



The Swedish training system

Future expectations of integration

"A solid education is its own reward" (US Department of Labour 1991).

The problem of raising the "skills" of the labour force is common to most mature industrial economies, and paradoxically the problem has appeared at the same time as an increasing share of young individuals stay longer at school in most of the world. Education even outruns the increase in job content in a number of jobs.

The human capital problem, however, goes beyond the raising of the educational level and skills. The new labour market situation in Sweden forces change on the entire training system. Individuals have to learn at school to be able to learn on-the-job (Kazamaki Ottersten 1994). Thus secondary training becomes increasingly important. Individuals also need to adapt to frequent changes at the workplace. Hence, learning, training, and retraining will be a lifetime investment and experience, that spans over a complete work career. Such continued investment needs strong incentives to be effectively conducted. A significantly wider spread of wages in favour of the well educated is a first requirement. Also firms have become much more selective than before in recruiting in order to identify individuals able to learn and to constantly retool intellectually at the work place. In the search for the "ability to learn" a higher level of education will be a first quality signal in the labour market.

Will Sweden be able to cope with such changes on top of the problems associated with the integration in the European Union? Sweden is known for its many labour market institutions and in the new European situation such institutions may both facilitate and hinder the needed adjustments of the training and educational system in the labour market. Integration

in the European Union will put further pressure on the Swedish training system. The question is - is the Swedish training system equipped with the right tools and is it flexible enough to allow for the changes called upon? This article addresses the Swedish training system, its integration with those of the European Union, as well as future expectations.

Some background

The Swedish school system includes 9 obligatory years and additional voluntary grammar school or high school years, where both traditional general education and vocational training is provided for. Most industrialized countries have a minimum formal education requirement, commonly 9 years. Some European countries have longer required education, for example, 10 years in Belgium, Finland, France and Germany, 11 years in Holland, and 12 years for some studies in Belgium and Germany. An international tendency is for children to begin school earlier and that more individuals go on studying for more years than before.

About 90 percent of all age groups that finish elementary school in Sweden go on to grammar school. Since the 1980s the number of individuals that choose university-oriented fields at the grammar school in comparison with those which choose the skill-oriented fields has diminished. This development corresponds with the findings in many other countries, with the exception of US and Japan. In addition, there is training at the firm level, through labour market policies as well as through public and private institutions.



**Eugenia
Kazamaki
Ottersten**

*Research Fellow, at
IUI (the Industrial
Institute for Economic
and Social Research),
Stockholm*

For a long time, and by many other European countries Sweden has been seen as the example concerning labour market systems, a competent labour force and vocational training. The consistently low unemployment rate has been interpreted as a success of Swedish labour market policy. Recently, however, the Swedish economy has experienced problems similar to those in other European countries, such as high open unemployment, and a deterioration of the competence base of the labour force. To be more specific the skills provided through the educational system as well as through vocational training programs have not been sufficient to satisfy employer's requirements. This has partly to do with the fact that industrial production and the labour market have been changing during the past decade, but the educational system has not adapted. This causes human capital problems in the technological transition of Swedish industry. Unless qualified labour is available the technological transition will be slow and hard on labour. Employability in the future will require education and training will become a lifetime experience.



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In an international comparison Sweden on average devotes more resources to education than the OECD-average when it comes to public expenditure (OECD, 1992). It spends more than France, Germany and the United Kingdom but less than Denmark, Norway and Finland. Most formal education is publicly financed. On-the-job training is of course private, but many firms receive large amounts of state financed grants to help initiate and support on-the-job training and competence improving measures. The Working Life Fund has provided firms with generous support to undertake training and an ongoing evaluation will tell whether this support has been successful (Lindh, Mellander, Kazamaki Ottersten 1994).

Studies furthermore show that during the 1980s Sweden had a quite expensive public elementary schooling system. In an international comparison the total cost per student was between 23 to 28 percent above the same costs of our Nordic neighbours.

Does this also guarantee good quality? Since Swedish schools are more "teacher intensive", with more teachers "per class-size" than in other countries one would expect higher performance. There is no consistent research to show whether more teachers per class-size give higher student performance. International comparisons show Swedish students have good ability in reading and in foreign languages but less than satisfactory skills in writing and a little ability in mathematics (Fägerlind, 1993). Swedish students do not exhibit elite performance. This is not an ideal situation for an economy on the threshold of a significant technological transformation. Meanwhile we note that the younger generation is better educated than the older generation, which is the case for the whole European Community. The Nordic countries, Germany, Austria, England, and Switzerland have a very high proportion of individuals with grammar school competence (diploma) in the labour force.

