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Numerical or functional labour flexibility: What is at stake for the Swiss economy? ; [flexibility and competitiveness: labour market flexibility, innovation and organisational performance (flex-com) ; Swiss national report]

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Arbeitspapiere/ Working Papers

Spyros Arvanitis, Heinz Hollenstein and
David Marmet

Numerical or Functional Labour
Flexibility:
What Is at Stake for the Swiss
Economy?

Flexibility and Competitiveness: Labour Market
Flexibility, Innovation and Organisational Performance
(Flex-Com)

Swiss National Report

*Numerical or Functional Labour Flexibility: What Is at Stake
for the Swiss Economy?*

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1. Introduction

In this report we identify and describe the most important structural characteristics as well as outcomes of the Swiss labour market and the underlying legal and institutional arrangements. The main goal is to detect elements of flexibilization of the labour market that, this is the main working hypothesis of the study, improve the functioning of the labour market, thus allowing the business sector to achieve higher efficiency and, as a consequence, higher economic performance.

The report is the first part of a larger project containing also field research through firm case studies and econometric investigations based on a large sample of firm data. At this stage of the work we intend to perform a first exploration of the sketched problems by using aggregate data to obtain an impression of the basic structural characteristics of the Swiss labour market. In a later stage the tentative results of this report are going to be enriched with more detailed information from microeconomic investigations.

There are dimensions of flexibility more closely related to the overall operation of the aggregated labour market such as wage flexibility and labour hoarding which can be better treated at the macroeconomic level, particularly because they strongly correlate with cyclical movements of aggregate economic activity.¹

(Involuntary) unemployment exists when the supply of labour exceeds the demand for labour at the prevailing market wage. This happens when demand for labour at each wage level falls but real wages do not decline (wage inflexibility). Explanations for why firms may be unable to reduce wages and thus unemployment include the theory of explicit (union) contracts or implicit contracts, insider-outsider theory (which explains why firms do not pay lower wages to newly-hired employees) and restrictions by minimum wage laws. The Swiss labour market is characterized by a system of decentralized wage determination (very often wages are determined at firm level and minimum wage regulation exists only indirectly, legislation seeking to ensure that foreign workers' wages are not lower than those of Swiss workers; see chapter 2). Wage inflexibility is thus not an important problem for the functioning of Swiss labour market.²

Firms often do not fully utilize their labour force in economic downturns. Such labour hoarding means that as the economy expands, output increases more than in proportion to increases in employment. Too much hoarding may prove to be an obstacle for necessary structural adjustments of the economy, too little may cause, besides social costs, a waste of human capital. Thus, it is not easy to find out which is the „optimal“ degree with respect of this type of flexibility. Nevertheless studies of the labour hoarding behaviour of Swiss firms

¹ See Stiglitz/Driffill (2000), ch. 32 for a concise presentation and discussion of wage rigidity and labour hoarding.

² See OECD 1996 for a general assessment of this issue for Switzerland and Kiander/Viren 2001 for a comparative study on this subject.

showed that at the beginning of the recession of the nineties (1991/93) considerably less labour has been hoarded by manufacturing firms than in the short recession at the beginning of the eighties (1981/83) (see Hollenstein/Marty 1996). Besides the different length of the two recession periods, a further important reason for this change of behaviour was that the conditions for subsidies of wage costs paid by the federal unemployment insurance to encourage labour hoarding have become more restrictive since the early eighties. This is to interpret as a hint that an increase of this type of flexibilization has taken place in this period.

We are going to focus to two types of flexibility which are located at the microeconomic level and are therefore closely related to the strategies of enterprises. The first one is *numerical flexibility* defined as a process through which firms react to changes in the demand for their products/services by adjusting the amount of labour they employ. It is achieved through overtime, part-time work, variable working hours, fixed-time contracts or layoffs. The second one is *functional flexibility* meaning a process through which enterprises adjust to changes in the demand for their output by an internal re-organization of workplaces based on multi-skilling, multi-tasking, team-working and the involvement of workers in job design, innovation, technology and the organization of work. According to new theoretical approaches to workplace organization functional flexibility is generated through the combined use of new information technologies and new forms of workplace organization, both of them requiring high-skilled labour to be operated (see e.g. Milgrom/Roberts 1990 and Lindbeck/Snower 2000).

Chapter 2 contains a presentation of the development of labour market legislation in Switzerland in the last fifteen to twenty years, particularly those parts of legislation closely related to labour market flexibility, and of the underlying institutional framework. In chapter 3 we analyze the structural characteristics of the labour market with respect to flexibility. Chapter 4 decries shortly the development of important economic indicators and deals with some aspects of the rather complex relationship between economic performance and labour market flexibility. Chapter 5 presents the results of three interviews with representatives of the largest trade union and the national employer association respectively as well as the official of the Federal Administration responsible for labour market policy. Finally, chapter 6 contains a summary and some concluding remarks.

2. Labour Market Legislation and Institutions

2.1 Labour Market Legislation

Review of the most important reforms of labour market legislation

In 1878 the first Swiss Federal Factory Law („*Fabrikgesetz*“) came into force. This law, which in those days was a pioneering step, regulated topics like work and rest time, health precaution, prevention of accidents and special protection for female and youth workers. Working time was laid down to eleven hours a day. The enforcement of the law was delegated to the cantons, the Federal Government carried out the supervision of law enforcement. The *Swiss Federal Labour Law* of 1966, which followed the Factory Law of 1878, was binding not only for manufacturing firms but also for most other industries of the private sector. There were no substantial changes of regulations in the law and its rules of implementation regarding flexibility of employment conditions until the year 2000.

As in most other countries, regulation of maximum working hours as well as Sunday and night work were the main elements of the original Factory Law as well as of the Federal Labour Law of 1966. So it was the case also in the last revision of the Labour Law which took place in the last years. In 1989 the Federal Government started a „consultation process“ („*Vernehmlassungsverfahren*“) for a partial revision of the Labour Law. The main elements of the proposal were the following: flexibilization of the working hour regulation, equalization of men and women with respect to working time, enhanced protection for night work, special protection for employees with family responsibilities (see Schweizerischer Bundesrat 1994). This proposal contained some politically quite controversial issues. Especially the planned abrogation of the night work prohibition for women was a key issue, since it would mean a violation of the ILO Convention No. 89. As a consequence, the Swiss Government had to withdraw from this Convention in 1992 in order to push further the planned revision of the Labour Law. At the end of a long debate, the dispute about compensation of night and Sunday work led to a successful „referendum“ of the trade unions against the law (i.e. denial of the law in a vote by the Swiss people) which had passed the parliament already in 1996. Subsequently, the legislator tried to find a compromise by taking account of both the desires of the employers to achieve more flexibility and those of the trade unions to protect against misuse of flexibilization in a more balanced way. This time the new proposal passed the referendum and came into force in 2000. This act brought a considerable change of rules regarding flexibility (see below).

The *Code of Obligations* of 1911 (Vischer 1998) was another milestone in the history of Swiss industrial law. It contained important regulations of employment contracts and of collective agreements. This part of the code (Employment Contract Law; „*Arbeitsvertragsrecht*“) was further developed through a revision of the regulations regarding collective agreements in 1956 and an additional revision in 1971 of that part of the law that regulated

employment contracts. The latter revision was considerably influenced by the economic conditions of the boom years of the sixties; a strict protection against dismissal did not seem necessary at that time. In 1988 the rules of protection against dismissal were complemented to take account also of protection against „unfair/improper“ („*missbräuchlich*“) dismissal. However, there were no other substantial changes of the regulation of labour contracts concerning this type of flexibility until today. Therefore, the present regulation of employment contracts is still characterized by a low degree of regulation (e.g. no provisions for redundancy schemes in case of mass dismissals („*Sozialpläne*“), or no provisions for socially acceptable dismissals („*Sozialverträglichkeit*“)).

The *Federal Law on Unemployment Insurance* of 1983 is a further important piece of legislation with some relevance with regard to numerical flexibility. In 1977 as a reaction to the recession of the early seventies unemployment insurance became compulsory. A corresponding Law came into force in 1983. It reflected to a large extent the situation during the recession of mid-seventies and early eighties. As the labour market strongly improved during the eighties, some (minor) adjustments became necessary. However, the recession of the early nineties which led to a persistent increase of unemployment provoked in 1993 another revision of the Unemployment Law. This last revision can be seen as a fundamental change of the underlying philosophy since it brought a transition from a passive to an active labour market policy. „The relatively late enactment of a comprehensive federal law on unemployment insurance in the early 1980s provided Switzerland with the opportunity to start with a „grand design“ rather than to be obliged to make successive and incremental adjustments to existing legislation“ (OECD 1996, p. 137). This transition entailed the setting-up of new instruments such as Regional Placement Offices („*RAV*“) or various regulations to improve the ability of unemployed workers to find a job (e.g. compulsory training after three months of unemployment). Subsequently, the long-lasting stagnation of the Swiss economy in this period led to a large deficit of the unemployment insurance which made necessary another revision of the law, which is still in the process of enactment. The most important planned change with regard to (numerical) flexibility would be the reduction of the maximum duration of entitlements from 520 to 400 days („*Leistungsberechtigung*“).

The development of the *Federal Law on the Employment Services and Hiring of Services (AVG)* is closely linked to that of the unemployment law. The duality between private and public placement services is unique in Europe and has proven to be useful with respect to the well-functioning of the labour market. This is the reason why Switzerland did not ratify the ILO Convention No. 96 which submits private placement services to severe regulations (*Erb 1992*). The new Law on the Employment Services and Hiring of Services of 1991 replacing that of 1951 did not change this institutional duality, but introduced some new regulations to prevent illicit work placement and guarantee a better protection of employees hired for temporary work.

Politicians, trade unions and employers of other European countries are astonished over and over again about the so called „*industrial peace*“ („*Arbeitsfrieden*“) of Swiss „social partners“. The trigger for this unusual type of industrial relations system was the „peace agreement“ negotiated in the machinery industry in 1937. This agreement was the beginning of a triumphant advance for many collective agreements. Therefore, and favoured by the buoyant labour market after the war until the seventies, strikes and lockouts were very rare, and remained so even in the recession of the (early) nineties.³ The Swiss system of industrial relations developed a relatively large autonomy; in general, governmental interventions in this policy field are seen as undesirable, although there are some exceptions (see below).

In the context of the attempt of the government to join the European Economic Area, which was refused by a people's vote in 1992, a legal regulation concerning industrial relations was implemented, i.e. the worker participation at company level („*Mitwirkungsgesetz*“). However, the effect of this law was rather indiscernible. In contrast to other European countries, the idea of a state-regulated participation scheme of the workers („*Betriebsverfassung*“) has never been popular in Switzerland.

Flexibilization of labour relations is not restricted to the private sector of the economy. To become a more attractive, competitive and social employer Swiss federal government modernized the corresponding regulation. On the 1st of January 2001 a new *Federal Personnel Law* („*Bundspersonalgesetz BPG*“) came into force, which replaced the Law for Civil Servants („*Beamtengesetz*“) of 1927. The status of federal employees was approximated to that of employees regulated by private law (Code of Obligations). The status of a civil servant was replaced by a terminable individual contract, which contains, compared to private contracts, a somewhat extended dismissal protection. This law created an increased numerical flexibility for federal employers and had clearly a „trend-setter effect“ for the cantonal and the municipal administration.

