$$\pi_{n}(\widetilde{X}, \widetilde{X}_{0}) \xrightarrow{j_{*}} \pi_{n}(\widetilde{Y}, \widetilde{X}_{0})$$

$$\rho_{X_{*}} \bigg| \cong \bigg| P_{Y_{*}} \bigg|$$

$$\begin{array}{ccc}
\rho_{X*} & \cong & \cong & \rho_{Y*} \\
\pi_n(X, x_0) & \longrightarrow & \pi_n(Y, x_0)
\end{array}$$