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CONSTRUCTION OF A NEW LIBRARY

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Assessing the statewide impacts of economic activity

In this report Input-Output methodology is used to examine the effects of building a new library in the North of the state worth \$10 million on the Tasmanian economy. These effects are considered in terms of its impacts on six key measures: the output of Tasmanian industries, the Gross State Product (GSP), employment numbers, wages income, taxes generated and imports.

This report examines only the impacts during the construction phase, and does not calculate the impact on the state economy of the library through its ongoing operational phase.

These direct impacts are only part of the total effect on the State's economy. Analysis of the total impact, including indirect effects, is based on an understanding that industries, and individual companies within these industries, do not exist in a vacuum, but use each others' products to produce their own. Thus, an increase in demand for one industry's products leads to increases in the demand of other 'linked' industries. An input-output representation of the economy is comprised of a set of industries which are linked by these inputs and outputs or intermediate relationships, and by the final demand for each industry's output. The model used in this report is the Regional Input-Output Model (RIOM).

Broadly, input-output modelling examines how different industries interact to produce final demand. For example, a dairy farmer (as part of the Agriculture industry) may sell some of his or her milk to a Milk Processing company (part of the Food Product Manufacturing industry), which uses it as an ingredient in their chocolate milk. This company in turn sells some of its output to a food wholesaler (part of the Wholesale Trade industry), who sells some of it to the local supermarket, who sells it to a thirsty customer. The same 500 ml of milk has been sold several times, but only the last transaction represents part of the state's final demand. Thus, it can clearly be seen that the inputs required by one industry form part of the demand for the products of another.

There are two major types of Input-Output models: open and closed models. In open models, the labour and wages of employees and the gross operating surplus of companies are treated as primary inputs in the production of goods and services; if you want to produce more widgets, you must employ more widget makers. This type of model captures the direct and indirect effects of changes in demand in one industry on the other industries in the economy. By contrast, RIOM is a closed model that includes the household sector as a separate industry. This enables the consideration of **induced** effects of changes in demand. Induced impacts reflect the changes in consumer spending resulting from changes in

economic activity and therefore in employment. The household sector is considered as an 'industry' whose outputs are labour, and whose inputs consist of consumer spending; if you create more employment, you also create an increase in demand from the household sector for consumer goods like food, accommodation, entertainment and so on.

Statewide impacts

The overall impacts of all these changes in final demand are shown in table below.

Sector	Output Impact (\$MM)	Employment Impact	GSP Impact (\$MM)	Wages Impact (\$MM)	Imports Impact (\$MM)	Taxes Impact (\$MM)
Construction trade services	11.72	79	4.33	2.18	6.99	0.83
Total	11.72	79	4.33	2.18	6.99	0.83

Table 1 Construction phase impacts – whole economy

These impacts represent an ongoing gain for the Tasmanian economy. The output of all Tasmanian industries increases by \$11.72 million and GSP by \$4.33 million. 79 additional full time equivalent jobs are created, representing \$2.18 million of wage income for Tasmanian workers.

The spread of the impacts across different industry groups provides additional information. As would be expected, the largest impacts are seen within the Industry itself, as seen in Table 2 below. Of the \$11.72 million worth of output \$7.25 million is created within the construction trade services sector. Of the 79 full time equivalent jobs created due to the project 58 are created within the construction trade services sector.

Industry	Output Impact (\$MM)	Employment Impact	GSP (GVA) Impact (\$MM)	Wages Impact (\$MM)
Construction trade services	7.25	58	2.33	1.18

Table 2 Construction phase impacts – construction industry trade services sector

Impacts are also seen within other industries across the whole Tasmanian economy, as seen in Figure 1 and Figure 2 below.

