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The post-crisis global division of labor 2009

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The Global Economy

The Post-Crisis Global Division of Labor 2009

The Challenges

Recent changes in how different stages of the production chain are dispersed across the globe have led to the notion of a new global division of labour.

It will have far-reaching consequences for the skills required from the workforce, their jobs, and the economy as whole; both in developed and developing countries.

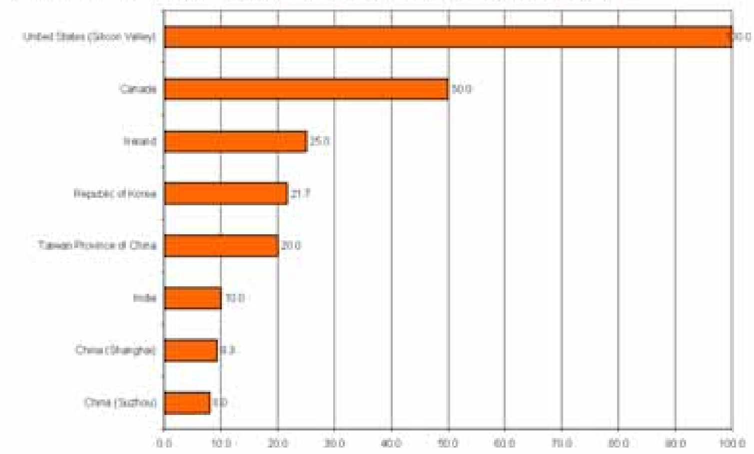
During the 80s and 90s, the global division of labour implied that unskilled jobs were done in low-wage countries, while skilled jobs were done in the developed economies.

At the same time, the situation of unskilled workers in many developed countries deteriorated drastically and inequalities started to rise.

Recent technological developments such as the internet have made it possible to efficiently relocate more and more tasks of the production chain abroad, including high-skilled jobs. Entirely new and unpredictable patterns of inequalities could thus emerge, possibly along with dwindling support for economic globalisation. Yet, for both the developed and the developing world, the new global division of labour may entail a lot of potential to be explored. So what should be done to prevent potential unwanted consequences?

The unpredictable nature of the new global division of labour may entail that job contents change completely and that people are likely to work in more than one occupation throughout their working life. It has been argued that workers need strong competences in social skills, problem-solving skills, and versatility to cope with such challenges. Are these the skills that are needed to create and preserve employment in good jobs and to sustain current welfare levels? Will education systems and curricula have to change in order to produce a workforce with such skills? How can the welfare state support workers in such a changing environment? Which skills do workers in developing countries need in order to benefit most from the new global division of labour? Is the new global division of labour finally the chance to close the huge education gap between developed and developing nations?

Annual cost of employing a chip design engineer, 2002, in percent of US cost



Source: UNCTAD (2005). World Investment Report, p. 174; own calculations

Proposed Solutions

Filip Abraham

Vice-President for the Humanities and Social Sciences, Katholieke Universiteit Leuven

Some further thoughts about the future of employment

I agree with many of the comments I have read. The following points should be seen as complimentary with the other statements.

1. The current crisis does not change the structural drivers of employment but potentially introduces a period of unemployment levels exceeding the natural rate of unemployment. If so, expansionary macro-economic policy may have a role to play in particular since there is no clear inflationary threat at this moment.

2. Educational systems and structural labor market policy must focus on promoting flexible adjustment to changing economic conditions. In today’s global world, people are likely to switch jobs during their careers. Current policies are spending too much attention in preserving what exists instead of switching to what is new.

3. It is often argued that employment in the non-traded sector of developed should be expanded as those sectors are shielded from global competition. This is true to some extent as the aging of population, the outsourcing of many personal services by higher income professionals, and the increased demand for art, culture, media... services creates new employment opportunities.

Nevertheless, one should recognize the limits of this employment expansion. First, several of those non-traded jobs are or may become exposed to international competition. Second, the expansion of non-profit employment is dependent on the profitability of the rest of the economy. This balance between the development of personal services and international competitiveness of the economy is a matter that will continue to be important in particular in European economies.

4. What are the necessary skills for professionals of the future? The book on the Flat World by T. Friedman devotes some readable chapters to this question. What matters is a skill that allows a professional to differentiate himself. This can be a specific expertise, creativity, an ability to make people work together in a team, an ability to synthesize ideas, to communicate difficult ideas in a transparent way, to filter the core out of a flood of information.

