

Characteristics of Japanese Corporations with Manufacturing Facilities in Australia

Yasuo Hoshino
Terrence J. Byfield

CHARACTERISTICS OF JAPANESE CORPORATIONS WITH MANUFACTURING FACILITIES IN AUSTRALIA

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1. INTRODUCTION

Manufacturing activities in Australia have undergone significant structural change over the fifteen or so years. Imports of manufactured goods have risen markedly, exports have fallen and consequently the output and employment levels in Australian manufacturing industries are depressed. (See Bureau of Industry Economics (3).)

In sharp contrast to the decline of Australian manufacturing activity, the output of Japanese industry has expanded and new export markets have been developed. During this same period a number of Japanese companies have setup manufacturing facilities in Australia or acquired interests in existing operations.

The success of the Japanese manufacturing companies in developing a competitive advantage in terms of both cost and quality with products manufactured at home plants has been ascribed to their management practices. The visible expansion of the "local" Japanese manufacturing activity in the face of the overall contraction of industry points to success here in Australia as well as success domestically.

A previous study by JETRO(7) in 1984, examined overall management and structural characteristics of Japanese companies with manufacturing facilities in Australia. The purpose of this study is to examine more deeply the production and management systems of these companies.

The primary research data for the study were obtained by surveying these companies directly. Information on management practices and company statistics was requested from all companies which were identified as ml having significant Japanese equity and whose activities included manufacturing operations.

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2. SURVEY DESIGN

Questionnaires were sent to forty-two companies requesting data for the study.¹⁾ Responses were received from a total of twenty-nine companies (69%) from which twenty-one (50%) usable questionnaires were obtained (Refer Appendix A). Six companies declined to participate in the study on the basis of company policy, minimal Japanese influence in management or business circumstances. No response at all was received from the remaining thirteen companies.

Of the twenty-one valid questionnaires used for this study, seven (33%) were completed by a Japanese-national. In six of these instances (86%) the Japanese respondent was the Chief Executive Officer. A total of nine questionnaires (43%) were completed by the CEO of the responding organization.

The questionnaires was comprised of four sections with a total of sixty-one questions. Section 1 of the questionnaires was designed to collect statistics that could be used to classify the nature and size of the business and the degree and extent of Japanese involvement. Section 2 was designed to classify the nature of the manufacturing operations performed and the level of technology employed. Sections 3 and 4 sought to identify elements of management structure and style.²⁾

3. FINDINGS

3.1 NATURE AND SIZE OF JAPANESE MANUFACTURING COMPANIES

The absolute number of Japanese companies with manufacturing facilities in Japanese is understandably small. According to a survey prepared by the Australia-Japan Economic Institute (1) there are a total of thirty-eight "manufacturing" companies in Australia in which there is direct investment by Japanese firms. Four additional companies are listed by Toyo Keizai Shinposha (12).

Table 1 lists the industry classification of the respondent companies that are included in this study (Refer Appendix A). The Electronics (24%), Automotive (24%) and Rubber/Plastics (19%) industries account for two thirds (67%) of the respondent companies engaged in local manufacture. The "Other" industry grouping is not focused

1) The initial 24 questionnaires were addressed and mailed to the Managing Director of the target company in person. All subsequent mailings were addressed to: "The Managing Director" or "The General Manager" of the target company.

2) Questions in sections, 2.2, 3.1, 3.2 and 4.1 draw on a questionnaire by Kagono (6).

in any particular industry. The activities of these companies are diverse and range from : malt, "zipper" and crane manufacture to smelting and tanning.

Table 1. Japanese Equity and Managerial Control by Industry

Industry	Total Number of Companies	Total 3) Paid-up Capital \$A mil	Japanese Equity %	Number of Co's with Japanese CEO	Number of Co's with Japanese Mgr/Tech
Electronics	5	54	100	5	5
Automotive	5	106	96	4	5
Rubber/Plastics	4	5	86	1	3
Forest Products	1	8	100	1	1
Other	6	105	53	3	4

Eighty-six percent of the companies surveyed have at least one Japanese-national employee. Two-thirds (67%) of the companies have a Japanese Chief Executive Officer and three-quarters (76%) have at least one Japanese technical/liaison specialist. The mean number of technical/liaison specialists per company is 2.6 persons.

