"Variance" has a definite meaning. Variance always means the second central moment, and when we estimate or test the variance, we are estimating or testing this quantity.

"Scale" is more general. It refers to spread of the data (in some way) but without committing to discussing the second central moment.) After all, the second central moment might not exist!

I like the definition (I'm seeing (on Wikipedia) (for a scale parameter s) (and other parameters θ):

$$F(x; s, \theta) = F(x/s; 1, \theta)$$

(So if some s allows us to stretch or compress the CDF to some standardized CDF,) we call it a scale parameter. It might be related to the variance, but maybe not.