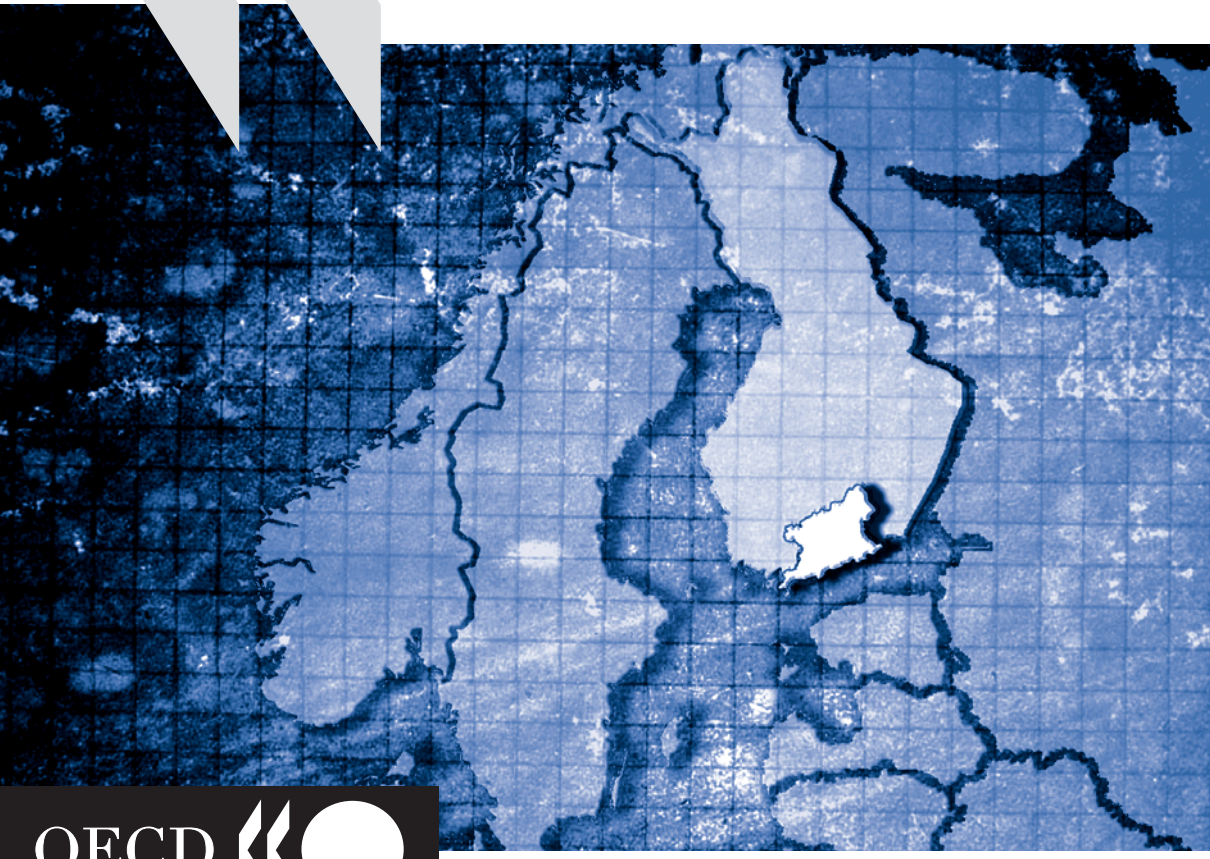
OECD Territorial Reviews

Helsinki, Finland



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ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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Foreword

The globalisation of trade and economic activity is increasingly testing the ability of regional economies to adapt and exploit or maintain their competitive edge. There is a tendency for performance gaps to widen between regions, and the cost of maintaining cohesion is increasing. On the other hand rapid technological change, extended markets and greater use of knowledge are offering new opportunities for local and regional development but demand further investment from enterprises, reorganisation of labour and production, skills upgrading and improvements in the local environment.

All these trends are leading public authorities to rethink their strategies. The role of policies aimed at improving the competitiveness of regions by promoting the valorisation and use of endogenous resources and at capturing trade and additional economic activities has been strengthened. At the same time central governments are no longer the sole provider of development policies. The vertical distribution of power between the different tiers of government needs to be reassessed as well as the decentralisation of fiscal resources in order to better respond to the expectations of the public and improve policy efficiency.

The Territorial Development Policy Committee (TDPC) was created at the beginning of 1999 to assist governments with a forum for discussing the above issues. Within this framework, the TDPC has adopted a programme of work that puts its main focus on reviewing member countries' territorial policies and on evaluating their impact at regional level. The objectives of territorial reviews are: *a*) identify the nature and scale of territorial challenges using a common analytical framework; *b*) assist governments in the assessment and improvement of their territorial policy, using comparative policy analysis; *c*) assess the distribution of competencies and resources among the different levels of governments; and *d*) identify and disseminate information on best practices regarding territorial policy and governance.

The Committee produces two types of reviews:

Territorial reviews at the national level. Requested by national authorities, they analyse trends in regional performances and institutional settings, focus on policies to reduce territorial disparities and to assist regions in developing

competitive advantages. They also concentrate on the governance framework, on the impact of national non-territorial policies on subnational entities and on specific aspects of fiscal federalism. The final report proposes territorial policy recommendations.

T*hematic territorial reviews at regional level*. Requested by subnational authorities (local or regional) with the agreement of national ones, they aim to support cross-country analyses on the following themes: multi-level governance, sustainable development at local and regional levels and regional networks for competitiveness.

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Helsinki and its surrounding region emerged from the 1990s as an internationally competitive economy that had seemingly grafted the requisites of the "New Economy" onto the bedrock principles of the Nordic welfare state. Although the robustness of this model is still uncertain, the accomplishment is notable in providing a concrete example of globalisation dynamics that have been compatible with a significant scope for government. The experience corroborates broader empirical evidence suggesting that a social commitment to equity need not disadvantage the economic performance of countries. At the same time, incipient trends observed in Finland and the Greater Helsinki Region (GHR) suggest that this commitment has become more difficult to implement in the current environment of economic development. Recent widening of regional disparities within the country, greater spatial differentiation within municipalities, and an increase in inequality of the size distribution of personal income – although modest in all cases – challenge the ability of the state, regional and local economy to meet both its equity mandate while sustaining economic growth. Along several dimensions, development of the GHR is best described as transitional, compelling a reassessment of policies able to pursue competitiveness and equity as multiple objectives.

… follows a transformation induced by the deepest post-war recession of any OECD country…

The economic crisis of the early 1990s provided the painful demonstration that not all contingencies could be accommodated. The induced transformation from a planning-dominated worldview to one fully cognisant of the uncertainties inherent in the global economy is best demonstrated by the fiscal response to the crisis. A proportional reduction in spending on the range of public services was implemented across the board in response to lower

revenue-raising capacity. The notable exception to this policy was the public funding of R&D that was perceived as the enabling investment that could contribute to a long-term resolution of the crisis. The crisis also precipitated local government management reforms. Implementation of budget cuts was accompanied by increased freedom for some 400 municipal governments to organise themselves as they saw fit. Decentralisation of powers, autonomy and flexibility, including the introduction of new management principles have led to strongly differentiated practices in providing and running municipal services in Finland.

... and the phenomenal success of its mobile communications sector.

The specialisation of the Finnish ICT cluster has been favourable for growth, contributing to significant agglomeration economies and territorial capital, while enabling the key locations to become more competitive and thereby attracting more firms. However, this specialisation has introduced considerable vulnerability, as it is dependent on a single sector rather than several sectors. While the Finnish ICT cluster has been well-positioned to benefit from continued growth in mobile communications, it is prudent to consider the potential downside risks of this strategy. Demand for mobile technologies, products and services have already demonstrated susceptibility to global economic slowdowns. In the long term, market growth may not prove as rapid as it was during the late 1990s due to the transition from original demand to replacement demand.

The opportunities and constraints of cities are changing, introducing new challenges at the international level...

The success of the ICT sector is a bellwether of a broader set of changes to the patterns of urban development, suggesting that older modes of governance may be unsuitable to meet the new challenges. For example, the recent appearance of Helsinki near or at the top of rankings of city competitiveness was met with both delight and apprehension. Although size is far from being an obvious factor of economic success, Helsinki with its 560 000 inhabitants is commonly perceived as an intermediate urban centre in European or international comparison. It fears marginalisation on the north east corner of the EU and wants to address competition from, for instance, neighbouring Scandinavian countries as illustrated by the bridge between Copenhagen and Malmö, and the new region of Öresund, or the growth of Stockholm. A

well-managed and better co-ordinated GHR of more than 1.5 million could be a response to the question of size within the so-called competition between urban regions.

... conditioning the relationship between the primate region and the nation...

The ICT sector and the other dynamic sectors of the new economy have also demonstrated a strong urban bias in location. Economies of agglomeration exploiting the diverse collection of services and economies of localisation exploiting concentrated specialisation are thought to be dependent on a scale of economic activity available in medium to large cities. From Portugal and Ireland to France and Britain, the major city has faced continuous growth much to the irritation of the rest of the country. Rural Finns perceive the development of Helsinki with a great lack of trust, fearing that any transfer of resources to Helsinki will jeopardise their own resources or marginalise them. On the other hand, the increasing significance of the Helsinki region for the economic growth of the whole country is also quite clear. In many ways, in order to organise and sustain growth, the Helsinki region needs financial support to make major investments in terms of infrastructure and housing.

... fuelling growth pressures that may not contribute to sustainable development...

Urbanisation proceeded at a moderate pace in Finland for most of the second half of the 20th century. The inability of many smaller local economies to replace the traditional drivers of economic growth as was done in Helsinki and a number of university cities throughout the country after the economic crisis have increased rates of internal migration. In the latter half of the 1990s the population growth rate for Helsinki Metropolitan Area was 1.5% per annum compared to an average of 0.5% for other European metropolitan areas. Beyond the city of Helsinki itself, there is an organised movement of urbanisation of what were once suburban peripheries in Vantaa and Espoo. While the majority of new construction is taking place in areas already built up, some sparsely populated, outlying areas are experiencing high rates of new construction. Actually the great proportion of inbound migration is directed towards the eight municipalities around the Helsinki Metropolitan Area, the total population being approximately 220 000 inhabitants. Also, middle-size towns such as Lahti or Hämeenlinna that are some distance from the urban centre are starting to bene-

fit from the dispersal of the growth in Helsinki, to be further aided by the development of fast trains. Concentrating growth in those towns and other built up areas and through more intensive infill of heavily urbanised areas would be preferable to uncontrolled, dispersed urban sprawl in terms of environmental sustainability, public infrastructure investment and maintaining the liveability of the GHR. Co-operation between planning authorities as regional councils and municipalities within the GHR is therefore required to achieve those goals despite the long-established autonomy of municipalities that may prevent it.

... and contributing to greater spatial differentiation.

Just as the ICT sector has been concentrated in a relatively small number of regions within Finland, it has also demonstrated strong localisation tendencies within individual municipalities. The core of the Finnish ICT sector is concentrated in a 7-kilometre radius around the bay of Ruoholahti in eastern Espoo and western Helsinki. This development with its strong demand for highly qualified workers has tended to reinforce an educational divide between the western and eastern half of the city. Although evident in socio-economic data for some time, it was only after the trough of the crisis in 1992 that these differences were manifest in growing income and employment disparities. The data also indicate greater differentiation among the major municipalities within the GHR. Although these incipient trends are not likely to challenge the effectiveness of the status quo – especially in the context of the Finnish welfare state and strong mechanisms for tax base equalisation – extrapolation of these trends poses significant threats to integrated governance and social cohesion in the region.

The increasing interdependence of metropolitan problems overtaking modest initiatives of municipal co-operation compels consideration of alternatives.

Indeed, the success that the region has enjoyed and the absence of any imminent crises provides little incentive for prospective thinking on the ability of the current system to sustain advantages indefinitely. However, maintaining the status quo – *i.e.* the present principles and policies, such as spatial integration, municipal sovereignty and voluntary regional co-operation would apply – raises concerns over the long-term prospects of integrated governance of the region. Projected social outcomes based on the emerging socio-economic differences are not desirable,

as the city of Helsinki would end up with a disproportionately large share of the region's poor and needy households. Although the trends are not yet dramatic, they are clear enough to cause concern given the large role that local governments play in providing social services. Immigrants dependent on social support and other allowances would tend to be concentrated, with attendant social problems, in the city, although they would be spread throughout its neighbourhoods, without any distinctive ethnic area or subculture emerging. Espoo and Kauniainen and some other parts of the region would become progressively wealthier and more entrenched enclaves for the affluent, especially highly-paid workers in the IT economy.

Evidence from the current status quo foreshadows greater fragmentation.

It could be argued that this may be a positive development allowing more competition and more diversity within the area that could contribute to the overall competitiveness of the area. In western Europe however, this sort of dynamism has most of the time led to declining services, wasteful competition between areas and increased fragmentation, making public policy less efficient. Dynamics of "secession of the rich" can develop quite quickly and lead to very negative unintended effects in terms of sustainable development, social integration and economic development. In this light, attempts at regional co-operation would meet with mixed success, with issues of tax equity, social housing, cultural life, and economic development as nagging sources of political friction. Indeed, if the interdependence of problems within the metropolitan region seem on the rise (from immigration to economic development and housing), the co-operation between municipalities remains limited to a large extent.

Functional advantages of consolidation are appealing...

At the other extreme, a consolidation scenario would have the four municipalities of the Helsinki Metropolitan Area merge into a single municipality, if the municipalities themselves and their inhabitants are in favour of the scenario. If power could be shifted upward to the metropolitan area, it would simultaneously be shifted downward to the neighbourhood or *arrondissement*. Land use planning in the metropolis would become more politically and administratively streamlined, as would social housing. Spatial mixing

of immigrants and other minorities over a larger geographic area would be more easily accomplished.

... but merger would be seriously hampered by a lack of political legitimacy.

The functional advantages of this second alternative must be assessed against existing political realities. The proposal runs directly counter to the country's strong tradition of local autonomy. To be sure, the relative similarity of service levels and tax rates within the Helsinki region would make merger less disruptive in terms of service levels and windfall gains and losses than might be the case with amalgamation of cities in other countries. However, the merger of the municipalities would deprive the area of the benefits of local fiscal competition that serves as a constraint on the monopoly power of large governments and provides incentives for municipalities to provide services cost-efficiently. Those positive benefits combined with strong expected political opposition to merger argue against municipal merger at this time.

Intermediate solutions warrant serious consideration given the weaknesses inherent in the status quo or municipal merger proposal.

There is a wide array of possibilities between business-as-usual and formal municipal merger. The two requirements for dealing effectively with problems of the region are an ability to pursue the interests of the whole region – not simply the interests of the individual municipalities – and ensuring that new modes of regional governance are fully accountable for decisions that impinge on the sustainable development of the GHR. Action should be directed to those two issues which are currently the most contentious: 1) to assure that social housing is distributed in a fair and efficient way initially throughout the Helsinki region, and over time throughout the GHR and 2) to develop and implement a regional strategy for the coherent and balanced economic development of the region, with attention to the quality of the environment as well as to the economy.

A municipal consortium could overcome the danger of fragmented decision making and improve and enlarge co-operation.

A stronger system of regional governance could be achieved through incentives and voluntary co-operation. However, reliance on voluntary co-operation would not prohibit municipalities from opting out of projects, seriously weakening any prospects for regional co-ordination. A consortium of municipalities in the GHR could overcome this deficiency if members were bound to decisions on the

basis of pluri-annual contracts. Light institutionalisation of municipal co-ordination could go a long way in compelling autonomous local governments to collectively articulate and implement a vision for the entire region. Indeed, the degree of co-ordination that might be achieved at low organisational and fiscal cost is particularly persuasive if the threats of greater fragmentation identified above do not materialise.

Threats of greater fragmentation warrant consideration of bolder alternatives able to tackle the unique problems of metropolitan areas...

Unfortunately, those urban development problems that most require a co-ordinated, regional approach are the same problems that most frustrate efforts for greater inter-municipal co-ordination. Specifically, land use and housing are inherently contentious issues. The range of possible contingencies warrants consideration of the net benefits of a new regional authority. Issues of regional social equity could be addressed more easily and expeditiously if municipalities yielded power on issues of housing policy and location of social housing to a new super-agency. This new regional authority might also co-ordinate and manage land use and other matters, such as transportation, economic development and environmental sustainability. The economic competitiveness of the region could be potentially increased by the agency's management of land use and housing development. To attract and retain a balanced labour pool, industry sectors, such as IT, will require increased regional co-operation in matters of tax rates, housing, transportation, culture, education, etc.

... constituted by a more formal mechanism of regional governance.

To be sure, the co-operation between the four municipalities of the Helsinki area is on the increase. However, institutionalising these mechanisms of co-operation at the metropolitan area level is suggested by the autonomy of municipalities, the representation of the pressure of competition and because the incipient trends that pose the risk of greater fragmentation may materialise in the future. A new regional authority would provide the opportunity to constitute a more formal mechanism to govern, and articulate the networks within an integrated perspective. The focus on the integration of different policy networks for instance paves the way for the reintroduction of politics, legitimacy, and collective choice.

Combating substantial long-term unemployment will benefit from a locally adapted labour market policy.

The benefits of local adaptation could also improve centrally implemented policy. Unemployment stands out as the decisive factor inducing spatial polarisation within the GHR. Long-term unemployment that was practically non-existent in Finland at the beginning of the 1990s increased rapidly during the downturn and accounted for about 30% of all unemployed people by the mid-1990s. Many traditional industries that had supported the prosperity of southern urban areas were hit hard. These same industries did not participate fully in the robust recovery in Helsinki and its surroundings, which has contributed to greater spatial disparities in unemployment rates. Labour market policy has largely functioned as a welfare support system that secures a basic livelihood to the unemployed. The disincentives for the unemployed to find work under this system have progressively shifted the policy focus from passive labour market measures to active labour market programmes such as labour market training and subsidised employment. However, these efforts have been hampered by the centralised formulation of labour market policy that is implemented within local jurisdictions that do not correspond to functional labour market areas. A regionally diversified employment policy would contribute to helping Helsinki and other municipalities apply locally adapted measures to their local priorities and integrate different policy instruments into a more place-based employment and development strategy.

Embracing multiculturalism constitutes the other principal challenge for social policy.

Since the 1970s, housing policy has been based on the concept of social integration. Special attention has also been paid to the spatial dispersion of ethnic minorities. However, not until recently have immigrants been a visible presence and begun to stress, or at least challenge, the social welfare system. The policy to date has been to integrate immigrants by spatially integrating them in the community and immediately offering the full benefits of the welfare state. Achieving social equity through spatial integration seems to be a particularly fundamental goal and high priority. However, it comes at the inevitable cost of suppressing or at least diluting ethnic and other subcultures that might otherwise flourish. The major problem with ethnic communities is that they can become enclaves

of a disadvantaged and alienated underclass. In contrast to many metropolitan areas in other OECD countries, Helsinki has been able to prevent the emergence of significantly deprived neighbourhoods. Accordingly, Finland should be cautious about reconsidering its policy of spatial integration. On the other hand, there may be moderate policies and practices that allow immigrant cultures and enterprise to survive more intact spatially.

Moderate policies to increase the "positive marginalisation" of more disadvantaged neighbourhoods could contribute to the area's attractiveness while ameliorating spatial differentiation.

The aforementioned spatial differentiation has strong parallels with the residential patterns of recently arrived foreign immigrants – *i.e.* highly educated immigrants tend to settle near the high-tech agglomerations while those without qualification are concentrated in the eastern and northern parts of Helsinki. Policy initiatives will be most effective if they exploit untapped or unused potentials rather than dilute external economies of localisation. Thus, policy should not be directed to dispersing high technology employment to more disadvantaged neighbourhoods but to more fully valorising the sources of "positive marginalisation" of these neighbourhoods. New urban design and planning tools such as urban design codes – *i.e.* prescribing desired architectural types, building materials, street types, etc., as opposed to zoning codes, which proscribe building type, building bulk and land use – would work toward promoting desired outcomes rather than prohibiting undesired outcomes. New or hybrid types of housing that are associated with both greater affordability and greater community interaction should be encouraged in these areas such as live-work housing (units that combine work and residential space), accessory units (rental units attached or adjacent to primary dwelling units), lofts (converted industrial space), and co-housing.

Planning should guard against increased auto-dependency to meet sustainability objectives and reinforce competitiveness of new sectors that are increasingly dependent on interaction.

Although planning in the region is generally of a very high standard, sustainable development of high growth areas will require a stronger commitment to compact development principles. Specifically, development and redevelopment should be dense, socially diverse, mixed use, walkable and transit-oriented, rather than sprawling, auto-dependent, single-zoned development that is socially and economically homogeneous. Redevelopment of unused and under-utilised urban land, especially obsolete industrial sites, is consistent with these principles and projects (Herttoniemi and Ruoholahti are good existing examples of such redevelopment). New communities on the urban periphery, such as the proposed new town at Marja Vantaa, should also be developed, preferably on rail lines. Espoo Centre is a good existing example of such new towns. It is located on a rail line that allows easy commuting to central Helsinki and its town centre is dense, low-rise, mixed-use, walkable and has pedestrian-scaled public spaces.

Long-term regional competitiveness requires a more focused strategy of diversification brought into the mainstream of policy.

