

Economic Contribution and Productivity of ATM

Paula Leal de Matos, EUROCONTROL

Amedeo Odoni, MIT

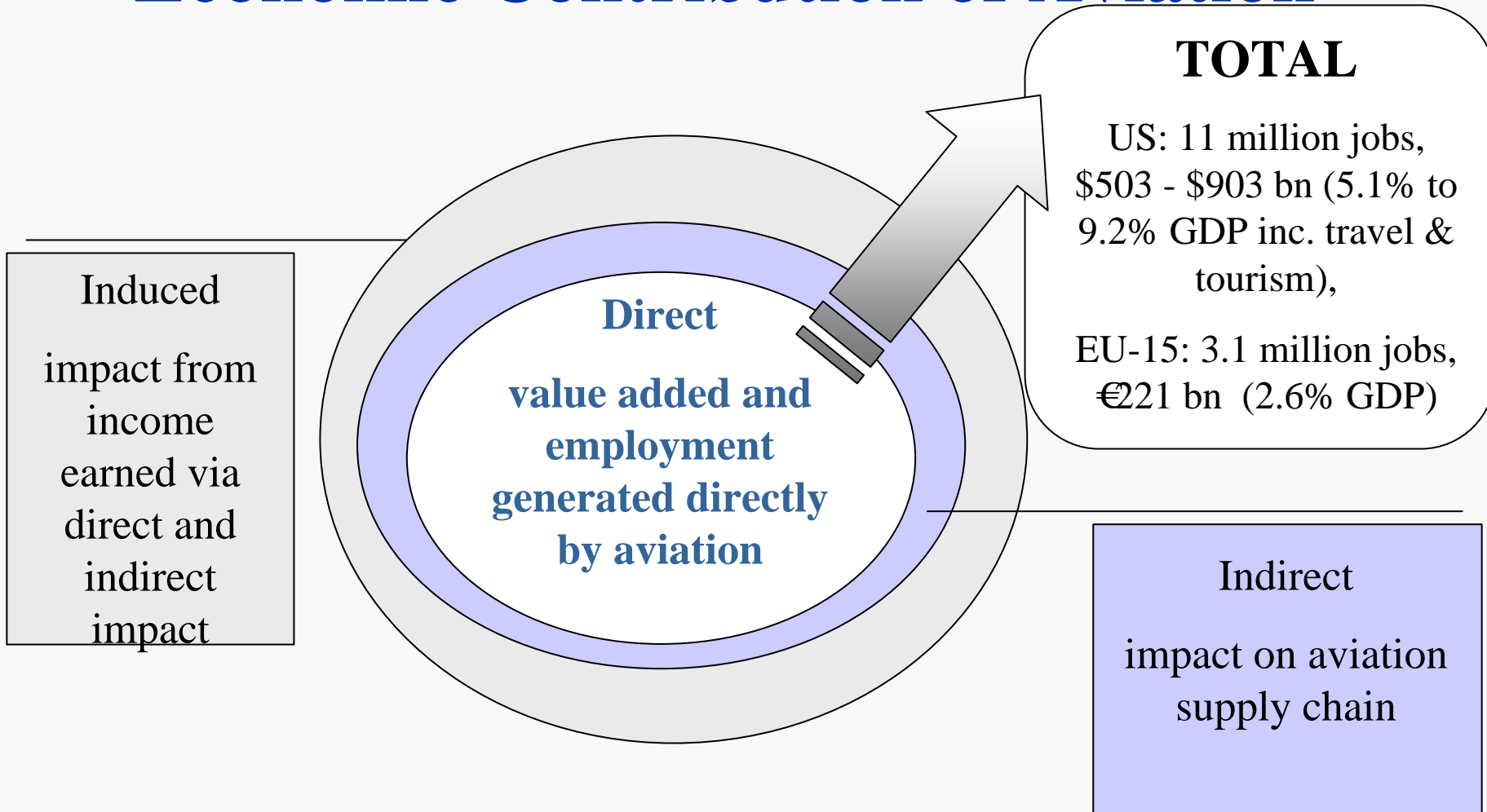
Victor Rivas, MIT

6th USA/Europe ATM R&D Seminar

Questions

1. What is the contribution of ATM to economic output and to employment?
2. How does its economic productivity compare with that of other sectors?
3. What is the size of investment and R&D expenditures in the sector?

