



Statistics and Indicators on the Labour Market in the eEconomy

# eWorking in France

*Measuring eWork using the French LFS*

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## Introduction

The aim of Work Package 2 was to analyse the potential of national labour force surveys for measuring eWork, or more precisely:

'To examine the extent to which the coding processes used in the national LFS can be used to extend the information on eWork derived from these surveys. To derive recommendations as to where extensions of the current coding processes can provide more detail and more information about eWork.'

This has resulted in the Institute for Employment Studies led final report '*The missing E: the use of national elements of the LFS for eWork Analysis*'. This analysis was of a theoretical nature, taking the wording and the routing of the questions to see to what degree national questionnaires were in a position to provide accurate information on eWorkers and their characteristics. Complementing *The Missing E*, the aim of this short document is first to provide some data to go with the theory and second to underline the limitations of this data by looking more closely at the French labour force survey data for the year 2000.

### 1.1 Definition of eWork redux

The definition of eWork used in the context of the STILE project is the following:

'eWork is any type of work which involves the digital processing of information and which uses a telecommunications link for receipt or delivery of the work to a remote employer or business client.' (Huws, 2001)

It is clear that this definition goes beyond simply homeworking or teleworking. But, as is highlighted in *The Missing E*, the principal stumbling block to the measurement of eWork using many of the different national labour force surveys is the lack of information on the use of information and communication technologies (ICTs). Without such information we are unable to tell directly whether the person *could* work at home without the use of both a computer and a telephone, an important factor in the definition of an eWorker.

Other methods of measuring eWorkers are discussed in *The Missing E*, each of which involves making certain assumptions that are far from axiomatic. France falls into this category. That is, due to a lack of questions concerning the use of ICT, assumptions need to be made in order to measure eWorkers. Having made these assumptions, the question that needs to be answered is whether the accepted definition and the assumptions made are satisfactory or not.

The following indirect ways of dealing with a lack of questions on ICT are detailed in Chapter 2 of *The Missing E*:

- inferred from location — this assumes that someone working from home is using a telecommunications link for receipt or delivery of the work;
- inferred from occupation — the assumption here is that a range of occupations are potentially eWorking;
- inferred from occupation and location — using a combination of both of the above this is likely to be slightly more accurate and better at filtering out non-eWorkers;
- inferred from sector — this approach assumes that certain sectors of activity are eWorking sectors, for example ICT sectors;
- inferred from sector and location — combines assumptions on place of work and sector of activity.

Therefore there are three variables that, in various combinations, may allow an indirect measurement of eWork using the existing content and structure of the French national labour force survey. To ascertain the extent to which this may be possible, it is useful to recall the wording and inclusiveness of the questions in the French LFS (Box 1), as well as the matrix of possible eWorking permutations followed in *The Missing E* (Box 2):

**Box 1.** Questions in the French LFS questionnaire referring to location, occupation and sector

Location

Question name	A14b	Variable name	MAISON
Question	Do you work at home (or in an adjacent building)		
Answer codes	1 Generally; 2 Sometimes; 3 Never?		
Who is asked	All		

Occupation

Question name	A1	Variable name	PCL
Question	Principal profession. Exact title		
Answer codes	Open answer		
Who is asked	All people with a professional activity and all who have worked during the reference week		

Sector

Question name	A8	Variable name	
Question	Industrial, commercial, agricultural establishment, etc that you manage if you are set up as an independent... d) Activity of this establishment		
Answer codes	d) Open answer		
Who is asked	All who have a professional activity or who have worked in the reference week		

