

## Dialogue Europe Russia

### “Diversification, Modernisation and Innovation of Economies”

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The world economy is going through a time of fundamental change, driven by the rapid growth of emerging economies, pathbreaking advances in information and telecommunication technologies, fundamental changes in the organisation of production processes and work, and changes in the international division of labour. In order for Europe and Russia to thrive in this new environment, an economic restructuring is essential. Let us consider first the most important elements of the current economic transformation and then the resulting desiderata for restructuring.

#### ***The nature of the current economic transformation***

The world economy is currently witnessing the beginnings of a far-reaching transformation in the organization of production and work in the mature, industrialized countries and, increasingly, in the rapidly growing emerging market economies. This transformation has three striking features: (1) the geographic decomposition of value chains, (2) the rising importance of personal relationships, and (3) the increasing flexibility, heterogeneity and versatility of work.

#### The geographic decomposition of value chains

The new advances in information and telecommunications technologies, together with huge improvements in logistics, are enabling firms nowadays to decompose their various stages of production geographically into clusters of tasks, locating each task cluster in the countries and regions where it is most profitable.<sup>1</sup>

An important consequence of the geographic decomposition of value chains is that global competition is occurring at a lower level of disaggregation. In the first Industrial Revolution, international competition was primarily among countries; by the second Industrial Revolution, transportation costs had fallen sufficiently to induce a marked increase in competition among multi-national companies, transcending national boundaries. Now the new wave of globalization is leading us into a new world where individual workers, performing similar tasks in different countries, are brought into direct competition with one another. This means that a team of workers in one country may suddenly lose their jobs because a team of workers in another country may now be able to offer a more profitable combination of human capital to wages.

This change in the organization of production has two important implications:

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<sup>1</sup> This has become possible on account of the vast expansion in the goods and services that became tradable. Alan Blinder (2006) made this point succinctly when he wrote that tradable goods used to be whatever you could put in a box, whereas nowadays anything that is electronically transmittable has also become tradable.

- (1) Sectors are becoming increasingly irrelevant in determining job security. It is no longer the case that jobs are relatively secure in the growing sunrise sectors and relatively insecure in the shrinking sunset sectors. The reason is that jobs in the growing sectors can be outsourced and offshored. Sectors are no longer the relevant entities for determining the geographic security of jobs.
- (2) Skills required for the performance of routine tasks – regardless of whether they have traditionally been associated with high-skill work – are no longer a guarantee for rising wages and job security. The reason is that such tasks may be electronically transmittable and thus internationally outsourcable.

The empirical evidence for these developments is growing steadily.<sup>2</sup>

### The rising importance of personal relationships

Independently of comparative advantage, three types of tasks appear secure from international outsourcing:

- (i) *Physical delivery tasks*, involving physical delivery to customers: For example, retail sales personnel is required where the customers are making their purchases. Waiters are required in the restaurants where customers are eating their meals; construction workers are needed where homeowners wish to place their houses. Similarly for gardeners and taxi drivers.<sup>3</sup>
- (ii) *Noncodifiable tasks*, which cannot be defined in terms of routine procedures: People engaged in creative and leadership tasks – for example, managers or researchers working on common projects – often require physical contact to be effective.
- (iii) *Personal relationship tasks*: The work of psychotherapists, nurses, school teachers, social workers, and many other tasks involves building personal relationships and these also require physical presence with the recipients of these services. Personal relationship tasks may be combined with sales of manufacturing goods, for example, with regard to service, maintenance, and interactive product adjustment and development. The success of German business in exporting manufactured goods depends significantly on this link to personal relationship tasks.

The new advances in information and telecommunications technologies enable firms to gather much more detailed, differentiated information about their customers' preferences and to exploit economies of scope among complementary customer needs. Satisfying these often requires building personal relationships. Furthermore, as routine white collar work in advanced industrialized countries is increasingly offshored or performed by computers, increasing emphasis is placed on noncodifiable tasks. In these ways, the new technological

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<sup>2</sup> The geographic decomposition of value chains has been overviewed by Baldwin (2006) and described in detail by Amiti and Wei (2005), Ando and Kimura (2005), Hanson et al. (2005), and Yi (2003). The “unbundling” of production stages between the U.S. and Mexico has been documented by Cañas and Coronado (2002) and Feenstra and Hanson (1996). The offshoring of labor-intensive Japanese manufacturing to other East Asian nations is examined by Fukao, Ishito and Ito (2003) and Urata (2001).

