```
Clear[ρ, λ, θ, μ, p, z]
(* Define the functions *)
π0 = 1 - ρ;

g1[z_] := (z λ (θ + λ (1 - z)) (1 - ρ)) / (z^2 λ^2 + (θ + λ (1 - p)) μ - λ z (θ + μ + λ))

g2[z_] := (p z λ μ (ρ - 1)) / (z λ (θ + λ (1 - z)) - θ μ + λ μ (p + z - 1))

g[z_] := ((1 - ρ) (z - 1) (μ / (μ + λ (1 - z))) (1 - p + p θ / (θ + λ (1 - z)))) /
   (z - (μ / (μ + λ (1 - z))) (1 - p + p θ / (θ + λ (1 - z))))

(* Check the equality g(z) = π0 + g1(z) + g2(z) *)
Simplify[g[z] == π0 + g1[z] + g2[z]]
```

True