The strategic challenge for the Finnish ICT cluster that should be reinforced by all levels of government is to evolve a lower-risk/high-return strategy by developing ICT activities beyond the current cluster scope (*e.g.* use of learning and positive externalities in forestry and biotechnology, learning transfers in online banking and new media). However, instead of remaining peripheral, these objectives could be integrated into explicit and bottom-up territorial policies of related diversification focusing on developing competencies in the research, design and development phases of the product life cycle across a range of product areas. Such an approach, however, requires greater focus on private and international risk capital, profitable commercialisation, and – most importantly – profitable new business formation. These requirements, in turn, are necessary to create new and renew old strategic advantages in the Finnish ICT cluster, just as they make it necessary to better facilitate the transition of the macroeconomy from top-down centralisation to bottom-up decentralisation.

More aggressive promotion of high-tech entrepreneurship is a key element of a diversification strategy.

In Helsinki and Finland, high-tech entrepreneurship and start-ups have yet to achieve prominence. In particular, relatively few Finnish start-ups have achieved a global market position, despite highly favourable conditions. First, Finland's well-developed and commercially focused higher education system and an institutional and financial commitment to supporting commercially oriented research provides a key source of potential new technologies upon which high-tech start-ups may be based. Second, through the National Technology Agency, the National Fund for Research and Development and other institutions, Finland currently provides substantial support for start-up companies. Drawing on this and the managerial resources of Finland's larger companies in the high-tech and more traditional sectors, mentoring and guidance programmes will increase the probability that high-tech start-ups succeed. Third, venture capital/initial public offering/merger activity has developed rapidly in recent years in Helsinki with increasing availability of local venture capital funding and some external investment. Fully exploiting this potential will require making entrepreneurship and start-up activity a central policy objective with a clearly defined entrepreneurship strategy to counter the "conservative entrepreneurship" which characterises Finnish society. Key issues that might be addressed in the formulation of this strategy include measures to develop and strengthen the "enterprise culture", development of materials publicising successful entrepreneurship, development of physical and virtual business incubators, promotion of measures to encourage mentoring and other forms of expertise transfer from larger companies to smaller firms, strengthening of support arrangements for high-tech start-ups, and further support for venture capital development.

Reforms to the intergovernmental aid system would promote intelligibility and accountability…

Although the current intergovernmental aid system is in some ways quite carefully designed to assure that municipalities have the revenue capacity to meet the service needs of their residents, it lacks intelligibility and also dilutes accountability by separating taxing decisions of local governments from service level decisions of Parliament. One or more foundation programmes of intergovernmental aid – assuring that each local government provides a target level of service at a reasonable tax rate – replacing

the existing combination of sector-specific subsidies and tax base equalisation could remedy these problems. This foundation aid approach is quite similar in spirit to the current system. In contrast to that system, however, in which sector specific subsidies may be offset by equalisation payments, this approach would more clearly link government aid to each municipality's fiscal needs in that policy area relative to its revenue raising capacity.

... while being more consistent with the aims of the Finnish welfare state.

Intelligibility is enhanced as the proportions of local taxes devoted to each broad functional area and the level of aid in each area from the central government could be a part of the public record understood by citizens. Accountability would be enhanced, as any expansion of social services, for example, would require Parliament to explicitly specify the required minimum local tax rate and appropriate sufficient funds for subsidy to provide the target level of service. Perhaps most importantly, a system of foundation aid would be a fairer way to finance the Finnish welfare state, as subsidies would come primarily from the national progressive income tax. Thus taxpayers throughout the country would be asked to pay their fair share of the costs of the subsidies based not on the revenue-raising capacity of a jurisdiction in which they happened to live but rather on their own ability to pay taxes.

Summing up

The process of structuring a mode of governance of the Greater Helsinki Region should be encouraged by the central government. Managing the growth of the Helsinki region is crucial in the long term to avoid urban sprawl and the waste of resources. However, in the new system of rules, conflicts between municipalities seem not to be solved by elaborating constructive solutions. A proactive role of central government, encouraging GHR thinking, remains essential. With priorities for the GHR identified, there is room to negotiate a general agreement for several years between the central government and municipalities of the GHR. For instance, under the current system of fiscal equalisation it does make sense to transfer some resources from the richest municipalities in the south to finance the rest of the country because the south benefits from workforces trained elsewhere. The interdependence between

the Helsinki region and the rest of the country should be made more apparent. But that makes sense if the central government agrees to finance major infrastructures which are crucial for sustainable economic development in the Helsinki region and therefore for the whole country. This agreement should also receive large publicity and raise a debate in Parliament as the goal is to reassess both the role and the dependence of Helsinki upon the rest of the country, *i.e.* how can Finland develop as a whole by making better use of the motor, Helsinki.

Chapter 1

Is Competitiveness Compatible with Egalitarian Norms?

Introduction

Prior to the competitive success of the Finnish economy in the latter half of the 1990s the implicit social contract in the country was both simple and widely shared. High marginal tax rates in combination with legal rights to a comprehensive set of social services ensured one of the most egalitarian economies in the world seemingly willing to bear the costs of slower economic growth. The severe economic crisis of the early 1990s – indeed, the deepest recession experienced by any OECD member country in the post-war period – forced a critical reassessment of this social equation. Most importantly, the strong rationalist orientation of Finnish governance was unseated by the economic uncertainty that gripped all sectors and social strata of the country.

The rebound from the crisis differed substantially across regions. Helsinki and much of southern Finland, along with several "university cities" throughout the country, drove the national recovery, the rate of which was again unprecedented among OECD member countries. The economic dynamism of these areas supported the replacement of the rationalist, planning-dominated worldview with one that acknowledged the evolutionary unfolding of the future. Guiding the country to socially preferred outcomes became the more feasible goal, dependent on the opportunities emerging from the creative ability of citizens and the uncertainty inherent in the global economy. However, those regions unable to replace the economic vibrancy lost during the recession have also found it difficult to embrace a new worldview.

Sorting out the contradictions of a Nordic entrepreneurial welfare state is thus the primary task in framing a coherent development policy for Finland at the opening of the new millennium. The contradictions permeate all spatial levels from the international standing of the country, to regional disparities, intermunicipal conflicts, and differentiation of neighbourhoods all the way down to the distribution of individual incomes. The central conflict is the need to promote positive feedback that both motivates and reinforces growth dynamics while ensuring that the advantages accruing to some further facilitates the productive contributions of

others. The task is arduous and there is no presumption that this review will resolve these contradictions. The more modest goal is to focus this issue to stimulate the productive public debate that will be required of any social resolution. Although the focus of this review is on the functional region of Greater Helsinki – seemingly limiting its scope to the lower three levels described above – the status of Helsinki as both the capital and only major urban agglomeration of Finland requires framing this conflict at all spatial levels.

The timing of Finland's emergence as one of the most competitive national economies amid its long-standing commitment to egalitarianism is opportune given its salience to the debate over globalisation and increasing doubts of the commonly assumed trade-off between efficiency and equity. The reasonableness of the efficiency-equity trade-off is in fact so deep-seated that it challenges the very possibility, let alone the reproducibility, of the Finnish accomplishment. It is thus important to assess alternative theories of the relationship between growth and inequality against the empirical evidence to understand the generality or particularity of the Finnish experience. This is not only critically important to the framing of development policy in Finland that is consistent with the goal of growth with equity, but to all countries sincerely committed to growth and social cohesion as vital components of sustainable development.

Conceptual debate

The textbook trade-off

The trade-off between efficiency and equity is a core principle in contemporary economic thought: "*... tradeoffs are the central study of the economist. 'You can't have your cake and eat it too' is a good candidate for the central theorem of economic analysis*". (Okun, 1975, p. 1). Indeed, in the allocation of scarce resources, trade-offs emerge as the principal means to satisfy binding constraints. The logic is that a redistribution of gains from the more successful to the less successful reduces the incentives to engage in successful activities. As such, redistribution of gains comes at the cost of slower growth. In short, inequality is good for incentives and thus good for growth.

A persuasive case for this argument comes from the anticipated effect of taxes on incentives. Taxes will distort incentives by placing a wedge between the private and social return of an activity. To the extent that individuals allocate labour and capital to maximise after-tax returns, the impact of a tax will be to divert a greater share of resources to low-tax activities than would be the case in the absence of taxes. As activities with high social value (entrepreneurship, wage income) are relatively highly taxed versus activities with low social value (leisure time), a dead weight loss is imposed on society in the form of activities that are

foregone that would have a higher social return than those activities actually chosen. The main drawback of the local income tax in the Finnish context is that the combination of national and local income tax rates leads to high marginal tax rates. The top marginal national rate of 38% combined with a typical municipal rate of 17% generates a marginal rate of 55%. This pyramiding of tax rates is cause for concern because the dead weight or efficiency loss associated with these distortions increases exponentially with the tax rate. Thus, for example, a doubling of the marginal rate increases the dead weight loss four-fold. The dead weight loss of the current tax system is estimated at 15% of tax revenue (Kuismanen, 2000). At the wage level of an average production worker, the steepness of Finland's marginal tax wedge ranked third within the OECD area in 2000. The heavy tax burden at higher wage levels may also have a negative effect on location decisions of the highly qualified (and internationally mobile) workforce required by the Finnish telecom industry. Combined with the strong compression of wages, the steep progressiveness of labour income taxes also reduces the return for an individual investing in education and may thus discourage human capital formation (Asplund, 2000).

This same line of reasoning suggests that the disincentives are greatest in those socially desirable activities with large but highly uncertain returns; *i.e.*, entrepreneurship. In an economic environment where innovation and creation of new products and services is paramount, the dynamic costs of redistribution could be especially large if taxes exceed the risk premium required to compensate individuals.[1] Excess profits in the form of entrepreneurial rents can be interpreted as the bait that attracts capital to untried fields suggesting the instrumental value of inequality in a dynamic economy (Schumpeter, 1942). Indeed, it has been theoretically argued that the optimal tax on capital is negative given imperfect competition in intermediate goods markets (Judd, 1997). Alternatively, if the decision variables are not absolute but relative rates of taxation, then high personal income tax rates may provide an incentive for entrepreneurial activity if tax-favoured relative to wage and salary employment (Gordon, 1998). In Finland, entrepreneurial activity is tax-favoured relative to labour income if highly successful (see Footnote 1). The conditional nature of this incentive creates problems in the promotion of risk taking, possibly imposing an entrepreneurial penalty on ventures in the start-up stage at the very time that an entrepreneur may be expected to earn less than if he or she remained in salaried employment. This disincentive is especially troubling from the perspective of the equity-growth debate as it impedes risk taking but with little or no redistributive benefit.

With respect to spatial inequalities, theories of regional income convergence conclude that concerns over redistribution may be misplaced, as mobile factors of production seeking the highest return will redistribute income as a self-organising process. The implication is that the ultimate concern of regional redistribution is best addressed by eliminating impediments to the free flow of capital and labour.

In this explanation low-wage regions are characterised by low levels of capital investment. Capital investment in low-wage regions will thus enjoy higher rates of return due to the relative scarcity of the factor. Such investment will increase the productivity of labour in the region that will be translated into wage increases. Alternatively, labour could leave a poorer region, raising the productivity of those remaining while increasing downward wage pressure in the destination regions. In either case, regional income convergence results from the self-organising process of mobile factors seeking the highest rate of return.

The Kuznets (1955) hypothesis of a virtuous growth-equality circle mirrors the concern that redistribution may be unnecessary or even counterproductive to the self-organising process of the economy. For him, economic development, characterised by sectoral shifts (from agriculture to industry) leading to spatial shifts (rural to urban), will initially lead to greater inequalities. Over time, however, societal advances contribute to greater equality and consumer demand replaces scarce factors of production as a limiting factor of growth. Empirical evidence for this argument was available through the 1970s and redistribution, given its distorting effect on the allocation of resources could arguably slow the process leading to greater equity. However, economic data from the developed industrialised countries, such as the United States and United Kingdom, have demonstrated large increases in wage inequality since then and have brought doubt to both the Kuznets and regional convergence theories.

Explaining tendencies for concentrated advantage

One possible explanation for the failure of regional convergence is found in the theory of agglomeration economies, which holds that some factors may not disperse spatially, but will concentrate in those areas offering the most advantages. These advantages are especially clear in the new economy. Greater complexity in production, increased volatility in economic markets and more rapid rates of technological change support the heightened importance of increasing returns to scale in the "new economy". The spatial clustering of vertically and horizontally related production units is premised on the frequent and intense interaction of firms and their sub-contractors. Increasing volatility in economic markets may also engender spatial clustering as firms will be less able to fully employ a comprehensive collection of production factors through time. The vertical disintegration of production will again lead to the clustering of firms in a relatively smaller number of locations. Finally, the rapid rate of technological change will provide incentives for clustering as comparative advantages increase through learning processes represented by demonstration and spillover effects and as the demand increases for skilled flexible labour able to adjust quickly to a changing workplace.

Advantages mentioned above would reinforce the capability for public spending, as the concentration will increase the tax base and more public services can be offered. On the other hand, if the agglomeration suffers from depopulation or reduction in businesses, public goods, which are often based on fixed costs, will be difficult to maintain on a reduced tax base. This will, in turn, accelerate an already existing decline in the area. As such, the virtuous circle phenomenon can be replaced by a corresponding vicious circle. The fiscal equalisation formula in Finland is designed to short-circuit these virtuous and vicious circles by redistribution of tax money at the municipal level. Service levels determined at the national level also necessitate this redistribution as they are funded through local taxes. This national commitment to equity in social services may be interfering with the international competitiveness of Helsinki as Helsinki has to pay out to the rest of the country and must, therefore, resort to borrowing for, or forgo, the infrastructure needed to remain highly competitive.

Implications of the new growth theories

The new economic geography demonstrates that whether advantage is dispersed or concentrated depends critically on one's underlying assumptions of the workings of the economy. Insights from endogenous growth theory introduce a new set of underlying assumptions related to factors that influence the rate of technological progress. The theory makes a substantial contribution to our understanding of the growth-equity trade-off as the social definition of development evolves from the process of (physical) capital deepening to one of fostering capability to advance in a knowledge-based economy. The central conceptual difference is that production possibilities in an economy are conditioned by the externalities from both physical and human capital investment and their use. Thus, growth is not merely the result of the accumulation of physical and human capital but critically depends on the ability to learn about new possibilities that are generated from this accumulation. The result that technological progress is related to the use of physical and human capital derives from the common sense notion of learning-by-doing. The result that the aggregate possibilities of an economy are more than the sum of individual possibilities derives from various mechanisms for technological spillover from the relatively simple processes of learning-by-imitating to more complex processes of learning-by-monitoring or learning-by-disseminating. From this perspective, the conceptual debate is much more than a sterile academic argument but impinges on the development strategies of national and local governments.

Using the endogenous growth theory approach the Finnish example from the latter half of the 1990s provides an ideal entry point for considering theoretical justification for heightened competitiveness that is consistent with a strong commitment to equity. Models of endogenous growth assume an economy characterised by

processes of learning-by-doing, technological spillovers, imperfect capital markets, and moral hazard problems related to worker effort (Aghion *et al.*, 1999). The models demonstrate that redistribution in such an economy will create more opportunity, improve incentives, and reduce macroeconomic volatility relative to an economy with a more unequal distribution of wealth. The intuition for these results is persuasive given its adoption of economic phenomena observed in real world economies. For example, borrowing for intangible investment in human capital is either difficult or impossible if capital markets are imperfect so that initial family wealth will largely determine the level of individual investment. Since human capital investment is characterised by strong diminishing returns, higher levels of inequality will impede the growth of human capital (Lopez *et al.*, 1998; Galor and Zeira, 1993; and Perotti, 1993).

An endogenous view of entrepreneurship suggests that demand for innovation will increase with a more equal distribution of "discretionary income". Arguably the first demonstration of this relationship was not motivated by a desire to spur innovation but to increase economies of scale in the Fordist model of welfare capitalism. The transformation of the automobile from an exclusive luxury good to a commonplace necessity was related to the growth of a blue-collar middle class. The shift in consumerism from mass-market to specialised, and even interactive, suggests that distribution of income may have a strong influence on demand for innovations. Zweimüller (2000) demonstrates that given the economic "law" of hierarchic preferences, where the budget share of basic goods declines with rising income, the long-run growth rate will depend on the distribution of income as incentives to innovate increase with the demand for innovations. The Finnish experience with the development of its mobile communications industry is consistent with this explanation. While the evolution of the industry was complex (see Chapter 6), the ability of a national market of only 5 million consumers to serve as a viable test market for new innovations was a critical element of early success dependent on high penetration rates. The long-run effect of globalisation may tend to dilute this particular benefit as emerging industries target world demand for innovation. However, national test markets may still be important for the roll-out of complex technologies increasingly dependent on not only a consumer's means to purchase but also on her capabilities to fully utilise them.

Theoretical models explaining why inequality may be good or bad for growth are limited to a qualitative verdict. It is evident that both extreme inequality and absolute equality are bad for growth. This raises the issue of whether the Finnish concern over small increases in inequality starting from one of the most egalitarian national distributions of income warrants policy action. Theoretical models of the stratification process related to the distribution of human capital suggest that such "preventive concerns" are not misplaced. Benabou's (1996) work demonstrates that the cumulative nature of the stratification process of human capital endowments makes it much easier to arrest the process at an early stage relative to eventual

reversal once it has run its course. Both high degrees of social and geographical stratification emerge from initially small differences in wealth, preferences and educational technologies. Depending on the level of economy-wide human capital, marginal products may be lower for individuals living in areas with a high degree of inequality, even if personal human capital levels are the same or even greater than for those living in areas with low inequality.

Seen from the social stratification perspective, the concern can be understood as a desire to maximise the degree of social mobility in a society. In this regard, the concern over the *ex post* distribution of income reflects a more fundamental concern with the *ex ante* distribution of opportunity (Benabou and Ok, 2001). The relationship and interaction between these two distributions are likely to be very different in a modernising industrial economy premised on physical capital investment versus an entrepreneurial knowledge-based economy. This in fact forms one dimension of the tensions and contradictions emerging in the Finnish welfare state. On the one hand, one would anticipate the outcomes in an entrepreneurial economy would be more varied than in an industrial economy starting from the same distribution of opportunity. In fact, the evidence from Finland suggests that inequality in the pre-tax distribution of income increased faster in this country in the 1990s than in any of 19 other OECD countries studied (OECD, 2000c). On the other hand, increasing inequality of outcomes may be more damaging to the growth prospects and equality of opportunity in the entrepreneurial economy if development is dependent on a widely shared capability to exploit emerging opportunities. This suggests that some form of redistribution that attempts to balance equality of opportunity may be necessary for ensuring sustained growth.[2] To now, the Finnish economy has been successful in ensuring a very high degree of social mobility.[3] This is arguably a more compelling measure of the success of the Nordic entrepreneurial welfare state than the distribution of outcomes.

In summary, the theoretical findings on the anticipated relationship between efficiency and equity are ambiguous. Indeed, the complexity of the contemporary economy suggests that this may not be a well-defined question dependent on one's definition of the "type of efficiency" and the "type of equity" that are central concerns. The more positive result from the review of the theoretical literature is the suggestion that competitiveness need not be in conflict with egalitarian norms. In essence, the relationship is an empirical question.

Empirical evidence

International comparisons

The persuasiveness of the equity-efficiency trade-off conflicts with the empirical evidence that fails to support the notion. A comprehensive survey of the empirical

literature concludes that "[o]*verall, the view that inequality is necessary for accumulation and that redistribution harms growth is at odds with the empirical evidence*" (Aghion *et al.*, 1999, p. 1620). An analysis of 23 OECD member countries over two periods from 1960-1980 and 1970-1990 generates similar results that less inequality is associated in the long run with faster rates of growth (Gomez and Meltz, 2001). Especially in light of the commonly accepted notion of an efficiency-equity trade-off, the single recent study that provides empirical support for the trade-off is tentative as to how these results should be interpreted: "*even if this short-term, within-country, positive relationship between inequality and growth is proven to be robust, this paper does not investigate how these two variables and their underlying determinants are interconnected…Therefore, this paper suggests the need for not only a further careful reassessment of the reduced-form relationship between these two variables, but also further theoretical and empirical work evaluating the channels through which inequality, growth and any other variables are related.*" (Forbes, 2000, pp. 885-886). In this respect, empirical analysis of taxation and the functions of government are suggestive of how equity and efficiency may be complements rather than substitutes.

Persuasive explanations for the result that a larger allocative role for government does not necessarily impede growth come from the observation that taxes will be less distortionary if taxpayers are in agreement with how revenues are spent. For example, corporatist political institutions and national wage bargaining are associated with higher labour taxation rates arguably because the linkage between taxes that workers pay and the benefits they receive are more transparent relative to countries where labour supply is determined individually (Summers *et al.*, 1993). Labour tax burdens are higher in more corporatist nations while non-labour taxes are lower. In contrast, countries that rely more heavily on property taxes are characterised by long political traditions of local autonomy of how these revenues are spent. In those instances where an insurance role for government is perceived as more necessary – for example, in countries more heavily dependent on foreign trade and thus more vulnerable to the vicissitudes of the global economy – relatively larger governments are common. The most comprehensive analysis of this relationship of more than 100 countries from the 1960s to the 1990s finds a robust partial correlation between the openness of an economy (defined by the share of trade in GDP) and the scope of government (defined by the share of government expenditure in GDP).[4] Finally, an optimal level of non-excludable goods may require government expenditure that is both growth-enhancing and largely non-distortionary (Ashauer, 1990).

Individual inequality

Inequality rose significantly in the latter half of the 1990s in Finland. This experience contrasts with the experience of the 1980s in which Finland was one of the developed countries that did not demonstrate an increase in income inequality and enjoyed the lowest level of inequality in all OECD member countries

Box 1.1 Finland, Singapore and the United States: alternative models of high-tech development?

