



Review of Tasman Coal Project
Socio economic assessment (EIA appendix M)

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Introduction

Economists at Large have reviewed the socio-economic assessment of the Tasman Extension Project by Gillespie Economics. We are concerned that the cost benefit analysis overstates the value of the project by overstating several benefits and understating various costs.

Treatment of net production benefits

Gillespie economics are right to differentiate between profits that will accrue to foreign shareholders and those that will accrue to Australia. Given the importance to Australian decision makers of this issue, it is disappointing that no calculations or sources are shown for this calculation. Royalties and tax revenue are also important to understand the benefits to Australia and NSW and sources and calculations for these figures should also be shown.

Greenhouse Gas emissions

At a global level, consideration of end use greenhouse gas emissions is required. Gillespie Economics consider only the emissions generated by mining and transport operations. This is inappropriate as the benefits of coal use are implied in the price of coal and therefore incorporated into the analysis, while the costs associated with emissions are not. While correct from an international carbon accounting viewpoint, as an economic assessment this is incorrect.

Non-market benefits of employment

This value refers to the willingness to pay of general NSW citizens to maintain employment by the project. It is problematic for several reasons. It is based on choice modelling surveys that do not include an appropriate “status quo” scenario. Respondents are forced to apply a value to the variable.

Furthermore, respondents are asked to value jobs “created” or “maintained”. Fully employed labour markets, such as Australia’s mining sector do not “create” jobs, but reallocate labour resources. Without a proper understanding of the mining labour market, respondents are likely to over value this attribute. This value should be omitted rather than considered in sensitivity analysis.

Noise, air quality, vibration, amenity

These values are assigned zero values in the CBA, generally as the predicted levels of the project will comply with guidelines. This is incorrect from an economic perspective, as just because an impact complies with a government guideline does not mean there is no impact on the surrounding community. Consultation with the community should be undertaken and considered in the cost benefit analysis.

Flora and fauna

Impacts on flora and fauna are assumed to be offset by an ecological offset programme and no value assigned to any damage that may be caused. This is inappropriate as it ignores the considerable debate between ecologists over the ability of offset programmes to achieve their aims in many cases. See (Bekessy et al., 2010) for example.

Input-output modelling of economic impacts

Input-output modelling has fallen from favour among economists. While relatively cheap and easy to perform it invariably overstates the impacts of a project on output and employment. Its main flaws have been spelled out by (ABS, 2011):

- Lack of supply-side constraints: The most significant limitation of economic impact analysis using multipliers is the implicit assumption that the economy has no supply-side constraints. That is, it is assumed that extra output can be produced in one area without taking resources away from other activities, thus overstating economic impacts. The actual impact is likely to be dependent on the extent to which the economy is operating at or near capacity.
- Fixed prices: Constraints on the availability of inputs, such as skilled labour, require prices to act as a rationing device. In assessments using multipliers, where factors of production are assumed to be limitless, this rationing response is assumed not to occur. Prices are assumed to be unaffected by policy and any crowding out effects are not captured.
- Fixed ratios for intermediate inputs and production: Economic impact analysis using multipliers implicitly assumes that there is a fixed input structure in each industry and fixed ratios for production. As such, impact analysis using multipliers can be seen to describe average effects, not marginal effects. For example, increased demand for a product is assumed to imply an equal increase in production for that product. In reality, however, it may be more efficient to increase imports or divert some exports to local consumption rather than increasing local production by the full amount;
- No allowance for purchasers' marginal responses to change: Economic impact analysis using multipliers assumes that households consume goods and services in exact proportions to their initial budget shares. For example, the household budget share of some goods might increase as household income increases. This equally applies to industrial consumption of intermediate inputs and factors of production.
- Absence of budget constraints: Assessments of economic impacts using multipliers that consider consumption induced effects (type two multipliers) implicitly assume that household and government consumption is not subject to budget constraints.
- Not applicable for small regions: Multipliers that have been calculated from the national I-O table are not appropriate for use in economic impact analysis of projects in small regions. For small regions multipliers tend to be smaller than national multipliers since their inter-industry linkages are normally relatively shallow. Inter-industry linkages tend to be shallow in small regions since they usually don't have the capacity to produce the wide range of goods used for inputs and consumption, instead importing a large proportion of these goods from other regions.

Conclusion

The shortcomings of the Gillespie Economics cost benefit analysis relating to:

- **Treatment of net production benefits**
- **Greenhouse Gas emissions**
- **Non-market benefits of employment**
- **Noise, air quality, vibration, amenity**
- **Flora and fauna**

all serve to overstate the value of the project. Particularly if greenhouse gas emissions are considered, the present value of the project may be negative.

The use of input-output models serves to overstate impacts on output and employment.

In conclusion, we recommend that the assessment be revised before it is used for decision making purposes.

References

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