5. Will the winner take it all (or most) in a global economy as is something claimed in the literature? According to this theory, globalization polarizes the inequality between normal workers and the superstars? While this effect may be present in some occupations, recent research shows that it does only contribute marginally to a widening of income inequality.

Hans-Paul Buerkner

President and CEO, The Boston Consulting Group

The weight of the global economy will continue to move from West to East. Asia offers the largest growth pools in most industries. The next billion people will become an active part of the global economy. With continued growth over the next several decades, we will see a growing standard of living across the world, even though some countries or regions may benefit less because of a lack of stable structures.

While one can observe a shift from agriculture and mining, over manufacturing to services in most economies as they mature, this does not mean that the Western developed markets will

focus entirely on services. China will be the factory of the world and Africa and other emerging markets provide the necessary commodities.

The global division of labor will be determined by the value added chains of companies around the world: from sales and marketing over manufacturing to R&D and general administration. Where are the customers located, where are the necessary skill sets, where are acceptable cost structures? In general, more services will be outsourced, more manufacturing will move to the high growth markets, and more R&D will move to the places that dominate consumer taste and also offer the necessary skill sets.

Industry by industry, product line by product line and company by company, the answers may look very different. And major changes in the political and economic environment may lead to different answers going forward:

- How stable and secure is the political and legal framework?
- Can I protect my physical assets and my intellectual property?
- Do bottlenecks in the infrastructure make my logistics unpredictable?
- Does transportation become prohibitively expensive because of high energy costs?
- Do I lose my resource base and therefore have to give up production?
- Do I lose my people base and skill set because of demographics?
- Do the expansions or even existing operations become impossible because of increasing regulations or even wholehearted rejection by the people in the neighborhood?
- Does a society accept change?

The widening growth differentials between most emerging markets and most developed markets will accelerate the movement from West to East, and potentially from North to South. As it enables hundred of millions of people to actively participate in the global economy, it will benefit most if not all, provided we are willing to adjust and not to try to preserve the status quo.

Jean-Philippe Cotis

Lead Director General, National Institute for Statistics and Economic Studies

Areas of agreement with the briefing notes

I read very carefully the GES briefing note about the "post-crisis global division of labor" and found it very interesting. I certainly agree that "public support for globalisation might be severely harmed and the risk of protectionism will rise" and that, as well, we might see a surge in political extremism. I also agree that "less globalisation and more redistribution is not the right option." Although more globalisation might call for more redistribution.

I finally share the overall editorial line that "ad-hoc" remedial policies, specifically targeting the losers will not, alone, do the trick and that broad policies aimed at fundamentals will add a lot (i.e., policies such as teaching the right cognitive skills to cope with change from early childhood as well as policies keeping the workforce employable on a continuous basis). I also fully share the commitment to trade liberalisation as an engine for growth worldwide.

From an analytical perspective, I also very much appreciated the insightful discussion of shifting frontiers between traded and non traded sectors, in a context where NITC's are quickly spreading to the services sectors.

Areas where more emphasis should be put

That said, I found surprisingly little material, in this overview, linking the ongoing world economic crisis to labour market issues. In my view, issues such as the long-term impact of the world economic crisis on labour market policies, institutions and outcomes deserve a lot more attention.

The first-order risk with the current depression is that a long-lasting, protracted world economic crisis ends up permanently derailing labour market, trade and other structural policies ... with dire consequences for unemployment, globalisation, and workers well-being.

Elaborating a bit further on these issues, it appears, that falling aggregate demand worldwide may entail large collateral supply side losses. Given deflationary pressures, many structural reforms have been kept on hold, with possible negative consequences for long-term productivity and investment. As well, prolonged Keynesian unemployment, initially associated with insufficient aggregate demand, may progressively turn into structural unemployment, in a context where many unemployed people finally lose contact with labour markets (i.e., hysteresis effects).

Despite sluggish supply, underlying inflation is still on a downward trend in a context of extreme aggregate demand weakness. In such a context, the risk of moving into a deflationary regime worldwide should be taken seriously. Such a deflationary regime would impede world trade growth as it did during the 1930's. What is needed to avert such a threat is more than a short-lived technical recovery. Should we fail in restarting the global economy, the post-crisis division of labour may differ substantially from original expectations.

