

Working time: Tendencies and emerging issues

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Time and pay are the two elements in every wage employment relationship that can be measured in quantitative terms.¹ These two fundamental aspects of the working conditions associated with different types of jobs in different countries can therefore be compared in detail and the results communicated. Many very different employment problems can also be expressed in terms of time or money, which allows a broad comparative approach to be taken. Proposals to improve working conditions are thus often expressed in terms of either money or time, since this makes it easier to amalgamate a wide range of disparate individual interests and to evolve suitable responses. Wages are paid in whatever is the relevant national currency, but time can be measured in universally accepted units — which is certainly one of the reasons why, from 1890 onwards, a central demand of the labour movement all over the world was the call for an eight-hour working day and also why it was the subject of the first ILO Convention (the Hours of Work (Industry) Convention, 1919 (No. 1)), and, subsequently, of a number of other Conventions on working time.

Over the past 20 years, however, the organization of working time has changed considerably. New forms, such as part-time working, have gained ground; in some countries working time is being reduced in order to create jobs, and in others it is being extended; new formulas combining education and work are emerging; and working time is no longer automatically organized on a weekly or annual basis, but a more flexible approach is being adopted. As a result it is increasingly unclear what should be measured, or, indeed, whether actual time worked is being measured at all. Consequently, the “currencies” of daily and weekly working time, which were valid up till now throughout the world and are the basis of several ILO Conventions, are losing ground to a wide range of other, special “currencies”.

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¹ Though this statement applies in a way to self-employment as well, there is a difference in the form of the working time of the self-employed, which is more likely to be determined by deadlines than by supervised hours of work which can be measured. Hence the focus of this article on wage employment.

This article is an attempt to examine some of these issues. The greatest difficulty in such an attempt is capturing the range of realities and developments in the various parts of the world. Because of recent sizeable reductions in working time in some European countries, the differences in working time between these countries and the developing countries have markedly increased by comparison with what they were 30 years ago. In view of such diversity it is important to realize not just that the issues traditionally addressed by policies on working time are undergoing change but that new ones are emerging.

The article starts with an outline of the ILO Conventions and Recommendations concerned with working time. There follows an analysis of major trends in the changes in working time and of the forces driving them. The following section summarizes the conditions in which working-time reductions are likely to have a positive effect on employment. Finally, a number of issues requiring further analysis are suggested.

ILO standards on working time

The various ILO Conventions concerned with one or several aspects of working time approach the subject from very different perspectives, as follows.

- One group of Conventions deals with the *daily, weekly and annual duration* of working time. Early ILO Conventions fixed daily working time at eight hours and weekly working time at 48 hours (the Hours of Work (Industry) Convention, 1919 (No. 1), and the Hours of Work (Commerce and Offices) Convention, 1930 (No. 30)). A flexible distribution of working time over a period of three weeks was permitted under Convention No. 30; in this case, daily working time was not to exceed ten hours. The Forty-Hour Week Convention, 1935 (No. 47), called for working time to be reduced to 40 hours, without any cut in living standards, in order to reduce unemployment. Adopted subsequently, the Reduction of Hours of Work Recommendation, 1962 (No. 116), proposes a reduction in weekly working time, although account has to be taken of the level of economic development attained by the country concerned. The Holidays with Pay Convention (Revised), 1970 (No. 132), stipulates paid annual holidays of at least three weeks.
- Another group of Conventions deals with the *scheduling of working time*. The Weekly Rest (Industry) Convention, 1921 (No. 14), and the Weekly Rest (Commerce and Offices) Convention, 1957 (No. 106), stipulate an uninterrupted rest period of not less than 24 hours in the course of each seven-day period. Wherever possible, all the persons concerned in the establishment should be entitled to take this weekly rest period at the same time, and wherever possible, this should be on the day of the week established as a day of rest by the traditions and customs of the country or district. The traditions or customs of religious minorities should be respected. No maximum working time or minimum rest period between

shifts is laid down for night workers. More recently, however, the Night Work Convention, 1990 (No. 171), does establish health protection measures, such as medical examinations.

- A third group of Conventions deals with regulations governing the *working time of certain groups of employees*. Thus, night work by children is prohibited and the duration of night work by young people is restricted under the Night Work of Young Persons (Industry) Convention (Revised), 1948 (No. 90). The Maternity Protection Convention, 1919 (No. 3), and the Maternity Protection Convention (Revised), 1952 (No. 103), stipulate twelve weeks' paid leave for working mothers, of which at least six must be taken after the birth. During maternity leave, women should receive an adequate subsistence allowance, which is paid out of the public purse or an insurance fund.
- A fourth group of Conventions focuses on *new forms of working-time organization*, such as part-time work or paid educational leave. According to the Part-Time Work Convention, 1994 (No. 175), part-time workers should not be discriminated against in respect of the right to organize and to engage in collective bargaining, occupational health and safety, social security or pay. Earlier, the Paid Educational Leave Convention, 1974 (No. 140), had stipulated that ratifying States should promote paid training leave during working hours.