A comparison of three of the best performing "high-tech" economies demonstrates wide variation in labour market institutions, democratic processes, and commitment to the welfare state. Finland, Singapore and the United States ended the 1990s at the top of most international rankings of the most competitive "new economies". But despite the early success of Silicon Valley that seemingly defined the parameters of an emerging Information Society, high levels of economic competitiveness and technological innovation are observed in other parts of the world with very different social and cultural values and institutional environments.

The definition of all three countries as information societies is derived from their observable strengths in infrastructure, production and knowledge of information technology. They generally boast the highest per capita number of Internet hosts, mobile phone subscriptions, Internet users, or e-commerce capabilities. In addition, these three countries are currently among the most dynamic economies based on measures of competitiveness and innovation.

Where the starkest differences appear between these three countries is in the commitment to the welfare state and extent of democratisation. As a triad it is interesting to note that Finland is the odd-man-out with respect to its commitment to egalitarianism, demonstrating much lower levels of income inequality and poverty relative to either the United States or Singapore.* With regards to democratisation, Singapore provides an example of a less open political environment relative to either the United States or Finland.

The following summary categorisation provides insight into the different societal architectures that have supported successful high-tech economies:

- the Silicon Valley Model of a market-driven, open Information Society;
- the Singapore Model of an authoritarian Information Society;
- the Finnish Model of an open, welfare Information Society.

* In this respect it is interesting to note the results of a recent study that do not identify the growing use of information technology as a source of increasing inequality in the United States. See Mishel and Bernstein (2001).

Source: Castells and Himanen (2001).

(Atkinson *et al.*, 1995). Differences in the share of capital income across income groups were the largest contributor to overall inequality. The effect of rising unemployment in the early 1990s has increased the number of unemployed in poverty (incomes below 50% of the national average income) and the disposable income of the unemployed has declined steadily since 1991. However, this divergence was not confined solely to the unemployed. The share of market incomes, in

particular gross earnings, going to the bottom deciles among the working-age population decreased significantly during the 1990s and, accordingly, the share going to the top deciles increased. Both movements were more pronounced than in the other 19 OECD member countries reviewed, and were linked to the recession of the early 1990s (OECD, 2000c).

There are different opinions on the efficacy of taxes and transfers for addressing growing disparity. The OECD study concludes that the effectiveness of taxes and transfers is demonstrated by the fact that changes in Finnish disposable income shares were not very different from the cross-country average. In contrast, a study by the Government Institute for Economic Research in Finland concludes that the tax and transfer system became less effective through the 1990s (Riihelä *et al.*, 2001). Evidence of this is provided by the fact that inequality as measured by the Gini coefficient in factor incomes (a 14.9% increase) rose more swiftly than gross income (total income including transfers) (a 1.9% increase) from 1990 to 1993. However, from 1993 to 1998 inequality in gross income grew faster – registering an increase of 13.0% – than factor income (5.4%).

It is notable that entrepreneurs as a group contributed more markedly to rising inequality in the 1990s as their factor share of capital income increased throughout the decade (from 10.1% to 38.1% in 1998) and capital income became more favoured by the dual income tax system introduced in 1993. Not surprisingly, the peculiarity of the tax formula disadvantaging relatively less successful ventures also resulted in entrepreneurs demonstrating the greatest increase in within group inequality from 1990 to 1998. Transfers paid by the group also demonstrated a significant decline between 1990 and 1998. Indeed, the introduction of the dual income tax system sparked intense national debate of its distributional consequences that continues to this day. The tax treatment of entrepreneurs thus presents a central dilemma for assuring that competitiveness is compatible with egalitarian norms. The easy decision is to reform the tax code so that entrepreneurs do not bear a tax penalty relative to wage employment if their ventures are initially less profitable than presumed in the tax formula. This would increase incentives for engaging in entrepreneurial activity at the start-up stage essential to promoting growth but with negligible adverse distributional effects. The more difficult task is to arrive at some social consensus of the fair taxation of entrepreneurial activity that recognises the critical role they play in ensuring a dynamic, competitive economy. The conventional argument that has held sway to now is that tax rates on capital must better match other national rates given its mobility and susceptibility to international tax competition. The persuasiveness of this argument has convinced some that the appropriate egalitarian rejoinder is to make capital ownership much more common.[5] Similarly, wider belief that entrepreneurship is a likely career path would build consensus and is seen as a central challenge of the Finnish Information Society (Castells and Himanen, 2001, pp. 108-110).

Regional disparities

Similar to the trends of the size distribution of income in Finland, functional regions across Finland have also demonstrated a process of convergence followed by divergence in the 1990s. In a long-term study of regional taxable per capita income from 1934 to 1993, rates of convergence of about 2% per year are estimated, similar to rates of conditional convergence identified in other national studies.[6] From a shorter-term perspective there is evidence that regional disparities widened during and following the severe recession of the early 1990s. Although this marks a break in convergence of per capita GDP across functional Finnish regions it is too early to determine whether this is a short-term fluctuation or a longer term structural break with the earlier epoch. Both regional differences in evolution of labour productivity and the number of jobs contributed to a tendency for sub-regions with higher per capita GDP to diverge from sub-regions with less productive capacity from 1990 to 1995. In terms of sectoral effects, manufacturing contributed the most to regional divergence over the period.

Explicit examination of trends of individual sub-regions with respect to Helsinki confirms that the great majority of those regions lagging behind were in the north. The 30 (out of 84) sub-regions catching up with Helsinki in terms of per capita GDP were largely in the coastal sub-regions of the country. Salo, the southern sub-region where Nokia has concentrated most of its Finnish production activities actually surpassed Helsinki in per capita GDP over the study period. Although more recent analysis of the regional convergence process is not yet available, if the latter period of recovery has not fundamentally altered these trends then the interdependencies of Helsinki and the rest of the country discussed above are likely increasing. This again poses a challenge to the relationship between competitiveness and equity as a share of resources is redirected from the growth engine to less advantaged regions. The small population size of Finland makes the interdependency more salient as a growing metropolitan region will still be dependent on the development of human resources and services in other parts of the country. So some redistribution would still serve the growth interests of the country. Whether this redistribution would also satisfy the regional equity interests of citizens is the topic of current political debate.

Intraregional disparities

Unemployment, poverty and social exclusion have traditionally been problems of decaying rural areas in the sparsely populated northern and eastern parts of Finland. However, in the wake of the economic crisis of the early 1990s, unemployment began to be more spatially concentrated in urban areas and the suburban belt of cities. Although these developments come against the backdrop of the best socio-economic balance observed in Helsinki's recorded history at the

turn of the 1990s – suggesting that intraregional disparities are still quite modest relative to other European and North American cities[7] – these changes have spurred increased interest in and a national discussion of urban social exclusion and the need for new urban policies in Finland. The motivation for this concern is reflected in the strong commitment to social mixing or locating different social strata in the same neighbourhoods. The fact that social segregation of neighbourhoods may be proceeding in spite of policies that were successful in reinforcing more balanced development in the 1970s and 1980s is regarded as a troubling trend in Finnish urban development.

Three factors have been associated with this process of spatial differentiation. First, the rise in unemployment during the economic crisis of the early 1990s tended to be greater in those areas more disadvantaged socio-economically in the eastern and north eastern parts of the city. This reversed the trend of the 1970s and 1980s where socio-economic distinctions in this area were diminishing relative to the rest of the city. Second, the level of education is becoming a more important determinant of labour market success with the less well-educated, working class areas lagging behind. In contrast, the western areas with a higher concentration of better-educated workers have realised more of the gains of the dynamic recovery. Consequently, the educational divide of the city is gradually breeding both unemployment and income differences. Third, the residential choices of recent immigrants are reinforcing this pattern with one-third of new foreign residents in the western part of the city having university degrees compared to only 10% of the comparable group in the east and north east. It is important to stress that this differentiation is masked at even the lowest administrative units of neighbourhoods, emerging clearly only in very fine-grained analysis of 250 x 250 meter grids. However, the intractability of spatial differentiation that plagues many western cities suggests that preventive urban policies for stemming incipient processes may be much more effective in ensuring residential diversity that is increasingly regarded as a crucial aspect of sustainable urban development.[8]

At larger spatial scales there is evidence that municipalities within the GHR are also contributing to greater spatial differentiation. Examining changes in city characteristics between 1995 and 1999 there is a noticeable differentiation between Helsinki, Espoo and Vantaa. Incomes of city residents rose fastest in Espoo, more moderately in Helsinki and slowest in Vantaa. These trends mirror the situation with respect to the proportion of families receiving subsidies, with slow growth in Espoo, moderate relative increases in Helsinki and growing fastest in Vantaa. The trends for the outlying cities of Hämeenlinna and Lahti also demonstrated a decline relative to Helsinki. Despite the short period of these trends, they do suggest a widening gap for the cities within the metropolitan region and between the metropolitan region and the outlying cities.

Taken together, the empirical evidence suggests that while a social commitment to egalitarianism need not disadvantage the economic performance of countries, this commitment has become more difficult to implement in the current environment of economic development. The fact that the Finnish Nordic welfare state has emerged from both a severe economic crisis and a dynamic period of growth with its central tenets largely unaltered is testament to its economic viability to now. At the same time, there is evidence that it has become less effective in fulfilling its equity mandate. However, merely altering the parameters of redistribution to better equalise outcomes may impose costs of slower growth as well as frustrate processes of harmonisation within the EU. Rather, the contradictions that have emerged between the Nordic welfare state and the entrepreneurially driven Information Society will require that certainties of underlying assumptions are challenged in order to reformulate development policy that is better able to pursue competitiveness and egalitarianism as multiple objectives, not merely as policy substitutes.

Notes

1. The impediment to growth in the Nordic countries was acknowledged in the 1980s with the introduction of dual income tax (DIT) systems that apply different tax rates to labour and capital income. In Finland, the capital component derived from the activity of a self-employed individual or a partnership is calculated by applying a fixed rate of return (18%) to the company's net assets, the labour component being the residual. The progressive tax structure then applies to the labour component. This introduced the perverse result that small firms with a lower rate of return are taxed at a higher effective rate since the capital component is taxed at the 29% flat rate but derive little benefit from the progressive taxation of labour income as the residual will be small. For more profitable companies, a large part of their labour income will be tax exempt, thus bringing down their overall effective tax rate. As a result, and contrasting with other Nordic dual systems, the Finnish tax system creates an incentive to have income recorded as labour income for low to middle-income self-employed. To reduce these vertical inequities, from 2001 onwards the self-employed have the option to adopt a lower (10%) rate of return thus giving the less profitable enterprises the opportunity to benefit from the generous tax allowances on the labour income component (OECD, 2002c).
2. The industrial district literature provides numerous examples of how entrepreneurial economies have been able to ensure a relatively equal distribution of productive and innovative capability across collections of relatively small firms independent of the current market success of any particular firm. Co-production relationships characterise many design intensive districts where firms that were unsuccessful in winning contracts in a particular season nonetheless are actively involved in filling production orders of successful firms. In this way, the unsuccessful firms not only gain tacit knowledge in the production of successful designs, but also maintain the economic viability to design and compete in the next season. In this way, the industrial district satisfies the requirement of *adaptive efficiency* to maximise the number of tries to solve economic or entrepreneurial problems (North, 1990).
3. See Österbacka (2001) who identifies a comparatively low correlation between the social status of succeeding generations in Finland.
4. See Rodrik (1998). These results in the Finnish context are best demonstrated in comparison to the US economy. The "scope of government" in Finland is nearly twice that of the United States in the latter period examined but its "openness" is nearly three times that of the United States.
5. Louis Kelso and Mortimer Adler (1958) first developed the thesis in T*he Capitalist Manifesto* that called for more widely distributed capital ownership. The most recent widely read extension of these ideas is T*he Ownership Solution* by Jeff Gates (1998) that extends the problems of concentrated capital ownership to unsustainable development patterns related to increasing inequality and environmental degradation among others. Although

these ideas have to date had little impact on policy, notwithstanding legislation required of Employee Stock Ownership Plans, it has broadened the debate on the options available between l*aissez-faire* on the one hand and state-directed redistribution on the other.

6. Kangasharju (1998). For discussion of regional convergence in other national contexts see Cellini and Scorcu (2000), de la Fuente (2002) and Bernard and Jones (1996).
7. Ratios of the top income quantile to the bottom income quantile confirm this impression. In Helsinki the ratio has remained relatively stable at about 2.1 in both 1980 and 1994 (Statistics Finland, 2001). The corresponding decile ratio in Toronto increased from 2.8 in 1970 to 4.1 in 1990 (Murdie, 1998) and in London among households with an employed head from 3.1 to 4.2 between 1978 and 1991 (Hamnett, 1994).
8. The social costs of segregation are perhaps most evident in American cities where increasingly vocal advocates of a New Urbanism have stressed the importance of neighbourhoods with a broad range of housing types. The diversity in age, race and income that such neighbourhoods could support is seen as essential to strengthening the personal and civic bonds of an authentic community. See Leccese and McCormick (2000).

Chapter 2

Constraints and Potentials of Territorial Development

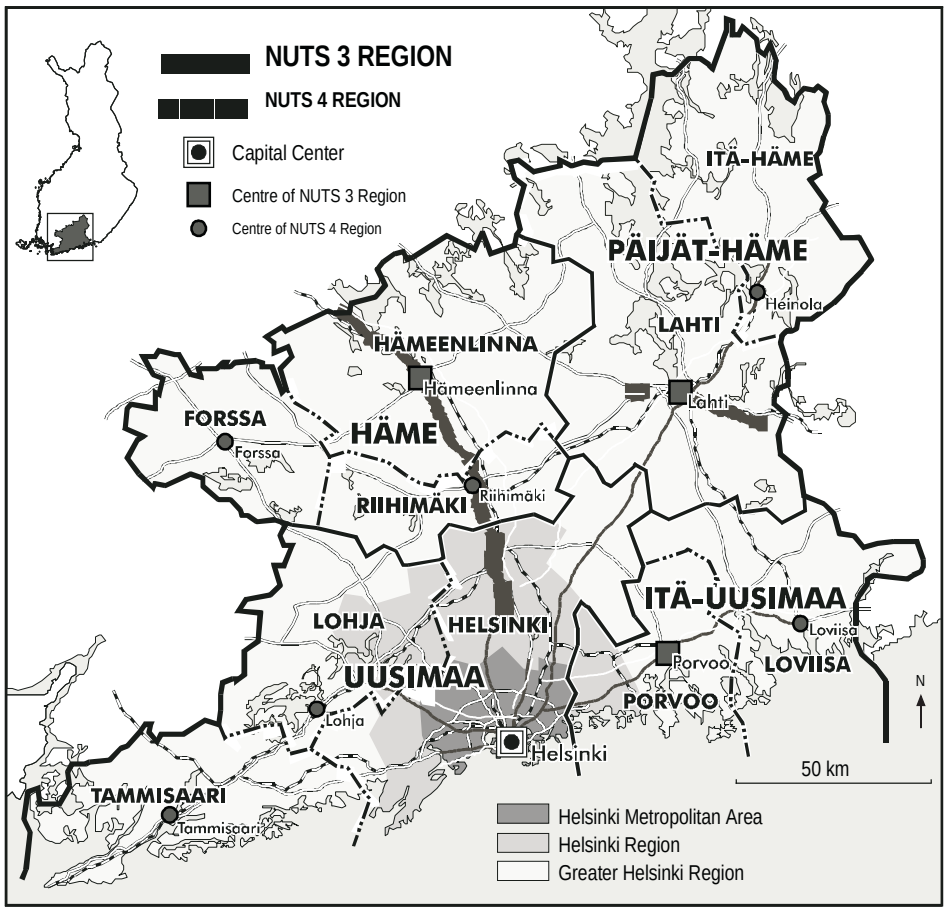
Borders and interaction

Definition of the Greater Helsinki Region

The definition of the Greater Helsinki Region is based on four main factors: co-operation between different actors, commuting (travel-to-work area), connectivity and using NUTS 3 regions as building blocks. This study is a first attempt to describe Helsinki and its adjacent regions as a whole.[1] The Greater Helsinki Region consists of four regions: Uusimaa, Itä-Uusimaa, Häme (former Kanta-Häme) and Päijät-Häme, classified by the European Union as NUTS 3 regions (Figure 2.1). The 1 757 000 inhabitants living in these regions constitute approximately one-third of Finland's entire population. Three-fourths of the Greater Helsinki Region's population lives in Uusimaa. Within the Greater Helsinki Region, these NUTS 3 regions are further divided into ten NUTS 4 sub-regions (Table 2.1). The central part of the region comprising Helsinki, Espoo, Vantaa and Kauniainen forms the Helsinki Metropolitan Area populated by 965 000 inhabitants. With its 560 000 inhabitants, the capital city Helsinki is the largest city in Finland. The four core municipalities and eight surrounding municipalities constitute a Functional Urban Region (Helsinki Region, FUR), denoting a commuting area in which more than 15% of residents work in the Helsinki core region. The neighbouring cities and towns of Porvoo, Lahti and Hämeenlinna, as well as their adjacent regions (Itä-Uusimaa, Päijät-Häme and Häme) are favourable living areas for people working in the Helsinki district. The proportion of long-distance commuters has grown particularly in the cities of Hämeenlinna and Lahti that are situated on the outskirts of the Greater Helsinki Region approximately 100 kilometres from the capital city.

Throughout the review the various regional aggregates will refer to the specific areas delineated in Figure 2.1. At this point it is important to recognise that the smallest regional aggregate – the city of Helsinki – is several orders of magnitude smaller in land area relative to the largest regional aggregate of the Greater Helsinki Region. The relative order of the four regional aggregates in land area is also important, as these spatial relationships are not made explicit in the discussions that follow.

Figure 2.1. **Greater Helsinki Region**



Source: City of Helsinki Urban Facts.

Urban primacy in Finland

An important feature of the Greater Helsinki Region is its developed urban structure. The urban network consists of one predominant European-level centre, the Helsinki Region and its near-by regions of Porvoo, Riihimäki and Lohja, as well as the regional centres of Lahti and Hämeenlinna (Figure 2.2). Although the status of Helsinki as the primate city in Finland is not questioned, it is instructive to compare

Table 2.1. **Population distribution of the Greater Helsinki NUTS regions**

NUTS 3 Regions (number of units)	NUTS 4 Sub-regions (number of units)	NUTS 5 Municipalities (number of units)	Population 2000
Uusimaa		24	1 304 600
	Helsingin seutukunta	13	1 184 850
	Lohjan seutukunta	6	76 400
	Tammisaaren seutukunta	5	43 350
Itä-Uusimaa		10	89 600
	Porvoon seutukunta	3	66 840
	Loviisan seutukunta	7	22 770
Häme		16	165 310
	Hämeenlinnan seutukunta	8	87 580
	Riihimäen seutukunta	3	41 860
	Forssan seutukunta	5	35 870
Päijät-Häme		12	197 380
	Lahden seutukunta	9	167 450
	Heinolan seutukunta	3	29 930
4	10	62	1 756 880

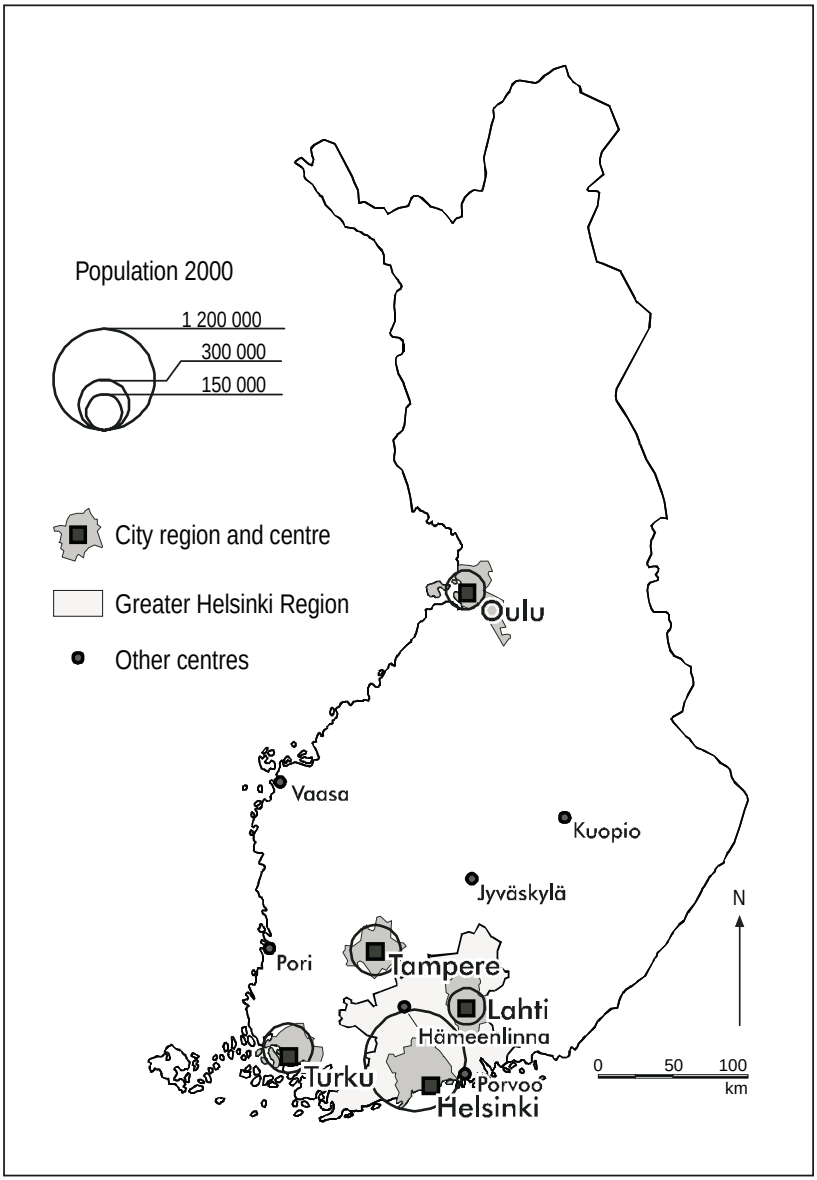
Source: City of Helsinki Urban Facts and Statistics Finland.

the level of concentration to other national contexts. Urban primacy in Finland is regarded as satisfactory given its level of development and scale of the country in an econometric analysis of the relationship between urban concentration and economic growth of 70 countries (Henderson, 2000). Denmark and Hungary are other European countries unambiguously classified in this group. In contrast, Austria, France, Greece, Ireland and Portugal are characterised by excessive primacy that has a robust relationship with slower economic growth. Belgium and the Netherlands are the two western European countries characterised by too little primacy.

