

# Valuing the economic impacts of standards

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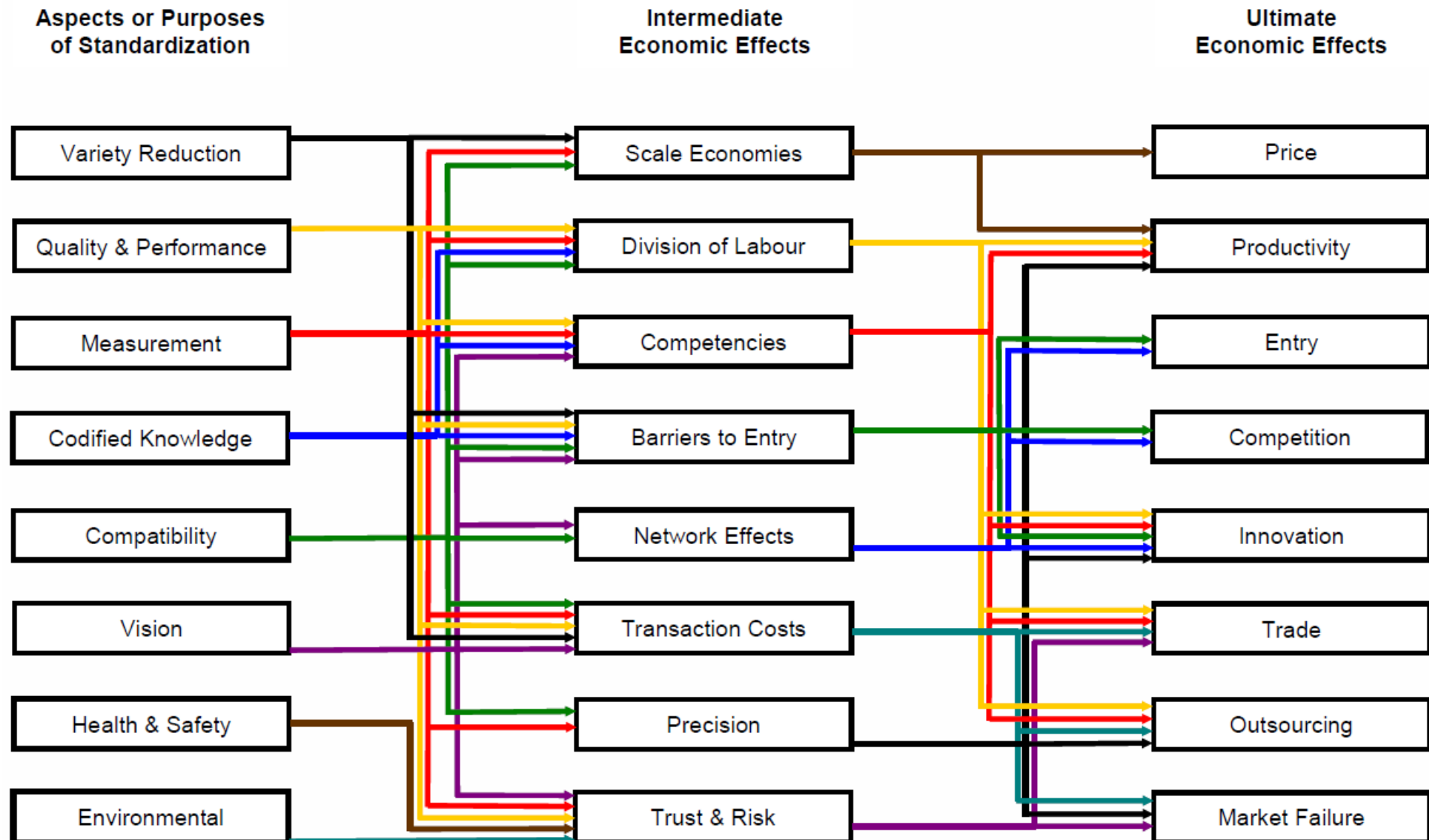
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Presentation to 'Measuring the Measurers', a symposium  
of the Asia Pacific Metrology Programme, 26 Nov 2012





# Standards in the economy



# Mechanisms for gains

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- ▶ Productive efficiency
  - Division of labour
  - Economies of scale
  - Lower transactions costs
- ▶ Dynamic efficiency
  - Reduced entry barriers
  - Building competencies
  - Faster innovation
  - Faster adoption
- ▶ Productivity gains – more output per input