In sum, the flexibilization of the Swiss labour market was extensively and quite controversially debated in the last fifteen to twenty years, although the extent of flexibility has been large or – in some instances – even larger than before. The most important regulations of the last decade were the Unemployment Law and the Labour Law which caused the largest changes with respect to labour market flexibility. We turn now to the most important regulations with respect to the specific elements of flexibilisation.

³ There is an absolute obligation of both partners for „industrial peace“ (*absolute Friedenspflicht*) and a relative one. The matters for which an absolute obligation for a „peaceful“ way of regulating industrial relations is negotiated between workers and employers are laid down in a collective agreement; in this case, strikes or lockouts are forbidden. Strikes or lockouts are then permitted only for matters not ruled in this agreement.

Overwork time, additional hours, Sunday work, night work, shift work

In manufacturing firms and for office staff, technical and other employees including sales personnel in large enterprises of retail trade, the *maximum weekly working time* was fixed at 46 hours in 1964 and reduced to 45 hours in 1975. For all other categories of workers the weekly working time was fixed at 50 hours. Under the new Labour Law implemented in 2000 the same number of hours is valid for all categories of workers. The maximum weekly working time can be extended for maximum 4 hours a week in case of considerable seasonal or weather-dependent fluctuations of labour demand.

In accordance with the new ILO Night Work Convention No. 171, *night work* is defined in the Labour Law as work between 11 p.m. and 6 a.m. Day work is from 6 a.m. until 8 p.m., and the time from 8 p.m. until 11 p.m. is defined as evening work. In principle, activity outside day and evening work time is forbidden; however, night work is granted, if the applicant can show that night work is indispensable for technical or economic reasons. Temporary night work is to be compensated by an extra pay of 25 per cent, employees with permanent or recurrent night work have the right to compensate 10 per cent of the effective working time with free time. Employees working at least 25 nights a year are entitled to a medical examination.

Sunday work is not permitted between Saturday 11 p.m. and Sunday 11 p.m.; exceptions can be granted for well-founded cases. Temporary Sunday work is to be paid with an extra pay of 50 per cent, permanent Sunday work up to 5 hours is to be compensated with free time within 4 weeks.

In Switzerland *overwork time* („*Überzeit*“) is defined as the time which exceeds the maximum weekly working time. It has to be compensated by an extra pay of 25 per cent, free time compensation is possible on request of the employee. Overwork time is not allowed to exceed two hours a day and 170 hours in a calendar year (if the maximum weekly work time is 45 hours, otherwise 140 hours in a calendar year).

Overwork, as defined in the Labour Law, has to be distinguished from *additional hours* („*Überstundenarbeit*“) according to Art. 321c of Code of Obligations. Additional hours are the time exceeding the arranged working hours, independent of whether the employee works full-time or part-time. The employee must perform additional hours fixed by the employer, if it can be expected that he can do the work without any disadvantage for himself. Additional hours are to be paid with an extra of 25 per cent or they can be compensated with free time.

All employees have the right to have a *resting time* of at least 11 successive hours.

The new Labour Law simplified the process of permission for *shift work*. Two-shift work during day or evening hours needs no longer a permission; this does not hold for two-shift work during the night as well as for three-shift work.

Part-time work

Regulations concerning Sunday and night work, additional hours and resting time are applied to full-time workers as well as to part-time workers on call or with a permanent occupation.

Fixed-term contracts

Fixed-term contracts are allowed without major restrictions with respect to the maximum duration or the number of renewals of the contract.

Legislation on manpower agencies and temporary work

As already mentioned, in Switzerland there exist a *public employment service* as well as private placement agencies. The task of the public employment service, in addition to the registration of job-seekers and job vacancies notified by the enterprises, is to advise and mediate job-seekers and to help the employers to find an appropriate worker to fill vacancies. The public employment services are organized at the cantonal/regional level („RAV“), with payments of the federal government differentiated according to the success of placement of unemployed persons. *Placement services of private agencies* are often subdivided in services for hiring workers for temporary work and workers for work on (fixed-term) contract. In case of work on contract, besides manpower agencies any employer is allowed to lend some of his workers to work for another employer. In case of temporary work, only specialized manpower agencies are allowed to lend workers to an employer. An employment contract for temporary workers is signed for a single (short term) assignment, a contract for „work on contract“ is fixed for a longer period. In contrast to standard employment contracts, employment contracts between job-seekers and private placement agencies must be written. The Law on the Employment Services and Hiring of Services of 1991 allows private employment agencies to operate for an unlimited period (after the initial permission).

Telework

This type of work is a modern phenomenon which is not regulated by a specific law (see Buser et al. 2000). However, the existing laws cover also wage earning and working conditions of independent tele-workers. Employees doing telework come under the Labour Law, so the already mentioned rules concerning resting time, Sunday and night work, etc. are valid also for this type of work arrangement.

Dismissal, redundancy, collective dismissal

In Switzerland conditions of contract termination provided by the law are, in contrast to many other European countries, not restrictive. Common to all types of contracts is the rule that the period of notice may not be different for employers and employees. More specifically, the following regulations apply:

- A *fixed-term contract* expires without termination (Code of Obligations Art. 334,1). Fixed-term contracts signed for a long period can be terminated by each party with six months notice.
- Each contract party can terminate an *unlimited contract* (Code of Obligations Art. 335,1) with a period of notice of seven days within the trial period. Afterwards, an employment contract is terminable with a period of notice of one month during the first contract year, two months between two and nine contract years and three months after ten and more contract years. The period of notice can be changed through written or collective agreements.
- The law prescribes rules especially against unfair dismissal and dismissal at „the wrong time“ („*Unzeit*“), for example, during pregnancy. If an employee commits grave offences, a dismissal without notice is permitted. *Redundancy* is not regulated by law, but it is implemented in certain collective agreements. Usually, redundancy or dismissal without notice is applied, if the correct execution of the work is impossible due to criminal incidents or repeated irregularities.
- *Collective dismissals* are dismissals due to reasons which have nothing to do with the specific persons to be dismissed. This type of dismissal is defined as follows: i) at least 10 employees in enterprises with more than 20 and less than 100 employees, ii) at least 10 per cent of employees in enterprises with more than 100 and less than 300 employees , and iii) at least 30 employees in enterprises with at least 300 employees. If the employer is intending to dismiss workers, he has to consult their representatives. These have the right to submit proposals how to avoid or reduce the extent of collective dismissal. The employer is obliged to name the number of concerned people, the number of employees, the period of notice and the reasons of the collective dismissal. He has also to inform the cantonal employment office.

Flexibility through immigration

Restrictions on the admission of foreign workers as well as regulations regarding labour market participation of foreign workers is a traditional and important instrument of securing labour market equilibrium in Switzerland. There are several categories of permissions, which are subject to a complex legislation: i) seasonal employees are foreigners who may be employed in a seasonal job for no more than nine months, ii) cross-border commuters are employees of one of the four neighbouring countries working within Switzerland's border zone, iii) short-term residents are employees working in Switzerland for no more than six months, iv) annual residents are entitled to work in Switzerland for one year; first-time permits may only be granted within restrictive limits, but once a permit has been granted, it is usually renewed, v) permanent residents are no longer subject to limitations with respect to the number of foreigners and they are free to choose their jobs, i.e. they have the same rights

on the labour markets as Swiss employees. These regulations are based on the Foreigners' Act of 1931 and many ordinances which, in the meantime, have been amended many times. At present, the recruitment of foreign workers rests on a „two-tier“ policy, i.e. priority for the admission of workers of EU origin and specific admission for specialised and qualified personnel from non-EU countries. Since 1st July 2002 citizens of the countries of the EU are to be treated as permanent residents.

Flexible retirement age

Like most European countries Switzerland is going through a process of demographic ageing caused by a falling birth rate and growing life expectancy. Until a few years ago, the retirement age was 62 years for women and 65 for men. The 10th revision of the *Retirement Law* in the late nineties raised the retirement age for women to 64 years; in 2009, the retirement age for women will be raised again to the same level as that of men, i.e. 65 years. In Switzerland the effective retirement age corresponds almost to the official one. In recent years there were efforts to flexibilize the retirement age; however, an initiative proposing flexibility with the earliest retirement age at 62 years for men and women was rejected in a plebiscite in November 2000. Nevertheless, the flexibilization discussion goes on with proposals ranging from purely downward flexibility to those with downward and upward flexibility (two under and five years over the official retirement age); the national parliament will decide on this matter in the near future.

Industrial relations and social dialogue

As noted earlier, labour market regulations are highly decentralized. Collective agreements covering a whole industry are rather exceptional. Social partners are quite free to negotiate their agreements, the legislator interferes only on request of the social partners. If both sides ask the administration to intervene, then, under some very specific conditions, the administration can extend collective agreements to all employers and employees of the specific industry („*Allgemeinverbindlichkeitserklärung*“). Furthermore, there is an official arbitration committee for quarrels between the social partners. A recent trend is to remove wage determination from collective agreements, leaving it for negotiations at the company level; only a minimum-wage rate is set at industry level. In this case, collective agreements refer to other matters such as training, working time, minimum holiday, retirement age, etc.

2.2 Labour Market Institutions

Unions and employee representation at different levels (company, industry/sector, national level)

A source of stability of Swiss labour market is the so-called „industrial peace“, that focuses to negotiated solutions rather than confrontation. This is the main reason for the extremely low incidence of strikes and lockouts in the Swiss economy (see table 2.1).

Table 2.1: Strikes and Lockouts: lost working days per 1000 employed persons

1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
0.20	0.02	0.00	0.24	0.07	1.07	0.01	0.18	0.00	3.80	0.09	1.91	0.11	6.44	0.69

Source: Swiss Statistical Yearbook, Swiss Labour Force Statistics (SAKE).

The Swiss industrial relations system is a „hybrid“ system, fusing structural characteristics from broad-based bargaining models and those stronger oriented to the local determination of working conditions, wages and benefits (OECD 1996). There are several major national union and employer confederations. These national organisations (e.g. Swiss Federation of Trade Union, Swiss National Christian Trade Union Association) do not actually engage in collective bargaining; they discuss general trade union policy, participate as a lobby in political debates and make only recommendations for wage targets and goals referring to working conditions (Flückiger 1998). Agreements with the employers are negotiated by the sectoral or occupational unions. The aim of unions and other organizations representing employees is to improve the working conditions of its members and of all workers respectively through political pressure and collective bargaining. Their bargaining power depends, among other things, on the number of workers represented by them. However, union density declined over the last twenty five years (see table 2.2 and table 2.3).

The largest grouping of unionized workers, the Swiss Federation of Trade Unions (*„Schweizerischer Gewerkschaftsbund“*), comprises 15 trade unions with more than 380'000 members organised at sectoral level. Not all unions and employee organisations are members of one of the major national confederations. In 1986 there existed 73 unions and employees organisations, 33 of which were independent, i.e. not associated to any of the national confe-

Table 2.2: Union density: union membership as a % of wage and salary earners

1971	1975	1980	1984	1987	1994
30.7	32.9	30.7	28.8	26.0	22.5

Source: OECD Employment Outlook (1994), ILO (1998).

