

Table A1: Dependent variables and descriptives

Innovation Type	Description	Number of observations (N)	Share of innovators (%)
Product Improvement	Product improvements are a matter of improvements in quality of the products and services already offered by the firm. Because it is less risky compared to product introduction because already a market exists, it is sometimes referred as “incremental innovation”.	6,199	44.8
Product Introduction	Product introduction is innovation in totally new products or services. It is the most risky and therefore most seldom type of innovation and therefore sometimes called “radical innovation”. It aims to introduce new products to the market to achieve additional revenues from a totally new market.	6,189	11.0
Process Innovation	Improvement of process aim to provide its products and services more efficiently and therefore reduce production related costs such that more profitable can be produced and potentially lower prices can be set.	4,264	22.3
Organizational Innovation	Organizational innovation is related to all customer contacts in a broader sense but also related to the within-firm management. It is a rather diverse type of innovation and includes: Insourcing or outsourcing of services, Restructuring of supplier and customer relationships, Restructuring of competences and responsibilities within the establishment, Introduction of working groups that act independently, Introduction of units with own cost-benefit analysis, Ecological organizational innovation, Improvement of quality management.	4,937	47.4

Table A2: Independent variables

Variable	Scale Level	Description
CON = Control Variables		
Productivity	Interval	Turnover per employee
Establishment Size	Binary	Categories: 1 to 4, 5 to 9, 10 to 19, 20 to 49 [reference category], 50 to 99, 100 to 149, 150 to 199, 200 to 249, 250 to 499, 500 to 999, 1000 and more employees
Human Capital	Interval	Share of high skilled employees among establishment workforce
Sole Trader	Binary	Legal form of the establishment: Sole trader
Private Company	Binary	Legal form of the establishment: Private company
Limited Liability	Binary	Legal form of the establishment: Limited liability company [reference category]
Single-site Company	Binary	Embedment in company structure: Single-site company [reference category]
Branch Office	Binary	Embedment in company structure: Branch office
Headquarter	Binary	Embedment in company structure: Headquarter
Foreign Ownership	Binary	Establishment is foreign owned
Age: 0-4	Binary	Age of establishment: 0 to 4 years [reference category]
Age: 5-14	Binary	Age of establishment: 5 to 14 years
Age: 15+	Binary	Age of establishment: 15 years and more
Newest Equipment	Binary	Capital stock of the establishment: newest [reference category]
New Equipment	Binary	Capital stock of the establishment: new
Older Equipment	Binary	Capital stock of the establishment: older
Out-of-date Equipment	Binary	Capital stock of the establishment: out-of-date
Time Dummy	Binary	Time dummy variables of each survey year [1999, 2000, 2003, 2006, 2007, 2008, 2009]
ENV = Economic Environment		
Diversity	Interval	Inverse Hirschman-Herfindahl Index of industries; 2-digit-level
Specialization	Interval	Share of employees in own KIBS industry; 2-digit-level
CIT = Distance to nearest City		
Any City	Interval	Minimum distance in 100 km to the next city [50,000 or more inhabitants]
Metropolis	Interval	Minimum distance in 100 km to a Metropolis [500,000 or more inhabitants]
Large City	Interval	Minimum distance in 100 km to a Large City [100,000 to less than 500,000 inhabitants]
Small City	Interval	Minimum distance in 100 km to a Small City [50,000 to less than 100,000 inhabitants]
LOC = Location		
Closest City	Binary	Dummy for the closest city type: Metropolis, Large City, Small City [reference category]

