

Teleworking practices and trends in the Portuguese industry

Provisional results of a survey on the textile, metal engineering and software sectors

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1

TeleRisk

Labour Relations and Professional Risks at the context(s) of Teleworking in Portugal

- Financial support: IDICT (Ministry of Labour), FCT-Universidade Nova Lisboa
- Aims of the project
- Sectors of activity analysed

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2

Concepts

- *All the work carried out from a certain place or **away from offices** or central locations, where the worker does not have **personal contact** with his/her colleagues, but may communicate with them using the **new technologies**. (ILO)*
- *When the **location of work is independent** of the location of the employer or contractor and can be changed according to the wishes of the individual teleworker and/or the organisation for which he or she is working. It is work that relies primarily or to large extent on the use of **electronic equipment**, the results of which work are communicated remotely to the employer or contractor. The **remote communications link** need not be a direct **telecommunications link** but could include the use of **mail** or **courier services**." (Huws et al; 1990)*
- ***Flexible** form of work, covering different areas of activity, where the workers can carry out their functions from a **distance**. Information technologies will increasingly become indispensable tools for the performance of **remote work**, breaking geographical barriers and leading to **information sharing** within a widespread **electronic environment**. (Green Book on Information Society, 1997)*

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3

Analysis dimensions

- Nilles (1973) Huws (1990) Olson (1993)
Stanworth (1998) Baruch (2000) DiMartino
(2001) Fiolhais (1998) Sousa (1999)

TELDET (1996)

- Location of work
- Use of ICT
- Organizacional forms

FUNDETEC (1998)

- Distance
- Technology
- Structure (agreements and conditions)

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4

Methodology

- Field of analysis – Sectors of activity:
 - Software sector
 - Textile and Shoemaking sectors
 - Metal engineering sector
- Observation instruments:
 - Survey with questionnaire
 - Interviews (semi-structured)

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5

Sampling

- Multi-stage sample:
 1. "Subjective" segmentation among emergent sector (software) and 'so-called' traditional sectors (textile, shoemaking; metal engineering)
 2. Selection of large sectors of economical activity from the Min. Labour classification (subsections of CAE)
 3. Selection of subsectors from ML-CAE (3 digits) and Metal engineering sector (from the Data Base on Investment, Bank of Portugal)
- Stratified sample (Proportional)
- Survey base: DB of firms (Depart. of Statistics of Ministry of Labour (1999))

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6

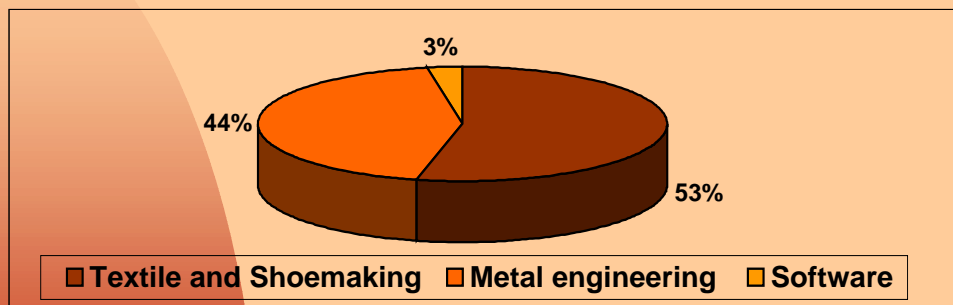
Sample and sectors

Sectors of activity	Universe (N)	Pretended sample (n)	Sent questionnaires (Q)	Real sample (n*)	% answers in relation to (Q)	% firms in relation to (n)
Textile and shoemaking	3002	215	647	80	12,4	37,2
Metal engineering	1572	118	257	65	18,2	55,1
Software	87	5	19	4	24,1	80,0
Total	4661	338	1023	149	15,0	44,1

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7

% of firms by activity sector



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8

Characterisation of Firms

Activity sectors	Dimension of Firms	Legal Nature	Geographical Location	Other units or establishments (in 22 firms)
Textile and Shoemaking	SME (83.3%)	Private company (75.6%)	Urban Areas (40%) Mixt Areas (41.3%)	yes (36.4%)
Metal engineering	SME (84.6%)	Private company (57.1%)	Urban Areas (39.7%) Mixt Areas (34.9%)	yes (59.1%)
Software	SME (75%)	Anonimous Societies (75%)	Urban Areas (100%)	Yes (4.5%)

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- ### Indicators of Telework Modalities:
- Network of Strategic Actors
 - Location and geographical scattering of the network of strategic actors
 - Information and communication technological support
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Indicators of Telework Modalities (1)

- Network of Strategic Actors
 - ★ Clients
 - ★ Sub-contracted Entities
 - ★ Mobile workers

