge as being the best-managed category. 'Australian MNCs', firms owned and headquartered in Australia but having production activities overseas, also outperform companies that operate purely domestically. This suggests that foreign firms not only have the capability for implementing better management practices but also have the tendency to diffuse and transfer knowledge and practices in the market by "transfer of best practice to local firms both, possibly through the migration of employees and knowledge and through commercial interactions between the two groups"[27].

This kind of activity should be further encouraged. The positive impact of MNCs on the Australian business landscape is further echoed by a research conducted by the Australian Business Foundation which concludes that the key contributions of MNCs lie in three key areas – firstly through building Australia's capabilities and critical mass by enhancing product and service to globally competitive standards across the value chain, secondly in

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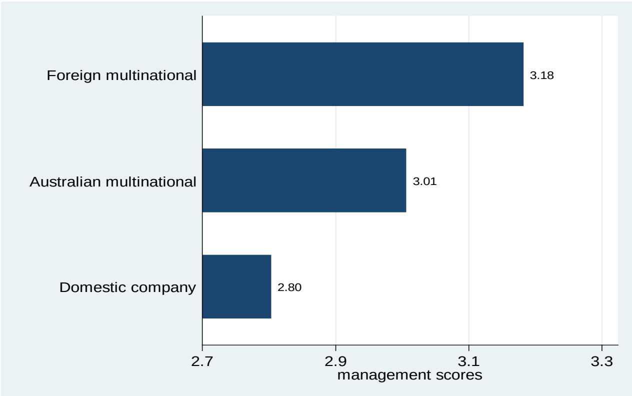
[25] *Powering Ideas – An Agenda for the 21st Century*, (Canberra :Commonwealth of Australia,2009) p.7.

[26] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 7.

[27] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters*, Nov 2007, p. 7.

enabling Australia's global reach by opening up distribution channels, overseas employment opportunities and export avenues; and finally by augmenting the flow of knowledge and skills to domestic firms, customers and staff alike[28]. Earlier research indicates that the primary means by which MNCs create and diffuse innovation is through the use of the knowledge base contained in their network of subsidiaries, leading us to believe that the more sophisticated the use of management techniques by Australian MNCs, the more their involvement in this innovation network[29].

Exhibit 24 - - Management scores – multinationals vs. domestic firms



Source: Australian management practices research.

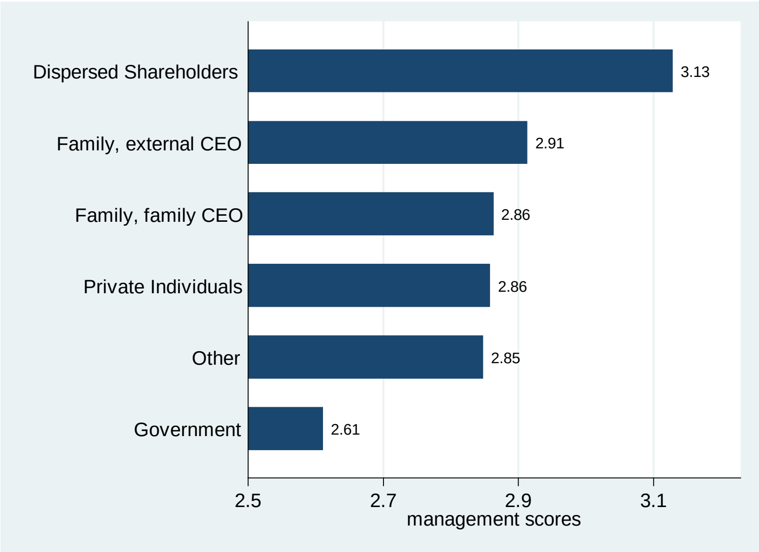
Firm ownership is a factor

The ownership structure of a firm seems to have a significant impact on its management performance. Publicly owned companies outperform other types of companies in Australia including privately-owned firms and family-owned firms, a finding consistent with results from the previous LSE project in other countries (Exhibit 25). Australian publicly listed companies, in an effort to meet shareholder expectations and deliver strong market performance, are more likely to adopt modern management practices than other types of firm. On the other hand, family-owned firms perform statistically significantly worse than the publicly listed companies.