# Inherent tensions

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- ▶ Inertia vs innovation
  - Standards can cause lock-in
  - Standards can improve innovation
- ▶ Laissez-faire vs public involvement
  - Many benefits of standards arise through private economic activity
  - Public involvement can overcome market and system failures

# Indicators of value

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- ▶ Of EU GDP, 1% per year spent on measurement and testing (public and private, national and super-national)
- ▶ In New Zealand as elsewhere, public standards make small positive contributions to growth – around 0.1% of GDP
- ▶ Benefit-cost ratio of metrology R&D in UK National Measurement System is 5.3 to 16.0

# Measuring the benefits

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- ▶ Not simply the market value of transactions
  - Price is measure of *marginal* contribution
- ▶ Cost benefit analysis (CBA) and case studies
  - Sets up a counterfactual
  - Allows disaggregation of types of activities and benefits
- ▶ Econometric analysis
  - Total factor productivity or similar
  - Measures contribution to growth rate

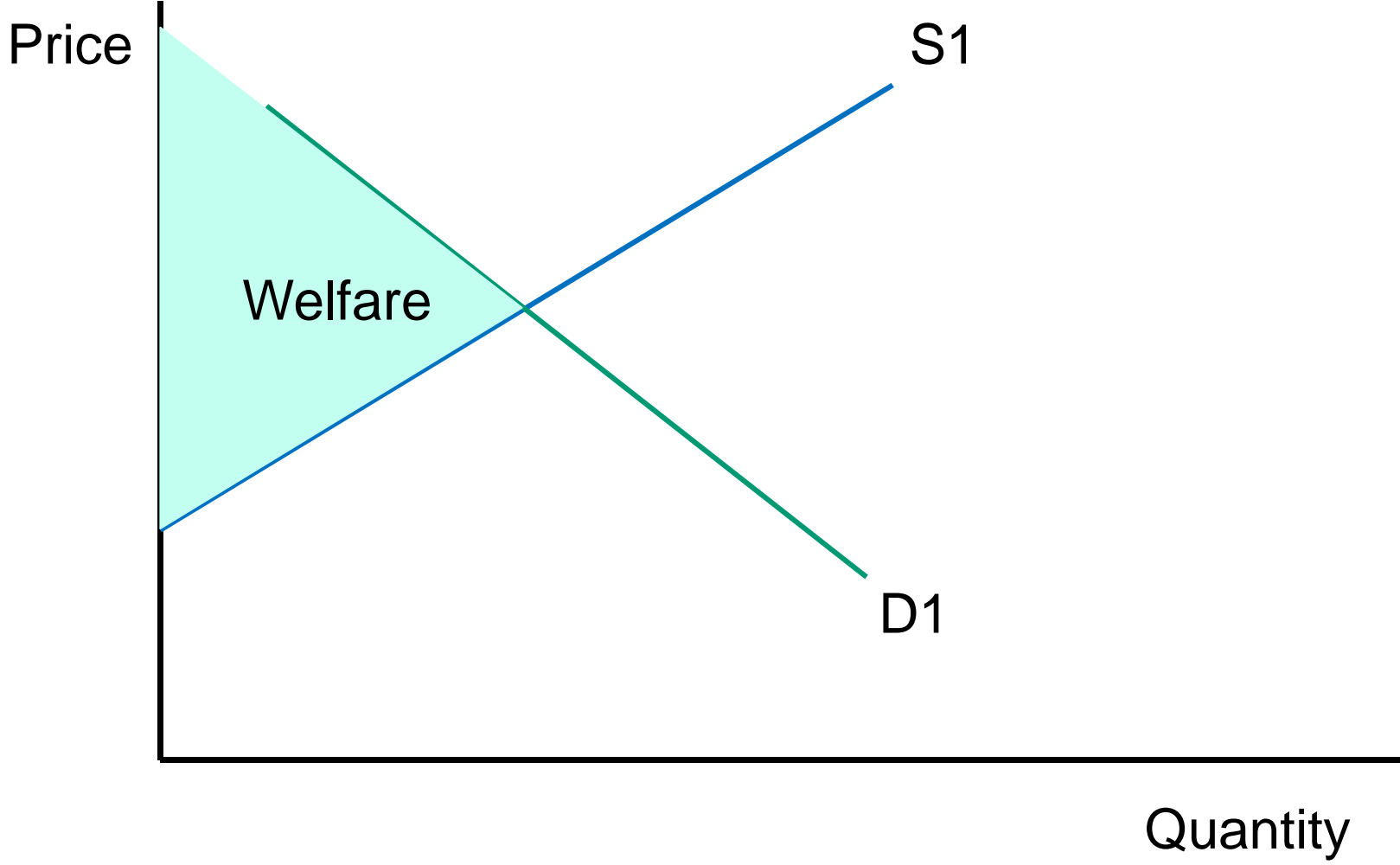
# CBA: counterfactual important

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- ▶ What is the alternative?
  - What are the additional transactions costs?
  - What would people and businesses do otherwise?
- ▶ Without standards
  - Lowered demand
  - Increased (cost of) supply