Economic Contribution of Aviation

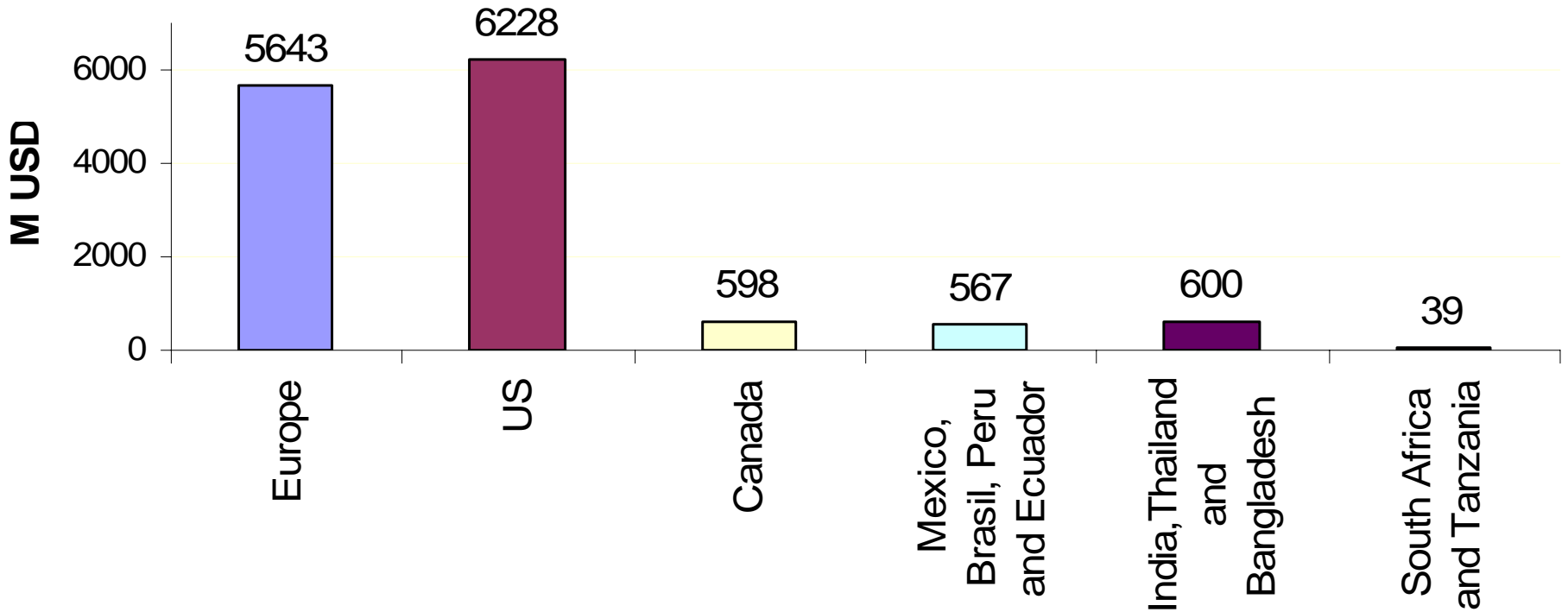


Scope of Analysis

- Employment, revenues and value added
- ATS, ASM and ATFM
- US, Canada and Europe (31 ANSP) and limited for other countries in South America, Africa and Asia
- Sources:
 - Europe: EUROCONTROL PRC and ARDEP
 - US: FAA budget reports, National Aviation Research Plans, Performance and Accountability Reports
 - Canada: Annual Reports of NAV CANADA and ICAO financial data
 - Other countries ICAO Financial Data