Table A3: Descriptive statistics of variables

Variable	Mean	Standard Deviation	Minimum	Maximum
I = Innovation Type				
Product Improvement	0.448	0.497	0	1
Product Innovation	0.101	0.313	0	1
Process Innovation	0.223	0.417	0	1
Organizational Innovation	0.474	0.499	0	1
CON = Control Variables				
Productivity [log]	5.589	0.940	-0.379	12.866
Establishment Size: 1 to 4	0.374	0.484	0	1
Establishment Size: 5 to 9	0.126	0.332	0	1
Establishment Size: 10 to 19	0.117	0.322	0	1
Establishment Size: 20 to 49	0.153	0.360	0	1
Establishment Size: 50 to 99	0.096	0.295	0	1
Establishment Size: 100 to 149	0.046	0.208	0	1
Establishment Size: 150 to 199	0.025	0.157	0	1
Establishment Size: 200 to 249	0.017	0.129	0	1
Establishment Size: 250 to 499	0.029	0.167	0	1
Establishment Size: 500 to 999	0.012	0.109	0	1
Establishment Size: 1,000 and m.	0.005	0.069	0	1
Human Capital	0.442	0.403	0	1
Sole Trader	0.283	0.451	0	1
Private Company	0.117	0.321	0	1
Limited Liability	0.600	0.490	0	1
Single-site Company	0.824	0.381	0	1
Branch Office	0.072	0.258	0	1
Headquarter	0.104	0.305	0	1
Foreign Ownership	0.042	0.201	0	1
Age: 0-4	0.187	0.390	0	1
Age: 5-14	0.290	0.454	0	1
Age: 15+	0.523	0.500	0	1
Newest Equipment	0.277	0.447	0	1
New Equipment	0.522	0.500	0	1
Older Equipment	0.186	0.389	0	1
Out-of-date Equipment	0.016	0.124	0	1
ENV = Economic Environment				
Diversity	0.908	0.037	0.426	0.946
Specialization	0.144	0.080	0.000	0.364
CIT = Distance to nearest City				
Any City [100 km]	0.085	0.127	0	0.918
Metropolis [100 km]	0.032	0.082	0	0.741
Large City [100 km]	0.091	0.117	0	0.709
Small City [100 km]	0.149	0.157	0	0.934
LOC = Location				
Closest City Metropolis	0.361	0.480	0	1
Closest City Large City	0.373	0.484	0	1
Closest City Small City	0.266	0.442	0	1