Employment levels in manufacturing related positions are modest. Only four companies employ more than 400 employees (19%). Over two thirds (71%) of the companies employ less than 200 employees in manufacturing related activities (See Table 2.)

Table 2. Manufacturing-Related Employment Levels of Japanese Companies in Australia

Employment Level	Number of Companies	% of Total	Cumulative % of Total
under 100	11	52	52
100 - 200	4	19	71
200 - 300	0	0	71
300 - 400	2	10	81
over 400	4	19	100

Respondents were asked for relative figures on the sources of material/components and not actual usage statistics. This analysis therefore is in relative terms. Table 3 summarizes the figures for comparison.⁴⁾ It is clear that, although the Automotive industry sources only a moderate proportion (16%) of its materials from Japan,⁵⁾ this

3) Figures on paid-up capital were obtained from the Toyo Keizai Shinposha (12).

4) The figures set-out in Table 3 have been arrived at by weighting the reported percentage of Japanese-sourced material/components by the reported gross-sales value of locally manufactured goods.

5) Federal government "local content plan" encourages motor vehicle manufacturers to reach 85% local content in locally manufactured vehicles. Export credits are given for vehicles and components exported. See for example Suzuki (10).

represents over half (54%) of all the materials sourced by the respondent companies. The Electronics industry, by way of contrast, sources approximately 55% of its materials/components from Japan but this represents only 38% of the total Japanese-sourced materials. The Rubber/Plastics and "Others" grouping, procure almost all their materials (93%) from Australian sources. The materials sourced from Japan by this group represents only 8% of the total materials/components sourced.

Table 3. Relative Proportions of Materials/Components Sourced from Japan by Industry

Industry	Sales of Local Mfg \$A mil	Weighted % Matls Sourced from Japan
Electronics	225	55
Automotive	1098	16
Rubber/Plastics	21	7
Other	371	7

Of the companies surveyed, local manufacturing activity is clearly focused on the Automotive industry which accounts for 64% of the total value of goods manufactured locally by the respondents. The Electronics industry accounts for around 13%, while the "Other" grouping accounts for 22% of the goods manufactured. The group "Others" has the highest ratio of local manufacture to total sales⁶⁾ (91%) followed by the Automotive industry (59%), the Electronic industry (38%) and the Rubber/Plastics industry (32%) (Refer Table 4).

Table 4. Sales of Locally Manufactured Goods by Industry

Industry	Total Sales \$A mil	Local Mfg Sales \$A mil
Electronics	597	225 (38%)
Automotive	1858	1098 (59%)
Rubber/Plastics	66	21 (32%)
Other	409	371 (91%)

The actual level of direct investment by Japanese companies is difficult to determine by virtue of the fact that all but four of the companies are Proprietary Limited companies and as such full financial figures are not readily available. Table 5 lists the level of Japanese-equity in the surveyed companies, measured in terms of the nominal value of paid-up capital. On this basis it is apparent that the level of investment is quite modest.

6) This ratio, local manufacture to total sales is distorted in the instances where sales of imported goods are not reported by the responding company but are handled by an associate company.

Almost half (48%) of the companies have investments of less than \$A 2,500,000, three-quarters (76%) of the companies have investments of less than \$A 10,000,000 and only four of the companies (19%) have investments exceeding \$A 20,000,000.

The equity in these companies is closely held. The overall level of equity held in the respondent companies by Japanese interests is approximately 80%. The Electronics and Forest products industries are each 100% owned by Japanese shareholders, the Automotive industry 96%, the Rubber/Plastics industry 86% and the "Other" category 53% owned by Japanese shareholders. (Refer Tables 1 and 5).

Table 5. Level of Capitalization in Terms of Paid-up Capital

Japanese Equity ⁷⁾ \$A mil	Japanese Equity %	Number of Companies
0 - 2.5	86	10 (48%)
2.5 - 5	78	3 (14%)
5 - 10	100	3 (14%)
10 - 20	100	1 (5%)
over 20	77	4 (19%)

Table 6. Nature of Manufacturing Activities⁸⁾

Mode of manufacture	Number of Companies	% of Total	Electronics				
			Automotive	Rubber/Plastic	Forest	Other	
Kit assembly	3	14	2	1	0	0	0
Assembly	9	43	3	4	1	0	1
Subassembly	4	19	0	2	1	0	1
Commissioning	1	5	0	0	0	0	1
Fabrication	11	52	1	4	3	0	3
Primary manufacture	6	29	0	0	1	1	4
Continuous process	2	10	0	1	1	0	0
Other	0	0	0	0	0	0	0

3.2 NATURE OF MANUFACTURING OPERATIONS

Table 6 sets out the modes of manufacture adopted by the respondents. The most common modes adopted by the companies surveyed are assembly (57%) and fabrication (52%) operations, followed by primary manufacture (29%) and continuous process

7) Calculated by applying % equity figure obtained from the survey to the paid-up capital value reported by Toyo Keizai Shinposha (12).

