
The Nordic Model and the Challenge from Global Value Chains

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Are the Nordic countries winning or losing the globalization game?

Global dispersion of value chains

With the increasing ease of communication and transportation, the falling costs of processing and transferring information, and the major political and societal changes that have occurred in recent years, the link between economies of scale and the geographic concentration of production has weakened. It has become feasible and profitable to disperse global value chains in time and space at a fine level of aggregation. This trade-in-tasks (Grossman and Rossi-Hansberg, 2008) or second unbundling (Baldwin, 2006; 2009) is among the most important features of modern globalization.

Basic economic theory suggest that deepening specialization brings about aggregate benefits. As agents and institutions involved do not necessarily/fully redistribute these benefits, there are bound to be both winners and losers. Therefore, current high-income countries are justly concerned about the sustainability of their prevailing standards of living.

The Nordic model

The Nordic countries are widely recognized as a group that has been able to combine efficiency and equity to meet the challenges imposed by globalization (Andersen et al., 2007; Sapir, 2006). Nordic countries differ in many respects but also share common features that make up a social and economic system that may be referred to as the “Nordic model”.

The principal features of this model include the following: consensus-driven decision making, collective bargaining and strong labor market institutions, extensive transfers to households and publicly provided social services financed through taxes, and high public investment in education and research. The essence of the Nordic model is a combination of collective risk sharing and international openness (Andersen et al., 2007).

Sapir (2006) identifies four types of socioeconomic models in Europe – the Continental model, the Mediterranean model, the Anglo-Saxon model, and the Nordic model (Figure 1.1). He then compares the ability of the models to bring about efficiency and equity in society using various indicators of social justice, income distribution, employment protection, economic growth and stability, and living standards. While there is often a trade-off between equity and efficiency, he argues that the Nordic countries have been able to achieve both.

Figure 1.1. The Four European Models: A Typology

		EFFICIENCY	
		Low	High
EQUITY	High	Continental	Nordic
	Low	Mediterranean	Anglo-Saxon

Source: Sapir (2006).

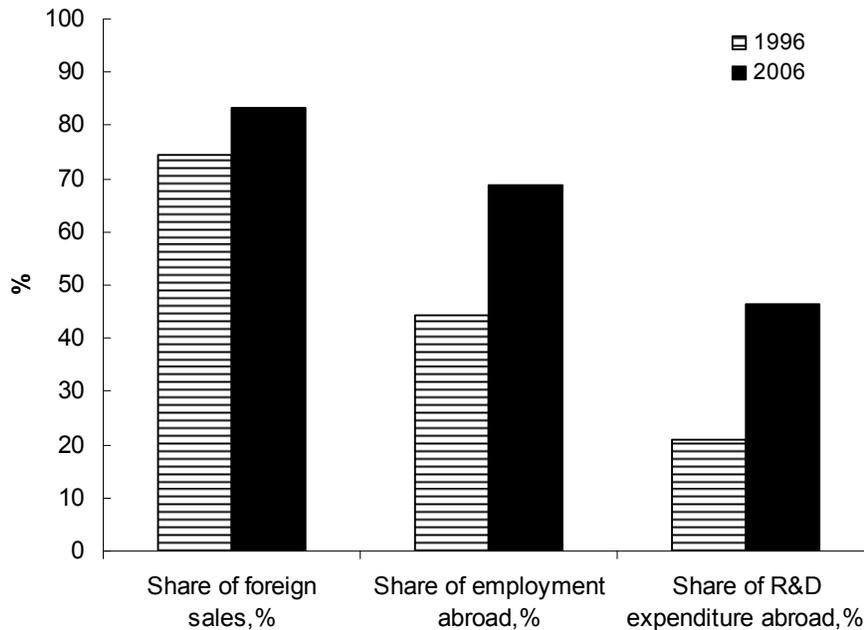
Indeed, the Nordic economies have been performing well in terms of export and GDP growth, external balances, and public finances (Andersen et al., 2007). They were hit hard by the global economic crisis, but they are recovering faster than Europe as a whole and especially faster than Southern European countries, many of which continue to face major imbalances and structural weaknesses.

