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TRENDS IN WORKER RECRUITMENT PRACTICES IN SWEDISH COMPANIES

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"The increased importance of skills and competences – and the higher the cost of inadequate skills and competences – have raised the stakes in further education and training for firms (as a way of staying competitive), for individuals (as a way of staying employable and providing opportunity for wage growth), and for society at large (as a way of ensuring that national economies stay competitive internationally, and that the benefits of that competitiveness are widely accessible to all in society)." (OECD 1993, p. 8).

"A fundamental recommendation is that higher education institutions should adopt cooperation with industry as part of their fundamental mission, especially in the continuing training field, and that companies themselves should have an explicit education and training strategy as well as an organized interface with higher education which will encourage and facilitate access and dialogue." (EEC, 1993, p. iv).

Introduction

The current policy assumption is that industrial countries need an improved economic strategy based on skill development. Skill development and improved internal training in workplaces are generally believed necessary to increase productivity and to ensure a prosperous future. In most of the world "the third industrial revolution" is gradually replacing the former "Taylor" production organization model with new high performance work organizations. The Tayloristic method was well suited for mass production of relatively simple goods, (Taylor 1920). Development today is towards complex, high performance and client-oriented systems products that satisfy high demands

on quality, variety, and volatility in consumer tastes.

Even though increased needs of education and skills are seen, many recent studies (Bishop 1993, EEC 1993, Heckman 1993, OECD 1993) underline the declining quality and educational levels of the workforce and in particular the lack of appropriate internal training. Practices and policies for correcting this situation differ among the European countries. Most of the current discussion has focused on higher education and industry cooperation in education and training. Some concern was, however, also raised regarding the unsatisfactory state of vocational training in the European Community in the early 1990s. Some of this concern about the unsatisfactory state of vocational training is, however, based on assumptions rather than facts. Since slow growth and employee performance are assumed to have been caused by skill deficiencies in the labor force the blame goes to the educational institutions. The reason can also be, for instance, a badly organized labor market (see Eliasson 1993). This means that the market has to be prepared to incorporate individual skills and new knowledge. Unless this is possible and if labor market flexibility is low the best knowledge and skills may be wasted. Managers must have the proper skills to direct individuals to the right jobs and provide such jobs. It is further important to train at all levels. Countries try to solve their skill development problems in different ways. Countries like Germany, Switzerland and Australia depend on Youth Apprenticeship programs, whereas France for example encourages all employers to provide on-the-job training and Sweden has a great number of vocational schools (see Ballot-Taymaz 1993). The future workforce, however, has to be prepared for continued "learning" on-the-job already at the school level.

The article raises the question how school should educate individuals to build the right platform for further development of skills, at the workplace. The knowledge students carry with them from school to the workplace affects how well they do in the labor market, and on a job. Therefore, school cannot live its own independent life but has to adjust to developments in the workplace.

One responsibility of school is to provide the students with a minimum level of communication skills, the necessary platform to continue learning on-the-job. The opinion of firm managers is that school performance influences workplace performance in a number of different ways.

Trends in recruitment policies in Swedish companies will be discussed, and the immediate and future needs of these companies identified. Our study is based on a number of interviews with Swedish firms within manufacturing, notably engineering industries. Both large corporations and a number of small and medium-sized manufacturing firms are included in the sample of about 50 firms. The sample is representative in terms of localization, including both hitech and low-tech companies, and including firms dependent on exports as well as firms with no exports. The interviews were carried out between May and December 1993, and were addressed to the managing director, and/or the personnel or education manager at the firm. What we learned from all different firms was surprisingly similar, a very interesting observation considering the heterogenous sample that we interviewed. In particular, both large and small firms have similar development tendencies and similar problems to cope with in the future. This article is based on the experiences of the interviewed firms.