Table 2.3: Growth rate of the number of union members *

1960-70	1970-80	1980-90	1990-99		1995-96	1996-97	1997-98	1998-99
6.8	9.7	0.8	-12.3		-2.3	-2.5	-0.3	-3.0

* Members of Schweiz. Gewerkschaftsbund, Föderativverband des Personals öffentlicher Verwaltung und Betriebe, Vereinigung schweiz. Angestelltenverbände, Christlichnationaler Gewerkschaftsbund, Dachverband Schweizer Lehrerinnen und Lehrer, Zentralverband des Staats- und Gemeindepersonals, Schweiz. Bankpersonalverband. Source: Swiss Statistical Yearbook.

derations (Fluder et al. 1991). Therefore, there is a considerable heterogeneity among unions and employees organisations. As a consequence of this organizational splitting often several unions participate in a collective agreement, whereas the employers' side is mostly represented by only one organization.

In Switzerland there are only few national collective agreements covering several different industries. Collective agreements are industry-specific and they may be negotiated at the national, cantonal, regional or even company level. Enterprises of a particular industry join sectoral employer organisations and their workers join occupational or industrial unions representing organized labour of this industry. These employer organisations and unions engage in collective bargaining. This decentralized system of wage determination is more flexible than a system of negotiations conducted at national level by a few actors representing a heterogeneous group of employers and workers respectively. In the last years there has been a tendency towards negotiating agreements at enterprise level and even to individual contracts of employment.

In 1999 there were 621 basic collective agreements in force (in 1992: 1146 basic and complementary agreements), one third of them being sectoral-level and two thirds company-level agreements (see Swiss Statistical Yearbook, various years). In 1992 1.4 million (or about 57% of all employees) were covered by a basic collective agreement (1990: coverage rate of 53%; see OECD 1994); this rate is rather low in comparison to other European countries. The coverage rate for men is about 62%, for women 50%; in manufacturing industries about 64% of workers are covered by a collective agreement, in service industries 53% (see Baumann et al. 1995). The coverage rate has been practically constant over the years (1951: 51%, 1992: 57%).

Since the agreements are negotiated at sectoral, regional or company level, there exists a huge variety with respect to their contents. Some agreements stipulate a minimum wage for particular groups of workers, some contain clauses about wage adjustment, whereas others do not even define wages. The diversity of the different agreements was analysed by Wiesendanger-Martinovits (1994) in a survey covering 80% of the existing agreements: 28% of the agreements contained no wage specification, 25% stipulated a minimum-wage clause,

9% included an effective-wage clause and 38% a minimum-wage clause as well as an effective-wage clause.

As already mentioned, the government has the possibility to declare a negotiated agreement binding for an entire sector or industry („*Allgemeinverbindlichkeitserklärung*“), if the employer and worker organisations involved in the agreement are sufficiently representative for their sector or industry.⁴ In 1995 there were only 14 collective agreements on national and cantonal level declared valid for the whole sector, but some important agreements are included in them (e.g. for the construction sector and for restaurants and hotels). Due to the obligatory status of such agreements, the coverage rate of collective agreements is higher by more than 10 percentage points than it would be without this type of agreement (Baumann et al. 1995). The existence of this legal instrument which allows to declare an agreement valid for an entire sector could be a partial explanation for the low number of labour union members, because of the free rider problem applying in this case (Flückiger 1998).

Working Councils

The institution of „working council“ as an element of workers‘ participation in firms‘ decision making practically does not exist in Switzerland. The unions and employees representations recently made an effort to build up worker participation structures in multinational enterprises. The EU guidelines about European working councils, which are valid also for Swiss multinational enterprises, have been the trigger behind these efforts.

The only institution which can be regarded as something like a working council at national level is the Federal Labour Commission („*Eidg. Arbeitskommission*“) consisting of 24 representatives of cantons, unions, employer associations, other organizations and also academic experts. This Commission discusses various issues related to labour legislation and legal enforcement and also makes recommendations to the government.

Industrial Tribunals

In Switzerland industrial tribunals are dealing, in the first instance under private law, with disputes between employers and employees. The industrial tribunals consist, besides representatives of the social partners and a lawyer, of experts of the involved industrial sector. Disputes of labour relations under public law are treated by an administrative tribunal, disputes concerning collective agreements are judged by ad hoc arbitration tribunals.

Industrial tribunals give legal advice and information to employers and employees. If necessary, the industrial tribunal tries to negotiate an extrajudicial agreement between the two parties. If an extrajudicial agreement cannot be reached, the parties are summoned to a hearing. The tribunal tries then to obtain a settlement. In case of a failure of the mediation, the

⁴ In connection with the bilateral agreements Switzerland-EU there was established a tripartite commission, which can apply for overall-binding agreements („*Allgemeinverbindlichkeit*“), if wage dumping or an abuse of working conditions is identified.

industrial tribunal passes a sentence. In principle, the use of this type of tribunal is free of charge; therefore tribunals are well-esteemed by both employees and employers. Industrial tribunals are seen to be quite efficient.

Labour Inspectorates

The implementation of Labour Law (and of ordinances related to it) is a task for the cantons with federal government acting as supervisor. In case of the Accident Insurance Law, the Swiss Accident Insurance Fund („*Suva*“) is responsible for supervision. About 550 persons are engaged in the labour inspectorate boards (Weber 2000). About 38'000 establishments were visited in 1999 and 28 offences had to be prosecuted. Accident prevention is a matter of first priority for Swiss legislators. Nevertheless, owing to lack of available data on this subject, an assessment of the efficiency of Labour Inspectorates is not possible.

A commission assigned by the Swiss government identified recently a deficit in the implementation of the legal provisions related to illicit work. The extent of illicit work, primarily concerning foreign workers in the construction sector, is not large, but it is the cause of social marginalization of the involved persons. The new law against illicit work, now in discussion in the national parliament, aims at enforcing the inspection of firms under the supervision of cantons and increasing the punishment fees (see Veuve/Küng Gugler 2002).

Concluding remarks

Table 2.4 gives an overview of the most important legislation elements with respect to labour market flexibility in the last 10-15 years. The overall impression is one of a rather liberal labour legislation allowing a flexible functioning of the labour market. The new Swiss Federal Labour Law (which came into force in 2000), the most important reform in this field in the last years, led to a further flexibilization of the labour market (night and shift work, retirement age, and so on). The transition from a passive to an active labour market policy of Swiss administration (not dealt with here) also created scope for an increase of flexibility. The offered training, placement consulting and temporary wage subsidies help unemployed persons to find more quickly a new job.

What is the position of the Switzerland with respect to flexibility of labour market legislation and institutions in comparison with other OECD countries? Table 2.5 yields some information on this matter. According to the indicators of employment protection legislation developed by the OECD, Switzerland takes a position with respect to the degree of restriction of its legislation near the top countries being somewhat more restrictive than the USA and the UK, but more flexible than the Netherlands, Finland, Greece and Ireland (the other four countries participating in the present project). Finally, table 2.6 compares the institutional flexibility of labour market of several countries with the help of a summary measure of centralization/co-ordination of collective bargaining arrangements. In this case, Switzerland lies in the middle field together with France and Finland.

Table 2.4: Overview of the most important elements of Swiss Labour Legislation

	80s, 90s	2000/2001
Maximum weekly work time:		
- Blue-collar workers of manufacturing enterprises; white-collar workers; sales personnel in large firms in retail trade	45 hours	45 hours
- All other categories	50 hours	50 hours
Night work time	8 p.m. to 5/6 a.m. ¹⁾	11 p.m. to 6 a.m.
Overwork time (hours per year):		
- Blue-collar workers of manufacturing enterprises; white-collar workers; sales personnel in large firms in retail trade	260 hours	170 hours
- All other categories	220 hours	140 hours
Resting time (hours per day)		
- Women	12 hours	11 hours
- Men	10 hours	11 hours
Fixed term contracts		
- Purpose of the contract	No limit	No limit
- Maximum cumulated duration	No limit	No limit
Private temporary work agencies (TWA)		
- Types of work for which TWA employment is legal	No limit	No limit
- Maximum cumulated duration	No limit	No limit
Dismissal		
- Trial period before eligibility arises	3 Months	3 Months
- Notice period:		
- in the first year	1 Month	1 Month
- between two and nine years	2 Months	2 Months
- after ten and more years	3 Months	3 Months
- Unfair dismissal:		
- Compensation	Max. 6 Month	Max. 6 Month
- Reinstatement	No	No
Retirement age		
- Women	62 year old	63/64/65 ²⁾
- Men	65 year old	

1) In summer 5 o'clock, in winter 6 o'clock.

2) Women: staggered adjustment, in 2009 the official retirement age will be 65.

Table 2.5: Summary Indicators of Employment Protection Legislation (EPL)

	EPL (1990)	EPL (1990)	EPL (1990)	EPL (1998)	EPL (1998)	EPL (1998)	Tendency	Rank
	Total	Regular Contracts	Temporary Contracts	Total	Regular Contracts	Temporary Contracts	1990-1998	(EPL total)
Finland	2.2	2.5	1.9	2.1	2.3	1.9	decreasing	8
Greece	3.6	2.8	4.5	3.5	2.6	4.5	decreasing	15
Ireland	1.0	1.7	0.3	1.0	1.7	0.3	no change	4
Netherlands	3.1	3.1	3.0	2.4	3.2	1.5	decreasing	9
Switzerland	1.3	1.3	1.2	1.3	1.3	1.2	no change	6
Top 2:								
USA	0.2	0.1	0.3	0.2	0.1	0.3	no change	1
UK	0.5	0.7	0.3	0.5	0.7	0.3	no change	2
Bottom 2:								
Portugal	4.2	5.0	3.5	3.7	4.3	3.2	decreasing	17
Italy	4.2	3.0	5.3	3.3	3.0	3.6	decreasing	16

High (low) values indicate a more (less) restrictive EPL. Source: Nicoletti et al. (2000), p. 84.

Table 2.6: Country classification according to the degree of centralization/co-ordination of collective bargaining arrangements in the 1980s and 1990s

Country	Summary measure of centralization/co-ordination		
	low	Intermediate	high
USA	+		
Japan	+		
Canada	+		
UK	+	+	
France		+	
Switzerland		+	
Finland		+	
Ireland		+	+
Netherlands			+
Greece			+
Germany			+

Source: Elmeskov et al. (1998), p. 246f.; Bassanini/Ernst (2002), p. 14.