The offshoring challenge

Past achievements aside, the long-term sustainability of the Nordic model is in doubt. Multinational enterprises’ search for the most cost-effective location of each business activity is eroding the Nordic countries’ manufacturing bases and weakening the traditionally densely networked industrial clusters. Especially in Finland, which has a large high-wage manufacturing sector, this is clearly an issue of concern. Furthermore, national clustering is arguably a feature that promotes solidarity among labor market participants and private citizens.

Having a highly internationalized business sector has been an integral part of the Nordic model for decades; the largest corporations in the region currently derive their revenue primarily from international operations (Braunerhjelm et al., 2010). The internationalization of business has been exceptionally fast in the past few decades, as illustrated by the Finnish case (Figure 1.2). This internationalization has also been qualitatively different from earlier times: internationalization has concerned not only production jobs but also high-value-added “supportive” tasks such as research and development (R&D). Earlier internationalization has often translated into increasing exports by expanding domestic production; in the current mode, internationalization often means choosing globally optimal locations for ever-finer slices of the value chain. With the increase of this type of internationalization, large corporations are detaching themselves from their original home countries and national institutions.

Figure 1.2. Role of overseas operations in the 30 largest manufacturing companies in Finland



Source: The authors' calculations.

Outsourcing, offshoring, and technical changes have led to a polarization of the labor markets in developed countries. The shares of managers and professionals and also personal service workers tend to grow at the expense of manufacturing and routine office jobs (Goos, Manning, & Salomons, 2009). Mid-range jobs are hit the hardest by the current phase of globalization.

Policy responses

In the public debate, it is recognized that offshoring and the global dispersion of value chains are challenges for small open economies. Consequently, all Nordic countries have high-level groups or councils that consider the opportunities and threats of and policy responses to globalization. Finland has been particularly active in this respect (Baldwin, 2006; Ottaviano & Pinelli, 2004; Secretariat of the Economic Council, 2004, 2006a, 2006b), closely followed by the other countries. On 12 April 2005, Denmark set up a special globalization council chaired by the country's prime minister; Sweden has a similar council (www.sweden.gov.se/sb/d/9299). With respect to globalization, all Nordic countries have come to the same conclusion: one should *not* resort to policies that attempt to curb globalization but rather should implement reforms improving knowledge- and productivity-based national competitiveness; the Nordic countries should embrace deepening international specialization rather than fight it.

What is at stake?

At least one key aspect of the Nordic socioeconomic model, that is, the labor market institutions and related wage formation mechanisms, is undergoing a major change: collective bargaining arguably becomes less desirable and less feasible when the locus of competition shifts from the industry and firm levels to the level of individual job assignments. This shift may also more generally weaken solidarity among inhabitants. Will this and other changes erode the Nordic model, or can these countries continue to achieve “the best of both worlds”?

In what follows, we consider of the motivations for and the extent of value chain dispersion. The Nordic countries are discussed as a group, although we primarily use Finland as an illustrative example. In the concluding section, we consider the sustainability of the Nordic model in light of the presented evidence.

The Nordic countries as participants in global value chains

The business sectors in the Nordic countries have exceptionally high ratios of foreign to domestic employment. In this respect, Denmark ranks at the top. Danish companies employ 1.48 million people abroad, which is equivalent to 52% of their domestic

Box 1. Nokia in the Finnish Economy

Nokia is the most important single company in the Finnish national economy. Some 30% of its (including Nokia Siemens Networks) global R&D personnel is currently in Finland. In 2009, *Nokia* accounted for more than one-third of the total R&D and one-half of business-enterprise R&D performed in Finland. Its share of the country’s GDP was nevertheless “only” 1.6% (Box 1 Table 1).

