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Title - Required Teamwork and its contribution to High Performance Workplace Organization

This is the Italian contribution to the topic report on Teamwork and its contribution to High Performance Workplace Organization for the European Working Conditions Observatory.

QUESTIONNAIRE

Q.0 Firstly, the correspondents are asked to describe shortly the surveys

Dates, coverage, size and response rates, in case of qualitative surveys the leading methodology) used in answering the questions. Correspondents are asked to report on relevant available surveys such as:

Q.0.1 working conditions national representative surveys (quantitative methodology)

To keep this category, the national representativeness is the most important criterion. The population surveyed might be employees, employers, HR specialists, social representatives etc..

There is just one nation-wide representative survey, carried out by Isfol in 2002 ([QWS2002](#) in the questionnaire), the national agency for training. For sampling techniques, see SR.

Amongst other local-level surveys (regional/provincial level, see SR... for a short list), only the survey “La salute e la sicurezza nei luoghi di lavoro in provincia di Torino” (“Health and Safety in workplace in the province of Torino”), the main automotive and ICT Italian area, carried out in 2002 by IPL (Istituto per il lavoro) (in the following, TO-IPL) includes one question over teamworking. The 3rd EWCS questionnaire was used with minor changes. 63.3% of respondents work in the automotive industry, 21.8% in logistics and transports of goods and persons, 4,9% in trade, 3,9% in construction and 6.2% in health. The report does not contain any clear description of sampling methodology: work councils’ members managed the collection of questionnaire and no weighting technique is used in order to face sampling bias.

Q.0.2 other establishment of company surveys (quantitative methodology - e.g. larger sample of employees; structured questionnaire used)

This category of surveys differs from the previous one by national representativeness. The survey sample is often constituted by employees of one company only. The nation-wide survey carried out by [Banca d’Italia](#) over investments in manufacturing companies and the organizational changes show that teamworking increased in about 57% of companies over 1,000 employees, but nothing is said about the percentage of involved employees.

There are some local-level surveys carried out according the model of the English WIRS 1980-1990 in some industrialised provinces of the Northern Italy:

- Bergamo ([Leoni et al., 2001](#); BG 2002);
- food industry in Emilia-Romagna (Pini et al., 2002; ER2002);
- Reggio Emilia 2004 and 2006 (Pini et al., 2004; [Pini Del Soldato., 2006](#), RE2004 and RE2006);
- Ferrara 2005 ([Bianchi et al., 2005](#), FE2005).

BG2002 is carried out in a sample of 100 companies over 50 employees, observed in their performance over the 90s (1990-1999); ER2002 includes all food plants with more than 50 employees, RE2004 includes all manufacturing companies with more than 50 employees, FE2005 is based on a sample of companies in all industries (excluding public administration) having more than 20 employees; RE2006 a sample of 192 manufacturing firms over 20 employees, representative of the 376 manufacturing firms of the province having work council,

Interviews are carried out both to firms' top management (sometimes to HR manager or to the entrepreneur/owner) and to work councils only in RE2004; in BG2002 and FE2005 only to top management; ER2002 and RE2006 to work councils only.

Q.0.3 qualitative studies (at different levels)

Studies where qualitative methods have been used to understand teamwork and its consequences

Since late 90s there is poor record of qualitative studies of teamworking. We just refer to Piotto (2000) which investigated two metalworking firms in Piemonte and to Pini e Del Soldato (2005) comparing two leaders of food industry, Barilla e Parmalat, both located in the "food valley" of Parma (in the following PDS). The latter combines the question. The latter combines a prior version of RE2004 questionnaires submitted in 2002 and 2004 to both firm management and workers' representatives of the plants of both firms in the province of Parma with qualitative interviews. The recently established (1993) FIAT plant in Melfi according to the lean production principles gave rise to a significant debate over the nature of teamworking.

Note: Please label each survey with abbreviation which will be used when answering next sections of questionnaire to indicate the source survey.

Secondly, the structure of most of the questions will be very similar. Each question is divided into three sections (each section has its own box). Your answers are supposed to be jot down into particular boxes.

- **BOX 1 Question wordings-** (question formulations from already existing survey instruments)
- **BOX 2 Content and main findings – national representative surveys**
(the data from the national representative surveys on working conditions or teamwork in particular)
- **BOX 3 Content and main findings – other company surveys, qualitative research**
(including case studies)

(The data from company level surveys, qualitative company case studies or other qualitative research)

Explanation of the questionnaire structure:

The aim of this questionnaire structure is to give you a room for answers from different sources. As we are seeking for information about issues that are usually not very well covered in most working conditions surveys, we thought it was useful to leave space for other research findings and build out questionnaire in this way. You might feel concerned about not being able to respond all the questions. Please bear in mind that we are obliged for any information you provide us.

It means that **when there is a very good coverage of the issue by quantitative data from national representative surveys you are NOT required to search for additional information in qualitative studies (BOX 3)!** The third box (complementary information) is optional and/or complementary. But we would appreciate if you would include at least one case study from your country in the answers.

However, we are well aware that it is very difficult to capture some of the following issues by national representative quantitative data both because of the nature of the issue and also because of scarce occurrence of these questions in national representative surveys. If it is your case please keep in mind **to stress importance of the third box** “Content and main findings – company surveys, qualitative case studies or other qualitative research” where **expert opinion** and **synthesis** of existing qualitative studies are required. Outputs of qualitative research should provide you a room firstly for describing the topic in situation when no quantitative data are available or secondly to complete the information when you find it relevant.

