'Trace' Anomaly

at the quantum level :

$$\partial_\mu \mathcal{D}^\mu = \frac{\beta(\alpha_s)}{4\alpha_s} G^a_{\mu\nu} G^{\mu\nu}_a + (1+\gamma(\alpha_s))\bar{\psi} m \psi$$

with

$$\beta(\alpha_s) = \Lambda d\alpha_s(\Lambda)/d\Lambda$$
$$\gamma(\alpha_s) = d\ln(m_q(\Lambda))/d(\ln\Lambda)$$

to lowest order:

$$\beta(\alpha_s) = -(33-2N_f)\frac{\alpha_s^2}{6\pi} + O(\alpha_s^3)$$

then $\left(G^2 \equiv \frac{\alpha_s}{\pi} G^a_{\mu\nu} G^{\mu\nu}_a\right)$

$$T^\mu_\mu = -\frac{9}{8} G^2 + \bar{\psi} m \psi$$