8) Companies may adopt one or more modes of manufacture and therefore these figures contain multiple responses.

(10%). The Electronics industry respondents perform mainly assembly operations, only one of those respondents (20%) also reported fabrication operations. In contrast to this the Automotive group perform both assembly and fabrication operations. Kit assembly operations were reported by two (40%) of the Electronics and one (20%) of the Automotive companies.

Table 7 sets out the methods of manufacture employed by the respondents. High volume manufacturing methods are dominant in the companies surveyed. No low volume methods were reported in the Automotive sector and only one of the Electronic companies (20%) included Small batch/Job-shop methods. Mass production manufacturing methods were reported by almost three-quarters (71%) of the respondents. Forty-three percent reported Continuous process and 38% reported Large batch methods. Small batch/Job-shop methods were reported by six respondents (29%) and only three companies reported using Custom-built methods.

Table 8 summarizes the level of technology employed by the respondent companies. In overall terms the level of manufacturing technology is relatively high. Almost half (48%) of the companies reported the use of Computer Aided Manufacturing (CAM), one-third (33%) utilize Robotics technology and over one-quarter (29%) utilize Computer Aided Design (CAD). Flexible Manufacturing Systems technology is employed by a little over a third (38%) of the respondents while Computer Integrated Manufacturing is in place in three of the companies (14%).⁹⁾

Table 7. Manufacturing Methods Employed¹⁰⁾

Mode of manufacture	Number of Companies	% of Total	Electronics Automotive Rubber/Plastic Forest Other				
			Electronics	Automotive	Rubber/Plastic	Forest	Other
Custom-built	3	14	0	0	2	0	1
Small batch/Job-shop	6	29	1	0	3	0	2
Large batch	8	38	1	2	2	0	3
Mass production	15	71	5	4	3	1	2
Continuous process	9	43	3	1	2	0	3

9) Robotics, Computer Aided Design (CAD), Computer Aided Manufacture (CAM), Flexible Manufacturing Systems (FMS) and Computer Integrated Manufacturing (CIM) are (overlapping) contemporary technologies that embody computing power.

10) Companies may employ any number of manufacturing methods and therefore these figures contain multiple responses.

Table 8. Manufacturing Technology Employed¹¹⁾

Mode of manufacture	Number of Companies	% of Total	Electronics Automotive Rubber/Plastic Forest Other				
			Electronics	Automotive	Rubber/Plastic	Forest	Other
Robotics	7	33	2	2	1	0	2
Computer Aided Design	6	29	2	3	0	0	1
Computer Aided Manufacturing	10	48	2	3	1	0	4
Flexible Manufacturing	8	38	1	3	2	0	2
Computer Integrated Mfg	3	14	1	0	0	0	2

The formal "Japanese" manufacturing management techniques are practiced by all but three of the respondents (86%). Quality Circles (QC) programs were reported by 67% of the companies, Total Quality Control (TQC) by 57% and Just In Time (JIT) by 38%. Three companies reported "Other" formal techniques. The Automotive and Electronics industry respondents each employ one or more of the techniques. (Refer Table 9.)

Table 9. Manufacturing Management Techniques Employed¹²⁾

Mode of manufacture	Number of Companies	% of Total	Electronics Automotive Rubber/Plastic Forest Other				
			Electronics	Automotive	Rubber/Plastic	Forest	Other
Total Quality Control	12	57	3	4	3	0	2
Just In Time	8	38	2	5	1	0	0
Quality Circles	14	67	5	4	1	0	4
Other	3	14	0	2	1	0	0

3.3 MANAGEMENT STYLE

The responses to questions dealing with organization structure are tabulated in Table 10. The respondents were asked to indicate their perception of the appropriateness of a particular statement or proposition in describing their organization. For each question five different scores were available to indicate the degree of agreement or disagreement with the proposition.