Q.1 National correspondents are asked to give question wordings and figures which deal with the incidence of teamwork in their countries.

Example:

- *“Do you work in permanent work group or team that has common tasks and possibility to plan its work?”*
- *Does your job involve, or not...? “Doing all or part of your work in a team”*
- *Does your job involve, or not...? “Rotating tasks between yourself and colleagues”*
- *“At my work I have opportunity to be in touch with my colleagues by means of team work”*

Question wordings (Q.1a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover incidence of teamwork in the country or in particular company. Correspondents are asked to give relevant existing question wordings to this issue.

There is no question relating the task performance and the involvement in a team. Since autonomy and involvement are investigated in some questions (Q29-Q37), by combining some of

the items we draw an indicator of presumed involvement in teamworking. The methodology adopted to construct the index is described in Annex 1.

The survey TO-IPL, question D.7 is set as follows: “does your job implies: 1) job rotation with your colleagues 2) you perform part or all your work in a group”. An explanatory note defines teamwork as “formalized forms of cooperation amongst workers that guarantee persons interchangeable for all or part of their tasks, or allow integrating different and specific competences, within a defined task/project”.

Content and main findings – national representative surveys (Q. 1.b)

Correspondents are asked to give figures on the issue of **extent of teamwork** from national representative quantitative surveys. Please give figures broken down by gender, occupation, sector, company size (0-49; 50-249,250 and more employees), educational attainment, type of ownership. If trend is available please give the trend data with a brief commentary.

Table 1 describes how employees having some of the features of teamworking are distributed according company size. They show a larger share amongst small companies, where teamworking is usually informally set up as a result of reciprocity and trust. However, their size is less than 5%

Women show larger cooperation and autonomy (tab. 2): this clearly depends on their concentration in service sectors, where women are more concentrated. Except manufacturing, where the gap is low, male dominated industries show definitively lower share of teamwork practices.

Table 1 Distribution of some teamwork features by company size

% values

	teamworking	no teamworking
less than 50 employees	58,95%	50,85%
50 - 199 employees	23,52%	22,77%
over 200 employees	13,27%	18,79%
total	3,65%	96,35%

Source: Isfol QWS2002, our elaborations

Table 2 Distribution of some teamwork features by gender

% values

	teamworking	no teamworking
men	33,83%	59,49%
women	66,17%	40,51%
total	3.65%	95.35%

Source: Isfol QWS2002, our elaborations

Table 3 Distribution of some teamwork features by industry

% values

	teamworking	no teamworking

	teamworking	no teamworking
Agriculture and fishing	0,34%	1,41%
Mining and quarrying		0,03%
Manufacturing	22,41%	25,29%
Energy		0,60%
Construction	1,24%	5,48%
Commerce	13,13%	8,72%
Hotels and restaurants	4,25%	2,59%
Transports	4,90%	6,99%
Financial intermediation	0,33%	3,77%
Other private services	9,27%	7,20%
Public services	44,13%	37,93%
total	3.65%	95.35%

Source: Isfol QWS2002, our elaborations

Content and main findings – company surveys, case studies or other qualitative research (Q.1.c)

Correspondents are asked to give the main findings emerging from the most recent case studies on the issue of **the extent of teamwork** (the summary and expert reflexion of existing case studies on that issue is required).

The report TO-IPL shows that quite half of the respondents work in teams. The definition is however rather broad. Teamworking is very widespread amongst health workers (79.7%) and well above average amongst workers in construction (64%) and managers and cadres (56.7%), while drivers and machinery operators show the lowest rates (27.1%).

Table 4 Teamworking by occupational groups in the province of Torino

% values

Workers	46.8%
Manual workers in construction	64.0%
Warehouse management and logistics	42.9%
Technicians	47.8%
Drivers and machineries operators	27.1%
Medical and health and care operators	79.7%
Clerks	51.8%
Managers and cadres	56.7%
Non identified tasks	45.7%
Total	46.3%

Source: Provincia di Torino, IPL, 2003

Surveys carried Leoni et al. (BG1999) and Pini et al. (ER2002, RE2004, FE2005 and RE2006) share the same theoretical set of hypothesis, i.e. to investigate how widespread are high performance work practices (HPWP), their impact on firms' performance and their links with industrial relations. Empirical findings both support the general hypothesis that such practices are introduced in bundles, and that they have positive effect both on productivity, firm performance

and industrial relations (Pini does not identify any clear causal effect but just positive links). According to Leoni et al.(2001), the threshold measures are first good industrial relations, and then “internal reorganization favouring the horizontal dimension”.

While Leoni tends to generalize his findings to the Centre-North manufacturing industry, Pini never does so because he implicitly (and correctly) takes into account the importance of social environment for SMEs systems, stressed by industrial districts studies (Brusco and Becattini above all), and tend to stress the striking contrast of companies “particularly dynamic on both technological and organizational levels, but very cautious in decentralizing decision-making in favour of employees on performing their operations” (Pini, 2004, p. 150)

Amongst various contributions on teamworking at FIAT Melfi, the most significant are Cattero (1994) and Pulignano (2006). The former stresses the presence of a double supervisors, in contrast with VW for instance, consistent with the supervisory systems in the main plant of Torino, Mirafiori, grown according fordist principles (and consistently with Catholic Church after the introduction in 16th century of Santo Uffizio), while the latter stresses its paternalistic characters and its role of preventing conflict and union intervention at shop-floor level. These contributions are good examples of the general tendency amongst Italian sociologists of investigating TW in Melfi plant an industrial relations approach rather than analysing its impact on working conditions.

