

Appendix C Summary question selection and weights

C.1 Strategic Management capability

Table C1: Strategic management capability

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
10. During the year ended 30 June 2016, how many Key Performance Indicators were monitored by this business?	Scaled	a	1 or 2	1/4	Monitoring	0.334
		b	3 to 5	2/4		
		c	6 to 9	3/4		
		d	10 or more	1		
		e	Don't know	0		
		f	No Key Performance indicators monitored	0		
11. What were the topics of focus for the Key Performance Indicators monitored by this business?	List	a	Financial measures	1/8	Planning	0.284
		b	Operational measures	1/8		
		c	Quality measures	1/8		
		d	Innovation measures	1/8		
		e	Human resource measures	1/8		
		f	Environmental measures	1/8		
		g	Social measures	1/8		
		h	Health and safety measures	1/8		
		i	None of the above	0		
12. What best describes the period of time covered by Key Performance Indicators set by management at this business?	Scaled	a	Short-term (up to one year)	1/3	Planning	0.427
		b	Long-term (more than one year)	2/3		
		c	Combination of short-term and long-term	1		
		d	None of the above	0		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
13.1 How frequently were the Key Performance Indicators monitored by managers and non-managers of this business?	Scaled	a	Frequency KPIs monitored by non-managers – Annually	1/4	Execution	0.220
		b	Frequency KPIs monitored by non-managers - Biannually	1/4		
		c	Frequency KPIs monitored by non-managers - Quarterly	2/4		
		d	Frequency KPIs monitored by non-managers - Monthly	2/4		
		e	Frequency KPIs monitored by non-managers - Weekly	3/4		
		f	Frequency KPIs monitored by non-managers - Daily	1		
		g	Frequency KPIs monitored by non-managers - Hourly or more frequently	1		
		h	Frequency KPIs monitored by non-managers - Other review period(s)	0		
		i	Frequency KPIs monitored by non-managers - Never	0		
13.2 How frequently were the Key Performance Indicators monitored by managers and non-managers of this business?	Scaled	a	Frequency KPIs monitored by managers - Annually	1/4	Execution	0.350
		b	Frequency KPIs monitored by managers - Biannually	1/4		
		c	Frequency KPIs monitored by managers - Quarterly	1/2		
		d	Frequency KPIs monitored by managers - Monthly	1/2		
		e	Frequency KPIs monitored by managers - Weekly	3/4		
		f	Frequency KPIs monitored by managers - Daily	1		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
		g	Frequency KPIs monitored by managers - Hourly or more frequently	1		
		h	Frequency KPIs monitored by managers - Other review period(s)	0		
		i	Frequency KPIs monitored by managers - Never	0		
14.1 What were the performance bonuses of managers and non-managers based on?	List	a	No performance bonus system - Non-managers	0	Monitoring	0.076
		b	Own performance based on KPIs -Non-managers	1/4		
		c	Team performance based on KPIs-Non-managers	1/4		
		d	Business performance based on KPIs-Non-managers	1/4		
		e	Other-Non-managers	1/4		
14.2 What were the performance bonuses of managers and non-managers based on?	List	a	No performance bonus system - Managers	0	Monitoring	0.115
		b	Own performance based on KPIs - Managers	1/4		
		c	Team performance based on KPIs - Managers	1/4		
		d	Business performance based on KPIs - Managers	1/4		
		e	Other - Managers	1/4		
15.1 What percentage of non-managers and managers at this business received performance bonuses?	Scaled	a	No performance bonus paid	0	Execution	0.825
		b	1-33% (up to one third)	1/4		
		c	34-66% (up to two thirds)	1/2		
		d	67-99% (more than two thirds to almost all)	3/4		
		e	100% (all)	1		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
15.2 What percentage of non-managers and managers at this business received performance bonuses?	Scaled	a	No performance bonus paid	0	Execution	0.770
		b	1-33% (up to one third)	1/4		
		c	34-66% (up to two thirds)	1/2		
		d	67-99% (more than two thirds to almost all)	3/4		
		e	100% (all)	1		
16.1 What were the primary ways managers and non-managers were promoted at this business?	Scaled	a	Promotions were based solely on performance and ability	1	Execution	0.335
	Scaled	b	Promotions were based partly on performance and ability and other factors	2/3		
	Scaled	c	Promotions were based mainly on factors other than performance and ability	1/3		
	Scaled	d	Staff were not promoted	0		
16.2 What were the primary ways managers and non-managers were promoted at this business?	Scaled	a	Promotions were based solely on performance and ability	1	Execution	0.321
		b	Promotions were based partly on performance and ability and other factors	2/3		
		c	Promotions were based mainly on factors other than performance and ability	1/3		
		d	Staff were not promoted	0		
17.1 When under-performance was identified, were managers or non-managers demoted or dismissed?	Scaled	a	Yes within 6 months	1	Execution	0.192
		b	Yes after 6 months	1/2		
		c	No, not demoted or dismissed	0		
		d	No under-performance identified	0		
	Scaled	a	Yes within 6 months	1	Execution	0.133

