Our Algebras. Let $sl_{2+}^{\epsilon} := L\langle y,b,a,x\rangle$ subject to $[a,x]=x$, $[b,y]=-\epsilon y$, $[a,b]=0$, $[a,y]=-y$, $[b,x]=\epsilon x$, and $[x,y]=\epsilon a+b$. So $t := \epsilon a - b$ is central and if $\exists\epsilon^{-1}$, $sl_{2+}^{\epsilon}/\langle t\rangle \cong sl_2$. Indeed if ϵ is invertible, the map $\phi_\epsilon\colon sl_{2+}^{\epsilon} \to sl_{2+}^{1}$, defined by

$$\phi_\epsilon(y,b,a,x) = (\epsilon y, \epsilon b, a, x),$$

is an isomorphism of Lie algebras, and $sl_{2+}^{1}/\langle t\rangle \cong sl_{2+}^{1}/(a=b) \cong L\langle y,a,x\rangle/([a,x]=x,[a,y]=-y,[x,y]=2a) \cong sl_2$.

U is either $CU = \mathcal{U}(sl_{2+}^{\epsilon})[\![\hbar]\!]$ or $QU = \mathcal{U}_\hbar(sl_{2+}^{\epsilon}) = A\langle y,b,a,x\rangle[\![\hbar]\!]$ with $[a,x]=x$, $[b,y]=-\epsilon y$, $[a,b]=0$, $[a,y]=-y$, $[b,x]=\epsilon x$, and $xy-qyx=(1-AB)/\hbar$, where $q=\mathbb{e}^{\hbar\epsilon}$, $A=\mathbb{e}^{-\hbar\epsilon a}$, and $B=\mathbb{e}^{-\hbar b}$. Set also $T=A^{-1}B=\mathbb{e}^{\hbar t}$.

The Quantum Leap. Also decree that in QU,

$$\Delta(y,b,a,x) = (y_1+B_1y_2, b_1+b_2, a_1+a_2, x_1+A_1x_2),$$

$$S(y,b,a,x) = (-B^{-1}y, -b, -a, -A^{-1}x),$$

and $R=\sum \hbar^{j+k}y^kb^j\otimes a^jx^k/j![k]_q! = 1+\hbar r+O(\hbar^2)$, where $r=y\otimes x+b\otimes a$ satisfies CYBE, $[r_{12},r_{13}]+[r_{12},r_{23}]+[r_{13},r_{23}]=0$.