Interestingly, among the family-owned firms, those who engage an external professional manager as CEO, deliver relatively better performance as compared with those family firms which are both owned and managed by an internal family member (Exhibit 25). This suggests as did prior research findings that "a propensity to employ professional managers and to promote them on the basis of merit delivers better managed, better performing firms"[30]. In the case of family-owned and managed firms, "the knowledge that family members will receive management positions in the future may generate a "Carnegie effect" of reducing their investment in human capital earlier in life"[31] resulting in inferior management practices and performance.

[28] Lyndal Thorburn, John Langdale and John Houghton, "*Friend or Foe: Leveraging foreign multinationals in the Australian Economy*", (Sydney: Australian Business Foundation, 2002).
[29] Stewart Johnston and Angela Paladino, "Knowledge Management and Involvement in Innovations in MNC Subsidiaries", *Management International Review*, 2007, vol. 47, p. 281 – 302.
[30] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", Nov 2007, p.7
[31] Bloom, Nicholas and John Van Reenen "Measuring and Explaining Management Practices Across Firms and Countries". *The Quarterly Journal of Economics* 122 (4): (2007), p.1351-1408.

Exhibit 25 - - Management scores by firm ownership types



Source: Australian management practices research.

Flexibility is important but talent is more so

The institutional context of the labour market has some bearing on Australian management performance. The role of labour market flexibility and regulation as a factor influencing management is evident from the correlation between the people management score and World Bank rigidity of employment index (REI)[32] (Exhibit 26). The LSE research team found that "flexible labour markets should encourage companies to adopt better people management practices in order to attract and retain the best employees"[33]. The Canadian study on management practices reported: "Flexible labour markets encourage competition among firms for attracting and retaining top talent, and therefore inherently demand better people management" [34]. This helps explain the higher scores for the US and Canada.

However, Australia with the second lowest labour market rigidity score, closely following the US, has a highly 'flexible' labour system, yet has displayed 'ordinary' people management performance. It is outperformed by countries with a higher employment rigidity index. This is more in line with earlier OECD research which studied the relationship between bargaining arrangements and performance, and concluded: "The impact of the organisation of collective bargaining on labour market performance appears to be contingent upon other institutional and policy factors and these interactions need to be

[32] Rigidity of employment index is part of the World Bank ranking of countries and testifies the labour market conditions in countries. It is a simple average of the below three indices (The World Bank, Doing Business 2008):

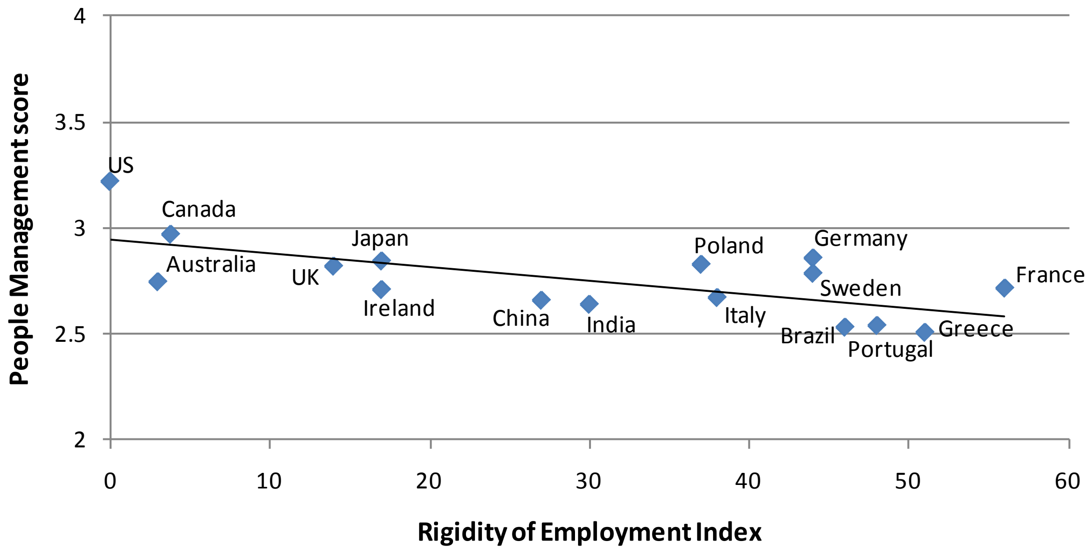
- Difficulty of hiring index: Applicability and maximum duration of fixed-term contracts and minimum wage for trainee or first-time employee.
- Rigidity of hours index: Scheduling of non-standard work hours and annual paid leave.
- Difficulty of firing index: Notification and approval requirements for termination of a redundant worker or a group of redundant workers, obligation to reassign or retrain and priority rules for redundancy and reemployment.