Source: INSEE Enquête emploi en continu

**Box 2.** Typology of de-localisation enabled by eWork

		<b>Contractual</b>	
		<b>Internal/employees</b>	<b>Outsourced</b>
<b>Type of work place</b>	<b>Individualised (away from 'office' premises)</b>	<ul style="list-style-type: none"> <li>▪ Employed tele-homeworkers</li> <li>▪ Mobile employees</li> </ul>	<ul style="list-style-type: none"> <li>▪ Freelance teleworkers or mobile workers</li> </ul>
	<b>Collectivised (on shared 'office' premises)</b>	<ul style="list-style-type: none"> <li>▪ Employees working in telecottages or other third party premises</li> </ul>	<ul style="list-style-type: none"> <li>▪ Specialist business service supply companies</li> <li>▪ Outsourced call-centres</li> </ul>

Source: Huws, 2001

If we consider to what extent each of the identified professional circumstances in Box 2 can be captured by an analysis of the French LFS using the indirect measurement approaches provided above, then it is clear that definitional problems are, to say the least, large. The extent to which these definitional variations will have an impact on an accurate eWork measurement is another matter. Indeed, as Table 1 shows, the principal problem is a lack of coverage of the various types of eWorking. However, the opposite is the case when measuring the first case — employed tele-homeworkers. Using the location variable MAISON in the questionnaire results in a much wider pool of people being reported than should be the case. Given the available questions in the French LFS, it is impossible to reveal to what degree the two opposing groups offset each other.

**Table 1.** Coverage of eWork categories using the French LFS

	Location MAISON	Occupation PCOM	Sector NAF
Employed tele-homeworkers	Yes*	?	?
Mobile employees	No	?	?
Employees working in telecottages or other third party premises	No	?	?
Freelance teleworkers or mobile workers	No	?	?
Specialist business service supply companies	No	?	?
Outsourced call-centres	No	?	?

\* Assuming a telecommunications link is used for receipt or delivery of work.

Note: PCOM is more or less equivalent to ISCO-88, whilst NAF (Nomenclature d'Activités Française) at the most detailed level can be relatively simply grouped into NACE sectors.

As a result, the issue remains as to what extent the assumptions one has to make in order to indirectly measure eWork are satisfactory. What follows in this report highlights the inadequate results obtained should the indirect measurement of eWork be compared against another country, underlining both the structural differences in economies and cultural differences in responses that can prevail. Given this inadequacy, deepening the analysis to provide further insight on the characteristics of eWorkers seemed a redundant exercise.

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## Measuring eWork indirectly

### 2.1 Inferred from location

The first method, inferred from location, uses the question on how often people work from home. The response to this question is of a subjective nature in the French LFS, categorised into generally, sometimes or never, and with prompting from interviewers expected only if the respondent does not answer spontaneously.

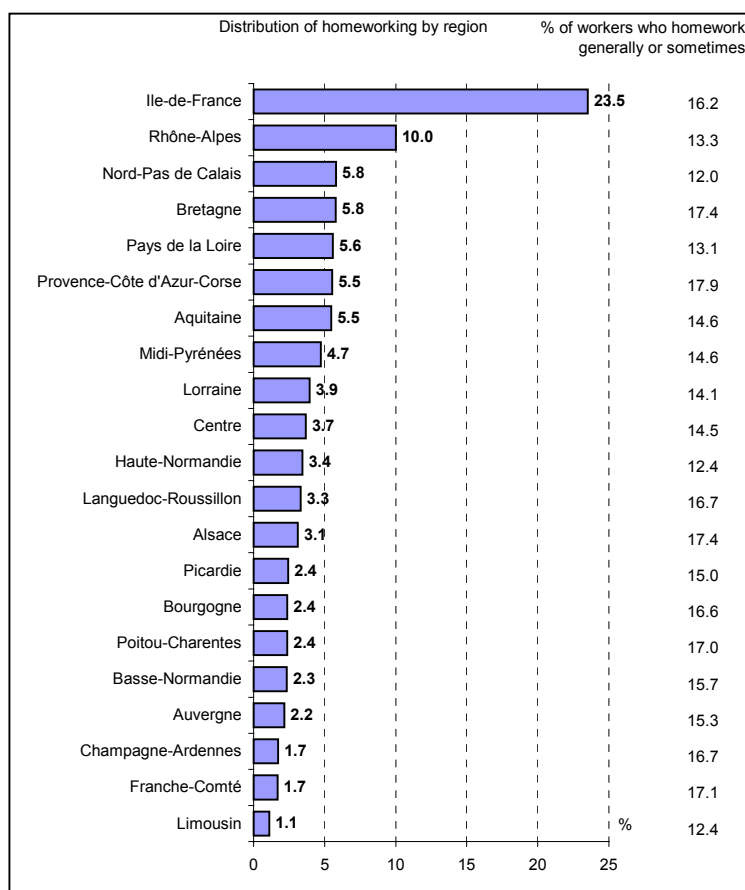
Excluding the agricultural, forestry and fishing sectors from the total number of homeworkers (see Chapter 4 and also *Working at a distance*<sup>1</sup>) provides the distribution of homeworking by region in Figure 1.