Appendix to Chapter 1 and 2: The most relevant pieces of legislation related to labour market flexibility in Switzerland

BBI: „Bundesblatt“,

AS: „Amtliche Sammlung der Bundesgesetze und Verordnungen“,

BS: „Bereinigte Sammlung der Bundesgesetze und Verordnungen 1848-1947“

In chronological order:

- AS 2001 894 Bundespersonalgesetz (BPG) vom 24. März 2000, *Federal Personnel Law*
- AS 2000 1581 Verordnung 1 zum Arbeitsgesetz (ArGV 1) vom 10. Mai 2000, *Ordinance of the Federal Labour Law*
- BBI 1999 1597 Botschaft zum Bundespersonalgesetz (BBG) vom 14. Dezember 1998, *Swiss Government Notification to the Federal Personnel Law*
- BBI 1994 157 Botschaft über die Änderung des Bundesgesetz über die Arbeit in Industrie, Gewerbe und Handel (Arbeitsgesetz) vom 2. Februar 1994, *Swiss Government Notification to the Federal Labour Law*
- AS 1994 1037 Bundesgesetz über die Information und Mitsprache der Arbeitnehmerinnen und Arbeitnehmer in den Betrieben (Mitwirkungsgesetz) vom 17. Dezember 1993, *Federal Law on Employees' Participation at Company Level*
- AS 1991 408 Verordnung über die Arbeitsvermittlung und den Personalverleih (Arbeitsvermittlungsverordnung, AVV) vom 16. Januar 1991, *Ordinance of the Federal Law on the Employment Services and Hiring of Services*
- AS 1991 407 Bundesgesetz über die Arbeitsvermittlung und den Personalverleih (Arbeitsvermittlungsgesetz, AVG) vom 6. Oktober 1989, *Federal Law on the Employment Services and Hiring of Services*
- BBI 1985 III 556 Botschaft zu einem revidierten Bundesgesetz über die Arbeitsvermittlung und den Personalverleih vom 27. November 1985, *Swiss Government Notification to the Federal Law on the Employment Services and Hiring of Services*
- AS 1982 2184 Bundesgesetz über die obligatorische Arbeitslosenversicherung und die Insolvenzschiädigung (Arbeitslosenversicherungsgesetz, AVIG) vom 25. Juni 1982, *Federal Law on Mandatory Unemployment Insurance and Insolvency Compensation*
- AS 1966 57 Bundesgesetz über die Arbeit in Industrie, Gewerbe und Handel (Arbeitsgesetz) vom 13. März 1964, *Federal Labour Law*
- AS 1956 1543 Bundesgesetz über die Allgemeinverbindlichkeitserklärung von Gesamtarbeitsverträgen vom 28. September 1956, *Federal Law on the Extension of the Application Field of General Agreements*
- AS 1949 1298 Bundesgesetz über die eidgenössische Einigungsstelle zur Beilegung von kollektiven Arbeitsstreitigkeiten vom 12. Februar 1949, *Federal Law on the Federal Arbitration Board for the Settlement of Collective Work Disputes*
- BS 1 121 Bundesgesetz über Aufenthalt und Niederlassung der Ausländer (ANAG) vom 26. März 1931, *Federal Foreigners Law*
- BS 2 199 Bundesgesetz betreffend die Ergänzung des Schweizerischen Zivilgesetzbuches (Fünfter Teil: Obligationenrecht) vom 30. März 1911, *Code of Obligations*

3. Labour Market Structure Analysis

Cyclical labour market flexibility

The eighties have been a period of considerable employment growth for the Swiss economy. The number of employed persons has grown with an average annual rate of 2% between 1983 and 1991 (see Weber 2001, p. 6). Moreover, in the second half of the eighties there was an acceleration of employment growth (annual growth rates between 2% and 3% in the period 1986-1990; see table 3.1).

The development of the Swiss labour market in the last ten years bears the marking of the time between 1991 and 1997 which was the longest period of stagnation the Swiss economy ever went through after the second world war. In earlier recessions the Swiss labour market showed a considerable capacity to absorb external shocks and came out of recessions without experiencing significant unemployment, because of a high cyclical flexibility which could be primarily traced back to the buffering influence of foreigner and women employment. In addition, the dual vocational education system facilitated the transition from school to work, thereby keeping youth unemployment low in comparison to other countries. However, considerable changes in labour market patterns have occurred in the nineties. In 1991 the economy suddenly stopped to create new jobs, causing a fall of employment until 1995 and a subsequent stagnation until 1998 (see table 3.1). As a consequence of the employment decrease, despite of (slightly) falling participation rates, unemployment reached historical peaks by Swiss standards in the nineties (1990: 0.5%; 1997: 4.2%; see table 3.1).

Since 1997 employment increased (again) considerably; the labour market demonstrated (once more) a remarkable responsiveness to favourable macroeconomic conditions (at home and abroad) primarily driven by a slow wage growth.

The participation rate, which is among the highest in the OECD countries, has increased by about ten percentage points between 1985 (75.5%) and 1991 (85.4%). The stronger integration of women in the labour market, mostly in part-time jobs, and the increase of the number of foreign workers (1985: 21.4% of the labour force; 1992: 24.7%; see table 3.1) until the beginning of the nineties, were the driving forces behind this spectacular increase. Subsequently the participation rate has only slightly fallen to about 82.7% (1995). The usual cyclical effects of individuals withdrawing from the labour market and young people prolonging their education which tend to move the participation rate down during a recession, have been counterbalanced to a considerable extent by the new phenomenon of a relative weak withdrawal of women and foreigners from the labour market in this period.

The stronger integration of *women* in the labour market in the last fifteen years can be explained partly through the rise of the average educational level of the women in this time, partly through a change of the value system of the population with respect to family allowing more women with children to work outside the home. Even during the period of economic

Table 3.1: Swiss labour market structure; basic characteristics 1985-2000

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Total population aged 15-64 ('000)	4482	4518	4555	4593	4556	4593	4650	4689	4718	4750	4761	4774	4779	4789	4809	4836
Labour force ('000)	3384	3456	3540	3629	3721	3839	3969	3952	3960	3940	3936	3956	3970	3981	3987	4006
Employment ('000)	3354	3430	3515	3607	3704	3821	3891	3831	3802	3789	3800	3802	3804	3841	3867	3908
Employment growth (annual change in %)	1.8	2.3	2.5	2.6	2.7	3.2	1.8	-1.5	-0.8	-0.3	0.3	0.1	0.1	1.0	0.7	1.1
Unemployed persons ('000)	30	26	25	22	17	18	78	121	158	151	136	154	166	140	120	98
Unemployment rate (unemployed persons as share of labour force in %)	0.9	0.8	0.7	0.6	0.5	0.5	2.0	3.1	4.0	3.8	3.5	3.9	4.2	3.5	3.0	2.5
Employment rate (employed persons as share of labour force in %)	74.8	75.9	77.2	78.5	81.3	83.2	83.7	81.7	80.6	50.9	79.8	79.6	79.6	80.2	80.4	80.8
Participation rate (labour force as share of total population in %)	75.5	76.5	77.7	79.0	81.7	83.6	85.4	84.3	83.9	82.9	82.7	82.9	83.1	83.1	82.9	82.8
Foreign workers (share of labour force in %)	21.4	21.7	22.2	22.6	23.1	23.8	24.2	24.7	24.4	24.5	24.3	23.7	22.8	22.2	22.2	22.6
Foreign workers without permit C (share of labour force in %)	8.7	9.1	9.6	10.2	10.7	11.1	10.9	10.5	10.1	9.9	9.9	9.6	9.0	8.7	8.7	9.0
Compensation per employee; business sector (annual change in %)	3.9	4.3	3.2	3.6	4.5	5.0	7.2	6.3	1.8	1.3	2.4	0.7	2.7	0.5	1.5	2.5

Sources: OECD Labour Statistics 1980-2000; OECD Employment Outlook 2001 (Annex); Swiss Labour Force Statistics 1991-2000.

Table 3.2: Indicators of flexibility of the Swiss labour market 1991-2000

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Long-term unemployment (persons unemployed longer than 12 months as share of all unemployed in %)	4.4	8.3	17.0	28.9	28.7	26.1	30.7	32.4	25.7	20.2
Youth unemployment (unemployed aged 15-24 as share of all unemployed in %)	18.5	21.3	19.6	18.1	17.0	16.6	16.5	15.4	14.9	14.0
Part-time employment (part-time employed as share of all employed persons in %)	22.1	22.7	23.2	23.2	22.9	23.7	24.0	24.2	24.8	24.4
Fixed-term contract employment (fixed-term employed as share of all employed persons in %)	9.1	8.2	7.3	7.9	7.7	6.5	5.3	5.8	6.2	5.6
Workers hired from manpower agencies (share of all employed persons in %)	0.5	0.3	0.3	0.3	0.5	1.0	1.0	1.2	1.2	1.0
Self-employment (self-employed as a share of all employed persons in %)	12.5	12.5	13.5	13.1	13.7	14.9	15.4	15.7	15.2	18.0
Shift work (share of employed that usually perform shift work in %)	-	4.9	5.0	5.5	4.9	4.9	4.8	4.7	5.5	5.1
Night work (share of employed that often perform night work in %)	-	1.8	1.5	1.7	1.7	1.6	3.9	3.6	4.5	4.4
Sunday work (share of employed that often perform Sunday work in %)	-	21.0	21.3	21.1	22.0	10.4	10.7	9.9	9.9	10.3
Overwork (share on total work hours for full employment in %)	1.8	1.4	1.1	1.7	2.1	1.8	2.0	2.1	2.1	-
Personnel turn-over: share of employed being in a job:										
up to 1 year	16.4	13.6	12.3	13.0	14.0	14.7	14.7	16.1	15.7	15.9
1-2 years	11.0	11.4	9.4	7.7	8.4	16.1	20.0	19.1	18.9	19.7
3-4 years	14.3	15.9	17.5	15.8	12.9	11.7	10.4	11.4	12.1	11.2
over 4 years	58.3	59.1	60.8	63.5	64.7	57.5	54.9	53.4	53.3	53.2

Sources: OECD Labour Force Statistics 1990-2000, Swiss Labour Market Indicators/KOF database, Swiss Labour Force Statistics 1991-2000; owing to changes in the wording of some questions in the Swiss Labour Force Survey there is a structural break between 1995 and 1996 for the figures for personnel turn-over as well as for the workers hired by a manpower agency which does not allow to compare the figures till 1995 with those after 1995.

stagnation the percentage of households with couples working outside the home has grown (from 40.7% to 54.7% between 1991 and 1997; see ILO 2001, p. 6). Another consequence of changes of the value system which has also contributed to the increase of women participation rate has been the high divorce rate of new couples; in families with low incomes (divorced) women have been forced to work in order to keep up with the costs of an additional household.

Since the sixties *foreigners* have made up at least one-fifth of the Swiss labour force. One of the factors which kept unemployment low during past economic downturns in the seventies was the high flexibility of the labour force consisting of workers with annual or seasonal work permits or the status of cross-border workers. Over the years increasing numbers of foreign workers whose stay in the country exceeded ten (five for workers coming from countries of the European Union) consecutive years qualified for permanent resident status, thus acquiring the same rights as natives in the labour market. Moreover, after some years also seasonal workers have become eligible to have their permits converted into annual ones, therefore aspiring to non-seasonal jobs. Nowadays the share of foreign workers without 'permit C' (awarding permanent resident status) is about 9% of the labour force (i.e. about 40% of all foreign workers; see table 3.1); hence, the buffering function of the segment of foreign workers became obsolete in the nineties. These trends began long before the nineties, but it was during the economic stagnation of this period that their impact on labour market outcomes was being felt.

Other structural characteristics of labour market

Long-term unemployment (i.e. persons without a job for more than one year), practically inexistent in earlier recessions, has become somewhat more important – though still to a lesser extent than in most other OECD countries – during the nineties. In 1991 long-term unemployment made up only 4.4% of total unemployment (about 0.1% of labour force), this share has risen to 32.4% in 1998 (about 0.6% of labour force; see table 3.2). Workers from the French- and Italian-speaking regions, foreigners and persons over 50 years were much stronger affected by long-time unemployment than the labour force on the average. But on the whole the number of involved persons as a share of labour force remained very low also compared to most other OECD countries. Meanwhile long-term unemployment has fallen back to about 12% of total unemployment (spring 2002).