The survey results indicate that authority and responsibility are defined to a fairly strong degree. Sixty-two percent of the respondents felt that the statement, "the authority and responsibility of every executive is clearly and concretely defined", was

11) Companies may employ several classes of technology concurrently and therefore these figures contain multiple responses.

12) Companies may utilize several management techniques and therefore these figures contain multiple responses.

Table 10. Description of Company Organization

PROPOSITION DESCRIBING COMPANY ORGANIZATION	Number of Responses					% of Total Responses
	Definitely true	Somewhat true	Cannot say	Somewhat incorrect	Definitely incorrect	
1 The authority and responsibility of every executive is clearly and concretely defined.	3 14%	13 62%	1 5%	3 14%	1 5%	
2 Planned job rotation of managers is emphasised as a device for developing their capabilities.	0 0%	3 14%	5 24%	6 29%	7 33%	
3 Even first-line employees have intimate knowledge about the basic policies of the company.	1 5%	8 38%	3 14%	5 24%	4 19%	
4 Individual manager's initiative is valued more than harmony of human relations.	1 4%	6 29%	5 24%	7 33%	2 10%	
5 Career paths for specialists as well as for managerial personnel are clearly defined.	2 10%	3 14%	8 37%	6 29%	2 10%	
6 Consensus is heavily emphasised in decision making.	5 24%	11 52%	0 0%	3 14%	2 10%	
7 Conflict among executives is promptly resolved based on superiors' authority.	4 19%	7 33%	4 19%	4 19%	2 10%	
8 Job descriptions for executives are general and applied flexibly.	2 10%	16 76%	0 0%	3 14%	0 0%	
9 Executives and employees share a considerable amount of information.	3 14%	10 48%	2 10%	3 14%	3 14%	
10 Senior executives have frequent meetings with line managers and supervisors.	8 38%	7 33%	2 10%	4 19%	0 0%	
11 The performance of managers is evaluated by end results rather than by the amount of the effort.	3 14%	9 43%	3 14%	5 24%	1 5%	
12 Executives exchange information in advance of formal meetings so that differences of opinion are not aired at meetings.	2 10%	7 33%	4 19%	5 24%	3 14%	

"somewhat true" and 14% felt that it was "definitely true". Only one respondent (5%) scored this as being "definitely incorrect". However there is a strong preference for "general" job descriptions. Eighty-six percent of the respondents indicated that the proposition: "job descriptions for executives are general and therefore applied flexibly" was "true". (The eighth proposition)

Planned job rotation is not favoured by the majority of respondents. To the second proposition, "planned job rotation of managers is emphasised as a device for developing their capabilities", 33% indicated that it was "definitely incorrect" and 29% felt that it was "somewhat incorrect". Twenty-four percent had no definite opinion, while there were no responses indicating that it was definitely true. In a like manner career planning is not favoured. To the fifth proposition: "career paths for specialists as well as for managerial personnel are clearly defined", 39% scored it as "incorrect", while only 24% scored it as "true".

On the topic of knowledge of company policy, responses were divided fairly evenly

for (total 43%) and against (total 43%) the third proposition: "even first-line employees have intimate knowledge about the basic policies of the company".

Harmony and good relations were valued highly. In response to the fourth proposition: "individual manager's initiative is valued more than harmony of human relations", 43% favoured harmony as against 33% for individual initiative. Similarly the resolution of conflict was seen as important. Fifty-two percent agreed with the seventh proposition: "conflict among executives is promptly resolved based on superiors' authority", whereas 29% disagreed.

Consensus was valued very highly with 76% agreeing with the sixth proposition, "consensus is heavily emphasised in decision making". However in response to the last proposition that, "executives exchange information in advance of formal meetings so that differences of opinion are not aired at meetings", opinion was fairly evenly divided. Forty-three percent were in agreement and 38% were against.

On the topic of performance evaluation there was a fairly strong preference for evaluation by means of end results. Fifty-seven percent of the respondents indicated that the eleventh statement: "the performance of managers is evaluated by end results rather than by the amount of the effort", was true whereas only 29% felt that it was not true.

