Pricing Strategy of Indonesian Contractors

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- STATEMENT OF PROBLEM
- OBJECTIVES
- PRICING STRATEGY IN CONSTRUCTION
- PRICING MODELS DEVELOPMENT
- THE SURVEY
- RESEARCH FINDINGS
- CONCLUSION

CONTENTS

Cost-based pricing:
- Starts from the total cost
- Additional cost-based markups

- Problems:
  1. Underpricing
  2. Overpricing

BACKGROUND

Two extreme approaches in pricing(Best, 1997)
- Cost-based pricing
- Market-based pricing

Market-based pricing:
- Starts with the customer and key competitors
- Uses the help of marketing intelligence
- The goal is to create a price based on a superior customer value
- Different market-price strategies:
  1. Price-sensitive segment
  2. Quality-sensitive segment

BACKGROUND

- Transactions and contracting in construction are conducted through the competitive bidding process, so that the pricing approach used commonly in construction: cost-based pricing.

STATEMENT OF PROBLEM

- Problems with current pricing strategies in construction are explored
- Pricing strategy with a market-based approach is discussed
- Survey findings of current pricing practices and findings related to the applicability of the proposed strategy of the top Indonesian contractors are presented
- The findings with findings in the U.S. are compared

OBJECTIVES

- Most researchers propose bidding strategies based on **cost-based approach** (i.e.: Fayek, 1998; Ioannou and Leu, 1993; Paek et. al., 1977; Moselhi et. al., 1993; de Neufville and King, 1991; Ahmad and Minkarah, 1988; de Neufville et.al., 1977; Carr and Sandahl, 1978)

PRICING STRATEGY IN CONSTRUCTION

- Some researchers concerning bidding strategies in the construction industry (i.e.: Griffis, 1982; Ioannou, 1988; Carr, 1982; Carr, 1987; Benjamin and Meador, 1979; Fuerst, 1976; Wade and Harris, 1976) that, **to a certain extent, include market information**
- Very limited use
  ◦ require sensitive information about competitors and customers → not readily available.