Beyond these specific provisions, a number of general themes emerge. Thus, several Conventions give definitions of *working time or particular forms of working time*. According to Convention No. 30, "the term 'hours of work' means the time during which the persons employed are at the disposal of the employer; it does not include rest periods during which the persons employed are not at the disposal of the employer" (Article 2). Public and customary holidays are not counted as part of holiday entitlement (C. 132). And night work is defined as work performed between midnight and 5 a.m. (C. 171).

The *remuneration of working time or of time when released from ordinary work or duties* is covered in several Conventions. Thus, on an hourly or piece-rate basis, part-time employees should not receive a basic wage lower than that of comparable full-timers (C. 175). Compensation of night work should recognize and reflect the nature of night work (C. 171). Holidays, maternity leave and education/training leave should be paid. During holidays, employees should continue to receive their usual wage. As regards maternity leave, the normal wage should be taken as a reference point. And in the case of education/training leave, the leave should be financed on a regular and adequate basis.

The objectives underlying Conventions are not always clearly stated, but can sometimes be inferred from the regulations, for example:

- The most clearly stated objectives are those relating to *health and safety at work* in the Conventions on night work (C. 90 and C. 171) and the protection of particular categories of employees.

- *Equality of treatment* is a declared objective of several Conventions, as in the treatment of part-time employees (C. 175) and of those taking education/training leave (C. 140) and in the granting of the weekly rest period (C. 14 and C. 106).
- The *objective of continuing education and training* related to scientific and technological development and the changing pattern of economic and social relations is one of the themes of the Convention on paid training leave (C. 140).
- The goal of *protecting traditions or customs* was declared when the provisions on the weekly rest period were drawn up (C. 14 and C. 106).
- *Sharing in the benefits of the rapid technological progress* that characterizes modern industry is a declared objective of the Convention on working time reduction (C. 47).

Main trends in working time

Long-term developments

Developments over the long term show there have been considerable reductions in working time and significant increases in pay. In 1870, workers in most present-day industrialized countries had to work on average between 2,900 and 3,000 hours per year (Maddison, 1995). By 1992, average working time had declined by up to 50 per cent (table 1). Though these figures include the effects of part-time work which did not begin to make a significant impact until the 1960s, it can, however, be argued that, viewed from a nineteenth-century perspective, most full-time workers in western industrialized countries today can be considered to be working part time. Gross domestic product (GDP) per capita (which, in the absence of any other data, serves here as a very rough indicator of the evolution of material well-being) rose five- to ten-fold over the same period. The increase in hourly productivity was considerably higher than that in earnings, and the increased prosperity was redistributed in the form of shorter working hours and rising real incomes.

The reduction of working time was associated with extensive changes in work organization. The introduction of scientific management divided the work process into standardized tasks, each with an exact time allotted to it (Taylor, 1911). Product standardization led to reduced costs when output volumes were high, and the development of storage techniques made it possible to protect the production process from short-term fluctuations in the market and to extend operating hours (Deutschmann, 1985). Shorter working hours proved not to be an obstacle to a more intensive utilization of capital stock: all that was required was a change in the organization of shifts. Studies in the United States show that between 1929 and 1963 operating hours increased each year by 0.46 per cent and that, irrespective of that increase, actual machine utilization times rose by 1.17 per cent per year, through a reduction in machine stoppage times and in

Table 1. The evolution of working time, productivity per hour worked and gross national product *per capita*, percentages, 1870-1992

	United States	Germany	Japan	France	United Kingdom
Working time	-46.4	-46.9	-36.3	-47.6	-50.0
Productivity per hour worked	+1 287.6	+1 743.7	+4 352.2	+2 177.9	+918.8
Gross national product <i>per capita</i>	+877.4	+1 011.6	+2 621.5	+966.4	+483.7

Source: Maddison, 1995, tables 1-3, J-4 and J-5.

breaks (Foss, 1984). This trend continued into the 1990s (Foss, 1995). Thus, over the past 100 years, the reduction of working time proved to be not only an element in a policy of redistribution but also, through its effects on work organization and operating hours, an important source of productivity gains and economic growth. Indisputably, the working-time reductions of the past 100 years were largely the result of legislative change and collective bargaining; however, they also led to the introduction of new and more productive forms of work organization in enterprises. The eight-hour day and the 40- or 48-hour week became fixed reference points around which enterprises developed their work organization paradigms. As these standards became embedded in company work organization and in employees' work habits and as links became established between standard working time and social security, the relevant ILO Conventions, which had been implemented in many national legislations, proved to be very effective in practice.