Box 1 Table 1. The role of Nokia’s domestic activities in the Finnish national economy

	Nokia
Share of GDP	2.6% in 2008 (1.6% in 2009)
Contribution to GDP growth	2.13 percentage points in 2000 (the peak year)
	-0.11 percentage points in 2008
	-0.88 percentage points in 2009
Share of total employment	0.9% in 2009
Share of manufacturing employment	5.5% in 2009
Share of total R&D exp. (GERD)	37.6% in 2009
Share of business sector R&D exp. (BERD)	51.2% in 2009
Share of patents (EPO patent applications)	43% in 2006
Share of corporate taxes	21.7 percent in 2003 (the peak year)
	7.1% in 2008
	2.6% in 2009
Share of manufacturing value added	11.5 % in 2008

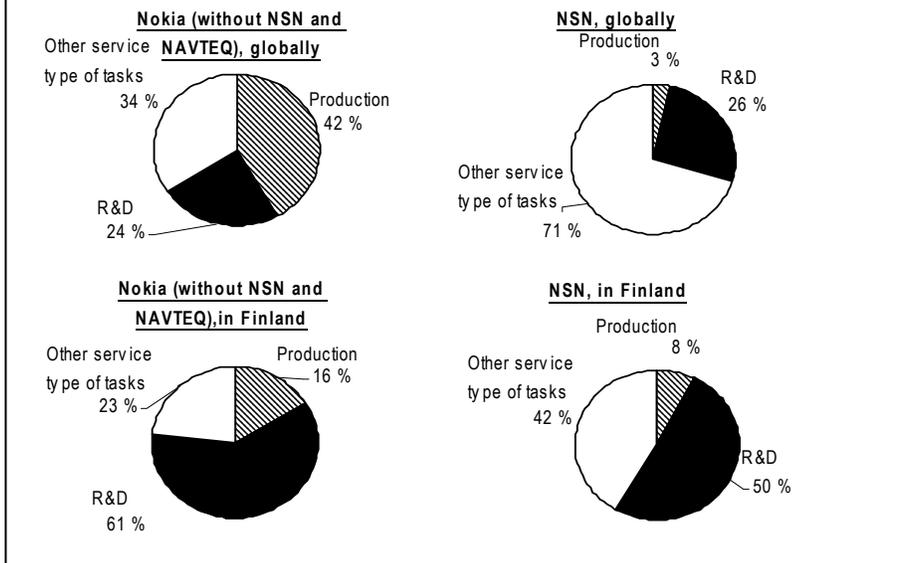
Source: Ali-Yrkkö (2010)

Notes : GERD, Gross domestic expenditure on R&D; BERD, Business Enterprise Research and Development; EPO, European Patent Office.

Nokia's supplier network in Finland has drastically changed in the 2000s (Seppälä, 2010). Finnish manufacturing suppliers have lost most of their positions to competitors. Some of these firms were acquired by Asian companies that sought new technological competencies and/or new customers. The Finnish suppliers that remain have offshored their manufacturing operations (e.g., *Salcomp*). In non-manufacturing tasks, such as those in software development, *Nokia* continues to have an extensive subcontractor and partner network in Finland.

Even if *Nokia* is still classified as a manufacturing company by Statistics Finland, only a minority of its employees works in “pure” production (Box 1 Figure 2): in the parent company (*Nokia* without *Nokia Siemens Networks* (NSN) and *Navteq*, its US-based digital maps and navigation arm), roughly 40% of employees work directly in production. In NSN, the corresponding share is only 3% (SEC, 2008). Whereas NSN has a significant number of employees in delivery execution, logistics, global procurement, and other tasks related to manufacturing, the great majority of employees are working on R&D, sales and marketing, and other service types of tasks. The figure also illustrates the central role the Finland has in *Nokia's* global R&D.

Box 1. Figure 2. The employment of Nokia and NSN by tasks (2008) globally and in Finland



employment. For Finland and Sweden, the corresponding figures are 19% and 25%, respectively.¹ In addition to resulting from openness of these countries, these high shares are attributable to the high employment shares of larger companies (Braunerhjelm et al., 2010).

¹ Sources: Statistics Finland, Statistics Sweden, and Statistics Denmark; the authors' calculations.

