

Economic Assessment of Investments in German and European Airports.

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Keynesian principles

This house believes that we are all Keynesians now.

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How an Economist debate works ?

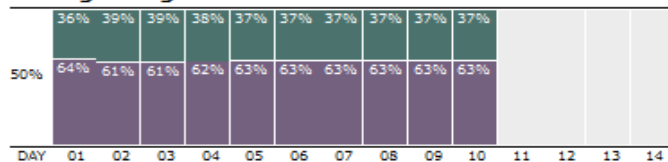
Post-debate

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Voting at a glance



Representing the sides



Defending the motion

Brad DeLong ■

Professor of economics and chair of the political economy major, University of California, Berkeley



Against the motion

Prof. Luigi Zingales ■

Robert C. McCormack Prof, Entrepreneurship & Finance, University of Chicago Booth School of Business

About this debate

As economies around the world have tumbled into recession, Keynesian ideas have enjoyed a new lease of life. Conventional monetary policies seem to have reached their limits, and more and more governments have turned to looser fiscal policies. Are they right to do so—and if they are, should they be cutting taxes or bulking up public spending? And what might Keynes have had to say about it all?

Background reading

Issues

- **Airports the only bastion of Keynesianism!**
- **Contradictory Policy (Advise):**
 - **Macro: Austerity and wage flexibility**
 - **Transport: Airports as job machines based on Leontief-Keynesian model with multiplier effects = 1.7 to 4**
- **How airport investment are assessed in the political process?**
- **In some countries assessments are irrational and reflect the ideology of “jobs versus environment”**
- **How can the assessments be improved?**
 - **Cost Benefit Analysis (CBA)**
 - **Computerized General Equilibrium (CGE)**

- I. Introduction: Research Questions**
- II. Rational Methods to Assess Airports Investments:**
 - Characteristics of Airport Investments
 - Methods to assess airport investments
 - Lessons from mega project cost economics
- III. Economic Impact Analysis**
 - EIA as a tool of regional economics
 - Misuse of EIA: EIA as an assessment tool
- IV. CBA and CGE**
 - Case Studies
 - Strengths & Weaknesses
- V. Summary and Recommendations**

- **Five research questions:**
 1. Which countries (mis)use EIA to assess airport expansion?
 2. Which countries use CBA
 3. Which countries use CGE?
 4. What are the strength and weaknesses of CBA/CGE?
 5. Have CBA or CGE been carefully scrutinized?
- **Work in progress**

II. Rational Methods

- **Characteristics of Airport Investments**
 - **Airports are long term relationship specific investments plagued with hold up problems, opportunism, externalities and imperfect information.**
 - **Costs and benefits are unevenly distributed in space and lead to NIMBY reactions in the direct neighbourhood of airports.**

II. Rational Methods

- **Airport regulation:**
 - Subsidies might cover fixed costs or cause distortions
 - Regulation and slots break the link between scarcity and pricing so that prices lose their signalling function for investment.
 - Cost based regulation sets incentives for inefficient pricing and for excessive and too costly investment.
 - Lack of independent regulation leads to regulatory capture and rent seeking

II. Rational Methods

- If the state defines well environmental, urban planning, safety and security standards, and if intense competition or effective price regulation constrains the market power and no wider economic benefits exists, then the airport calculations on the present value of an investment should be sufficient to guide investment.
- Otherwise, public planning and rational assessment necessary

II. Rational Methods

- **Methods to assess airport investments**
 - **CBA**
 - **CGE**
 - **Both not perfect, but address the question of cost and benefits in terms of economic welfare**

II. Rational Methods

- **Mega project economics:**
 - **Airport investments might turn into mega projects with benefit shortfalls and/or cost overruns.**
 - **The failure of mega project is due to the lack public sector or private sector accountability.**
 - **Public control and transparency are not implemented or competition does not work effectively.**
 - **CBA or CGE should be made by independent organizations, peer reviewed and ex-post evaluated**

III. EIA

- **EIA useful tool to study forward and backward linkages and agglomeration**
- **EIA can quantify the economic significance of an airport.**
- **Economic significance is a nice, but useless for airport management and airport policy.**

III. Fallacies of EIA

- **If investment decisions are assessed by EIA the following problems are neglected:**
 - **Direct & indirect effects of are greater the more costly and unproductive an airport is.**
 - **Induced effect is independent of the investment object.**
 - **Substitution and price effects are neglected.**
 - **EIA creates the ideology that jobs can only be created if noise and environmental burdens are accepted.**
 - **EIA is intentionally misused by airports to legitimize investment and to delude the public.**

III. EIA Case Studies: Austria



Home >Company >Flughafen Wien AG >

Economic significance of Vienna Airport



Vienna Airport is the largest employer in the east of Austria. In 2011-12, an average of 20,000 employees in 230 companies worked to ensure punctuality, convenience and safety. A further 52,500 jobs are indirectly connected with Vienna Airport. The airport operations generate tax revenue throughout Austria of just under 1 billion euros per year.



