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Report on developing countries matters:

Modeling: The Economic Impact of Legal Metrology

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- Report from the Chief Economist's Office of the Department of Industry (Australia)
- 'The Economics of Metrology' (soon to be publicly available)
  - Economic benefits of measurement
    - Limiting market failure
    - Reduced transaction costs
    - Increased economic efficiency
    - Supporting innovation
  - Empirical literature on the economic impact of measurement
    - A 1% increase in the stock of standards on total factor productivity produced estimates that ranged from 0.1% to 0.17%
    - A 1% increase in the stock of standards on labour productivity ranged from 0.05% to 0.36%, while the impact on GDP ranged from 0.17% to 1%

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- **Modeling: The Economic Impact of Legal Metrology**
- Study financed by BIML: 10,230 € Hors Taxe
- Students from the Ecole Nationale de la Statistique et de l'Administration Economique (commercial arm: eje for ENSAE Junior Etudes)

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- Main Contents of the Report
  - Review of literature: standards, metrology, legal metrology, econometric models
  - Macroeconomic and microeconomic benefits
  - Modeling
  - Case studies

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- Modeling the microeconomic impact of measurement
  - Transaction costs
  - Productivity increase
  - Price increase
  - Social welfare

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- Case studies: assessing the impact of the maximum permissible errors in three industries (wheat, coal and sugar)
  - Deviating from MPEs in a national situation
  - Allowing larger MPEs in an export/import situation
- Model used: Usuda and Henson, 2012

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- Deviating from MPEs in a national situation
  - Sugar: **Aus$41K** per year for a 0.01% deviation
  - Wheat: **Aus$65K** per year for a 0.01% deviation
  - Coal: **Aus$1.2 million** per year for a 0.05% deviation

- Allowing larger MPEs in an export/import situation
  - Sugar: **Aus$306K** per year for a 0.1% difference
  - Wheat: **Aus$489K** per year for a 0.1% difference
  - Coal: **Aus$9 million** per year for a 0.5% difference

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- Next steps

1. Report available to interested CIML Members
2. CIML Members to suggest experts to help develop the material

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- I would like to thank
- BIML and the CIML President for allowing this project to be undertaken
- The two eje students, Caroline and Yasmine, for their in-depth work
- My staff, Darryl Hines who developed the data for the studies

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- Any Question?