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
17.2 When under-performance was identified, were managers or non-managers demoted or dismissed?		b	Yes after 6 months	1/2		
		c	No, not demoted or dismissed	0		
		d	No under-performance identified	0		
18. During the year ended 30 June 2016, who or what determined the type of data to collect in decision making at this business?	List	a	Managers at this business	1/6	Execution	0.227
		b	Managers at another business/entity owned by the same company	1/6		
		c	Employees/non-managers	1/6		
		d	Customers	1/6		
		e	Government regulation	1/6		
		f	Other (please specify)	1/6		
		g	None of the above	0		
19.1 How frequently were each of the following sources of data used in decision making at this business?	List scaled	a	Performance data - Not at all	0	Execution	0.510
		a	Performance data - Daily	1		
		a	Performance data - Weekly	1		
		a	Performance data - Monthly	1		
		a	Performance data - Quarterly	1		
		a	Performance data - Annually	1		
		a	Performance data - Ad hoc	1/2		
19.2 How frequently were each of the following sources of data used in decision making at this business?	List scaled	b	Feedback from managers - Not at all	0	Execution	0.651
		b	Feedback from managers - Daily	1		
		b	Feedback from managers - Weekly	1		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
		b	Feedback from managers - Monthly	1		
		b	Feedback from managers - Quarterly	1		
		b	Feedback from managers - Annually	1		
		b	Feedback from managers - Ad hoc	1/2		
19.3 How frequently were each of the following sources of data used in decision making at this business?	List scaled	c	Feedback from employees/non-managers - Not at all	0	Execution	0.636
		c	Feedback from employees/non-managers - Daily	1		
		c	Feedback from employees/non-managers - Weekly	1		
		c	Feedback from employees/non-managers - Monthly	1		
		c	Feedback from employees/non-managers - Quarterly	1		
		c	Feedback from employees/non-managers - Annually	1		
		c	Feedback from employees/non-managers - Ad hoc	1/2		
19.4 How frequently were each of the following sources of data used in decision making at this business?	List scaled	d	Information from external sources - Not at all	0	Execution	0.628
		d	Information from external sources - Daily	1		
		d	Information from external sources - Weekly	1		
		d	Information from external sources - Monthly	1		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
		d	Information from external sources - Quarterly	1		
		d	Information from external sources - Annually	1		
		d	Information from external sources - Ad hoc	1/2		
20.1 How frequently were each of the following activities influenced by data analysis at this business?	List scaled	a	Design of new goods or services - Not at all	0	Monitoring	0.513
		a	Design of new goods or services - Daily	1		
		a	Design of new goods or services - Weekly	1		
		a	Design of new goods or services - Monthly	1		
		a	Design of new goods or services - Quarterly	1		
		a	Design of new goods or services - Annually	1		
		a	Design of new goods or services - Ad hoc	1/2		
20.2 How frequently were each of the following activities influenced by data analysis at this business?	List scaled	b	Demand forecasting - Not at all	0	Monitoring	0.546
		b	Demand forecasting - Daily	1		
		b	Demand forecasting - Weekly	1		
		b	Demand forecasting - Monthly	1		
		b	Demand forecasting - Quarterly	1		
		b	Demand forecasting - Annually	1		
		b	Demand forecasting - Ad hoc	1/2		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
20.3 How frequently were each of the following activities influenced by data analysis at this business?	List scaled	c	Supply chain management - Not at all	0	Monitoring	0.457
		c	Supply chain management - Daily	1		
		c	Supply chain management - Weekly	1		
		c	Supply chain management - Monthly	1		
		c	Supply chain management - Quarterly	1		
		c	Supply chain management - Annually	1		
		c	Supply chain management - Ad hoc	1/2		
20.4 How frequently were each of the following activities influenced by data analysis at this business?	List scaled	d	Environmental management - Not at all	0	Monitoring	0.422
		d	Environmental management - Daily	1		
		d	Environmental management - Weekly	1		
		d	Environmental management - Monthly	1		
		d	Environmental management - Quarterly	1		
		d	Environmental management - Annually	1		
		d	Environmental management - Ad hoc	1/2		
21. How frequently does this business rely on predictive analysis?	Scaled	a	Daily	1	Execution	0.364
		b	Weekly	3/4		
		c	Monthly	3/4		
		d	Quarterly	3/4		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
		e	Annually	2/4		
		f	Ad hoc	1/4		
		g	Never	0		
29. During the year ended 30 June 2016, did this business have a strategic plan or policy?	Scaled	a	No	0	Planning	0.428
		b	Yes, and described in a written document	1		
		c	Yes, but not a written plan or policy	1/2		
30. Who contributed to developing the content in this business's strategic plan or policy?	List	a	Principal manager	1/9	Planning	0.194
		b	Commercial manager	1/9		
		c	Chief financial officer	1/9		
		d	Production/operations manager	1/9		
		e	Research and development manager	1/9		
		f	Sales/marketing manager	1/9		
		g	Committee, team or board of directors	1/9		
		h	Other person(s) within the business	1/9		
		i	External consultant	1/9		
31. What areas were covered in this business's strategic plan or policy?	List	a	Revenue	1/13	Planning	0.267
		b	KPIs	1/13		
		c	Marketing, advertising and promotion	1/13		
		d	Business continuity/contingency	1/13		
		e	Supply chain	1/13		