In such a context, I found the assertion that "structural change...might be accelerated strongly due to the crisis" a bit daring. In particular, one should no infer too much from past experience in small open economies such as Nordic countries, Australia or Canada which "took advantage" of economic and fiscal crisis to undertake wholesale reforms with great success. These reforms were very successful in raising potential supply and growth, in a context where the world economy provided ample aggregate demand to match what remained a tiny increase in the supply of goods and services at the global level. Compared to these case studies today's circumstances are vastly different: persistent GDP weakness and falling knowledge investment may be the order of the day rather than Schumpeterian breakthroughs. Indeed, recent, empirical research (cf. OECD) suggests that good macroeconomic conditions rather than crisis are supportive of innovation.

So to put it in a nutshell, I find the position paper is certainly underplaying the negative structural consequences that a prolonged slump may entail. "Creative destruction" is fine ... provided a number of basic economic mechanisms are still at play, which may not be the case currently.

I finally have a few remarks to make about the role of the welfare state in helping people cope with structural change. I certainly agree that structural change, nowadays, may involve all types of workers regardless of skill levels and that welfare policies need to reach them all, through mechanisms such as welfare accounts or benefit transfers.

That said it should be added that welfare policies are not just about adjusting to change. There is also a need for welfare policies to concentrate on the poor and unskilled on a more permanent basis. It is well known, for instance, that even in the United States, poverty and estrangement from labor markets are very persistent.

I guess, in hindsight, that what my remarks amount to is that it is not possible anymore, in a context of crisis, to neatly separate macro economic and structural policies. Without macro economic success, structural policies may stall or, even worse go the wrong way (reversal to protectionism, etc). In this context, an important part of our structural policy agenda should also be devoted to "policies to be avoided".

At the current stage, the position paper is somewhat abstracting from these macro-structural interactions. In my view, it makes the discussion a bit disconnected from what current policy making debates are about.

John Feldmann

Member of the Board of Executive Directors, BASF

Opening Remarks

The removal of trade restrictions and the emergence of new markets in many parts of the world have created a wealth of opportunities – and risks. However, the assessment of these opportunities and risks differs greatly from sector to sector and from industry to industry, especially with regard to implications for labor.

The chemical industry, for example, is capital- and resource intensive, and investments are generally long term. Access to competitive raw materials and energy play a decisive role, as do proximity to end-consumer markets and solutions tailored to fulfil specific customer needs. Highly qualified, motivated and dedicated employees are absolutely critical. The relative importance of labor as a cost factor is subordinate to factors such as raw material and energy costs.

Over the last few years, the competitive environment in the chemical industry has undergone major changes. Large international corporations like Sabic in the Middle East or Sinopec in China are challenging the traditional image of the chemical industry and its competitive environment. In the last decade, financial investors started to participate in the consolidation of the chemical industry. Now, the consolidation process is being accelerated by the current economic crisis. Major demand growth will stem from populous developing countries like China and India, where customer needs are very different from well-known, familiar Western standards. Adaptation to local or regional requirements paired with close-to-customer production will be essential, not only to provide the right solutions to these markets, but also to avoid purely export-led growth.

The other source of organic growth opportunities in the chemical industry is its contribution to energy and resource efficiency. A study for BASF, for example, has shown that the use of the company's products saves three times more CO2 than is produced over their entire lifecycle.

Any analysis of "division of labor" must therefore always be made against the background of a specific industry or service segment. There are no general rules or solutions that apply equally to all economic participants.

Background

1) General labor market trends – demography is the key for the future division of labor

The high degree of inequality between nations was caused by an uneven spread of capitalism that segmented the international division of labor from the mid-1800s through the mid-1900s. However, since the beginning of the 1960s, the world economy has experienced a new international division of labor in the form of a shift of manufacturing from developed to developing countries and an increase in the volume of international trade. This shift has been accelerated and enhanced through technological advances and an increasing level of skill in developing countries. These new opportunities provide incentives for higher education in these countries, enabling the existing education gap between developed and developing nations to be closed eventually. This would, of course, be a desirable development, as a higher educational standard would be an essential step in reducing the inequality between developed and developing countries, since as it would allow developing countries to participate in production stages that have previously been unavailable to them.