Cultural amenities

With its concentration of various cultural institutions, the Helsinki area is the centre of arts and culture in Finland. In 2000, Helsinki was not only capital of Finland but also a European Capital of Culture that attracted approximately 1.3 million people. The premier education, production, brokerage and distribution functions are located in Helsinki and its surroundings for almost every artistic and cultural endeavour. National shrines such as the National Theatre, National Opera and Radio Philharmonic are found in the capital. The country's highest education in the arts and culture is given in Helsinki at the Sibelius Academy, the Theatre Academy, the University of Art and Design and the Academy of Fine Arts. Forty-five per cent of all Finns who earned

Figure 2.2. **Greater Helsinki Region and the Finnish functional urban regions over 150 000 inhabitants**



Source: City of Helsinki Urban Facts.

their living in arts and culture-related occupations work in the Uusimaa region, that comprises the major share of population of the Greater Helsinki Region. The importance of the Helsinki region to the cultural life of the country is also reflected in state appropriations: 49% of the state's total funding for various fields of art goes to Uusimaa. The city of Helsinki has the country's largest municipal budget for arts and culture with gross expenditures for arts and culture totalling EUR 72 million in 2000, or 2.5% of the city's total expenditure. The city of Lahti, located on the northern outskirts of the Greater Helsinki Region possesses a strong competence in arts design; Institute of Design, Institute of Fine Arts and Faculty of Music provide the highest level of vocational training in their respective fields. Lahti is undoubtedly one of the few cities in the world with less than 100 000 inhabitants possessing an internationally acclaimed symphony orchestra.[2] The distribution of cultural institutions throughout the GHR is provided in Table 2.2.

The level of convention tourism in a city provides an external assessment of the various amenities available that convention organisers value in ensuring good attendance. Cultural amenities are a strong draw in this respect. Helsinki's ranking on the list of large congress cities rose from 16th in 1997 to 11th in 1999, placing Helsinki ahead of cities like New York, Madrid, Geneva and Stockholm (Figure 2.3).

Competitiveness

Concerning the Greater Helsinki Region's international competitiveness, Fortune Magazine assessed cities providing Europe's best opportunities for business

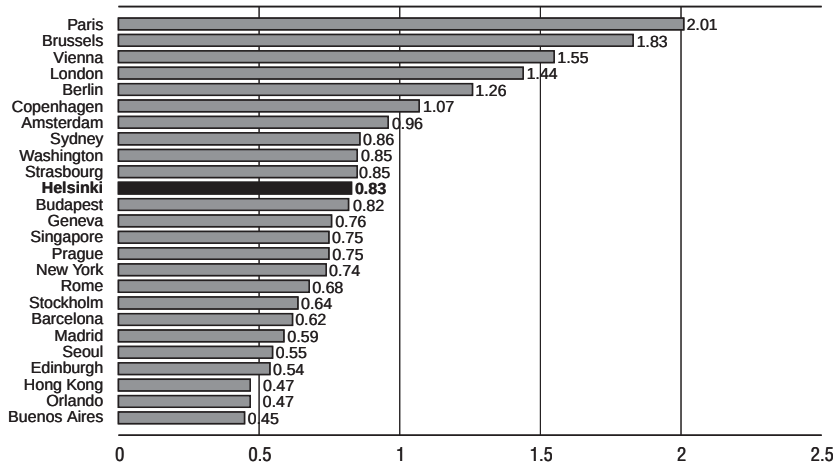
Table 2.2. **Number of cultural institutions in 1999**

	Number of symphony orchestras active in region	Number of theatres	Number of cinema screens	Number of museums	Number of central and branch libraries	Number of sports facilities
Helsinki Metropolitan Area	4	22	65	92	86	3 421
Helsinki	3	17	62	80	55	2 501
Helsinki Region	4	22	69	123	106	4 415
Outer part of GHR	1	2	13	36	20	550
Lahti	1	1	6	12	10	256
Porvoo	–	–	3	11	7	141
Hämeenlinna	–	1	4	13	3	153
Greater Helsinki Region	5	24	82	159	126	4 965

Source: Statistics Finland Finnish Film Foundation; The Finnish Museums Association; Association of Finnish Symphony Orchestras; Finnish Theatre Information Centre.

Figure 2.3. **Leading cities hosting international meetings, 1999**

Percentage of the worldwide total



Source: Union of International Organizations.

enterprise in the year 2000 (Murphy, 2000). Fortune utilised Arthur Andersen's Business Location Service Practise. According to these results, Europe's top five in this respect were London, Frankfurt, Helsinki, Amsterdam and Dublin. Among these cities, London and Amsterdam were also ranked among the top five in the previous year, while Helsinki was not. The most recent comparison covers 35 cities. Helsinki's strengths are linked to the adoption of new technologies, quality of life, safety and education (Table 2.3). Certain business enterprise-related parameters score average points and a special cause for concern is the relatively high total unemployment rate. Helsinki had the highest ratio of Internet connections per 1 000 inhabitants, and ranked second after Stockholm in computer density.

A more robust analysis of the competitiveness of Helsinki relative to other Finnish regional economies was evaluated in a study of enterprise efficiency.[3] For the period 1988 to 1999, the Helsinki Region, or the core area of the Greater Helsinki Region scored the highest rating of 99.7. In contrast, the least efficient Finnish region scored 67.1, meaning that given the same resource input, the business sector in the Helsinki Region would produce more than 50% greater output. The mean efficiency score for the entire study period was 81.6. The entire Greater Helsinki Region also scored high efficiency points (94.4 on average) for the period 1988-1999. With one exception, all ten NUTS 4 regions within the Greater Helsinki Region were more efficient than the national average. Natural explanations for the Helsinki Region's high efficiency would include the area's sufficient size and modern

Table 2.3. **Ranking of Helsinki by selected indicators in Best Cities Survey**

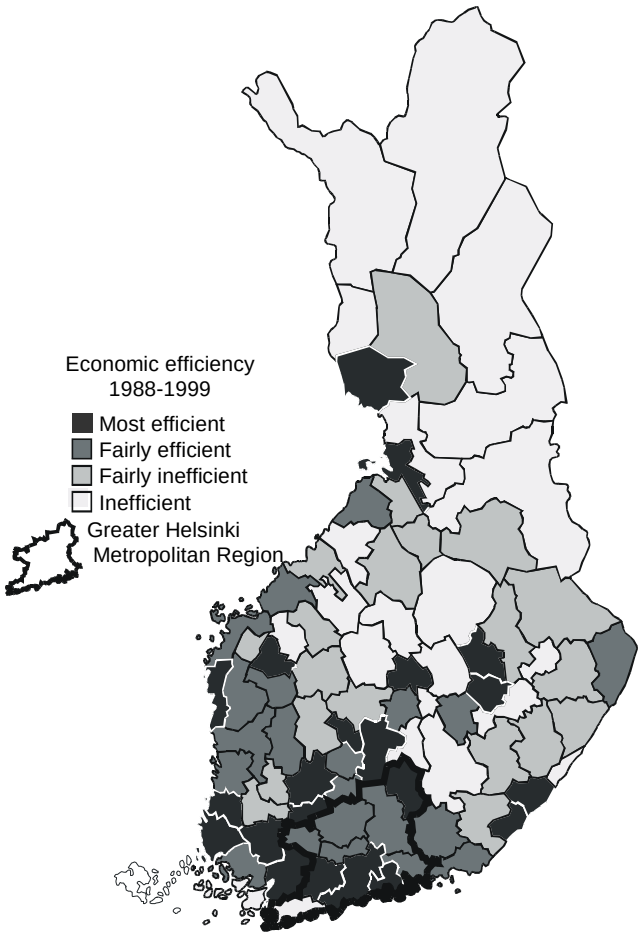
Feature	Helsinki's ranking
Internet connection ratio	1
Computer density	2
Public spending on education	3
Quality of life	4
Political, financial and economic risk index	4
Office rent	16
Foreign direct investment inward	18
Creation of firms	20
Degree of unemployment	22

Source: Andersen (2000).

production structure. Large economic regions generally scored high points in the comparison, suggesting the benefits of scale. Economically efficient areas are usually well off economically and their geographical location is favourable (Figure 2.4).

A topic of special interest in the case of the GHR and Finland is the role of information and communication technology (ICT) in fostering competitiveness. Finland was one of the first countries to formally develop and publicise a national vision of Information Society initiatives in 1995. Enabling public investments in education and research to develop the sector have a much longer history (Chapter 6). The compelling territorial dimension of the topic is the extent to which large cities are the critical driving force of the transformation into an integrated information economy. In Finland, information sector jobs are predominantly located in the largest cities and growth centres.[4] In Helsinki alone, the information sector employed 56 000 people in 1998 and the estimate for 2000 is 59 000. Espoo, with 23 300 information sector jobs in 1998 and 24 000 in 2000 comes second after Helsinki, followed by Oulu (9 700 in 1998 and 10 500 in 2000) and Tampere (8 200 in 1998 and 13 500 in 2000). Between 1994 and 2000, jobs in the information sector grew considerably compared to the growth in other industries especially in Oulu (a university city in the north), Helsinki, Espoo and Tampere. In the country as a whole, the information sector accounted for one-fifth of job growth during that period. The strong tendency for clustering of IT-sector jobs not only in larger cities but also within certain areas of the cities is suggestive of strong spillover effects that would be greater in urban environments. But the experience in Finland requires a more nuanced interpretation as the success of much smaller cities such as Tampere and especially Oulu in promoting IT sector growth suggests that localisation is the critical factor; *i.e.*, that urban agglomeration *per se* is neither necessary nor sufficient. Still, particular sub-sectors such as services, telecom and data processing businesses demonstrated much faster

Figure 2.4. **Average DEA efficiency of 83 Finnish regions, 1988-1999**



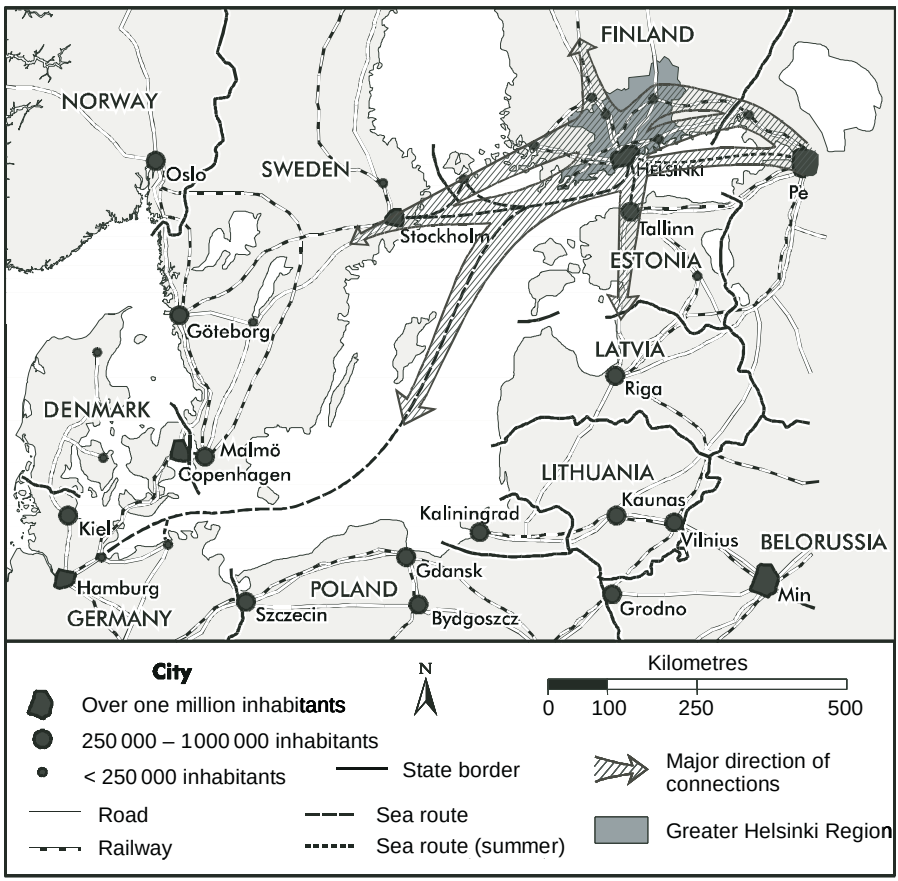
Source: Susiluoto and Loikkanen (2000).

growth in the Helsinki conurbation. Of the 14 400 jobs created in these fields during the period 1993-1999, 11 000 (76%) were in Helsinki, Espoo or Vantaa. This implied an 82% growth in the field in those cities. Other branches that tend to gravitate to Helsinki are publishing, radio and TV broadcasting, advertising and business consulting; 84% of the job increase taking place during the period occurred in Helsinki, Espoo or Vantaa.

Geopolitical status in the Baltic, EU *and global community*

The trend towards internationalisation that strongly characterised the 1990s has continuously increased the importance of the Baltic Sea Region for the Greater Helsinki Region. Besides traditional connections to Stockholm, new contacts have developed. Tallinn in particular has become an important city for economic and cultural interaction and contacts with St. Petersburg are also increasing. New connections have also been initiated to other Baltic states (Figure 2.5). The

Figure 2.5. **Greater Helsinki Region within the context of the Baltic Sea Region**



Source: City of Helsinki Urban Facts.

processes of globalisation accompany a transformation in market boundaries and comparative advantage of the geopolitical region. Once a periphery supplying raw materials to the industrial centres of Europe, northern Europe and the Baltic Sea Region have emerged as an important area for advanced industry and trade. When the Soviet Union broke up, there was a change in the relative position of Finland and its capital. A new economic region is emerging in northern Europe, affecting a population of between 70 and 80 million people. Southern Finland and the Greater Helsinki Region are centrally situated in this area.

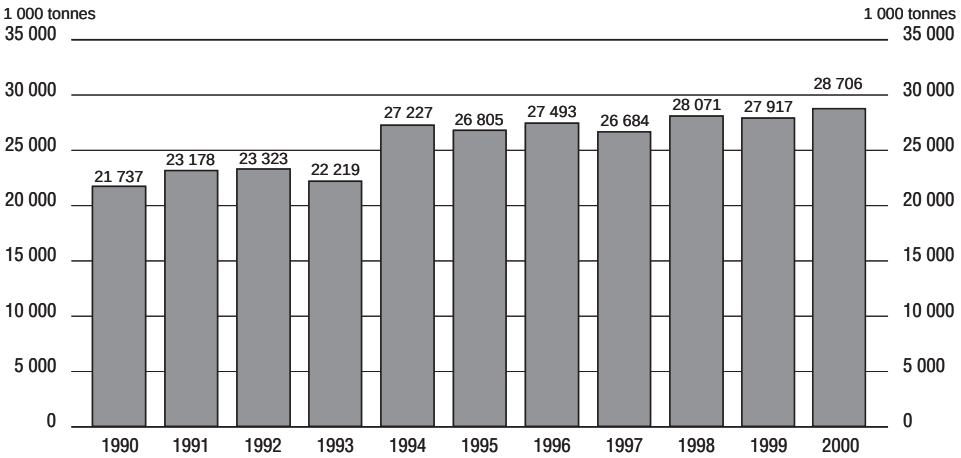
In addition and as an obvious consequence of Finland's EU membership from 1995, the European Union has been an important arena of international contact for the Greater Helsinki Region. Within the European Union, Europe's new regional and community structure and its transport requirements are still in a process of transition with the implications of eastern enlargement injecting an additional level of transformation. In Finland, the idea of being a gateway or springboard between east and west has long been a cornerstone in the country's international strategy. Thus, the logistical advantages of location are further reinforced by considerable practical and political experience in facilitating interaction between east and west. Large investments in the transport system and freight sector constitute a unique opportunity to direct community structure and to develop international economic competitiveness. The volume of foreign trade gives a picture of the current situation. Among the Baltic states, a fifth of Estonia's foreign trade goes to Finland. Other Baltic states are much less dependent on trade with Finland, but Finland is an important source of foreign direct investment in Lithuania and, obviously, in Estonia. However, the trade orientation of Finland is put in proper perspective by comparison to its largest trading partner to the west: while Estonia accounts for 3% of Finland's entire foreign trade, Sweden accounts for 10%.

Logistics and interconnections

In the year 2000, the total amount of international cargo traffic passing through the region's ports and Helsinki-Vantaa airport totalled approximately 29 000 tonnes, representing an approximately 32% increase compared to the year 1990 (Figure 2.6). Harbours accounted for 99.7% of regions' international cargo traffic. Regarding international cargo traffic, the growth of traffic volumes during the late 1990s has been fairly moderate and there have even been certain periods when cargo traffic volumes have decreased compared to the previous year. In 2000, the Helsinki-Vantaa airport's share of all airborne Finnish cargo traffic was approximately 85% and of international cargo traffic approximately 98% (Civil Aviation Authority, 2001). When measured according to cargo volumes, the larger ports are Sköldvik, specialised in the transport of oil and chemical industry products, as well as Helsinki whose combined cargo imports and exports during the year 2000 accounted for nearly 80% of the Greater Helsinki Region's harbours' import and export volumes.

Figure 2.6. **International cargo traffic passing through the Greater Helsinki Region's harbours and Helsinki-Vantaa airport during the 1990s**

Freight and mail



Source: Civil Aviation Administration Finland, Finnish Maritime Administration.

The region's air traffic takes place primarily through the Helsinki-Vantaa airport, although there is also a certain volume of passenger traffic handled by the Helsinki-Malmi airport. Helsinki-Vantaa airport is by far the most important airport in Finland with its national and international connections. In 2000, its share of the entire country's air passenger traffic was approximately 72% and share of international air passenger traffic was approximately 91% (Civil Aviation Authority, 2001). Passenger traffic taking place by air (departing, arriving and transit passengers) has grown rapidly since 1994. In the year 2000, the Helsinki-Vantaa airport's passenger traffic volume broke the 10 000 000 passenger limit, almost 4 million passengers more than the year 1993. In 1999, scheduled traffic from Finland was oriented primarily to other EU member states. For all regularly scheduled flights taking place in 1999, approximately 72% of passengers travelled to EU countries and approximately 28% to other countries (Statistics Finland, 2000b).

During the year 2000, the number of passengers passing through the region's ports totalled approximately 9.3 million passengers, accounting for nearly 60% of the international passenger traffic passing through all Finnish ports (Merenkulkulaitos, 2001). Almost all of this traffic passed through the port of Helsinki. The most important destinations for maritime passenger traffic are Tallinn,

whose passenger volumes have been registering strong growth in the 1990s (approximately 6.2 million passengers in 2000), as well as Stockholm, whose passenger volume during the year 2000 totalled approximately 2.7 million persons. Other important destinations for maritime passenger traffic include regularly scheduled connections from Helsinki to Lübeck and Travemünde, as well as connections from Helsinki to St. Petersburg and Rostock arranged primarily during the summer months (Figure 2.5).

Of the infrastructure projects aimed at improving the area's accessibility and particularly international traffic, the most important are the development of the Helsinki-Vantaa airport area and the concentration of harbour operations for Helsinki's cargo traffic at a new port planned at Vuosaari. The Helsinki-Vantaa airport's most important development initiative is construction of a third runway that is expected to be in use during the year 2002. The airport has been developed particularly with an eye to the increased volume of international flights. The port at Vuosaari is meant to replace cargo traffic-related harbour operations in west and north harbours in Helsinki's centre that would not have enough capacity to handle increasing volumes of cargo in the future (Vuosaari Harbour Project, 2001). The Vuosaari harbour is planned to be built on a 150-hectare area where it replaces a former shipyard. There is also planned to be a 50-hectare business park with approximately 3 500-4 500 new jobs adjacent to the harbour. At the same time approximately 1.5 million m^2 of space in Helsinki's central business district would be freed up for housing, enough to meet the needs of approximately 20 000 residents, and office use. In addition to this, heavy truck traffic generated by the harbour would be directed away from the city centre, which will ease traffic congestion in the city centre and on the inbound routes. The cost estimate for the harbour is EUR 168 million (Helsingin kaupunki, 1996) and for traffic connections of the harbour EUR 188 million (Vuosaaren satamahanke, 2001). The port's construction has been slowed because it will be necessary to build the harbour's traffic connections through Porvarinlahti's Natura 2000 conversation area. The environmental impacts of the harbour project have been studied extensively and taken into account in the plans. The harbour would be ready to start activities in the year 2008.

