Presentation Overview

1. BC Context

2. Public Sector Comparator (PSC)
   • What, why, & how
   • Issues & challenges

3. Multiple Criteria Analysis (MCA)
   • Addressing the challenges

4. Conclusions

Objective:
“to put the PSC in a stronger decision making context”
BC Policy Context

Capital Framework Development
- Examined other jurisdictions

Framework Policy Approach:
- Explore options - consider quantitative & qualitative dimensions
- Risk based financial analysis (e.g. PSC) remains critical

More recently:
Sources of Technical Guidance

Partnerships Victoria (Australia), e.g.
- Public Sector Comparator Technical Note

UK
- Technical Note & Policy Statements (e.g. PSC and Value for Money) - OGC
- Green Book (cost-benefit) – HM Treasury

Industry Canada
- PSC – A Canadian Best Practices Guide

Netherlands *
What is the PSC?

“... PSC is a hypothetical risk-adjusted costing, by the public sector as a supplier, to an output specification as part of a PFI procurement exercise”  UK- Green Book

“... The PSC is the hypothetical whole-of-life risk-adjusted cost of government delivering the project”  Aus- Partnerships Victoria

Key/common elements in most definitions:

1. Hypothetical and a forecast
2. Net present value (NPV) number
3. Based on life-cycle costing
4. Risk-adjusted
5. ... if the public sector was to deliver (e.g. finance, own, operate)
Why a PSC?

“… develop and use a PSC to assess the financial aspects of value for money – and as a benchmark against which to measure the net value of alternative procurement options”

BC- CAMF

Key Benefits – regardless of analytical conclusions:

• Brings financial & costing rigour & discipline
• Requires a full life-cycle approach
• Compels consideration & management of risk
• Encourages bidding tension & competition
• Can encourage consideration of management & delivery options
Three key considerations:

1. Incorrect or confusing use of the term PSC

2. Technical complexities in constructing the PSC

3. Application - ‘Apparent’ simplicity can be misleading
   - e.g. doesn’t easily accommodate non-financial and non-quantifiable factors critical to decision-making

Most literature acknowledges limitations
- … however, it doesn't necessarily offer clear solutions
PSC – terminology confusion

- the public sector (reference) “project” displaced by a P3
- the “scenario” (i.e. life-cycle costs) associated with the project

- the risk adjusted PV financial costing of that scenario
  - i.e. including financial & non-financial factors

- the comparison process itself

- the “shadow-bid” or the expected P3 annualized payment
Other Decision Factors (outside PSC): e.g.

- Service quality & market innovation
- Industrial relations
- Broader economic benefits
- Public Interest
  - Access, safety, privacy

Other Decision Factors (outside PSC): e.g.

- Service quality & market innovation
- Industrial relations
- Broader economic benefits
- Public Interest
  - Access, safety, privacy

Build

Net Operating Costs

Risk (Retained + Transferred)

Capital Improvements

Maintenance

PSC

Cost in $M

NPV

discounted cost/cash flow

Time in Years

Discounted cost/cash flow

Build

Design

PSC
Competitive Neutrality (Hidden/Assumed Costs)

Transferable Risk

Shared Risk

Retained Risk

Direct Costs, e.g.
- Capital
- Operating
- Maintenance
- Decant/move-in

Indirect Costs
- Admin & overheads

Revenues
- Third party, Land sales

- Tax
- Self-insurance
- Policy or regulation
- Base demand
- Geotech

$ (NPV)

PSC

Baseline Costs
Retained Risk

Transferable Risk

Competitive Neutrality

Raw PSC

Expected Cost

Planning

Affordability

Market

NPV of Payments

Shadow Bid (Expected P3 bid)

P3 Bid 1

P3 Bid 2

+ additional retained risk

Planning Market

Affordability

Retained Risk

Transferable Risk

Competitive Neutrality

Raw PSC

Expected Cost

Shadow Bid (Expected P3 bid)

P3 Bid 1

P3 Bid 2

+ additional retained risk
Steps in Building & Refining the PSC

Planning

Strategic Options Analysis

Business Case

Approval

EOI (issued to market)

Award Decision

Implementation

✓ Is preferred option affordable?
✓ Service outputs @ strategic level
✓ Is a PSC relevant/warranted?
✓ Preliminary costs & risks
✓ Preliminary PSC & shadow bid

✓ Business case fully developed
✓ Detailed output specs
✓ Detailed PSC & shadow bid

✓ Procurement team assess risks/costs & assumptions
✓ Refine PSC as required

✓ Refine PSC if changes: e.g. to final scope, output specs., risk

✓ Compare bids to shadow & PSC
✓ Fairness - PSC not refined to capture market innovations

