On the Maximum Modulus of a Polynomial

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ABSTRACT: For a polynomial $p(z)$ of degree n, having no zeros in $|z| < 1$ Ankeny and Rivlin had shown that for $R \geq 1$

$$\max_{|z|=R} |p(z)| \leq \frac{R^n + 1}{2} \max_{|z|=1} |p(z)|.$$

Using Govil, Rahman and Schmeisser's refinement of the generalization of Schwarz's lemma we have obtained a refinement of Ankeny and Rivlin's result. Our refinement is also a refinement of Dewan and Pukhta's refinement of Ankeny and Rivlin's result.