Human communication was rated highly by the respondents. To the ninth proposition: "executives and employees share a considerable amount of information", 48% scored the statement as "somewhat true" and a further 14% scored it as "definitely true". Similarly to the tenth proposition: "senior executives have frequent meetings with line managers and supervisors", 38% scored it as "definitely true" and 33% scored it as "somewhat true".

The responses to questions dealing with personal traits are tabulated in Table 11. The respondents were asked to indicate their perception of the appropriateness of a particular statement or proposition in describing personal traits. For each question five scores were possible to indicate the degree of desirability of various traits/competences.

Professional competence was valued very highly in a number of different but related questions. In all but one instance depth of professional knowledge was valued very highly. Forty-eight percent of the respondents rated it as "indispensable" and a further 48% rated it as "important". This was supported by a very strong preference for the ability to produce and accept new ideas, with no respondents indicating that was "undesirable" or "not important". Similarly high values were placed on detailed

Table 11. Importance of Personal Traits and Capabilities for Senior Executives

PROPOSITIONS DESCRIBING PERSONAL TRAITS OF SENIOR EXECUTIVES	Number of Responses				
	Indispensable	Important	Desirable	Not important	Undesirable
	% of Total Responses				
1 Depth of professional knowledge in specific field	10 48%	10 48%	0 0%	1 4%	0 0%
2 General knowledge of the company and its business	9 42%	10 48%	1 5%	1 5%	0 0%
3 Ability to produce and accept new ideas	4 19%	15 71%	2 10%	0 0%	0 0%
4 Sound and consistent values and beliefs	5 24%	9 42%	5 24%	2 10%	0 0%
5 Willingness to take risk	3 14%	7 33%	6 29%	3 14%	2 10%
6 Ability to formulate detailed plans	6 29%	11 52%	3 14%	0 0%	1 5%
7 Commitment to and identification with company	5 24%	12 57%	3 14%	1 5%	0 0%
8 Ability to promote harmony and collaboration among peers and subordinates	9 43%	6 28%	5 24%	0 0%	1 5%
9 Sense of equity and fairness	4 19%	14 66%	2 10%	1 5%	0 0%
10 Past record of successful performance	1 5%	10 48%	7 33%	3 14%	0 0%
11 Ability to integrate diverse information	1 5%	9 42%	10 48%	1 5%	0 0%
12 Popularity and credibility with subordinates	4 19%	8 38%	7 33%	2 10%	0 0%

planning ability (29% "indispensable", 52% "important" and 14% "desirable"). (No. 6) Past record of successful performance scored positively. (No. 10) Only 14% considered it as "not important" and no respondents considered it to be "undesirable". The ability to integrate diverse information was also valued highly, with only 5% considering it to be "not important" and no respondents considering it to be "undesirable". (No. 11)

The ability to promote harmony and attain popularity was valued fairly highly. (No. 8) Forty-three percent considered it to be "indispensable", 28% "important", 24% "desirable" and 5% "undesirable". The sense of fairness was valued slightly more highly. (No. 9) Only one negative score of "not important" was recorded. Popularity and credibility with subordinates was also valued highly. (No. 12) Nineteen percent indicated that it was "indispensable", 38% "important", 33% "desirable" and 10% "not important".

Sound and consistent beliefs were valued highly. (No. 4) Only ten percent of respondents considered that the adoption of sound and consistent values and beliefs was "not important". All other responses for these aspects were positive.

Table 12. Organizational Devices/Systems

Organizational Device/System	Number of Companies	% of Total
Formalized job descriptions	15	71
Standard cost accounting system	15	71
Flexible budget control system	16	76
Performance evaluation	9	43
Monthly operations reporting	19	90
Management By Objectives (MBO)	12	57
Strategic planning	14	67
Contingency planning	16	76
Capital budgeting	18	86
Matrix organization	5	24

Knowledge of company business and commitment to the company were overwhelmingly valued highly with only one respondent (5%) scoring each of these aspects negatively. (No. 2) However, on the subject of risk taking, opinion was divided. Twenty-four percent of the respondents considered the willingness to take risk as either "indispensable" (14%) or "undesirable" (10%). (No. 5)

3.4 MANAGEMENT CONTROL SYSTEMS

The majority of the companies surveyed employed formal management control systems. Table 12 tabulates the survey results for the incidence of organizational devices/systems.

