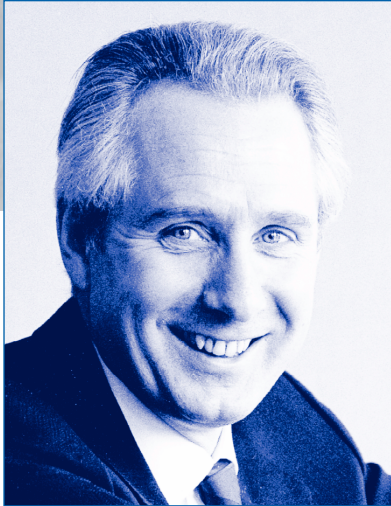


# Greeting from the President



Dr. Klaus Zumwinkel  
IZA President  
Chairman of the Board of Management,  
Deutsche Post World Net

*Deutsche Post World Net, an internationally operating company and one of Germany's largest employers, regards the fight against unemployment as a central political issue of global importance. It wants to make an active contribution to meeting this challenge. Every future-oriented policy needs innovative concepts. If high-level economic research does not stop at national borders but explicitly aims at exchanging one's own experience with other countries, it will be able to provide new concepts in the context of globalization and thereby pave the way for an effective fight against unemployment.*

*These considerations inspired Deutsche Post World Net to create the Institute for the Study of Labor (IZA). This independent institution functions as a mediator between the academic community, politics, and economic practice. At the same time, it provides a forum for influential economists to develop innovative and potentially controversial concepts. This includes scientific and empirical labor market research as well as the translation of scientific findings into practical economic policy concepts. The professed goal of IZA is to make a concrete contribution to the reduction of unemployment by conducting nationally and internationally oriented research.*

*The research sponsoring activities of Deutsche Post World Net, focusing explicitly on labor market issues, have led to the creation of IZA, a unique institution in the German research community. This strategy, based on the awareness that unemployment is one of the most pressing issues of our time, is perfectly suited to tackle the issue directly.*

A handwritten signature in blue ink that reads "Klaus Zumwinkel". The signature is written in a cursive, flowing style.

# Director's Preface



Prof. Dr. Klaus F. Zimmermann  
Director of IZA

*Neither the structural change of labor markets nor the scourge of unemployment stops at national borders. Almost all western countries are facing similar problems during the transition from a traditional industrial nation to an information society or – as some have come to call it rather euphorically – “knowledge” society. In Germany, the problems have been exacerbated by the inevitable transformation of the economy in the eastern part of the country, but they are by no means unique. Nonetheless, unique solutions must be found for each country to fight unemployment and to deal with the challenge of structural change. To be sure, the study of successful labor market policies in other countries helps evaluate and modify one’s own instruments. But eventually we will need policy programs that are specifically designed for the particular conditions in each country.*

*Against this background, there is a whole range of issues to be tackled by labor market research – not only in the area of basic research, but also in offering advice to policymakers. IZA is the first privately-owned German research institute solely devoted to labor market economics. The commitment of Deutsche Post World Net has created favorable conditions for IZA researchers to pursue basic research as well as political consultancy. Within a short period of time, IZA has taken its proper place among national and international research institutes, thereby filling a “gap in the market”. IZA will continue to be both politically constructive and scientifically excellent.*



# Aims and Tasks of IZA



IZA is an internationally oriented local and virtual research center. Independently of short-term commissioned research, the institute conducts academic research with close ties to universities and contributes to the public debate through the publication of its research results. Its primary goal is the analysis of labor market issues in a rapidly changing world. Within this framework, IZA carries out original and internationally competitive research activities in all fields of labor economics. Research findings are also translated into practical economic policy concepts and presented to the public.

In order to cover all relevant fields of labor market research, IZA's activities are divided into various programs. Within that spectrum, a number of in-house researchers, typically holding a PhD, work for IZA on a fixed-term contract. It is considered crucial that this team consist of international researchers who are able to draw strong microeconomic references in their work. A core team of permanent staff supports IZA's research team by providing information, documentation, communication, and administrative support. Researchers around the world are associated with the institute, supplement local staff and thereby contribute to IZA's flexibility. Renowned labor economists as well as up-and-coming young researchers are integrated in IZA's activities as Research Fellows and Research Affiliates. IZA staff members, fellows, and affiliates cooperate in a variety of individual medium-

term projects. This cooperation may take the form of working visits or communication via the internet.

