Senate Standing Committee on Economics
ANSWERS TO QUESTIONS ON NOTICE
Industry, Innovation, Science, Research and Tertiary Education Portfolio
Additional Estimates Hearing 2011-12
15 February 2012

AGENCY/DEPARTMENT: DEPARTMENT OF INDUSTRY, INNOVATION, SCIENCE, RESEARCH AND TERTIARY EDUCATION

TOPIC: Downstream Employment

REFERENCE: Question on Notice (Hansard, 15 February 2012, pages 54-55)

QUESTION No.: AI-30

Senator CAMERON: But manufacturing provides one of the biggest multiplier effect in terms of downstream employment, doesn't it?
Senator CARR: Do we have a figure on that?
Senator CAMERON: If you do not have it at hand, I am happy for you to come back with that.
Mr Lawson: A range of estimates exist around the world on multipliers, and there are differences about whether you use them when you are talking about changes in employment or average levels. We can check for you just at the moment what the degree of integration between the mining sector and the manufacturing sector is and what direct inputs it has. I am pretty sure you are right that there is a higher direct input from that multiplier concept in manufacturing than there is in mining.

ANSWER

The Australian Bureau of Statistics (ABS) has ceased publishing industry input-output multipliers since the 2001-02 issue of the input-output tables due to the inherent shortcomings in the underlying assumptions that could result in the significant overestimation of the impact of economic events. This followed feedback from the user community regarding the suitability of such multipliers for use in quantifying the economic impacts of policies and projects.

Nonetheless, some indicators of the extent to which an industry is linked to other industries in the economy can be derived from the data in the ABS input-output tables, the latest being for the 2007-08. Tables 1 and 2 below indicate the extent to which an industry's output is dependent on outputs of other industry, and the proportion of an industry's output that is used by other industries.

Table 1 indicates that, in aggregate and on average, manufacturing production requires a higher level of intermediate input from other industries than does mining, which attributes a greater proportion of its value-added to primary inputs (capital services in the case of mining).

Table 2 indicates the relative demand for an industry's output as an intermediate input to another industry's production (again, in aggregate and on average). The output from mining production is used primarily as an intermediate input to manufacturing production while about 25 percent and 35 percent of manufacturing outputs end up as intermediate input to Construction and Services, respectively.

While downstream employment multipliers may be inferred from the relative distributions shown in Tables 1 and 2, the ABS has, as explained above, stopped publishing multipliers because they are easily misinterpreted.

Table 1. Input to industry production by source – Columns sum to 1.00 (i.e. 100 percent)

	For Use					
From	**Agricul-ture**	**Mining & Mining Services**	**Manufac-turing**	**Electricity, Gas, Water & Waste**	**Construction & Construction Services**	**Services**
Agriculture	0.18	0.0	0.07	0.00	0.00	0.00
Mining & Mining Services	0.00	0.09	0.09	0.08	0.00	0.00
Manufacturing	0.09	0.06	0.19	0.05	0.14	0.05
Electricity, Gas, Water, Waste	0.01	0.01	0.02	0.13	0.01	0.01
Construction & Construction Services	0.01	0.03	0.01	0.07	0.26	0.02
Services	0.20	0.14	0.18	0.17	0.23	0.31
Intermediate uses	0.49	0.34	0.55	0.49	0.65	0.39
Compensation of employees	0.11	0.11	0.16	0.17	0.15	0.33
Gross operating surplus & mixed income	0.31	0.49	0.12	0.28	0.15	0.21
Taxes less subsidies on products	0.01	0.00	0.00	0.01	0.00	0.01
Other taxes less subsidies on production	0.01	0.00	0.01	0.01	0.00	0.02
Complementary imports	0.00	0.00	0.00	0.00	0.00	0.00
Competing imports	0.06	0.04	0.15	0.04	0.04	0.04
Contribution to Australian Production	1.00	1.00	1.00	1.00	1.00	1.00

Note: Summation of individual cell in a column may not add up to 1.00 due to rounding.
Source: ABS Catalogue No. 5209.0.55.001 Australian National Accounts: Input-Output Tables - Electronic Publication, 2007-08 Final

Table 2. Industry output by destination of use – Rows sum to 1.00 (i.e. 100 per cent)

	For Use						
From	**Agricul-ture**	**Mining & Mining Services**	**Manufac-turing**	**Electricity, Gas, Water & Waste**	**Construction & Construction Services**	**Services**	**Total Industry Uses**
Agriculture	0.26	0.0	0.61	0.00	0.01	0.12	1.00
Mining & Mining Services	0.00	0.23	0.62	0.07	0.02	0.06	1.00
Manufacturing	0.03	0.04	0.37	0.01	0.20	0.35	1.00
Electricity, Gas, Water, Waste	0.03	0.06	0.21	0.22	0.10	0.39	1.00
Construction & Construction Services	0.02	0.04	0.10	0.03	0.50	0.30	1.00
Services	0.02	0.03	0.11	0.02	0.11	0.71	1.00
Competing imports	0.03	0.04	0.41	0.02	0.09	0.42	1.00

Note: Summation of individual cell in a column may not add up to 1.00 due to rounding.
Source: ABS Catalogue No. 5209.0.55.001 Australian National Accounts: Input-Output Tables - Electronic Publication, 2007-08 Final