During the 1990s, the most important infrastructure projects aimed at improving the region's internal mobility have been the construction of the so-called City Railway from Helsinki to Tikkurila, the extension of the metro line from Itäkeskus to Vuosaari, motorway extensions from Helsinki to Hämeenlinna and Lahti, as well as the Ring Road II's construction between the Länsiväylä Motorway and Turku Motorway that has improved the metropolitan area's cross traffic. Additionally, a new stretch of railway tracks from Helsinki to Leppävaara was taken into use on 13 August 2001. Within the near future, significant railway projects will include the construction of a bypass track planned from Kerava to Lahti (estimated costs approximately EUR 336 million) that would shorten the rail journey times between

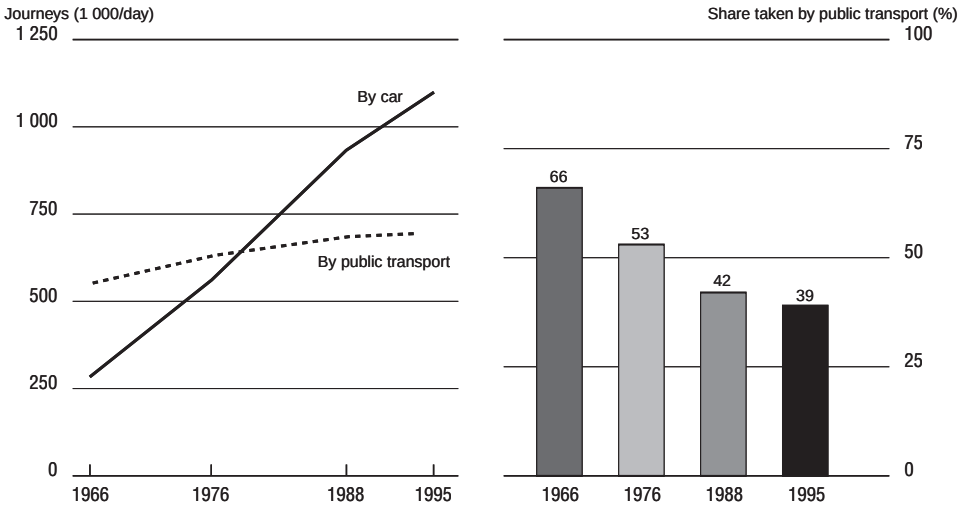
Helsinki and Lahti from the current 83 minutes to 45 minutes, the extension of the City Railway from Tikkurila to Kerava (EUR 22 million), the construction of the so-called Marja Railway Line running from Martinlaakso via the Helsinki-Vantaa airport to the main line (EUR 219 million), the creation of fast bus connections that would extend from Tapiola in Espoo to Oulunkylä and Viikki through Helsinki's Itäkeskus (EUR 23 million) as well as the construction of the so-called West Metro (EUR 219 million) that would extend metro traffic from Ruoholahti in Helsinki to Matinkylä in Espoo. Road traffic development measures emphasise improvements in the metropolitan area's cross traffic, including the extension of Ring Road II from the Turku Motorway to the Hämeenlinna Motorway (EUR 71 million) as well as other ring road improvements.

It has been estimated that the cost of the most important transport projects will total EUR 2.1 billion by the year 2020 (YTV, 1999; Ratahallintokeskus, 2001). The government is primarily responsible for financing, but the area's municipalities and EU are also participating in project financing. Currently financing is managed primarily on the basis of annual road project appropriations designated by the Parliament. Along with this so-called annual budget financing, there has however been a search in recent years for other financing models that would speed up the initiation of road projects. One of these is a so-called post-financing model in which a private operator acquires the necessary financing, builds the road and maintains it. The government subsequently pays compensation for a period of 15 years depending on the type of traffic and service level. This type of financing model has been applied in the construction of the Lahti Motorway.

The change in the community structure, concentration of functions and decentralised housing patterns at the centre's peripheral areas has increased the need to transport people and goods. Economic growth, technological advances in transportation equipment and a rise in living standards have also contributed to an increase in traffic-related growth pressures in the region. Along with the rapid expansion of employment areas and improved transport connections, the metropolitan area's urban field has grown appreciably during the last few years; the Hämeenlinna and Lahti regions brought closer by new motorways have begun to play increasingly active roles in the capital city's growth zone.

Private automobiles make approximately 60% of the passenger trips taking place within the region. To a certain extent, driving has become part of the regional population's lifestyle: trips to and from work, as well as leisure-time related trips in particular, are more frequently made in one's own car. A clear indication of the automobile's growing popularity is that the number of journeys made by car in the metropolitan area has grown almost four-fold since the mid-1960s, while the number of journeys using public transport has grown only by a quarter (Figure 2.7). An increasing reliance on the automobile is also shown by the strong growth registered in the region's car ownership; this was however dampened momentarily by the recession of

Figure 2.7. **Journeys made daily by public transport and car in the Helsinki Metropolitan Area**

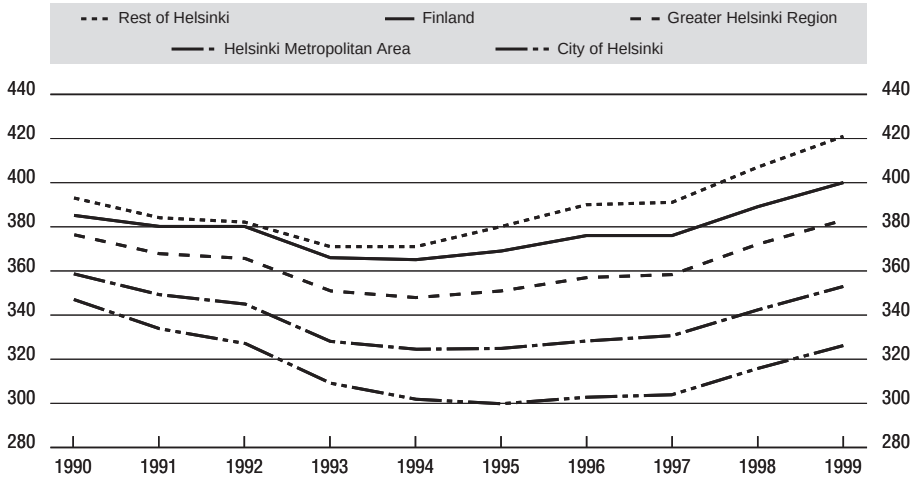


Source: Helsinki Metropolitan Council (1999): Helsinki Metropolitan Area Transport System Plan PLJ (1998).

the early 1990s (Figure 2.8). In 1999, the number of private cars in the Greater Helsinki Region was approximately 667 000, equal to approximately 380 cars per 1 000 residents. In the metropolitan area the number of cars (approximately 350 cars per 1 000 residents) was slightly lower than the region's average value due to shorter travel distances and effective public transport connections. On the other hand, the car ownership in the Helsinki region surrounding the metropolitan area (so called framing municipalities) was approximately 416 cars per 1 000 residents, which exceeded the Finnish average.

The significance of public transport is accentuated particularly in the metropolitan area and connections between the centres. Public transport functions best in a direction towards the centre of Helsinki, where the most of the journeys made by motor vehicle can also be made by public transport. The share of the public transport of the total passenger traffic heading towards the Helsinki centre has remained steady at the 1990s' level of 62-64% (Helsingin kaupungin tietokeskus, Helsingin kaupungin ympäristökeskus, 2000). During the rush hours the share has been slightly bigger – around 68-70%. As a whole, the number of passengers using public transport has grown during the 1990s from 937 939 passengers boarding per work day in 1992 compared to 1 109 033 in 1999 (YTV, 2000a). The main public transport

Figure 2.8. **Greater Helsinki Region's car ownership 1990-1999**
Cars per 1 000 inhabitants



Source: Statistics Finland.

services for the metropolitan area are provided by buses, commuter trains, the underground railway (metro) and trams. In the year 1999, the volume of passengers using public transport in the Helsinki Metropolitan Area amounted to almost 306 million passenger journeys (YTV, 2000b). The bus was the most important mode of transport with its 55% share of the passengers (167 million passengers). Trams, which operate in the main city area of Helsinki, carried about 55 million passengers (about 18% of travellers) and metro about 50 million passengers (about 16% of passengers). Commuter train services extend outside the metropolitan area, and about 41 million travellers made use of these services in the region. Of these the majority, 34 million, travelled within the metropolitan area; about 11% of public transport journeys in the region were made by train.

The region's railway network consists of northbound and westbound connections from Helsinki that are supplemented by the connection branching out from Kerava towards Lahti, as well as rail connections primarily carrying freight traffic from Hyvinkää to Hanko and from Kerava to Porvoo and Sköldvik. Except for the stretch of track branching off from Kerava, the railway network is part of the pan-European TEN railway network. The railway network's track gauge is 1 524 mm, identical to that used in Russia and differing from the track gauge generally used in Europe. The region's railway network is electrified, except for

the stretch of track between Hyvinkää and Hanko whose future electrification is, however, planned.

Settlement pattern

Population growth

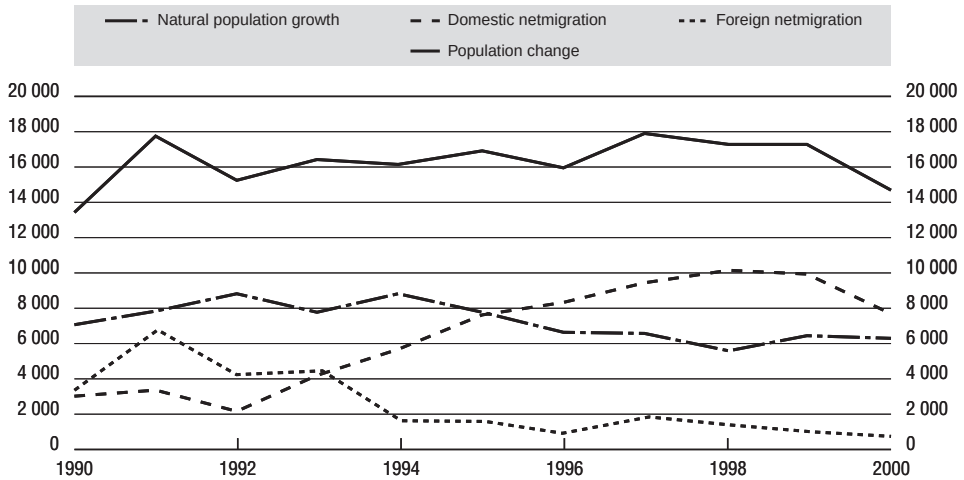
In the 20th century, the population of Helsinki and its surrounding areas continued to grow rapidly until the mid-1970s, after which growth slowed. During the 1990s, it picked up again due to immigration from other parts of Finland and from abroad. Since 1975, the population of the Greater Helsinki Region area has grown by 330 000 inhabitants, an increase of nearly 25%. Half of this growth has occurred during the last ten years. Growth in the Greater Helsinki Region during the 1990s was almost entirely due to growth in the Helsinki Region, which grew by over 150 000 people. On 31 December 2000, the population of the Greater Helsinki Region totalled 1 757 000 inhabitants, accounting for more than one-third of all Finnish citizens. Three-quarters of the region's population reside in its southern part, in the Uusimaa NUTS 3 region, with additional concentrations in the 13 municipalities forming the NUTS 4 level Helsinki Region. Two-thirds of the Greater Helsinki Region's population live in the Helsinki Region, accounting for almost one-fourth of all Finnish citizens.

Despite vigorous migration during the 1990s, natural population growth accounted for as much as 45% of population growth in the Greater Helsinki Region (Figure 2.9). Seventy per cent of those moving into the area came from other parts of Finland. Foreign immigrants totalled 30 000 people. All told, the 1990s saw an increase in foreign nationals in the area from 14 000 to the current 50 000. Of these, 40 000 live in the Helsinki NUTS 4 Region. The majority come from outside the European Union. The proportion of foreign nationals in the Greater Helsinki Region (2.8%) is, however, relatively low by international standards. In the core Helsinki Region, the percentage is 3.5 and in Helsinki 5.0.

The steadily increasing migration taking place during the past few years has kept the population structure of the Greater Helsinki Region relatively young. The proportion of children is now equivalent to the figure for Finland as a whole, whereas ten years earlier it had been smaller in the Greater Helsinki Region. There are, however, greater differences in the percentage of elderly persons; in the Greater Helsinki Region the percentage of persons over the age of 65 held steady at 12-13% throughout the 1990s compared to the rest of the country where it grew from 14 to 16%. Within the GHR, young adults are concentrated in the most urbanised parts with a corresponding lower share (approximately 10%) of elderly persons in these areas. The share of elderly persons rises to nearly 20% in peripheral areas.

Figure 2.9. **Population changes in the Greater Helsinki Region, 1990-2000**

Persons



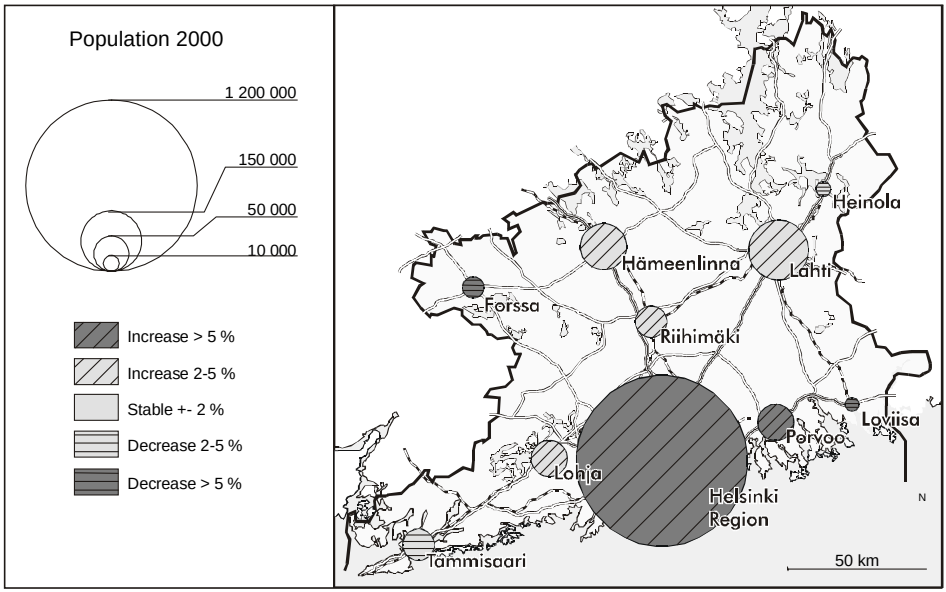
Source: Statistics Finland, City of Helsinki Urban Facts.

U*rbanisation*

In Finland, urbanisation started considerably late by European standards. The 1950s marked the beginning of the heavy migration into towns and cities, a trend that is still continuing. Especially in the 1960s and 1970s the increase in urbanisation was rapid. However, Finland still remains less urbanised than, for example, Denmark, Sweden or Norway. The 20th century was marked by population concentration in centres in the southern and south western parts of the country, thus the geographical centre of the distribution of population moved southward (Kanninen and Schulman, 2000). During the 1990s, the development of Finland's regional structure has been characterised by a strong centralisation of population and jobs distributed among increasingly fewer centres, the main ones being the regions of Helsinki, Tampere, Turku, Oulu and Jyväskylä. The concentration of population in the most dynamic centres means not only out-migration from the rural areas but also from the small, medium-sized and even large urban areas where the industry is not well diversified.

The underlying factor behind this centralisation is a structural transformation of the economy that has resulted in the creation of new jobs, primarily in areas possessing diversified educational opportunities, successful business sectors based on a high degree of technical expertise, as well as excellent domestic and international transport connections (Halme, 2000). Particularly strong growth has

Figure 2.10. **Population growth of the NUTS 4 centres of the Greater Helsinki Region during the 1990s**

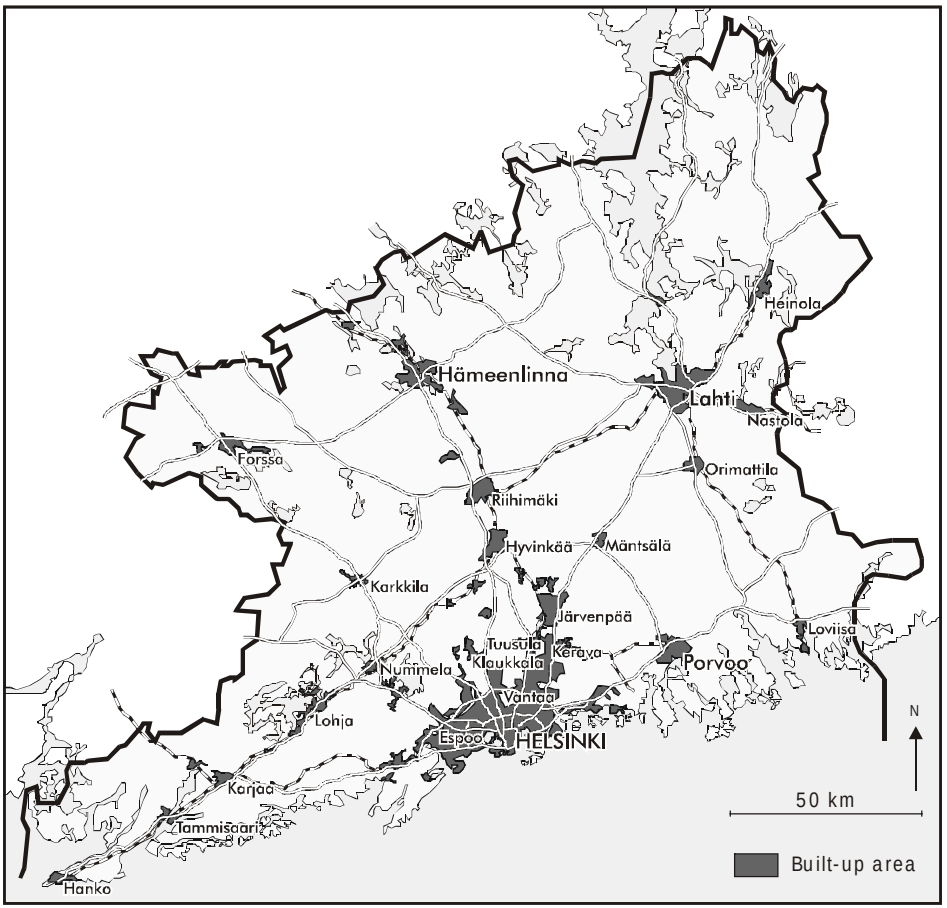


Source: City of Helsinki Urban Facts.

been registered in the Helsinki Region. Other growth centres of the Greater Helsinki Region are Hämeenlinna and Lahti as well as the cities of Lohja, Porvoo and Riihimäki nearer Helsinki (Figure 2.10). Although the Greater Helsinki Region's population has increased during the 1990s, many smaller centres, whose population growth has been fairly moderate or even fallen during the 1990s, are interspersed among the area's growth centres. The current trend towards centralisation is expected to continue unabated, at least during the early years of the 2000s (Uudenmaan liitto *et al.*, 2001).

