Definition of R^2

In lectures, I gave an erroneous definition of R^2. The correct definition is

$$R^2 = \frac{\text{RSS}_0 - \text{RSS}}{\text{RSS}_0}$$

In lectures, it was defined incorrectly with RSS instead of RSS_0 in the denominator. Therefore, the relationship between the F statistic and the R^2 statistic is

$$F = \frac{n-p}{p-p_0}\frac{1}{1/R^2 - 1}.$$

The F statistic can take any value in $[0, \infty)$, whereas the R^2 statistic takes values in $[0, 1]$.