[33] Nick Bloom, Stephen Dorgan, John Dowdy, John Van Reenen, "Management Practice & Productivity: Why they matter?", *Management Matters,* Nov 2007, p.8.

[34] *Management Matters*, Working Paper 12 (Institute for competitiveness and Prosperity, Canada March 2009).

clarified in order to provide robust policy advice"[35]. It would seen that in Australia, the dimensions and determinants of people management are primarily under management control and performance will only be improved if organisations change their current practices and structures. Research by the UK Work Foundation also found that the best managed 30% of UK companies achieved higher growth, sales per employee, profitability and exports, where best practice was <u>not</u> characterised by any particular structure, but by informal and continued dialogue supported by simple processes, an open work culture of sharing information between peers and networks of managers, visible and accessible leadership and management, strong interpersonal and employee relations.[36]

Exhibit 26 - - People management scores by Rigidity of employment index – A global comparison



Source: Australian management practices research.

Other research has also highlighted that defining issues in terms of 'rigidity' and 'flexibility' is not always helpful. Labour standards can in fact work as a 'productivity whip' – and this explains to some extent why productivity performance in Europe has improved over recent decades[37]. A possible limiting factor for Australia in terms of the deployment of people management practices is not the high proportion of union membership as such but the difficulties experienced by management in structuring their relationship with workforces in a positive and collaborative way. Australian firms can emulate the world's best by pursuing high performance work practices, lifting management skills and embracing healthy workplace cultures in organisations.

Other important findings show that organisational hierarchy seems to impact management performance in firms. Interestingly, the results show that organisational hierarchy is positively correlated to management scores, a finding which qualifies the trend to flatter structures in firms, possibly indicating that, in the context of Australian manufacturing firms, a certain optimal degree of hierarchy is still necessary for organisation and management of

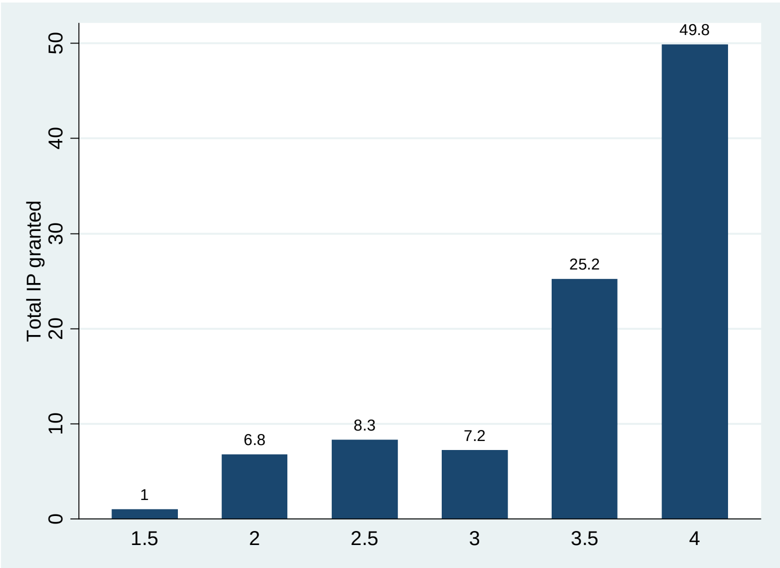
[35] *Wage setting Institutions and Outcomes*, Employment Outlook, (Paris: OECD, 2004), pp 127 – 181.
[36] *Cracking the Performance Code: How the Top Firms Succeed, (*UK Work Foundation 2003, 2005).
[37] L Mishel et. al., *State of working America*, (Ithaca: Cornell University Press, 2008), Chapter 8.

operations. In addition, the degree of manager autonomy[38] is significantly linked to better management, and can explain approximately 4 percent of variability of the management scores. Put simply, the more plant manager autonomy, the better the management performance of firms. What this means is that within manufacturing firms, while a structured hierarchy certainly aids in systematic implementation of management practices, at the same time introducing flexibility in the management style and empowering the workforce for decision-making is also beneficial in driving performance; striking the right balance between organisational structure and levels of autonomy is the key.