<sup>3</sup> Due to immigration, however, this does not mean that the domestic workers currently performing these jobs are sheltered from competition by foreign workers.

advances are promoting tasks with personal-relationship content. Recent literature provides empirical evidence for this phenomenon.<sup>4</sup>

It is clear that the three sets of tasks above cut across the divide between the sunrise and sunset sectors, and between skilled and unskilled workers. Thus these recent developments imply new fault lines of social fragmentation, not merely dividing the skilled from the unskilled, but pursuing a more complex course influenced by such factors as the electronic transmittability, codifiability, physical deliverability, and personal-relationship content of tasks.

### The increasing flexibility and versatility of work

As a growing body of empirical evidence attests, the organization of work in advanced, industrialized countries is changing in both manufacturing and services. The command-and-control style of management - where authority flows from the senior executives down through middle management to the workers in the functional departments - is being replaced by flatter organizational structures, in which customer-oriented teams report to the central management with few, if any, intermediaries. These teams frequently require multi-tasking, job rotation, and sharing of multiple responsibilities.<sup>5</sup>

To succeed in the skilled labour market nowadays, people need more than competence in their specialized occupation.<sup>6</sup> They also need to combine their occupational skills with social competence, the ability to take responsibility for one's own work, knowledge of other jobs (so that they can deal with customers and communicate effectively with other members of their team), as well as the ability to adapt their skills to changing customer needs. Increasingly, they require versatility across tasks, the potential to acquire multiple skills, and the ability to learn how the experience gained from one task enhances productivity in other tasks.<sup>7</sup>

The recent empirical evidence on wages – that the wages of unskilled workers has risen relative to those in the middle reaches of the income distribution and that wage inequality has risen in the upper reaches of the distribution – is consonant with the hypothesis that the recent advances in information and telecommunications technologies complement the work of high-wage workers doing creative, noncodifiable tasks or flexible, versatile work in customer-oriented teams, while having relatively little effect on the low-skill, low-wage work. Insofar

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<sup>4</sup> The importance of personal relationships is investigated by Blinder (2006a, b). Van Welsum and Reif (2005) and Van Welsum, Reif and Vickery (2006) examine the offshorability of jobs in terms of electronic transmittability, personal interactions, IT intensity, and task codifiability.

<sup>5</sup> The move towards more flexible work organization in Nordic countries – in terms of increased delegation of responsibility, accelerated acquisition of versatile human capital, and the rise of team work, job rotation, and multi-tasking – has been documented by NUTEK (1996, 1999). Empirical studies along analogous lines for various European countries include the European foundation (1997, 1998) and the OECD (1996b). Gallie, White, Yuan Chen and Tomlinson (1998) consider evidence of work reorganization in the UK. Caroli and Van Reenen (2001) explore the relation between work reorganization and skills in the UK and France. Bresnahan, Brynjolfsson, and Hitt (2002) explore the relation between work reorganization and skills for the US. Aoki (1990) examines new forms of work organization in Japan. Osterman (1994) and Lawler, Mohrman and Ledford (1992) focus on the restructuring of work in the US. Other studies of the economic implications of the organizational change include Appelbaum and Bott (1994), Mitchell, Lewin and Lawler (1990) and Levine and Tyson (1990). This evidence also attests to the increasing flexibility, heterogeneity and versatility of work.

<sup>6</sup> Further theoretical studies of the reorganization of work include Athey and Schmutzler (1995), Becker and Murphy (1992), Bolton and Dewatripont (1994), Kremer and Maskin (1995), and Milgrom and Roberts (1990), and Yang and Borland (1991).