Increasing economic globalization is forcing human resources functions in many industrial and service companies to adapt and to change their traditional structures: They need to take account of factors such as off-shoring and the fragmentation of value chains, and revise their management policies accordingly. As activities decentralize, an effective organizational design involving international standards and global teams is essential to ensure that business units are able to communicate and collaborate efficiently. In addition, the possible impact of supra-national organizations, e.g., EU regulation, on HR action fields must be constantly monitored.

With populations shrinking in Europe, the United States and Japan, demographic change is leading to an aging workforce and a decline in the number of young talents available. This will cause dramatic changes for economies and companies that are unique in newer industrial history. Companies need to gain transparency and conduct a demographic risk assessment process, which can then from form the basis for strategies to ensure productivity and success in shrinking and aging domestic labor markets. Moreover, aging labor markets also mean that companies will have to face the loss of knowledge due to the retirement of a relatively large share proportion of the workforce each year after year.

At the same time, cooperation of universities and other educational institutions are increasing around the globe. We are seeing worldwide growth in education levels, enrolment in higher education is increasing, and more capital is being spent on the secondary sector.

Due to global trading, employees compete with each other beyond national borders. Currently, post-industrial nations still benefit from a growing number of highly skilled migrants, but this is likely to change as living standards increase in emerging countries.

As shown by a recent BCG study on worldwide HR challenges, companies will, however, continue to become global organizations. While the recession may have temporarily dampened these ambitions and fanned protectionist fires, the reasons for companies to pursue global growth endure.

It is crucial that protectionist measures in response to the financial and economic crisis are avoided at all cost. Such measures will harm all globally active companies, which in turn will have damaging effects at the national and even local level. There needs to be a common understanding that global and local activities are not mutually exclusive. The benefits of socially responsible globalization therefore far outweigh the anticipated advantages of protectionism.

2) The chemical industry – sustainable growth and the need for a highly skilled workforce

The chemical industry is a capital- and resource-intensive industry. Access to competitive raw materials and energy are important investment decision criteria. Investment cycles are generally based on long-term considerations. The last decade was characterized by consolidation and the impact of new competitors such as Sabic and Sinopec. The struggle for economic success in the face of ever fiercer global competition requires sustainable processes, products and solutions – even more so in the post-crisis world. We are observing the growing importance of Corporate Social Responsibility, as well as environmental awareness and responsibility.

Besides shifting production and reducing production costs for low-skilled tasks in some areas of manufacturing, recent discussions about the international division of labor often revolve around the possibilities of offshoring in service industries, where medium- to high-skilled knowledge tasks can be transferred to regions with a highly educated local workforce. Thanks to growing access to and the performance of information and communication technology, the potential cost savings offered by such relocations is considered to be significant.

However, while shifting production for cost reasons might be conceivable for service providers or in parts of the manufacturing industry, the picture is, however, quite different for companies in resource- and capital-intensive industries.

Unlike the relocation possibilities in the service industry, whose restrictions lie mainly in technical requirements for service provision, companies like BASF are not as free in the choice of site locations. The proximity to resources and customers is a critical success factor. Employment is not shifted from one country to another for cost reasons; new capacities are created in certain locations to best fulfill market needs.

BASF is also dependent on a highly-skilled and well-trained workforce at all of its sites worldwide, regardless of whether they are in developed or developing countries.

The shortage of qualified labor that will face most Western economies shows the opportunities offered by rising education levels in developing countries. In Germany especially, there will be a high demand for service workers in the healthcare sector and a significant need for engineers by 2020. Also, even if the world population grows significantly overall, Europe's population will decrease by 1.15% between 2010 and 2020. In view of the correlation between population and GDP, this does not bode well for economic growth in Europe. In Western Europe, Germany and Italy will be hit hardest: Germany's population will decrease by 1.4% per year between 2000 and 2020, dropping to 81.16 million by the end of this period.

BASF has never believed that the opportunities of globalization would simply involve the transfer of low-skilled tasks to developing countries, with only high-skilled tasks being retained in developed nations. Instead, we have established our worldwide locations in an effort to strengthen our economic presence in relevant markets. Our presence in Ludwigshafen, Germany, and our presence in Nanjing, China, are in no way mutually exclusive, as both sites deliver essential tasks within our worldwide "Verbund."

