Grupo 1.

$(-0'0352, 0'0306)$, $(-0'0058, -0'0050)$, $(-0'0082, -0'0213)$

$(1{,}0641, 0'9885)$.

Grupo 2.

$(1{,}0494, 0'9247)$

5 observaciones, 5 valores de silueta.

• obs 1.

$$s(i) = \frac{b(i) - a(i)}{\max\{a(i), b(i)\}}$$

$$d(a_1, a_2) = \sqrt{(-0'0352 + 0'0058)^2 + (0'0306 + 0'0050)^2} = 0'0461.$$

$$d(a_1, a_3) = 0'0585.$$

$$d(a_1, a_4) = 1'45809$$

$$a = 0'5209.$$

$$d(a_1, b_1) = 1'4056.$$

$$s(1) = \frac{1'4056 - 0'5209}{1'4056} = 0'6294.$$

• obs 2.

$$d(a_2, a_1) = 0'0461)$$

$$d(a_2, a_3) = 0'0165 \quad ; \quad a_2 = 0'5075.$$

$$d(a_2, a_4) = 1'4600.$$

$$d(a_2, b_1) = 1'4063.$$

$$s(2) = \frac{1'4063 - 0'5075}{1'4063} = 0'6391.$$

Observación 3

$$d(a_3, a_1) = \sqrt{(-0'0082 + 0'0352)^2 + (-0'0213 - 0'0306)^2} = 0'0585$$

$$d(a_3, a_2) = \sqrt{(-0'0082 + 0'0058)^2 + (-0'0213 + 0'005)^2} = 0'0165$$

$$d(a_3, a_4) = \sqrt{(-0'0082 - 1'0641)^2 + (-0'0213 - 0'9885)^2} = 1'473$$

$a \equiv$ distancia media intracluster

$$a = \frac{0'0585 + 0'0165 + 1'473}{3} = 0'516$$

distancia intercluster

$$d(a_3, b_1) = \sqrt{(-0'0082 - 1'0494)^2 + (-0'0213 - 0'9247)^2} = 1'4189$$

$$s(3) = \frac{1'4189 - 0'516}{1'4189} = 0'63639$$

Observación 4

$$d(a_4, a_1) = 1'458$$

$$d(a_4, a_2) = 1'46$$

$$d(a_4, a_3) = 1'47$$

$$a = \frac{1'458 + 1'46 + 1'47}{3} = 1'4626$$

distancia intercluster

$$d(a_4, b_1) = 0'0655$$

$$s(4) = \frac{0'0655 - 1'4626}{1'4626} = -0'9552$$