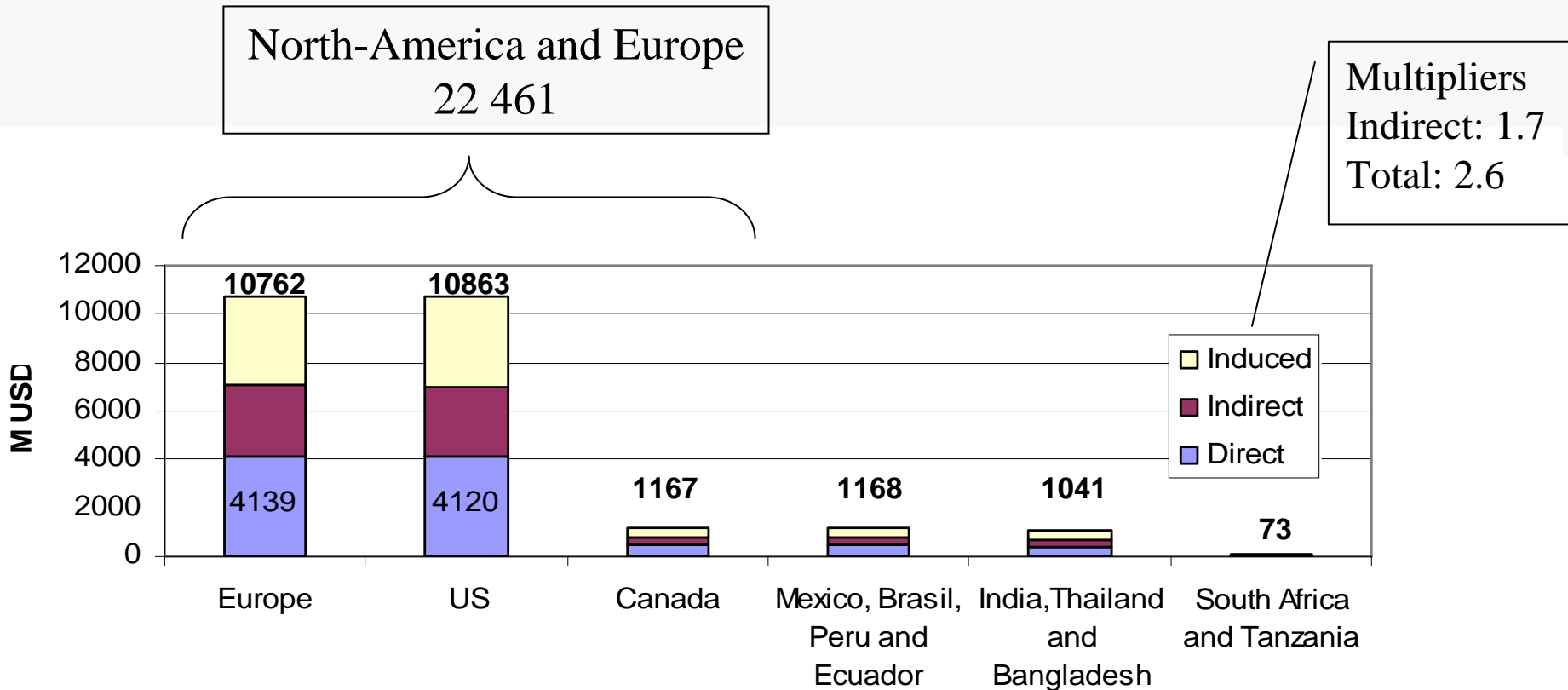
Value added = staff costs + depreciation + interest