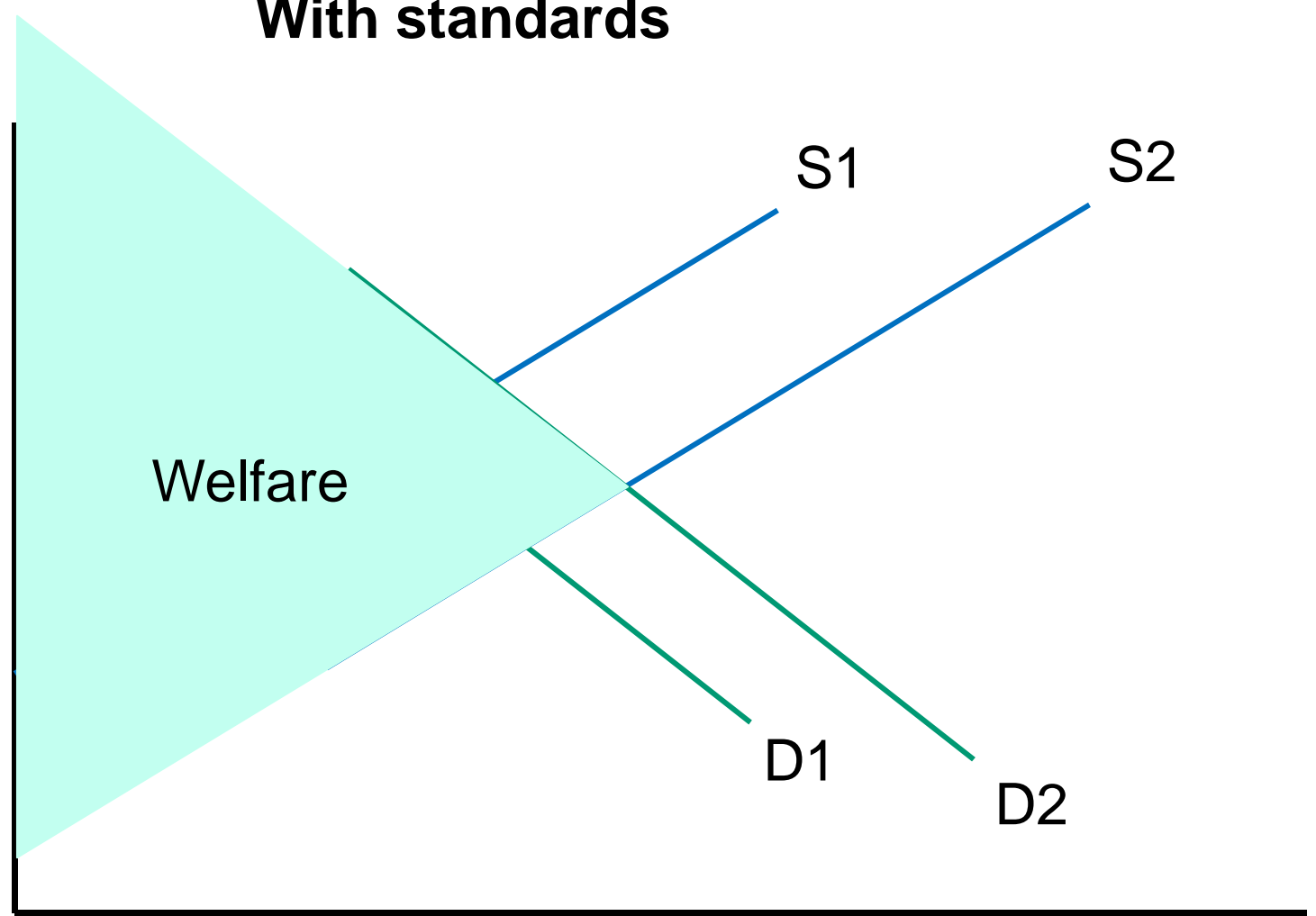


# Without standards



# With standards

Price



S1

S2

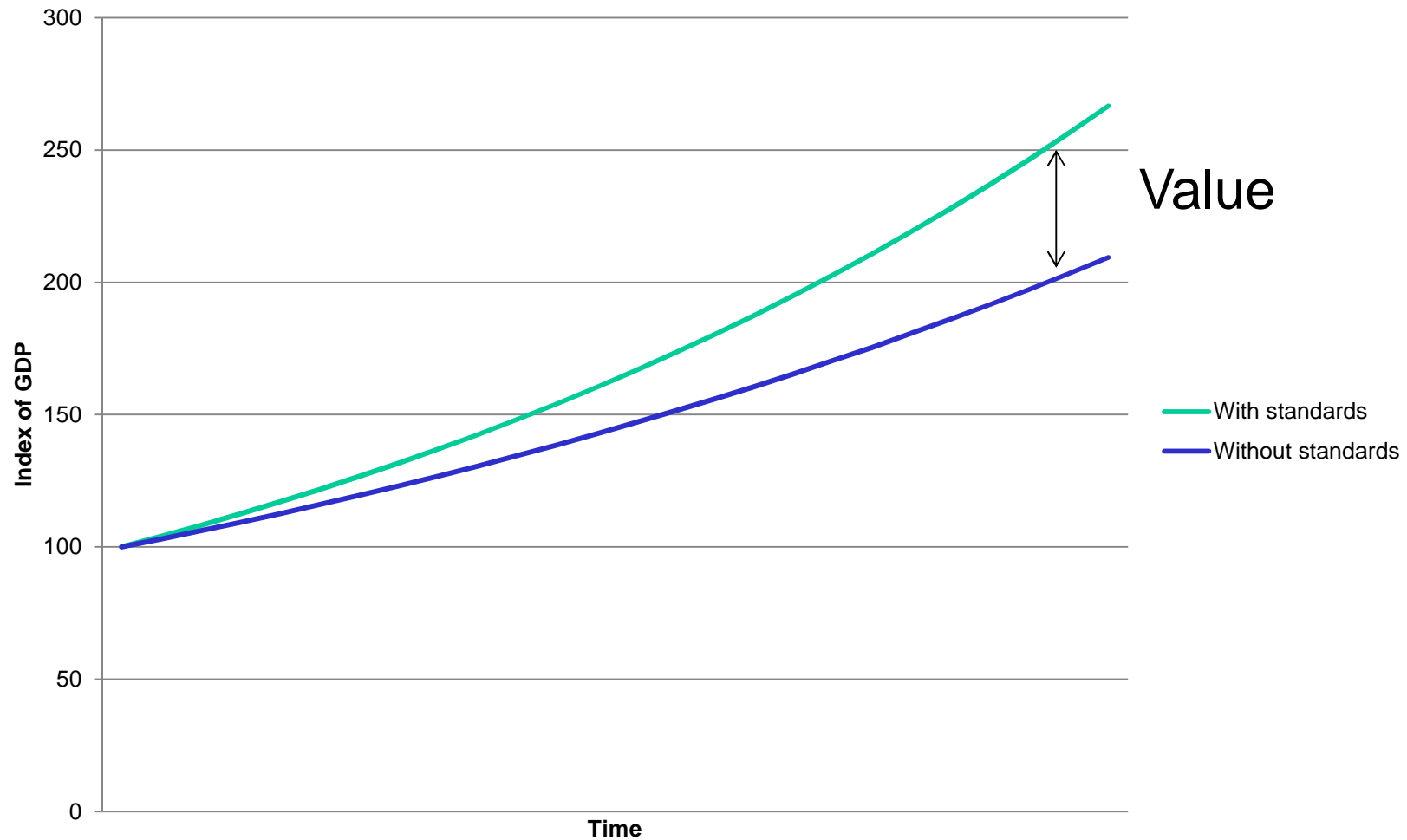
Welfare

D1

D2

Quantity

# Econometric analysis



# Paying for standards

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- ▶ Standards can be a ‘public good’
  - Non-exclusionary, non-rival
  - Suggests public funding
- ▶ Standards can be a ‘club good’
  - Can exclude people from using them
  - Suggests coordination useful
- ▶ Learning, economies of scope in *producing* standards suggests centralisation
- ▶ Conclusion: Role for public funding and coordination

# References

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