

DESIGN	Weight (%)	Glass bottle with twist-off cap	Aluminum can with pull-tab	Polyethylene bottle with twist-off cap	Mylar bag with straw
<b>Constraints and Objectives</b>					
C: No sharp edges		*	*		
C: No toxin release					
C: Preserves quality					
O: Environmentally benign	33			0.9 × 33% 29.7%	0.1 × 33% 3.3%
O: Easy to distribute	09			0.5 × 9% 4.5%	0.6 × 9% 5.4%
O: Preserves taste	22			0.9 × 22% 19.8%	1.0 × 22% 22%
O: Appeals to parents	18			0.8 × 18% 14.4%	0.5 × 18% 9.0%
O: Permits marketing flexibility	04			0.5 × 4% 2.0%	0.5 × 4% 2.0%
O: Generates brand identity	13			0.2 × 13% 2.6%	1.0 × 13% 13%
<b>TOTALS</b>	<b>99</b>			<b>73.0%</b>	<b>54.7%</b>

**FIGURE 5.4** A numerical evaluation matrix for the beverage container design problem. This chart reflects BJIC's values in terms of the weights assigned to each objective, as given in the pairwise comparison chart of Figure 3.4 (b).