Innovation and management practices

There exists a strong and statistically significant relationship between innovation and management practices; the level of innovation can explain approximately 8 per cent of variability within their management scores. Well-managed firms appear to be more innovative, as the highest scoring firms also have the maximum number of innovation patents granted, where the number of innovation patents[39] is used as a proxy indicator of the intensity of innovation activities within the interviewed firms (Exhibit 27).

Exhibit 27-- Management scores and level of innovation



Source: Australian management practices research and IP Australia.

The attention of enterprises needs to increasingly shift towards innovation, entrepreneurial and management talent, which play a critical role in driving competitiveness and growth in the modern economy. As such innovation and management performance go hand in hand. In urging enterprise level innovation, growth and prosperity, the white paper ‘Powering Ideas’ emphasises the importance of management skills and talent where the policy paper

[38] Degree of manager autonomy is measured through an overall index calculated by normalizing the average score of four dimensions of autonomy i.e. hiring and firing autonomy, involvement in introduction of new products, maximum capital expenditures investment allowed, and involvement in sales and marketing decisions.
[39] Number of innovation patents for the manufacturing firms obtained from IP Australia.

acknowledges: “Making innovation work requires a workforce with sophisticated skills of all kinds – including leadership and management skills. It also requires cooperative workplaces in which creativity is encouraged. Few organisations command all the skills needed to innovate successfully on their own. They must network and collaborate – locally and globally”[40].

Key implications for Australia

Effective management is a key driver for enhanced productivity performance within firms and at the industry level. Management capabilities are important contributors to national economic prosperity and sustained innovation. Lifting up Australia’s management standards in a consistent manner calls for aligned efforts and concerted initiatives. To strategically move this forward, there is a need to deploy policy drivers at the firm, the industry level, and the government level.

Where to for Australian enterprises

Focussing on management is paramount for Australian enterprises; firms need to develop a structured approach to improve their management capabilities across the whole of the enterprise. A critical finding is that a majority of Australian enterprises are unaware of their management standards, and are operating under the false premise that their performance is better than it really is. This suggests the need for firms to develop internal policies, systems and processes to formally and regularly measure and assess their management standing against benchmarks, identify performance gaps and initiate improvement measures towards seamlessly building robust and sustainable value. These improvement processes should become a ‘natural way of life’ for enterprises.

Multinational corporations foster global competitiveness through their systematic approach to management, deploying effective management practices that perform consistently across nations, cultures and different market segments. Multinationals are also beneficial to the Australian business landscape as they positively influence the standards of management practices in domestic Australian firms. Foreign MNCs, through their Australian subsidiaries, transfer their global management expertise to the domestic environment, and raise the standards of management performance across the industry through competitive pressures as well as knowledge-sharing interactions between inter- and intra- firms in the market.

Family firms should invest in establishing strategic focus on management. Family-owned and family-managed firms consistently lag behind other public and privately owned firms in terms of their management performance. They should be aware that their path to staying competitive is through building management capability within their firms, by ensuring that key management positions are filled by merit and talent.

Higher skills and education levels both at the managerial levels as well as the general workforce in manufacturing firms are positively and significantly associated with better

[40] *Powering Ideas – An Agenda for the 21st Century*, (Canberra: Commonwealth of Australia, 2009) p.49.

management. It follows that engaging better educated personnel both as managers and shopfloor workers, and constantly upgrading their skills through training and development initiatives, will almost certainly contribute to enhanced management performance within firms.

Autonomous management drives better management performance. Firms can benefit by introducing more flexibility in their management style, decentralising the decision-making processes and developing an empowered workforce, as this unleashes the creative potential and induces a greater sense of accountability amongst the employees, thereby leading to enhanced productivity performance of enterprises.

Where to for government policy-making

Management focus can drive innovation in the economy. The efforts of the Australian government should explicitly incorporate support for management and leadership development into its productivity agenda.

Policies which continue to **encourage the presence of multinationals** will aid in lifting overall productivity performance in Australia. This can be done firstly through policies that attract foreign investment in key industries, and also through local industry development policies that encourage collaboration and associations between domestic firms and foreign MNCs. Through supportive polices, the government can also encourage Australian-based firms to grow their domestic operations internationally and become more globally competitive.