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11

Average of Clients and Sub-contracted Entities

Activity Sectors	Clients		Sub-contracted Entities	
	Average	N	Average	N
Textile and Shoemaking	3 [11; 20[80	2 [2; 5[69
Metal engineering	4 [+ 20[65	2 [2, 5[59
Software	4 [+ 20[4	3 [6; 10[3
Total	4 [+ 20[149	2 [2; 5[131

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12

Existing Mobile Work				Average of Mobile Workers		
Activity Sectors	Mobile Telework			Activity Sectors	Average	N
	Yes	No	Total			
Textile and Shoemaking	51 65.4%	27 34.6%	78 100%	Textile and Shoemaking	1 [until 5%]	50
Metal engineering	52 80%	13 20%	65 100%	Metal engineering	2 [6% to 20%]	52
Software	4 100%	0 0%	4 100%	Software	4 [+ 50%]	4
Total	107 69.7%	40 30.3%	147 100%	Total	2 [6% to 20%]	106

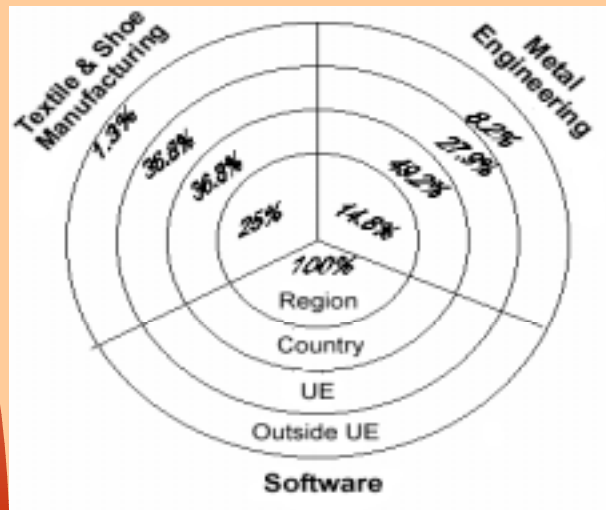
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Indicators of Telework Modalities (2)

- Location and geographical scattering of the network of strategic actors

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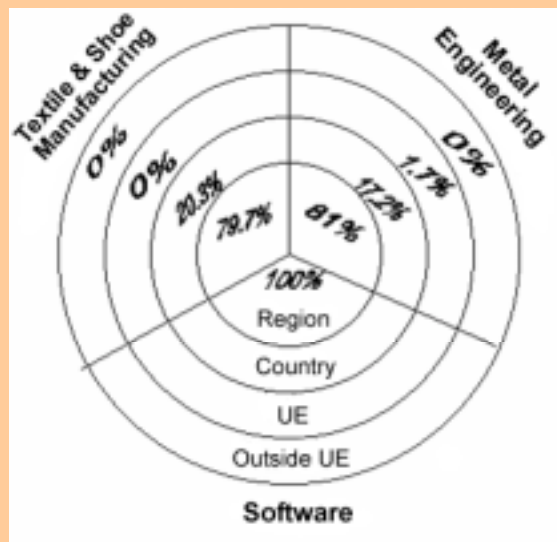
Location of Clients



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15

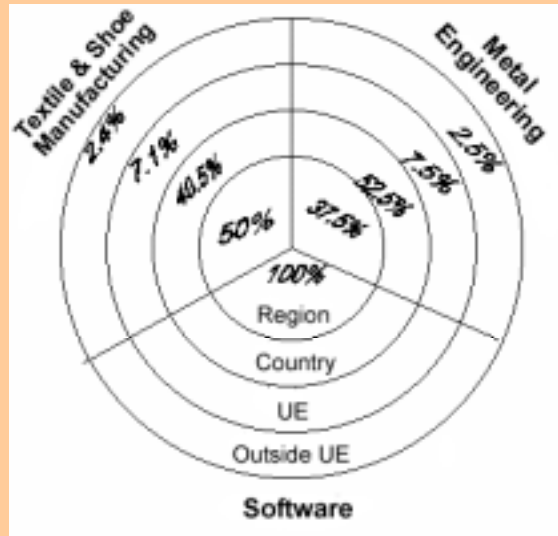
Location of Sub-contracted Entities



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16

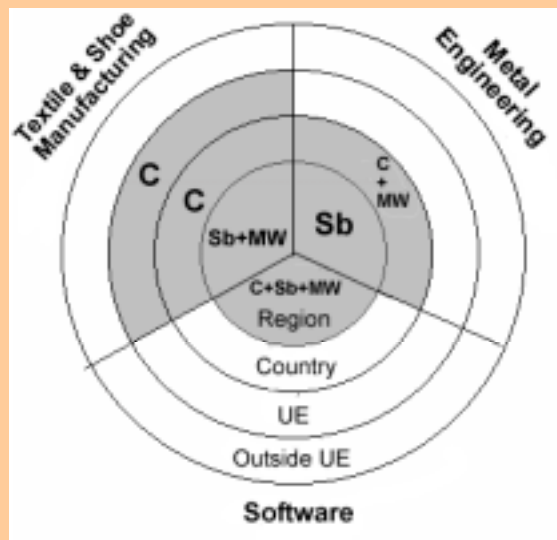
Location of Mobile Workers



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17

Geographical Location of Strategical Actores



C - clients
 S - sub-contracted
 TM - mobile workers

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18

Indicators of Telework Modalities (3)