With homeworking and eWorking being different concepts, one has to assume that people working from home are *likely* to be using a telecommunications link for receipt or delivery of work. Workpackage 5 of the STILE project has shown this assumption to be unsound, however, with only around 40 % of non-agricultural homeworkers in Ireland actually using a computer with a telecommunications link. Further evidence from the Austrian Mikrozensus indicates only around two thirds to three quarters of homeworkers use computers, underlining that differences prevail across countries.

With the likelihood of homeworkers being eWorkers also dependent on the types of activity or occupations that are prominent in the various countries it makes sense to cross-tabulate these data with intensity of homeworking.

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<sup>1</sup> Oteri C. & della Ratta F. (eds.) (2003), *Working at a distance: how to know about it*, STILE, Workpackage 5 — Final Report.



Source: INSEE Enquête emploi en continu, CAMIRE

**Figure 1.** Distribution of total homeworking by region and % of workers in that region who homework — 2000 data

## 2.2 Inferred from location and occupation

This second method cross-tabulates location of work and occupation. Table 2 shows a large diversity of occupations that homework either generally or sometimes. A glance through the list, however, really seems to emphasise 'the Missing E', as it is difficult to imagine when people in many of these occupations will use a telecommunications link for receipt or delivery of work. Furthermore, the shaded cells, which were those identified as being potential teleworking occupations during the Emergence project do not rank favourably compared to other professions in France.<sup>2</sup> This can only serve to underline the cultural differences encountered when testing such an exercise and the danger of performing international comparisons with a tool such as the labour force survey when it does not have the capacity to accurately measure what is desired.

<sup>2</sup> This process, undertaken only due to a lack of alternative methods, involved applying the 'teleworking occupations' from the UK to other countries (IES, 2001).