ATM Revenue 2002

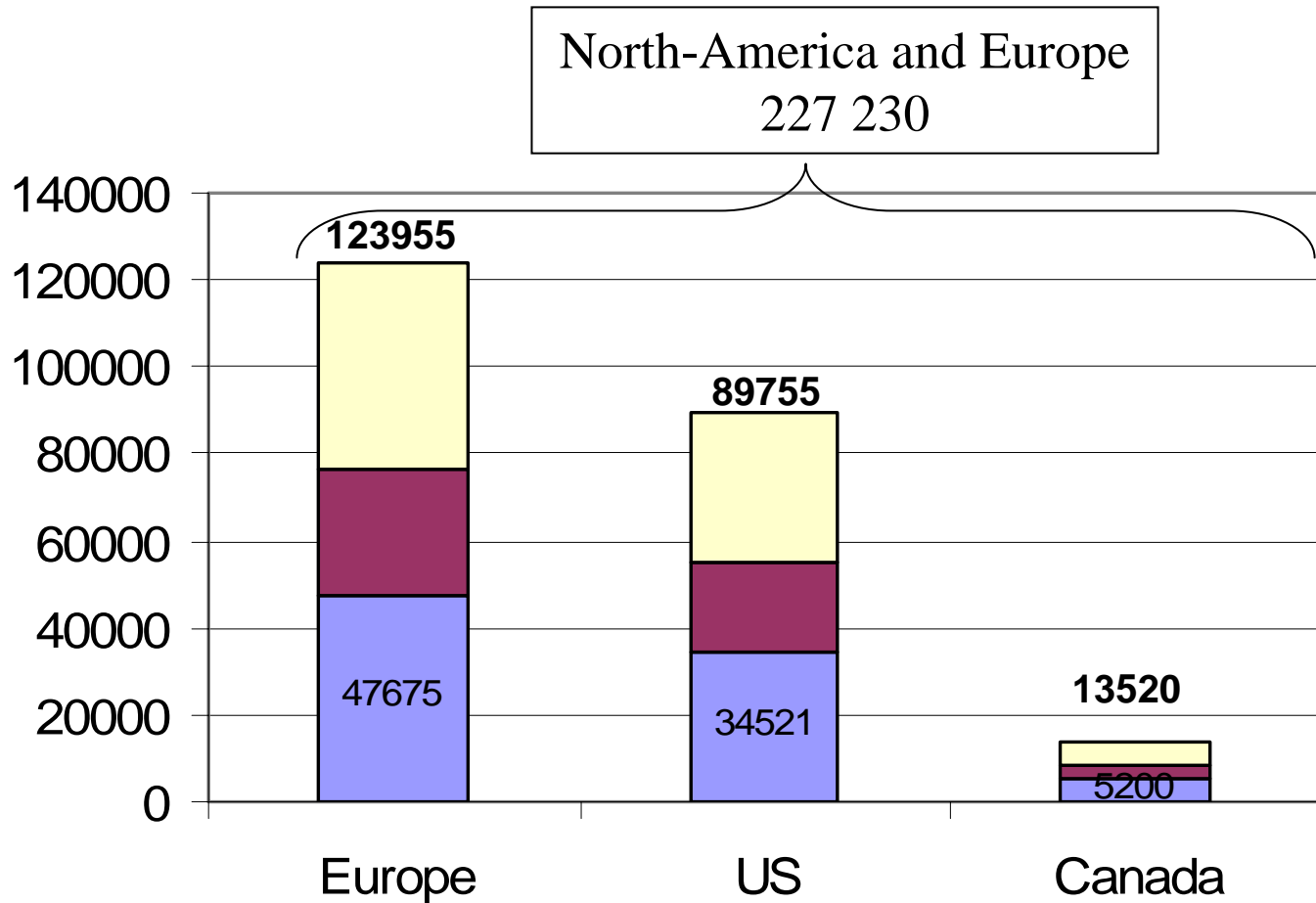


World: 16 000 – 20 000 M USD

ATM Value Added 2002