- Information and communication technological support

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19

Information and communication media

Channels	simple telephone line, modem/ISDN, dedicated lines
Terminals	fax, fixed computer, portable computer, mobile phone
Protocols	FTP, electronic mail, voice mail, normal mail, chat, video conferencing
Means	intranet/LAN/Ethernet, infra-structure for sharing of data/information, infra-structure to support collaboration process, services for client and supplier access, services for worker access

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20

Importance of information and communication channels

Activity Sectors	Clients		Sub-contracted Entities		Mobile workers	
	Average	N	Average	N	Average	N
Textile and Shoemaking	2 (Important)	67	3 (Less Important)	55	3 (Less Important)	35
Metal engineering	2 (Important)	44	2 (Important)	48	3 (Less Important)	39
Software	3 (Less Important)	2	2 (Important)	3	2 (Important)	4
Total	2 (Important)	113	2 (Important)	106	3 (Less Important)	78

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21

Importance of Information and Communication Terminals

Activity Sectors	Clients		Sub-contracted Entities		Mobile workers	
	Average	N	Average	N	Average	N
Textile and Shoemaking	2 (Important)	71	2 (Important)	54	3 (Less Important)	35
Metal engineering	2 (Important)	51	2 (Important)	50	3 (Less Important)	41
Software	2 (Important)	4	2 (Important)	3	2 (Important)	3
Total	2 (Important)	126	2 (Important)	107	3 (Less Important)	79

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22

Importance of Information and Communication Protocols

Activity Sectors	Clients		Sub-contracted Entities		Mobile workers	
	Average	N	Average	N	Average	N
Textile and Shoemaking	3 (Less Important)	48	3 (Less Important)	51	4 (No Importance)	31
Metal engineering	3 (Less Important)	32	3 (Less Important)	40	3 (Less Important)	36
Software	2 (Important)	3	3 (Less Important)	3	3 (Less Important)	4
Total	3 (Less Important)	83	3 (Less Important)	94	3 (Less Important)	71

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23

Importance of Information and Communication Means

Activity Sectors	Clients		Sub-contracted Entities		Mobile workers	
	Average	N	Average	N	Average	N
Textile and Shoemaking	3 (Less Important)	65	3 (Less Important)	53	4 (No Importance)	35
Metal engineering	3 (Less Important)	48	3 (Less Important)	47	3 (Less Important)	38
Software	2 (Important)	4	2 (Important)	3	2 (Important)	4
Total	3 (Less Important)	117	3 (Less Important)	103	3 (Less Important)	77

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24

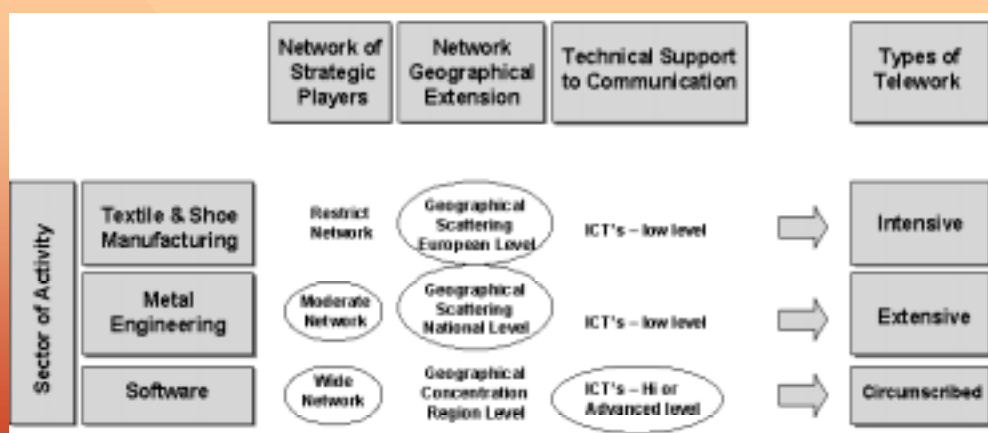
Importance of Information and Communication Technologies

Activity Sectors	Clients	Sub-contracted Entities	Mobile workers
Textile and Shoemaking	✓ Channels ✓ Terminals	✓ Terminals	
Metal engineering	✓ Channels ✓ Terminals	✓ Channels ✓ Terminals	✓ Channels
Software	✓ Terminals ✓ Protocols ✓ Means	✓ Channels ✓ Terminals ✓ Means	✓ Terminals ✓ Means

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25

Modalities of Telework



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26