In developing countries, average annual working times are still significantly in excess of 2,000 hours, even in the formal economy (table 2). Overtime can push annual working hours up to and over the 3,000-hour mark, which makes them comparable with those practised in Europe in the early twentieth century. Indeed, in many parts of the world, the achievement of an eight-hour day and 48-hour week, a guaranteed weekly rest period and maximum working times in order to prevent accidents and protect workers' health remain highly topical issues.

Developments over the past 20 years

Over the past 100 years, the annual working time of full-time employees has decreased in all industrialized countries. However, it is now rising in some of them. The increase is particularly marked in countries where income inequalities have widened and labour markets have been deregulated (United States, United Kingdom, New Zealand) (table 3). In some Third World countries, working time has also risen from what was already a high level. In Latin America, for example, where the formal sector has contracted (ILO, 1998, p. 22), the time worked in microenterprises and by self-employed workers in the informal sector is generally longer than in the formal sector. By contrast, in many other countries agreed and actual working times have fallen consider-

Table 2. Annual working hours in Asia and the Pacific, 1995-96

Country	Production workers	Non-manual workers
Australia	1 824	...
China, People's Rep. of	2 496	...
Hong Kong (China)	2 023	...
India	2 496	2 340
Japan	1 971	...
Korea, Rep. of	2 685.30	2 280.50
Malaysia	2 160.50	1 952.50
New Caledonia	1 950-1 748	...
Philippines	2 304	2 112
Singapore	2 288	...
Thailand	2 833	2 474

Source: International Metalworkers Federation, 1997, p. 28.

ably, especially in western European countries. Thus, after converging for some 120 years, the working time of full-time employees in countries at comparable levels of development is now beginning to diverge.

In recent decades the time worked by certain groups of employees has increased considerably. These include highly qualified workers in the industrialized countries who work to ever-tighter deadlines and groups of employees who in ever-greater numbers work outside national norm systems, e.g. seamen, lorry drivers, and workers in the informal sector.

Thirty years ago, discussion of cuts in working time focused largely on the reduction of full-time workers' standard working hours, by means such as shorter working weeks, longer holidays or more days of paid leave. Today, however, the increased numbers of part-time workers account for a considerable share of the reduction in annual working time in industrialized countries (table 4). However, the development of part-time work varies considerably from country to country. In the United States and in some Scandinavian countries, the share of part-time workers is rising, while in certain European countries it is now declining. The average number of hours worked by part-timers is rising in Scandinavia and is approaching the norm for full-timers, whereas in the United Kingdom, for example, it remains low. These divergent patterns of development raise the question of whether the increase in part-time work will last or whether it will decrease in significance as women are fully integrated into the world of work on a more equal footing.

For it is mainly women who work part time; men tend to work full time. The changing dynamics in these two forms of working time therefore reveal a great deal about the distribution of paid work between the sexes. The extent of change varies considerably: the gender gap in weekly working time has widened a great deal in some countries (e.g. the United Kingdom), and narrowed in others (e.g. Denmark). In the United Kingdom, it has widened mainly because of the increase in men's working time through overtime, while in Den-

Table 3. Level and changes in earnings inequality in advanced OECD countries, measured by the ratio 90th:10th decile, male earnings, 1979-95

	1979 (or other early year)	1995 (or other end year)	Annual change
Huge rise in inequality			
New Zealand	2.72 ('84)	3.16 ('94)	0.044
United States	3.18	4.35	0.027
Italy	2.29	2.64 ('93)	0.025
Canada	3.46 ('81)	3.74 ('94)	0.021
United Kingdom	2.45	3.31	0.020
Some rise in inequality			
Australia	2.74	2.94	0.013
Japan	2.59	2.77 ('94)	0.012
Austria	2.61 ('80)	2.77 ('94)	0.009
Netherlands	2.51 ('85)	2.59 ('94)	0.009
Sweden	2.11	2.20 ('93)	0.008
Finland	2.44 ('80)	2.53 ('94)	0.006
Denmark	2.14 ('80)	2.17 ('90)	0.003
France	3.39	3.43	0.002
Decline in inequality			
Belgium	2.29 ('85)	2.25 ('94)	-0.004
Norway	2.05 ('80)	1.98 ('91)	-0.006
Germany	2.38 ('83)	2.25	-0.013

Source: Freeman, 1997, p. 15.

mark it has narrowed because of the reduction in the time worked by full-time employees and the simultaneous increase in part-timers' working hours.

Patterns of working time are becoming increasingly flexible over a working life (Bosch, 1997). There are several different aspects to this process:

- As educational levels rise and labour market entry is delayed, workers are increasingly combining paid work with periods of education or training.
- Many workers are alternating between periods of full- and part-time employment.
- Many industrialized countries have early retirement schemes, whether statutory, collectively agreed or company-operated. As a result, labour market participation rates among older workers have fallen (table 5). Some countries have introduced phased retirement programmes, whereby older workers enter part-time employment prior to retiring.
- People's working lives are increasingly being interrupted by periods of further training or by a combination of work and further training.