Table A4: Pearson correlation matrix of establishment specific control variables

	Pro- duc- tivity	Estab- lish- ment Size: 1 to 4	Estab- lish- ment Size: 5 to 9	Est. Size: 10 to 19	Est. Size: 20 to 49	Est. Size: 50 to 99	Est. Size: 100 to 149	Est. Size: 150 to 199	Est. Size: 200 to 249	Est. Size: 250 to 499	Est. Size: 500 to 999	Est. Size: 1,000 and more	Hu- man Cap.	Sole Trader	Priv. Comp.	Ltd. Liab.	Single -site Comp	Br. Office	Head- quar- ter	Fo- reign Own.	Age: 1-4	Age: 5-14	Age: 15+	New- est Equ.	New Equ.	Older Equ.	Out- of- date Equ.
Productivity	1,000																										
Establishment Size: 1 to 4	0,309	1,000																									
Establishment Size: 5 to 9	0,020	-0,303	1,000																								
Establishment Size: 10 to 19	-0,011	-0,297	-0,131	1,000																							
Establishment Size: 20 to 49	-0,116	-0,353	-0,156	-0,153	1,000																						
Establishment Size: 50 to 99	-0,157	-0,255	-0,112	-0,110	-0,131	1,000																					
Establishment Size: 100 to 149	-0,129	-0,172	-0,076	-0,074	-0,089	-0,064	1,000																				
Establishment Size: 150 to 199	-0,115	-0,129	-0,057	-0,056	-0,066	-0,048	-0,032	1,000																			
Establishment Size: 200 to 249	-0,076	-0,096	-0,042	-0,041	-0,049	-0,036	-0,024	-0,018	1,000																		
Establishment Size: 250 to 499	-0,053	-0,144	-0,063	-0,062	-0,074	-0,053	-0,036	-0,027	-0,020	1,000																	
Establishment Size: 500 to 999	-0,098	-0,083	-0,037	-0,036	-0,043	-0,031	-0,021	-0,016	-0,012	-0,017	1,000																
Establishment Size: 1,000 and more	0,025	-0,054	-0,024	-0,023	-0,028	-0,020	-0,014	-0,010	-0,008	-0,011	-0,007	1,000															
Human Capital	0,246	0,034	0,156	0,091	-0,019	-0,107	-0,106	-0,083	-0,045	-0,081	-0,071	0,005	1,000														
Sole Trader	0,067	0,507	-0,025	-0,104	-0,232	-0,180	-0,134	-0,100	-0,065	-0,112	-0,033	-0,042	-0,003	1,000													
Private Company	0,077	0,029	0,031	0,051	0,030	-0,085	-0,013	-0,051	-0,038	-0,057	-0,017	-0,022	0,060	-0,213	1,000												
Limited Liability	-0,110	-0,490	0,004	0,066	0,198	0,219	0,133	0,125	0,084	0,139	0,041	0,052	-0,034	-0,803	-0,411	1,000											
Single-site Company	0,120	0,310	0,087	-0,003	-0,104	-0,179	-0,119	-0,114	-0,107	-0,131	-0,102	-0,102	0,046	0,271	0,068	-0,294	1,000										
Branch Office	-0,035	-0,182	-0,047	-0,003	0,035	0,089	0,103	0,020	0,100	0,108	0,105	0,069	-0,002	-0,150	0,017	0,129	-0,579	1,000									
Headquarter	-0,118	-0,232	-0,069	0,006	0,099	0,147	0,062	0,123	0,051	0,072	0,041	0,069	-0,055	-0,211	-0,096	0,256	-0,756	-0,096	1,000								
Foreign Ownership	0,013	-0,146	-0,057	-0,012	0,035	0,048	0,059	0,148	-0,005	0,140	0,025	0,127	-0,017	-0,134	-0,071	0,168	-0,240	0,015	0,281	1,000							
Age: 1-4	-0,043	0,084	-0,050	-0,055	-0,002	0,032	-0,020	-0,022	-0,005	-0,037	-0,014	-0,014	-0,108	0,015	-0,045	0,013	0,074	-0,012	-0,081	-0,015	1,000						
Age: 5-14	-0,009	0,061	-0,031	-0,028	-0,009	-0,001	-0,042	0,013	0,009	-0,012	0,013	-0,014	0,015	-0,043	-0,045	0,067	-0,011	-0,031	0,038	0,028	-0,342	1,000					
Age: 15+	0,042	-0,124	0,068	0,070	0,010	-0,025	0,055	0,006	-0,004	0,040	-0,001	0,024	0,073	0,028	0,078	-0,074	-0,049	0,039	0,029	-0,015	-0,477	-0,663	1,000				
Newest Equipment	0,025	-0,084	-0,010	0,045	0,009	0,048	-0,006	0,020	0,053	0,024	0,005	0,011	0,077	-0,057	0,000	0,052	-0,022	0,021	0,010	0,017	0,042	-0,035	-0,001	1,000			
New Equipment	0,024	0,001	-0,008	-0,011	-0,018	0,010	0,043	-0,004	-0,032	0,022	0,008	0,003	0,011	-0,003	0,003	0,002	-0,020	0,029	0,001	-0,005	0,001	0,004	-0,005	-0,636	1,000		
Older Equipment	-0,050	0,071	0,033	-0,032	0,015	-0,058	-0,040	-0,019	-0,013	-0,055	-0,012	-0,031	-0,086	0,052	0,003	-0,050	0,040	-0,049	-0,009	-0,010	-0,051	0,039	0,004	-0,287	-0,513	1,000	
Out-of-date Equipment	-0,025	0,065	-0,038	-0,014	-0,007	-0,028	-0,028	0,003	-0,015	-0,002	-0,013	0,047	-0,047	0,048	-0,020	-0,033	0,034	-0,036	-0,013	-0,011	0,006	-0,015	0,009	-0,079	-0,142	-0,064	1,000