Del Soldato and Pini (2005) show that Parmalat has an organizational design closer to the J-firm, while Barilla to the A-firm, although in both companies teamwork involves about 50% of the workforce, a more widespread incremental organizational innovation supported by more participative industrial relations. Such organizational practices was the main resource in supporting the company recovery after the explosion of the financial scandal.

Q.2 Do in the national representative surveys or other surveys exist questions dealing with form and organisation of the team?

Example:

- If you have opportunity to work in team, what is its usual form?

Flexible teams build up to solve particular project or problem.

Teamwork in a simple form of job rotation without having opportunity to decide about methods of work or task.

Please include also data if available about incidence of different types of teamwork such as: **quality circles** (exmp. „Do in your company exist so called QUALITY CIRCLES, where the room to express your ideas to particular work issues is given to employees?, **virtual teams** („Do you use computers or other electronic devices to organize group work or for consultation of your work tasks. “), **cross functional teams** (“Do you cooperate with other departments within interdisciplinary work on particular projects or work tasks?”)

Question wordings (Q.2.a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover **form and organization of the team**. Correspondents are asked to give relevant existing question wordings to this issue.

As stated above, Isfol QWS2002 does not investigate the TW issue. However, we build a proxy variable (Tw indicator, TWI) according rather relaxed principle of inclusion (autonomy, involvement in

ER2002, RE2004, FE2005, RE2006 and PDS differentiate the amongst the various forms of TW, but the report and papers do not focus on such an issue. RE2006 and FE2005 are the most refined edition of the same questionnaire. They include the same questions:

2.2. (F.2 RE) Which of the following organizational practices do you use (1. quality circles, 2. production by means of teamworking 3. just-in-time 4. Total quality management 5. None of these)? If used, when did you introduce them (before 2000, 2000-2004, doesn't remember when)? *(Possible more answers)*

2.4 (F.4 RE) Which of the following organizational practices are used in working activities (1. job rotation, 2. job enlargement, 3. competences enlargement, 4. wider autonomy 5. wider autonomy of groups and/or individual employees in problem solving 6. structured forms of discussion on employees suggestions and/or proposals on work organization and process/product quality 7. continual training related to organizational needs 8. reduction of hierarchical levels within the same company function 9. target setting for teamworking and/or individual employees 10. none of these)? *(Possible more than one answer)*

BG1999, 2003 survey includes some questions to firms's management on TW:

Q37: "What proportion of employees work in groups (working groups, committees, teams, project teams, quality circles, continuous improvement teams, etc.) formally set up? A) all (100%), b) almost all (80-90%), c) most (60-79%) d) About half (40-59%) d) some (20-39%) e) few (1-19%) f) none (0%)"

If teamwork exists, the following questions apply:

Q38 "Which of the following statements reflect the way the team operates? (Yes/No) i) The team members can nominate their head; ii) the team members decide together how to do the work; iii) teams are responsible for specific services/products"

Q39 "How the results of these teams are rewarded? a) Economic reward b) other (please specify) c) no reward"

Content and main findings – national representative surveys (Q.2.b)

Correspondents are asked to give figures on the issue of form and organization of the team from national representative quantitative surveys. What is the incidence of different types of teamwork? Which types of teamwork are characteristic for different occupations, sectors, company size or type of ownership?
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QWS2002 adopting the derived index (narrower, larger definitions) does not allow us to identify the type of teamworking according the above specified characteristics. Just local-level surveys on the company side allow further investigation.

Content and main findings –company surveys, case studies or other qualitative research (Q.2.c)

Correspondents are asked to give the main findings emerging from the case studies or qualitative research on the issue of **form and organization of the team**. What is the incidence of different types of teamwork? Which types of teamwork are characteristic for different occupations, sectors, company size or type of ownership? (Summary and expert reflexion of existing case studies on that issue is required).

As seen above, Pini carried out various surveys amongst manufacturing firms in Emilia-Romagna.

ER2002 on food industry shows that job rotation is implemented in the majority of companies, involving 40% of their workers (one work over four about in the whole sample). Teamworking is introduced in one company over five and Quality circles in one over twelve. In general, food companies show an increasing hierarchical intensity, while production is based on extensive flexibility of labour, which compensates both organizational and technological rigidities (Pini, 2002).

Table 5 Innovative practices in the food industry in Emilia Romagna

Organizational practices adopted since 1998	% companies	% involved workers (1)	% involved in companies with innovative practices (2)	Std. dev. (1)	Std dev. (2)
Teamworking	21,43	8,43	39,33	20,493	27,628
Quality circles	8,33	2,68	32,14	12,669	33,399
Just in time	7,14	3,43	48,00	15,784	39,603
Job rotation	59,52	23,06	39,40	27,635	25,670
Total quality management	26,19	9,85	37,59	26,499	41,021
None of these	2,38	0,12	5,00	1,091	7,071
	29,76				

% values

Source: Pini et al. (2002)

Table maps the proponents of organizational changes in the period 1998-2001. Job rotation and formalized discussions of workers suggestions on work organization are mainly introduced on work councils (or joint consultive committees or workers') proposal, while total quality, formalized discussion over process/product improvements, formalization of roles, tasks and procedures are mostly introduced on management proposal.