Furthermore, IZA's extensive visitors program and seminar series provide a forum for general academic exchange of information. These activities take place in cooperation with the University of Bonn. Also, PhD candidates are integrated in IZA's work in various ways: The institute supports candidates who are linked to the Bonn Graduate School of Economics, the Economics Department at the University of Bonn, and other economics departments in Germany and abroad. Some PhD candidates are mentored by qualified IZA staff members. Particularly outstanding candidates may also receive the status of IZA Research Affiliates and thus become integrated in concrete research projects of the institute.

In order to optimize international research exchange, IZA takes an active part in international research networks, for example through cooperation with national and international research centers. Moreover, the institute forms research associations with other institutions for a certain period or project.

IZA regularly organizes research seminars, lectures, lunchtime meetings, workshops, and international conferences covering a wide range of labor market policy issues. International researchers present their

recent research findings to their colleagues or share their insights with the public. Additionally, IZA hosts the annual European Summer School in Labor Economics, bringing together renowned experts with a number of selected young economists from various countries in order to provide intensive teaching for young researchers in general methodology and specific topics. The European Summer Symposium in Labor Economics is held annually by IZA in cooperation with the Centre for Economic Policy Research (CEPR), London. It provides excellent conditions for a wide variety of researchers to discuss recent research results.

IZA strongly aims at integrating its research findings into the general debate on labor market policy. To that end, the institute issues several publications, such as its discussion paper series and reprint series, also for the purpose of making scientific findings accessible to the public. Preliminary versions of research reports are made available for debate to a predominantly academic audience before publication in the form of discussion papers. Reprints are papers published in research journals and books reprinted for wider distribution. More extensive scientific reports are published in the institute's research report series. In cooperation with renowned publishing houses, IZA also issues monographs on crucial labor market policy issues.

# Aims and Tasks of IZA

Newsletters provide an additional means for interested readers to obtain information about the institute on a regular basis. The newsletter *IZA Compact* is published in both English and German and is distributed worldwide. The internet is also used extensively for information and communication purposes. Electronic newsletters are distributed online by IZA and the *Journal of Population Economics*, an international research journal edited by IZA.

With its various activities, IZA meets the demand for information on labor market mechanisms and takes advantage of the continuing progress in research and methodology. ■



# The Future of Labor - Challenges for Training and University Education

Klaus F. Zimmermann



## I. In the Midst of Structural Change

Does labor have a fruitful future in our time? If we believe the augurs who regularly offer their pessimistic message, the outlook is indeed grim. It has become fashionable to predict the end of work – or at least the “end of work as we know it.”

The vision of a world in which the working person has become redundant and must look elsewhere for activities that give meaning to his or her life is not only a hot topic of bestsellers and televised debates – it is also being discussed in the scientific community. It is often claimed that technological progress first superseded traditional farming, then human labor in industrial production. Now the information revolution is expected to lead to a similar reduction of jobs in the service sector. The fast development of globalization, it is feared, has caused capital flows to regions where labor costs are lowest, thus leading to persistent mass unemployment in many countries. Every conceivable type of information is now available everywhere via the internet. As a consequence, human capital requirements for information processing are ever increasing. This affects especially the low-skilled workers, who are no longer able to compete effectively in the labor market.

Against this background, it should come as no surprise that politicians and society as a whole have often focused solely on the redistribution of labor when dea-

ling with unemployment. Well-meaning proposals for creating a new sector of subsidized civic work are founded on the belief that labor is a limited or even shrinking good, and that the order of the day is to cut the cake fairly. Other buzzwords in this context are part-time work, reduction of the working week, and early retirement.