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
		f	Innovation	1/13		
		g	Information and communication technology	1/13		
		h	Environmental	1/13		
		i	Workforce	1/13		
		j	Customer relations	1/13		
		k	Social	1/13		
		l	Health and safety	1/13		
		m	Government regulation and compliance	1/13		
		n	None of the above	0		
32. Who was responsible for managing the areas outlined in this business's strategic plan or policy?	List	a	Principal manager	1/8	Planning	0.181
		b	Commercial manager	1/8		
		c	Chief financial officer	1/8		
		d	Production/operations manager	1/8		
		e	Research and development manager	1/8		
		f	Sales/marketing manager	1/8		
		g	Committee, team or board of directors	1/8		
		h	Other person within the business	1/8		
36. To what extent do you agree or disagree with the following statements about entrepreneurial orientation and culture within this business?	List scaled	a	This business takes a proactive approach to market competition	0 (Strongly disagree) / 0.25 (Disagree) / 0.5 (Neither)	Innovation	0.602
		b	This business normally initiates changes upon which its competitors react			0.470

MCM Question Number	Structure Type	Question part	Description	Weight	Sub-Score topic	Question Score
		c	This business often gets involved in high risk/high reward projects	/ 0.75 (Agree) / 1 (Strongly agree)		0.325
		d	This business continually seeks out new partners to collaborate with			0.422
		g	This business constantly reviews its business model			0.529
		h	This business has a high capacity to acquire and exploit knowledge external to the business			0.047
Total Average Strategic Management Capability (SMC) Score						0.386*

Notes: * Average score based on use of ABS Microdata

Source: Australian Bureau of Statistics 2016, Management and Organisational Capabilities of Australian Business, 2015-16. Expanded Confidentialised Unit Record File (CURF), ABS DataLab

C.2 Supply chain management capability

Table C2: Supply chain management capability

Question in MCM	Structure Type	Question Part	Responses	Weight	Question Score
20. How frequently were each of the following activities influenced by data analysis at this business?	Scaled	c	Supply chain management - Not at all	0	0.457
			Supply chain management - Daily	1	
			Supply chain management - Weekly	3/4	
			Supply chain management - Monthly	3/4	
			Supply chain management - Quarterly	3/4	
			Supply chain management - Annually	2/4	
			Supply chain management - Ad hoc	1/4	
31. What areas were covered in this business's strategic plan or policy?	List	e	Supply Chain	1 (Yes)	0.202
				0 (No)	
43. What were the management actions undertaken by the business to respond to the factors affecting the supply chain?	List	a	Assessed and recorded changes associated with the supply chain	1	0.281
		b	Implemented a contingency plan to address risks to the supply chain	1	0.288
		c	Carried out quality assurance testing of supplier's products	1	0.145
		d	Carried out an environmental assessment or accreditation	1	0.065
		e	Carried out quality assurance testing of this business's products	1	0.131
		f	Introduced a tender process to review suppliers	1	0.084
		g	Increased/decreased inventories/stock	1	0.270
		h	Trained suppliers in the business's supply chain products	1	0.047
		i	Trained staff in the business's supply chain practices	1	0.148
		j	Introduced a new market testing process to seek customer/buyer feedback	1	0.070
		k	Introduced new training for staff in customer engagement/assurance	1	0.111
		l	Introduced new KPIs on supply chain performance	1	0.091
		m	Other	1	0.034
		n	None of the above	Exclude	

Total Average Supply Chain Management Capability (SCMC) Score	0.169*
---	--------

Notes: * Average score based on use of ABS Microdata

Source: Australian Bureau of Statistics 2016, Management and Organisational Capabilities of Australian Business, 2015–16. Expanded Confidentialised Unit Record File (CURF), ABS DataLab.

