APPENDIX 1: Survey Questionnaire

Survey of Technological Innovations in Malaysian Wooden Furniture Industry

- **Objective**
  This survey collects information about levels and characteristics of technological product and process innovation activity of Malaysia Small and Medium-sized Wooden Furniture Manufacturers during the three year period 2006-2008.

- **Statement of Confidentiality**
  Your company’s identity will not be revealed in any publication or presentation of the results of this survey. Results will only be presented in an aggregated form.

- **Instructions**
  - The questionnaire should be completed by the manager or senior staff responsible for Research and Development or/and corporate planning.
  - Kindly return this questionnaire in the enclosed envelop within 14 days of the receipt.
  - If exact figures are not available, please make a best estimate.
  - If you have problems in completing this form, please do not hesitate to contact:

    Mr. Ng Boon Kwee – Tel: 014 6437769
    Email: bkng@perdana.um.edu.my

Details of person completing this form:

<table>
<thead>
<tr>
<th>Name:</th>
<th>Phone:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company Name:</td>
<td></td>
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<tr>
<td>Designation:</td>
<td>Fax:</td>
</tr>
<tr>
<td>Date:</td>
<td>Email:</td>
</tr>
</tbody>
</table>

Department of Science and Technology Studies, Faculty of Science, University of Malaya, 50603 Kuala Lumpur
A: ENTERPRISE PROFILE

Note: If exact figures are not available, please make a best estimate.

A1 What is your enterprise’s main product? (Please ✓ one only)

☐ Wood-based Furniture
☐ Others (Please specify): ______________________________________

A2 Year of Establishment for your Enterprise: ________________

A3 Ownership structure of your enterprise:
Local : _________ %   Foreign : _________ %

A4 Turnover in 2008: RM ____________________; and
Percentage derived from exports: _______ %

A5 Number of full-time employees: ___________

A6 Proportion of full-time employees educated to degree level or above in science &
engineering: ______ %

B: TECHNOLOGICAL PRODUCT & PROCESS INNOVATION

Product Innovation (Goods & Services)

Important definition:
• A technologically product innovation is the implementation / commercialisation of a new
product or product with significant improved performance characteristics.
• The product innovation must be new to your enterprise, but it does not need to be new to
your sector / market.

B1 During the period 2006-2008, did your enterprise introduce any technologically
significant new or improved products?

☐ Yes   ☐ No  ➔ Go to question B3

B2 If ‘YES’, how were these products developed? (Please ✓ one only)

☐ Mainly by your enterprise or enterprise group
☐ Your enterprise in co-operation with other enterprises or institution
☐ Mainly by other enterprises or institutions

Process Innovation (Production & Delivery Methods)

Important definition:
• A technologically process innovation is the implementation / adoption of new or significantly
improved production or delivery methods.
• The process innovation must be new to your enterprise, but it does not need to be new to your
sector / market.

B3 During the period 2006-2008, did your enterprise introduce any technologically
significant new or improved process?

☐ Yes   ☐ No
If ‘YES”, how were these process developed? (Please ✓ one only)

- Mainly by your enterprise or enterprise group
- Your enterprise in co-operation with other enterprises or institution
- Mainly by other enterprises or institutions

* If NO to both question B1 and B3, go to question B13, otherwise please continue to question B5 *

During the period of 2006-2008, did your company have any technological innovation projects that were:

- Abandoned
- Not yet completed but on time
- Not yet completed but seriously delayed
- Not even started

Please indicate the importance of each of the following methods to protect innovations developed by your enterprise:

<table>
<thead>
<tr>
<th>Method</th>
<th>Degree of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patents</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Registration of design</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Trademarks</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Copyrights</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Confidentiality agreement and trade secrecy</td>
<td>Not Used Low Medium High</td>
</tr>
</tbody>
</table>

What were the sources of these innovations (product and / or process) expenditure?

- Own fund
- Related companies (subsidiary or associated company)
- Financial companies (bank loans, venture capital, etc)
- Government (loans, grants, etc)
- Supranational and international organizations
- Other (non-financial) enterprises
During the period of 2006-2008, did your enterprise engage in the following innovation activities?

- **In-house R&D**, i.e. creative work undertaken within your enterprise to increase the stock of knowledge and its use to devise new or improved products and processes.

- **Acquisition of external R&D**, i.e. R&D purchased from other enterprises or organisations.

- Purchase or licensing of patents and non-patented innovation, know-how and other types of **external knowledge** from other companies or organisations.