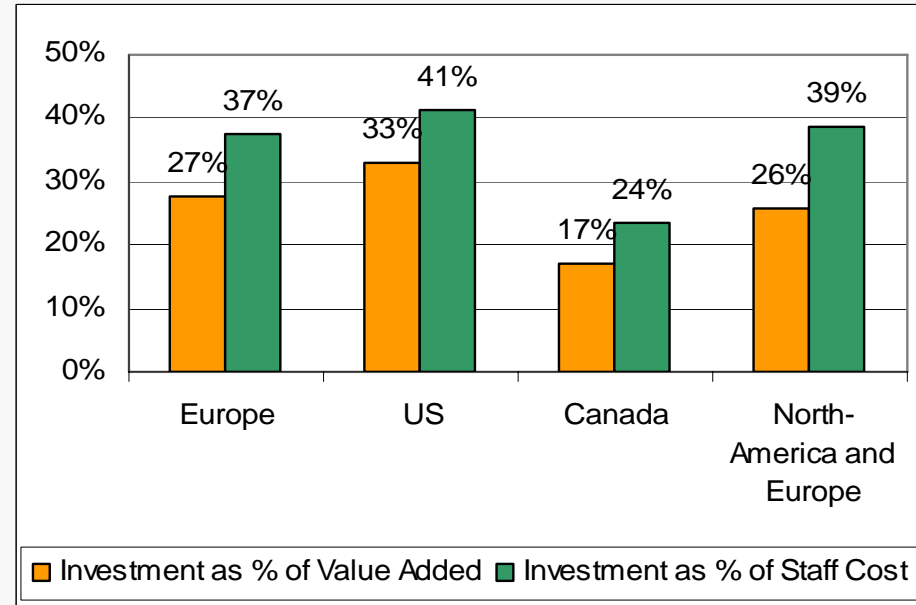
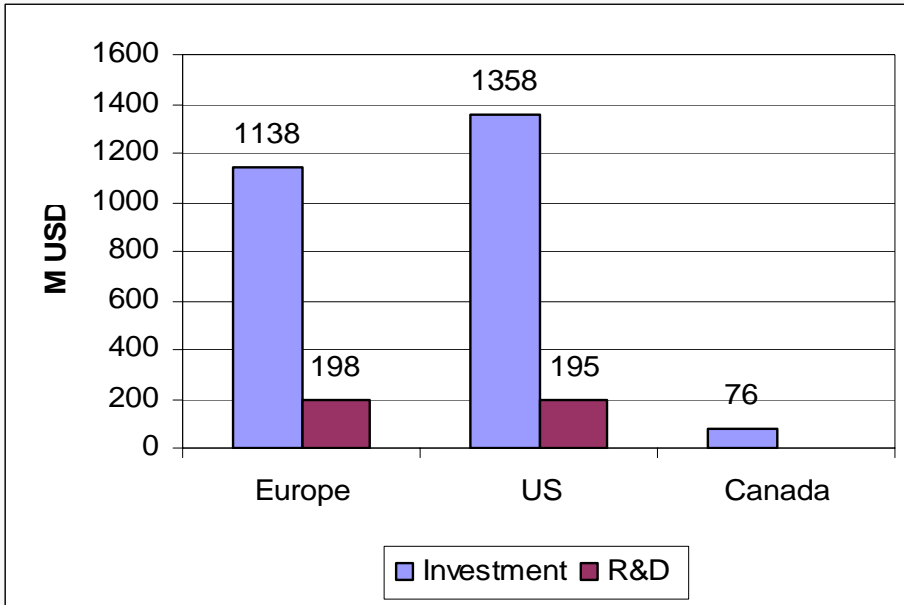
ATM Employment



