

# **Measuring & Improving the International Competitiveness of Australian Book Producers**

## **Interim Report Phase Two**

5<sup>th</sup> March 2004



**Australian Government**  

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**Department of Industry  
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**Appendix 1: Summary of Producer Data.**

### 1. INTRODUCTION

This reports the progress and methodologies employed to complete Phase Two of the project to "Measure and Improve the International Competitiveness of Australian Book Producers", as detailed in Schedule 1 to the Deed between Commonwealth of Australia and Printing Industries Association of Australia for the provision of funding for dated 7th February 2004.

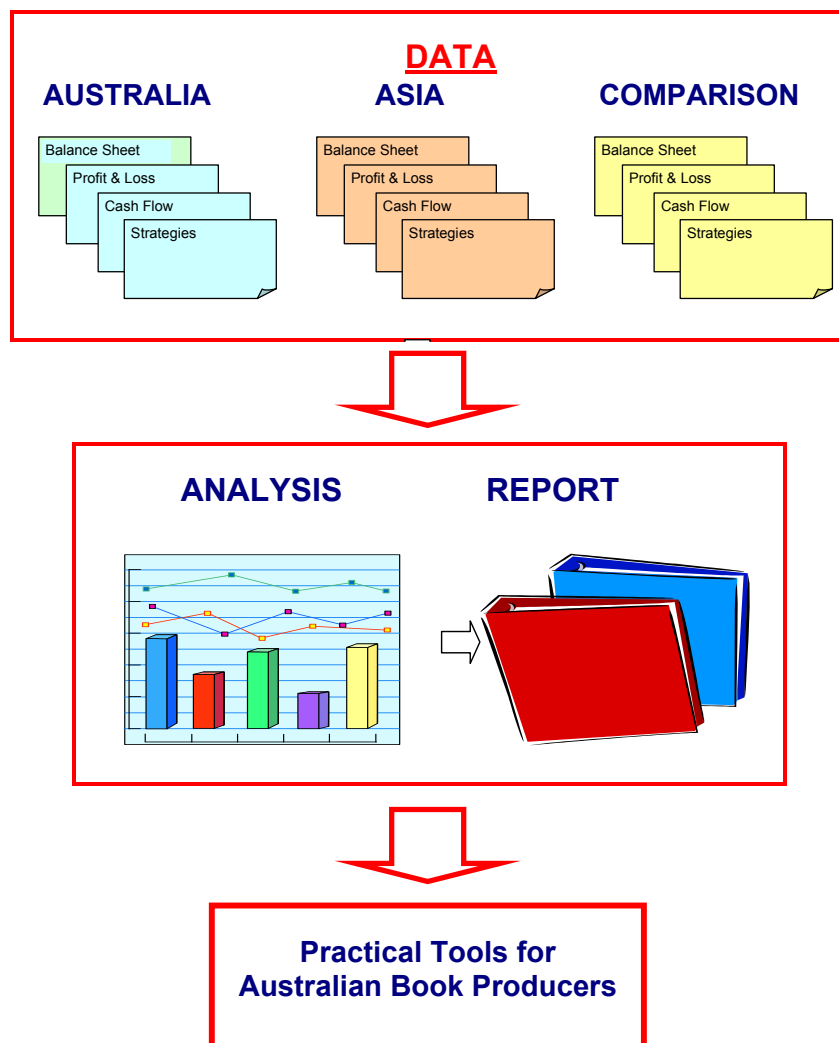
The report is aligned with

- The requirements numbered as items 2 to 2.3 in **Schedule 2, Funding Schedule, Performance Indicators and Reporting Requirements**, of the deed, and
- Attachment 3 of the proposal at Schedule 1, Attachment 1.

This report is formatted as a summarised description of the analytical models that will allow apples-to-apples comparisons of Capital Structure, Production Costs and the Strategies employed by Asian and Australian producers.

The overall approach to the structure of the analytical models is represented in the following schematic.

#### Conceptual Structure of Analytical Models



The models also allow an analysis of the impact of publishers costing models on their decision affecting book producers. The models will use pro forma Balance Sheet and Profit & Loss Statements that include gross and net margins and that comply with GAAP standards<sup>1</sup> to organise and analyse the data. We will derive cash flows from this data.

The report describes each ACTIVITY, comments on the research approach for each, the type of data required, its source and method of collection.

The Avimo research team will use this as their guide for the collection, validation and entry of data.

The analytical team will use this to guide their analysis of the data.

