	Industrial R	Management R	Financial F	Credibility	Competitiveness	Operation R	Class
117	P	P	A	A	P	P	NB
213	A	N	N	N	N	N	B
242	N	N	N	N	N	P	B
147	N	N	N	N	N	N	B
129	A	A	A	P	A	A	NB
209	A	A	N	N	N	N	B
7	P	P	P	A	A	P	NB
94	P	A	P	N	P	N	NB
20	A	A	P	A	A	A	NB
63	A	N	N	P	P	P	NB
49	A	P	P	A	P	P	NB
79	A	P	N	P	A	P	NB
6	P	P	A	P	P	P	NB
30	P	N	P	P	P	N	NB
9	P	P	A	A	P	P	NB
153	N	N	A	N	N	N	B
173	A	N	N	N	N	N	B
188	P	N	N	N	N	N	B
219	A	A	N	N	N	N	B
237	N	P	N	N	N	N	B

$$I(S) = -\left(\frac{11}{20}\log_2\left(\frac{11}{20}\right) + \frac{9}{20}\log_2\left(\frac{9}{20}\right)\right) = 0.9927$$

$$I_1 = \frac{6+1}{20}\cdot \overset{P}{I}\left(\frac{6}{7}\cdot\frac{1}{7}\right) + \frac{4+0}{20}\cdot \overset{N}{I}\left(\frac{4}{4}\cdot\frac{0}{0}\right) + \frac{4+5}{20}\cdot \overset{A}{I}\left(\frac{4}{9}\cdot\frac{5}{9}\right)$$

$$= \frac{7}{20}\cdot -\left(\frac{6}{7}\log_2\left(\frac{6}{7}\right) + \frac{1}{7}\log_2\left(\frac{1}{7}\right)\right) + \frac{4}{20}\cdot 0 + \frac{9}{20}\cdot -\left(\frac{4}{9}\log_2\left(\frac{4}{9}\right) + \frac{5}{9}\log_2\left(\frac{5}{9}\right)\right)$$

$$= 0.1116$$

$$I_M = \frac{6+1}{20} \cdot I\left(\frac{6}{7} \cdot \frac{1}{7}\right) + \frac{2+6}{20} \cdot I\left(\frac{2}{8} \cdot \frac{6}{8}\right) + \frac{3+2}{20} \cdot I\left(\frac{3}{5} \cdot \frac{2}{5}\right)$$

$$= \frac{7}{20} \cdot -\left(\frac{6}{7}\log_2\left(\frac{6}{7}\right) + \frac{1}{7}\log_2\left(\frac{1}{6}\right)\right) + \frac{8}{20} \cdot -\left(\frac{2}{8}\log_2\left(\frac{2}{8}\right) + \frac{6}{8}\log_2\left(\frac{6}{8}\right)\right) + \frac{5}{20} \cdot -\left(\frac{3}{5}\log_2\left(\frac{3}{5}\right) + \frac{2}{5}\log_2\left(\frac{2}{5}\right)\right)$$

$$= 0.7743$$

$$I_F = \frac{5+0}{20} \cdot I\left(\frac{5}{5} \cdot \frac{0}{5}\right) + \frac{2+8}{20} \cdot I\left(\frac{2}{10} \cdot \frac{8}{16}\right) + \frac{4+1}{20} \cdot I\left(\frac{4}{5} \cdot \frac{1}{5}\right)$$

$$= \frac{5}{20} \cdot 0 + \frac{10}{20} \cdot -\left(\frac{2}{10}\log_2\left(\frac{2}{10}\right) + \frac{8}{10}\log_2\left(\frac{8}{10}\right)\right) + \frac{5}{20} \cdot -\left(\frac{4}{5}\log_2\left(\frac{4}{5}\right) + \frac{1}{5}\log_2\left(\frac{1}{5}\right)\right)$$

$$= 0.2707$$

$$I_{Cr} = \frac{5+0}{20} \cdot I\left(\frac{5}{5} \cdot \frac{0}{5}\right) + \frac{9+1}{20} \cdot I\left(\frac{9}{10} \cdot \frac{1}{10}\right) + \frac{5+0}{20} \cdot I\left(\frac{5}{5} \cdot \frac{0}{5}\right)$$

$$= \frac{8}{20} \cdot 0 + \frac{10}{20} \cdot -\left(\frac{9}{10}\log_2\left(\frac{9}{10}\right) + \frac{1}{10}\log_2\left(\frac{1}{10}\right)\right) + \frac{5}{20} \cdot 0$$

$$= 0.2344$$

$$I_{Co} = \frac{7+0}{20} \cdot I\left(\frac{7}{7} \cdot \frac{0}{7}\right) + \frac{0+9}{20} \cdot I\left(\frac{0}{9} \cdot \frac{9}{9}\right) + \frac{4+0}{20} \cdot I\left(\frac{4}{4} \cdot \frac{0}{4}\right)$$

$$= \frac{7}{20} \cdot 0 + \frac{9}{20} \cdot 0 + \frac{4}{20} \cdot 0$$

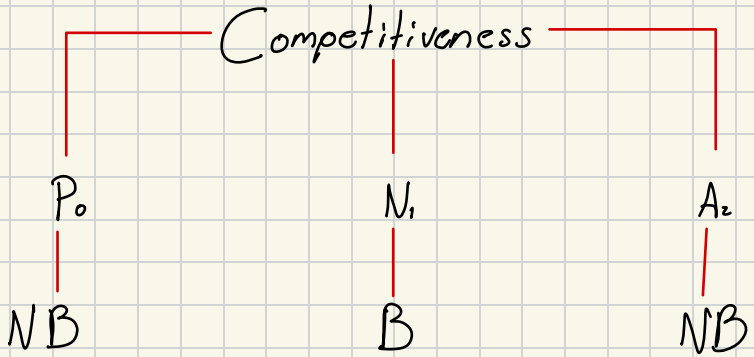
$$= 0$$

$$I_O = \frac{7+1}{20} \cdot I\left(\frac{7}{8} \cdot \frac{1}{8}\right) + \frac{8+2}{20} \cdot I\left(\frac{8}{10} \cdot \frac{2}{10}\right) + \frac{2+0}{20} \cdot I\left(\frac{2}{2} \cdot \frac{0}{2}\right)$$

$$= \frac{8}{20} \cdot -\left(\frac{7}{8}\log_2\left(\frac{7}{8}\right) + \frac{1}{8}\log_2\left(\frac{1}{8}\right)\right) + \frac{10}{20} \cdot -\left(\frac{8}{10}\log_2\left(\frac{8}{10}\right) + \frac{2}{10}\log_2\left(\frac{2}{10}\right)\right) + \frac{2}{20}(0)$$

$$= 0.5783$$

I = 0.9927 - 0.1116 = 0.8811
M = 0.9927 - 0.7793 = 0.2184
F = 0.9927 - 0.2707 = 0.722
C_r = 0.9927 - 0.2344 = 0.7583
C_o = 0.9927 - 0 = 0.9927
O = 0.9927 - 0.5783 = 0.4144



Clasificación manual:

52	NB	True
190	B	True
21	NB	True
37	NB	True
221	B	True
154	B	True
136	NB	True
143	B	True
68	NB	True
17	NB	True