Formalized job descriptions were employed by 71% of the respondents. However, as exposed in the preceding section job descriptions are apparently general and applied flexible. Management By Objectives (MBO) system were reported by 57% and performance evaluation system were reported by 43% of the respondents.

Monthly operations reporting was reported by 90% of the respondents. Standard costing system are in use in 71% of the companies and flexible budgeting is used in 76% of the companies.

Formal strategic planning (67%) and contingency planning (76%) systems are in place in the majority of companies. Capital budgeting systems are used by 86% of the organizations. The presence of these planning system in conjunction with the reporting systems dealt with in the preceding paragraph point to a high degree of internal management control in the local subsidiaries.

There is a high utilization of computerised "operations" systems in the companies surveyed. This is in sharp contrast to the low incidence of technical and modelling

systems. Table 13 tabulates the results of the survey.

Computerised accounting systems are in place in the vast majority of respondent companies. Financial accounting systems were reported by 95%, cost accounting by 86% and payroll preparation systems by 81% of the companies.

There is also a fairly high incidence of production and inventory control systems. Production control systems are utilized by 76% of the respondents while inventory control and purchasing systems are each reported by 71% of the companies and materials requirements planning systems by 57% of the respondents.

The incidence of process and quality control systems is much lower. Process control systems were reported by 43% and quality control systems by only 29% of the respondents. Scientific/technical systems were reported by 43% of the companies while demand forecasting was reported by 24% and simulation/modelling by only 14%.

Table 13. Utilization of Computerised Systems

Computerised System	Number of Companies	% of Total
Production control	16	76
Process control	9	43
Quality control	6	29
Inventory control	15	71
Material requirements planning	12	57
Financial accounting	20	95
Cost accounting	18	86
Payroll preparation	17	81
Personnel records	8	38
Demand forecasting	5	24
Scientific/technical	9	43
Simulation/modelling	3	14
Purchasing	15	71
Sales order processing	12	57

4. CONCLUSIONS

The Japanese companies with manufacturing facilities in Australia are concentrated in the Electronics and Automotive industries. A substantial proportion of these companies' sales are of good manufactured outside Australia. The manufacturing operations performed in Australia are mainly high-volume fabrication and assembly operations of components and materials which are sourced from Japan.

The majority of the local subsidiaries have a Japanese CEO and a small number of

Japanese technical specialists/co-ordinators. The size of Australian operations, in terms of capitalization and employment levels, is fairly small. Japanese equity holding is very high and most of the respondent companies are subsidiaries of Japanese parent companies.

The majority of the companies utilize Computer Aided and/or Robotics manufacturing technology. Computer Aided Design technology is utilized to a lesser yet significant extent even though the local operations are, by and large, limited to assembly of components produced overseas.

Formal management control systems are employed by most of the Japanese manufacturing companies. Computerised management information and operations planning systems are utilized extensively. However, because the local subsidiaries tend to be assembly facilities for products designed and partially manufactured overseas, the utilization of computerised simulation and modeling is very low.

The much vaunted, Just In Time, Quality Circles and Total Quality Control, production management techniques are practiced by a significant number of the Australian subsidiaries. However these Japanese production management techniques are also employed by non-Japanese companies. The local Automotive industry in particular, uses these techniques to improve productivity and competitiveness.¹³⁾

Some of the characteristically Japanese organizational traits are evident in the Australian subsidiaries despite the small, albeit influential, number of Japanese managers employed in the operations. There is a clear tendency to emphasise harmony and consensus and to engender good communications/dialogue throughout the organization. However, in contrast to the archetypical Japanese organization, specialist professional knowledge, individual's achievement of end results and personal initiative are valued highly.

13) The Just In Time production system was cited as the reason for standing-down production workers at a number of Ford and General Motors car plants following an industrial dispute at a Borg-Warner axle plant. Because the systems are in their infancy they are vulnerable to industrial disruptions. (Sydney Morning Herald (11)).

