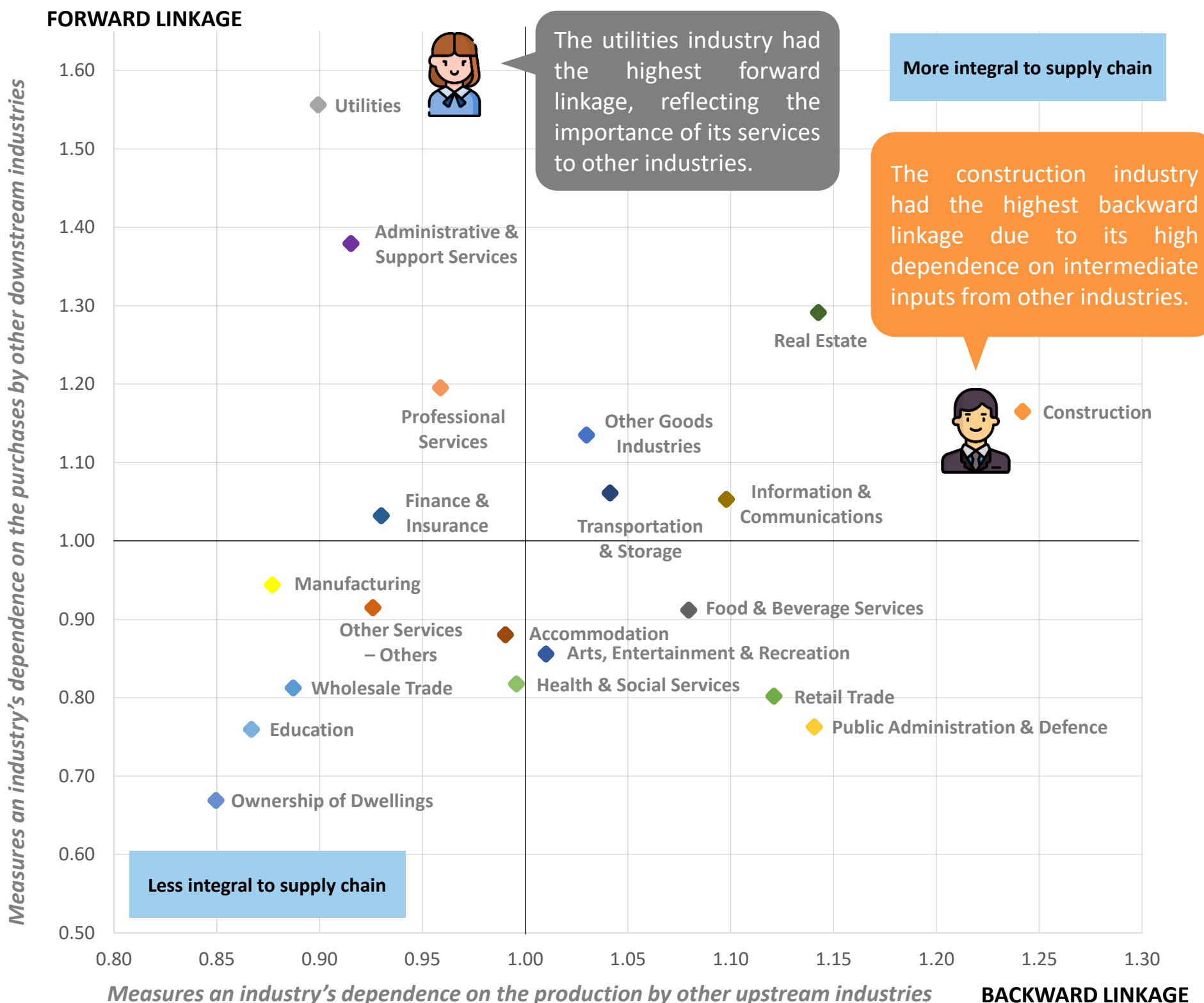# Linkages at a glance (2022)

An industry's linkage measures the degree of its inter-dependence with other industries.

For example, industries in the top-right quadrant in the chart are more dependent on intermediate inputs from upstream industries and are also important sources of supply to downstream industries.

FORWARD LINKAGE

Measures an industry's dependence on the purchases by other downstream industries

The utilities industry had the highest forward linkage, reflecting the importance of its services to other industries.

More integral to supply chain

The construction industry had the highest backward linkage due to its high dependence on intermediate inputs from other industries.