In some countries, this flexibilization of working time over a working life is firmly established through entitlement to parental or training leave or to part-time employment (in Scandinavia); in most countries, however, it is still a result of individuals' attempts to shape and organize their working time.

Table 4. Contribution of part-time working to recent changes in average annual hours of employees in selected industrialized countries (average change in hours from year to year)

Country	Period	Overall change	Change attributable to:		
			Change in hour of full-timers	Change in hours of part-timers	Change in share of part-timers
Belgium	1983-93	-7.5	-2.5	0.2	-4.9
Canada	1983-93	-1.1	0.7	0.5	-2.3
Denmark	1985-93	-6.6	-7.1	-0.9	1.4
France	1983-93	-4.1	0.4	0.7	-4.4
Germany	1983-93	-10.9	-6.1	-0.9	-3.9
United Kingdom	1983-93	-1.5	3.8	-0.5	-5.0
Greece	1983-93	-1.0	-1.6	-0.4	1.3
Ireland	1983-93	-7.4	-1.0	-0.4	-6.0
Italy	1983-93	-3.7	-3.0	0.4	-0.9
Luxembourg	1983-93	-2.1	-0.9	-0.1	-1.1
Netherlands	1987-93	-6.6	0.0	3.2	-11.3
Portugal	1986-93	-6.9	-6.5	0.6	-0.3
Spain	1987-93	-6.0	-3.8	-0.4	-1.8
Sweden	1987-94	7.7	1.8	3.6	2.3
United States	1983-93	7.3	4.7	1.3	1.2
Unweighted average	1983-93	-3.1	-1.4	0.5	-1.7

Source: OECD, 1998, p. 156.

The forces driving change

Incomes

Short working hours voluntarily accepted by employees are one indicator of a country's level of prosperity. One precondition for workers' acceptance of short working hours is an assured adequate income, i.e. the fact that employees and their families can "afford" short working hours. As incomes rise, basic needs are met, time becomes relatively scarcer and there is growing interest in distributing productivity gains in the form of shorter working time rather than higher wages. This explains the much shorter working hours in more prosperous countries. However, absolute income levels are not the only important factor in the evolution of working time: income distribution is also particularly important.

In countries where income inequality has increased and average and lower incomes have stagnated or fallen, working time has increased. Workers are trying to compensate for the decline in their earnings by increasing the supply of labour, which may explain the increase in full-timers' working hours in the United Kingdom, United States and New Zealand, and certainly would explain the increase in working time in the informal sector in developing countries. On the other hand, it is safe to assume that the relative stability of income distribution in the Netherlands, Denmark and Germany over the past 20 years was an important precondition for the acceptance of work redistribution policies in

Table 5. Participation rates of older and younger workers in selected industrialized countries

Country	Year	Men and women, 15-24 years	Men, 55-64 years	Women, 55-64 years	Total	Changes in the participation rates of men aged 55-64 years	
						1968-88	1988-95
Australia	1968	68.2	85.9	24.2	68.3		
	1988	69.1	60.6	22.8	71.7		
	1995	69.7	60.9	28.6	74.5	-25.3	0.3
Canada	1968	54.6	85.4	29.0	63.9		
	1988	70.1	66.6	35.4	77.3		
	1995	62.2	58.9	36.3	75.7	-18.8	-7.7
France	1968	54.9	76.9	41.0	68.5		
	1988	39.0	47.4	31.7	66.5		
	1995	29.8	41.5	30.9	67.2	-29.5	-5.9
Germany	1968	68.5	83.2	30.5	69.2		
	1988	61.5	58.7	25.0	68.9		
	1994	56.2	53.3	28.4	71.4	-24.5	-5.4 ^d
Italy	1968	45.4 ^b	51.2 ^c	12.0 ^c	55.8		
	1988	45.1 ^b	65.4	21.7	60.0		
	1995	39.4 ^b	55.8	21.1	58.1	14.2	19.3
Japan	1968	55.8	86.4	44.9	72.4		
	1988	42.6	82.3	45.2	72.7		
	1995	47.6	84.8	48.5	76.6	-4.1	2.5
Netherlands	1971	59.1	80.8	14.9	58.9		
	1988	59.8	46.9	15.8	65.2		
	1995	64.5	42.3	18.6	70.6	-33.7	-4.6
Sweden	1968	64.1 ^a	89.0	42.9	75.1		
	1988	67.8 ^a	74.6	64.1	85.2		
	1995	50.0 ^a	70.4	63.4	79.5	-14.4	-4.2
United Kingdom	1968	67.8	91.9	38.1	73.5		
	1988	77.7 ^a	68.0	36.2	77.8		
	1995	69.8 ^a	62.4	40.8	77.2	-23.9	-5.6
United States	1968	60.1	81.9	41.5	69.2		
	1988	68.4 ^a	67.0	43.5	78.0		
	1995	66.3 ^a	66.0	49.2	79.2	-14.9	-1.0

^a16-24 years. ^b14-24 years. ^c60-64 years. ^d1988-94.