Training as a lifetime experience

The former "Taylorist" production organization is gradually being replaced with high performance work organizations. New firms and industries lead this development. Changing labour market performance and a changing job environment thus

"mean that educational and labour market performance will have to be attended to in one context" (Eliasson 1994). Furthermore, schools have to prepare people for the labour market, a task that comes before other tasks (Eliasson 1992).

Additional training on-the-job is becoming typical of modern workplaces, and only workers with a satisfactory educational background are considered for jobs requiring such training. Firms are becoming increasingly selective at recruiting and new tougher practices are slowly getting established. Some empirical results based on interviews with a number of firms show that advanced manufacturing firms search for factory workers with at least a grammar school diploma (Kazamaki Ottersten 1994). Furthermore, communicative skills in Swedish, other languages, and mathematics are often minimum requirements. Employees with "learning abilities" with a broad problem-solving capacity, able to work in teams (social ability) are placed high on employer's priority lists. This development also means that to be considered for a job even at the shop-floor at least grammar school level is required. "Employability" in the future will require education.

In brief, training is becoming a lifetime experience. Training and retraining takes place at different stages and places during a lifetime. European integration (in this respect) adds a new dimension to training at school by demanding more in the form of language knowledge and the ability to cooperate in culturally mixed work teams in the firm, as well as by widening the views and prospects of both individuals and the educational system. Workers from countries with a high educational and skill standard of the labour force will be more in demand than others. Hence, competition will force an increase in the educational standard of all countries. Competence, however, (Eliasson 1994), is something the labour market has difficulties with. Highly competent workers are normally underpaid compared to the value of their contribution to the employer, and vice versa for unskilled workers (Eliasson 1992). This has effects on the incentives to learn at school and at work. Since competence development is cumulative and since school provides the platform for individuals to con-



tinue to learn at the workplace expectations of a low long-run pay off at the workplace can cause a bad early start in life for the individual. In an integrated Europe this will also affect the individual negatively when it comes to his or her capacity to work in and flexibility to adjust to an international environment.

Is education worth it?

Conventional wisdom tells that there should be a premium for learning (Kazamaki Ottersten, Mellander, Meyerson, Nilsson 1994). In Sweden, however, the premium for learning has been low by international standards.

Ever since the seminal work of Becker (1962), Mincer (1958, 1962, 1974), and Schultz (1960, 1961) earnings functions and human capital estimates have been discussed intensively. Wage equations are by now "classic" in economics and have frequently been addressed empirically. Lots of work has also been done to assess the shortcomings of the original wage equations (Kazamaki Ottersten, Mellander, Meyersson and Nilsson 1994).

The wage premium in Sweden measured as the relative wage increase that follows from an additional year of schooling is about 3-4 percent. The premium for education has been rather constant at this level during the 1984 to 1991 period. The premium should be compared to the OECD-average which is about 10-12 percent. We should add, however, that despite the relatively low level in an international comparison, some workers, for example engineers, have benefited from increases in wage premia. However, those increases mean that this group finally is reaching the Swedish average premium level (Mellander 1994)!

The low wage premium raises the question of eventual brain-drain, or competence reallocation, in the wider market context of an integrated Europe. Most likely, part of this "brain-drain" has already taken place. Individuals with a high educational level will of course move first and even small numbers can give rise to considerable negative effects on the competitiveness of the Swedish economy

(Braunerhjelm and Eliasson, 1994). With advanced labour markets developing there will be a higher demand for highly educated people to migrate. In order to address the issue of brain-drain, however, one has to know how sensitive education and migration is to income variation (Lundborg 1991). In this case there could also be country specific differences. Will the sensitivity change in the future partly be due to integration? Which factors do have an impact on the migration of individuals with higher education? These questions need to be thoroughly investigated.

Institutional barriers

Labour market flexibility depends critically on the educational level of individuals and labour market institutions. Many of these institutions, notably those associated with union cartelization of markets have reduced labour market flexibility. Labour market laws and union practices in Sweden can, furthermore, slow the labour market allocation processes. Interviews with firms in fact show that the average age of the labour force within Swedish manufacturing firms is very high. Swedish labour market laws may in part be responsible for this development. Meanwhile we know that education is higher among the younger generation, although the older generation has an advantage in the form of longer experience in the labour market.

The Employment Act, with its first-in last-out principle for firing people will affect the long run productivity of the old firms negatively, notably firms in declining markets that do not grow (Kazamaki Ottersten 1993). Since the incentives for employees to learn by moving both within firms and between firms is also reduced, this negative productivity effect is further increased. As a consequence the firm may invest less in human capital because it has an older work force with a lower pay off to retraining. Although the younger generation is better informed and better educated in new skills, young people will, nevertheless, find it difficult to enter the labour market. Again, this negative indirect effect on youth employment is further reinforced if too high introductory

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wages are set in the contracts negotiated with unions.

