



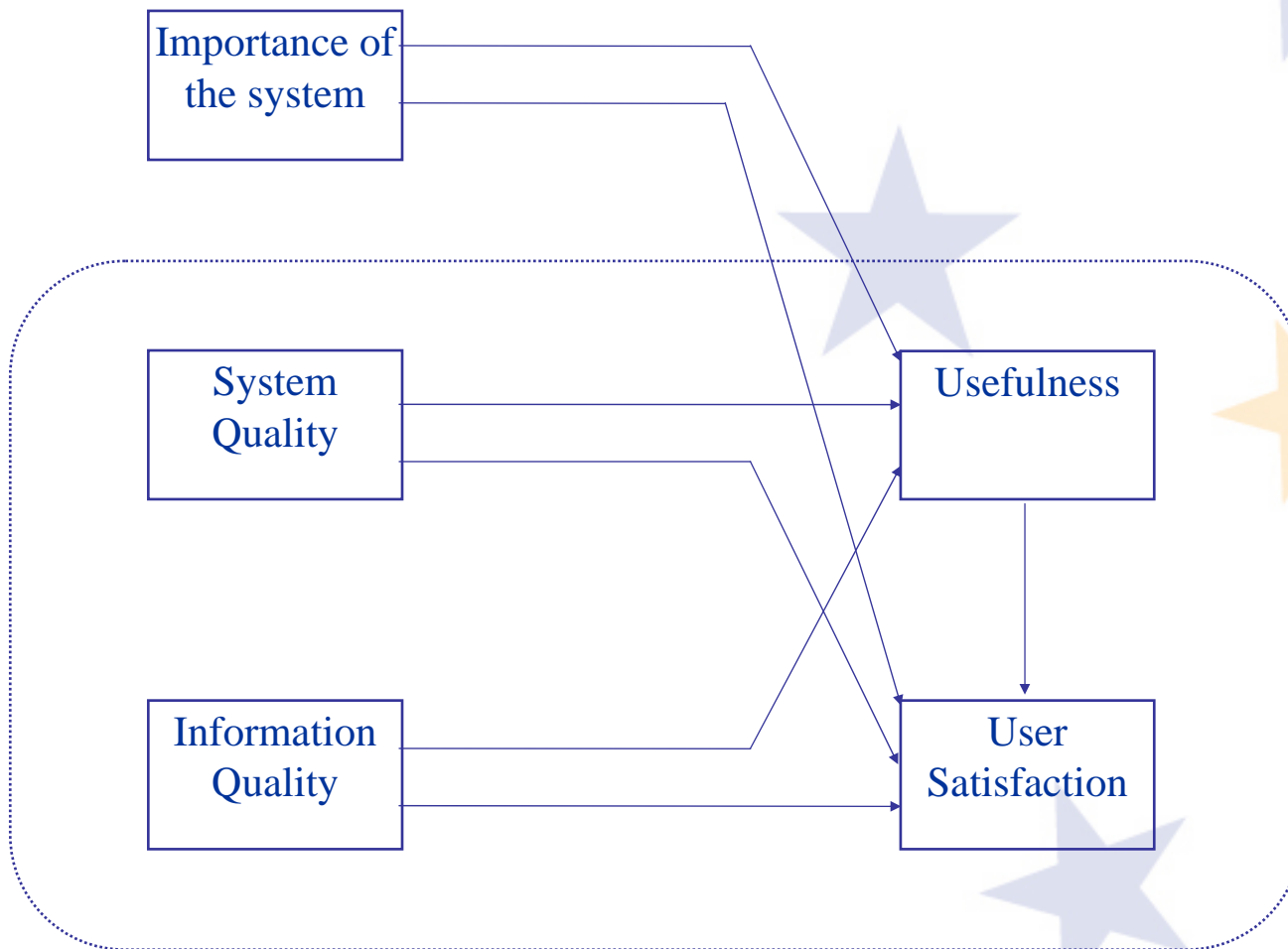
# Scales Measuring Characteristics of Small Business Information Systems