## 2. Building Analytical Models

**Activities:** Model the typical **capital structure** of book producers, and how it **impacts on their productions costs**. Format models to facilitate apples-to-apples comparisons between Asian and Australian producers, and comply with GAAP requirements. **All this data will be collected for each step in the production cycle<sup>2</sup>.**

This section of the report describes the construction for the models.

In order to facilitate comparison to the requirements listed in Schedule 2 of the deed, and Attachment 3 of the proposal at Schedule 1, Attachment 1., each description begins with the **research approach** including the **types of data** required to populate them. We also comment on progress toward accessing the data.

The details are summarised in Appendix 1.

### 2.1 Model Typical Range of Formats Used

- **Research Approach:** To model the typical capital structure, the constituent parts are generic - Current and Term Assets, Current and Term Liabilities and Equity. This part of the model allows us to organise data collection so that we capture all salient parts. The table below illustrates the structure.

	Capital Structure	Type of Data Required
1.1	Cash & Accounts Receivable	Terms of sales, days in A/R.
1.2	Inventories	Inventory values and turns.
1.3	Plant	Costs, depreciation policies
1.4	<b>Total Assets</b>	
1.5	Accounts Payable	Terms for purchases
1.6	Working capital loans	overdraft or term loans, rates.
1.7	Term loans	Interest rates and terms
1.8	<b>Total Liabilities</b>	
1.9	Type of Shareholdings	Nature of ownership, access to equity
1.10	Value of Equity	Net asset value
1.11	Relationship between owners and mgmt.	

<sup>1</sup> **Definition:** Generally Accepted Accounting Practices **Source:** UK and International GAAP, 7<sup>th</sup> Edition. Wilson.A., Davies.M., Curtis. M., and Wilkinson-Riddle G. Butterworths Tolley, London. 2000. Section 1.7.1 – Required form of a summary financial statement.

<sup>2</sup> We defined the production cycle as five distinct steps., viz: *Receiving Electronic File Inputs; Pre-press; Print; Binding/Finishing; and Delivery.*

- **Impacts on productions costs**

**Research Approach:** To model the impact of capital structure on production costs we first consider that the direct impacts are on depreciation and cost of capital. These can only be assessed once the productivity factors are included. For this reason we treat production factors separately using data that demonstrates the amount of investment, the cost of capital (equity and debt) and depreciation policies and practices.

The table below illustrates the structure.

Productivity Factors		Type of Data Required
2.1	Depreciation	Schedules for each part of value chain.
2.2	Cost of Capital	Interest rates and terms, hurdle rates
2.3	Hours per week (std 50 p.a)	shifts and hours per shift ("clock hours")
2.4	Average chargeout rates	common base average in each area
2.5	Average % of capacity used	common base average in each area
2.6	Time - order entry to delivery	days in process across each process
2.7	Cost of Capital	Interest rates and terms, hurdle rates

**2.2 Model Typical Operating Costs**

**Research Approach:** Key components of direct cost are labour (including on-costs) , materials (principally paper), consumables, outbound freight, and others, especially depreciation, which can be calculated from the previous set of data. The impact of volume is assessed in this section.

The data will be formatted as "pro-forma" p&l's to facilitate an apples-to-apples comparison of gross and net margins and cash flows, as illustrated below<sup>3</sup>:

Direct Costs		Type of Data Required
3.1	Labour	Operator numbers, pay rates.
3.2	Oncosts	penalty rates, insurance, taxes, other
3.3	Paper	Costs and terms, sources, policies.
3.4	Other Consumables	Costs and terms, sources, policies.
3.5	Freight	costs and policies
3.6	<b>Gross Margin</b>	net sales less direct costs
<b>Indirect Costs</b>		
3.7	Admin labour	admin, sales, r&d manning levels.
3.8	General & Admin Expense	
3.9	<b>Net Margin</b>	gross margin less g&a expenses
<b>Production Factors</b>		
3.10	Volumes	Throughput, at each step of the VC
3.11	Timeliness	Order-to-deliver and C-to-C cycle times
<b>Publisher Cost factors</b>		<b>Type of Data Required</b>
3.12	Set-up costs and risk factors	EOQ vs run length, source, season, etc

<sup>3</sup> **Definitions:** "VC" is Value Chain; "C-to-C" is Cash to Cash Cycles; "EOQ" is Economic Order Quantity

**2.3 Build a Model That Facilitates Comparison of qualitative factors affecting total supply chain costs of book production**

**Research Approach:** Strategy is defined as the approaches producers take to enhance and sustain a competitive position in their chosen markets.