Sources: OECD, 1986, pp. 468, 470, 472, 474, 478, 480, 484, 486, 494 and 496; OECD, 1997b, pp. 532, 534, 536, 540, 554, 556, 564, 570, 582 and 586.

those countries. It could be said that policies of labour market deregulation that lead to a widening of income inequalities are not compatible with strategies for work redistribution (OECD, 1996 and 1997a; ILO, 1998, p. 51).

Wage differentials between men and women have an impact on the distribution of paid working time between men and women. If a man works much longer hours than his female partner and has opportunities to earn overtime bonuses that are not available to her, then the two partners' working times will remain polarized.

Table 6. Employment rates by level of education of men and women aged 25-54 in selected European Union countries, 1997

Level of education	Germany	France	Sweden	United Kingdom	All EU
Men					
High	92.4	90.2	86.3	93.1	91.2
Middle	84.8	88.4	81.8	86.7	86.3
Low	73.3	78.9	76.0	78.3	79.0
Total	85.5	85.7	81.6	85.2	84.7
Women					
High	80.8	80.9	87.1	85.9	81.1
Middle	68.7	71.1	78.8	74.0	68.3
Low	49.8	56.0	65.5	63.0	48.0
Total	67.2	67.4	78.9	71.3	62.4

Source: Commission of the European Communities, 1999, table 3.

Education

The link between education and economic activity is increasingly important. The differences in participation rates for women of varying levels of educational attainment are particularly striking. Whereas 81.1 per cent of highly educated women in the European Union aged 25-54 were economically active in 1992, the employment rate for lower-educated women was only 48 per cent (table 6). In most industrialized countries, employment rates among men with low levels of educational attainment are declining. In the "knowledge society" of the future, employment opportunities will increasingly vary according to educational attainment, and education is now the ticket for entry to the labour market. There are both micro- and macro-level reasons for this link between education and employment.

- Individuals with higher educational levels have access to more interesting and better-paid jobs, so that their motivation, which is already high because of the considerable investment they have made in their own education, is further strengthened by their experience of work.
- An expansion of education may create a virtuous circle in which an increase in the labour supply will in turn give rise to increased demand for labour. One indicator pointing in this direction is the close connection between the level of GNP and the stock of human capital (Schumacher, 1997).

Household structures and household activities

The unequal distribution of individual working time between men and women is a consequence of working-time decisions taken at household level, and traditionally women have been responsible for reproduction work and men for paid work. Time budget studies in both industrialized and developing countries have confirmed the great importance of "do-it-yourself" work and home

Table 7. Frequency of dual-earner, single-earner and no-earner households amongst couples with children in selected EU countries, percentages, 1996

	Dual earners	Single earners (Men)	Single earners (Women)	No earners
Portugal	67.1	27.3	3.8	2.0
Germany, East	64.0	26.8	5.5	3.8
Belgium	61.6	30.3	2.5	5.6
United Kingdom	61.0	26.3	3.3	9.3
Austria	60.6	32.0	4.8	2.7
France	57.3	33.3	4.1	5.4
Netherlands	52.4	39.8	2.6	5.2
Germany, West	50.8	40.5	3.5	5.1
Ireland	39.0	45.4	4.1	11.6
Spain	32.7	53.5	4.1	9.6
European Union (13)	51.4	38.6	3.4	6.5

Source: Calculated from data supplied by Eurostat: *Labour Force Survey*.

production for the economic well-being of societies. They also show that such work is primarily carried out by women, though men have slightly increased their involvement. Thus, a United Nations study shows that in industrialized countries the total time spent on do-it-yourself work is about the same as that given over to paid work (Goldschmidt-Clermont and Pagnossin-Aligisakis, 1995).

- Men spend more time on paid work than do women. Their share of paid work in the total time devoted to economic activities is between 52 and 79 per cent, while that of women is between 19 and 58 per cent.
- Measured in terms of time input, the value of do-it-yourself work corresponds to 43 per cent (+/- 10 per cent) of GNP.

Household structures have changed in recent decades. Forty years ago, for example, the single, male breadwinner model prevailed throughout Europe. Today, in the European Union most households with children have two earners (table 7). As female participation rates rise, so does the demand from households for services that used to be provided within the home, for example, childcare and care of the elderly. In a number of countries where the supply of such services is inadequate, women tend to be either economically inactive (or to work part time) or, if working, to give up any idea of having children. Research has shown that female patterns of economic activity and working time are more strongly influenced by the patterns of school hours and the availability of childcare than by any other factors. Conversely, it might be supposed that the duration of working time affects the demand for services. The pressure of paid work on households is considerably higher in the United States and the United Kingdom, for example, than in Germany or the Netherlands because average working time per household is significantly longer in the two former countries. Consequently, households in these countries have a reduced capacity for home production and an increased demand for goods and services produced outside the home, such as ready-made meals and “fast food”.