Solutions

1) Key success factors for workforce competitiveness

a) Level of education and social competencies are the key to success

The workforce around the world needs to be able to cope not only with globalized markets but also with regionalized or even globalized labor markets. On the one hand, companies need to follow appropriate labor and social standards. On the other hand, it is important that employees are prepared ready and willing to act in a globalized economy and to participate in its benefits. In developed countries especially, the fear of globalization needs to be overcome by achieving a broader understanding of global markets, by pointing out how society benefits from global markets, and by providing examples of global organizations that act in alignment with relevant standards.

Preparing for globalization also means ensuring that our own educational system meets the highest international standards and that we foster from an early age the social and emotional competencies needed to cope in a rapidly changing world. Higher education must prepare students for the world they will face once they join the workforce. This means that greater emphasis has to be placed on the importance of working in teams, the ability to cope with differing views, raising and responding to new ideas, and finding solutions to problems.

b) Mobility and cross-cultural competencies as the basis for being part of a regional or even global labor market

In order to remain competitive, the workforce also needs to become more mobile. The faster pace at which global markets are evolving requires companies and their workforce to adjust at the same speed in order to remain key central market players in their markets. However, this mobility is not possible without preparation and support, especially in those parts of the workforce less familiar with globalization. Therefore, education must not only meet the highest international standards, but must also provide students with international experience. This includes involves the including and integration of appropriate global content in all educational fields, providing input from international experts, as well as encouraging students to gain experience abroad. All of these factors are not only central components in creating a highly mobile workforce, but also help to develop cross-cultural competencies. Without awareness of and familiarity with a variety of behaviors, conventions and opinions from different cultures, workforce mobility cannot evolve at the international level.

2) Key success factors for companies' competitiveness

a) New culture of diversity: a corporate culture that encourages diversity and inclusion

Global companies need to address the diversity of their workforce. In addition to demographic characteristics like age, gender, race, religion or education, diversity also relates to less tangible differentiating factors like personal skills, values and experiences. These 'invisible' differences can have a very tangible and immediate effect on a company's performance and results. Diversity requires inclusion as the basis of a corporate culture shaped by respect, openness and mutual esteem that improves a team's performance. The combination of diversity and inclusion in corporate culture creates a welcoming working environment in which all employees may are able to introduce their own views, experiences and ideas. This is the basis of creativity and innovation – the decisive factors for lasting business success.

b) Companies have to establish a strong employer brand to attract and retain talents

Besides the traditional focus on education, global companies should use their worldwide presence to locate and develop talents all over the world. BASF has started a number of such initiatives based on its strategic guideline "Form the best team in industry," BASF has started a number of such initiatives. They help us to recruit more employees in the regions in which we operate on the basis of uniform criteria throughout the BASF Group, and they help us to develop employees in a focused manner. One of our current projects is the implementation of a standardized recruiting approach for Europe. In many countries, BASF works to establish close relationships with local universities and vocational training institutes through various channels such as career talks, graduate recruitment, internship programs and research projects. In order to be effective, the recruiting organization has to be adapted to the specific labor market in each region and has to be backed by an appropriate talent management and development program. BASF has therefore also started an initiative to intensify its global efforts in career development efforts.

Companies will also have to find ways to help employees to cope with demographic challenges. Our program Generations@work analyzes the various implications of demographic change and provides solutions. For example, the program examines the shifting of gender roles and new lifestyles that require additional measures and solutions to help balancing career and family, for example by ensuring care for children and/or elderly relatives. Other parts of the program deal with the need for age-specific HR strategies to foster a high-performance workforce to ensure employability, sustainable recruitment, productivity and innovativeness, for example by providing job options for employees aged 50+.

Jointly, we hope that these projects will strengthen our position as a preferred employer and help us to act globally to attract talents in regional labor markets.

c) Successful post-crisis entrepreneurship is based on sustainable development

Post-crisis competitiveness will be based on the ability to cope with global structures of both companies and employees. Market growth is likely to be limited; competition is intensifying, and global megatrends are demanding solutions. Now, more than ever, global companies are obliged to adopt a responsible position toward the environment and society. The current financial and economic crisis is a major challenge to most of the world's economies, and its ultimate consequences are still unclear.