<sup>7</sup> For analyses of multi-tasking, see for example Carmichael and MacLeod (1993), Holmstrom and Milgrom (1991), and Lindbeck and Snower (1996, 2000).

as personal services are luxury goods (so that their demand rises faster than income), we would also expect the earnings of some unskilled workers (namely, those engaged in personal delivery and personal relationship tasks) to rise relative to other low- and middle-wage workers.<sup>8</sup> Moreover, the new technologies may substitute for middle-wage workers performing routine tasks or they may promote the international outsourcing of such tasks.

## ***Policy Implications***

The three new features of globalization that we identified above – the geographic decomposition of value chains, the rising importance of personal relationships, and the increasing flexibility and versatility of work – imply that work is becoming more heterogeneous. Workers used to be easily classifiable into well-defined occupations, each of which consisted of a well-defined bundle of tasks. These occupational categories were similar from country to country and were also reasonably stable through time. In the new stage of globalization, occupational barriers are breaking down, for a variety of reasons.

First, as value chains are decomposed geographically, the tasks that were grouped into an occupation can become unbundled. For example, routine white-collar jobs – such as standardized book-keeping procedures and routine phone calls – can be outsourced, leaving white collar workers to restructure their job descriptions along more creative, imaginative, non-systematizable ways. The resulting jobs tend to be very heterogeneous.

Second, as personal relationships become an increasingly important characteristic of non-offshorable jobs, workers combine their primary work competences with a wide variety of social, communication and interaction skills. These combinations are also highly heterogeneous.

Third, the new information and telecommunications technologies not only permit firms to unbundle their value chains, but they also allow workers greater latitude in choosing their idiosyncratic constellations of tasks. Due to the resulting flexibility and versatility of work, workers are increasingly choosing portfolios of skills that are appropriate to their individual abilities and their customers' preferences. Since these abilities and preferences are heterogeneous, the nature of work is becoming increasingly heterogeneous as well.<sup>9</sup>

Fourth, the new technologies permit firms to identify increasingly differentiated customer needs and to bundle these needs in idiosyncratic ways in order to reap differentiated economies of scope. Consequently workers must be willing and able to keep finding new market niches in which they – with their particular human capital, working with their particular physical capital and resource endowments – have a comparative advantage.

These considerations have far-reaching implications for policy making and business strategy. For countries to thrive in this new, flexible economic environment – by generating relatively high-value-added growth and relatively low growth volatility – various institutional prerequisites must be satisfied.

- To exploit the productivity gains from the geographic decomposition of value chains, the combination of personal relationships with sales of goods, and the increasing flexibility and versatility of work, it becomes more important than ever before to create an economic environment based the rule of law, rigorously enforce property rights and the effective means to fight corruption.

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<sup>8</sup> For evidence see Mazzolari and Ragusa (2007).

<sup>9</sup> The implications of this heterogeneity for centralized bargaining are analyzed in Lindbeck and Snower (2001).

- The gains from the new flexible arrangements can only be reaped under conditions of intense competition. Competition policies must be in place to prevent interest groups from receiving privileged access to financial and economic resources and from engaging in effective rent-seeking activities.
- Stable economic growth and low economic volatility will depend increasingly on economic diversification. Export diversification is commonly measured by the number of products with revealed comparative advantage that a country exports. Revealed comparative advantage is measured as the ratio of the export share of a given product in the country's export basket to that share at the world level. A high degree of export diversification enables a country to exploit economies of scope in production. Recent studies (e.g. Hidalgo et al. (2007)) show that China and India have a high degree of export diversification, relative to their GDP per capita.
- By contrast, heavy reliance on raw material exports makes a country vulnerable to swings in world raw material prices.
- Another desideratum for stable growth is a high sophistication level of the country's export basket. The level of sophistication of a product is measured as a weighted average of the GDP per capita of the countries exporting that product. High sophistication levels enables a country to take advantage of relatively high productivity and wages by producing products exported by rich countries. Once again, China and India have a high degree of export sophistication, relative to their GDP per capita.
- To exploit effectively the diverse gains from the new, flexible economic environment, countries need a well-developed Mittelstand (middle-class entrepreneurs). Economic growth in the new environment is sustainable when it is widely spread across the working age population. The reason is that multi-tasking, job rotation and work in teams benefits greatly from cooperation across people within complex value chains.
- The new gains from trade can be readily exploited only if the costs of entry into and exit from the economy are low. This means that administrative and regulatory costs of doing business must be kept low. The rules governing the export and import of goods and services must be kept simple.
- To thrive, countries also require a well-developed financial system, enabling credit to flow to enterprises that are continuously restructuring their value chains.
- Old-style, hard industrial policy is likely to do more harm than good. The reasons are straightforward. First, rapid growth means being able to respond rapidly to changing technologies, customer demands and market conditions. Hard industrial policy is not flexible enough for this purpose. Second, these policies are often easily captured by special interest groups.
- The only sort of industrial policy, if any, that may be promising is "soft" policy, whereby government and business cooperate in designing interventions that reduce coordination problems in potentially high-growth sectors.<sup>10</sup> Soft industrial policy covers issues such as reducing barriers to the adoption of new technologies, increasing the supply of workers with the appropriate portfolios of skills and the appropriate degree of adaptability, improving regulation and making the appropriate