At the same time, optimistic forecasts predict that the expansion of the internet-based information technology and a “new service culture” will trigger a miraculous growth in employment. Countless new job opportunities, the argument goes, are only waiting to be discovered. Demographers add that the aging of our society will inevitably lead to shortages in labor supply.

A synthesis of these different philosophies yields a rather diffuse picture: We live in a bizarre age of doubters and zeitgeist surfers, of prophets of doom and naive believers in progress. We have not yet found an unambiguous answer to the urgent question of the future of labor.

Nobody denies that structural change will not only confront the working population, but society as a whole, with immense adjustment problems. A “business as usual” strategy will not work. Rather than accepting the changes as they come, we must be active and creative in making them happen. We have underestimated obvious trends and shifts for too long, thus causing widespread uncertainty and confusion. Even

worse, the realization that familiar certainties are shaken creates a feeling of overexertion, and the “flexibility” demanded of each individual is accompanied by a perception of defenselessness.

The traditional notion of a job that is secure for many years – possibly for the entire working life – is gradually replaced by new, shorter and more mobile forms of employment. Simple though this may sound, the consequences are significant. Beyond all the ivory-tower debates on weekend work, shop opening hours and overtime compensation, “regular work” in the sense of the traditional employer-employee relationship has become only one of many forms of work. Other job patterns will take center stage. Shift work, temp work, and various other flexible forms of employment have already been integrated into operating schedules and corporate philosophies.

This trend will gain momentum as the resulting productivity advantages will become more visible and employees will demand more individually designed job patterns. These changes are not just the result of new technological possibilities, corporate calculation and virtual integration. They also stem from growing self-confidence among employees, changed patterns of leisure behavior, and the desire for better compatibility of family and job.

Despite all these changes, the basis of our work will remain the same. People will continue to shop in bakeries and supermarkets, or go to hairdressers and



# The Future of Labor - Challenges for Training and University Education

doctors. Although internet aficionados may find it exciting to order bread or shoelaces online, this opportunity has little value in daily life. A plumber will still have to come to our home to repair a broken sink. And the education of our children can hardly be done via videoconference. In short, human warmth and human services will continue to play an essential role in our lives.

Nonetheless, the structure of our working world, which is built on the basis of our daily needs, needs remodeling. The question is whether this process will destabilize the whole system.

Education and training, i.e. human capital, acts as a vital buffer between the challenges of globalization, the developments of the information age, and demographic change. An investment good for the young and an increasingly important consumer good for the old, human capital is a vital catalyst for economic and social adjustment processes.

## II. Shaping the Future of Training

There is a clear trend toward polarization of the labor market. On the one hand, marginal low-paid jobs in the personal services sector are created. On the other hand, the communication and information revolution produces well-trained and well-paid experts. This development has direct implications for the distribution of income – inequality will increase. The tendency toward higher qualification requirements is clearly

visible and will certainly continue. There is also an ever widening gap between low and high qualification levels when it comes to employment opportunities.

This can turn into a situation in which the low-skilled and the unskilled are excluded from the labor market. By no means is this problem limited to older low-skilled workers – it increasingly affects the young as well. More and more activities require comprehensive skills. This development is aggravated by the sheer speed of economic change. Low-skilled work is driven out, and employees need permanent further training to adjust their skills to a changed environment. Unskilled workers are again at a disadvantage in this respect.

Despite these obvious facts, German society – while being highly qualified – does not seem to value the general availability of education and training highly enough. So far, we have not been able to align supply and demand successfully, neither in the labor market nor in the allocation of training positions. We continue to accept a gross imbalance of apprentices without training position on the one hand and unfilled training slots on the other. Improved organization and targeted incentives for more mobility could counteract this development, but the shortages in the market for training will not easily disappear.

We allow, for example, that young foreigners generally face extreme disadvantages in education although they already have a highly relevant qualification, namely the knowledge of two cultures and two languages. The

continuation of training in rapidly declining industries, such as mining, has similarly dire consequences. It turns the young people of today, though highly motivated they may be, into the unemployable of tomorrow.

The growing number of jobs in high tech industries and information processing, as well as the inexorable decline of traditional industrial jobs, have added a new dimension to the question of training.