Table 6 Organizational changes by proponent in Emilia-Romagna food industry

% values

	introduced	Management proposal	Work councils' proposal	JCC proposals	Workers' proposal

	introduced	Management proposal	Work councils' proposal	JCC proposals	Workers' proposal
Introduction of TW in production	11,90	8,33	2,38	1,19	0,00
Total quality projects	33,33	32,14	0,00	0,00	1,19
Job rotation	58,33	15,48	26,19	5,95	10,71
Wider autonomy of groups and/or individual in problem solving	14,29	8,33	2,38	2,38	1,19
Formalized discussion over suggestions and/or proposal from employees on work organization	4,76	0,00	1,19	2,38	1,19
Formalized discussion over suggestions and/or proposal from employees on process/product quality	3,57	3,57	0,00	0,00	0,00
Continual training linked to organizational needs	20,24	9,52	5,95	2,38	2,38
Target setting for TW and/or individual employees	5,95	3,57	1,19	1,19	0,00
Definition of standard procedures	25,00	21,43	1,19	0,00	2,38
Increase and wider distinction amongst hierarchical levels	13,10	13,10	0,00	0,00	0,00
others	1,19	0,00	1,19	0,00	0,00

Source: Pini et al. (2002)

Table 7 Innovative practices in the province of Reggio Emilia, 2004 and 2006, and Ferrara, 2005

% values

Organizational practices adopted	% companies (RE2004)	% workers involved in innovative practices (RE2004)	% companies (FE2005)	% companies (RE2006)
Teamworking	29.65	50.85	24.29	34.90
Quality circles	12.06	35.68	31.43	6.77
Just in time	13.07	63.46	19.57	26.56
Job rotation	32.16	35.7		
Total quality management	45.73	59.74	45.39	24.48
None of these	32.66			

Source: Pini et al. (2004), Pini et al. (2006)

Comparing surveys RE004, FE2005 and RE2006 gives us important insights on teamworking issues. As anticipated above, it is worth to stress that company size are different (50 employees RE2004, 20 RE2006, FE2005) and sources are not homogeneous (RE2006 is based on interviews to work councils only): in general work councils tend to underreport management practices, because their implementation does not involved unionized workers. Thanks to the generous support of prof. Pini, who managed these surveys, it is possible to compare figures according to company size and industry (manufacturing).

Both teamworking and Quality circles use are positively affected by company size, but they differ according to the local production systems. TW practices are more widespread amongst small firms in Reggio Emilia than in Ferrara, although their managerial structure is weak. Even stronger differences in comparing the provinces of Padova and Prato were met: TW practices are part of the routine of one company over four in Prato, while in Padova just 4% of companies although their area larger on average (Giaccone, 2000). This reflects significant differences both in the industrialization pattern and in social capital endowment inside the “Third Italy” industrialization model.

The provinces of Reggio Emilia and Modena, in fact, are the reference area for the flexible specialization model described by Piore and Sabel (1984), having the industrial district as idealtipe, together with the industrial district of Prato. Italian politologists identify this pattern of local governance as “modello reggiano” (“Reggio Emilia model”, Messina, 2001) based on thick networks between social partners and local governments, supported by a rich social capital endowment and intense citizens’ participation to decision-making: in this particular social environment cooperation (inside a company and across companies) is a shared knowledge and easy to organize. The province of Ferrara shows a different industrialization pattern, with poor market and non-market links between large plants of non-locally based companies, and small companies.

Table 8 Work practices in two provinces of Emilia-Romagna

% value

Survey	RE2004 manufacturing	RE2006 manufacturing	RE2006 manufacturing	FE2005 manufacturing	FE2005 manufacturing
Firm size	Over 50 employees	Over 20 employees	Over 50 employees	Over 20 employees	Over 50 employees
No. Firms	199	192	134	86	36
Interviewed	Management	Work council	Work council	Management	Management
CQ	12.06	6.77	8.21	22.35	36.11
TW	29.65	34.90	40.30	28.24	44.44
JIT	13.07	26.56	26.12	21.43	38.89
TQM	45.73	24.48	31.34	43.53	61.11
None of these	38.69	33.33	26.87	36.47	16.67

Source: elaboration by Pini expressly for this questionnaire

Table 9 Combination of organizational practices – Reggio Emilia 2006

Correlation scores

	Quality circles	Teamworking	Just in Time	Total quality management
Quality circles	100,0	6,0	5,9	12,8
Teamworking		100,0	31,4	31,9
Just in Time			100,0	34,0
Total quality management				100,0

Source: elaborations by Pini expressly for this questionnaire

Tab describes correlations amongst innovative organizational practices. Teamworking and quality circles are actually alternative ways of eliciting workers’ cooperation, while Total Quality

Management and Just in Time practices are adopted by about one third of firms implementing teamworking.

Human resource management practices corroborate such findings. Reggio Emilia small firms do show lower use of HR practices associated with a well-structured company in managerial sense (organization-related continual training, target settings, evaluation systems) and higher employee autonomy, all consistent with the ideal type of the Marshallian industrial district. All these HR practices are strongly related to company size in the province of Ferrara.

Table 10 Human resource management practices in two provinces of Emilia-Romagna

% values

Survey	RE2006 manufacturing	RE2006 manufacturing	FE2005 manufacturing	FE2005 manufacturing
Firms involved	Over 20 employees	Over 50 employees	Over 20 employees	Over 50 employees
No. Firms	192	134	86	36
Interviewed	Work council	Work council	management	Management
Job rotation	54.69	54.48	31.76	33.33
Job enrichment	52.08	52.99	50.59	72.22
Competences enrichment	43.23	45.52	55.29	83.33
Organization-related continual training	9.38	13.43	41.18	61.11
Reduction of hierarchical levels	7.29	9.70	18.82	30.56
Target setting for individuals/TWs	14.58	19.40	32.94	47.22
Individual and/or group evaluation systems	20.31	25.37	31.76	44.44
None of these	6.77	6.72	13.10	0.00

Source: elaborations by Pini expressly for this questionnaire

Type of teamwork and rewards to team members is investigated. In the food industry, less than 40% of teamgroups can decide work methods and just in one case they choose the team leader, while most teams have their members responsible, as individuals (61%) and/or as a group (72%), of specific products/services. However, one firm over ten shows forms of improvement channelling without teamworks.