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<sup>10</sup> See Harrison and Rodrigues-Clare (2010).

improvements in infrastructure. Such soft industrial policy tends to reduce the scope of rent-seeking activities and corruption.

- The kinds of FDI to be encouraged are those associated with backward and forward linkages to domestic suppliers and buyers, respectively,<sup>11</sup> and ones in which foreign firms help domestic exporters break into new markets.<sup>12</sup>

In order to spread the material gains from economic growth broadly throughout the population, welfare systems will need to be restructured in both Europe and Russia. To address this challenge, it is increasingly inappropriate to rely on education and training policies that aim to move workers from identifiably insecure jobs in declining sectors to identifiable secure jobs in expanding sectors – as suggested, prominently, in the EU’s Lisbon Strategy. The reason, as noted, is that the new stage of globalization is progressively breaking the link between the economic prospects of a sector and the economic prospects of the local employees in that sector.

As competition increases among disparate groups of workers in disparate parts of the world, the welfare state must give workers an incentive to keep finding new market niches in which they – with their particular human capital, working with their particular physical capital and resource endowments – have a comparative advantage. In short, the new challenge of the welfare state is to *promote adaptability* of workers.<sup>13</sup> As workers’ job security becomes decoupled from their skills and sectors, the welfare state needs to provide more flexible forms of social insurance, which help people adjust to changing market conditions, rather than ones targeted at particular skill groups or sectors. What is needed are policies that empower workers whose jobs become at risk to adjust their idiosyncratic portfolios of tasks and their idiosyncratic skills to variable, differentiated customer needs.

As globalization creates changing, often unpredictable, constellations of winners and losers within a country, the welfare state increasingly needs to give workers the tools to turn themselves into winners whenever they happen to find themselves among the losers. This implies a new way of thinking about social insurance. In the old policy paradigm, people’s skills and job definitions are taken as given (or adjustable only very gradually) and it is the welfare state’s job to provide automatic stabilizers that support them in the event of adverse shocks. In the new paradigm, the aim is to make people more adaptable and versatile, so that they themselves – through their choices of jobs and skills – become part of the automatic stabilization process.

There are two potentially effective ways of achieving this goal: “welfare accounts” and “benefit transfers”.

Welfare accounts promote adaptability by giving people property rights in welfare services. These property rights enable people to internalize more of the costs and benefits of the welfare services and thereby they induce people to use these services more efficiently and adjust them automatically to their changing employment, skill acquisition and pension needs.

Benefit transfers involve redistributing economic incentives – particularly incentives to work and train – to the disadvantaged. This differs from the traditional approach of redistributing

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<sup>11</sup> Kee (2010).

<sup>12</sup> Aitken et al. (1997).

<sup>13</sup> Of course, the adaptability of firms must be promoted as well, for example, through policies that promote competition and stimulate infrastructure investment. These policies however lie beyond the purview of the welfare state.

purchasing power to the disadvantaged. Whereas the latter generally discourages people from engaging in productive activities and adapting to new conditions of work, the former encourages them to do so.

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