PRICING STRATEGY IN CONSTRUCTION

Figure 4.1. Hybrid Pricing Model, Version 1 (Model 2)
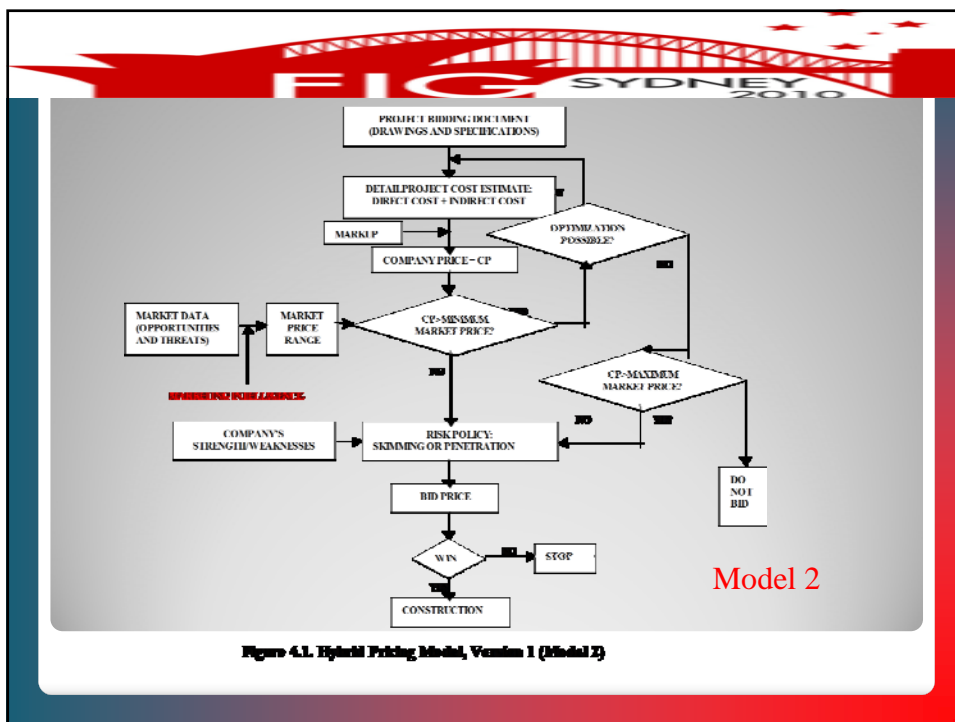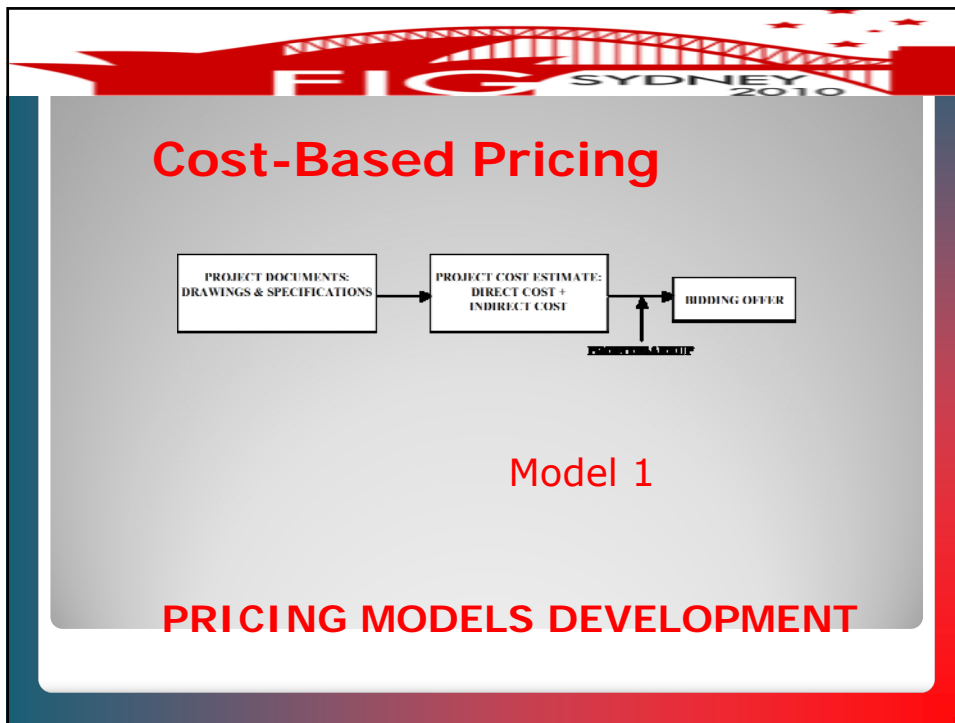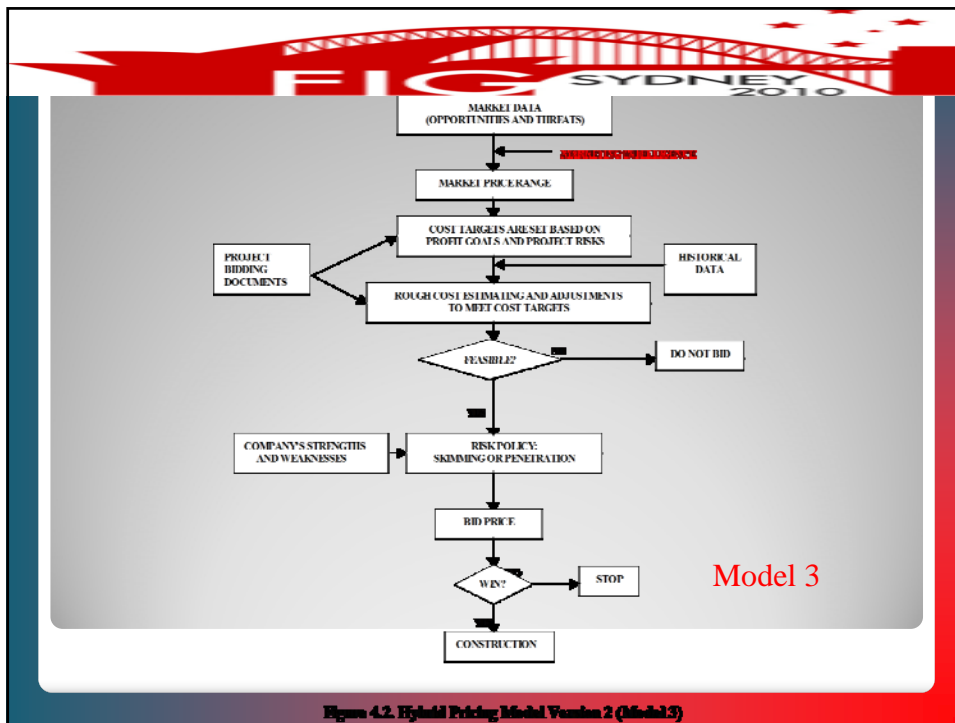
Figure 4.2. Hybrid Pricing Model Version 2 (Model 3)
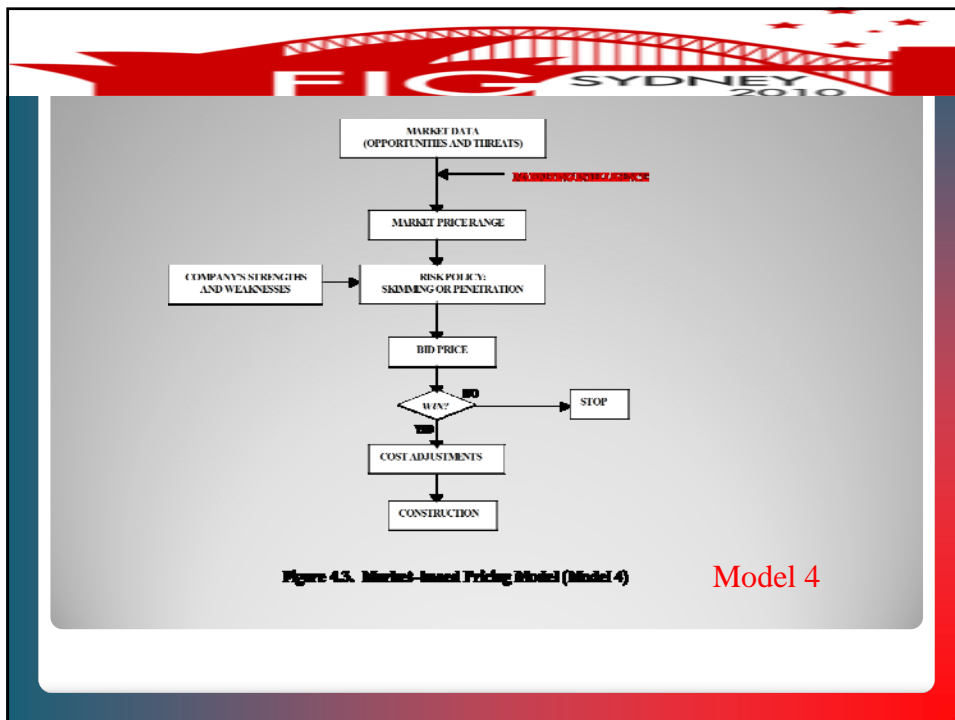
Model 3