Manufacturing industry in Reggio Emilia shows some significant differences. As seen above, the share of firms with teamworking is higher (30% vs. 22%), more. They have wide scope in decision making (57% over work methods) and collective responsibility, and slightly lower responsibility as individual. It is interesting to note that three firms over four have some forms of improvement channelling independently of teamworking practices and that half of them offer some economic reward.

Such results are consistent with both Piore and Sabel (1984) and Brusco and Fiorani (1996) arguments of a widespread workers' participation, at least in an informal way, in SMEs of Emilian industrial districts.

Table 11 Types of teamworks in Emilia-Romagna

% over firms

Operation form of team	ER2002 (food)	RE2004
team members can choose their team leader	5,55	8,47
Members of the team decide together about how to perform the job	38,87	57,63
Teams are responsible of specific products/services	72,24	84,75
Team members are individually responsible of specific products/services	61,13	59,32
	ER2002 (food)	RE2004
Independently of TW, exists channels allowing employees to suggest improvements in working methods?	32,14	76,88
If yes, are there economic rewards?	3,57	37,91

Source: Pini et al, (2002)

When analysing Barilla and Parmalat, Del Soldato and Pini (2005) focus on work participation taking into account both the organizational design and industrial relations.

In Parmalat teamworking was introduced in 1985 on very flexible plants, immediately after job rotation, while Just in Time and TQM were introduced in 1994 Parmalat: on-the job training plays a key role in competences building of skilled workers, and is integrated with off-the job training on teamworking, quality and market trends. Organizational improvements are mainly of incremental type and JCCs between management and work council play a major role in governing their implementation.

On the other hand, Barilla (sold by the family to an American conglomerate in 1971 and bought back by the family in 1978) involvement show different patterns. Quality circles were introduced in 1980 (very early indeed), TQM in 1992, JIT in 1994 and finally Job rotation and TW in 1996. plants are poorly flexible and training is mainly off-the-job. Although there are individual opportunities to advance improvements, management keep firmly its prerogatives both in work organization and industrial relations, notwithstanding wide information and consultation opportunities. Neither companies allow workers to nominate their teamleader.

Q.3 Does teamwork increase autonomy of employees in decision making about their work? Which degrees of self-regulation can be distinguished?

Example:

- *The teams are responsible for the preparing and supporting activities of their own work.*
- *The group can self set the targets for its work.*
- *The members of my team are responsible for determining the methods, procedures, and schedules with which the work gets done.*
- *Team is responsible for the results but the team is under the external control.*
- *Members of team do not have particular responsibility for results and group is managed from external sources as a unit.*

Please give also figures showing association between teamwork and individual worker's autonomy. In this respect crosstabs of autonomy (YES/NO) and teamwork (YES/NO) are required.

Question wordings (Q.3.a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover autonomy of members in a team (See examples above). Correspondents are asked to give relevant question wordings to this issue.

As described above (Q.1.a) no question deal with teamworking.

Content and main findings – national representative surveys (Q.3.b)

Correspondents are asked to give figures on the issue of autonomy in a team eventually autonomy at work from national representative quantitative surveys (crosstabs are preferred, correlations, other reported associations).

This issue cannot be investigated using QWS2002 results because autonomy is a constituent of the index used in order to have a proxy of TW. Only opportunity of breaks can be analysed. The result is rather puzzling: workers with job features closer to teamworking have less freedom in choosing their breaks: coordination boundaries are therefore tighter than group non-constrained workers.

Table 12 Freedom in choosing a break by the presence of some teamwork features

% values

	teamworking	no teamworking
Freedom in choosing the moment for the break	73,9%	82,0%

Source: Isfol QWS2002, our elaborations

TO-IPL reports summarize this issue as follows “By using occupational groups and by relating TW with the degree of autonomy This form of cooperation positively affects the degree of autonomy. Correlations are not significant only with the opportunity of modify the speed or the pace of work and with the freedom to take vacancies”. No figures supporting such findings are included.

Content and main findings – case studies or other qualitative research (Q.3.c)

Correspondents are asked to give the main findings emerging from case studies or qualitative research on the issue of teamwork and autonomy. We are interested in to what extent the growth in autonomy within the team results in better group performance and higher job satisfaction (the summary and expert reflexion of existing case studies on that issue is required).

This aspect is not discussed by any author. Prof. Pini elaborates expressly for this questionnaire findings from RE2006, presented last 17th January.

Quality circles do not show any significant impact on autonomy, while JIT and TQM increased individual autonomy only in performing their tasks, while autonomy in problem solving is significantly higher only in the case of teamworking.

Table 13 Impact of organizational practices over autonomy

Reggio Emilia 2006 - % over 192 manufacturing companies

	Quality circles	Teamworking	Just in Time	Total quality management	None of these
Increased individual autonomy of employee	5.73	13.54	12.50	13.02	6.77
Increased groups and/or individual autonomy in problem solving	2.08	8.33	2.60	3.13	3.65
Formalized discussion over suggestions and/or proposal from employees in work organization and process/product quality	1.04	4.69	1.04	4.69	2.60

Source: elaborations by Pini expressly for this questionnaire

Q.4. To what extent are workers satisfied with team based way of working? Can you also report on association between overall job satisfaction and teamwork presence? Does teamwork increase overall job satisfaction?