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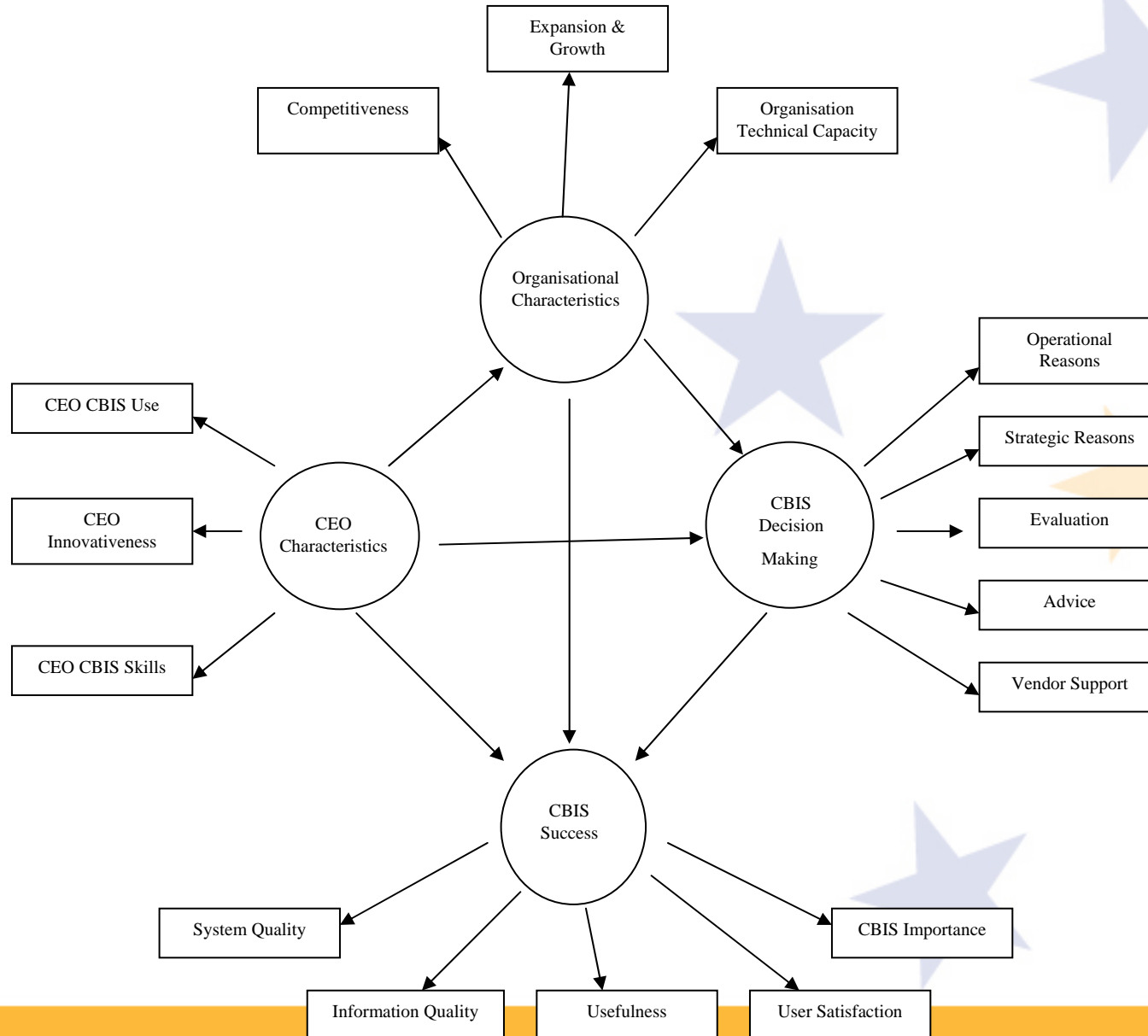
# I'll be talking about...

- Theoretical model underlying the research
- Importance of scale identification
- Sample and data collection
- Factor analysis summary
- Descriptive analysis of scales and items
- Where to from here...

# Theoretical Model (Seddon & Kiew 1996)...



# Proposed Theoretical Model



# Sample and Data Collection

- Small businesses - Mid North Coast Region of NSW
- Manufacturers < 100 fulltime equivalent employees
- Wholesalers < 20 equivalent fulltime employees
- Business Enterprise Register
- Business Enterprise Centres (BECs)
- Mid North Coast Regional Development Board

# Sample Distribution

		Manufacturers		Wholesalers		Manufacturers / Wholesalers		Region's Totals	
		Sample	All	Sample	All	Sample	All	Sample	All
Coffs Harbour	(n)	117	239	58	68	8	12	183	319
	(MNC)	19.6%	21.8%	9.7%	6.2%	1.3%	1.2%	30.6%	29.2%
	(SR)	63.9%	74.9%	31.7%	21.3%	4.4%	3.8%		
Hastings	(n)	147	276	75	141	3	11	225	428
	(MNC)	24.6%	25.1%	12.5%	12.9%	0.5%	1%	37.6%	39.0%
	(SR)	65.3%	64.5%	33.3%	32.9%	1.3%	2.6%		
Manning / Gloucester	(n)	72	150	66	131	16	23	154	304
	(MNC)	12.0%	13.7%	11.1%	12%	2.7%	2.1%	25.8%	27.8%
	(SR)	46.8%	49.3%	42.9%	43.1%	10.4%	7.6%		
Macleay	(n)	24	30	12	14			36	44
	(MNC)	4.0%	2.7%	2.0%	1.3%			6.0%	4.0%
	(SR)	66.7%	68.2%	33.3%	31.8%				
Region's Totals		360	695	211	354	27	46	598	1095
		60.2%	63.4%	35.3%	32.4%	4.5%	4.2%		

