

Appendix B: descriptive statistics of ICT variables

Table 1 shows that the amount of all three ICT-expenditure components varies considerably across firms. This is actually why I use the natural logarithm of the ICT-spending components as the dependent variable in the econometric analysis. Taking natural logarithms accounts for modest outliers and also transforms the expenditure levels in normally distributed variables.¹

Since the absolute values are not very informative, the ICT expenditures are also set in relation to total ICT expenditures and to workforce size. Expenditures in physical ICT capital possesses, with almost 50 per cent, the largest share in total ICT expenditures, followed — by a large distance — by expenditures for ICT-personnel and ICT-services. The same order and qualitative differences hold for ICT expenditures per capita as well. They also show up in the share of zero spendings for individual ICT-components: there is almost no left-censoring for expenditures in physical ICT-capital but quite severe left-censoring in the other two ICT components.

Table 1: ICT-expenditures by type

Share in total ICT-exp.	ICT-phys.	ICT-pers.	ICT-serv.
Share exp.=0	0.0183	0.1626	0.2256
Share in total ICT-expenditures (in %)			
Mean	0.4719	0.2786	0.1685
Median	0.5000	0.2500	0.1319
Std. dev.	0.2434	0.2112	0.1640
Per capita (in 1,000 DM p.c.)			
Mean	2.4436	1.6982	0.7703
Median	0.9434	0.5000	0.2500
Std. dev.	8.0194	4.3672	1.6867

Note: 984 observations involved. The abbreviations are as follows: Share exp.=0 — share of firms with zero expenditures in the respective ICT-component; ICT-phys. — expenditures in physical ICT-capital; ICT-pers. — expenditures for ICT personell; ICT-serv. — expenditures for externally bought ICT-services; ICT-other — expenditures for other ICT-components.

Reference

Härdle, W. (1989), Applied nonparametric regression, Econometrics Society Monographs 19, Cambridge University Press.

¹Kernel density estimation (Härdle 1989) applied to those ICT-expenditure values larger than zero shows that the approximate distribution of the ICT-expenditure components is approximately normal; normality of the error terms is crucial for the Tobit model to produce consistent parameter estimates.