- Example:*
- Are you generally satisfied with team based way of working
 - How satisfied are you with your job?

Question wordings (Q.4.a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover satisfaction with teamwork. Correspondents are asked to give relevant question wordings to this issue.

None of the surveys reviewed explore such issue.

Content and main findings – national representative surveys (Q.4.b)

If direct question on satisfaction with teamwork is available, please give the figures. Correspondents are also asked to give figures on the issue of teamwork (YES/NO) and job satisfaction (SATISFIED/NOT SATISFIED) from national representative quantitative surveys (crosstabs are preferred, correlations, other reported associations).

Workers with organizational features closer to teamworking are more satisfied: in particular, gaps amongst “very satisfied” is significant (+9.5%) and dissatisfaction rates are lower (7.1% versus 9.9%)

Table 14 Overall satisfaction by presence of teamwork features

% values

	teamworking	no teamworking
Very satisfied	44,6%	35,3%
Fairly satisfied	48,3%	54,8%
Fairly unsatisfied	3,8%	7,7%
Very unsatisfied	3,3%	2,2%
	100,0%	100,0%

Source: Isfol QWS2002, our elaborations

Table 15 Influence of teamwork features on multifacet satisfaction

% values

	teamworking	no teamworking
working times and shifts	88,4%	81,4%
autonomy	99,2%	87,0%
Job security	95,3%	84,2%
earnings	62,1%	60,3%
clima dei rapporti	92,3%	87,4%
Type of work	93,5%	87,9%
Personal and professional realization	78,6%	73,0%
Work perspectives	75,4%	50,5%

Source: Isfol QWS2002, our elaborations

Multi-facet satisfaction analysis explores such connections. Satisfaction is higher amongst those having job features closer to teamworking for all items. The satisfaction gap about earning is the lowest (1.8%), while gap about work perspectives is the highest (25%). On average, the satisfaction gap is around 5-8%, while it attains 12% on autonomy

Table 16 Influence of teamwork features on satisfaction about relationships with superiors

Scale 0 (lowest)-6 (highest), % values

	teamworking	no teamworking
0	1,0%	4,5%
1	1,3%	2,6%
2	5,7%	7,6%
3	15,1%	19,9%
4	15,0%	28,1%
5	61,9%	37,3%

Source: Isfol QWS2002, our elaborations

Relationships with superiors are felt by large better by those having job features closer to teamworking: three over four are satisfied versus just 55.4%, with a gap close to 20%. On the other hand, about one over six amongst those having job features closer to teamworking does not

have colleagues: they are mainly parasubordinates workers, having weak personal links with their employers, with discontinuous forms of cooperation (such as virtual links). However, satisfaction for work relationships with colleagues is lower, due probably to the fact that the variable used is a proxy.

Table 17 influence of teamwork features on satisfaction about relationships with colleagues

Scale 0 (lowest)-6 (highest), % values

	teamworking	no teamworking
0	1,7%	1,1%
1	0,6%	1,0%
2	4,4%	2,6%
3	9,0%	13,3%
4	27,6%	25,8%
5	39,4%	51,8%
No colleagues	17,4%	4,4%

Source: Isfol QWS2002, our elaborations

Content and main findings – case studies or other qualitative research (Q.4.c)

Correspondents are asked to give the main findings emerging from the most recent case studies or qualitative research on the issue of teamwork and job satisfaction (the summary and expert reflexion of existing case studies on that issue is required)

Since local-level surveys discussed do not involve workers directly, no information is available

Q.5 Does in your country exist any evidence about interconnection between teamwork presence and higher work intensity and probable work overload?

Please report on the results from any available sources (both of qualitative and quantitative nature).

Example of direct questions related to that issue:

- “Working in group is much more demanding than working individually”
- “Work pressure becomes evenly distributed in the group”
- “Nearly all the members of my team contribute equally to the work”
- “The number of people in my team is too small for the work to be accomplished.”

Question wordings (Q.5.a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover the problems of interconnection between teamwork introduction and higher work intensity and higher stress exposure. Correspondents are asked to give relevant question wordings to this issue.

As seen above (Q.a.1) the topic is not dealt. The index here built allow to explore

Content and main findings – national representative surveys (Q.5.b)

Correspondents are asked to give figures on the issue of interconnection between teamwork introduction and higher work intensity and higher stress exposure from national representative quantitative surveys. Please use both figures from direct questions and also figures from higher level analysis e.g. teamwork (YES/NO), higher risk of stress occurrence (YES/NO) (crosstabs are preferred, correlations, other reported associations).

Pace of work is slightly lower for those having job features closer to teamworking: their pace of work is more often affected by customers' or users' demands (58.8% vs 54.4%) and less by production targets (37.9% vs. 52.9%) and machines speed (less than the half)

Table 18 Influence of teamwork features on the pace of work

% values

	teamworking	no teamworking
High	30,1%	32,2%
Normal	56,4%	53,5%
Slow	0,6%	1,2%
Discontinuous	12,9%	13,1%
Total	100,0%	100,0%

Source: Isfol QWS2002, our elaborations

Table 19 influence of teamwork features over the factors affecting the pace of work

% values

	teamworking	no teamworking
Customers'/ users flow	58,8%	54,4%
Machines speed	12,4%	25,2%
Quantities to be produced	37,9%	42,9%

Source: Isfol QWS2002, our elaborations

Content and main findings – case studies or other qualitative research (Q.5.c)

Correspondents are asked to give the main findings emerging from case studies or qualitative research on the issue of teamwork and higher exposure to overload and stress. Is the work intensity or pace of work higher within organisations which have introduced the work in teams? (the summary and expert reflexion of existing case studies on that issue is required)

This topic was debated only when new organizational practices in the greffiels plant of Melfi were discussed in early 90s: this was rather associated to the new work methods introduced than to teamworking.