In an integrated world many of these institutional barriers will have to be removed. Some may disappear because of a more efficient labour market arbitrage. To some extent, a better and more deregulated labour market (see Eliasson 1994) can develop in an integrated Europe. If this is the case better secondary education, and better incentives to "learn" may be a consequence. However, there are problems with institutional barriers and labour market practices in the European Community today. It is to be hoped, therefore, that the future will hold a deregulation drive of European labour markets as a whole to make Europe competitive against new challenges from the West and from the East.

The Swedish training system in a European perspective

How should training be organized? Who should pay? These are questions that need to be considered in an European Training System. What will be allowed and which will be the barriers? How will a good education system be guaranteed? Who will take the responsibility? How much education is needed? Do we all need a highschool diploma just to be considered for a job? Will there be a split labour market as well as a split Europe of people with very low education and very high education, participating in independent labour markets?

Rapid changes in industrial technology are challenging both the educational systems and the labour markets of Europe (Eliasson and Kazamaki Ottersten 1994). Swedish integration has already begun. Most likely this is the market where Swedish integration already is making progress through the ERASMUS programme as well as through interaction of higher education and research. There is potential for the Swedish training system to be successful in European integration since there is great interest from Swedish students to study abroad. Integration widens the views and opens new training environments.

A few problems should, however, be mentioned:

□ firms appear to place extra value on communicative skills, verbal and mathematical in particular. Mathematics as a subject is becoming increasingly important at all levels, not least on the shop floor. However, less students than before are studying mathematics and natural sciences at high school. Even though this is an international tendency among the mature industrial countries, it spells serious problems for the future. New recruitment practices will also force the educational system to reorganize in order to meet these standards if students are to get well paid jobs in the future.

□ a question which also needs thorough examination and already has attracted some attention is whether integration will lead to a brain-drain in some countries while other countries will be provided with human capital. Countries with strong equalitarian policy will witness policy revision. This question is in part addressed in an article by Per Lundborg in this issue.

□ we do have to keep in mind that multilateral agreements are not always easy to implement in practice, in particular, if the agreements are set at a too high level. Adding more bureaucracy to the Swedish economy is not ideal. Flexibility in the practical implementation as well as in the way multilateral agreements are made is needed with respect to smooth integration. Placing part of the decisions on a lower decision level would be preferable.

With these problems in mind - what should be expected from integration? In an ideal situation,

1) We should expect a quicker pace of adaptation in the educational market to common requirements and goals in education as well as a wider variety of choices. In addition, we should expect a prospering research environment.

2) With more labour market interaction and competition at the European level we should expect the educational status to rise. A higher educational status should contribute to an increase in the standards of education both at school and at work. This effect will be shared by all of Europe. Premia for higher education will probably increase.



3) More competition would also put pressure on costs and force a rise in quality - this could be specifically important in the Swedish case with relatively high educational costs.

The overall effects on the Swedish training system should be positive given the above drawbacks.

Conclusions

European integration will make the educational system more exciting, allowing for more co-research and interesting de-

velopment areas. For successful integration the national labour and training market need to be working and to be flexible. Integration always starts at the national level. And the problem of a successful labour market and educational market is not exclusive to Sweden. It is believed, however, that close integration with Europe will have many positive effects on the Swedish educational level, for example, by raising its status as well as the pay off to education. It should be noted though that there may be some drawbacks as well, for example, problems with multilateral agreements at a high level may be exacerbated by integration.