Enhancing labour market flexibility through a workplace relations system that balances flexibility and fairness, while encouraging innovative and collaborative activity, will enable firms to implement better management practices on a sustained basis.

Lastly, **investing in education and fostering skill development** both in the managerial cadre as well as the general workforce in manufacturing firms is extremely important. Talent development is essential for both the younger generations and current managers. Firms develop absorptive capacity as a result of their own knowledge base gained though previous learning exposures and education – doing-by-learning – but also as a by-product of intense activity in the workplace – learning-by-doing.

In conclusion, what does this mean for Enterprise Connect and its clients?

To further a firm's strategic and operational management capabilities, Enterprise Connect needs not only to foster and inculcate the process of dynamic capability building through collaboration, but also should take measures to inculcate, promote and manage higher-order skill-sets for innovation, be they product, process, organisational or managerial innovations[41]. Researchers have suggested that "deliberate efforts to strengthen dynamic

[41] Agarwal, R. & Selen, W., "Dynamic Capability Buildng in Service Value Networks for Achieving Service Innovation", *Decision Sciences*, August 2009, Volume 40, Issue 3, p. 431-475.

capabilities are a genuine option for managers"[42] as they further management capabilities. Moreover, government policies should also target the development of intangible processes and management techniques in order to significantly improve productivity[43]. As such, Enterprise Connect can demonstrate the wealth embedded within organisational business processes and the process of dynamic capability building through road-shows, case studies, showing clients the building blocks and pathways to higher performance levels.

Enterprise Connect can use the findings of this research to strategically prioritise its support to firms operating behind the curve in specific industries and across industries. There is a gap in approaches to developing leadership and management practices, instilling a talent culture in organisations' processes and helping companies to measure their progress and outcomes. Further, organisations need help in developing policies for reward, recognition, pay and promotion so that they are able to invest in the personal growth and human capital development of their employees.

To facilitate innovation within firms, Enterprise Connect may wish to facilitate partnerships with enterprises, research and educational institutions and other public sector agencies when formulating new initiatives. This will not only develop the skills and capabilities of client firms but also of Business Advisers who can contribute further layers of expertise to the process of workplace development. It is this co-evolutionary adaptive process of doing-by-learning and learning-by-doing with a focus on lifelong learning, whilst collaboratively working with their stakeholders, which will keep Australian public policy and enterprises themselves ahead of the curve.

At this juncture, it is important to note that this project looked at medium and large firms, so has its limitations with respect to direct application of these policy changes to the small firms. Considering that such small-sized firms make up a relatively significant proportion of the Australian economy, due caution and consideration is required while extrapolating these policy implications to the cohort of small firms with less than 50 employees.

Managing for high performance

Realising Australia's potential for improved productivity performance will partially depend on improved management capability and skills. This study has indicated not only the significance of the opportunity but also the scale of the challenge. First, it has developed our understanding of the link between management and productivity, as well as other attributes of performance. Second, this has shown where Australia potentially lags behind other countries in the calibre of its management practices, particularly in its approach to people management. And finally the study has pointed to the possible role of public policy in facilitating and encouraging the development of management capability and performance. This applies not just to manufacturing, which was central to the research, but also, as we have seen from an additional study, to the services sector.

[42] Cepeda, G. & Vera, D. "Dynamic Capabilities and Operational Capabilities: a Knowledge Management perspective", *Journal of Business Research,* 2007, 60, p. 426-437.
[43] M. Alexopoulos and T. Tombe, "Management Matters," Manuscript, University of Toronto, 2009 cited in 'Management Matters', Working paper 12, March 2009, http://www.competeprosper.ca/.

The 2008 Review of Australia's National Innovation System, *Venturous Australia*, noted that, "Many government workplace and innovation programs in Australia are directed at technological or scientific innovation while only a few are directed at strengthening innovation management inside organisations, including leadership and culture… The challenge is how best to promote successful adoption and diffusion of high performance work systems in both the public and private sectors"[44]. The challenge has not gone away – addressing it is the key to linking short-term recovery to longer-term competitive advantage through better management of Australian firms and organisations.

[44] "*Venturous Australia"* – Australia's National Innovation System Review (2008) p. 58.

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