Figure 4.3. Market-based Pricing Model (Model 4)
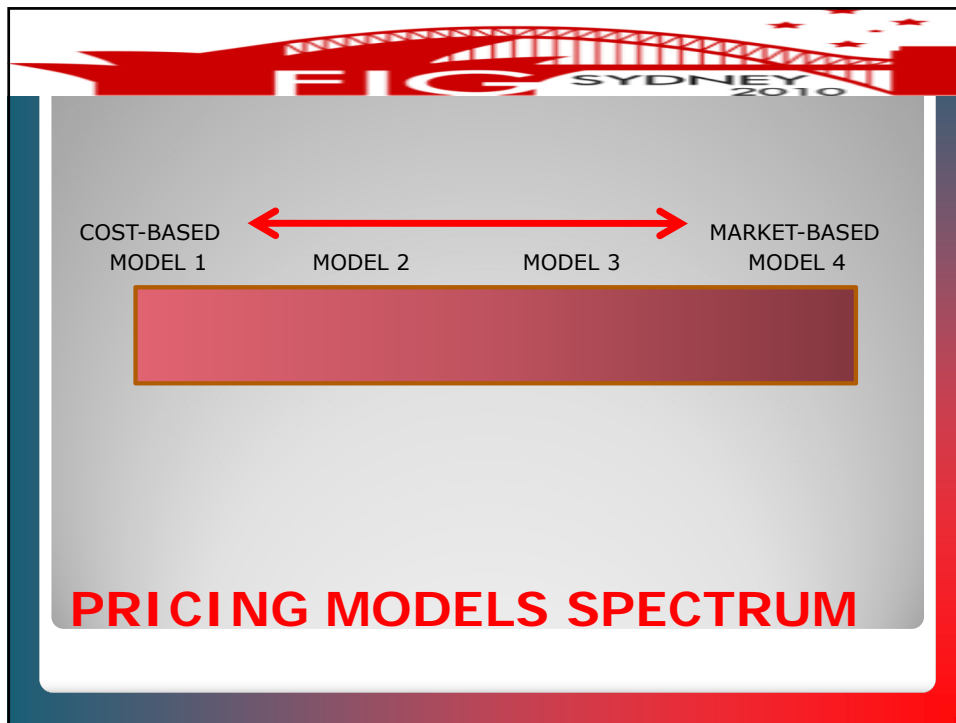
Model 4