New Challenges for firms

After more than 100 years of continued successful growth performance Swedish industry has stumbled, since the early 1970s, on a sequence of increasingly severe problems. Conditions for industrial production have changed for the worse in Sweden, as well as in the rest of Europe (Andersson et al. 1993). Most of the needed changes to raise productivity levels and stay competitive in international markets are associated with the introduction of sophisticated production techniques requiring less labor but more educated labor. Many firms have introduced advanced automatized production that

requires that workers are able to read and understand complicated machine instructions and are prepared for continuous learning and flexible adjustment to new process changes. The appropriate term is educated rather than skilled labor, since firms normally prefer to train the workers for particular jobs themselves. Poorly educated students are, however, not profitable investment objects for such training (Eliasson 1993). This change in demands on workers' quality is clearly visible in the advanced production plants, but we can foresee a transition involving most of the worker population over the next 2-3 years.

Our observations from the interviews indicate the following problems: 1) the Swedish workforce is old; the average age of a *skilled* blue-collar worker is between 45-50 years, (white-collar workers are in general a bit older) and managers worry about the possibility that the new entrants are not sufficiently educated to rise to the levels needed for profitable on-the-job training. 2) the "third industrial revolution" requires new methods for managing and for organizing work and production. 3) Mass production methods will continue to be applied for high volume production of simple products, which constitutes a significant part of Swedish manufacturing production (Braunerhjelm 1994). 4) There is, however, a development towards more flexible small-scale quality and client-oriented batch production. 5) This latter type of production requires new incentive systems of the firm. One consequence is that all individuals employed by the firm have to be treated as professionals, since most workers are either engaged in production scheduling or the setting on reprogramming of machines. This is not easy in a labor relations environment based on Tayloristic thinking.

These challenges involve fundamental cultural changes in the firm as well as organizational adjustments to accommodate the introduction of flexible, client-oriented technology, quality improvements, and reduced delivery times. Fewer organizational layers with fewer managers (many decisions are pushed down to the front line), create more meaningful jobs for all, and an emphasis on "team work". The change in work organization towards more team oriented

tasks again, however, raise educational and skill demands on the individual, notably in communicative skills. Another change is that few jobs in the future will be life-time positions. On the contrary, flexibility will be rewarded and rotation between different tasks much more frequent than before. Less accurately defined job specifications, and overlapping tasks between workers, will be the consequence and the clear job demarcation lines between white- and blue-collar workers will gradually disappear. Group-oriented behavior, flexibility, the ability to pay attention to fellow workers, and to instruct junior workers, etc. are attributes of the new factory organizations that are expected to enhance efficiency. This also means that more responsibilities will be delegated to workers. Both the team and each individual worker will be held responsible for their parts of production. Teamwork is also integrated with a broader framework of information as in the Japanese firm. Information processing at high levels in Japanese firms is seldom limited to managers, but integrated with local shop floor information processing. Despite this general systems concept of team work, workers will act in their own self interests, salaries being tied to individual performance. Many firms are working on finding new result- and quality oriented compensation systems that will allow for a great deal of individual differences.

The workers need skills to cope with organizational changes in the firm. Furthermore; *"It is the character of the workers' skills that produces high efficiency on the shop floor, and what appears to be team work at a glance is the result of these skills."* (Koike 1991 p.1.). Organizational change puts pressure on both managers, employers and employees, requiring supporting adjustments in attitudes of workers and work practices at the firm, adjustments that in turn require educational support from school. In fact, judging from the interviews the greatest pressure for change normally has to do with the culture of the firm, in particular, values, attitudes, and the ways people relate to one another. According to the firms, the restrictive Swedish labor legislation, also needs to be accommodated to such ongoing organizational change.

Recruitment Requirements and Practice

Future recruitment requirements will be raised. Today already, Swedish employers impose very demanding recruitment practices. It is almost impossible to get a factory job without a high-school diploma, and competition in the labor market is high for almost any kind of job given the high unemployment level. For skilled workers gymnasium diploma, preferably in technical subjects, is normally required. The reason expressed, is that this general education is needed as a platform for continued competence development on-the-job. Such stiff requirements may have something to do with the recession, but also with institutional factors. In addition, the restrictive labor market legislation has over the years made employers very careful in selecting applicants to avoid hiring "lemons".