Youth unemployment (i.e. unemployed persons aged 15-24) increased only slightly in the stagnation period; its share of total unemployment has risen from 18.5% in 1991 to 21.3% in 1992, thereafter continuously falling to about 14% in 2000 (see table 3.2). Due to the integrating capacity of the dual vocational education system the problem of youth unemployment was – compared with other European countries – not seriously accentuated in the nineties, although the economic downturn caused a shortage of places for apprentices, thus rendering more difficult the entry of young people in the labour market.

Self-employment has also risen – though not dramatically – in this period, from 12.5% in 1991 to 15.7% in 1998 (see table 3.2). It is interesting to see that the share of self-employed has further increased also during the recovery of the economy since 1997 (18% in 2000). It is possible that this phenomenon reflects a stronger tendency to entrepreneurial activities particularly among young persons.

Working time flexibility

In the nineties changes in production methods and work organization, but also the increasing pressure of international competition under the conditions of economic stagnation were the main reasons for many enterprises, particularly in manufacturing, for demanding changes in existing working-time arrangements with respect to shift work, night and Sunday work⁵. This was reflected in the number of firms requesting authorization for temporary exemptions from the law provisions in force regulating working time. More and more firms were authorized in the nineties to adjust the limits for night work, introduce two-shift day, etc. In contrast, requests for Sunday work and three-shift work declined in this period. This type of de facto (numerical) flexibilization of working-time was legalized through the amended Federal Labour Act, recently approved by a referendum, which provides for more flexible arrangements with safeguards to protect workers' health.

The data in table 3.2 demonstrate that until now there have been no spectacular changes with respect to this type of flexible arrangements of working time. The share of workers that usually perform *shift work* remained almost constant over the nineties, somewhere between 4.7% and 5.5% of all employed persons. This share has certainly grown in manufacturing, but because of the shrinking share of manufacturing employment in this period, the aggregate figures show no change for this type of work. There is a considerable rise of the share of workers performing *night work* from 1,8% (1998) to 4.4 % (2000). On the other hand, as already mentioned, the share of workers that often perform *Sunday work* has decreased from 21.0% (1992) to 10.3% (2000) of all employed. Finally, the development of the share of *over work* on total work hours in the nineties shows a cyclical pattern reflecting the overall conditions of the economy in this period.

Flexibility of employment conditions: part-time employment, fixed-term contract employment, telework

In the eighties one could observe a strong increase of *part-time employment* due primarily to the entry in the labour market of more women seeking a part-time job in order to combine a professional carrier with the requirements of (traditional) family life. Because of the overall unfavourable economic conditions there was a considerable slowing of the growth of part-time jobs in the nineties. The share of part-time employed raised only slightly from 22.1% of

⁵ See Bosch (1999) for a description of tendencies with respect to working time in other OECD countries in this period.

all employed persons in 1991 to 24.4% in 2000 (see table 3.2). In 1999 46.5% of employed women had a part-time job, but only 7.7% of men (see Birchmeier 2001, p. 56); this share was considerably higher than in the European Union, only Netherlands having a still higher one (54.0%). But full-time employment still remains the dominant form of employment relationship in most sectors of the Swiss economy, retail trade, hotels and restaurants and personal services being the most important exceptions.

Fixed-term contracts is not widespread in the Swiss economy. The share of employed with such contracts has somewhat grown in the last fifteen years, but it remains rather low; in the last years a tendency to decline could be observed: in 1991 this share made 9.1% of all employed, in 2000 only 5.6% (see table 3.2). Women had a share of about 56% in this type of employment in 2001 which was considerably higher than their share in total employment (about 46%) (see Birchmeier 2002, p. 12). Within the existing framework of rather flexible labour legislation and not too tight employment protection, employers and employees share the opinion that fixed-term contracts are not necessary for the well-functioning of the labour market given the negative incentives of such contracts particularly with respect to human capital formation. As a consequence of this common assessment of the advantages of long-term employment relationship, the *personnel turnover* is rather low in the Swiss economy. The share of employees occupying a job over 4 years was 58.3% in 1991 and has fallen to 53.2% in 2000 as a reaction to overall favourable economic conditions since 1997 in accordance to the usual cyclical pattern (see table 3.2).

Although there are no severe legal hindrances for the mediation of workers through private manpower agencies the share of *workers hired from such agencies* has only slightly risen in the nineties and was about 1% of all employed in 2000 (see table 3.2).

Telework is not widespread in Switzerland. Only about 3% of all employed were engaged in telework in 1999, while this share was 16.8% in Finland, 14.5% in the Netherlands and 4.4% in Ireland; only Greece among the countries participating in this project showed an even lower share of telework than Switzerland (1.3%) (Arnal et al. 2001, p. 68).

In sum, no spectacular changes have taken place in the Swiss labour market in the last fifteen years with respect to new types of quantitative flexibilization such as part-time jobbing, fixed-term contracting, mediation of workers through manpower agencies and so on. The reason for the lack of great changes in terms of the above-mentioned type of numerical flexibility in the nineties is that the Swiss labour market has already being relative flexible before the period of economic stagnation. The crucial transformations which took place since the middle of the eighties were related to a) the increase of the share of foreign workers having the same rights in labour market as natives and b) the rise of the participation rate of women (often via part-time employment).

Dimensions of functional flexibility: educational level, training, workplace flexibility

There is a strong tendency in core sectors of the production systems of the United States and Western Europe in the last twenty years of adopting flexible production methods, mostly in connection with the introduction and intensive use of modern information technologies (see e.g. Rubery/Grimshaw 2001). Flexible production methods „comprise the variety of ways in which producers shift promptly from one process and/or product to another, or adjust their output upward and downward in the short run without strongly deleterious effects on productivity“ (Storper/Scott 1990).

An important trait of flexible production, especially in sectors focusing to relatively unstandardized output, is the exploitation of the advantages of internal (intra-firm) flexibility through strategies that enhance the redeployability of the workforce across the various activities of the enterprises. This kind of functional flexibility is becoming an increasingly important characteristic of a) high-technology manufacturing, b) design-intensive craft industries and c) financial and producer services (Storper/Scott 1990, Treu 1992).

The Swiss economy has been traditionally specialized in (parts) of two of these groups of industries: „niche“ medium-high-tech manufacturing industries (pharmaceuticals, scientific instruments, specialized machinery, etc.) and financial and producer industries. Thus, there is a marked tendency particularly in these sectors of the Swiss economy of adopting flexible production methods and, as a consequence, of enhancing functional flexibility of workforce.

Functional flexibility has several major dimensions (see e.g. Vickery 1989). Polyvalent skills and aptitudes enable workers to perform many different kinds of task inside the production unit. Such flexibility is connected with a broadening of job categories in the workplace and, as a corollary, with more possibilities for shifting workers between different machines and job stations. In larger firms these methods may be associated on the one hand with the reorganization of workers into flexible groups or teams, on the other hand with a flattening of firm hierarchies and the delegation of competence to lower levels of hierarchy. A further important point refers to the technological preconditions for functional flexibility. There is some theoretical reasoning and also some evidence that modern information and communication technologies are related on the one hand to more high-skilled labour, on the other hand to flexible organizational forms (see e.g. Rubery/Grimshaw 2001 and Bresnahan et al. 2002).

To realize functional flexibility an adequate supply of high-skilled workers is required, whose capabilities have to be continuously adjusted to new (mostly technological) requirements by intensive job-related training. Good vocational education at every level is a necessary precondition for human capital formation in the business sector.

Table 3.3 shows the development of some education indicators for Switzerland in the nineties. The share of employed with *less than upper secondary level of education* is about 18.5%,

which is, in comparison to the OECD average, quite low; this share remained almost unchanged between 1991 and 2000. About 60% of the employed have *upper secondary education*, more than 20% an *education at the tertiary level* (university or technical/commercial college, etc.). There has been a slight tendency of the share of employed with upper secondary education to fall, which can be primarily traced back to a decrease of the supply of apprenticeships in manufacturing and construction during the period of economic stagnation. This effect has been partially corrected in course of the boom since 1997. In contrast to secondary education, the share of employed who dispose of tertiary education has steadily

Table 3.3: Educational attainment level and occupational mobility in the Swiss labour market 1991-2000 (share in % of all employed persons)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Less than upper secondary level	18.9	18.4	18.8	18.4	18.0	18.2	18.2	18.4	19.2	18.1
Upper secondary level	61.9	61.8	60.5	60.8	61.5	60.2	60.2	59.3	57.8	58.5
Tertiary level	19.2	19.8	20.7	20.8	20.5	21.6	21.6	22.3	21.6	23.4
Not occupied according to the original vocational education	46.7	55.1	57.3	56.8	52.9	50.4	53.0	55.2	52.3	52.2

Sources: Swiss Labour Force Statistics 1991-2000.

increased in the nineties (from 19.2% in 1991 to 23.4% in 2000). This effect can be explained through the combined increase of both the demand for and supply of high-skilled workers in the nineties. The demand increase was caused mainly by the introduction and intensive use of modern information technologies (including advanced manufacturing technologies; see Arvanitis et al. 1998, 2000); the supply effect was given rise by an increase of the share of young persons visiting an institution of tertiary education (universities, colleges). Recent institutional changes aiming at an up-grading of tertiary education (outside of traditional universities) is going to reinforce this supply effect in a couple of years.

Unfortunately data on *job-related training* are available only since 1996. Table 3.4 contains some information on job-related training by age classes, educational level and degree of part-time employment as well as by sectors/industries and firm size classes. Since 1996 a steady increase of the share of employed persons absorbing job-related training could be observed, from 32.7% in 1996 to 37.7% in 2000 (see table 3.4). Compared with other OECD countries Switzerland takes a middle position behind the Scandinavian countries and the United Kingdom (about 50%), but ahead of Netherlands, Italy, Ireland and Belgium (about 20% to 30%), quite close to Germany and the United States (about 40%) (see Swiss Federal Office of Statistics 2001, p. 95).

Table 3.4: Job-related training 1996-2000 (share of employed persons in %)

	1996	1997	1998	1999	2000
All employed aged 20-59	32.7	33.2	36.9	33.8	37.7
Men	35.6	35.3	39.0	36.9	38.4
Women	28.9	30.6	34.2	33.9	36.8
Age classes					
20-29 years	31.9	33.8	34.7	31.8	34.2
30-39 years	36.4	36.9	39.8	36.3	39.5
40-49 years	35.1	35.9	41.3	37.1	42.3
50-59 years	31.8	31.0	34.9	34.6	38.9
Educational level					
compulsory school	13.0	12.5	14.6	13.8	16.0
secondary level (vocational education)	31.1	32.3	35.5	34.4	35.7
secondary level (general education)	41.8	41.2	47.0	45.8	49.3
tertiary vocational education	50.8	48.3	51.4	49.6	52.2
University education	46.2	50.4	55.0	50.7	51.7
Part-time employment					
up to 49%	20.6	22.7	26.4	23.2	26.8
50 to 69%	27.5	29.5	33.8	34.5	36.8
70 to 89%	39.4	39.2	45.9	46.6	46.5
90 to 100%	35.4	35.7	39.5	37.6	39.7
Firm size					
up to 49 employees	26.4	26.8	30.4	29.7	30.4
50 to 249 employees	33.5	34.9	38.2	36.4	39.8
250 and more employees	42.3	41.5	45.9	43.8	46.3
Sector					
Manufacturing/construction	26.7	25.9	30.9	29.6	31.7
Trade/transportation/hotels	26.3	28.0	30.1	30.8	30.2
Finance/software industry	41.9	40.5	42.9	37.4	41.9
Health/education/public administration	45.6	46.4	51.6	49.9	53.9

Source: Swiss Federal Office of Statistics (ed.) (2001).