The relocation of work to developing nations might seem tempting when looked at only from the perspective of cost-efficiency. But this is a highly simplified view of complex and dynamic world markets which are driven by the availability of resources as well as requirements dictated by customer needs. BASF's past and present focus on sustainable development at the global level is based on the firm belief that the benefits of globalization will only manifest themselves when all actors adhere to set standards of responsible and sustainable behavior. The financial and economic crisis has shown us quite plainly how quickly the upward spiral of higher returns and lower production costs can come to an end. We should therefore be less generic when looking at worldwide developments and instead evaluate them on an industry-

specific basis. In order to have access to future markets and remain competitive, we must assume responsibility for our shareholders as well as for our employees, for the environment, and for society as a whole. Sustainability is integrated strategically and organizationally at BASF. We believe that it provides us with a competitive advantage and minimizes risks.

Dennis Goerlich

Kiel Institute for the World Economy

Background

What are the benefits of a new global division of labour? Possibilities for relocation of production stages to low-wage countries imply huge cost savings and productivity gains for firms. The manufacturing industries have long profited from these savings, but in the service industries off shoring is not yet a very common strategy. In general, back office services in all sectors of the economy have hardly ever been off shored. Service off shoring, which might importantly include the off shoring of medium- to high-skilled tasks, is only made possible by new ways of communication and storage (internet), which allows the fast and secure transmission and delivery of codifiable output that does not have to be delivered in person. Potential cost savings are sizeable: for example, one article claims that a call centre in India incurs only a quarter of the cost of a similar centre in the US.

The new global division of labour also allows developing countries to participate in production stages that have formerly been unavailable to them. Such new opportunities might change the incentive structure of educational investment in these countries, so that the existing education gap between developed and developing nations might finally be closed. In this respect, also western economies have an incentive to cooperate on education questions because the more skilled the foreign labour force is, the more attractive it becomes as an offshoring location.

On the one hand, it, thus, appears that a new global division of labour is generally a desirable development. On the other hand, it brings with it a number of uncertainties and consequences, which may present a big challenge to society and politics. In particular, the new global division of labour is likely to affect people that have not formerly been exposed to the forces of globalisation, namely those workers with skilled jobs. These workers suddenly become vulnerable, might slip into unemployment, or might see their wages fall relative to those of others. Entirely new patterns of inequalities might emerge. Mixed with the current financial crisis and the looming recession, public support for globalisation might be severely threatened, the risk of protectionism rises, and ultimately even a surge in political extremism is thinkable.

Solutions

Unwanted consequences of the new global division of labour need to be prevented.

(a) The population will have to be enabled to cope with the new challenges ahead of them. The current financial and economic crisis adds even more urgency to this point, as the crisis is very likely to completely reshuffle the world's labour markets. It is yet unclear how firms react to contemporary critical situations, but structural change which usually takes a long time to unfold might be accelerated strongly due to the crisis.

(b) Yet, throughout the crisis, support for globalisation will have to be held up and protectionist tendencies need to be prevented for the benefits of globalisation to be reaped.

(c) Also the welfare state will have to react to the changing surroundings.

(d) While a good and modern welfare state will play its part in keeping the workforce employable, teaching the (future) workforce the right skills to cope with rapid change is elementary.

Prevent protectionism.

Less globalization and more redistribution would be an intuitive though misleading response to the perceived increase in inequality, for two reasons. One is that the increased international mobility of goods, financial assets, people, and ideas is most likely to create income gains and hence is worth having. What seems to matter for changes in inequality is technological change, or possibly the combination of globalization with technological change. Thus reducing globalization by taxing the winners to compensate the losers is a solution that will not help, because it will mean foregoing income gains without necessarily affecting rising inequality.

We need clarification which new patterns of inequalities might emerge and who becomes vulnerable.

Many researchers suggest that it will turn out to be wrong to look solely at educational skills only when considering emerging inequalities. Instead, job content in terms of tasks will matter more (routine vs. non-routine, personal vs. non-personal tasks). Only jobs consisting of internationally contestable tasks will be threatened by the new global division of labour. Technological change might play an important part in continuously altering the spectrum of contestable tasks. Hence, inequalities will be determined along these dimensions in the future, whereas they were clearly determined along educational differences in the past. Hence, economic policy might promote and strengthen the learning of personal, non-routine, cognitive tasks as these are the tasks that make a job a good job in the future. Research in this area should be strengthened to make clear where inequalities emerge and where action should be taken.

We have to teach the right skills for people to become and remain successful when the nature of work is becoming more heterogeneous.