# Factor Analysis Summary

Factor Set	Factor Name	% of Variance	Total Variance Explained
<i>CBIS Importance</i>	Importance of Accounts	30.70	57.54
	Importance of SOHO	16.16	
	Importance of Management Applications	10.68	
<i>Decision Criteria</i>	Decision Criteria	61.16	61.16
<i>Decision Making</i>	Operational Reasons	44.79	61.83
	Strategic Reasons	17.04	
<i>Organisation Characteristics</i>	Organisation Technical Capacity	44.59	70.69
	Competitiveness	14.75	
	Expansion & Growth	11.35	
<i>CEO Characteristics</i>	CEO CBIS Knowledge	58.64	83.82
	CEO Innovativeness	25.18	
<i>Cost Benefit Analysis Techniques</i>	Cost Benefit Techniques	64.41	64.41

# Descriptive Stats for Scales

	No. of Items	Mean	Std. Dev.	$\alpha$
<u>CBIS Importance</u>				
Importance of Accounts	6	4.30	1.79	0.78
Importance of SOHO	4	2.81	1.63	0.73
Importance of Management Software	3	1.16	1.53	0.78
<u>Organisation Characteristics</u>				
Competitiveness	3	4.92	1.59	0.85
Expansion & Growth	5	5.08	1.14	0.85
CBIS Technical Capacity	8	4.04	1.36	0.94
<u>Decision Making</u>				
Operational Reasons	6	5.63	1.00	0.85
Strategic Reasons	6	4.33	1.55	0.87
<u>Decision Criteria</u>				
Decision Criteria	22	3.84	1.04	0.89
<u>CEO Characteristics</u>				
CEO Innovativeness	3	4.63	1.29	0.87
CEO CBIS Knowledge	3	4.06	1.36	0.93
<u>Cost Benefit Analysis Techniques</u>				
Cost Benefit Techniques	8	2.03	1.41	0.91

Items (n = 169)	Mean	Std. Deviation
Purchase Price	5.62	1.45
After sales support from the vendor	5.61	1.80
Installation support	5.36	1.67
Pre-purchase information and support from the vendor	5.33	1.74
Ability to adapt the system to your specific needs	5.28	1.70
Confidence in the vendor	4.83	1.85
Design of reports and screens	4.72	1.70
Response speeds of the system	4.51	1.96
Recommendations from users	4.44	2.00
Software updates	4.34	2.08
Manuals and documentation	4.22	1.90
Availability of training	4.02	2.10
Advice from a similar business	3.96	2.24
Existing skills of operators in your organisation	3.77	2.03
Advice from an accountant or financial advisor	3.34	2.14
Finance and purchase options	3.07	2.07
Ergonomic design and appearance of the hardware	2.95	1.75
Delivery lead times	2.95	1.96
Promotional and marketing brochures	2.66	1.63
Advice from in-house employees	2.62	1.98
Advice from external consultants	2.42	1.98
Advice from family members	2.35	1.77
Advertisements in magazines and papers	2.14	1.54
Information in computer magazines	1.88	1.52

# Demographic Items considered in Correlation Analysis

Demographic Item Name	Survey Item
Total Staff	1.1 How many people does your business employ, including the proprietor(s)?
Years Established	1.2 What year was the business established?
Years Current Owner	1.3 If not the original owner, what year did the current owner takeover the business?
Years 1st CBIS	1.4 When did your business start using its <u>first</u> computer-based information system?
Years Current CBIS	1.5 When did your business start using its <u>current</u> computer-based information system?

# Significant Correlations

- Number of Total Staff to...
  - Importance of Accounts (.40)
  - Importance of Management Applications (.47)
  - Organisation Technical Capacity (.27)
  - Decision Criteria (.30)
- Effect of size is small - approx 22% shared variance
- Small businesses with more staff...
  - Do more market research
  - Have better technical capacity
  - Place more importance on accounting and management applications

# Summary of Outcomes

- Smaller business do less planning and market research
- Operational planning more important than strategic planning
- Price is one of the most important considerations in purchasing software
- Accounting applications are the most important application to small business
- Micro-business did not think email and internet were important

# Limitations of the Study

- Only businesses that were willing to respond
- Representativeness of sample to other regions
- Regional vs metropolitan businesses
- Generalisability of findings to other small businesses
- Difficulty extrapolating findings to business practice  
*VIZ.* smaller and micro business need to invest more time on market research, planning, etc...

# Where to from here...?

- Study replicated in other regions
- Examine success constructs against organisational characteristics, owner characteristics, decision making
- Hierarchical regression analysis
- Structural equation modelling