PRICING MODELS SPECTRUM

- Questionaire:
  - 11 internal variables
  - 3 external variables
  - 4 pricing models
  - Simulation: Hypothetical Bidding Scenarios
  - Samples: Indonesia Contractors Association (AKI)
    - 122 Large contractors
    - 70% market share

THE SURVEY

Internal Variables

| Type of projects		Projects geographic location
Work subcontracted	Marketing expenditure	Annual contract value
Marketing orientation	Type of clients	Policy on equipment
Technological sophistication	Level of experience	Market intelligence capability

Average Score Analysis

Level of Technological Sophistication Parameters
- Computer usage
- Work quality
- Number of accidents
- Number of field employees
- Cost efficiency
- Number of reworks
- Field productivity
- Management control
- Labor motivation
- Labor training
- Constructability enhancement
- Adaptation to organizational change
- Computer Skills

Level of Experience Parameters
- Work quality
- Cost efficiency
  Number of accidents
- Management skills
- Labor skills
  Engineering skills
- Brand identity
- Field productivity
- Timely project completion.

Marketing Intelligence Parameters
- Reading newspaper/journals
- Reading trade publications
- Talking to clients
- Talking to subs/suppliers
- Talking to managers
- Conducting market research
- Establishing MIS/DSS
- Purchasing information
- Analyzing rumors
- Collecting and analyzing competitors' past bids
- Training in marketing issues
- Searching through internet
- Analyzing competitors' info during bid preparation