**Table 2.** French homeworkers by occupation (ISCO) — 2000 data

Code	Title	Total	Generally	Sometimes	Never	No answer	Generally or sometimes	Generally or sometimes	
								(1000s)	% of occupations homeworking
232	Secondary education teaching professionals	591	287	200	94	10	487	82.4	12.1
246	Religious professionals	13	5	4	:	:	10	77.5	0.2
331	Primary education teaching associate professionals	362	148	131	74	9	279	77.0	6.9
612	Market-oriented animal producers and related workers	206	124	20	62	:	144	69.7	3.6
231	College, university and higher education teaching professionals	94	30	35	28	:	65	69.3	1.6
613	Market-oriented crop and animal producers	271	143	34	93	:	177	65.4	4.4
241	Business professionals	20	7	6	7	:	12	63.0	0.3
245	Writers and creative or performing artists	147	45	34	66	:	79	53.8	1.9
200	Professionals	51	8	19	22	:	27	53.5	0.7
242	Legal professionals	57	9	18	28	:	28	48.7	0.7
111	Legislators	21	:	8	11	:	10	47.7	0.3
121	Directors and chief executives	23	:	8	12	:	11	47.0	0.3
730	Precision, handicraft, printing and related trades workers	21	8	:	11	:	10	46.7	0.2
742	Wood treaters, cabinet-makers and related trades workers	17	5	:	9	:	8	45.8	0.2
131	General managers	664	176	125	359	4	301	45.4	7.5
720	Metal, machinery and related trades workers	37	8	9	20	:	16	44.1	0.4
733	Handicraft workers in wood, textile, leather and related material	13	:	:	7	:	6	42.1	0.1
244	Social science and related professionals	108	15	25	66	:	41	37.6	1.0
611	Market gardeners and crop growers	447	87	69	284	7	156	34.9	3.9
347	Artistic, entertainment and sports associate professionals	61	8	13	39	:	21	34.7	0.5
334	Other teaching associate professionals	199	25	37	130	7	62	31.5	1.5
222	Health professionals (except nursing)	311	33	55	218	5	88	28.3	2.2
313	Optical and electronic equipment operators	51	:	11	35	:	14	28.2	0.4
122	Production and operations department managers	639	40	140	454	6	179	28.1	4.4
214	Architects, engineers and related professionals	522	35	108	373	5	143	27.4	3.5
123	Other department managers	415	15	86	309	6	101	24.3	2.5
513	Personal care and related workers	1 319	310	9	976	24	318	24.1	7.9
915	Messengers, porters, doorkeepers and related workers	230	47	6	173	5	53	23.1	1.3
741	Food processing and related trades workers	236	46	7	182	:	53	22.3	1.3
213	Computing professionals	304	10	58	232	:	68	22.3	1.7
211	Physicists, chemists and related professionals	28	:	5	21	:	6	20.8	0.1
333	Special education teaching associate professionals	128	9	17	100	:	26	20.4	0.6
743	Textile, garment and related trades workers	63	9	:	49	:	13	20.3	0.3
341	Finance and sales associate professionals	730	43	104	572	11	147	20.1	3.6
734	Printing and related trades workers	25	:	:	19	:	5	20.1	0.1
740	Other craft and related trades workers	32	:	:	26	:	5	16.3	0.1
322	Modern health associate professionals (except nursing)	191	14	16	161	:	29	15.3	0.7
614	Forestry and related workers	28	:	:	23	:	4	14.4	0.1
346	Social work associate professionals	255	7	27	213	8	34	13.4	0.8
714	Painters, building structure cleaners and related trades workers	139	4	13	120	:	17	12.1	0.4
342	Business services agents and trade brokers	18	:	:	15	:	:	:	:
10	Armed forces	326	14	25	281	6	39	11.9	1.0
712	Building frame and related trades workers	573	19	44	501	10	62	10.9	1.5
235	Other teaching professionals	81	:	6	70	:	8	10.5	0.2
514	Other personal service workers	170	14	4	150	:	18	10.4	0.4
615	Fishery workers, hunters and trappers	34	:	:	31	:	4	10.4	0.1
713	Building finishers and related trades workers	466	16	32	412	6	48	10.3	1.2
312	Computer associate professionals	138	:	11	122	:	13	9.4	0.3
344	Customs, tax and related government associate professionals	324	6	21	293	5	27	8.3	0.7
343	Administrative associate professionals	427	7	28	387	4	35	8.2	0.9
422	Client information clerks	119	:	:	114	:	:	:	:
412	Numerical clerks	73	:	:	70	:	:	:	:
413	Material-recording and transport clerks	311	:	5	300	6	5	1.7	0.1
421	Cashiers, tellers and related clerks	459	:	4	444	11	5	1.1	0.1

Note: Occupations are ranked according to the percentage of people homeworking generally or sometimes, with a cut-off point at 10 % homeworkers per sector of activity. For information, potential eWork occupations identified in Where the Butterfly Alights are included when below 10 %. : = data unreliable.

Source: INSEE Enquête emploi en continu, CAMIRE

## 2.3 Inferred from location and sector

The data and indicators from this third method justify the exclusion of agriculture, forestry and fishing when eWork is inferred from location only. However, to name just one example, a substantial number of people working in private households, both as a total and working from home generally or sometimes, are also included for which the described activities do not seem

to fall into the definition of eWork (see NACE Rev. 1, 1996). Examples are domestic personnel such as maids, cooks, waiters, chauffeurs, caretakers, etc.