This research is primarily interested in the marketing, production and technology strategies used along the value chain. It is designed to address these factors, and the Value Proposition publishers seek as determined in Phase 1 of the project<sup>4</sup>.

During the testing phase we discovered a broader interest in the qualitative factors, as domestic producers expressed their desire to separate MIS technology from other forms, to know how Asian producers treated their people, and how they managed communications over distance and cultures.

We have therefore added these 3 factors to the list of qualitative factors to research.

The following table summarises the type of data that will be collected to assess how Book producers address the Value Proposition publishers seek.

Type of Data		How do Book Producers meet the Value Proposition publishers seek?
4.1	Marketing	Position, promotion, pricing, paper availability, Responsiveness (fast turnaround, hassle free, helpfulness of contact person and creative ability, enquiry turnaround time), relationship, On-time job delivery / keeping priorities,
4.2	Production	Whether low cost (scale), range / capability of equipment, differentiation, niche..?
4.3	Technology	Basis on which technology is selected, range of equipment, value added services offered.
4.4	MIS	What type of system(s) is/are used, and degree to which they are integrated into production workflows.
4.5	HR & Labour	General comments on special arrangements, such as those to deal with peaks and valleys in demand, training & development, etc.
4.6	Communications	General comments on how, with whom in client organisation, frequency, other factors.

<sup>4</sup> Measuring & Improving the International Competitiveness of Australia Book Producers Interim Report – Phase One. 6<sup>th</sup> February 2004

**2.4 Access**

Access to both domestic and Asian sources is well in hand.

We have arranged access to the 11 Australian producers listed below. They comprise a range of sizes, a broad geographic sampling and a representative presence in position across the supply chain.

	Firms	Position on Supply Chain				Deliver	Location	Scale
		Datafile Input	Prepress	Print	Bind/ Finish			
1				X	X		Melbourne	Large
2		X	X	X	X	X	Melbourne	Large
3		X	X	X	X	X	Melbourne	Medium
4		X	X	X	X	X	Sydney	Medium
5					X	X	Sydney	Medium
6		X	X	X	X	X	Sydney	Medium
7		X	X	X	X	X	Toowoomba	Small
8		X	X	X			Brisbane	Small
9		X	X	X			Brisbane	Small
10		X	X	X	X	X	Adelaide	Medium
11		X	X	X	X	X	Adelaide	Large

Thus far have arranged to visit at least 2 plants in Singapore/Malaysia, and 5 in Hong Kong/China. We expect to secure appointments with several more in each location and are attempting to visit a large producer in rural Thailand.

In addition to this, we are negotiating with an international accounting firm (HLB Mann Judd) for access to appropriate printing company data at their Singapore and Hong Kong offices. This will provide a valuable cross-reference against which to validate our fieldwork.

**3. CONCLUSION**

The project is on track to meet both the scope and timeframes specified in the deed.

We look forward to receiving your comments.

This is a summarised description of the analytical models that will allow apples-to-apples comparisons of Capital Structure, Production Costs and the Strategies employed by Asian and Australian producers. The models also allow an analysis of the impact of publishers costing models on their decision affecting book producers. The models will use pro forma Balance Sheet and Profit & Loss Statements, that comply with GAAP standards to organise and analyse the data.

The summary is a WORKING PAPER. It describes each ACTIVITY, comments on the research approach for each, the type of data required, its source and method of collection. Causal readers can link it to the project "Approved Purposes" detailed in Schedule 1 to the Deed between Commonwealth of Australia and Printing Industries Association of Australia for the provision of funding for "Measuring and Improving the International Competitiveness of Australian Book Producers", dated 7th February 2004.

**ACTIVITIES:** Model the typical **capital structure** of book producers, and how it **impacts on their productions costs**. Format models to facilitate apples-to-apples comparisons between Asian and Australian producers, and comply with both GAAP and WTO requirements. **All this data will be collected for each step in the production cycle.**

1. Capital Structure		Research Design: To model the typical capital structure, the constituent parts are generic - Current and Term Assets, Current and Term Liabilities and Equity. This part of the model allows us to organise data collection so that we capture all salient parts.	
Capital Structure		Type of Data Required	Source of Data and method of collection
1.1	Cash & Accounts Receivable	Terms of sales, days in A/R.	
1.2	Inventories	Inventory values and turns.	
1.3	Plant	Costs, depreciation policies	
1.4	<b>Total Assets</b>		
1.5	Accounts Payable	Terms for purchases	
1.6	Working capital loans	overdraft or term loans, rates.	
1.7	Term loans	Interest rates and terms	
1.8	<b>Total Liabilities</b>		
1.9	Type of Shareholdings	Nature of ownership, access to equity	
1.10	Value of Equity	Net asset value	
1.11	Relationship between owners and mgmt.		