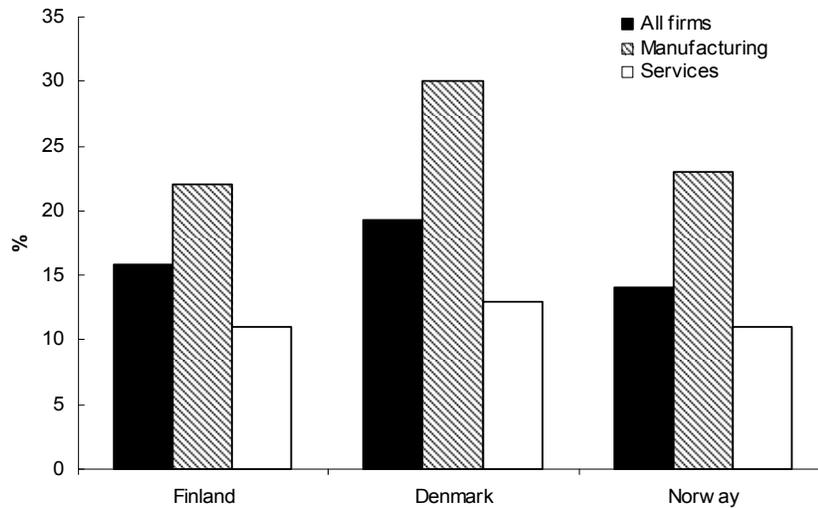
The extent of outsourcing and offshoring

In August 2003, one of the world’s top manufacturers of mobile phone chargers, *Salcomp Oy*, announced that it would relocate its production from Finland to China. This news marked the beginning of the current phase of globalization for Finland.

Although it was feared otherwise immediately following *Salcomp’s* announcement, offshoring has remained relatively modest in Finland: in 2000-2006, some two thousand jobs were relocated annually (Ali-Yrkkö, 2006a, 2006b); relative to the total employment of roughly two million, this rate is modest.

In 2001-2006, roughly one-fifth of manufacturing and one-tenth of service firms with 50 or more employees in Finland engaged in offshoring (Figure 2.1). Within these broad sectors, firms in high-tech manufacturing or knowledge-intensive business services (KIBS) were more likely to engage in offshoring (Ali-Yrkkö and Rikama 2008). Therefore, it does not seem to be true that the knowledge-intensity of the industry would in itself be a sufficient condition for insulating domestic employment from the adverse effects of globalization.

Figure 2.1. Shares of companies with 50 or more employees in the country that engaged in offshoring in 2001-2006, %



Source: Statistics Denmark (2008). Original Eurostat-coordinated surveys conducted by Statistics Finland, Statistics Denmark, and Statistics Norway (Alajääskö, 2009).

Although labor cost savings represent the main motive to offshore (Table 2.1), it is by no means the only one. Sometimes the decision to offshore is beyond national control, that is, it has been made at a higher (non-national) level of a multinational conglomerate’s hierarchy. Indeed, for the Nordic countries, with the exception of Denmark, decision making at a higher-than-national level is a motive of roughly equal importance. Finnish companies have been especially motivated by the desire to follow their key customers or mimic their competitors, which may be explained by the presence of a few “locomotive”

companies (Kauppalehti 12.8.2010, Seppälä 2010).²

Table 2.1. Motives of offshoring

	Finland	Denmark	Norway	Sweden
Reduction of labor costs	42%	59%	43%	58%
Reduction of costs other than labor costs	21%	39%	29%	29%
Access to new markets	23%	11%	18%	10%
Following the behavior/example of competitors/clients	30%	4%	8%	..
Improved quality or introduction of new products	7%	9%	9%	..
Strategic decisions taken by the group head	42%	24%	51%	59%
Focus on core business	18%	21%	18%	18%
Access to specialized knowledge/technologies	11%	13%	12%	12%
Tax or other financial incentives	2%	2%	4%	..

Note: Share of firms having sourced internationally in 2001-2006 and reporting “very important” for the motivation factor concerned.