C.3 Digital management capability

Table C3: Digital management capability

Question in MCM	Structure Type	Question Part	Responses	Weight	Question Score
31. What areas were covered in this business's strategic plan or policy?	List	g	Information and communication technology (e.g. digital capability)	1 (Yes)	0.232
				0 (No)	
49. Were any of the following management practices for the use of information and communication technologies and/or the internet implemented?	List	a	Introduced or changed a digital business strategy	1	0.135
		b	Approved the investment in new digital technologies or infrastructure for this business	1	0.202
		c	Introduced new training programs to upskill staff	1	0.154
		d	Reviewed staff performance against digital skills targets	1	0.044
		e	Rewarded individuals or teams involved in the successful introduction of digital technologies or processes	1	0.034
		g	Measured the contribution of digital activities to overall business performance	1	0.054
		h	Joint buying of digital technology or services	1	0.032
		i	Upgraded cybersecurity software, standards or protocols	1	0.195
		j	Other (please specify)	1	0.001
		k	None of the above	Exclude	
Total Average Digital Management Capability (DMC) Score					0.108*

Notes: * Average score based on use of ABS Microdata

Source: Australian Bureau of Statistics 2016, Management and Organisational Capabilities of Australian Business, 2015–16. Expanded Confidentialised Unit Record File (CURF), ABS DataLab.

C.4 Environmental management capability

Table C4: Environmental management capability score

Question in MCM	Structure Type	Question Part	Description	Weight	Question Score
11. What were the topics of focus for the Key Performance Indicators monitored by this business?	List	f	Environmental measures	1 (Yes)	0.135
				0 (No)	
20. How frequently were each of the following activities influenced by data analysis at this business?	Scaled	d	Environmental management - Not at all	0	0.422
			Environmental management - Daily	1	
			Environmental management - Weekly	3/4	
			Environmental management - Monthly	3/4	
			Environmental management - Quarterly	3/4	
			Environmental management - Annually	2/4	
			Environmental management - Ad hoc	1/4	
31. What areas were covered in this business's strategic plan or policy?	List	h	Environmental	1 (Yes)	0.126
				0 (No)	
46. Did this business undertake any of the following environmental management activities?	List	a	Measures to reduce material resource inputs and/or improve material resource efficiency	1	0.159
		b	Measures to reduce energy consumption and/or improve energy efficiency	1	0.284
		c	Measures to reduce water consumption and/or improve water efficiency	1	0.146
		d.1	Reduced environmental footprint through: research and development	1	0.049

Question in MCM	Structure Type	Question Part	Description	Weight	Question Score
		d.2	Reduced environmental footprint through: any new or improved good, service, operational process or management practice	1	0.088
		e	Measures to encourage environmental sustainability in customers and/or consumers	1	0.083
		f	Recycling or reuse of materials	1	0.361
		g	Environmental or green purchasing activities	1	0.097
		h	Environmental education and training of staff	1	0.111
		i	Environmental impact assessment/risk assessment	1	0.094
		j	Waste audit	1	0.083
		k	Measures to reduce pollution of soil, water and waterways	1	0.088
		l	Life cycle assessment, management or product stewardship	1	0.032
		m	Product design or reformulation to reduce environmental impacts	1	0.043
		n	Implemented or improved an environmental policy, plan or system	1	0.066
		o	Employment of staff with explicit responsibility for environmental management	1	0.052
		p	Measures to reduce air pollution including greenhouse gas emissions	1	0.048
		q	None of the above	Exclude	
Total Average Environmental Management Capability (EMC) Score					0.125

Notes: * Average score based on use of ABS Microdata

Source: Australian Bureau of Statistics 2016, Management and Organisational Capabilities of Australian Business, 2015–16. Expanded Confidentialised Unit Record File (CURF), ABS DataLab

Appendix D Methodology for developing comparative scores of structured management practices for Australian and US firms