THE SURVEY

Pricing Models
Model 1: Cost-based pricing
Model 2: Hybrid pricing version 1
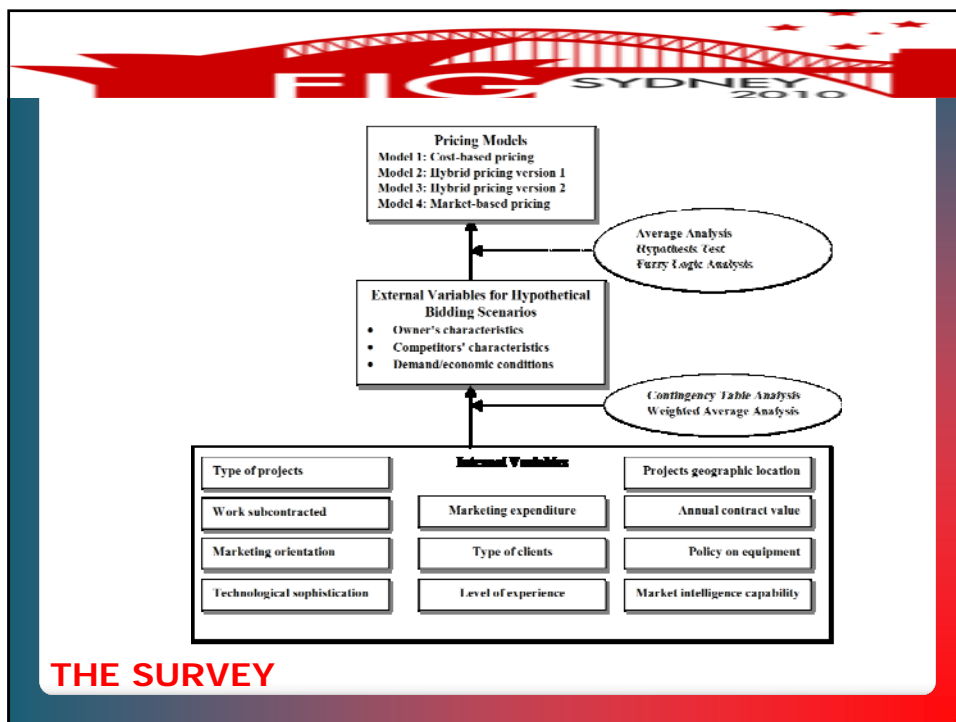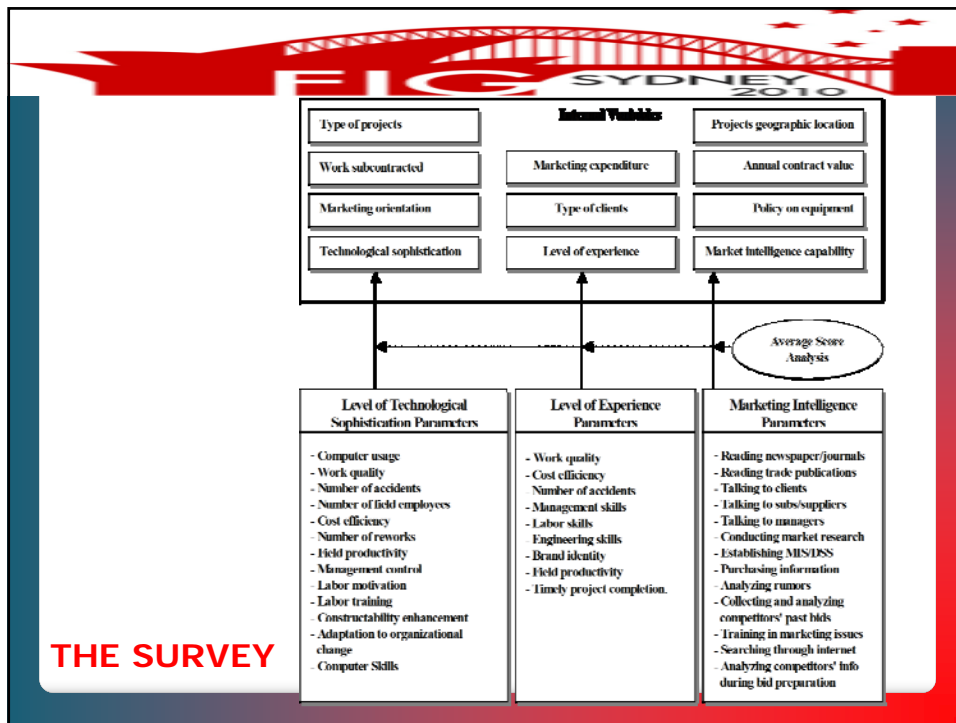Model 3: Hybrid pricing version 2
Model 4: Market-based pricing

Average Analysis
Hypothesis Test
Fuzzy Logic Analysis

External Variables for Hypothetical Bidding Scenarios
- Owner's characteristics
- Competitors' characteristics
- Demand/economic conditions

Contingency Table Analysis
Weighted Average Analysis

Internal Variables

Type of projects		Projects geographic location
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THE SURVEY

SIMULATION MODEL:
HYPOTHETICAL BIDDING SCENARIOS

Table 1 Hypothetical bidding scenarios (HBSs)

External variables	HBS 1	HBS 2	HBS 3	HBS 4	HBS 5	HBS 6	HBS 7	HBS 8
Owner's characteristics	Unknown	Unknown	Unknown	Unknown	Known	Known	Known	Known
Competitors' characteristics	Unknown	Unknown	Known	Known	Unknown	Unknown	Known	Known
Market demand	Low	High	Low	High	Low	High	Low	High