When compared internationally, the Greater Helsinki Region's community structure can be considered decentralised. Rural districts account for a large part of the entire region's land area and even the great majority of built-up areas are extremely low-density by European standards. The metropolitan area formed by the outwardly radiating main transport routes forms the region's only extensive built-up area (Figure 2.11). The population density in this zone, exceeding 1 000 residents/km^2, is surpassed only by Helsinki's population density of approximately 3 000 residents/km^2. Besides the capital city area, more extensive unbroken

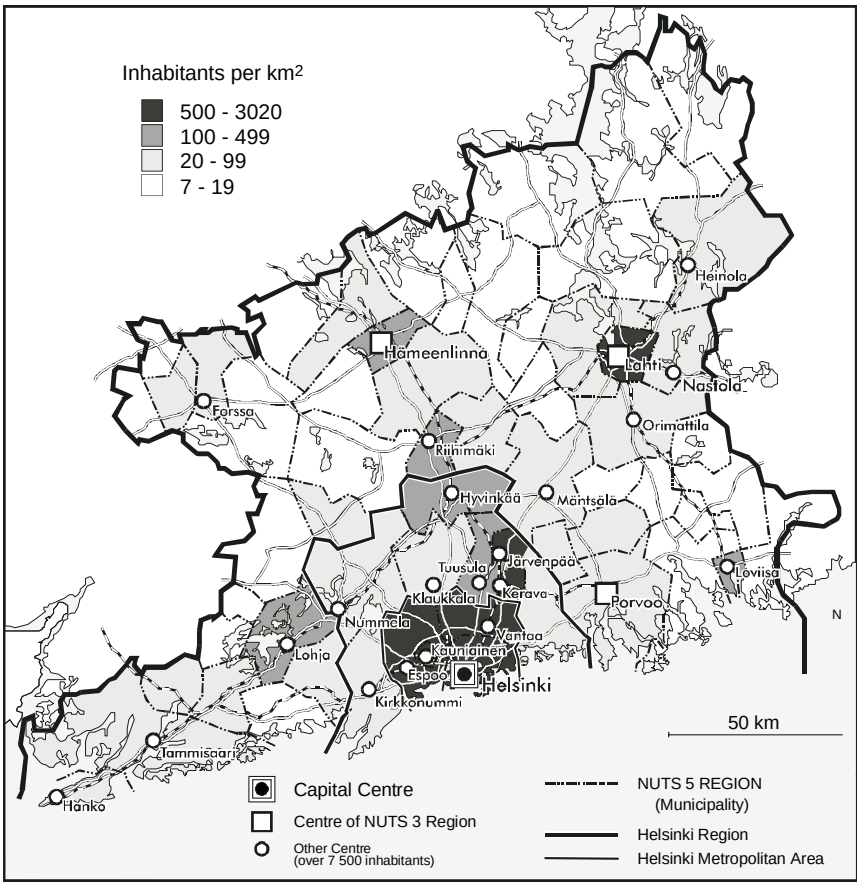
Figure 2.11. **Built-up areas of the Greater Helsinki Region**



Source: City of Helsinki Urban Facts.

areas are forming around the larger centres. Fairly extensive rural areas and smaller population centres whose population densities are generally under 20 residents/km^2 lie between the built-up areas (Figure 2.12). Although the majority of new buildings is and will be constructed in existing built-up areas, the gravitation of families with young children to areas offering less expensive housing in the urban region's rapidly growing peripheral areas is placing decentralising pressures on the community structure. Thus, the development trend of the Greater Helsinki Region's community structure is characterised by growth from main centres oriented

Figure 2.12. **Population density of the municipalities (NUTS 5 regions) in the Greater Helsinki Region in 2000**



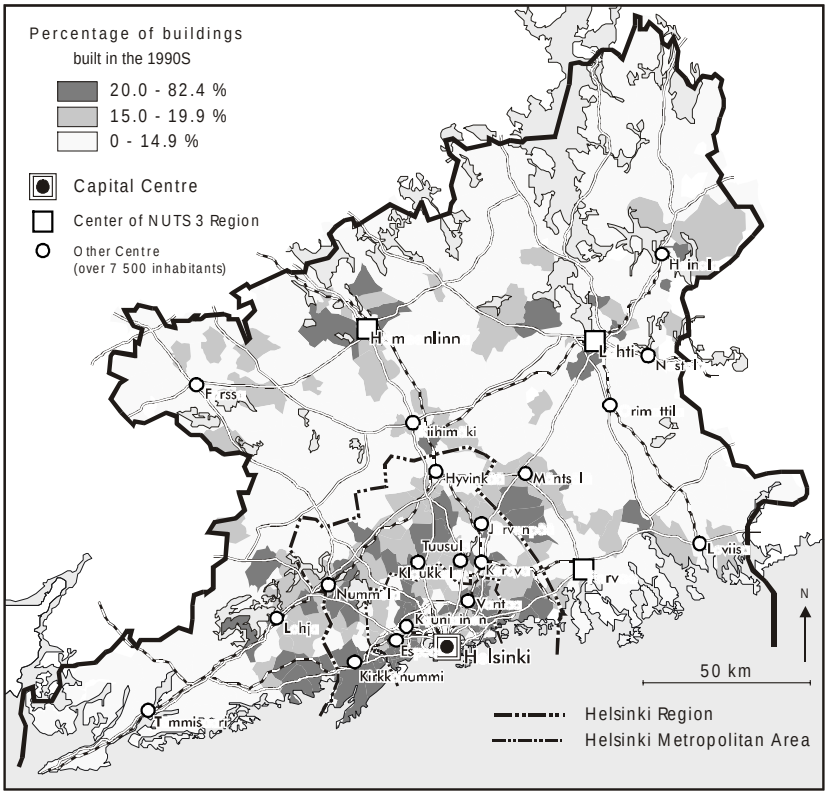
Source: Statistics Finland.

to their surrounding peripheral areas (Figure 2.13). The reasons for this include rising housing prices and office rents as well as housing preferences (Halme, 2000).

Municipalities

The relevant municipalities can be divided into three groups: the core metropolitan area, which includes the four cities of Helsinki, Espoo, Vantaa, and Kauniainen; the rest of the Helsinki Region which includes eight surrounding municipalities from

Figure 2.13. **Percentage of buildings built in the 1990s of the total amount of buildings in the region in 2000**



Source: Statistics Finland.

which many people commute to work in the core area; and the Greater Helsinki Region, which includes an additional 50 municipalities, among which are the cities of Hämeenlinna, Lahti, and Porvoo. Three of the cities within the core metropolitan area are quite large: Vantaa with a population of 179 000, Espoo with 217 000, and Helsinki with 560 000. The fourth city, Kauniainen, has 8 500 residents and is located in the middle of the city of Espoo. The other eight cities in the Helsinki Region are all much smaller. Six of them have populations that range from 32 000 to 42 000, and the other two have populations of 17 000 and 24 000. The outlying cities of Porvoo, Hämeenlinna, and Lahti have populations of 45 000, 46 000, and 98 000 respectively.

Box 2.1. **Municipal and metropolitan visions**

Population growth and an expanding economy are strong overall regional trends that will bring similar challenges, possibilities and threats to the municipalities of the region. Underlying these trends are several well-known and global factors: technological development, increasingly stringent international competition and the globalisation of the economy. At the regional scale the increased concentration of the economy in the Helsinki region is a clear pattern. It is also generally assumed that this development will continue to pose formidable challenges to the region's actors. Population growth is largely concentrated within zones located 10 to 50 kilometres from the urban cores of the fastest growing city regions. Wider dispersion of residential areas has not been accompanied by a wider dispersion of employment.

Uusimaa

As the capital city area of the country, Uusimaa possesses enviable preconditions for success, given the presence of its strong, multidisciplinary universities, research institutions and its growing and modern corporate sector. It is important to note that improving Uusimaa's international competitiveness will also advance Finland's overall economic development. Regarding the Uusimaa region as a whole, the primary strategic emphasis is on industrial development, the Information Society and its related educational needs, internationalisation, the technical infrastructure as well as environmental quality and community structures. In particular, the promotion of internationalisation within Uusimaa is based on the Baltic Sea strategy as well as on the vision of Uusimaa as the centre of the Nordic economy and an east-west meeting place.

Helsinki Metropolitan Area

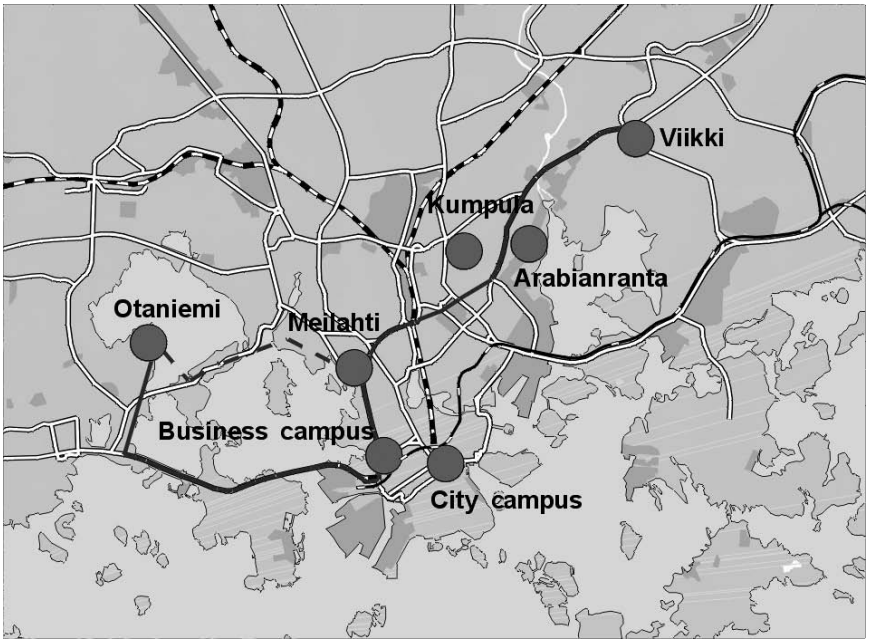
The Metropolitan Area Vision 2020 aims at an ecologically, socially and economically sustainable urban region. It has been estimated that by 2020 the annual population increase in the metropolitan area will be 8 000 persons. The total population will be 1.1 million, but it will also be necessary to prepare for an additional population of 70 000 persons. The net inbound migration in the area is expected to be rapid; a significant number of migrants are young, approximately 20-29 years of age, and are at the beginning of their studies, career and family lives. Natural population will account for less than half of annual growth; the rest will be due to migration. Within this scenario, functional efficiency would secure the area's competitiveness in comparison to other urban regions in Europe. The industrial structure would focus on development and production based on top-level expertise and sophisticated technology supported by quality services and convenient accessibility by multimodal transport. For instance, the area around Helsinki-Vantaa airport is attracting business, since it is well served by road and railway, and the port of Helsinki is not far away. Together the city of Vantaa and Technopolis intend to make the area around Helsinki-Vantaa airport a high-tech

Box 2.1. **Municipal and metropolitan visions** (*cont.*)

industry cluster of international interest. A commitment to equity and social responsibility mated to the environmental goals of sustained biodiversity and minimising the ecological footprint of the area round out the metropolitan vision.

The idea of an urban structure supporting the creation of new learning and skills is based on a network of university campuses and science parks, and their role in the creation and location of knowledge-intensive business activity in a given area. Within these structures people live in new stimulating environments in which housing, work and leisure come together to form a new and compact way of living. Important nodes of learning and skills in the Helsinki Metropolitan Area are the Otaniemi area (engineering), Meilahti (medicine, biotechnology), the Helsinki University city campus (humanities), Kumpula (natural science, mathematics), Arabianranta (art and design, digital media), and Viikki (agriculture and forestry, biotechnology). A new growing area is the Helsinki Business Campus in Töölö, in the neighbourhood of the business and economics schools (Figure 2.14).

Figure 2.14. **Helsinki Science Cooridor**



Source: City of Helsinki Urban Facts.

Box 2.1. **Municipal and metropolitan visions** (*cont.*)

Helsinki

Helsinki's first internationalisation strategy, initially formulated in 1995 during Finland's economic recession, exemplifies new attitudes regarding co-operation and development. The strategy was revised in 1999 and is under reconsideration currently. The city's success is perceived as being dependent on education, science and research. Besides these perspectives, cultural and environmental factors are also important. The strategy includes several activities and projects that were initiated or implemented, including the Centre of Expertise Programme, Helsinki Science Park, the Art and Design City, Biomedicum and the European City of Culture Project 2000. Regarding communications and logistics, the Helsinki-Vantaa airport, the new harbour planned for Vuosaari, improved commercial relationships with the Baltic countries, faster railway links and the construction of the E18 motorway to Russia are considered important. This vision for Helsinki also includes the creation of more and better jobs, improved competitiveness for the city, as well as improvements in the welfare, quality of life and safety of its citizens.

Espoo

In its own municipal vision, Espoo emphasises its position as a city of high technology, education, culture, research and innovation that functions as a part of the metropolitan region. The city aims at being pluralistic and multicultural, with an open and inspiring atmosphere, providing its inhabitants with the preconditions for a strong identity and intellectual growth. The key elements of industrial development strategy in Espoo are collaboration and public-private partnerships. In particular, joint development programmes involving the city organisation, industry, universities and other research centres are very important. Otaniemi Science and Technology Park forms an innovative and dynamic environment where research and new technology are transformed into successful new business ventures in the region. The expansion of Innopoli Technology Centre is a good example of public-private partnership. The city of Espoo is financing and resourcing a new business incubator block in the new technology centre under construction.

Vantaa

Vantaa city borders northern Helsinki. The development and structure of the city, its population and working places, have been influenced by four other factors: the Helsinki-Vantaa airport, the main railway to the north, the main motorways from Helsinki to the rest of the country as well as the outer Ring Road (E18) in east-west direction. The vision of Vantaa is to be *"an international centre of business, logistics and know-how where people of different age groups can lead a good life"*. The list of critical success factors for Vantaa is topped by controlled housing production, sustainability, renewable industrial and commercial policy, prevention of segregation, easily accessible services, preparedness for a large number of pensioners, etc. Besides supplementary housing construction in the old housing districts along the main railway especially, Vantaa will gradually see the construction of a new suburb for 10 000 inhabitants near the airport.

Box 2.1. **Municipal and metropolitan visions** (*cont.*)

New business clusters of silicon technology, environmental and high-technology logistics will also be located in that area. The long-term mega project in Vantaa is the building of a new suburb for 20 000 inhabitants in west Vantaa, which includes the construction of the so called Marja railway. This railway will connect the Helsinki-Vantaa airport, the city centre of Helsinki and several regional centres and neighbourhoods in the area.

Kauniainen

Kauniainen, one of the four cities in the Helsinki Metropolitan Area, is situated 15 kilometres west of the capital city Helsinki and is completely surrounded by the neighbouring city of Espoo. With its present population of 8 500 inhabitants, Kauniainen is being developed as an independent bilingual town for the region. Services for inhabitants are of a high standard, and are developed in close co-operation with citizens. The town's high income level has enabled the production of high-quality services with a low municipal tax rate.

Itä-Uusimaa and Porvoo

According to Itä-Uusimaa's vision, the region is a vigorous bilingual cultural region in the Baltic sphere. The aim is to strengthen the position of the region as an international actor between Helsinki and St. Petersburg. Central themes in the development of the region are strengthening of skills, industrial development, increased employment for firms, and developing co-operation as well as the management of the built-up and natural environments. Close communication with the Helsinki Metropolitan Area's municipalities is considered essential. In the northern part of the Itä-Uusimaa region, communication with Lahti is also important. Porvoo sees its role as a town with all the characteristics of an independent municipality with a high self-sufficiency rate for its workplaces. Porvoo does not envision itself as a "bedroom community" of Helsinki.

Häme and Hämeenlinna

In the Häme region, developing the IT-sector and the region's logistic position have been significant during recent years. The creation of regional workplaces linked with these sectors, as well as their outflow from the Helsinki Region, will be key questions affecting the development of the region. Commuting to the Helsinki Region is expected to increase to a certain extent. Häme's regional development programme emphasises sustainable development, equality, Information Society capabilities, the utilisation of the region's specific geographic strengths, and co-operation between towns and rural areas. The Hämeenlinna region's strategy is to invest in its existing strong industries: the manufacturing of metal products, wood, textiles, the food industry and tourism. Information technology will however also be strengthened, contributing to the versatility of the corporate structure. The region also has a strong network of educational institutes that reinforce the region's business clusters.

Box 2.1. **Municipal and metropolitan visions** (*cont.*)

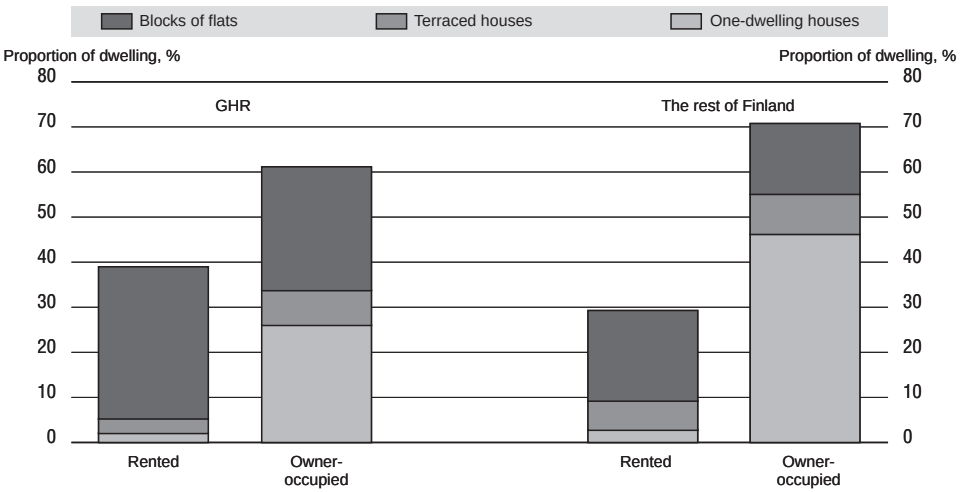
Päijät-Häme and Lahti

In Päijät-Häme's vision, the region is seen as a high-quality centre of design, culture and tourism. The main themes in the strategy of the region are good environment and strengthening the level of education. The city of Lahti and the nearby town of Heinola will be developed as manufacturing centres with an international-level degree of expertise in the fields of design and environmental products. The Lahti region seeks close co-operation with the Helsinki Metropolitan Area to provide an alternative for the rapid growth of the latter. Developing the transport connections and logistical services will facilitate this. The new railway shortcut reduces the travelling time between Lahti and Helsinki by half to 45 minutes. The 2010 Lahti vision features five main development sectors. Firstly, the economy of the city must be balanced. A strong economy will provide favourable conditions for the city's future development. Secondly, the city will be a regional growth centre closely networked with the Helsinki Metropolitan Area. Thirdly, the city will provide basic services and security, as well as the mechanisms for citizen participation. Fourthly, besides strong traditional business there will be a great deal of new, expertise-based entrepreneurship in the city. And fifthly, the surrounding natural amenities will offer unique recreational possibilities. South-Finnish Päijät-Häme will in 2020 be an environment-focused centre of business, design, culture and tourism which attracts European experts with its safe and pleasant atmosphere.

H*ousing*

From 1990 to 1998, the housing stock in the Greater Helsinki Region grew by approximately 70 000 dwellings, constituting a total housing increase of 29% for the country as a whole during that period.[5] Helsinki and its three adjacent cities accounted for 60 000 of these dwellings. Within the GHR, 68% of the new dwellings were in blocks of flats. In Lahti, this percentage was 72%, in Hämeenlinna 44% and in Finland as a whole it was 42%. In the NUTS 4 Helsinki Region, 69% of dwellings and 56% of housing floor area are in blocks of flats. In Helsinki proper, only 13% of dwellings are in terraced, semi-detached or detached houses. In the Greater Helsinki Region, 73% of dwellings are in blocks of flats (Figure 2.15). During the 1990s, a shift from predominantly owner-occupied housing towards rented housing was seen in the Greater Helsinki Region and to a lesser extent in the entire country. Rented housing is most common in Helsinki and its three adjacent municipalities. In Helsinki, rented flats accounted for 47% of dwellings at that particular time. On the whole, rented housing is most common in the region's urban centres.

Figure 2.15. **Housing stock in the Greater Helsinki Region and the rest of Finland by type of house and tenure status on 31 December 1999**

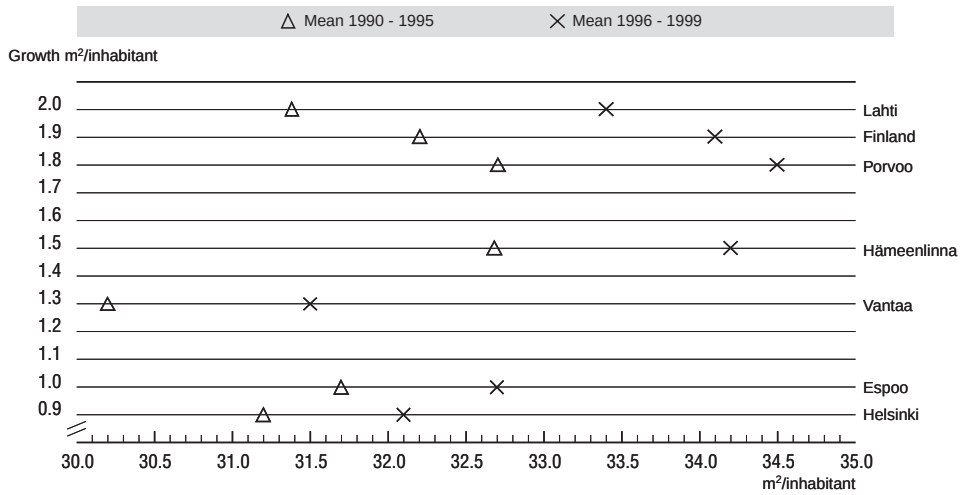


Source: Statistics Finland, City of Helsinki Urban Facts.

The average housing space in Greater Helsinki Region is 34.2 m^2 per inhabitant overall and 22.9 m^2 in households with over four members. Within the entire Greater Helsinki Region, the average overall housing space and family housing space is lowest in Vantaa and Helsinki. People live more spaciously in municipalities with a higher proportion of terraced and detached houses. Figure 2.16 demonstrates that the national trend of increasing square metres per inhabitant is increasing throughout municipalities of the GHR. However, there is increasing differentiation throughout the region as those municipalities with the largest average housing space also demonstrated the greatest increases during the 1990s. The one exception is Lahti, which started the 1990s with average housing space similar to that of Helsinki but finished the decade much closer to Porvoo, the municipality that registered the largest average throughout the decade. This helps to highlight the relatively small differences that characterise dwelling size in the urban centre and more outlying areas. At the end of the decade, average housing size per inhabitant in Porvoo was only 7.5% larger than in Helsinki.

For the Greater Helsinki Region and Finland as a whole, figures on housing prices in the 1990s demonstrate the link between housing prices and the general

Figure 2.16. **Housing space, square metres per inhabitant and increase in space 1990-1995 and 1996-1999**



Source: Statistics Finland, City of Helsinki Urban Facts.

economic situation. After a steep rise during the economic peak in the late 1980s, housing prices of flats fell drastically during the economic recession of the early 1990s. From 1990 to 1991, the general level in Finland fell by 11%, during the following year by 17%, and in Helsinki and its surroundings this slide was even stronger. Nineteen ninety-six saw the beginning of a new and clear rise in housing prices; in Helsinki prices skyrocketed by 22% that year, and by 10-11% during the next few years as well. In the country as a whole, this rise has been slightly more moderate, between 9 and 15% annually. A clear trend can be seen in the prices of flats: Helsinki and three adjacent cities are increasingly becoming a high-price zone compared with the rest of the Greater Helsinki Region. In 1990, for example, prices in Helsinki were 50% higher than in Finland as a whole, and owing to the recent economic upswing, the difference has grown even further; in 1999, flats were 61% more expensive in Helsinki than in Finland as a whole (Table 2.4). Flats in Espoo were 37% more expensive and in Vantaa 14% more expensive than average Finnish flats. In the rest of the Greater Helsinki Region, flats cost less than in Finland as a whole, but this is due to a higher proportion of detached houses in the area.