<b>2. Impact on Production Costs</b>		<b>Research Design:</b> <i>Model the impact of capital structure on production costs. The direct impacts are on depreciation and cost of capital. These can only be assessed once the productivity factors are included. This first part is to assess the total effect, using data that demonstrates the amount of investment, the cost of capital (equity and debt) and depreciation policies and practices.</i>	
<b>Productivity Factors</b>		<b>Type of Data Required</b>	<b>Source of Data and method of collection</b>
2.1	Depreciation	Schedules for each part of value chain.	
2.2	Cost of Capital	Interest rates and terms, hurdle rates	
2.3	Hours per week (std 50 p.a)	shifts and hours per shift ("clock hours")	
2.4	Average chargeout rates	common base average in each area	
2.5	Average % of capacity used	common base average in each area	
2.6	Time - order entry to delivery	days in process across each process	
2.7	Cost of Capital	Interest rates and terms, hurdle rates	

**ACTIVITIES:** *Model the typical operating cost structure of book producers, and publishers, show gross and net margins and cash flows. Format models to facilitate apples-to-apples comparisons between Asian and Australian producers, and comply with both GAAP requirements.*

<b>3. Book Producer Cost Structures</b>		<b>Research Design:</b> <i>Key components of direct cost are labour (including oncosts), materials (principally paper), consumables, outbound freight, and others, especially depreciation, which can be calculated from the previous set of data. Volume has a critical impact so it is assessed in this section. The data will be formatted as "pro-forma" p&amp;l's to facilitate an apples-to-apples comparison of gross and net margins and cash flows.</i>	
<b>Direct Costs</b>		<b>Type of Data Required</b>	<b>Source of Data and method of collection</b>
3.1	Labour	Operator numbers, pay rates.	
3.2	Oncosts	penalty rates, insurance, taxes, other	
3.3	Paper	Costs and terms, sources, policies.	
3.4	Other Consumables	Costs and terms, sources, policies.	
3.5	Freight	costs and policies	
3.6	<b>Gross Margin</b>	net sales less direct costs	
<b>Indirect Costs</b>			
3.7	Admin labour	admin, sales, r&d manning levels.	
3.8	General & Admin Expense		
3.9	<b>Net Margin</b>	gross margin less g&a expenses	
<b>Production Factors</b>			
3.10	Volumes	Throughput, at each step of the VC	
3.11	Timeliness	Order-to-deliver and C-to-C cycle times	

Publisher Cost factors	Type of Data Required	Source of Data and method of collection
3.12 Set-up costs and risk factors	EOQ vs run length, source, season, etc	

**ACTIVITIES:** Build a model that facilitates comparison of technology, strategies and tactics, government policies and other qualitative factors effecting the total supply chain costs of book production.

<b>4. Strategies</b>	<b>Research Design:</b> Strategy is defined as the approaches producers take to enhance and sustain a competitive position in their chosen markets. This research is primarily interested in the marketing, production and technology strategies used along the value chain. It is designed to address these factors, <b>and</b> the Value Proposition publishers seeks as determined in Phase 1 of the project.	
	<b>Type of Data Required</b>	<b>Source of Data and method of collection (in each area of strategy):</b> Observation, questioning technique, industry knowledge, publisher inputs, etc
<b>d) Strategies</b>	<b>How do they work to meet the Value Proposition publishers seek?</b>	
4.1	Marketing	Position, promotion, pricing, paper availability, Responsiveness (fast turnaround, hassle free, helpfulness of contact person and creative ability, enquiry turnaround time), relationship, On-time job delivery / keeping priorities,
4.2	Production	Whether low cost (scale), range / capability of equipment, differentiation, niche..?
4.3	Technology	Basis on which technology is selected, range of equipment, value added services offered.
4.4	MIS	What type of system(s) is/are used, and degree to which they are integrated into production workflows.
4.5	HR & Labour	General comments on special arrangements, such as those to deal with peaks and valleys in demand, training & development, etc.
4.6	Communications	General comments on how, with whom in client organisation, frequency, other factors.