- **Also surveyed**: pricing strategy adapted, markup automation practices, way of decision making, importance factors in pricing strategy

Current Pricing Practices

Table 2. Current pricing strategy

Pricing strategy (1)	Rating system (2)	Percent of respondents (3)	Rating (2)x(3) (4)
1. Detailed cost estimate is performed, then markup is set Based on company's preferences (Model 1).	1.0	13.3	13.3
2. Detailed cost estimate is performed, then markup is set Based on company's preferences and market conditions; No cost adjustments (Model 1-Model 2).	1.5	20.0	30.0
3. As above, but with cost adjustments/optimization (Model 2).	2.0	46.7	93.4
4. Cost/markup is set based on market conditions; then Detailed cost estimate is made and then adjusted to Fit cost targets (Model 2-Model 3).	2.5	13.3	33.3
5. Cost/markup is set based on market conditions; then Rough cost estimate is made and then adjusted to Fit cost targets (Model 3).	3.0	6.7	20.1
6. Cost/markup is set fully based on market conditions; Costs are adjusted to fit targets only after the award of Contracts (Model 4).	4.0	0.0	0.0
Total		100.0	190.1
Average pricing Strategy			1.90

- US Finding: 1.62

RESEARCH FINDINGS

Table 3. Markup Decision Assessment

Types of assessment	Respondents as percentage	
	Indonesia	US
Intuition	26.7	50.5
Probability/mathematical models	26.7	14.3
Empirical models	46.7	24.2
A constant percentage that does not change	6.7	9.9
An assessment of the competition	66.7	60.4

RESEARCH FINDINGS

Table 4. Importance of Factors in Current Pricing Strategy

Factors	Average score	
	Indonesia	U.S.
Company's strengths and weaknesses	3.53	4.12 (3)
Need for work	4.60 (5)	3.67 (5)
Demand/economic conditions	3.67	3.67
Financial goals of company	4.33 (1)	4.13 (1)
Competition	4.13 (4)	3.40
Owner's characteristics	4.20 (2)	3.63
Owner's consultant characteristics	3.67	3.24
Project size/complexity	3.67	4.13 (2)
Project location	3.53	3.78
Subcontractors' characteristics	3.27	3.19
Expected future project from the owner	4.13 (3)	3.67 (4)

Note: – 1=least important; 5=most important
– Bolds show the top five ranks
– Numbers in parentheses show ranks

RESEARCH FINDINGS

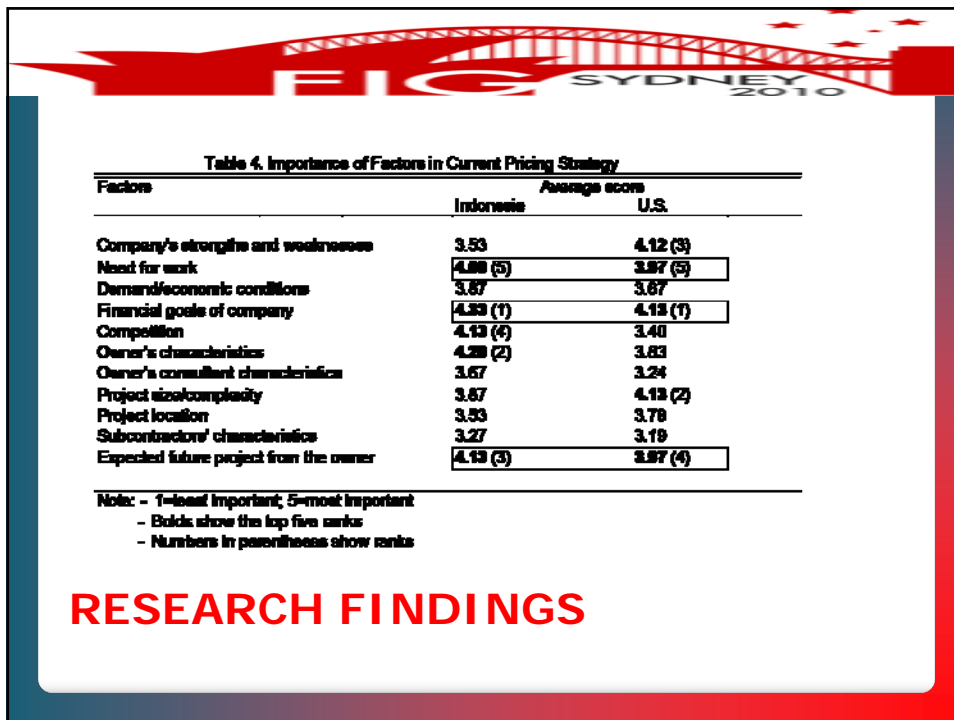Table 5. Contingency coefficients between internal variables and pricing strategy in hypothetical bidding scenarios (HBSs)