Table A5: Variable Vectors CON and ENV for Model 1

	Product Improvement	Product Introduction	Process Innovation	Organizational Innovation
CON = Control Variables				
Productivity	0.218*** (0.01)	0.130* (0.07)	0.181*** (0.00)	0.119*** (0.02)
Establishment Size: 1 to 4	-0.260*** (0.04)	-0.134** (0.06)	-0.217*** (0.06)	-0.705*** (0.00)
Establishment Size: 5 to 9	-0.074** (0.03)	-0.026 (0.10)	-0.184*** (0.07)	-0.346*** (0.09)
Establishment Size: 10 to 19	0.076 (0.08)	-0.011 (0.02)	0.074 (0.07)	-0.181*** (0.02)
Establishment Size: 50 to 99	0.141*** (0.02)	-0.076 (0.10)	0.338*** (0.05)	0.189*** (0.04)
Establishment Size: 100 to 149	0.399*** (0.05)	0.277*** (0.06)	0.378*** (0.06)	0.281*** (0.05)
Establishment Size: 150 to 199	0.380*** (0.11)	0.490*** (0.13)	0.548*** (0.05)	0.504*** (0.10)
Establishment Size: 200 to 249	0.300*** (0.04)	0.411** (0.18)	0.312*** (0.08)	0.571*** (0.04)
Establishment Size: 250 to 499	0.414*** (0.04)	0.519*** (0.17)	0.552*** (0.07)	0.433*** (0.14)
Establishment Size: 500 to 999	0.624*** (0.07)	0.201 (0.14)	0.239*** (0.08)	0.663*** (0.04)
Establishment Size: 1,000 and m.	1.167*** (0.08)	0.559* (0.31)	0.931* (0.53)	0.881*** (0.17)
Human Capital	0.396*** (0.09)	0.262*** (0.05)	0.221** (0.09)	0.174** (0.08)
Sole Trader	-0.351*** (0.08)	-0.286*** (0.01)	-0.326*** (0.09)	-0.255*** (0.01)
Private Company	-0.453*** (0.09)	-0.420*** (0.03)	-0.347*** (0.05)	-0.243*** (0.05)
Branch Office	-0.021 (0.05)	-0.187** (0.08)	0.127 (0.08)	0.078 (0.07)
Headquarter	-0.074 (0.05)	-0.168*** (0.05)	0.054 (0.06)	-0.112 (0.08)
Foreign Ownership	0.064 (0.13)	0.113 (0.10)	-0.024 (0.14)	0.280*** (0.01)
Age: 5-14	0.014 (0.03)	-0.048 (0.05)	0.021 (0.03)	0.075 (0.10)
Age: 15+	-0.126*** (0.02)	-0.237*** (0.05)	-0.071** (0.04)	-0.154 (0.10)
New Equipment	-0.165*** (0.02)	-0.134*** (0.05)	-0.247*** (0.02)	-0.056*** (0.00)
Older Equipment	-0.280*** (0.06)	-0.091*** (0.02)	-0.462*** (0.04)	-0.089* (0.05)
Out-of-date Equipment	-0.384*** (0.10)	-0.591* (0.34)	-0.317*** (0.12)	-0.010 (0.02)
ENV = Economic Environment				
Diversity	0.738 (1.22)	1.846* (1.11)	-0.704 (1.04)	-1.123*** (0.17)
Specialization	-3.283*** (1.12)	-3.191*** (0.56)	-2.654*** (0.50)	-0.784 (0.64)

Notes: Time-fixed effects and locational fixed effects *LOC* included.