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APPENDIX A

COMPANIES PARTICIPATING IN THE STUDY

	Japanese Equity %	Paid-up Cap \$A mil	Number of Employees
ACASAS Pty Limited	83	1.0	56
Australian Char (Holdings) Pty Limited(+)	26	2.1	70
Australian Motor Industries Limited	50	7.1	2200
Boyne Smelters Limited	50	97.0	950
Diesel Kiki Co Australia Pty Limited	50	0.05	94
Eagle-West Pty Limited	100	.3	16

Harris-Daishowa (Australia) Pty Limited	67	7.5	130
Hoya Lens Australia Pty Limited	80	.3	70
KBB Malting Co Pty Limited	100	6.0	23
Kobe Aluminum (Australia) Pty Limited(+)	10	8.7	3
Matsushita Electric Co (Aust) Pty Limited	100	25.0	150
Mitsubishi Motors Australia Limited	98	59.0	4264
NEC Australia Pty Limited	100	9.2	930
NEC Home Electronics Pty Limited	100	2.0	358
Nippondenso (Australia) Pty Limited	100	4.0	530
Pilon Plastics Pty Limited	40	1.25	28
Sanyo Australia Pty Limited	100	5.0	350
Sharp Corporation of Australia Pty Limited	100	12.4	370
Terumo (Australia) Pty Limited	100	1.5	147
Toyo Australia Limited	100	2.4	170
Toyota Manufacturing Australia Pty Limited	100	36.0	470
Valpak Pty Limited	80	.3	35
YKK Australia Pty Limited	50	.6	128

(+) Survey results not included in study due to minority Japanese (26%) shareholding.

(*) Survey results not included in study because manufacturing activity included with Boyne Smelters Limited.

APPENDIX B

QUESTIONNAIRE

The completion of this questionnaire in its entirety will be appreciated. However, even the partial or selective completion will be of value to our study. If you cannot for some reason, answer a specific question please leave it blank and proceed with other questions.

Most of the questions do not require detailed figures or data. We would like to know your judgement of "how things actually are" rather than "how things ought to be". Please respond to each question, reflecting the "way it is" in your company.

It is understood that this information is confidential and accordingly every precaution is being taken to protect your company. All responses will be treated in the strictest confidence and not disclosed to any other party.

Please return this questionnaire as soon as possible to :

T.J. Byfield

c/o Prof Y. Hoshino

Faculty of Commerce

University of New South Wales

PO Box 1
KENSINGTON NSW 2033

Thank you for your cooperation.

Do you wish to receive a copy of the report? yes-no

Name and address for copy of report :

Name : _____

Position : _____

Address : _____

1. Nature of Business and Major Product Lines

1.1 Which major industry classification best describe your manufacturing operations? Please circle one classification.

- | | |
|-------------------|-------------------|
| 1 Electronics | 4 Farm Machinery |
| 2 Automotive | 6 Packaging |
| 3 Whitegoods | 7 Forest Products |
| 4 Rubber/Plastics | 8 Other _____ |

1.2 What is the total number of employees in your Australian operations? _____

1.3 What is the total number of employees engaged in manufacturing and manufacturing related activities? _____

1.4 What is the total number of Japanese managers and specialists employed in manufacturing and manufacturing related activities? _____

1.5 Is the Chief Executive of the Australian operations a Japanese national? _____

1.6 Please indicate the relative proportions of equity held by :

- | | |
|-------------------------------------|--------|
| 1 Your parent company and associats | _____% |
| 2 Other Japanese companies | _____% |
| 3 Local parties | _____% |
| 4 Other | _____% |

1.7 What are the sources of materials and parts used in manufacture? Please indicate the relative proportions.

1 Japan _____%

2 Local _____%

3 Other _____%

1.8 What is the gross annual sales turnover of your company? \$A _____

1.9 What is the gross sales value of locally manufactured goods? \$A _____

2. Nature and Extent of Manufacturing Operations

2.1 What is the nature of your manufacturing activities? Please circle the the items that describe your mode of manufacturing most closely.

- | | |
|-----------------|-----------------------|
| 1 Kit assembly | 5 Fabrication |
| 2 Assembly | 6 Primary manufacture |
| 3 Subassembly | 7 Continuous process |
| 4 Commissioning | 8 Other _____ |

2.2 Which of the following methods of production are utilized in your operations? Please circle yes or no.

- | | |
|-------------------------|--------|
| 1 Custom-built | yes-no |
| 2 Small batch, job-shop | yes-no |
| 3 Large batch | yes-no |
| 4 Mass production | yes-no |
| 5 Continuous process | yes-no |