Education and training have to adapt to the changed environment. We have to admit that reactions have often been too slow and that many signals have not been taken into account early enough. Among other measures, we need a qualification offensive for unskilled and skilled workers in order to increase the chances for the low-skilled to catch up. Qualification, of course, has certain natural limits. Therefore, new employment opportunities must also be created in the area of simple services.

Statistics reveal the large number of those who, even today, leave our training system without a qualified degree and find themselves looking for a job in our information society. The number of dropouts is indeed alarming. Furthermore, important resources are wasted as a result of the limited supply of training positions. To be sure, the German dual training system has its merits. But we must not dwell on its past success.

We have to speed up the adjustment and development of training programs and job structures. A reduction of red tape would be a significant improvement to start with. Even more important, however, would be a critical evaluation of the trend toward early specialization. Training programs should not waste time by concentrating on knowledge of firm-specific details, even if many companies demand this kind of knowledge for reasons of cost-effectiveness. They expect “custom-made” employees from the start and overlook the fact that the demand for specialists is being replaced by a demand for generalists who can be assigned to various tasks and independently pursue further training.

Frequent job changes, within or between companies, will soon become the rule. Firm-specific and job-specific knowledge will then become useless. In the information age, specialized knowledge quickly becomes outdated. Key qualifications such as independence, strong interpersonal skills, decision-making skills in flat hierarchies, network competence, self-organization and improvisation, social skills, media competence, and communication and language skills are gaining importance.

Education and training therefore have to be tailored toward the acquisition of these crucial skills. Our youths must spend less time in school and training. Compared with other countries, Germans take too long to complete their education. New structures of life-long learning must be created. While the govern-

# The Future of Labor - Challenges for Training and University Education

ment could support this process through training vouchers, this is also a wide field for initiatives by employers and unions. Why should employers not provide financial support when employees invest vacation time in further training? Why should corporate restructuring activities not be coordinated with periods of further training, thus fighting unemployment on two fronts?

On the other hand, we have to stop leaving the responsibility and the initiative for shaping our opportunities to others. We must ourselves be aware that we need to remain active in life-long learning in order to keep our human capital up-to-date.

In addition, unemployment benefits have to be supplemented by incentives to undergo further training so that these interim periods can be used effectively. A wage voucher system could replace the present system of transfer payments. Each completed training program would increase the value of these vouchers, which means that the likelihood of finding employment would increase twofold: Potential new employees would have a higher level of qualification while labor costs would be lower – at least for a limited time – as the government provides wage subsidies according to the value of the voucher.

It is hard to quantify the employment effects of the changes currently taking place. They also depend on how quickly the new developments will catch on. From a labor market policy perspective, the govern-

ment should encourage – not hinder – the spread of new technologies and flexibility. Unemployment due to technological change has been discussed throughout economic history. Time and again, all the fears about the end of work have proven to be unfounded. We, too, will continue to experience an interplay of risks and opportunities.

### III. “Opening Clauses” for University Education

What does all this mean for university education? This is another field full of challenges. Pointing at the relatively low unemployment rates among university graduates does not do the trick. The labor market has become more unpredictable for them as well – primarily as a result of the large gap between the demands of firms and the qualification profile of graduates. The bizarre, even alarming situation of high unemployment among computer scientists on the one hand and a simultaneously existing strong demand for IT experts on the other is a case in point.

The business community has rightfully been accused of focusing its recruiting efforts too much on the short term. Recruitment of trainees and employees is often inconsistent and does not account for the fact that training needs time to be become adjusted to changes in supply and demand. If the demand is not recognized and communicated, training will inevitably lag behind. What is worse, a demand increase that is reported too late will lead to a supply surplus by the

time apprentices and university students who reacted to this announcement have finished their education.

It is not enough, however, to demand foresighted behavior of firms. The Wissenschaftsrat (Science Council) has rightly criticized the rigidity and inflexibility of German universities, though some progress has been made. The average university education still takes too long. Syllabi and degrees are in many ways too far removed from practice. On the other hand, academic performance, achievements in research, and their communication to a larger audience have not reached an acceptable level. Respect for the individual commitment of our colleagues should not keep us from recognizing the existing deficits.