Q.6 What is the impact of teamwork on learning environment in organization?

In this question we are following the assumption that teamwork is creating environment for shared responsibility, knowledge and both continuous professional and personal development. We are interested in learning and professional growth opportunities of employees working in team in comparison to the other workers.

When answering this question you should also focus on the job enrichment and job enlargement phenomenon of working life.

Question wordings (Q.6.a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover the problems mentioned above. Correspondents are asked to give relevant question wordings to this issue.

Learning at work is dealt in general in the following way:

Content and main findings – national representative surveys (Q.6.b)

Correspondents are asked to give figures on the issue of interconnection of teamwork and learning opportunities from national representative quantitative surveys. Do team members use the opportunity to enhance their professional skills in workplace training more than other employees working in different organizational structures? (crosstabs are preferred, correlations, other reported associations).

According to table 20 those showing some teamworking features have lower opportunities of learning new things. This depends on both the significant weight of para-subordinate workers and the higher weight of those employed in small companies, where workplace cooperation is informal.

Table 20 Influence of teamwork features over learning of new things

% values

	teamworking	no teamworking
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	teamworking	no teamworking
Opportunities of learning new things	69,9%	74,5%

Source: Isfol QWS2002, our elaborations

Content and main findings – case studies or other qualitative research (Q.6.c)

Correspondents are asked to give the main findings emerging from case studies or other qualitative research on the issue of teamwork and learning. We are interested in what is the extent of sharing the knowledge within the team. Do employees working in teams have better opportunities to learn new things in the job than other workers?" "Is learning environment within team more stimulating?" (the summary and expert reflexion of existing case studies on that issue is required)

(Q.6.d)

It is assumed that teamwork contributes positively to job enrichment and job enlargement (for definition and concept see page n. 8).As these two job characteristics consists of different attributes of work and cannot be measured directly, they must be operationalised. **Can you find in your national studies (both quantitative and qualitative) any reported association between teamwork, job enrichment and job enlargement?**

There are no nationwide investigations over this issue. Again only surveys carried out in Emilia-Romagna by Pini provide some figures. There is no empirical research over impact on learning processes of teamworking. Personal support by Pini allows us to show some figures from RE2006.

Pini (2002) and Pini (2004) discuss rewards offered to team members. According ER2002, economic rewards are offered in one food company over three – leaving therefore uncertain whether higher productivity or competences are rewarded - while career paths and training path are offered respectively in one firm over six and one over 21. RE2004 show some significant differences: most team members are offered both career paths and economic rewards, and in almost one team over four a training path is offered. Only in one team over six no reward is offered.

Table 21 Reward forms to team members

Emilian food industry and Reggio Emilia, 2004, manufacturing % values

	ER2002	RE2004
Economic rewards	33,32	53,33
Career paths	16,66	55,00
Training paths	5,55	23,33
No reward of any kind	50,00	16,67

Source: Pini, 2002, Pini 2004

Teamworking practices are positively related with both an increased variety and complexity of tasks, while quality circles do not. JIT practices increased significantly job rotation and job enlargement, while TQM show a positive association also with competence enlargement and evaluation systems. Teamworking shows a further positive association with target setting practices.

Tab 22 Human resources practices by organizational practice

Reggio Emilia 2006 % over 192 manufacturing companies

	Quality circles	Teamworking	Just in Time	Total quality management	None of these
Job rotation	3.65	22.40	18.23	15.63	15.10
Job enlargement	4.17	20.31	15.10	14.06	16.15
Competence enlargement	5.21	17.19	9.38	17.19	10.42
Continual training linked to organizational needs	1.56	4.17	3.65	5.21	1.56
Reduction of hierarchical levels within organizational function	0.52	3.13	2.60	3.13	2.60
Target setting for TW and/or individual employees	1.04	8.85	3.13	5.21	1.56
individual and/or group evaluation systems of employees	1.04	9.38	5.73	7.29	4.17
None of these	0.00	2.60	0.52	0.00	4.17

Source: elaborations by Pini expressly for this questionnaire

Q.7 Team effectiveness subjectively perceived

It is probable that when answering this question you will be very limited and there will be no question wordings in representative surveys. For all that we can find at least some evidence how workers assess productivity of company or particular department after being involved in the teamwork (See an example).

Example:

- How well the following statements describe your group work? Productiveness of work improves in group work.

Question wordings (Q.7.a)

National representative surveys and quantitative case studies: We are interested how national representative surveys and quantitative case studies cover the problems what is the impact of teamwork introduction on team effectiveness (from the subjective point of view). Correspondents are asked to give relevant question wordings to this issue.

This topic is not dealt in QWS2002

Content and main findings – national representative surveys (Q.7.b)

Correspondents are asked to give figures on the issue what is the impact of teamwork introduction on team effectiveness subjectively perceived (crosstabs are preferred, correlations, other reported associations).