There are only small differences with respect to training among workers of different age classes. 34.2% of young employees aged between 20 and 29 absorbed job-related training in 2000, while the corresponding share of employees aged between 50 and 59 is 38.9% (see table 3.4). Since 1996 there is a tendency for older workers to try to make up for the educational deficits as against younger workers through more training; the share of persons aged 50 to 59 years who absorbed job-related training has risen by about 7 percentage points, while the share of young workers has changed only by about 2 percentage points in the same period. According to the data in table 3.4 the educational background plays an important

role for a worker to absorb job-related training. Only 16.0% of persons with only compulsory school education could get such training in 2000, this share was considerably higher for persons with secondary level vocational education (35.7%); for the three upper education levels it amounted to about 50%. Presumably these differences can be traced back to the joint influence of both demand (larger willingness of persons with a higher previous education to absorb training) and supply factors (employers expecting more benefits of training for persons with a higher previous education).

Job-related training is more common among service firms than among manufacturing and construction enterprises. In 2000 31.7% of workers in manufacturing and construction firms and 30.7% of employees in firms in trade, transportation and hotels absorbed job-related training, while the corresponding share of employees in modern services (finance, software industry) and in health, education and public administration was 41.9% and 53.9% respectively (see table 3.4). There is also evidence that job-related training is more frequent in large firms than in small ones (firms up to 49 employees: 30.4% of employees; firms with 250 and more employees: 46.3%).

Table 3.5 yields some evidence on the technological preconditions of functional flexibility. Between 1995 and 2000, as in many other OECD countries, the use of *information technologies* in Swiss business sector has increased at a tremendous rate. In 2000 94.0% of all firms (with more than 5 employees) used a personal computer, 86.1% e-mail and 78.0% internet; about 55% of internet users disposed of a homepage. Many firms used also more complicated networking-technologies (electronic data exchange with other firms (EDI), firm computer networks (LAN/WAN), intranet and extranet). On the whole, Swiss firms are well-equipped with information technology; compared to other countries Switzerland is ranked (with respect to the overall diffusion of information technologies) behind of the USA and the Scandinavian countries, but ahead of other European countries (see Arvanitis/Hollenstein 2002).

We have argued that functional flexibility is required where a flexible workplace organization exists. Two main forms of flexible organization are *team working* and *job rotation*. According to table 3.6, 35.7% of Swiss firms (with more than 5 employees) had introduced team working, 10.4% of them job rotation. There is a considerable acceleration of the adoption of such organizational practices in the Swiss economy since 1995. 16.9% of all firms have already introduced team working earlier than 1995, 7.4% did it between 1995 and 1998, 11.4% between 1998 and 2000. For job rotation the corresponding shares of firms are considerable lower, but also increasing; only 5.1% firms used job rotation before 1995, some more 1.8% of them introduced this organizational practice between 1995 and 1997, some more 3.5% between 1998 and 2000. These forms of flexible workplace organization could be found in all sectors of the economy, but in manufacturing at the strongest, particularly job-rotation.

Parallel to these organizational changes also a *decentralization of decision-making* within enterprises has taken place. 40.0% of all firms declared in a representative survey conducted in 2000 that since 1995 management has delegated various competencies to their employees or teams of employees, aiming at a decentralization of firms' decision-making process (see table 3.7). Only 2.9% of them found that a shift toward stronger competencies not of workers but of managers has taken place since 1995, for 57.0% of firms there was no change with respect to within-firm competency delegation. This decentralization effect was at strongest in manufacturing.

Putting all elements together, we get the following picture of the situation in Swiss labour market with respect to functional flexibility: high average educational level, intensive use of information technologies and wide-spread flexible organizational practices at firm level seem to be *positively* correlated with each other; this tendency has been accentuated in the second half of the nineties. Thus, some important preconditions for functional flexibility are fulfilled in many important sectors of the Swiss economy. On the whole, the available evidence shows that the Swiss labour market is developing in the direction of more functional flexibility, numerical flexibility having already in the nineties attained a satisfactory level.

Table 3.5: Diffusion of Information Technologies in the Swiss Economy
(share of firms in %)

Technology	Date of introduction:			
	before 1995	1995-1997	1998-2000	Total
Personal Computer	60.4	19.8	13.8	94.0
E-mail	3.0	20.2	62.9	86.1
Internet	1.7	14.4	62.0	78.1
EDI	5.2	10.5	24.4	40.1
LAN/WAN	17.8	16.6	19.0	53.4
Intranet	1.8	6.2	19.0	27.0
Extranet	0.6	2.5	10.2	13.3

EDI: electronic data exchange between enterprises; LAN/WAN: intrafirm computer network; Source: Arvanitis/Staib (2001).

Table 3.6: Flexible workplace organization: team working, job rotation
(share of firms in %)

	Team working introduced				Job rotation introduced			
	before 1995	1995-1997	1998-2000	Total	before 1995	1995-1997	1998-2000	Total
Manufacturing	18.6	11.3	14.5	44.4	7.8	2.3	7.1	17.2
Construction	14.2	3.5	13.4	31.1	4.7	0.5	0.1	5.3
Services	17.0	7.0	9.4	33.4	4.1	1.9	2.9	8.9
Total	16.9	7.4	11.4	35.7	5.1	1.8	3.5	10.4

Source: Arvanitis/Staib (2001).

Table 3.7: Delegation of competencies within enterprises (share of firms in %)

	No change	Shift toward employees	Shift toward managers
Manufacturing	50.0	48.0	2.0
Construction	78.2	21.2	0.6
Services	53.6	42.4	4.0
Total	57.0	40.0	2.9

Source: Arvanitis/Staib (2001).

4. Economic Performance and Some Hints on the Link Between Performance and Labour Flexibility

After a period of robust growth in the late eighties, the Swiss economy practically stagnated between 1991 and 1997. In the period 1997-2000 the economy grew again with a considerable rate (see table 4.1). Not only in good times (before 1991 and after 1997), but also during the stagnation period between 1991 and 1997 overall labour productivity has grown continuously.

Owing to the dominance of cyclical factors on the performance of the Swiss economy (in terms of GDP growth) in the nineties, it is difficult to identify structural factors having either a negative or a positive impact on this development. In this sense it is not easy to make a statement with respect to the particular contribution in quantitative terms of labour market flexibility, either of the numerical or functional type, to aggregate output.

The point we want to make in this section is that due to the traditional orientation of the Swiss economy, on the one hand, toward the generation of services with high value added, on the other hand toward the production of goods with a high quality as well as technology content in various „niche“ industries, the Swiss business sector has to build its strategy on the combined use of high-skilled workforce, new (information, nano-, bio-) technologies and flexible workplace organization, that is the utilization rather of functional than numerical flexibility of labour market.

A conclusive investigation of the link between economic performance and labour flexibility (numerical or functional) cannot be performed at the macroeconomic level given the available database. Some additional information can be gained by field research via firm case studies and by econometric investigations based on a large sample of firm data to be conducted in later stages of this project (see also below).

Table 4.2 contains some information on the innovation performance of the Swiss economy in the last ten years. Starting with a top innovation performance as compared with most European countries at the beginning of the nineties, the Swiss economy lost part of its advantage in this area as a consequence of the severe financial restrictions most firms have had to endure during the long stagnation period 1991-97 leading to a drastic reduction of R&D budgets and increased orientation to rather short-term projects (see Arvanitis et al. 2001a).

The Swiss economy is a typical „small open economy“ with a large GDP share of exports and imports, thus highly-integrated in the world market. While exports of goods still make the largest part of exports, the share of exports of services (mainly tourism and financial services) has continuously grown in the last fifteen years.

Exports are not the only link to the international economy, also the internationalization of all kinds of economic activities (production and distribution of goods and services, R&D) via direct foreign investment has become more and more important in the nineties. Outward

direct investment has grown from about 11 billions Swiss Francs in 1985 to 72 billions in 2000 (Table 4.1). Empirical studies have shown that most of these activities of Swiss firms abroad, particularly those in Europe and North America, aimed at strengthening the overall competitiveness of the enterprises through the securing of new markets, and not at the exploitation of lower production costs in other countries (Arvanitis et al. 2001b). The latter incentive has some importance only for direct investment in Eastern Europe since 1990.

The increasingly international orientation of the activities of many Swiss firms (also SMEs), considered as being mainly complementary and not substitutive to domestic activities, strengthens the already existing tendency of large parts of the Swiss economy to specialize in the production of goods and services of high quality and technology content.

As a consequence, the requirements with respect to workforce education, intensity of technology use and flexibility of organization in the Swiss economy increase; in this context, a labour market based to a large extent on functional flexibility seems to be a prerequisite for fulfilling these requirements.

Is there any evidence for the type of functional flexibility at firm level we are dealing with to be positively correlated to higher economic efficiency? The results of a large survey conducted among Swiss firms in 2000 showed that the managers assessed the impact of flexibilization attained through the introduction of team working and job rotation as well as through a stronger delegation of decision competencies from management to workers to be positive. On the whole, 70.4% of firms that had introduced such workplace practices until 2000 found that organizational change (and thus functional flexibility) had exercised a positive influence on firm efficiency, 26.7% of them could not find any impact and only 2.8% declared that there had been a negative effect on firm efficiency to be traced back to (unsuccessful) organizational change (see Arvanitis/Staib 2001).

Finally, some remarks regarding the international competitiveness of the Swiss economy. It is again not possible to relate straightforwardly the international competitiveness of the economy to the degree of flexibility of the national labour market. There are several factors determining the international competitiveness of an economy and some of them may be, in the case of the Swiss economy, more important than the change of labour market flexibility, given that the labour market in Switzerland can be seen as rather flexible and well-functioning. Nevertheless, as some recent studies have shown, the moderate increase of wages in the last twenty years, which is a result of the flexible process of wage-determination, helped considerably to keep its competitiveness in a period of practically continuous appreciation of the Swiss franc.