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

Table A6: Variable Vectors CON and ENV for Model 1 – Average Marginal Effects

	Product Improvement	Product Introduction	Process Innovation	Organizational Innovation
CON = Control Variables				
Productivity	0.075*** (0.00)	0.022** (0.01)	0.048*** (0.00)	0.042*** (0.01)
Establishment Size: 1 to 4	-0.089*** (0.02)	-0.023** (0.01)	-0.057*** (0.02)	-0.248*** (0.00)
Establishment Size: 5 to 9	-0.025** (0.01)	-0.004 (0.02)	-0.048*** (0.02)	-0.122*** (0.03)
Establishment Size: 10 to 19	0.026 (0.03)	-0.002 (0.00)	0.019 (0.02)	-0.063*** (0.01)
Establishment Size: 50 to 99	0.048*** (0.01)	-0.013 (0.02)	0.089*** (0.01)	0.066*** (0.01)
Establishment Size: 100 to 149	0.136*** (0.01)	0.047*** (0.01)	0.099*** (0.02)	0.099*** (0.02)
Establishment Size: 150 to 199	0.129*** (0.03)	0.083*** (0.02)	0.144*** (0.02)	0.177*** (0.04)
Establishment Size: 200 to 249	0.103*** (0.01)	0.070** (0.03)	0.082*** (0.02)	0.201*** (0.02)
Establishment Size: 250 to 499	0.141*** (0.01)	0.088*** (0.03)	0.145*** (0.02)	0.152*** (0.05)
Establishment Size: 500 to 999	0.213*** (0.02)	0.034 (0.02)	0.063*** (0.02)	0.233*** (0.01)
Establishment Size: 1,000 and m.	0.398*** (0.02)	0.094* (0.06)	0.244* (0.14)	0.310*** (0.06)
Human Capital	0.135*** (0.03)	0.044*** (0.01)	0.058** (0.02)	0.061** (0.03)
Sole Trader	-0.120*** (0.03)	-0.048*** (0.00)	-0.086*** (0.02)	-0.090*** (0.00)
Private Company	-0.154*** (0.03)	-0.071*** (0.01)	-0.091*** (0.01)	-0.085*** (0.02)
Branch Office	-0.007 (0.02)	-0.032** (0.01)	0.033 (0.02)	0.028 (0.03)
Headquarter	-0.026 (0.02)	-0.029*** (0.01)	0.014 (0.02)	-0.039 (0.03)
Foreign Ownership	0.025 (0.05)	0.021 (0.02)	-0.004 (0.04)	0.099*** (0.00)
Age: 5-14	0.005 (0.01)	-0.008 (0.01)	0.005 (0.01)	0.026 (0.03)
Age: 15+	-0.043*** (0.01)	-0.040*** (0.01)	-0.019** (0.01)	-0.054 (0.03)
New Equipment	-0.056*** (0.01)	-0.023*** (0.01)	-0.065*** (0.00)	-0.020*** (0.00)
Older Equipment	-0.096*** (0.02)	-0.016*** (0.00)	-0.121*** (0.01)	-0.031* (0.02)
Out-of-date Equipment	-0.131*** (0.03)	-0.102* (0.06)	-0.083*** (0.03)	-0.004 (0.01)
ENV = Economic Environment				
Diversity	0.253 (0.42)	0.314* (0.20)	-0.185 (0.27)	-0.395*** (0.06)
Specialization	-1.121*** (0.36)	-0.542*** (0.12)	-0.698*** (0.14)	-0.276 (0.22)

Notes: Time-fixed effects and locational fixed effects LOC included.

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

Table A7: Variable Vectors CON and ENV for Model 2

	Product Improvement	Product Introduction	Process Innovation	Organizational Innovation
CON = Control Variables				
Productivity	0.214*** (0.01)	0.128* (0.07)	0.180*** (0.00)	0.119*** (0.02)
Establishment Size: 1 to 4	-0.249*** (0.04)	-0.130** (0.06)	-0.211*** (0.06)	-0.706*** (0.01)
Establishment Size: 5 to 9	-0.059* (0.03)	-0.018 (0.11)	-0.177** (0.07)	-0.342*** (0.09)
Establishment Size: 10 to 19	0.070 (0.08)	-0.013 (0.02)	0.067 (0.08)	-0.182*** (0.02)
Establishment Size: 50 to 99	0.138*** (0.02)	-0.076 (0.11)	0.334*** (0.05)	0.192*** (0.04)
Establishment Size: 100 to 149	0.411*** (0.04)	0.287*** (0.06)	0.386*** (0.06)	0.287*** (0.05)
Establishment Size: 150 to 199	0.375*** (0.11)	0.492*** (0.13)	0.544*** (0.05)	0.514*** (0.11)
Establishment Size: 200 to 249	0.303*** (0.04)	0.417** (0.18)	0.318*** (0.09)	0.573*** (0.04)
Establishment Size: 250 to 499	0.420*** (0.05)	0.527*** (0.17)	0.548*** (0.07)	0.438*** (0.14)
Establishment Size: 500 to 999	0.613*** (0.07)	0.194 (0.14)	0.229*** (0.08)	0.662*** (0.03)
Establishment Size: 1,000 and m.	1.167*** (0.08)	0.560* (0.30)	0.922* (0.54)	0.882*** (0.17)
Human Capital	0.400*** (0.09)	0.263*** (0.05)	0.222** (0.09)	0.176** (0.08)
Sole Trader	-0.352*** (0.08)	-0.288*** (0.01)	-0.326*** (0.09)	-0.255*** (0.01)
Private Company	-0.453*** (0.09)	-0.419*** (0.04)	-0.348*** (0.04)	-0.241*** (0.05)
Branch Office	-0.018 (0.05)	-0.184** (0.08)	0.127 (0.08)	0.081 (0.07)
Headquarter	-0.070 (0.05)	-0.167*** (0.05)	0.056 (0.06)	-0.112 (0.08)
Foreign Ownership	0.055 (0.13)	0.107 (0.10)	-0.025 (0.13)	0.278*** (0.01)
Age: 5-14	0.015 (0.02)	-0.050 (0.05)	0.017 (0.03)	0.074 (0.10)
Age: 15+	-0.130*** (0.02)	-0.240*** (0.06)	-0.074** (0.04)	-0.154 (0.10)
New Equipment	-0.170*** (0.02)	-0.131*** (0.05)	-0.247*** (0.02)	-0.054*** (0.01)
Older Equipment	-0.284*** (0.07)	-0.085*** (0.02)	-0.464*** (0.04)	-0.086* (0.05)
Out-of-date Equipment	-0.407*** (0.10)	-0.599* (0.34)	-0.327*** (0.12)	-0.006 (0.02)
ENV = Economic Environment				
Diversity	0.717 (1.26)	1.858* (1.12)	-0.730 (1.05)	-1.154*** (0.13)
Specialization	-3.399*** (1.06)	-3.222*** (0.59)	-2.703*** (0.49)	-0.763 (0.64)