Table 2.4. **Average sales prices of flats**
EUR per m^2

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Finland	1 239	1 107	917	824	843	820	840	968	1 077	1 175
Espoo	1 716	1 450	1 139	1 014	1 088	1 045	1 069	1 293	1 464	1 611
Helsinki	1 860	1 545	1 202	1 167	1 271	1 208	1 267	1 545	1 704	1 896
Hämeenlinna	1 183	1 043	813	698	722	725	764	890	1 013	1 061
Lahti	1 029	910	781	683	668	688	717	820	865	938
Porvoo	1 288	1 121	970	811	851	810	826	909	1 031	1 132
Vantaa	1 510	1 282	949	846	869	832	868	1 058	1 201	1 337

Note: The irrevocable EUR/FIM conversion rate is applied to data relating to years prior to the year of Euro Zone accession (1999). This method facilitates comparisons within one country over time but these data cannot be applied to cross-country comparisons.
Source: Statistics Finland.

Geographic distribution of resources

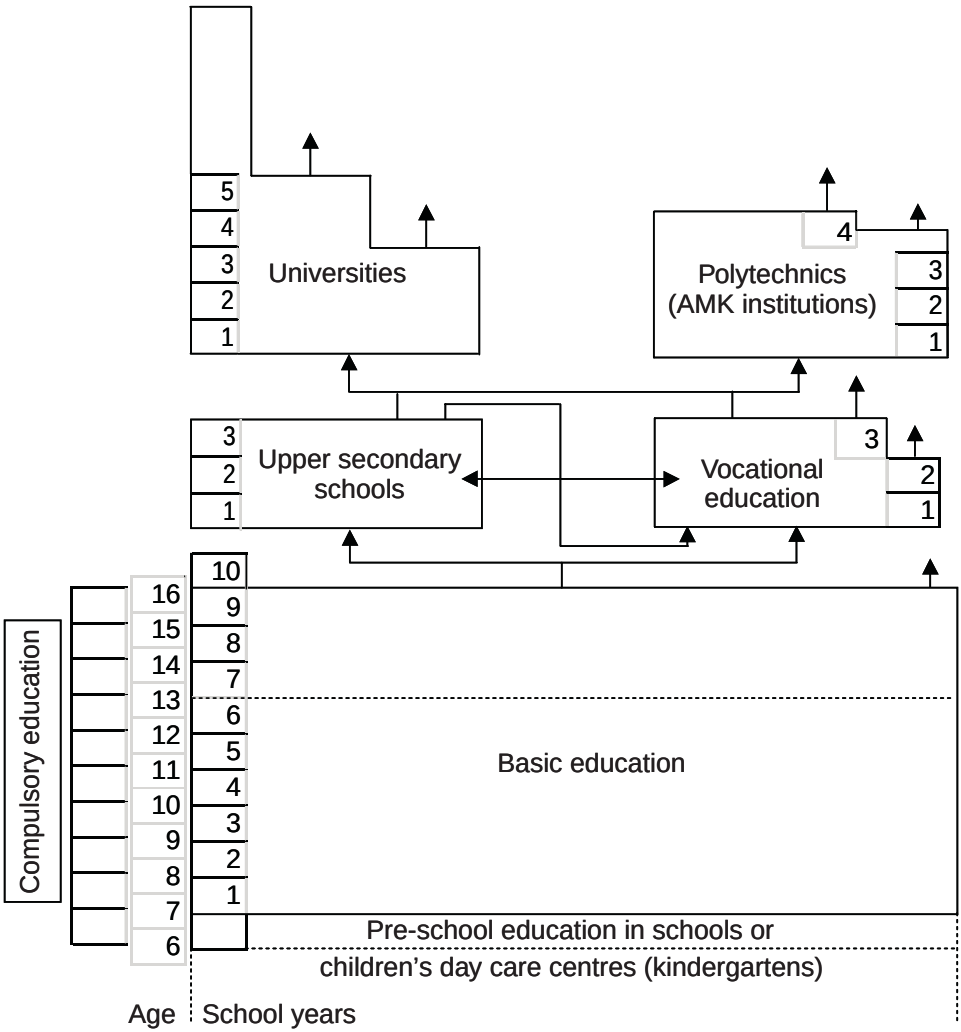
Human resources

Educational institutions

The basic structure of the Finnish education system is shown in Figure 2.17. It also shows approximately how the education provided by various institutions corresponds to the levels defined in the revised Unesco International Classification of Education 1997 (ISCED 97). The Finnish education system does not include any separate establishments for pre-school teaching. This is provided at day-care centres and in connection with comprehensive schools. Since 1996, all Finnish children aged 0-6 have been entitled to a municipal day care place and since 2001, all Finnish cities and municipalities have been responsible for organising pre-school teaching for all Finnish children. Upper secondary general schools (*lukio*) provide post-comprehensive general education (usually for 16-18 year olds). It normally takes two to four years to complete the upper secondary general curriculum. Studies conclude with a national matriculation examination that gives students a general qualification to apply to a university or for high-level vocational studies.

Vocational schools (*ammatilliset oppilaitokset*) provide post-comprehensive vocational education. Obtaining a vocational diploma generally takes two to four years. The qualifications for upper secondary vocational education are undergoing a process of reform. After 2001, three-year courses of study are possible. The vocational college system (*ammatilliset opistot*) is gradually being phased out in connection with a restructuring of the polytechnic system. The polytechnic (*ammattikorkeakoulu*) emerged as a new type of educational institution in Finland in the early 1990s. The developmental work for polytechnics began as an experiment in 1991, and the

Figure 2.17. **Education system in Finland, 1998**



Source: Ministry of Education Finland (1999).

polytechnic network was complete in autumn 2000. Studies for a polytechnic degree take 3.5 to 4.5 years after the matriculation examination or similar qualification. Polytechnic degrees are of the same level as lower university degrees but have a vocational orientation. By the 1999/2000 academic year there were 31 in

Table 2.5. **Educational institutions in regular education system by institution type, 2000**

	Type of institution			
	Upper secondary general schools	Vocational schools and colleges	Polytechnics	Universities
Helsinki	46	31	4	7
Helsinki Region	83	66	9	8
Outer part of GHR	13	20	2	–
Greater Helsinki Region	96	86	11	8
Finland	477	321	31	20

Source: Statistics Finland.

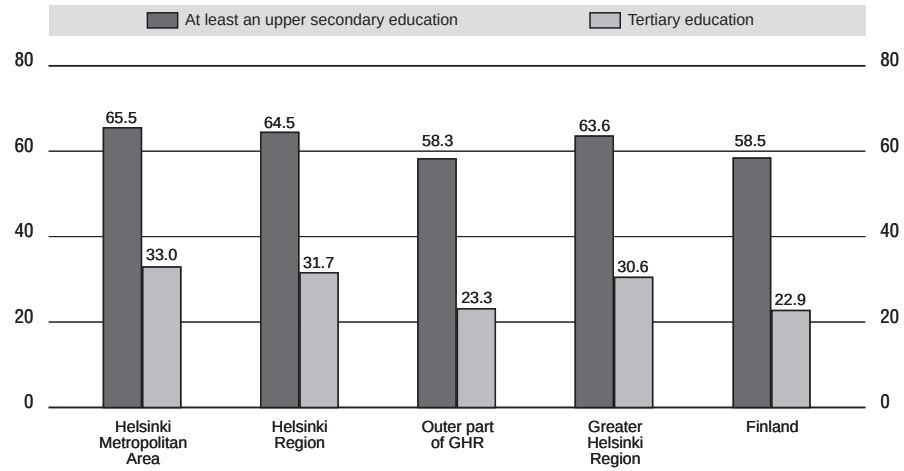
operation in Finland. Nine of the regular institutions were in the Helsinki Region (Table 2.5). Polytechnics in Finland had a combined enrolment of approximately 100 000 students in 1999. Polytechnics in the Helsinki Metropolitan Area enrolled approximately 22 800 students, 37% of whom studied business and administration.

Finland has 20 universities throughout the country, some of them situated in relatively small towns. Eight of the universities are located in the Helsinki Region (Table 2.5). The universities in the Helsinki Region consist of one multidisciplinary institution, three specialist institutions and four art academies. All universities are state-run and engage in both education and research. Business administration and social science are the most popular fields of study in Finland, accounting for one-fourth of all students in 1999. Conversely, in the Helsinki Metropolitan Area, the largest field of study is the humanities (24.5%), followed by engineering (23.5%) and business and administration and social science (23.4%). The University of Helsinki, with its 36 800 students in 2000, is the largest. The smallest, the Academy of Fine Arts, had 216 students enrolled.

Adult education and training refer to activities organised for the specific intention of producing learning results in adults who have, since completing or discontinuing their studies within the regular education system, been employed on the labour market. Over the 1990s, adult education has emerged as an increasingly important component in national education policy and planning. As a result of the structural change in industry and the labour market, lifelong learning has become an important principle underpinning education policy. Adult education is arranged by universities and polytechnics, public and private vocational institutions, adult education centres and summer universities, adult upper secondary schools, study centres, sports institutes, and music institutes. One form of adult education of particular importance is labour market training, which mainly comprises job-specific courses purchased by the labour authorities from education and

Figure 2.18. **Share of population aged 15 years and over with upper secondary and tertiary education in 1999**

In %



Source: Statistics Finland.

training providers for the unemployed and persons threatened by unemployment. There were 1 754 000 adult students in Finland in 2000.

Educational attainment levels

The educational level of the population has risen significantly in the Helsinki Region. At the end of 1999, 64.5% of residents aged 15 and over had an upper secondary or tertiary qualification (Figure 2.18). Practically every municipality in the region has a higher educational level than the national average. However, the share of working age population with higher university or doctorate degrees provides evidence of much greater differentiation within the region (Table 2.6). For example, Lahti is second in size after the Helsinki Region among regions included in the GHR. Yet, the general level of education in Lahti is relatively low, resulting partly from its strong traditions as a manufacturing town, but also from an unfavourable age structure. The proximity of the capital has led to an outflow of young educated people. The level of education is higher among those moving away from Lahti than among those moving in. Nevertheless, Lahti's polytechnic continues to contribute significantly to a rising level of education in the area. Throughout the GHR, the educational level will continue to rise as a result of strong growth in the number of students completing qualifications at polytechnics. Migration is another reason for the rising

Box 2.2. **Libraries as public gateways to the Information Society**

Public libraries play an important and diverse educational role in Finnish society. The terms of reference imposed by the recently revised Libraries Act reflect a principle in the Finnish constitution that guarantees all citizens equal access to supplementary educational facilities and opportunities for personal development regardless of income level. In Finland's national strategy for an Information Society the library is viewed as an egalitarian and user-friendly route to the world of data networks. It serves as the principal institution meeting the needs of the public because it makes information readily available to everyone and provides equal opportunities for interactive participation. Internet was used 15 000 000 times by public library customers in Helsinki City Library in 2000. In 1999 virtual visits were 9 100 000.

Helsinki City Library was the first library in the world to receive an Access to Learning award from the Bill & Melinda Gates Foundation in July 2000. The award was for USD 1 million. Among the reasons cited for granting the award were the international activities of the Helsinki City Library and its progressive role as a provider of IT-based services.

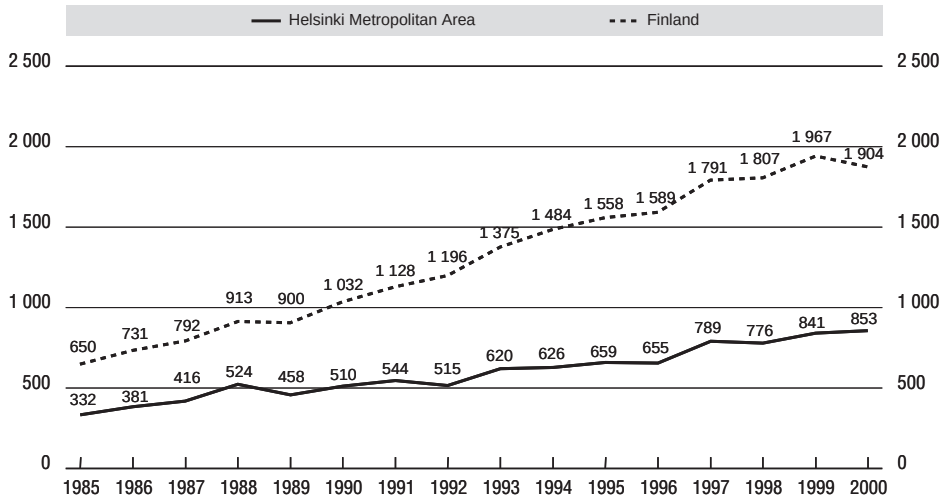
educational level. According to a study of migration, the Helsinki Region is a strong magnet for the young and educated population. A typical feature of the area – and of Finland – is the high level of education among women.

Table 2.6. **Educational level of population by age group in Helsinki Metropolitan Area and Greater Helsinki Region, 1999**

	At least upper secondary qualification		Higher university degrees and doctorate-level degrees	
	25-34	55-64	25-34	55-64
Helsinki Metropolitan Area				
Helsinki	81.8	56.1	17.4	12.6
Espoo	84.9	62.9	21.4	15.3
Vantaa	77.9	48.9	7.8	5.7
Kauniainen	89.9	81.1	27.9	27.6
Outer part of GHR				
Porvoo	80.2	45.2	7.3	4.9
Hämeenlinna	84.6	52.4	9.1	6.8
Lahti	78.3	48.8	5.4	4.2
Finland	83.0	46.8	10.0	5.1

Source: Statistics Finland.

Figure 2.19. **Advanced research degrees (licentiates and doctorates), 1985-1999**



Source: Statistics Finland.

The number of doctorate-level degrees has risen rapidly in Finland (Figure 2.19). In 2000, 1 904 advanced research degrees were earned: 748 licentiates and 1 156 doctorates. At Helsinki Metropolitan Area universities the number of completed advanced research degrees totalled 853 in 2000. Of these, 348 were licentiates and 505 were doctorates. The proportion of women at the highest academic level is rising.

Foreign language skills are becoming increasingly important with internationalisation of business and the explosion of networking opportunities provided by the Internet.[6] Seventy-two per cent of Finns claim to be able to speak at least one foreign language. English is the foreign language spoken most of all in Finland: 66% of the Finns said they could speak at least some English. Next came Swedish (55%) and third German (29%). Eight per cent said they could speak some French and 5% speak some Russian.

Research and development capabilities

Investments in R&D activity are increasing briskly. Between 1995 and 1999, R&D expenditure in Finland grew in nominal terms by more than 78%, and in the Helsinki Region (NUTS 4) by 67%. In 1999, the R&D expenditure of Helsinki Region was EUR 1 732 million and accounted for 44.6% of the entire Finnish R&D expenditure

Table 2.7. **Research and development expenditure by NUTS 4 region, Greater Helsinki Region, 1995 and 1999**

Region	1995		1999	
	Millions EUR	%	Millions EUR	%
Helsinki	1 033	47.5	1 728	44.6
Porvoo	50	2.3	52	1.3
Hämeenlinna	9	0.4	13	0.3
Lahti	22	1.0	35	0.9
Finland	2 172	100.0	3 879	100.0

Note: The irrevocable EUR/FIM conversion rate is applied to data relating to years prior to the year of Euro Zone accession (1999). This method facilitates comparisons within one country over time but these data cannot be applied to cross-country comparisons.
Source: Statistics Finland.

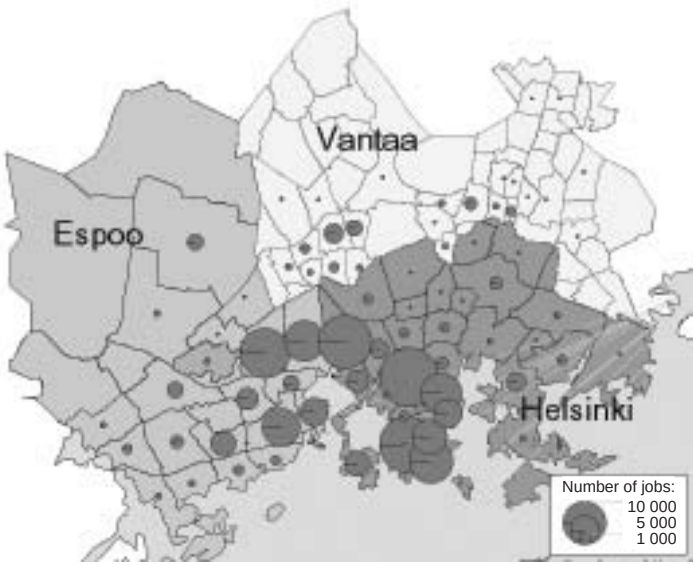
(Table 2.7). According to preliminary data, the GDP share of R&D expenditure in Finland was 2.89% in 1998, and 3.30% in 2000.

Localisation and agglomeration economies

Location patterns of the ICT *industry*

As already noted, the location of the ICT industry in Finland has not only been characterised by concentration in a relatively small number of municipalities, but also within strongly differentiated locales within those municipalities. This is demonstrated in Figure 2.20 that maps the location of ICT employment in the Helsinki Metropolitan Area. South western Helsinki and south eastern Espoo essentially define the core of the Finnish ICT cluster contained with a radius of about 7 kilometres. This localisation of activity also has a strong relationship to the residential choices of the highly educated workers employed in the sector (Figure 2.21). As education has become a stronger determinant of income and employability in the last decade in Finland, the educational differentiation in the metropolitan area has been translated into increasing disparity. In the Finnish context of social mixing, these dynamics could create a dilemma between business locations that maximise competitiveness and the desire for socially balanced neighbourhoods. Although projects such as the Art and Design City development in Arabianranta – a centre for industrial art exploiting expertise in information networks that is planned to provide homes for 8 000 residents and 5 000 jobs – would create a high qualification enclave several kilometres north and east of the current ICT cluster, it too is dependent on a logic of localisation.

Figure 2.20. **Jobs in the information sector in the Helsinki Metropolitan Area in 1999**



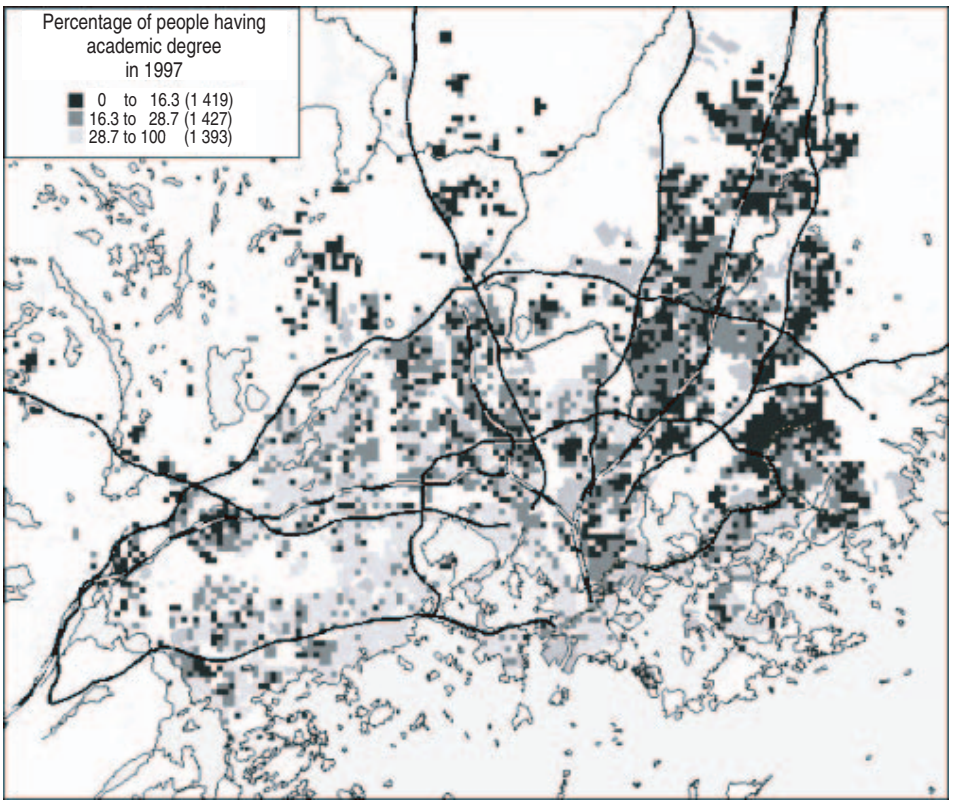
Source: Statistics Finland, City of Helsinki Urban Facts.

Threats and unused potentials

Growth pressures and increasing automobile dependency

Population growth within the GHR amid relatively low-population density presents both a significant threat to continued sustainable development and a significant opportunity in providing a unique model of urban-suburban and ex-urban interaction. On the one hand, Finnish planning sensibilities closely match those of their European peers with an emphasis on compact development that reinforces the feasibility of public transport solutions. On the other, these preferences are driven not by the constraints imposed by centuries of urban development predating the automobile but more by an ideal vision of what an urban system should look like. As a feasible alternative among several planning paradigms, there is an ever-present threat that the vision maintained by various authorities intervening in the region will not be reinforced by the choices of citizens with respect to housing and mode of transport. Relatively sharp increases in automobile dependency in the brief period since the economic crisis of the early 1990s is one manifestation of this threat. Aligning the planning vision with individual choice is more likely where the benefits of compact

Figure 2.21. **Percentage of people having an academic degree in the Helsinki Metropolitan Area in 1997**



Source: Statistics Finland.

development – *e.g.*, increased social interaction – are regularly experienced and widely recognised. Chapter 3 critically assesses the extent to which Modernist design and planning principles prevailing in Finland further this objective in the interest of increasing both the quality of life and economic competitiveness within the GHR.