Hiring practices are in fact tending towards increased demand of skill and education at all levels. *First*, there is a need for general communicative skills in Swedish, other languages and mathematics. In particular, the importance of foreign languages is growing because most technical instruction manuals are written in a foreign language, mostly in English but also in German and French. *Second*, subjects like computer science, electronics, control theory, and mechanics are particularly important for skill development and the problem solving capacity of workers at the shop floor, especially in small firms which do not have in-house maintenance specialists. In addition, due to the new ways production is being reorganized into team-configurations, particular personal characteristics are becoming very much in demand. Apart from good work ethic, there is a demand for good social or team behavior. Individual characteristics that the employers value highly are; independence, creativity, flexibility, the ability to work in a team, problem solving capacity, communicative skills, and social competence. Finally, small firms would also like to see employees possess some entrepreneurial skills.

Grades and school certificates play a role in the recruitment of young workers

just out of school. Firms, however, look at the overall grades in communicative subjects rather than for specific knowledge. Firms look at grades as a means of selecting general quality, but some firms also see grades as a signal of potential ability. In a labor market with high unemployment high school grades increase the probability of being offered a job. What matters for recruitment, however, apart from having the right education, is "experience, personal chemistry and references" as asserted by the recruiters. In particular, what matters is recorded "on-the-job" quality and performance. References are particularly important for white-collar workers although most large firms want to see the distinction between blue-collar and white-collar workers eliminated.

According to firms there are ways in which the school and the firm can meet and collaborate. Productive relationships with institutions of higher education already make a major contribution to many larger firms' competitiveness and business performance. However, even the small firms need this collaboration. The problem has been that the small firms and the higher educational institutions have not been able to find a common meeting ground that benefits both. In addition, their communication seems to be afflicted by a significant amount of misunderstanding.

Employers of both small, medium-sized and large companies also have reason to cultivate their relationships with schools, because they know what kind of skills they require and thus the kind of skills schools should provide. Recent research has emphasized the importance of primary education (Psacharopoulos 1991, Eliasson & Kazamaki Ottersten 1994). *"Make sure that the country has a solid primary education base before embarking on university expansion. The expansion of primary education, where attendance is not universal, might offer the highest social benefit per dollar or peso spent relative to any other investment in the country. Expansion of primary education is also likely to have a sizable impact on reducing income inequality and poverty, as it is those at the lowest end of the income spectrum that are not attending primary*

schools.” (Psacharopoulos, 1991, p. 18). This statement applies both to developing and developed countries. In addition, it has been shown in the literature that *”the quality and amount of earlier schooling experience predict the quality and amount of subsequent learning experience, which predict and interact with job level, earnings and life chances more generally”*. (Tuijnman, 1994 p. 17). In Sweden primary school starts at the age of seven (which is late in comparison with other European countries) and is among the most expensive in the world. There are further few private school alternatives, and thus in general small differences between schools.

The basic idea that the better initial formal education the more trainable is the worker encourages firms to approach the school. Many employers have already developed and established links with schools through the *”practitioner”* programs that pupils at school take part in. The employers emphasize as important that students visit, and get some hands-on shop floor experience. Despite the fact that vocational training is widely provided in Sweden in comparison with many other countries, the general view among employers is that both pupils and teachers have an old-fashioned conception of industry as a workplace. Therefore they should be guided towards the manufacturing work place to learn.

Organizational change requires new skills and forms of education at recruitment of workers. Also continued maintenance and development of skills is demanded. The workforce needs to be integrated in the change process. There are different ways in which the employers try to achieve this.

”Learning is the product of experience... technological change in general can be ascribed to experience, that is the very activity of production which gives rise to problems for which favorable responses are selected over time.” (Arrow 1962 p. 155-156). Learning by doing is extremely important and time is needed to learn and get accustomed to a new job (according to the firms this takes on average six months). In addition, continuous changes in production and

organization require continuous on-the-job training. There are various ways in which this training takes place, *first* through guidance by more experienced colleagues at the firm, *second*, through external programs outside the firm (which may or may not be held at the firm), *third*, through sending workers abroad both to training centers and/or to other firms, *fourth*, through industry schools run in cooperation with the schoolsystem or exclusively run by the firm.