- Utilities — 1.55
- Administrative & Support Services — 1.38
- Real Estate — 1.29
- Professional Services — 1.195
- Construction — 1.17
- Other Goods Industries — 1.135
- Information & Communications — 1.055
- Finance & Insurance — 1.03
- Transportation & Storage — 1.06
- Manufacturing — 0.945
- Food & Beverage Services — 0.91
- Other Services – Others — 0.915
- Accommodation — 0.88
- Arts, Entertainment & Recreation — 0.855
- Wholesale Trade — 0.81
- Health & Social Services — 0.82
- Retail Trade — 0.80
- Education — 0.76
- Public Administration & Defence — 0.775
- Ownership of Dwellings — 0.665

Less integral to supply chain

Measures an industry's dependence on the production by other upstream industries

BACKWARD LINKAGE

Multipliers at a glance (2022)

An industry's multiplier measures the total economic impact of a $1 increase in demand for its output.

For example, in 2022, every $1 spent on Food & Beverage (F&B) Services generated $1.64 in total economic output.

$ 0.64
(indirect effect)

$1
(direct effect)

$ 1.64
(multiplier)
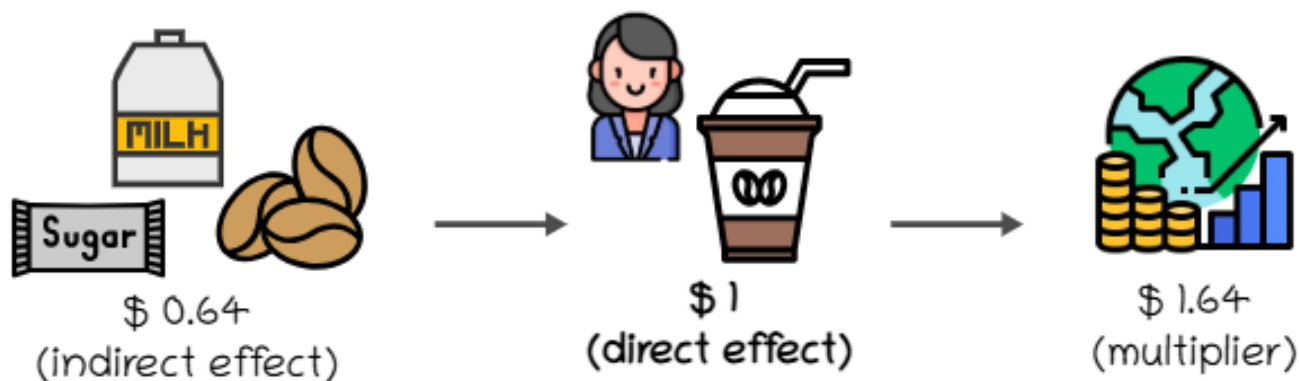
Assuming the multipliers for serving of coffee were the same as F&B services, every $1 increase in a customer's order for a cup of coffee in a coffeeshop would lead the coffeeshop to produce an additional $1 of Output, which was the direct effect.
For the coffeeshop to fulfill the order, it would require an additional $0.64 of inputs such as milk and coffee beans from other industries, which was the indirect effect.
In total, $1.64 of total Output would be generated in the economy arising from the $1 increase in coffee consumption in the coffeeshop.

Value-added + **Taxes on Products** + **Imported Intermediate Inputs*** + **Domestic Intermediate Inputs*** = **Total output**

Imported and domestically produced goods and services used as inputs for production

Industry	Value-added	Imported Intermediate Inputs	Domestic Intermediate Inputs	Total
Construction	0.59	0.41	0.89	1.89
Real Estate	0.77	0.21	0.74	1.74
Public Administration & Defence	0.60	0.40	0.74	1.74
Retail Trade	0.76	0.24	0.71	1.71
Information & Communications	0.39	0.60	0.67	1.67
Food & Beverage Services	0.57	0.40	0.64	1.64
Transportation & Storage	0.42	0.57	0.58	1.58
Other Goods Industries	0.43	0.57	0.57	1.57
Arts, Entertainment & Recreation	0.77	0.21	0.54	1.54
Health & Social Services	0.74	0.23	0.51	1.51
Accommodation	0.76	0.24	0.51	1.51
Professional Services	0.60	0.40	0.46	1.46
Finance & Insurance	0.65	0.34	0.41	1.41
Other Services – Others	0.78	0.22	0.41	1.41
Administrative & Support Services	0.77	0.23	0.39	1.39
Utilities	0.48	0.51	0.37	1.37
Wholesale Trade	0.57	0.43	0.35	1.35
Manufacturing	0.40	0.60	0.33	1.33
Education	0.84	0.15	0.32	1.32
Ownership of Dwellings	0.93	0.07	0.29	1.29

Legend:
- Value-added
- Taxes on Products
- Imported Intermediate Inputs
- Domestic Intermediate Inputs