- FWAG (group) facts & figures
- Economic significance of Vienna Airport
- The airport & the environment
- Third runway project
- New terminal
- Other development projects
- VIE Metamorphosis
- Ex-post Environmental Impact Statement
- Brochures for downloading

III. EIA Case Studies: Germany

EIA is used for four different reasons:

- **to document the economic significance and to study agglomeration effects**
- **to assess and rationalize the airport investments**
- **to prevent stricter night curfews**
- **to legitimize subsidies and or expansion of small regional airports**

III. EIA Case Studies: Germany

Frankfurt Airport: Third runway

- **Objective of mediation:** “under which circumstances Frankfurt Airport can help to keep up permanently and enhance the competitiveness of the Rhine-main region with respect to employment and economic structure, without neglecting the ecological costs imposed on the region”.
- 5 scenarios from status quo, reduction of movements to full-scale expansion were analysed by EIA (Bulwien et. al.,1999).
- Full-scale expansion creates 57,000 more jobs. Therefore mediation recommends full-scale expansion.
- Logic of jobs versus the environment

III. EIA Case Studies: Germany

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III. EIA Case Studies: Germany

- **BBI P: 30 Mio PAX. Inputs: 2.8 Bill €**
 - **direct: 17.000, indirect: 11.300, induced: 12.200 jobs**
= 31500 jobs (Baum et al. 2005)
- **BBI B: 30 Mio PAX Inputs: 5.6 Bill €**
 - **direct: 32.00, indirect: 22600, induced: 24.400 =**
63000 jobs (Niemeier, 2013)

III. EIA Case Studies: Germany

EIA an instrument against strict night curfews

- Berlin International Airport (BBI).
- Baum et al (2007) analyse stricter night curfew with an EIA & estimate catalytic effects.
- Base scenario: no night restrictions, 30 m PAX in 2023:
 - 21.300 direct jobs, 9700 indirect, 13600 induced jobs and 13600 catalytic jobs. Total 79.100 jobs.
- Strict night curfew reduces PAX by 8 million:
 - - 5 300 direct jobs, - 2100 indirect jobs, - 47000 induced jobs, - 5400 catalytic jobs.
- Loss of 20.000 jobs persuaded the planning authority to keep BBI open.

III. EIA Case Studies: Germany

Legitimize subsidies/expansion of regional airports

- Klophaus (2006) for the Association of Regional Airports:
 - Regional airports are part of national infrastructure: “Daseinsvorsorge”
 - 2.550 jobs at regional airports create 3.825 indirect and induced jobs.
- The real problem of over capacity at regional airports is not addressed including the legitimate role of subsidies.

IV. CBA and CGE

- **CBA:**
 - Used for airports since 1960s
 - Roskill Commission: Third London Airport (Mishan, 1970, Forsyth 1972)
 - Second Runway in Sydney (Mills, 1982)
 - Amsterdam (CPB, 1971)
 - Dublin Airport 2nd Terminal & Runway (2007)
 - New Lisbon Airport (NERA, 2007)
 - New airport in Sydney (Joint Study 2012)
 - New London Airport
 - Projects funded by European Investment Bank

IV. CBA and CGE: Case Study

- **CBA of Terminal 2 and Runway 2 at Dublin Airport by Cambridge Economic Policy Associates (2007) for Aviation Regulation (CAR)**
- **Two scenarios: “do nothing” vs. expansion of Dublin Airport**
- **Discount rate (7.4%.)**
- **Main conclusion: The benefits from building a second terminal will be greater in later years, because more passengers will be using the airport in those years.**
- **EIA played no role in the discussion**
- **CBA was not assessed ex post, but CBA was part of a more rational investment decision.**

IV. CBA and CGE

- **CGE models are now used quite often as a way of evaluating investments**
 - **Esp for large infrastructure projects**
 - **Melbourne CityLink, East West Transport Study (Eddington), Australian HST,**
 - **Second Sydney Airport**
 - **Airline passenger taxes (PwC, 2013, Forsyth et al, 2014)**
 - **Airport Investments in Japan**
 - **New Runway for London**

IV. CBA and CGE

- **CBA and CGE:**
 - **Misconception: CBA is about welfare (CS + PS) but CGE is about GDP**
 - **Very straightforward to include a welfare measure (CS+PS etc) in a CGE model**
 - **We can seek to integrate CBA and CGE**
 - **They are complementary techniques**
 - **In theory, should give the same answer**
 - **In practice, both have limitations**
 - **Can use both to get a better evaluation of a project**

V. Summary

- **EIA is useful for economic significance and regional agglomeration**
- **EIA should not be used to assess decisions on investment, night curfews and subsidies for regional airports.**
- **Some countries intentionally misuse EIA and mislead public discourse: Ideology of jobs versus environment**
- **Traditional CBA and now also CGE used in some countries. Peer Review and ex-post evaluation needs further research.**
- **Well designed CBA/CGE should become mandatory for airport expansion similar to other transport modes**
- **Airport Policy should become Neoclassical and Macro Policy should become Keynesian.**

Thank you!

IV. CBA Portugal

- Assessing the net benefits of developing a new Lisbon airport
- NERA (2007) commissioned by the government

		Costs (Mio. of Euro)
Base Scenario	Phase 1	427.0
	Phase 2	2 772.3
		1199.3 (Total cost)
Alternate Scenario	Phase 1 and other	438.3
	Ota Airport	4674.4
	Surface Access Costs	72.5
		5185.2 (Total cost)
Incremental expenses		3985.9
Social Project Investment		1971.4
Present Value of Benefits (duration of the project till 2048, discount rate 5%)	With transboundary effects	4539.4
	Without transboundary effects	2810.6
Economic Net Present Value	With transboundary effects	2568.0
	Without transboundary effects	839.2

Source: own illustration based on the report

IV. CBA Portugal

- **National Civil Engineering (2010): New Lisbon Airport at Ota or Alcochete will generate incremental net benefits.**
- **The new airport will be built in Alcochete.**
- **Further research on regional interests**