It will be important to achieve a strong competition between universities, fostered by a large degree of autonomy from governmental constraints. To give a concrete example: Why should a renowned university not, wherever possible, offer lectures and seminars in English language and leave it to the student to accept or reject this offer? At the same time, the responsibility of German universities to select students according to transparent criteria must be strengthened. Issuing education vouchers to students could be a feasible way to encourage universities to compete for their “customers” while allowing them to select students from an abundant supply.

Opening up university structures is not an end in itself – it is a prerequisite to the development of new

models and profiles that can shape university education more toward professional demands. This does not imply a decrease in academic quality. The terms “practice-oriented” and “academic” need not be mutually exclusive. Outstanding academic training, when dealing with applied issues, can be an excellent preparation for economic practice.

Opening up also means making university programs more flexible. Study programs could, in a second stage, be divided into a more scientific and a more professional part. The successful credit point system, which has already been implemented in many economics departments in Germany, provides an extremely flexible framework for this concept. It also encourages students to show more responsibility and self-organization. The introduction of international Masters programs rounds off this concept.

Opening up means requiring students to take internships provided in cooperation with firms. Studying abroad should also be made a requirement, not just as part of graduate programs, but already after the first two years of study.

Opening up also means facilitating lateral entry from professional positions into study programs and offering practical and widely available further training for professionals. If we are serious about demanding life-long learning, universities cannot remain aloof. Why should it not be possible to extend their financial scope by marketing their human capital?

# The Future of Labor - Challenges for Training and University Education

Opening up, furthermore, implies the creation of education networks with schools and associations. It is a well-known fact that prospective university students often lack adequate skills and knowledge, which is by no means due to excessive requirements formulated by the universities.

Opening up also means that new forms of university funding must be systematically tested and evaluated. Private science sponsoring, as carried out by the Deutsche Post World Net for IZA and the graduate program in economics at the University of Bonn, is a great example. Inhibitions must be overcome – fresh thinking is needed.

Opening up means helping Germany, after years of decline, to regain its status as a premier location for academic study. We need foreign students because an international mix improves the quality of our education. The lack of flexibility among our universities leads to a dangerous isolationism that puts the international competitiveness of our graduates at stake. Our universities have to attract excellent students from the international market. But we also have to offer new incentives: Why not issue “green cards” to foreign students, why not keep foreign graduates in the country if their skills are demanded by the market? This would make more sense than trying to re-attract the same candidates as immigrants later.

Opening up means that we must seize the opportunities of internationalization in creating international

research networks. We must foster the integration of foreign academics into our education and research system rather than helplessly witnessing their growing reluctance to stay in Germany in the face of xenophobic incidents.

More is at stake – not least from a labor market policy perspective – than the future organization and orientation of teaching and research: Our society is shaped to a great extent by the knowledge acquired at our universities. Only if universities keep up with the times – which is not to be confused with a strategy of opportunism – will their voices be heard outside the ivory tower.

## **IV. Seizing Opportunities**

It is time to leave traditional ideas behind. This is, of course, not as easy as it may sound. Why else would we still pour billions of subsidies into industries whose decline is inevitable? It would be more effective and socially responsible to invest these enormous funds in our system of education and training, which would ultimately benefit the labor market. We must move in this direction if we want to allocate scarce resources more efficiently.

The transition from the traditional industrial society to the information society will invariably force us to rethink and adjust our strategy. We will need to give up familiar structures. Human capital has become the driving force behind growth. Investment in education

and training fosters technological progress, and the improved productivity of a skilled worker has a positive effect on unskilled colleagues as well. Demographic change reinforces the need for human capital formation. Only through enhanced productivity can fewer employees help maintain the benefits of our welfare society. But first we have to get used to this “new normalcy”. These prospects are not always comfortable, but we cannot escape them. Instead, we must seize the great opportunities that come with the new situation. ■