Source: Statistics Denmark, p. 54

As the result of the motives not related to labor cost, the old EU member states (EU-15) have been the most frequent offshoring destination of Finnish firms (Table 2.2), closely followed by the new EU member states (EU-12).³ Not surprisingly, manufacturing firms in particular have offshored to China. Additionally, India and Russia have attracted Finnish manufacturing firms.

² According to Braunerhjelm et al. (2010), the largest manufacturing firms are more dominant in Finland than they are in the other Nordic countries. In 2009, the 10 largest exporters accounted for 37% of the total merchandise exports of Finland (National Board of Customs 2010).

³ The old Member States: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

The new member states: Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia, the Slovak Republic, Bulgaria and Romania.

Table 2.2. Shares of companies with 50 of more employees in Finland that offshored in 2001-2006

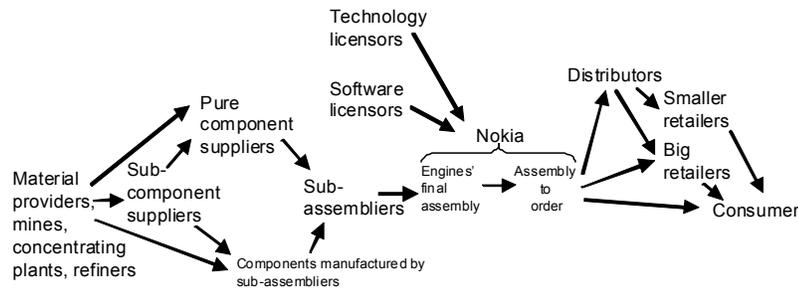
	All sectors (all functions)	Manufacturing (all functions)	Services (all functions)
Old EU member states	52%	48%	58%
New EU member states	50%	53%	45%
Russia	10%	12%	8%
Other Europe	8%	9%	7%
China	19%	27%	7%
India	15%	13%	17%
The US or Canada	8%	9%	6%
Other countries	10%	10%	9%

Data source: Statistics Finland

Box 2. Global Value Chain of Mobile Phones – Case Study of the Nokia N95 smartphone

(based on Ali-Yrkkö 2010 and Ali-Yrkkö, Rouvinen, Seppälä & Ylä-Anttila 2010, forthcoming)

The Nokia N95 smartphone consists of some 600 tangible components and a range of intangible components and other inputs. We studied the phone’s global value chain from the extraction of metals and minerals to the final delivery to the phone’s end-user (Box 2 Figure 1).



The value chain is geographically dispersed: the processors of the N95 were provided by Nokia’s long-time ally Texas Instruments (US). The display and the most expensive memory chips came from Samsung (South Korea). On the semiconductor side, the main European companies that contributed were NXP Semiconductor (the Netherlands), STMicroelectronics (Switzerland) and Cambridge Silicon Radio (the UK). The AC adapter is made by Astec, which is headquartered in the US with manufacturing in China. On the software side, the operating system was provided by Symbian (UK). Application software included RealPlayer and Adobe Acrobat, both of which are produced by US companies. Nokia assembled the N95 in its own plants in Finland and in China.

In 2007, the pre-tax retail price of N95 was \$749 in the US. This is the total value added to the product, which was created in different phases by a large number of firms located in

various countries on several continents. Out of this value, Nokia captured 50%, first-tier hardware vendors captured 11%, first-tier intangible vendors captured 3%, second- and subsequent-tier vendors-of-vendors in both categories captured 19%, wholesalers captured 3.5%, and retailers captured 11%. Therefore, Nokia captured most of the value added, which went to paying Nokia's indirect and direct in-house labor costs such as assembly, R&D, marketing, and sourcing but also includes its "pure" profit.

From the national economy's point of view, it is more important to consider the geographic breakdown of the total value added than to consider the companies. Even if virtually all hardware components are manufactured outside Finland, approximately 38% of N95's total value added is created domestically if the country of final sale is abroad. If the handset is sold in Finland, then roughly half (55%) of the total value added is created domestically. Taking into account both locations of final assembly and markets being served globally, over the life cycle of the product, on average, 40% of the value added was captured in Finland.