Rapid changes of job contents, individualised employment biographies, and the blurring occupational borders will make work very heterogeneous. Consequently, workers will have to stay adaptable. It has been argued that workers need strong competences in social and emotional competences, problem-solving skills, and versatility to cope with such challenges. Teaching social and emotional competences (so-called non-cognitive skills) cannot start early enough, possibly even with children at pre-school age (Nobel Laureate James Heckman is a prominent proponent of this idea). At school and university, lessons have to strictly convey problem-solving capacities by designing instruction in a participative and activating manner. Such capacity will also foster versatility, which is urgently needed to stay successful in a world with rapid organizational change.

Instructional methods at school and university have to change radically.

Reports and videos from class rooms show a very limited number of varieties of instructional methods: the teacher speaks for most of the time and student involvement is limited. Yet, in order to obtain problem-solving skills and versatility, this is not sufficient. Instead, lessons should involve the study of real-life problems, should emphasize team work and cooperative learning, encourage students to produce own new ideas, and train social and organising abilities. Students should be able to autonomously analyse an issue, structure information, work in a team, conduct and chair discussions, and to present own ideas to an audience. Learning should occur by actively going out and finding the information the students need. Previous knowledge should be evoked, learning objectives should be transparent to the students, and the individual learning process should be closely monitored. Finally, also instructional quality is important. Educational research stresses three elements necessary for high-quality instruction: high cognitive activation, good classroom management, and personal and emotional support and respect of the student. Incentives for educators to adhere to these goals have to be improved.

The welfare state needs to consistently focus on policies that enable people to adapt to their individual new situation.

The welfare state will have to part from the current strategy of income support and helping particularly the low-skilled, low-paid workers in vulnerable sectors. For example, it is no longer appropriate to train people from losing sectors for jobs in apparently winning sectors. Instead, welfare state policies should enable all workers affected by the new global division of labour to adapt to their new situation, and hence account for the diversity (in terms of skills and sectors) of the affected. Welfare accounts and benefit transfers are two such measures: Welfare accounts transfer property rights to people so that they can use their accounts of e.g. unemployment benefit according to their needs. Benefit transfers focus on changing the incentives to take on employment or participate in training programmes by transforming part of the benefit into vouchers.

Developing countries should take the chance to participate in the global market place and work on improving educational levels in their countries.

Recently emerging possibilities for services off shoring opens up new fields in which developing countries can participate in the global market place. Previously, only unskilled tasks were shifted abroad, but now also medium- and even high-skilled tasks might be done in developing countries. This entirely changes the incentives for a developing country citizen to obtain education. The argument here is similar to the brain gain idea from migration studies: the pure prospect of working in a skilled job abroad later in his life (perhaps a current migrant in the family has already made respective contacts) provides an incentive to get education today. Under a new global division of labour, this may be similar, except for the fact that one does not have to migrate. The new global division might thus help to close the education gap between developed and developing countries. The financial and economic crisis makes developing countries especially vulnerable. Consequently it will be important to continue the integration of poorer countries into the new global division of labour.

Kris Gopalakrishnan

CEO and Managing Director, Infosys Technologies Ltd.

Leverage technology, compile country/industry specific data, facilitate immigration/ migration and increase dialogue

There is a mismatch in the demand for talent versus the supply and this is bound to become worse in the future.

The demand for talent will see a rise in emerging fields like biotechnology, genetic technology, green technology, renewable energy and other environment-related fields. Currently, there is a mismatch between what is needed and what is available, not only in terms of the quantity but also the quality of talent.

Some of the prominent trends are:

The knowledge content of jobs today is increasing and competencies run the risk of becoming obsolete sooner than they did earlier. Factories for instance are becoming robotic and this calls for familiarization with latest developments in production technology

Country and regional demographics are playing a key role in developmental plans. While few countries are grappling with the problems of an ageing workforce, others are coping with the pressures of creating employment for a large number of young and talented job seekers.

Trends like these are changing the way we do business, the way we define talent and the way we interact with a global workforce.

However, there will always be jobs for the right people.

To bridge the existent gaps and also to increase employability options of the global workforce, various measures are needed.

Firstly, at the core of every reform initiative should be technology – to maximize its scale, scope and impact.

Secondly, immigration and migration policies need to favor an osmotic global workforce.

Next, there should be conscious efforts to have accurate data on workforce by country/ industry, etc. This will facilitate a clear understanding of the scale and scope of the gaps and facilitate effective, focused responses to the same.

Finally, dialogue between nations should be encouraged to aid a consensus on the need for a collective long-term response to tackle the challenges.