■ Direct ■ Indirect ■ Induced

Multipliers
Indirect: 1.6
Total: 2.6

Investment and R&D 2002

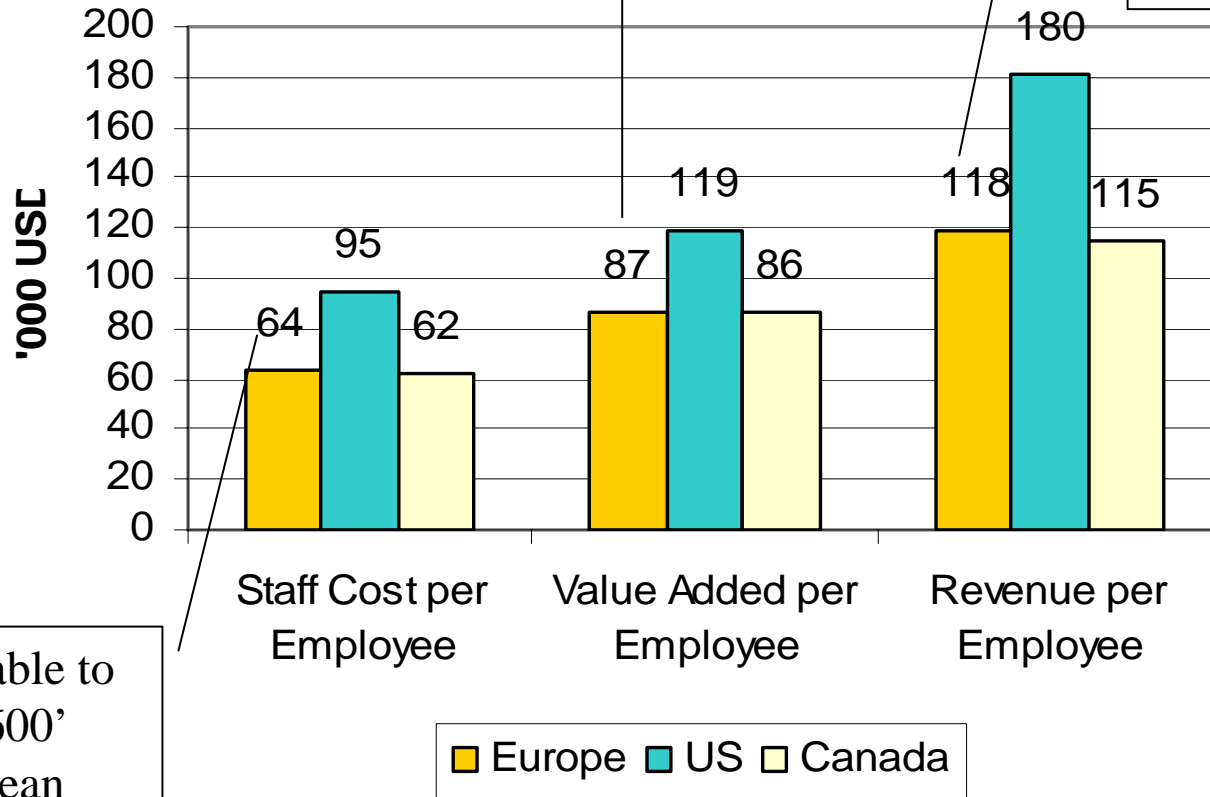


Note: R&D expenses in US might be as much as twice the value shown as they do not include funding from NASA and MITRE/CAASD

Productivity and Staff Cost 2002

- similar aerospace, automotive
- lower than electricity, telecom, pharm.

Transport, storage
communication
(2001) EU-25
\$119k



Comparable to
'Top 600'
European
companies

ATM Economic Value

- ATM adds value to other stages of the air transport value chain by
 - enabling air transport
 - reducing the operating costs of airspace users for example through improved punctuality, predictability and flight efficiency

Conclusions

- Preliminary results
 - Economic Impact – North-America and Europe: USD 22 billion, 230,000 jobs
 - Worldwide ATM revenues: USD 16 to 20 billion
 - Productivity comparable to other technologically advanced sectors
- Future work:
 - More precise and extensive economic data
 - ATM value beyond revenue and value added captured through ATM statements