Table D1: US MOPS and MCM comparison survey results

MCM Question Number	Response	Weight	AU per cent of respondents (%)	US per cent of respondents (%)
10	1 or 2	0.33	15.90	7.95
	3 to 9	0.67	24.30	47.97
	10 or more	1.00	10.70	34.65
	No Key Performance Indicators monitored	0.00	49.20	9.43
	Don't know	0.00	-	-
13 - Non-managers*	Annually / Biannually	0.17	4.49	14.31
	Quarterly	0.33	3.58	18.97
	Monthly	0.50	8.79	27.74
	Weekly	0.67	5.62	17.27
	Daily	0.83	7.24	17.74
	Hourly or more frequently	1.00	1.13	4.08
	Never	0.00	69.20	26.51
	Other review period(s)	0.00	-	-
13 - Managers*	Annually / Biannually	0.17	6.41	18.74
	Quarterly	0.33	7.09	22.19
	Monthly	0.50	20.80	39.97
	Weekly	0.67	9.99	27.99
	Daily	0.83	8.33	25.65
	Hourly or more frequently	1.00	0.87	3.51

MCM Question Number	Response	Weight	AU per cent of respondents (%)	US per cent of respondents (%)
	Never	0.00	46.50	9.64
	Other review period(s)	0.00	-	-
12	Short-term (up to one year) Key Performance Indicators	0.33	35.20	34.29
	Long-term (more than one year) Key Performance Indicators	0.67	8.89	2.92
	Combination of short-term and long-term Key Performance Indicators	1.00	46.40	50.85
	None of the above	0.00	9.52	11.94
	No response	0.00		
14 - Non-managers*	Based on their own performance as measured by KPIs	1.00	8.18	13.16
	Based on their team or shift performance as measured by the KPIs	0.67	1.77	6.84
	Based on the business's performance as measured by KPIs	0.33	5.32	38.99
	No performance bonus system	0.00	84.70	54.40
	Other	0.00	-	-
15- Non-managers	No performance bonus paid	0.00	86.20	58.02
	1-33% (up to one third)	0.25	5.84	8.23
	34-66% (up to two thirds)	0.50	1.58	2.52
	67-99% (more than two thirds to almost all)	0.75	2.30	7.87
	100% (all)	1.00	4.07	23.36
	No response	0.00	-	-

MCM Question Number	Response	Weight	AU per cent of respondents (%)	US per cent of respondents (%)
14-Managers*	Based on their own performance as measured by KPIs	1.00	9.84	17.64
	Based on their team or shift performance as measured by the KPIs	0.67	1.28	8.48
	Based on the business's performance as measured by KPIs	0.33	9.05	59.64
	No performance bonus system	0.00	79.80	41.06
	Other	0.00		
15 - Managers	No performance bonus paid	0.00	83.40	44.27
	1-33% (up to one third)	0.25	6.22	10.75
	34-66% (up to two thirds)	0.50	1.58	3.12
	67-99% (more than two thirds to almost all)	0.75	3.39	9.03
	100% (all)	1.00	5.43	32.84
	No response	0.00	-	-
16 - Non-managers	Promotions were based solely on performance and ability	1.00	23.90	68.33
	Promotions were based partly on performance and ability and partly on other factors (e.g. tenure/time-in-business)	0.67	11.50	13.50
	Promotions were based mainly on factors other than performance	0.33	1.51	1.86
	Staff were not promoted	0.00	63.20	16.31
	No response	0.00		

MCM Question Number	Response	Weight	AU per cent of respondents (%)	US per cent of respondents (%)
16 - Managers	Promotions were based solely on performance and ability	1.00	22.30	65.64
	Promotions were based partly on performance and ability and partly on other factors (e.g. tenure/time-in-business)	0.67	10.20	10.66
	Promotions were based mainly on factors other than performance	0.33	1.34	1.44
	Staff were not promoted	0.00	1.34	1.44
	No response	0.00	-	-
17 - Non-managers	Yes, demoted or dismissed within 6 months of identifying under-performance	1.00	13.00	46.62
	Yes, demoted or dismissed after 6 months of identifying under-performance	0.50	8.08	20.15
	No, not demoted or dismissed / No under-performance identified	0	79.00	33.23
17 - Managers	Yes, demoted or dismissed within 6 months of identifying under-performance	1.00	6.65	33.01
	Yes, demoted or dismissed after 6 months of identifying under-performance	0.50	6.47	24.19
	No, not demoted or dismissed / No under-performance identified	0	86.90	42.80

Notes: * Respondents instructed to "Select all that apply", response sum to greater than 100 per cent

Source: Australian Bureau of Statistics 2016, Management and Organisational Capabilities of Australian Business, 2015–16. Expanded Confidentialised Unit Record File (CURF), ABS DataLab.

U.S. Census Bureau, Massachusetts Institute of Technology, National Bureau of Economic Research, and Stanford University; 2015 Management and Organizational Practices Survey