**Table 3.** French homeworkers by sector of activity (NACE) — 2000 data

Code	Title	Total	Generally	Sometimes	Never	No answer	Generally or sometimes	Generally or sometimes	
								(1000s)	% of sector homeworking
1	Agriculture, hunting and related service activities	904	359	125	413	7	483	53.5	12.0
80	Education	1 851	501	425	845	79	926	50.0	22.9
95	Private households with employed persons	565	171	4	382	7	176	31.1	4.3
92	Recreational, cultural and sporting activities	428	56	55	311	6	111	26.0	2.7
70	Real estate activities	327	53	26	244	:	79	24.3	2.0
67	Activities auxiliary to financial intermediation	108	10	16	82	:	26	23.9	0.6
73	Research and development	148	8	27	110	:	35	23.7	0.9
72	Computer and related activities	311	15	53	237	6	68	21.9	1.7
2	Forestry, logging and related activities	37	4	4	29	:	8	21.9	0.2
91	Activities of membership organization n.e.c.	303	23	39	232	9	62	20.4	1.5
30	Manufacture of office machinery and computers	43	:	8	34	:	8	19.6	0.2
74	Other business activities	1 472	82	170	1 199	21	252	17.1	6.2
51	Wholesale trade and commission trade, except of motor vehicles and motorcycles	987	52	109	817	10	161	16.3	4.0
66	Insurance and pension funding, except compulsory social security	174	6	19	148	:	26	14.8	0.6
22	Publishing, printing and reproduction of recorded media	237	16	19	199	:	35	14.7	0.9
45	Construction	1 535	86	120	1 310	19	206	13.4	5.1
5	Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing	32	:	:	28	:	4	13.3	0.1
55	Hotels and restaurants	813	78	29	691	14	108	13.3	2.7
93	Other service activities	240	21	10	206	:	31	12.9	0.8
85	Health and social work	2 510	179	137	2 150	43	316	12.6	7.8
15	Manufacture of food products and beverages	652	60	22	563	7	82	12.6	2.0
24	Manufacture of chemicals and chemical products	301	7	27	262	5	34	11.4	0.8
71	Renting of machinery and equipment without operator and of personal and household goods	61	:	4	53	:	7	11.2	0.2
52	Retail trade, except of motor vehicles and motorcycles; repair of personal and household goods	1 689	89	95	1 483	22	184	10.9	4.5
75	Public administration and defence; compulsory social security	2 204	89	144	1 928	44	233	10.6	5.8
33	Manufacture of medical, precision and optical instruments, watches and clocks	145	5	10	128	:	15	10.5	0.4
36	Manufacture of furniture, manufacturing n.e.c.	194	9	11	172	:	20	10.2	0.5
40	Electricity, gas, steam and hot water supply	166	:	15	147	:	17	10.2	0.4

Note: Sectors are ranked according to the percentage of people homeworking generally or sometimes, with a cut-off point at 10 % homeworkers per sector of activity. : = data unreliable.

Source: INSEE Enquête emploi en continu, CAMIRE

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## Conclusion

This short document took as its starting point the theoretical work that had been conducted at a pan-European level on the potential of national labour force surveys to measure eWork. The aim was first to provide some data and second to underline the limitations of many labour force surveys by looking more closely at the French case. As is clearly shown in *The Missing E*, France is by no means alone in not being able to provide the possibility to measure eWork via its labour force survey. Rather, it is the norm.

Breaking down the typology of de-localisation enabled by eWork into the various categories illustrates quite succinctly the definitional problems with which one is faced when an indirect measurement approach is adopted instead. The subsequent tables further highlight the difficulty of using this approach to arrive at data which is internationally comparable, whether occupation or sector of activity are used alone, or when combined with location in an attempt to filter out non-eWorkers.

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