Internal variables (v)	Pricing strategy in								
	HBS 1	HBS 2	HBS 3	HBS 4	HBS 5	HBS 6	HBS 7	HBS 8	Average
. Type of project performed	0.1100	0.5403	0.4989	0.5176	0.4313	0.3345	0.6083	0.3536	0.4493
. Geographic location of most project	0.2774	0.3671	0.4029	0.3536	0.4129	0.4886	0.6661	0.6571	0.4607
. Work subcontracted on average job	0.2351	0.3713	0.2199	0.4489	0.2828	0.2977	0.3945	0.4460	0.3358
. Marketing expenditure	0.5808	0.4682	0.5252	0.3446	0.3758	0.3577	0.5423	0.4692	0.4668
. Annual contract volume	0.3536	0.3985	0.3813	0.5276	0.4557	0.5976	0.6447	0.3536	0.4584
. Marketing orientation	0.3430	0.4042	0.1322	0.2165	0.0576	0.3606	0.4264	0.3756	0.2920
. Type of client in most projects	0.2351	0.3713	0.4523	0.3752	0.2828	0.1395	0.4714	0.4692	0.3521
. Equipment policy	0.5074	0.4323	0.4008	0.4809	0.0576	0.3430	0.3827	0.4042	0.3638
. Technological sophistication	0.2351	0.4469	0.4794	0.3446	0.2828	0.3655	0.1536	0.5632	0.3610
0. Level of experience	0.2351	0.4489	0.2199	0.3446	0.4728	0.5606	0.3615	0.6562	0.3882
1. Marketing intelligence capabilities	0.2351	0.4883	0.2199	0.3142	0.2828	0.4876	0.3864	0.4692	0.3493
Average pricing strategy (WBA)	1.5532	1.9877	2.1699	2.1898	1.8776	2.2635	2.6124	3.0696	2.2063

Note: HBS refers to Table 1; box and bold face denote significant association at 95%

RESEARCH FINDINGS

US RESEARCH FINDINGS



RESEARCH FINDINGS

- Current Pricing Practices:
  ◦ Average: 1.90 vs 1.62 (US)
  ◦ competition assessment
  ◦ Subjective assesment
  ◦ Manual → pricing software?

CONCLUSION

- Association Variables vs Pricing Strategy:
  ◦ More market-based pricing strategy when owner, competitor, and market demand characteristics are available → Marketing Intelligence
  ◦ With IT breakthroughs, not impossible for proposed bidding process practices
  ◦ Shift to "proposed bidding events"