Notes: Time-fixed effects and locational fixed effects *LOC* included.

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

Table A8: Variable Vectors CON and ENV for Model 2– Average Marginal Effects

	Product Improvement	Product Introduction	Process Innovation	Organizational Innovation
CON = Control Variables				
Productivity	0.073*** (0.00)	0.022** (0.01)	0.047*** (0.00)	0.042*** (0.01)
Establishment Size: 1 to 4	-0.085*** (0.01)	-0.022** (0.01)	-0.055*** (0.02)	-0.248*** (0.00)
Establishment Size: 5 to 9	-0.020* (0.01)	-0.003 (0.02)	-0.047** (0.02)	-0.120*** (0.03)
Establishment Size: 10 to 19	0.024 (0.03)	-0.002 (0.00)	0.018 (0.02)	-0.064*** (0.01)
Establishment Size: 50 to 99	0.047*** (0.01)	-0.013 (0.02)	0.088*** (0.01)	0.067*** (0.01)
Establishment Size: 100 to 149	0.140*** (0.01)	0.049*** (0.01)	0.101*** (0.02)	0.101*** (0.02)
Establishment Size: 150 to 199	0.128*** (0.04)	0.083*** (0.02)	0.143*** (0.01)	0.181*** (0.04)
Establishment Size: 200 to 249	0.103*** (0.01)	0.071** (0.03)	0.083*** (0.02)	0.202*** (0.02)
Establishment Size: 250 to 499	0.143*** (0.01)	0.089*** (0.02)	0.144*** (0.02)	0.154*** (0.05)
Establishment Size: 500 to 999	0.209*** (0.02)	0.033 (0.02)	0.060*** (0.02)	0.233*** (0.01)
Establishment Size: 1,000 and m.	0.397*** (0.02)	0.095* (0.05)	0.242* (0.14)	0.310*** (0.06)
Human Capital	0.136*** (0.03)	0.045*** (0.01)	0.058** (0.02)	0.062** (0.03)
Sole Trader	-0.120*** (0.03)	-0.049*** (0.00)	-0.086*** (0.02)	-0.090*** (0.00)
Private Company	-0.154*** (0.03)	-0.071*** (0.01)	-0.091*** (0.01)	-0.085*** (0.02)
Branch Office	-0.006 (0.02)	-0.031** (0.02)	0.033 (0.02)	0.028 (0.03)
Headquarter	-0.024 (0.02)	-0.028*** (0.01)	0.015 (0.02)	-0.040 (0.03)
Foreign Ownership	0.019 (0.04)	0.018 (0.02)	-0.007 (0.04)	0.098*** (0.00)
Age: 5-14	0.005 (0.01)	-0.009 (0.01)	0.005 (0.01)	0.026 (0.03)
Age: 15+	-0.044*** (0.01)	-0.041*** (0.01)	-0.019** (0.01)	-0.054 (0.03)
New Equipment	-0.058*** (0.01)	-0.022** (0.01)	-0.065*** (0.01)	-0.019*** (0.00)
Older Equipment	-0.097*** (0.02)	-0.014*** (0.00)	-0.122*** (0.01)	-0.030* (0.02)
Out-of-date Equipment	-0.139*** (0.03)	-0.101 (0.06)	-0.086*** (0.03)	-0.002 (0.01)
ENV = Economic Environment				
Diversity	0.244 (0.43)	0.315 (0.20)	-0.192 (0.28)	-0.406*** (0.05)
Specialization	-1.157*** (0.34)	-0.546*** (0.13)	-0.710*** (0.14)	-0.268 (0.23)