Large firms (and some small ones) are in favor of industry schools within the company, and particularly schools run by the company, because the teaching agenda in such schools recognizes the needs of the firm. Thereby requirements are set high both on students and teachers. The experience is that industry operated schools work very well and succeed in providing firms with the right skills. Today no real skill shortage is felt other than within a few highly specialized fields. In the near future firms are expecting serious skill shortages in a number of different trades, for example; welding operators, specialized assemblers, operators, computer operators, production technicians and managers, mechanical technicians and engineers in general.

Most firms strive to make their work environment more attractive than today and to raise both the status and the requirements on training in industry schools. There is, however, a growing awareness that in doing so serious rethinking is necessary to exploit new techniques and opportunities to the benefit of both the firm and its employees.

Conclusions

The future general tendency is towards

- low scale production and customised ways to design and produce goods
- a more open and experimental attitude to new ways to organize

production.

At recruitment requirements by the firms will be:

- high-school competence. Jobs with low skill content will gradually disappear
- a broad education and analytic problem-solving competence
- more steering at school towards the labor market and industry
- higher work ethics and discipline from school.

In order to develop such competences at school or at the workplace the school has to monitor the changing needs of the labor market and employers' recruitment practices. This openness and flexibility is not part of the traditional school mentality. Even school, however, has to innovate and improve its product designs in order to cope successfully with its future and an experimental approach is the most promising way to be a high achiever in this respect (Eliasson 1992). Here schools have a lot to learn from the experimental product development that firms use. More collaboration may also be needed between school and industry especially towards the end of school when education becomes a transition into the labor market.

References

- Andersson et al., 1993, *Den långa vägen, Den ekonomiska politikens begränsningar och möjligheter att föra Sverige ur 1990-talets kris*, (The Long Road: The limitations and possibilities of economic policy to preserve Swedish welfare by reducing the welfare state to manageable proportions). IUI, Almqvist och Wiksell International, Stockholm.
- Arrow, K.J., 1962, The Economic Implications of Learning by Doing, *Review of Economic Studies*, Vol. 29, No. 3 (June), pp. 155-173.
- Ballot, G. and Taymaz, E., 1993, *Firm Sponsored Training and Performance – A comparison between France and Sweden based on firm data*, IUI Working Paper No. 387.
- Bishop, J.H., 1993, *The French Mandate to Spend on Training: A model for the United States?*, CAHRS, ILR Cornell University, Ithaca, NY, Working Paper 93-05.
- Braunerhjelm, P., 1994, "Regional Integration as a Vehicle to Microeconomic Disintegration: Some Macroeconomic Implications of Firms' Reorganization", i *Patterns in a Network Economy*, Editerad av B. Johansson, C. Karlsson och L. Westin, Springer-Verlag, forthcoming.
- EEC, 1993, *European Higher Education-Industry Cooperation: Advanced Training for competitive advantage*.
- Eliasson, G., 1992, *The Markets for learning and Educational services – a micro explanation of the role of education and competence development in macro economic growth*, IUI Working Paper No. 350b.
- Eliasson, G., 1993, *Vocational Training*, forthcoming IUI Working Paper.
- Eliasson, G. and Kazamaki Ottersten E., 1994, *Om förlängd skolgång*, (Extended School Attendance), forthcoming Sou 1994: Bilaga II:4.
- Heckman, J., 1993, *Assessing Clinton's program on job training, workfare, and education in the workplace*, NBER, Working Paper No. 4428.
- Koike, K., 1991, "Learning and Incentive Systems in Japanese Industry", paper presented at the conference, "Japan in a Global Economy: A European Perspective", held in Stockholm School of Economics, Sept 5-6.

- OECD, 1993, Industry Training, In Australia, Sweden and the United States.
- Psacharopoulos, G., 1991, *The Economic Impact of Education – Lessons for Policy Makers*, International Center for Economic Growth, ICS press, San Francisco.
- Taylor, F.W., 1920, Rationell Arbetsledning, Taylorsystemet, (Rational Work Sharing. The Taylor Method). Sveriges Industriförbund, Almqvist & Wiksells boktryckeri.
- Tuijnman, A.C., 1994, On a Path from Pre-schooling to Lifelong Learning: Capital Conversions Across the Lifespan, Swedish Ministry of Education and Science, Commission of Prolonged School Attendance.