Table 4.1: Macroeconomic performance, international trade and competitiveness

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Macroeconomic Performance:																
GDP (in billions of US dollars at current prices and exchange rates)	96.6	138.2	172.6	186.5	179.4	228.5	232.8	243.5	236.8	261.4	307.5	296.1	256.0	262.2	258.8	239.6
GDP per capita (in US dollars based on PPPs)	na	na	na	na	18'590	20'874	21'780	22'580	22'580	22'720	24'967	24'881	25'240	25'512	27'171	na
GDP at 1995 prices, annual change in %	3.4	1.6	0.7	3.1	4.3	3.7	-0.8	-0.1	-0.5	0.5	0.5	0.3	1.7	2.4	1.6	3.0
Labour productivity, annual change in %	1.6	-0.4	-1.3	1.0	2.2	1.5	-1.4	2.0	2.1	1.6	0.7	1.9	3.0	2.2	0.9	1.3
GDP deflator, annual change in %	2.4	3.1	2.7	2.8	3.1	4.3	6.0	2.7	2.7	1.6	1.1	0.4	0.1	0.2	0.4	0.6
CPI, annual change in %	3.4	0.8	1.4	1.9	3.2	5.5	5.8	4.1	3.3	0.8	1.8	0.8	0.5	0.0	0.8	1.5
International Trade, Foreign Direct Investment:																
Exports of goods and services at 1995 prices, annual change in %	8.0	-0.4	2.3	6.5	6.6	2.1	-2.1	3.0	1.5	1.8	1.6	2.5	8.6	5.0	5.9	11.4
Foreign direct investment (in millions of Swiss francs in current prices):																
- outward investment	11236	2627	1898	12723	12842	8849	9381	7974	12949	14761	14438	19964	25734	27209	49986	72026
- inward investment	na	na	na	na	na	na	na	577	-123	4604	2629	3805	9631	12963	17603	27503
International Competitiveness:																
Nominal Unit Labour Cost, annual change in %	2.7	4.6	4.3	3.1	2.9	5.1	8.3	3.3	1.3	0.3	2.1	0.4	0.3	-0.5	0.2	2.2
Share of high-tech products in %	na	na	na	16.5	16.4	16.1	15.8	16.1	15.9	15.8	16.8	17.7	17.8	18.9	na	na
World Competitiveness Yearbook Ranking	na	na	na	na	na	na	na	na	na	na	na	na	12(46)	9(46)	7(47)	7(47)

Sources: KOF Database, Swiss National Bank, IMD World Competitiveness Yearbook (www.imd.ch), OECD Economic Outlook 2001, Human Development Report 2001, United Nations.

Table 4.2: Innovation Performance

	1989	1993	1996	2000
Business Expenditure on R&D as a Percentage of GDP	2.1	1.9	1.9	1.9
	1988-90	1991-93	1994-96	1997-99
Share of innovating firms in %:				
- <i>Manufacturing</i>	81	84	78	71
- <i>Services</i>	na	na	62	56
Share of manufacturing firms with R&D activities	70	82	69	49
Sales share of new and/or improved products in %:				
- <i>Manufacturing</i>	na	42	45	37
- <i>Services</i>	na	na	11	16

Sources: Swiss Innovation Survey, Swiss R&D Statistics.

5. National Interviews

Introductory remarks

In what follows, we summarize the results of the interviews we conducted with three persons representing the national employers federation, the largest national workers federation and the Federal Ministry of Economic Affairs (which is also responsible for labour market policy) respectively.

According to the three respondents, the questionnaire (see the appendix) was quite difficult to answer, in the first place, because firms and industries are very heterogeneous with respect to the various dimensions of flexibility and related aspects. Therefore, the analysis of flexibility at firm level envisaged at a second stage of the project (case studies as well as empirical work based on large-scale firm datasets) is particularly important.

Nevertheless, the interviews yielded a consistent picture of the general trends of flexibilization as well as of the positions of the three parties. However, the mentioned reservations should be kept in mind.

Trends in flexibilization

There exists a consensus among the respondents that *numerical* flexibility in the Swiss labour market has increased during the last 10-15 years; however, the change is not very strong, which is not surprising since there was high flexibility already before. The increase of numerical flexibility refers primarily to daily, weekly and monthly working hours and to part-time work. According to the unions and the Ministry, fixed-term contracts and work on call have also become more important during the last few years.

There is also some increase of *functional* flexibility. Although this holds true for most forms of flexibility, the outstanding feature, according to the interviews, is the trend towards multiple competencies of workers. This may be interpreted as the basic aptitude on which other types of flexibilization such as „multi-tasking“ or self-organised teamworking can be built upon.

Numerical flexibility increased primarily in services, whereas functional flexibilization is more important in manufacturing industries. These trends are most pronounced in case of medium-sized firms, whereas small firms have been highly flexible since a long time. Moreover, flexibilization is more frequent in case of high-skilled (numerical: medium and high-skilled; functional: high-skilled) than for low-skilled workers.

Adjustment of the institutional framework

The respondents identified some institutional changes influencing the degree of flexibility which on the whole have not been so dramatic. Given the traditionally high degree of flexibility of the Swiss labour market, there was no need for fundamental adjustments. Due to the well-functioning of industrial relations in most sectors of the economy the necessary

changes of the institutional framework could be realized without causing much social or political tensions.

The revision of the Federal Labour Law (2000) modifying the rules for shift, evening and night work and the regulation of the legally allowed upper limit of working time is considered as the most important change of the legal framework in the last 10-15 years. Moreover, the various adjustments of the Federal Law on Unemployment Insurance of 1983 (with a further revision of it already in progress) and new regulations of employment contracts in public administration (among other things: abolishment of the status of civil servant at the federal level) are also judged as a remarkable contribution to increasing flexibility. The respondents also pointed to some important changes brought about by collective agreements of the private sector. Firstly, many agreements of the last decade introduced flexible rules of (weekly and monthly) working time; secondly, decentralized negotiations of wages are now even more frequent than in the eighties.

Moreover, there are some more institutional changes in the pipeline. The respondents mentioned, firstly, the planned flexibilization of the retirement age. In this matter, employers and unions, although both in favour of more flexibility, take an opposite position; whereas the former are for symmetric flexibility, the latter resist to upward-flexibility. Recently, the „social partners“ (employers and workers) of the construction sector agreed on a significant downward flexibilization of the retirement age; this negotiation result, however, cannot be interpreted as a signal for similar changes in other industries, because it reflects the specific circumstances of this sector (very hard physical work of most workers).

The changes mentioned so far are related to numerical flexibility. As far as functional flexibility is concerned, the respondents could not make out any institutional change having a direct impact on it. This is not surprising since this type of flexibility is primarily influenced by managerial decisions on organisational change at firm level. However, the respondents pointed to important adjustments of collective or legal regulations with respect to vocational education which exercise a strong positive influence on the conditions needed for generating more (functional) flexibility. The interviews showed that the introduction of „Berufsmaturität“, a new type of combined general and vocational education leading directly to non-university tertiary education (technical and commercial colleges) during the nineties, and the planned thorough revision of the Law on vocational education (regulating in particular the apprenticeship system) are probably the most important institutional changes in this field. Both changes favour general skills instead of more task-specific qualifications in narrowly defined occupations; it is just this type of flexibility („multiple competencies of workers“), which is the most relevant one for improving productivity according to both employers and unions. Important adjustments of the apprenticeship system have been already agreed upon before between the social partners and public authorities in some sectors (e.g. metalworking and machinery).

There are conflicting views with respect to some aspects of numerical flexibility (in addition to the already mentioned dispute on the retirement age) between employers and unions with the representative of public administration taking an intermediate position: The unions strive to some higher standards of minimum protection against, in their view, too much flexibilization of the number of daily working hours (evening and night work, work on call) and part-time work. In this matter, government (and, to some extent, also politicians and the population at large) have some sympathy for the unions' position. The various parties, however, agree on further flexibilization of the number of monthly (perhaps even yearly) working hours. Another conflict between employers and unions refers to the appropriate institutional level of regulating the various forms of flexibilization. Whereas the employers favour a bottom-up approach (from individual work contract to, as last resort, regulation by law), the unions see more scope for collective agreements and legal regulations; in this matter, public authorities rather share the view of the employers.

The impact of flexibilization

We asked our interview partners to make an assessment of the impact of work flexibilization on productivity, on factors determining productivity, on the working environment as well as on the quality of life. The three interviewed parties pointed out to the large inter-firm variance in this respect rendering an overall assessment quite difficult. Nevertheless, we can draw some general conclusions from their statements.

Unanimously, the respondents see stronger positive effects on productivity, labour motivation, work climate, etc. in case of functional than of numerical flexibility. Similarly, there is no doubt that functional flexibilization will shift labour demand from lower to higher skills. However, the assessment of the three partners differ with respect to the impact of numerical flexibilization. The employers, and to a lesser extent, the policy makers expect positive productivity effects, whereas for the unions this holds true only in case of self-determined or agreed flexibilization measures, if these are supported by minimum protection rules for atypical forms of working time such as work on call, evening and night work, etc. Employers, although not ruling out negative effects of numerical flexibility in specific cases, are convinced that, on balance, there is a positive impact on productivity and labour conditions. The representative of public authority takes an intermediate position; he thinks that high numerical flexibility might negatively affect the living conditions to a larger extent than employers are ready to admit. Therefore, as already mentioned, public authorities are more in favour of some protection against negative influences of numerical flexibilization on, for example, health conditions and on family life.

Preconditions for increasing functional flexibility

The most important precondition for making full use of the productivity potentials of functional flexibility is a highly qualified labour force based on high-standard basic and higher education and (permanent) training within and outside the firm.

Astonishingly, the questions dealing with this aspect did not get much attention from the interviewed persons, except for the representative of public authorities. Improving basic education (which, compared to other countries, has been a specific asset of Switzerland for decades) is considered as a high priority (see the mediocre performance of Swiss pupils in the PISA study). The revision of the system of vocational training aiming at a further development of the apprenticeship system, which is already in the pipeline, will bring some necessary improvements. The problem of incentives for live-long learning as well as for in-firm training is also addressed by the representative of trade unions. In his view, employers should increase their contribution to financing training. The representative of the Ministry addresses the incentive problem of employers confronted with the question whether it is for them worth undertaking investments in general skills (problem of „poaching“). This is most accentuated in case of SME's leading presumably to an underinvestment in training in this category of firms. In addition, in his view, there is too little training of employees with low qualification. However, in this case the incentives (at least for workers) to engage in training increased in recent years, since an up-grading of education has become a basic requirement for a worker for not getting marginalized on the labour market. Active labour market policy for unemployed persons, as introduced by the Federal Law on Unemployment in the nineties, is an important instrument to support such activities.

Exogenous change of factors requiring flexibilization

There are many types of changes of a firm's environment (and the concomitant responses of the firms to the changes) which require higher numerical and/or functional flexibility. Whereas the answers of the representatives of the unions and the Ministry (the employers did not answer this question because of the large heterogeneity among firms not allowing generalizations on his subject) showed a large consensus with respect to functional flexibility, the assessments of the implications of numerical flexibility have been controversial.

Technical change and innovative activity in general and, more specifically, the introduction of ICT and advanced manufacturing technologies are the most important factors requiring more functional flexibility. The same holds for the trend towards customization of goods and services. The required adjustments are facilitated by changes on the supply side of the labour market, i.e. the availability of highly qualified workers (in this respect, the available potential of labour market participation of women has not yet been fully exploited).

As far as numerical flexibility is concerned, there is only a concensus among the respondents with respect to the need to increase flexibility because of a steady rise of the capital/labour ratio. In case of insufficient demand for labour, the trade unions are also in favour of more numerical flexibility (e.g. through reduction of working time). However, the unions, in contrast to public administration (and probably also to the employers), do not believe that technical change and stronger competition require more numerical flexibility. From the policy side, it has been also pointed to the impact of social (time sovereignty; preference for part-

time work) and institutional change (the amendment of the labour law in the year 2000 increases the room of manoeuvre for employers to increase numerical flexibility).

Flexibilization and international competitiveness

The interview partners agreed that an increase of functional flexibility is an important factor for ensuring and improving competitiveness of a „high-wage, high-productivity economy“ with a highly specialized production structure like the Swiss one. With respect to the impact of numerical flexibility on the competitive position, however, the judgements of the respondents differ again; the employers see a direct strong positive relationship, the unions only a very weak one.