No finding is available

Content and main findings – case studies or other qualitative research (Q.7.c)

Correspondents are asked to give the main findings emerging from case studies or other qualitative research on the issue of team effectiveness subjectively perceived (the summary and expert reflexion of existing case studies on that issue is required).

Pini (2004) investigates the impact of organizational and human resources innovation on firm performance. TW is positively correlated with export share and with a better patrimonialization of the company, with an higher cash flow and lower debts. Quality circles introduction is positively correlated with firm size (both employees and turnover), production and turnover performance over 1998-2001, outsourcing practices and patrimonialization. This implies that QC practices better support company growth while teamworking better support firm competitiveness in international markets by improving their non-price factors.

According to Del Soldato and Pini (2005) productivity performances are better in Parmalat (closer to the model of J-firm) than in Barilla (closer to the model of A-firm), and the firm is now profitable, once got rid off the huge financial bubble grown along 20 years. They stress that when the Parmalat bubble clashed in December 2003, workers were firmly convinced of the profitability of their company and further engage themselves in a stronger cooperation with the new management in order to rescue the firm. Social cohesion strengthened both at a micro-level (teamworking, micro-innovations) and at a macro-level, extending involvement of workers representatives from the strictly productive aspects to the firm's strategies.

Q.8 Please reflect briefly on the existing governmental documents, policies, programs or social partners agreements discussing implementation of new work organization forms with emphasis on teamwork at national level.

Unfortunately neither teamworking nor HPWP in general have never been in the agenda of both government and social partners, at least at national level. As Pini (2004) concludes his investigation over the manufacturing system of Reggio Emilia, “the lack of a careful discussion of guidelines at European level, such as the well-known 1997 Green Paper “Partnership for a New Organization of Work” not only sluggish the diffusion of work practices able to increase companies competitiveness, but also gives place to more favourable conditions to non-innovative firms competing exclusively on costs, at the damage of innovative ones” (p. 406). Results from BG2003 highlight a further negative aspect: companies invest massively in ICT, but limited investments in the organizational field towards decentralization of decision-making do not allow to fully exploit their potential (Leoni et al, 2004).

In fact last Italian contributions on managerial reviews remount to early 80s and the debate over Melfi work practices expired at half 90s. Just some work psychologists and, as shown in the present questionnaire, more recently some labour economists devote some attention to this topic. Only in Emilia-Romagna, a region with a long-standing tradition of support of SMEs in general and of industrial districts in particular, and is summarized by the institution in late 90s of the Istituto per il Lavoro, following the indications of Brusco and Solinas (1997)

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Annex 1 The Italian problem: How to build a proxy variable of teamworking from the QWS 2002 by Isfol

As discussed above (Q.1.a) Isfol QWS2002 questionnaire does not include any direct question about teamworking. However, a proxy variable has been by combining some items of questions on autonomy and involvement.

Questions related with such topics are the following:

Q29. do you usually organize autonomously your daily job?

1. yes, in full autonomy;
2. partly, I have some scope of autonomy;
3. no

Q30. Are you involved by your supervisors in decisions concerning

1. strategy definition/targets to be reached (yes/sometimes/no)

2. choice of work methods and techniques (yes/sometimes/no)

3. work scheduling (yes/sometimes/no)

Q31. usually can you choose the moment for a pause? (yes/no)

Q32. How many are working under your supervision?

Q33. usually, you perform your job

1. in strict contact with others (colleagues/supervisors/subordinates)

2. individually

Q34. do you perform your job under the direct supervision of your superior? (Yes/no)

Q37. when problems arise, are you used to submit them to your supervisor?

1. no, I talk about it only with my colleagues

2. no, I prefer to shut up

3. yes, I talk with him or his delegate

4. yes, I talk with the trade unions

5. it never happened to me

None of the submitted items allow to undoubtedly infer the existence of some form of teamwork, but by selecting and combining some of them the resulting synthetic indicator could be employed as a proxy variable.

However, less than 2% of respondents are included: any further disaggregation

We identify four possible ways to proxy (guess the existence) of TW by means of these questions

a) TW in a weak sense:

Q29. items “1-full autonomy” or “2-some scope of autonomy”

Q30. 1. “yes” or “sometimes”, 2. and 3. “yes”

Q31. “yes”

Q32. only if “0” (otherwise you are a supervisor)

Q33. “1-in strict contact with others”

Q34. “no”

Q37. “1-I talk only with my colleagues”, with a good probability “4-I talk to the trade unions”

When all these items are fulfilled, such combination describes more appropriately an extensive individual involvement in the decision making. However, we guess that there is a good probability that teamworking exists, although in an informal way: such a weak inclusion criteria could correspond to both the informal and the “Japanese” meaning of TW. Q30.1 and Q30.2 are strongly correlated and therefore 30.2 is unnecessary. However, respondents satisfying such index are less than 2%

b) a stress on the autonomy: a) with only Q29.1

In that case, we consider for Q29 only the item “1-full autonomy”. This would, in principle, rule out some cases of spurious TW, such as discussed in one of the very few case studies in 2000s

where TW is interpreted by their members as a “concerted performance” preserving significant skill differences amongst team members. This could conflict with the “semiautonomous” meaning of the socio-technical style of TW. Such an index is fulfilled by about 1% of respondents. Some relaxation is required, as in c)

c) Q31 (opportunity of taking a break) and Q33 (working in strict contact with others) are excluded: the latter because of virtual teamworking, the former for sake of economizing variables. Furthermore, discussion of problems with their superiors is included because usually team leaders are supervisors. Respondents satisfying such filter are 3,65%.

Mario Giaccone, AGFOL, Venice