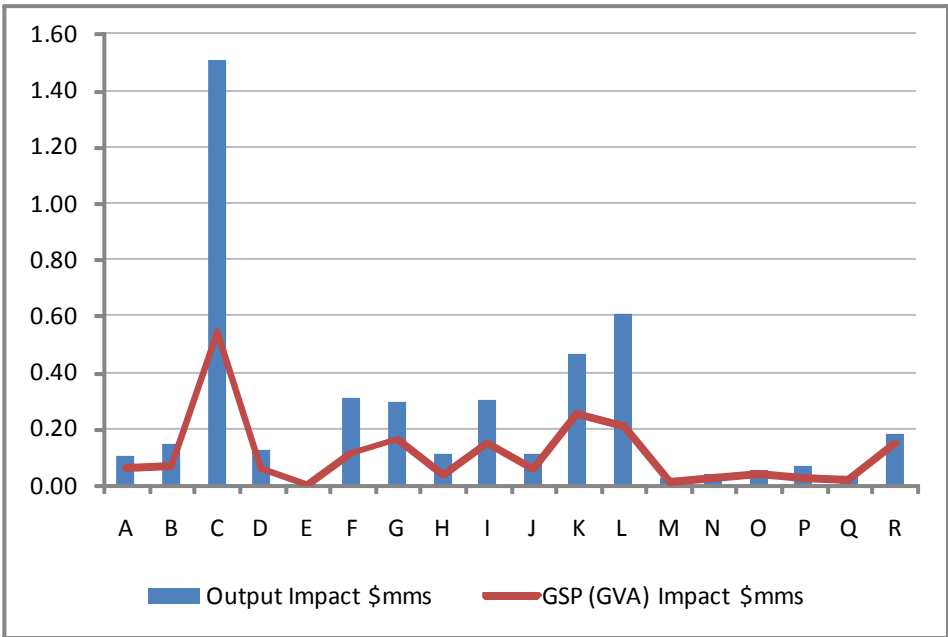


Figure 1 Output and GVA impacts on other industries

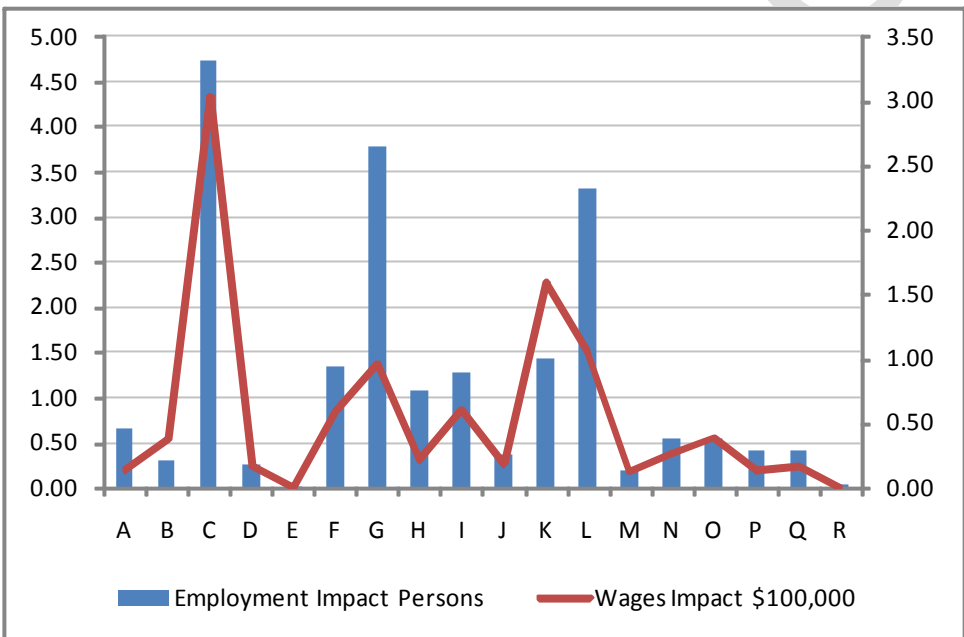


Figure 2 Employment and wages impacts on other industries

Major increases on output and GSP (representing gross value added) are seen in the construction, manufacturing and professional, technical, property and business services industry groups. Major employment impacts are seen in the construction, manufacturing and retail industry sectors.