

# BLP: Notation

November 24, 2021

Symbol	Label	Symbol	Label
$j$	Product	$p_{jt}$	Price
$t$	Market	$c_{jt}$	Marginal cost
$i$	Consumer	$x_{jt}$	Exogenous product characteristics
$f$	Firm	$v_{jt}$	Excluded demand-shifter
$h$	Nesting group	$w_{jt}$	Excluded supply-shifter
		$U_{ijt}$	Indirect utility
$N$	Set/# of products across all markets	$\delta_{jt}$	Mean utility
$T$	Set/# of markets	$\mu_{ijt}$	Heterogeneous utility
$J_t$	Set/# of products in market	$\epsilon_{ijt}$	Idiosyncratic preference
$F_t$	Set/# of firms in market	$d_{ijt}$	Choice indicator
$J_{ft}$	Set/# of products by firm $f$ in market $t$	$s_{ijt}$	Choice probability
$H$	Set/# of nesting groups	$s_{jt}$	Calculated market share
		$\mathcal{S}_{jt}$	Observed market share
$\theta$	Parameter, $\dim = K$	$\xi_{jt}$	Demand-side structural error
$\theta_1$	Linear demand parameters, $\dim = K_1$	$\mathcal{H}_t$	Ownership or holdings matrix
$\theta_2$	Nonlinear common parameters, $\dim = K_2$	$\Delta_t$	Intra-firm demand derivatives
$\theta_3$	Linear supply-side parameters, $\dim = K_3$	$\eta_{jt}$	Multi-product Bertrand Markup
$\beta$	$\theta_1$ excluding fixed effects	$\omega_{jt}$	Supply-side structural error
$\tilde{\theta}_2$	Parameters in $\theta_2$ governing heterogeneity	$Z$	Instruments
$\alpha$	Parameter in $\theta_2$ on price	$W$	Weighting matrix
$\gamma$	$\theta_3$ excluding fixed effects	$g$	Sample moments
$\rho$	Nesting parameters in $\theta_2$	$q$	Objective function