As in the case of Finland, the old EU member states have been the most frequent offshoring destination for Norway, whereas for Sweden, the most prevalent offshoring region has been the new EU member states. The most frequent destination of Danish companies has, however, been Asia (Statistics Denmark, p. 26).

Böckerman and Riihimäki (2009) examined the employment effects of offshoring using linked employer-employee data for the period 1999-2004.⁴ Their estimates indicate that intensive outsourcing (more than twice the two-digit industry median) neither reduces employment nor has an adverse effect on low-skilled workers. Hakkala and Huttunen (2010) used the same data to examine the effects on home-country employment. They found that offshoring is associated with an increase in the share of home-country tasks that are non-routine or interactive. Furthermore, offshoring to a low-income country increases the risk of job loss for workers in routine and non-interactive occupations.

R&D internationalization and offshoring

Overseas operations not only include production tasks but also include R&D. Finnish manufacturing firms currently employ 26,000 R&D employees abroad (EK 2010), which approaches their domestic R&D employment of 27,000 (Statistics Finland 2009). The number of overseas R&D employees has risen significantly over the past 15 years; in 1997, Finnish companies had only 3,300 R&D employees abroad (IT 1999). The largest firms have played a significant role in this development not only in Finland but also in Sweden and in Denmark (Braunerhjelm et al., 2010).

The rising number of overseas R&D employees does not necessarily mean that those jobs have been relocated; foreign units may do tasks that were never done domestically or may be expanding indigenously. Therefore, offshoring and foreign expansion are not synonymous.

Some 15% of companies with 50 or more employees in Finland have offshored R&D tasks (Table 3.2). In manufacturing, the top destinations are China, the old EU member

⁴ In this study, the definition of offshoring is based on firms' use of imported intermediate inputs.

states, and the new EU member states. In services, the old EU member states are followed by Russia and the new EU member states.

Table 3.2. Shares of companies with 50 of more employees in Finland that have offshored R&D tasks in 2001-2006

	EU-15	EU-12	Russia	China	India	The US or Canada
All sectors (R&D)	37%	25%	15%	23%	17%	7%
Manufacturing (R&D)	30%	30%	0%	37%	22%	17%
Services (R&D)	42%	21%	26%	13%	14%	0%

Data source: Statistics Finland

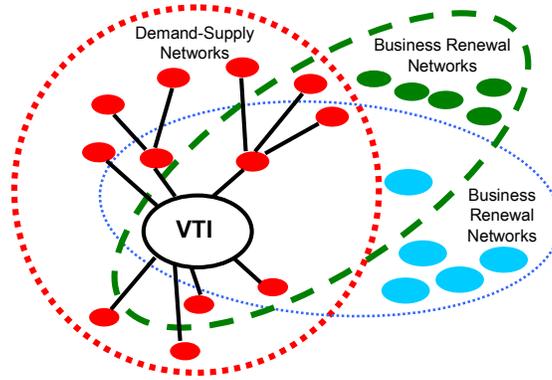
The offshoring of R&D has primarily been driven by the desire to enter a new market, to better fulfill customer needs, and to achieve cost savings (Ali-Yrkkö 2006a). Local regulations and needs often necessitate making product adjustments, and the easiest way to implement these adjustments may be by having a local presence. Operating in developing countries often generates cost savings because, for instance, in China, the cost of R&D staff is approximately one-third or one-fourth of the cost of equivalent labor in Finland (Ali-Yrkkö and Tahvanainen 2009). However, some R&D tasks have also been offshored to developed countries such as the US, where R&D labor costs are notably higher than in Finland. Based on qualitative data covering the largest Finnish companies, Ali-Yrkkö and Palmberg (2008) report that in Finland the labor costs of R&D are, on average, less than half of the US level and in most cases are clearly lower than in Germany or in Sweden.

Box 3. Global Value Chain of Sensors – Case Study of VTI Technologies Oy

VTI Technologies designs and manufactures sensors for a number of industries, e.g., automotive, consumer electronics, and medical equipments. In 2008, the company manufactured its products in Finland, Mexico, and China, but in 2009, the company decided to move its Mexican operations to Finland.