Social security

Tax and social security systems can offer a wide range of incentives for firms and employees to take certain decisions on working time. A few examples are given below:

- If social security contributions are very high and are paid only up to a certain ceiling, they become fixed costs once that limit is reached, which makes long working hours attractive to employers in cost terms. Research findings in this area are surprising. In the European Union, for example, in countries where employers' contribution rates are the most regressive (e.g. the Netherlands and Germany) some of the shortest working hours also operate (Ward, 1996). However, this fixed-cost problem also occurs in the United States, for example, where firms contract into health and pension insurance schemes for full-time workers. These schemes are paid for on a *per capita* rather than an hourly basis. It has been shown that working time is longer in firms that have contracted into insurance schemes for their employees than in those that have not.
- In the past, the tax systems of most industrialized countries granted particular advantages to the single-breadwinner model, which then dominated family life. Some countries have now switched from joint to individual assessment of couples' taxable incomes (e.g. Austria, Denmark, the Netherlands, Sweden) in order to adapt their tax systems to new patterns of economic activity and family structures (Dingeldey, 1998). The structure of social security benefits may also specifically favour certain patterns of working time. For example, the universal benefit system of retirement pension insurance in the Netherlands is frequently invoked as a reason for the high level of acceptance by the Dutch of the part-time model. However, it is by no means clear whether — and if so, how many — workers actually take their future pensions into consideration when deciding on their labour market behaviour, or indeed whether they have any information on which to base such decisions.

Flexible work organization

The organization of work in firms is based less and less on regular daily and weekly working times (Bosch, 1995). Current trends (outlined below) are reinforced by economic globalization and the shift to customized production and customer-oriented services, in which working time is generally scheduled in smaller units than in the past.

The first concern of firms is to extend the operating hours of expensive plant and equipment. This is not new, since shift work has long been the norm in capital-intensive industries. What is new is that operating hours are no longer being increased in large jumps through the addition of an extra shift per week. As they have become more cost-conscious, firms have developed new methods of finely tuning operating hours. Through measures such as continuous breaks, staggered working times and variable daily shift lengths, a "menu" of options

for adjusting operating hours has been developed, from which firms can choose according to their particular needs.

Stockholding

Manufacturing firms can no longer cope with seasonal fluctuations by holding stocks as they did in the past. Product diversity has increased to such an extent that keeping large stocks is too expensive. As a result, the state of the order book and disruptions to the production and supply chain have a direct impact on working time. So flexible annual working hours replace stock-keeping, and the workers themselves serve as buffers in the production process. In production departments, working times are becoming more attuned to customers' wishes and, in some cases, are coming closer to those practised in the service sector. In the service sector, restrictions on opening hours in the retail trade and in other service industries have been reduced or even eliminated in many countries, so that employees' working time is spread more thinly over a greater proportion of the week. It is more cost-effective to deal with fluctuations in orders by spreading working time flexibly over the whole year than by alternating periods of overtime and short time. This is why firms increasingly use the year or, for longer order cycles, periods of several years as the basis for their working time plans, in preference to the week.

Finally, firms are usually interested in the possibility of achieving cost savings when organizing working time. This can be done by avoiding paying bonuses for night work, or Saturday and Sunday work, or for any hours worked over and above the standard eight-hour day. In sharp contrast with the two aspects mentioned above (fine tuning of operating hours and annualized working time), the basic issue here concerns solely a change in payment, not changes in work organization.

As more flexible forms of work organization are introduced, so the scheduling of working time becomes increasingly differentiated. In extreme cases, individual workers may all start and finish work at different times. It is also less easy to establish the actual duration of working time not only for employee representatives but to some extent for employees, as well. Standard reference points in working time regulation, such as daily and weekly working time or the boundary between standard working time and overtime, are increasingly blurred.

It is often said that the introduction of flexible forms of work organization heralded the end of Taylorism. Clearly the transition to post-Taylorist forms of work organization is already taking place in many industries in the developed countries, where the whole system of work organization (hierarchy, remuneration, skills, working time, etc.) is changing. A change in one part of this system has far-reaching consequences for the whole structure. The operation of flexible working times within a group requires workers to be able to cover one for the other. This generally entails a loosening of the division of labour within the group and the development of multi-skilling, which in turn requires training programmes.

Where there is a large supply of low-skilled and cheap labour, Taylorist forms of work organization continue to predominate. This applies in many developing countries, to which Taylorism is now being exported, as well as in individual sectors in the industrialized countries, where it is being partially reintroduced. Unlike the Taylorism that prevailed in manufacturing industry 90 years ago, the neo-Taylorization process is driven not by production but by the labour market. It is possible only because of the existence of wage differentiation and the availability in the labour market of a large pool of workers who can be deployed flexibly. This pool varies in size from country to country, but generally it is larger the wider the wage dispersion, the lower the level of labour market regulation, the lower the share of skilled workers, the higher the unemployment rate, the higher the level of migration of unskilled workers, and the lower the extent of female integration into the labour market.