To what extent is flexibility higher or lower than in countries whose firms are important competitors of Swiss companies? We did not get answers with respect to functional flexibility (probably reflecting the difficulty to obtain information on this matter with respect to the situation of other countries). As far as numerical flexibility is concerned, the assessment of the employers is clear: The Swiss labour market is distinctly more flexible than that of other European countries, with the exception of United Kingdom (having similar or higher flexibility); there is no assessment of the labour market in the USA (presumably, placed in the employer's view at about the same position as the UK). Since the unions practically deny any relationship between numerical flexibility and competitiveness, they did not respond to the corresponding question. These results are quite consistent with the assessment of a smoothly functioning labour market in chapters 2 and 4.

6. Summary and Concluding Remarks

The overall impression regarding the most important elements of Swiss labour market legislation in the last 10-15 years is one of a rather liberal labour legislation allowing the well-functioning of the labour market. The new Swiss Federal Labour Law (which came into force in 2000), which is the most important reform in this field in the last years, led to a further numerical flexibilization (mainly night and shift work). The transition from a passive to an active labour market policy of Swiss administration also created scope for an increase of flexibility. The offered training and placement consulting as well as temporary wage subsidies help unemployed persons to find more quickly a new job.

What is the position of Switzerland with respect to the flexibility of labour market legislation and institutions in comparison with other OECD countries? According to the indicators of employment protection legislation developed by the OECD, Switzerland takes a position with respect to the degree of restriction of its legislation near the top countries being somewhat more restrictive than the USA and the UK, but more flexible than the Netherlands, Finland, Greece and Ireland (the other four countries participating in the present project). Finally, a comparison of the institutional flexibility of labour market of several countries with the help of a summary measure of centralization/co-ordination of collective bargaining arrangements showed that, in this case, Switzerland takes a, intermediate position together with France and Finland.

In the empirical analysis, we focused to two types of flexibility which are located at the microeconomic level and are therefore closely related to the strategies of enterprises. The first one is *numerical flexibility* defined as a process through which firms react to changes in the demand for their products/services by adjusting the amount of labour they employ. It is achieved through overtime, part-time work, variable working hours, fixed-time contracts or layoffs. The second one is *functional flexibility* meaning a process through which enterprises adjust to changes in demand for their output by an internal re-organization of workplaces based on multi-skilling, multi-tasking, team-working and the involvement of workers in job design, innovation, technology and the organization of work. According to new theoretical approaches to workplace organization, functional flexibility is generated through the combined use of new information technologies and new forms of workplace organization, both of them requiring high-skilled labour to be operated.

In sum, the empirical analysis showed that no spectacular changes have taken place in the Swiss labour market in the last fifteen years with respect to new types of quantitative flexibilization such as part-time jobbing, fix-term contracting, mediation of workers through manpower agencies and so on. The reason for the lack of great changes in terms of the above-mentioned type of numerical flexibility in the nineties is that the Swiss labour market has already being flexible before the period of economic stagnation. The crucial transformations which took place since the middle of the eighties were related to a) the increase of the share of

foreign workers having the same rights in labour market as natives and b) the rise of the participation rate of women (often via part-time employment).

With respect to functional flexibility, we get the following picture: high average educational level, job-related training, intensive use of information technologies and wide-spread flexible organizational practices at firm level seem to be *positively* correlated with each other; this tendency has been accentuated in the second half of nineties. Thus, some important preconditions for functional flexibility seem to be fulfilled in many important sectors of the Swiss economy. On the whole, the available evidence shows that the Swiss labour market is developing in the direction of more functional flexibility, numerical flexibility having already in the nineties attained a satisfactory level.

The most important policy implication from our analysis so far is the need of a further improvement of human capital of Switzerland, its most valuable asset for the maintenance and further development of a well-functioning flexible labour market which integrates most persons who are willing to work and does not generate social marginalization of parts of the labour force.

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Appendix

(Original questionnaire in German)

Survey among employer federations, trade unions and authorities responsible for labour market policy

„Flexibilization of the Labour Market and the Firms‘ Use of Labour“

February 2002

What do we mean by labour (market) flexibility?

Flexibilization of labour has many dimensions. A first one is „**numerical flexibility**“, which addresses the variation of the quantity of labour input. This variation can take place within the firm (overtime, flexible monthly hours, etc.) or by use of the (external) labour market (fixed-term contracts, lay-offs/dismissals, etc.). Many observers assume that high numerical flexibility is at the core of the „American Model“ of the labour market.

A second aspect of flexibility, which is often ascribed to the „European Model“, is called „**functional flexibility**“. This term is related to the multiple competencies of workers in general, the parallel work in different functions („multi-tasking“), the sequential work in different functions („job rotation“), etc.. It is assumed that broadly-based vocational qualifications are a precondition for the well-functioning of this type of flexible use of labour. The same holds true for the functional flexibility on the labour market, since workers with broadly-based skills are well-suited to undertake a new task in another firm, which reduces frictional unemployment in times of low labour demand.

1. Can you assess the change of labour flexibility in the course of the last 10 to 15 years?

Please differentiate between the various dimensions of numerical and functional flexibility mentioned below?

	Strong decrease			Strong increase	
	-2	-1	0	1	2
a) Numerical					
- Flexibility of daily hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Flexibility of weekly hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Flexibility of monthly hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Flexibility of yearly hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Flexible retirement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Flexible working hours/flexitime	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Shift work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Part-time work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Work on call	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Fixed-term contracts (excl. seasonal work)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Seasonal work contracts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- „Hire and Fire“-policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Other:					
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b) Functional					
- Multiple competencies of workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Parallel work in different functions („multi-tasking“)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Sequential work in different functions („job rotation“)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Self-organised group work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Temporary project teams	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Decentralisation of decision making	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Other:					
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

c) Can you identify particular industries, size classes of firms or qualification categories of employees in which an above-average increase of flexibility has taken place?

	Numerical flexibility	Functional flexibility
Industrial sectors		
<i>(choose 3 sectors at the most)</i>		
High-tech manufacturing	<input type="radio"/>	<input type="radio"/>
Low-tech-manufacturing	<input type="radio"/>	<input type="radio"/>
Construction	<input type="radio"/>	<input type="radio"/>
Retail trade	<input type="radio"/>	<input type="radio"/>
Wholesale trade	<input type="radio"/>	<input type="radio"/>
Hotels/restaurants	<input type="radio"/>	<input type="radio"/>
Banking/insurance	<input type="radio"/>	<input type="radio"/>
Business services	<input type="radio"/>	<input type="radio"/>
Public administration	<input type="radio"/>	<input type="radio"/>
Firm size classes		
<i>(choose 1 class at the most)</i>		
Large	<input type="radio"/>	<input type="radio"/>
Medium-sized	<input type="radio"/>	<input type="radio"/>
Small	<input type="radio"/>	<input type="radio"/>
Qualification categories		
<i>(choose 1 category at the most)</i>		
High qualification (tertiary level)	<input type="radio"/>	<input type="radio"/>
Apprenticeship/similar qualifications	<input type="radio"/>	<input type="radio"/>
No / low qualifications	<input type="radio"/>	<input type="radio"/>

2. Flexibilization of the institutional framework

a) What are the most important adjustments of the institutional framework relevant to labour flexibilization (legislation and collective agreements) which have taken place in the course of the last 10 to 15 years?

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- b) Which of the specific forms of numerical or functional flexibility mentioned in question 1a and 1b respectively you think need to be adjusted (either towards more or towards less flexibility)?
(multiple answers for each row are possible)

<i>Specific form of numerical flexibility</i> (see question 1a)	Preferred modus of regulation			
	Legal rules	Collective agreements	Firm-level agreements	Individual work contract
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

- c) Do you expect considerable resistance from particular social actors to the required measures of flexibilization?
(multiple answers for each row are possible)

	Numerical flexibility	Functional flexibility
Working councils	<input type="radio"/>	<input type="radio"/>
Management	<input type="radio"/>	<input type="radio"/>
Unions / employer federations	<input type="radio"/>	<input type="radio"/>
Political parties, etc.	<input type="radio"/>	<input type="radio"/>
Population, general public	<input type="radio"/>	<input type="radio"/>
Other:		
.....	<input type="radio"/>	<input type="radio"/>
.....	<input type="radio"/>	<input type="radio"/>

- d) Please indicate the adjustments of the institutional framework relevant to labour flexibilization (legislation and collective agreements) which are in preparation by now?
.....
.....

3. Can you please assess the impact of numerical and functional flexibilization?

Impact on	Numerical					Functional					
	Very negative					Very positive		Very negative			Very positive
	-2	-1	0	1	2	-2	-1	0	1	2	
Motivation of workers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Efficiency / productivity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Level of employment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Skill requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Satisfaction of workers / work climate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Industrial relations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Quality of life (family life, health, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Reputation of the firm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Time horizon of management decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Other:											
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

4. Do you think that the preconditions that are necessary to secure high or increasing functional flexibility are already fulfilled in the Swiss economy?

Do you think some kind of adjustments, improvements are still necessary?

Take into account, among else, the following elements:

- Education (amount, quality)
- Training (internal and external)
- Incentives to individuals to increase their educational level
- Incentives for employers and workers to offer/participate at (re)training measures

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5. Which external or internal changes of recent years or the years to come *require* a higher flexibility of workers, or are *preconditions to make use* of the potential benefits of flexibilization?

(Multiple answers for each row are possible)

	Numerical	Functional	Neither, nor
- Introduction/intensified use of information technology	O	O	O
- Introduction/intensified use of advanced manufacturing technologies	O	O	O
- Technological change in general	O	O	O
- Increase of innovative activity	O	O	O
- Stronger customer-orientation	O	O	O
- Increased need to cooperate with other firms	O	O	O
- More intensive competition	O	O	O
- Higher use of physical capital	O	O	O
- Higher (fixed) labour costs	O	O	O
- Labour shortages	O	O	O
- Oversupply of labour	O	O	O
- Increasing supply of (high-)qualified labour	O	O	O
- Increasing labour supply of women	O	O	O
- Increased requirements with respect to work content	O	O	O
- Social change (e.g. family, preference for leisure)	O	O	O
- Pressure from unions and employers resp.	O	O	O
- Legal rules for work conditions (night work, etc.)	O	O	O
- Regulation of the labour market	O	O	O
- Labour market policy for foreigners; increased share of permanent work permits	O	O	O
- Other:			
.....	O	O	O
.....	O	O	O
.....	O	O	O

6. Please compare numerical and functional flexibility of the Swiss economy with that of the most important competitors

a) Important competitors exhibiting significantly *higher* numerical and functional flexibility
(3 countries at most for each type of flexibility)

Numerical flexibility: 1.
 2.
 3.

Functional flexibility: 1.
 2.
 3.

b) Important competitors exhibiting significantly *lower* numerical and functional flexibility
(3 countries at most for each type of flexibility)

Numerical flexibility: 1.
 2.
 3.

Functional flexibility: 1.
 2.
 3.

c) Please assess the importance of labour (market) flexibilization as a means to improve the international competitiveness of firms:

	Very low		Very high		
	1	2	3	4	5
- Numerical flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Functional flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. General assessment of the role of labour (market) flexibility

The questions 1 to 6 might neglect (or do not take sufficiently into account) important aspects of the flexibilization of the labour market or the firms' use of labour.

May we ask you to discuss and assess the neglected dimensions of the problem?

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