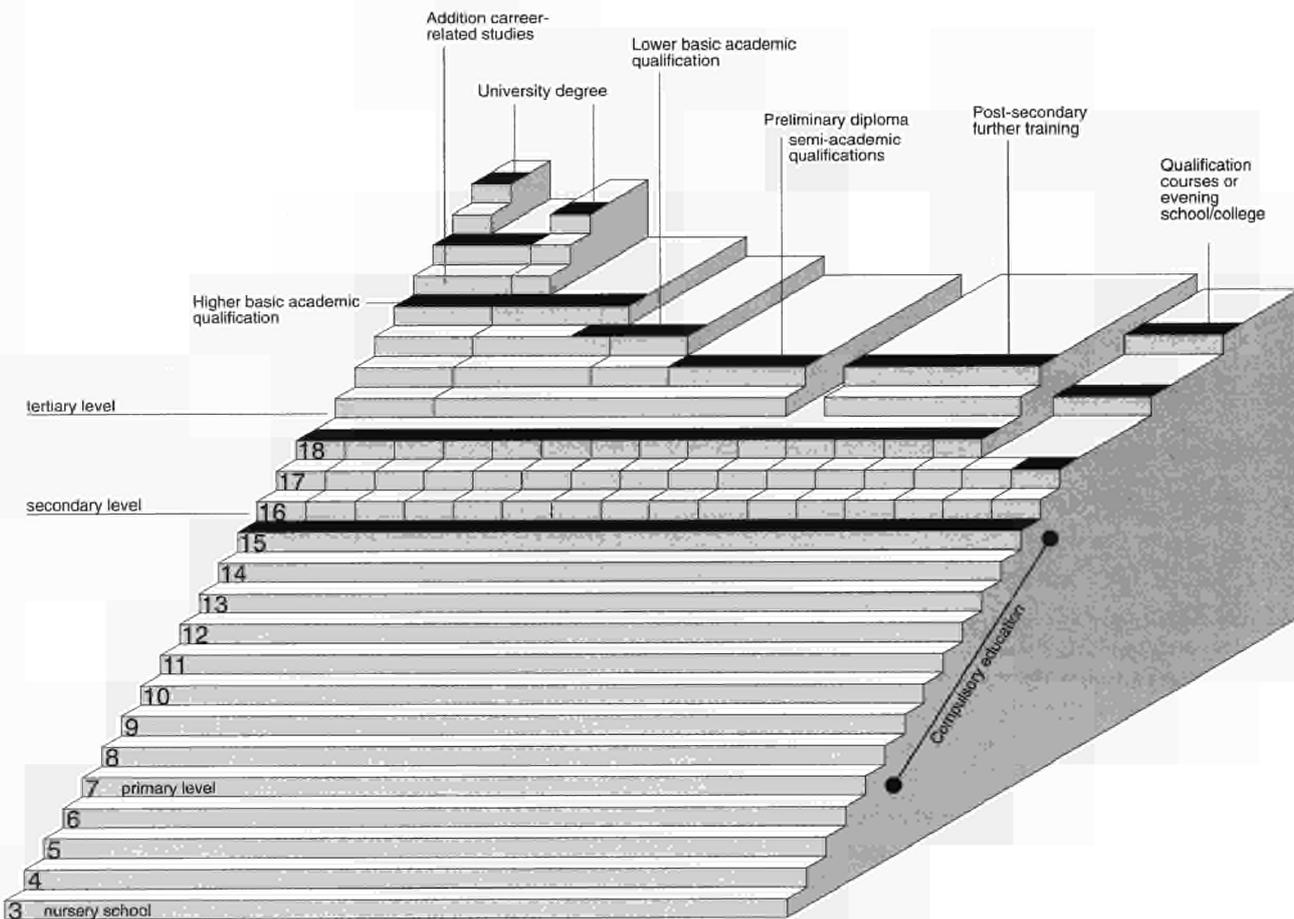
“For successful integration the national labour and training market need to be working and to be flexible. Integration always starts at the national level.”

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The vocational training system in Sweden



- ❑ In pre-school education there are several institutions catering for the 0 to 6/7 year age range; day care centres, part-time groups and open pre-school.
- ❑ Since 1991 children have a right to start school at the age of six years, if their parents so desire, and if the municipality has the capacity to provide this opportunity. The option should be available in all municipalities by the school year 1997/98.
- ❑ The compulsory school is attended by children aged 6/7-16 years. It is a comprehensive, co-educational school designed to accommodate all members of the rising generation. Since the introduction of the 9-year compulsory school in 1962 the compulsory school has been divided into 3-year levels: lower, intermediate and upper level. As from the school year 1995/96 a new curriculum, with nationwide validity, will be implemented in school years 1-7, in 1996/97 for year 8 and in 1997/98 year 9.
- ❑ In the new, comprehensive, upper secondary school system that was introduced in 1992, to be fully implemented in the beginning of the academic year 1995/96, all education is organized in study programmes of three years' duration. There are 16 nationally determined programmes, 14 of which are primarily vocationally-oriented and two preparing primarily for university studies. All the programmes, however, have the same eight core subjects i.e. Swedish, English, civics, religious studies, mathematics, nature studies, sports and health studies, and aesthetic activities. In addition students take subjects which are specific to their programme.
- ❑ The professional degrees rewarded at universities and university colleges are obtained upon completion of programmes of varying length (2-2,5 years). The programmes lead to specific profession e.g. University Diploma in Medicine or in Educational for Upper Secondary School.

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