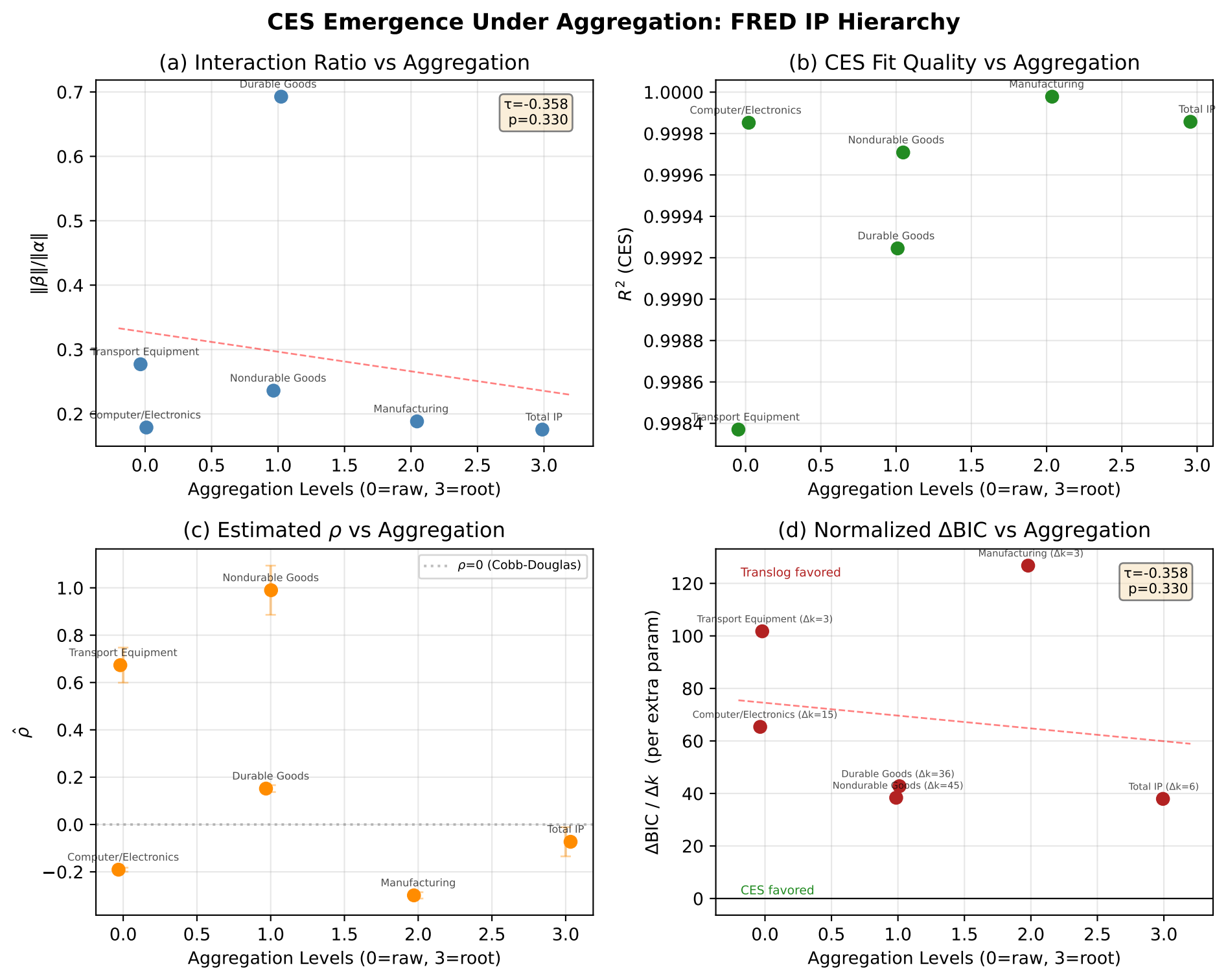
CES Emergence Under Aggregation: FRED IP Hierarchy
(a) Interaction Ratio vs Aggregation
τ=-0.358
p=0.330
Durable Goods
Transport Equipment
Nondurable Goods
Computer/Electronics
Manufacturing
Total IP
‖β‖/‖α‖
Aggregation Levels (0=raw, 3=root)
(b) CES Fit Quality vs Aggregation
Manufacturing
Computer/Electronics
Total IP
Nondurable Goods
Durable Goods
Transport Equipment
R^2 (CES)
Aggregation Levels (0=raw, 3=root)
(c) Estimated ρ vs Aggregation
ρ=0 (Cobb-Douglas)
Nondurable Goods
Transport Equipment
Durable Goods
Total IP
Computer/Electronics
Manufacturing
$\hat{\rho}$
Aggregation Levels (0=raw, 3=root)
(d) Normalized ΔBIC vs Aggregation
Translog favored
τ=-0.358
p=0.330
Manufacturing (Δk=3)
Transport Equipment (Δk=3)
Computer/Electronics (Δk=15)
Durable Goods (Δk=36)
Nondurable Goods (Δk=45)
Total IP (Δk=6)
CES favored
ΔBIC / Δk (per extra param)
Aggregation Levels (0=raw, 3=root)