Following Möller & Rajala (2007), the value networks of VTI can be classified into three categories (See Box 3 Figure 1): current business nets (including current demand-supply nets), business renewal nets, and emerging new business nets. These nets are partly overlapping. For instance, some suppliers in VTI's current supply chain networks also belong to its business renewal networks.

Box 3. Figure 1. The Classification of VTI's Value Networks



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The business renewal networks of VTI consist of companies, universities, and research institutes. The majority of cooperating universities and research institutes are located in Finland but some are located in the other EU-15 countries. The R&D cooperation related to integrated circuits is conducted with the same companies that currently deliver chips to VTI; consequently, the vast majority of these partners are located in the US and in Germany.

The emerging new business nets consist of organizations that participate in long-term research and development. VTI has a number of research projects targeting commercialization over the next 5 to 12 years. One example of a long-term project is the development of next-generation electric cars that utilize nanotechnology. The project consortium consists of more than 30 organizations in 10 European countries. Out of these organizations, 19 are companies, and the rest are universities and research institutes. Three companies participating in the project also belong to VTI's current demand-supply network.

During the past 15 years, the structure of VTI's demand-supply network has changed drastically. On the one hand, VTI has successfully expanded to new customer segments, e.g., in the medical equipments industry. On the other hand, although VTI's primary customers remain headquartered in Western Europe and the US, their manufacturing sites are increasingly located in low-cost countries; therefore, VTI delivers its products to these locations.

The supply networks of VTI have also changed. To reduce its dependency on sole suppliers, the company has sought secondary ones. Currently, roughly two-thirds of VTI's components and raw materials are sourced abroad (in value terms); the majority of inputs, which include integrated circuits and packages, are still sourced from the old EU members (EU-15) and the US.

During the past 10 years, the main change in VTI's value chain has been related to the geographic destination of its deliveries. In the consumer electronics segment in particular, customers are still primarily European and American companies, but now these companies have plants in China and other low-cost countries. Therefore, VTI's exports in the consumer electronics and in the automotive segments are increasingly sent to developing rather than to developed countries.

Source: Ali-Yrkkö (2009).

Does offshoring replace domestic R&D? Ali-Yrkkö and Deschryvere (2008) find that the impact of foreign R&D employment on domestic employment depends on the mode of internationalization. Moreover, manufacturing and services differ in this respect. In the manufacturing sector, the in-house *offshoring* of R&D in particular has a significant negative impact on the plan to increase domestic R&D employment. However, the relationship between the in-house *expansion* of R&D abroad and domestic R&D employment turns out to be complementary. In the service sector, it is primarily offshore *outsourcing* of R&D that has a significant negative impact on the plan to increase domestic R&D employment.

In 2008, Finnish firms had 3,600-3,800 R&D employees in China, accounting for almost 15% of the Finnish firms' R&D employment abroad (Ali-Yrkkö & Tahvanainen 2008). The study by Ali-Yrkkö and Tahvanainen (2009) showed that there have been three main motivations for R&D investment of Finnish firms to China: 1) market size and

growth, 2) the availability and labor costs of R&D personnel, and 3) the need for co-location between R&D and manufacturing. However, locating R&D in China also has disadvantages, which include intellectual property rights violations and information leakages. A further disadvantage is the lack of employee initiative, which is related to the high level of respect of hierarchies that is found in China.

Ali-Yrkkö and Tahvanainen (2009) conclude that, in the future, the domestic R&D activities of Finnish firms will increasingly emphasize longer-term technology development and other more challenging or “conceptual” R&D activities. More routine R&D will be increasingly conducted abroad in lower cost locations.

Conclusions and policy discussion

In the 1980s and early 1990s, all of the Nordic countries lifted the remaining restrictions on cross-border capital flows and liberalized their financial markets. Although all of these countries experienced banking crises and other “growing pains” as a consequence, at least up until the early 2000s, they clearly benefitted from this policy. Because these countries seem to fare quite well also in the current trade-in-tasks era, their commitment to openness and deepening international specialization will most likely be sustained.

