

Complexity Index – Detailed Description

1 Components

The Complexity Index (CI) for each institution is constructed from four components:

1.1 Number of staff

The number of equivalent full time staff.

1.2 Number of students

The number of equivalent full time students.

1.3 Research activity

Measured by total research income.

1.4 Geography

The number and size of locations where the institution has staff and/or students.

Locations are classified according to size as follows.

- Site Less than 100 workstations
- Small Campus 100-199 workstations
- Medium Campus 200-499 workstations
- Large Campus 500 or more workstations

The following table is used to quantify the physical arrangement for each institution. The table is used to assign a geographic score to each institution on the basis of their number of campuses and sites across their locations. The final index is the weighted sums these four values.

	Weight
Large Campus	3.0
Medium Campus	2.0
Small Campus	1.0
Site	0.2

Thus, a University with two large campuses, one medium campus, two small campus and seven sites would have a geographic score of 11.4.

2 Scaling of Component Scores

The four scores resulting from the above four components are then scaled (using a linear conversion) to provide a figure from 1 to 10 inclusive. The institution with the lowest score for a particular category will score 1.0 for that index; the university with the highest index for a particular category will score 10.0 for that category.

The calculation of an index **x** for a component value **y** is done using the formula

$$x = 1 + \frac{9(y - \text{Min})}{\text{Max} - \text{Min}}$$

3 Calculation of the Complexity Index

The Complexity Index (CI) is then calculated by using a weighted mix of the scaled indices.

Complexity Index = C1*StaffIndex+C2*StudentIndex+C3*ResearchIndex+C4*GeographyIndex

Where

C1 Staff 0.35
 C2 Students 0.35
 C3 Research 0.25
 C4 Geography 0.05

Example

If three universities had the following scaled indices for the four components

University	Staff	Student	Research	Geography
A	1.0	1.0	1.0	1.0
B	2.6	3.7	4.0	3.2
C	10.0	10.0	10.0	10.0

and the coefficients (C1, C2, C3 and C4) were (0.35, 0.35, 0.25 and 0.05)

University A would score 1.0 ie would be measured as the least complex of the universities considered in relation to IT.

University B would score 3.865 ie would be measured as moderately complex of the universities considered in relation to IT.

University C would score 10.0 ie would be measured as the most complex of the universities considered in relation to IT.

Paul Sherlock
 Director Information Strategy and Technology Services (UniSA)
 Complexity Index Author
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