- **Acquisition of machinery, equipment and software** in connection with product and process innovation, such as land, building, machinery, software, etc.

- **All design functions**, including industrial, product, process and service design and specifications for production or delivery.

- **Marketing preparation**, including market research, and launch advertising.

- **Training** for your personnel directly related to innovation activity.

If you ticked YES to in-house R&D [Question B8 (i)], please indicate how did your enterprise engage in in-house R&D during the period 2006-2008?

- Continuously
- Occasionally

Who were your partners for innovation co-operation?

Also, please indicate the importance of your partners.

<table>
<thead>
<tr>
<th>Degree of Importance</th>
<th>Not Used</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suppliers</td>
<td>[ ]</td>
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</tr>
<tr>
<td>Clients or customers</td>
<td>[ ]</td>
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<tr>
<td>Competitors</td>
<td>[ ]</td>
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<tr>
<td>Consultants</td>
<td>[ ]</td>
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<tr>
<td>Other enterprises within your enterprise group</td>
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<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>Universities or other higher education institutes</td>
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<tr>
<td>Government or public research organizations</td>
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<tr>
<td>Commercial laboratories &amp; private R&amp;D institutes</td>
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</tbody>
</table>
What were the objectives of innovation for your enterprise during the period of 2006-2008? (Please indicate the degree of importance attached to various alternatives by ticking one of the four columns for each objective)

<table>
<thead>
<tr>
<th>Objective</th>
<th>Degree of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replace products being phased out</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Increase range of goods &amp; services</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Develop environment-friendly products</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Increase &amp; maintain market share</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Enter new markets</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Improve quality of goods &amp; services</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Improve flexibility of production /services provision</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Reduce costs (labour, operating, design)</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Increase efficiency of delivery goods &amp; services</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Achieve industry technical standards</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Reduce environmental impacts / improve safety</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Meet regulatory requirements</td>
<td>Not Relevant Low Medium High</td>
</tr>
<tr>
<td>Improve working conditions</td>
<td>Not Relevant Low Medium High</td>
</tr>
</tbody>
</table>

Please indicate the sources of knowledge and technology used in your technological innovation activities, and their importance. (Please ✓ one box in each row)

<table>
<thead>
<tr>
<th>Source</th>
<th>Degree of Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Within the enterprise</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Other enterprises within your enterprise group</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Competitors</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Other enterprises in the industry</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Client or customers</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Consultants</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Suppliers of equipment, materials, components, etc.</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Commercial laboratories</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>External Market &amp; Commercial</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Universities and other higher education institutions</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Government or public research institutions</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Private non-profit research institutions</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>General information</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Patent disclosures</td>
<td>Not Used Low Medium High</td>
</tr>
<tr>
<td>Professional conferences, meetings or journals</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Fairs and exhibitions</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Professional association, trade unions</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Informal contacts or networks</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Standards or standardisation agencies</td>
<td>Not Used Low Medium High</td>
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<tr>
<td>Public regulations (i.e. environment, security)</td>
<td>Not Used Low Medium High</td>
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</tbody>
</table>
A range of factors may inhibit your ability to innovate. Please grade the importance of the following constraints during the period of 2000-2008. (Please ✔ one box in each row)

<table>
<thead>
<tr>
<th>Constraint</th>
<th>No Effect</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
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<tbody>
<tr>
<td>Excessive perceived economic risks</td>
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<td>Cost too high</td>
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<tr>
<td>Lack of funds within the enterprise</td>
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<tr>
<td>Lack of external financial resources</td>
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<tr>
<td>Innovation potential (R&amp;D, design) insufficient</td>
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<td>Lack of qualified personnel</td>
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<td>Lack of information on technology</td>
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<td>Lack of information on markets</td>
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<tr>
<td>Difficulty in finding co-operation partners</td>
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<td>Inflexibility within the enterprise</td>
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<td>Staff were burdened with production requirement</td>
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<tr>
<td>Uncertain demand for innovative goods / services</td>
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<td>Market dominated by established enterprises</td>
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<tr>
<td>Lack of infrastructure</td>
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<tr>
<td>Weakness of property rights</td>
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<tr>
<td>Legislation, regulations, standards, taxation</td>
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<tr>
<td>No need for innovation due to earlier innovations</td>
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<tr>
<td>No need because of lack of demand for innovations</td>
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</tbody>
</table>

Thank you for your cooperation
APPENDIX 2: BRS Envelope Design for Postal Survey