Planning Market
PSC - key technical issues

Appropriate Discount Rate

Risk calculations
  • e.g. complexity, what & how to calculate

Optimism bias

Tax considerations & treatment

Efficiency Assumptions
  • e.g. translation of PSC to a shadow bid

Sensitivity Analysis/Switching Analysis
PSC – key application issues

Requires “like-to-like” comparisons

Does not ensure addressing affordability

Public sector delivery option may not be only, or best benchmark

Quantitative/financial costing/benchmark only

• Value for money project decisions based on broader parameters, e.g.
  • Qualitative project factors (e.g. in planning)
  • Qualitative aspect of P3 bids (i.e. market response)
PSC – key application issues (cont’d)

- Market Innovation
- Environmental Costs
- Industrial Relations
- Maintenance Costs
- Third Party Revenue
- Operating Risk
- Project Risks
- Economic Development
- Policy Flexibility
- Direct Capital Costs
- Hidden Costs
- Social & Economic Goals
- Direct Operating Costs
- Indirect Costs
- Levels of Service Delivered
- Public Interest Issues
- Demand Growth
- First Nations
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Ind indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Treatment
- Environmental Demand Growth
- Economic Development
- Public Interest Issues
- Direct Capital Costs
- Indirect Costs
- Levels of Service Delivered
- Tax Trea
“... using a PSC can inform a decision about value-for-money, but it cannot be relied upon to provide an inflexible and simple answer to the question”  

UK, OGC Technical Note 5

“... ensure that value for money decisions are not based on a one-dimensional comparison of single figures”  

UK, Auditor General

PSCs focus solely on relative costs, yet often used incorrectly as a comprehensive pass fail test. Decisions need to be based on a realistic, systematic and comprehensive analysis of benefits & risks as well as costs. PSC should be just one of the factors …  

UK, Committee of Public Accounts, June 19 2003
Multi-Criteria Analysis (MCA) - linked to:

- “Comprehensive Matrix Approach”, MAE & “multi-attribute analysis”

Key output is a table of quantitative and qualitative criteria:

- Compare incremental changes among options - across criteria
- ‘Decision process’ not a simple decision rule
  - i.e. not just a risk-adjusted NPV estimate (PSC)
- Enables explicit & transparent trade-offs between options & criteria
- When appropriate, ‘PSC’ can be a key financial component
- Comparator (benchmark) needed - MCA accommodates more than one
<table>
<thead>
<tr>
<th>GOALS/ CRITERIA</th>
<th>‘Do Minimum’ Option</th>
<th>Preferred Option (Public Delivery)</th>
<th>Preferred Option (P3 Shadow Bid)</th>
<th>P3 Bid (Preferred Bid)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality</td>
<td>adequate</td>
<td>benchmark</td>
<td>best</td>
<td>best</td>
</tr>
<tr>
<td>Strategic Fit</td>
<td>good</td>
<td>best</td>
<td>good</td>
<td>good</td>
</tr>
<tr>
<td>Public Interest</td>
<td>good</td>
<td>best</td>
<td>best</td>
<td>best</td>
</tr>
<tr>
<td>Other Market Innovation</td>
<td>poor</td>
<td>n/a</td>
<td>best</td>
<td>best</td>
</tr>
<tr>
<td>Social &amp; Economic</td>
<td>poor</td>
<td>good</td>
<td>best</td>
<td>best</td>
</tr>
<tr>
<td>Financial (e.g. risk-adjusted NPV)</td>
<td>$160m</td>
<td>$220m</td>
<td>$215m</td>
<td>$220.5m</td>
</tr>
</tbody>
</table>

Note: PSC stands for Public Sector Comparator.
Business Case

- Planning Context
- Program/Service
- Implementation Plan
- etc.

MCA

PSC
Linkages of MCA criteria to procurement process?

Disclosure of MCA (& PSC) – during procurement:

• Develop case-by-case approach:
  • Disclosure to bidders
  • Disclosure to public

• Key considerations to weigh:
  • Level of disclosure
  • Transparency & accountability
  • Effect on competition
  • Negotiating position
  • Commercial interests of bidders & economic interests of province
### BENEFITS ...

- Broader focus on “VfM”
- Evaluate range of options
- Robust, flexible & transparent
- Allows explicit trade-offs among criteria
- Can build in financial analysis
- “PSC” in a stronger decision-making context
- Theoretically sound

### CAUTIONS ...

- Critical to build in principles from benefit-cost & financial analysis
- Need well defined & appropriate criteria
- Can be more complex than simple financial analysis
- Not as widely taught & applied as other appraisal methods (e.g. benefit-cost)
Conclusions

1. PSC can be a valuable tool & guide, but only one element
2. Use incremental MCA as part of business case & decision-making framework
   - PSC in the context & a component of MCA
3. Address affordability
4. Develop and refine a PSC as long as public delivery is a realistic option
5. Training & expertise required in PSC, MCA and risk assessment