CONCLUSION

Figure 4.1. Current Bidding Events

CONCLUSION

Figure 4.2. Proposed Bidding Events
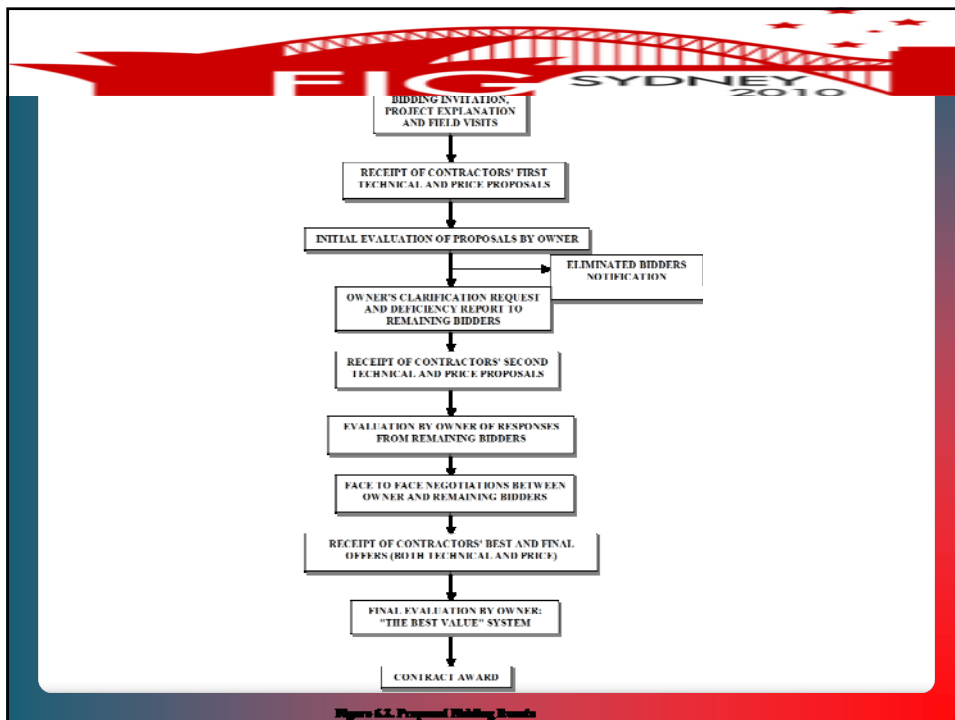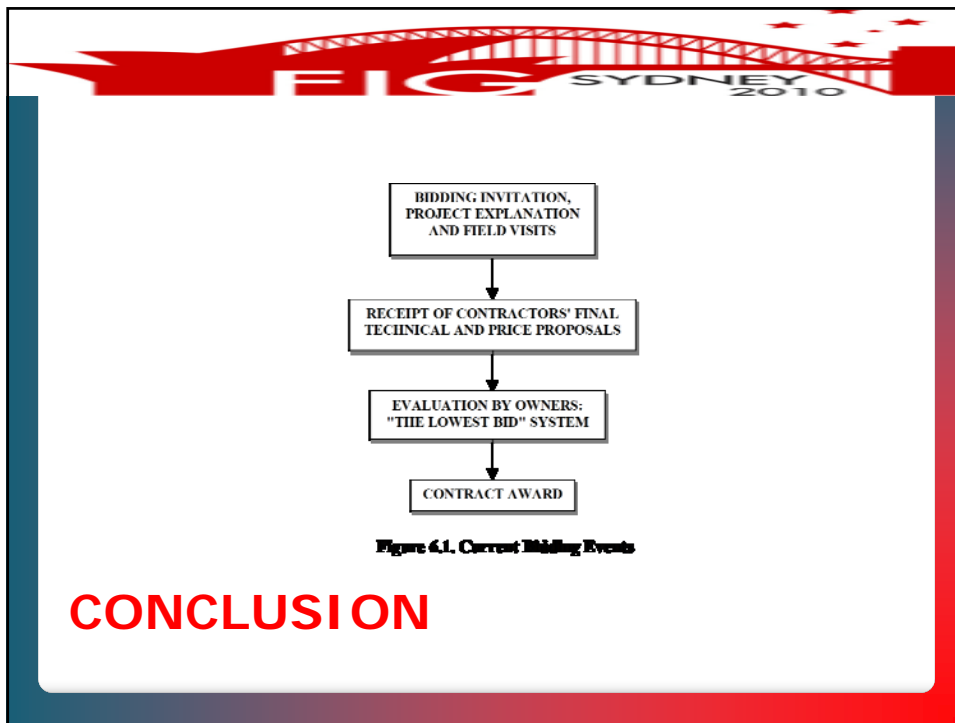
- Similarities between Indonesia and US → universal behavior?
- It is anticipated in the new millennium where markets are expected to be more globalized, and competition to grow fiercer
- Market-based pricing is a promising solution that can overcome the challenges in marketing construction services in the future and that can maximize the benefits derived by all the parties involved in construction projects

CONCLUSION

THANK YOU
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