2.3 Does your company utilize any of the following technologies? Please circle yes or no.

- | | |
|-------------------------------------|--------|
| 1 Robotics | yes-no |
| 2 Computer Aided Design (CAD) | yes-no |
| 3 Computer Aided Manufacturing | yes-no |
| 4 Flexible Manufacturing Systems | yes-no |
| 5 Computer Integrated Manufacturing | yes-no |

2.4 Does your company utilize any of the following techniques? Please circle yes or no.

- | | |
|-------------------------|--------|
| 1 Total Quality Control | yes-no |
| 2 Just In Time | yes-no |
| 3 Quality Circles | yes-no |
| 4 Other _____ | yes-no |

3. Organization Structure and Management Style

3.1 To what extent does each of the following statements correctly describe your company's organization? Please circle the appropriate score :

	Definitely true	1
	Somewhat true	2
	Cannot say	3
	Somewhat incorrect	4
	Definitely incorrect	5
1	The authority and responsibility of every executive is clearly and concretely defined.	1 2 3 4 5
2	Planned job rotation of managers is emphasised as a device for developing their capabilities.	1 2 3 4 5
3	Even first-line employees have intimate knowledge about the basic policies of the company.	1 2 3 4 5
4	Individual manager's initiative is valued more than harmony of human relations.	1 2 3 4 5
5	Career paths for specialists as well as for managerial personnel are clearly defined.	1 2 3 4 5
6	Consensus is heavily emphasised in decision making.	1 2 3 4 5
7	Conflict among executives is promptly resolved based on superiors' authority.	1 2 3 4 5
8	Job descriptions for executives are general and therefore applied flexibly.	1 2 3 4 5
9	Executives and employees share a considerable amount of information.	1 2 3 4 5
10	Senior executives have frequent meetings with line managers and supervisors.	1 2 3 4 5
11	The performance of managers is evaluated by end results rather than by the amount of the effort.	1 2 3 4 5
12	Executives exchange information in advance of formal meetings so that differences of opinion and judgement are not aired at meetings.	1 2 3 4 5

3.2 How important are the following personal traits and capabilities for

senior executives of your company? Please evaluate the importance of each on the following scale by circling the appropriate score :

	Indispensable	1
	Important	2
	Desirable	3
	Not important	4
	Undesirable	5
1	Depth of professional knowledge in specific field	1 2 3 4 5
2	General knowledge of the company and its business	1 2 3 4 5
3	Ability to produce and accept new ideas	1 2 3 4 5
4	Sound and consistent values and beliefs	1 2 3 4 5
5	Willingness to take risk	1 2 3 4 5
6	Ability to formulate detailed plans	1 2 3 4 5
7	Commitment to and identification with company	1 2 3 4 5
8	Ability to promote harmony and collaboration among peers and subordinates	1 2 3 4 5
9	Sense of equity and fairness	1 2 3 4 5
10	Past record of successful performance	1 2 3 4 5
11	Ability to integrate diverse information	1 2 3 4 5
12	Popularity and credibility with subordinates	1 2 3 4 5
4.	Management Control Systems	

4.1	Does your organization employ the following organizational devices or systems? Please circle yes or no.	
1	Formalized job descriptions	yes-no
2	Standard cost accounting systems	yes-no
3	Flexible budget control system	yes-no
4	Performance evaluation	yes-no
5	Monthly operation reporting system	yes-no
6	Management By Objectives (MBO)	yes-no
7	Strategic planning	yes-no
8	Contingency planning	yes-no
9	Capital budgeting	yes-no
10	Matrix organization	yes-no

CHARACTERISTICS OF JAPANESE CORPORATIONS WITH
MANUFACTURING FACILITIES IN AUSTRALIA

4.2 To what extent do you utilize computerized systems in your organization? Please circle yes or no.

- | | |
|-------------------------------------|--------|
| 1 Production control | yes-no |
| 2 Process control | yes-no |
| 3 Quality control | yes-no |
| 4 Inventory control | yes-no |
| 5 Material requirements planning | yes-no |
| 6 Financial accounting | yes-no |
| 7 Cost accounting | yes-no |
| 8 Payroll preparation | yes-no |
| 9 Personnel records | yes-no |
| 10 Demand forecasting | yes-no |
| 11 Scientific/technical calculation | yes-no |
| 12 Simulation/modelling | yes-no |
| 13 Purchasing | yes-no |
| 14 Sales Order processing | yes-no |

Thank you for your thoughtful participation.