Although offshoring has increased rapidly in the Nordic countries, it remains relatively modest in both absolute and relative terms. At least some local employment has successfully shifted toward higher-value-added activities in global value chains, as routine tasks have migrated to locations with lower labor costs. As far as dealing with the current phase of globalization is concerned, the Nordic countries have done better than most other European countries.

High-level globalization groups or councils in the Nordic countries have concluded that the most appropriate way to deal with the challenges imposed by globalization is to invest in education and innovative activity and to promote a vibrant corporate sector. Mutual trust and collective risk sharing have made globalization both more acceptable and more tolerable to citizens.

Although the Nordic model was perhaps more appropriate for the old trade-in-goods or export-driven phase of globalization, the core aspects of the system can also be maintained in the trade-in-tasks era. The main building blocks of the model – high investment in human capital, skills, and research as well as exposure to market competition – are sustainable. It may well be that the system’s biggest challenge is an internal one: as the locus of competitions shifts toward the level of the individual, the appreciation for communality – the very core of the model – may change in the longer run.

Partly as a response to globalization, labor market institutions have undergone major changes in all Nordic countries over the past few decades. Centralized wage bargaining has been replaced by union-level agreements combined with firm-level arrangements.

An essential feature of the Nordic model is the extensive provision of public welfare services funded through taxes and employer/employee contributions. Therefore, businesses’ indirect labor costs are high in international comparison, and these high indirect labor costs – along with intensifying international tax competition – has made it difficult for Nordic businesses to compete, particularly in labor-intensive tasks.

Leading Nordic firms have been able to specialize in high-value-added activities in global value chains, while assembly and some other activities are increasingly offshored to developing countries. However, these companies are few in number, and the high-level professionals, experts, and managers they largely employ in their home countries represent

a minor share of the total national employment. There seems to be persistent unemployment among *mid-level* manufacturing workers and *routine office* employees. Additionally, the previously secure higher-level positions are increasingly challenged.

Currently, the Nordic model provides little incentive for self-employment and entrepreneurship. In particular, the number of growth-seeking younger firms is quite small in all Nordic countries (particularly in Finland), which at least partly is an outcome of the existing socioeconomic model with ambitious egalitarian values. Certainly, one of the reforms needed is to create better conditions for high-growth entrepreneurial firms. This is all the more important, as the domestic operations of large multinationals have been constantly diminished in all Nordic countries.

Because it is becoming harder to increase tax revenues in the post-crisis globalized world, it is also evident that there is a need to define the core activities of the public sector and to give more room for private service provision. This would not, however, imply giving up the essential principles of the Nordic model.

Overall, the increasing globalization of business, the unbundling of production processes, and the growth of trade-in-tasks are not necessarily undermining the essence of the Nordic socioeconomic model, even if they call for reforming parts of it.

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Appendix

Data description

This study primarily used two data sources. The first one was a survey conducted by Etlatieto Ltd. (Ali-Yrkkö 2006a). This survey focused on the extent and motives of outsourcing and offshoring in 2001-2006. The sample consisted of 1,827 companies, of which 1,650 could be reached. Of these, 653 (40%) responded. The respondents represented the companies' top management.

The second source was a survey conducted by Statistics Finland in 2007 (Ali-Yrkkö & Rikama 2008, Statistics Denmark 2008). Representatives of more than 1,300 companies responded to the survey (in the group of large companies, the response rate was 83%; in the group of small companies, the rate was 75%). Similar surveys were also conducted in Denmark, Sweden, Norway, and in some other European countries. Instead of offshoring, the questionnaire used the term "international sourcing," which was defined as follows: *"The total or partial movement of business functions (core or support business functions) currently performed in-house or domestically outsourced by the resident enterprise to either non-affiliated (external suppliers) or affiliated enterprises located abroad"*.

Both surveys included a set of direct questions focusing on offshoring/ outsourcing motives and their results/impacts.