Notes: Time-fixed effects and locational fixed effects LOC included.

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

Table A9: Difference in parameter tests for city and innovation types (Model 2)

	Product Improvement	Product Introduction	Process improvement	Organizational Innovation
Chi-square difference in parameter tests if closest city is a metropolis				
Product Improvement	---	4896.79***	73.66***	256.59***, °°
Product Introduction	4896.79***	---	42.96***	90.15***, °°
Process improvement	73.66***	42.96***	---	22.59***, °°
Organizational Innovation	256.59***, °°	90.15***, °°	22.59***, °°	---
Chi-square difference in parameter tests if closest city is a large city				
Product Improvement	---	31.66***, °°	11.03***	7191.17***
Product Introduction	31.66***, °°	---	34.57***, °°	5.54*, °°
Process improvement	11.03***	34.57***, °°	---	14.74***
Organizational Innovation	7191.17***	5.54*, °°	14.74***	---
Chi-square difference in parameter tests if closest city is a small city				
Product Improvement	---	10.28***, °°	1.03	183.65***, °°
Product Introduction	10.28***, °°	---	12.69***, °°	1.19°°
Process improvement	1.03	12.69***, °°	---	1.17°°
Organizational Innovation	183.65***, °°	1.19°°	1.17°°	---

***Significant at 1% level, **Significant at 5% level, *Significant at 10% level

°° Joint significance test for distance decay variables are not significant

Table A10: Spatial distribution of KIBS establishments depending on closest city type

Closest City Type	Sample	KIBS in Germany*
Closest to Metropolis [%]	36.1	33.4
Closest to Large City [%]	37.3	36.0
Closest to Small City [%]	26.6	30.5
N	7,073	296,154

*Notes: Includes all KIBS with at least one employee subject to social insurance. Calculations are based on averages for the survey years 1999, 2000, 2003, 2006, 2007, 2008 and 2009.

Table A11: Cross table of KIBS location and innovative activity (as in Figure 2)

Percentiles of distance*	Closest to Metropolis (%)	Closest to Large City (%)	Closest to Small City (%)
Establishments with Product Improvement			
1	52.8	39.1	48.5
2	56.3	51.4	44.0
3	42.5	40.6	47.0
4	27.9	35.3	34.6
N	2,159	2,353	1,687
Establishments with Product Innovation			
1	11.6	9.8	25.0
2	10.6	10.3	9.5
3	10.5	10.3	10.8
4	10.2	11.3	11.4
N	2,156	2,344	1,689
Establishments with Process Innovation			
1	25.1	23.3	35.9
2	29.1	27.2	17.6
3	24.8	18.5	21.9
4	11.8	19.8	17.4
N	1,399	1,634	1,231
Establishments with Organizational Innovation			
1	54.5	52.4	48.1
2	51.3	49.1	45.9
3	45.4	44.7	47.1
4	46.0	41.7	37.1
N	1,850	1,820	1,267

Notes: * Distances according to percentiles are 0km to 0.87km (1), >0.87km to 1.60km (2), >1.60km to 12.30km (3) and >12.30 (4).