Industrial relations

These are a crucial element in the organization of working time. Strong trade unions and firm-level representative bodies that are socially integrated and accepted, represent their members' interests effectively at both macro and micro levels and cooperate with management can influence working-time structures and policy in the following ways:

- As may be expected, earnings inequalities are smaller in countries where there are strong trade unions and collective bargaining is highly centralized, than in countries with decentralized bargaining systems and weak trade unions (OECD, 1996). A relatively egalitarian income distribution is one of the prerequisites for a policy of work redistribution. At the same time, this general raising-up of lower-income groups creates pressure to adjust productivity to earnings through training. Skill shortages are reduced, which makes it easier to redistribute working time. In decentralized labour markets, however, there tends to be too little investment in training (ILO, 1998, p. 67 and pp. 74-75).
- Strong trade unions in centralized bargaining systems are better able than fragmented trade unions in decentralized bargaining systems to bring together very divergent interests regarding working time and income, and to negotiate with employers the type of longer-term incomes policy that is required for a policy of work redistribution. The changes to social security and training policy required for a successful policy on working time can also be negotiated through trilateral talks between the social partners and the State. The Dutch consensus model, in which working-time policy plays a central role, is a good example of this.
- Finally, if trade unions play an active role in plant-level negotiation and implementation of the basic conditions of new forms of work organization, this helps the rapid spread of new forms of modern company organization which, in countries with deregulated labour markets, have to be introduced laboriously from plant to plant. The learning costs for indi-

vidual firms engaged in such reorganization are considerably higher if these costs cannot be contained by sharing ideas and experience in an innovative environment. For each firm must then develop its own ideas in isolation and convince managers and workers to implement the changes, repeating all the mistakes made by others in the process.

Working time and employment

An oft-debated question is whether reductions in working time can also be used to create jobs. On a purely theoretical level, there are good arguments both for and against the view that collective working-time reductions can be an effective instrument of employment policy. All those arguments, however, are affected by the circumstances and context in which cuts in working time are carried out. The effects on employment are also affected by the manner in which cuts are implemented.

Most studies of collective working-time reductions carried out in western European countries over the past 20 years show positive employment effects. However, some of these studies also refer to cases in which cuts in working time have led to increased overtime and inflationary pressures caused by excessive pay increases, with consequent negative effects on employment. The conditions under which working-time reductions are likely to generate positive employment effects can be summarized as follows (Bosch and Lehdorff, 1998):

- It is useful if the wage compensation for working-time reductions and the increase in hourly rates are negotiated as part of an overall package, possibly one that will remain in force for a long time. Cuts in working time and wage increases can thus be implemented simultaneously, as they were in Germany and the Netherlands, without causing a rise in unit wage costs; this is important not only for international competitiveness but also for domestic demand.
- It is preferable if working-time reductions are combined with the introduction of more flexible working time. This makes it easier for firms to improve their work organization and to increase operating hours and adjust them more readily to demand. The State and the social partners should encourage the exchange of information on practical experience of new working-time systems, in order to reduce the learning costs associated with the modernization of company structures.
- Only in a functionally flexible labour market where there is also an adequate supply of unemployed skilled workers will reductions in working time not result in shortages of skilled labour and in overtime. Work redistribution policies will therefore be more difficult to implement in countries with an inadequate supply of unemployed skilled workers than in those where the supply of skilled workers is increased by active labour market and training policies.

Reductions in individual working time (i.e. the creation of part-time jobs) are often seen as an opportunity for work-sharing and the reduction of unemployment. One of the advantages of such reductions is said to be that they do not involve any wage compensation. But the question of whether new jobs can be created by dividing work up into part-time jobs cannot be answered in the abstract. The nature of part-time work varies widely from one national context to another and even between the various segments of national labour markets. These varying conditions must first be identified before sensible conclusions can be reached. To this end, it is useful to enquire into why part-time work has expanded rapidly in some countries and why it is stagnating, or even declining, in others. Research findings show that the following factors play some part:

- Wage differentials between full- and part-time workers: if the hourly wages of part-timers are lower than those of full-timers, then full-timers are unlikely to reduce their working time voluntarily.
- Differences in social security provision for full- and part-time workers: in many countries, part-timers, or those working only a small number of hours, are not covered by the social security system. No workers will voluntarily reduce their working time if in exchange they have to give up their entitlement to social security benefits.
- Career downturn or cultural acceptance: one of the most formidable barriers to the voluntary reduction of working time is the damage this can entail for workers' careers. In the current culture that places a high value on full-time work and a willingness to do overtime, workers seeking to reduce their working time are regarded as lacking in ambition, and can more or less write off their career prospects. Part-time work will gain lasting cultural acceptance only if firms cease to be the sole arbiters of decisions on part-time work and if part-time work ceases to be confined to marginal activities.
- If employees are permitted to work part time (as has already happened in Scandinavian countries), or the right to work part time is enshrined in law (as is currently being discussed in the Netherlands), then part-time work will not only be imposed through the market but can also be a matter of free choice. The Dutch and the Scandinavians are trying to change their work culture by strengthening the rights of employees to reduce their working time: in the Scandinavian countries, the parents of young children are entitled to work part time and to return subsequently to full-time work.
- The level of women's integration into the labour market: if female participation rates are very low, the initial effect of an expansion of part-time work will be an increase in the labour supply. Employment will increase without unemployment necessarily falling. As more and more women enter the labour market, the scope for expanding part-time work diminishes and it is more likely that working time will begin to rise again. Such a "part-

time trap”, caused by an increase in the labour supply and leading possibly to rising unemployment, can be avoided only if men’s working time is also reduced.

Issues for further analysis

An overview of the organization of working time can only point to the main trends. This final section indicates areas in which further analysis could usefully be undertaken.

The connection between the evolution of working time and of earnings: growing income inequalities both between and within countries are the main reason why working time is often found to be on the increase and why the benefits of technical progress are no longer being evenly distributed. Such inequalities still stand in the way of a more equitable distribution of paid work between men and women.

Flexible annual working hours: because of the long hours still worked in many parts of the world and because they have grown even longer in recent years, the classic ILO Conventions on the scheduling and duration of working time (C. 1, C. 14, C. 30, C. 47 and C. 106) continue to be pertinent today. In countries where working time has been reduced, work organization is changing and should allow for greater flexibility. It should also be possible to spread working time over longer periods, with the degree of flexibility rising as the duration of working time falls. But such flexible annual working hours require, among other things, clearly stated maximum and minimum daily and weekly working times, rest periods between shifts, opportunities for employees to choose or determine their own working hours, the period over which standard working time is to be achieved, the remuneration of overtime and the safeguarding of time credits. One increasingly important question raised by flexible but often poorly monitored working-time patterns is the definition and recording of work actually done.

Health and safety at work: in view of the excessive daily and weekly hours worked in some industries, in some countries and by certain groups of employees, the connection between the duration of working time, and fatigue, accidents and illness could usefully be examined.

In the past, ergonomics research has concentrated on the impact of night and shift work and has produced some robust findings. However, very little information exists on the effects of new patterns of working time, in which there can be sharp fluctuations, with temporary periods of very long and often unpredictable hours.

Social security: in view of changes in household structure and in women’s patterns of economic activity tax and social security systems need to adapt to new patterns of economic activity. Rights derived from the main breadwinner need to be supplemented or replaced by independent entitlements for all earners. There should be a guaranteed minimum level of social protection during career breaks or temporary periods of part-time work. The reference point for

calculating social security benefits should no longer be continuous, uninterrupted employment but, rather, flexible working times over a worker's lifetime. Thus research could usefully be conducted on the link between working time and social security, using benchmarking techniques to compare and evaluate regulations in different countries and develop new reference points.

Effects on employment of working-time reductions: the debate on the reduction of working time and its effects on employment has come to a halt throughout the world, with advocates and opponents of working-time reductions often locked into the positions of principle they have adopted. Since in the long term secular unemployment can be prevented only by a reduction in working time, a more functional approach is required. To this end, more accurate information needs to be gathered on the conditions in which working-time reductions have succeeded or failed. One precondition for success is the establishment of dialogue between the social partners on a basis of mutual trust. The ILO could offer a forum enabling a revival of the debate and the analysis and dissemination of best practice.

Today there can be a redistribution of work only if work organization becomes more flexible. However, as working time becomes more flexible, there is a risk that working hours will actually become longer, since they can no longer be easily monitored. Indeed, it has already become difficult to establish exactly the time spent working by individual employees and by their representatives. New mechanisms must be developed whereby working-time reductions can be implemented at plant level in the context of flexible working-time systems; these mechanisms must be economically viable and meet employees' interests. Examples of best practice in the reduction of overtime and of individual or collective working time should be documented.

Statistics on working time concentrate on paid work in the formal sector. However, a considerable proportion of socially necessary work is performed in the informal sector or in the home. Research findings in industrialized and developing countries should be collated in order to provide a clearer picture of the respective duration and scheduling of men's and women's working time in various countries.

In today's knowledge society, the connection between working time and education and training is becoming more complex. Learning is now acquired in many new and different ways and locations. Further training occurs partly at the workplace and partly in learning organizations as an integral element in the work process. Employees are increasingly undertaking training in their own free time; in some cases, reductions in working time are combined with an increase in the time made available for training purposes, in other cases, extremely long working hours prevent access to learning. There is scope for the link between working time and free time to be analysed and for international experience of the combination of working time, training time and free time to be documented.

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