Lack of diversification in dynamic sectors

The fragility of the model of the Finnish Information Society integrated into the Nordic welfare state is a critical policy question. It has proven itself to now but how

viable is it in the future? The view from the outside generally concludes that the current shape of the country would have been very different without the success of ICT cluster over the past decade. The Finns generally have a more robust view of their country, placing considerable importance on the framework and factor conditions that made this success possible. If luck is indeed nothing more than preparation meeting opportunity, then Finland may present an enviable allocation of these tasks, with the state committing significant resources to preparation but entrusting the discovery of opportunity, to the private sector. But this does not reduce the significant risk of the Finnish dependence on the telecom/mobile industry. Indeed, the current strategic positioning of the Finnish ICT cluster builds on a high-return/high-risk scenario. It is high-risk because of the significant dependence on a single product market with the implicit vulnerability to weakening demand conditions for telecom equipment. It is high-reward because, due to past success, the cluster has managed to capture much of the value added generated by ICT R&D and product development. The strategic challenge is to evolve a lower-risk/high-return strategy by developing ICT activities beyond the current cluster scope. Alternatives for pursuing this goal are elaborated in Chapter 6.

Notes

1. It should be stressed that the Greater Helsinki Region has to date been neither an administrative nor statistical entity. In fact, this review constitutes the first public use of the term to define a functional relationship between the city of Helsinki, the proximate conurbation, smaller cities more distant from the city centre and the interstitial rural areas contained in the four NUTS 3 regions. There are reasons to believe that the functionality of the area within the GHR will become increasingly important in line with the development of the Helsinki Metropolitan Area. For instance, Lahti (population 98 000) and Hämeenlinna (population 46 000) are both roughly 100 kilometres from the city centre, which already accommodates several thousand commuters. The impending development of fast trains will make both municipalities far closer to Helsinki. Possessing good infrastructure and services, both could become growth poles within the GHR according to national objectives for compact, co-ordinated development to combat tendencies for more dispersed urban sprawl. It is far less evident, however, that the GHR delineates a compelling functional region corresponding to any of the range of public tasks to be provided. This topic will be revisited a number of times throughout the review. At this point it is important to stress that the delineation and analysis of the GHR does not constitute an endorsement of efficacy of the boundary for implementing policy. Relevant boundaries that impose constraints as they provide opportunities for public actors should be derived through consultation rather than being imposed from above. See Frey and Eichenberger (1999).
2. This is reflected in the per capita expenditure for arts and culture that is the highest of any municipality in Finland.
3. Susiluoto and Loikkanen (2000) apply Data Envelopment Analysis to 83 NUTS 4 level regions of Finland. The DEA method accounts for differences in regions' economic base resources. It gives a maximum rating of 100 to regions that are economically efficient and lower scores to other regions according to their comparative positions. The comparison is based on the general pattern provided by five economic models over a period of 12 years.
4. According to Statistics Finland's classification on which these numbers are based, the information sector consists of the production of goods, services and contents. The industrial classification of the production of goods and services is based on OECD's recommendation of 1998. The concept of content has no international recommendation, but is based on deliberations between Finnish and international experts.
5. On 31 December 1998, the housing stock of Greater Helsinki Region amounted to 554 000 dwellings, or 23% of all dwellings in Finland. Of these, 460 000 (or 83%) of Greater Helsinki's dwellings were located in Helsinki and three adjacent cities.

6. See Zook (2001) for an assessment of the global distribution of Internet content creation at the national level that classifies Finland as an "Internet island" (countries that appear to have adequate domestic Internet content production for the demands of their users but are net Internet content importers in the global market) despite its strong public programme to create an "Informational Society". He suggests the difficulty to convert this to a global presence is likely due to the low level of demand for Finnish language content outside of Finland.

Chapter 3

Spatial Planning and Design

Building on past success to confront current challenges

The Helsinki region sets a very high standard in urbanistic, governmental, economic, environmental, social, educational, cultural and architectural terms. Both the city and surrounding municipalities have achieved great success in many dimensions and many areas. The metropolitan region is well planned, with careful land use and a balanced and efficient transportation system. The municipal governments are competent and increasingly co-ordinated. The region's economy has been robust, fast-growing and internationally competitive. The Finnish respect and love for the natural environment has ensured that the land has remained thickly forested and the waters ecologically healthy. Social services are among the best in the world, with exceptionally high social security, welfare and equality. Education, free from daycare to university, is universally available and of high quality, augmented by an extensive library system. Helsinki is a cultural hub for the entire country and for increasing ranks of international tourists attracted by acclaimed art, design, performing arts, literature and entertainment, so amply demonstrated as a recent European City of Culture. And architecturally, its standards are unsurpassed, with a long and rich legacy of outstanding architects who have designed a liveable, sophisticated and handsome built environment.

Regarding transport development, the suburban rail network completed by the early 1970s is a notable success that is easily taken for granted. The decision to build this electrified system was made in spite of pressure and precedent elsewhere to build instead a massive arterial road system. Also to its credit, Helsinki did not dispense with its tram system, as many European cities did in their enthusiasm to construct underground railroads. Trains, metro, trams and buses now collectively account for 30% of travel in the metropolitan area. Trips by foot and bicycle account for another 25%, making the inhabitants remarkably free of travel by private vehicle. Streets that were pedestrianised during the 1970s have added to the walkability in the city centre, much as bicycle paths have added to human-powered mobility throughout the city. Major landfill projects in the harbour at places like Merihaka have enabled substantial expansion of the built environment. The conservation

and preservation of neighbourhoods, such as the worker housing of the 1920s in Käpylä, has been another noteworthy success. Perhaps the most unique contribution to urbanism was the post-war "forest suburb", a convenient mixing of natural and urban environments that has proven especially popular with families. Many of the new town centres have been built next to rail lines, fostering walkability and ultimately sustainability. The fact that these whole towns have been built quickly, often a problem with new towns elsewhere in the world, makes them all the more commendable.

In general, Finland and Helsinki have been able to successfully balance conflicting and competing forces in the contemporary world. A helpful way to diagram those forces would be to lock them in triangle with economic competitiveness, sustainability and social equity at the corners:

Economic competitiveness

Sustainability Social equity

Economic challenges

Spatial planning and land use policy provide the basic synergies and connections toward development of a region's economic activities. At the regional scale, good physical infrastructure for transport and communication is essential. A capacious and up-to-date airport, harbour, rail and road system are all needed for the movement of goods and people. In addition, the "new economy", so brilliantly represented in Finland by Nokia and others, places a high premium on innovation, networking and entrepreneurship. The need arises for the design and planning of built space that is conducive to creative interaction and research, equipped with high technology, and supportive of business incubation and start-ups. Creation of liveable communities that meet changing and individualised life cycle needs is a priority of regions seeking high competitiveness within member countries. Well-planned, liveable communities decrease travel time and costs. Affordable housing is essential to attracting and retaining employees, as are cultural and recreational amenities and good schools.

The Helsinki Metropolitan Area has done an exemplary job in planning liveable and affordable communities that are well-served by infrastructure and that contain well-designed workplaces. Projects like the technology park in Espoo, however, could be harbingers of problems ahead. Although its buildings are designed and constructed well and they are located adjacent to the Helsinki University of Technology, the physical paradigm is one of more suburban location and layout that leads to growing automobile usage and dependence. For instance, it is unlikely that employees or visitors will walk across the limited-access highway from the publicly developed group of buildings to the privately developed group.

It is much like an American style "office park", with large surface parking lots, broad building set-backs, curving access roads and a relatively narrow mix of land uses. This pattern of greater distances between buildings ultimately privileges the automobile over the pedestrian. It has a fundamentally different feel and function than a town centre, which may offer longer-term economic competitiveness.

Sustainability challenges

Many factors and forces must be orchestrated to achieve environmental sustainability in an industrialised society like Finland, especially in a metropolis of over one million inhabitants. Energy conservation is a particularly important challenge. The construction, maintenance, lighting, heating and demolition of the built environment typically consumes over one-third of the energy, materials and water used in an industrialised economy. Transportation can consume up to another third of the energy used. Industry, which has often been the most responsive to the energy conservation imperatives, roughly consumes the final third. Spatial planning, which determines transportation needs to a large extent, and buildings are together directly and indirectly responsible for a very large portion of energy consumption. This consumption of fossil fuels in turn generates a great deal of air pollution and greenhouse gases, primarily through tailpipe emissions. Furthermore, the paved surfaces needed by automobiles, lorries and buses result in extensive run-off water pollution (which now exceeds point-source pollution from factories and production processes in industrialised countries like the United States). There is also noise and light pollution associated with vehicles. The consumption of land itself for development threatens to upset the balance between human habitat and animal habitat. Both flora and fauna, as well as marine life, are endangered by sprawling urban development on the periphery of conurbations like metropolitan Helsinki. It is only fair to point out, however, that although the region is lower density than many European cities, its metropolitan sprawl has been better contained and managed than in most cities in the industrialised world. The issue of biodiversity and sustainable development has attracted a lot of interest throughout Finland. In this regard, the debate over the Vuosaari harbour is particularly pointed. But generally, there seems to be a relatively high level of co-operation between municipalities and with the central government to protect Nuuksio Natural Park and to preserve green belt. This is also an interesting issue at the GHR level.

Following the United Nations recommendation, almost every municipality in the Greater Helsinki Region has prepared and issued its own local agenda with the aim to promote sustainability. The core indicators of sustainable development in Helsinki are comprised of five major parts: a global perspective, monitoring the condition and pressures on the local environment, socio-economic factors of sustainable development, local environment and services, and delineating participation and responsibility. An important part of the process that dictates the identification and

elaboration of local agendas is engendering a public sense of ethical commitment to the future. This is manifest clearly in Lahti where a tree in the city hall has become the repository of written commitments made by participants of how they plan to live more sustainably. In Helsinki, the process has been used to encourage city employees to ponder and propose ways that sustainability can be integrated in the day-to-day work of their respective departments. A significant share of the 40 000 employees from 19 of 30 departments participated in the process that generated more than a 1 000 suggestions, 300 of which were immediately adopted (Association of Finnish Local Authorities, 1996).

The ecological impact or footprint that describes total consumption in a city is an important indicator of sustainability. According to calculations, the ecological impact of the average Helsinki citizen is 3.46 hectares. Espoo and Vantaa citizens have a somewhat smaller impact, but the average Finn lives more ecologically with only 3.34 hectares. Indicator values in the 1990s demonstrate that on the whole, the actions carried out by municipal organisations, citizens and the business community have contributed to a slightly improved level of sustainable development. There, however, appear to be differences between the various elements that make development sustainable. Indicators gauging the condition and impacts on the environment, water consumption, waste recycling and environmental attitudes show a slight increase in sustainability. Indicators of energy consumption and accumulated waste per inhabitant, land use, housing conditions and people's health depict an unchanged situation. Indicators of traffic, biodiversity, environmental comfort, and citizen participation show a slight deterioration of sustainability. The disturbing trends regarding traffic are also reflected in a marked increase in vehicle ownership and the casual but increasingly common perception that increased vehicle use is an emerging lifestyle choice. Policies that attempt to mitigate the negative externalities of individual decisions will thus have to be sensitive to the factors affecting the transport choices of citizens. In this regard, the active involvement in EU programmes such as PROMPT (PROMoting Pedestrian Traffic in Cities) should be maintained and encouraged. With the five other participating countries, the aim is to compile case study analysis of safety, accessibility, comfort, attractiveness and intermodality that affects non-motorised transport in cities.

There is another interesting and little-recognised connection between the design of the built environment and sustainability. It is the connection of aesthetics and sustainability that makes design and planning important. Beautiful buildings and places will be respected and loved more, and therefore maintained more carefully, resulting in greater longevity. There is abundant evidence that the most aesthetically pleasing buildings, cities, and landscapes are sustained longer and, in that sense, are more sustainable. The Greater Helsinki Region is replete with beautiful natural and built environments that are beloved by citizens, which bodes well for their long-term care and ecological future.

Social challenges

Preventing spatial segregation is another important challenge for spatial planning in the GHR. Social segregation is not a major problem in Finnish communities. From the 1970s onwards, the housing policy has been based on the concept of social integration. A socially diversified pattern of spatial development has been reinforced by the following factors: strong public ownership of city land, planning that prevents differentiated communities, and price controls. Special attention has also been paid to the spatial dispersion of ethnic minorities. However, not until recently have immigrants been a visible presence and begun to stress, or at least challenge, the social welfare system. Even though the percentage of immigrants in the region is less than 5%, the integration of peoples of different cultures and languages is a complex socio-economic-cultural challenge. The policy to date has been to integrate immigrants by spatially integrating them in the community and immediately offering the full benefits of the welfare state. Achieving social equity through spatial integration seems to be a particularly fundamental goal and high priority. However, it comes at the inevitable cost of suppressing or at least diluting ethnic and other sub-cultures that might otherwise flourish.

For instance, in other European and American cities, there are distinctive neighbourhoods or districts in which ethnic or racial minorities are a large proportion of the inhabitants, sometimes as a clear majority. These communities have pros and cons. In their favour, they can provide a welcoming and supportive place with familiar languages and customs – a social and cultural cushion for new immigrants. They also act as an ongoing sub-community for the maintenance and celebration of native culture, including a social network, religious institutions, cultural centres, markets, restaurants, festivals and other events and facilities. In the American "melting pot" model, many immigrants choose, after they are better established and rooted in their new country, to move "up and out" into more mainstream and affluent communities. The major problem with ethnic communities is that they can become enclaves of a disadvantaged and alienated underclass. The neighbourhood can trap its residents in a downward, or at least stagnant, spiral of social and economic dysfunction and segregation, as has happened in many American and some European cities. This sort of spatial concentration of social problems, crime and poverty rarely, if ever, occurs in the Helsinki region, except a handful of very local social housing projects and then within a single block of flats. Accordingly, Finland should be cautious about reconsidering its policy of spatial integration. On the other hand, there may be moderate policies and practices that allow immigrant cultures and enterprise to survive more intact spatially.

Spatial planning and transport

In general, Nordic countries have attached high importance to the planning system compared with southern member countries. In Finland, the urban planning

tradition is not strong, while architecture has had a deep impact in shaping the identity of the cities. Nevertheless, it has created a well-developed planning system.

The present legal basis of spatial planning is the new Land Use and Building Act that came into effect at the beginning of 2000. Currently, spatial planning is a shared responsibility of three levels of governments, as is the case of many of the member countries: on national level, the Land Use Department of the Ministry of the Environment (MoE) is responsible for establishing general rules and guidelines regarding spatial planning and land resource management as well as environmental protection. National government provides only conceptual guidelines for sub-national governments that have substantial responsibilities over spatial development. In regional development issues the MoE has close co-operation mainly with the Ministry of Internal Affairs. The 13 regional environmental centres, belonging to the state administration, promote land use planning and building activity as well as environmental issues in their area.

At the local level, 448 municipalities formulate local land use plans: the *local detailed plan* is used in all municipalities, urban and rural, for regulating the location of functions, size and type of buildings as well as the form of the townscape. The *local master plan* can be prepared either as a more strategic or visionary plan to coordinate the spatial needs of different sectors, or it can be a more specific plan to guide construction directly. In the latter case, there may be legal implications concerning compensation for decreases in land value. The Act also enables the preparation of joint master plans to promote intermunicipal spatial policies. Regions have the right to prepare their own land use plans and create regional development strategies. A new master plan for the city of Helsinki was presented at the beginning of 2002. It broadly outlines land use and transport planning. The plan assumes that the population of Helsinki will be 600 000 by the year 2020 and seeks solutions to how the city can respond to such development and how the city can remain vigorous and competitive, including employment creation and housing and putting new stresses on the transportation system.

At regional level, six provinces that belong to the state administrative system have no spatial planning competence, while 19 regional councils that were established in the early 1990s to replace the former regional planning associations have been strengthened as development strategy makers. The *regional land use plan* is prepared and approved by the regional council and ratified by the Ministry of the Environment. Particular attention is given to the provision of an appropriate regional and community structure, the preservation of landscape values and ecological sustainability and the cultivation of favourable conditions for business and industry. The regional land use plan transfers national and regional land use goals to the local level.

The Finnish planning system emphasises spatial and physical planning and that has not been adequately integrated with regional development and innovation

policies, although the new Land Use and Building Act tries to address that problem by emphasising the strategic role of regional land use plans and local master plans. It attaches strong importance to ecological concerns and strongly encourages implementation of international environmental conventions regarding climate change, biodiversity, protection of cultural environment based on the philosophy that land use is a key solution for sustainable development. Recently, a priority of the planning system has been public participation. The planning system is open to civic participation throughout the entire planning process. It is anticipated that such participation will be closely linked with the assessment of environmental effects of spatial plans. For this purpose, in 1990, the former B*uilding Act* was amended so that consultation over planning issues between the municipal and mainly land owners was shifted to broader interaction with all citizens by defining the legal process of public participation. In 1994, regulations came into effect on environmental impact assessment in land use planning.

Based on the new Act, the Finland's National Land Use Guidelines were issued by the Council of State in 2000 which deal with issues of national and supra-regional impacts on land use: transport and other major infrastructures, ecological sustainability, natural resources and the nation's cultural heritage. According to the Act, these guidelines would be implemented through regional plans. The goal of the guidelines is defined as sustainable development and a good living environment, which are largely in the same line with the national principles of other European member countries and the guidelines share basic objectives of the European Spatial Planning Perspective (ESDP).

Regarding the capital region, the guidelines suggest special problems arising from population concentration and stresses the importance of land use solutions in Helsinki region since the future development of Helsinki region will affect not only ecological sustainability of the region and the country as a whole but also international competitiveness of the country. The most important future rail connections under consideration are the Marja Railway to the Helsinki-Vantaa airport, a metro extension to Espoo and a bypass railway route between Kerava and Lahti. At present the Malmi airport's alternative locations, as well as the construction of the Laajasalo oil harbour are yet unresolved. The public transport system, particularly rail traffic in the Helsinki Region, must be developed to accommodate population growth and reduce environmental hazards. This is reflected in recent plans for the area proposing that new construction takes place along the public transport system's main routes, particularly along railway lines. The Helsinki Metropolitan Area Council (YTV) has also been active in framing a long-term vision of transport needs to 2020. The most important objective of this plan was to develop public transport as a competitive mode of travel with the share of public transport of the total of daily motorised trips at least maintained at its present level (42%). Another main objective was to reduce the traffic-related environmental impact at

Box 3.1. **Urban travel and sustainable development: the OECD/ECMT strategy**

This strategy, outlined in U*rban* T*ravel and* S*ustainable* D*evelopment*, proposes a flexible, integrated approach based on *adoption of best practice*, *policy innovation* and *pricing* to encourage sustainable development by reducing vehicle-kilometres travelled and fuel consumption. The idea is that the three parts of this policy strategy should be applied together, to ensure that a comprehensive, long-term approach to urban sustainability is pursued. The report focuses on the impact of key policy instruments, notably the:

- role of incentives and disincentives;
- role of land use planning;
- potential of traffic management schemes; and
- use of marketing, telematics and other innovations to improve public transport.

The three main strands of the strategy can be summarised as follows:

A*doption of best practice* involves raising the effectiveness of current land use planning and traffic management measures to these level of practices in the best managed cities. The projected result of cities adopting best practice measures is for rate of growth in congestion and private vehicle travel to decline, but outside city centres the impact on congestion would be minimal and car use would continue to grow.

P*olicy innovation* entails developing new instruments that promote less car-dependent forms of urban development and by applying congestion pricing to bring the demand for car travel in line with road capacity. Integration of land use and public transport routes, roads, cycling paths and walkways is a central aspect of such policy innovation as are tighter and more extensive speed limit controls on through streets and traffic calming in residential and school zones. Traffic management initiatives include congestion pricing, parking reductions in city centre areas, priority for buses, park and ride services and further investment in transit infrastructure. Projected results are for a decrease in congestion and pollution (with the exception of noise) and improved safety levels. Dependence on cars would be reduced as would traffic in urban areas but overall traffic and CO_2 emissions would continue to grow.

P*ricing* for sustainable development is comprised of repeated annual increases in motor fuel taxation to promote more economical vehicles, discourage solo use of private vehicles and greater use of environmentally friendly transport modes. This final aspect of the ECMT/OECD strategy is seen as critical to reducing vehicle-kilometres travelled and reducing fuel consumption. The report concludes that a 7% annual increase in real terms in the price of fuel over a 20-year time period would reduce vehicle-kilometres travelled by a third and fuel use to a half of that projected in the absence of the tax. Of the three strands proposed by the strategy, only this third strand is thought capable of bringing CO_2 emissions down to the climate change targets established at the 1992 Rio Summit. If the taxes were applied along with the *adoption of best practices* and *policy innovations*, the report projects that vehicle-kilometres travelled would fall by 85% and fuel consumption to 60% of 1991 levels by 2015.

Box 3.1. **Urban travel and sustainable development: the OECD/ECMT strategy** (*cont.*)

These changes would result from an approximate 25% reduction in the length of car trips, slower growth in car ownership, modal shifting from car to public transport, increased cycling and walking, limited improvements in fuel consumption from driver behaviour improvements and enhanced vehicle fuel efficiency due to advances in engine design.

The fuel tax would also increase the effectiveness of land use planning policies, increasing the costs of travel and thereby serving as an incentive for bringing jobs, homes and shopping closer together. Public transport systems, cycling paths and walkways would also see an increase in use owing to the fuel tax.

All three strands of the strategy are necessary to reduce car travel – especially in cities – to achieve sustainable urban development. The report suggest that integrated implementation could substantially reduce the public costs of private travel – borne increasingly by the environment – in OECD and ECMT countries.

Source: OECD/ECMT (1995).

local level and fulfil national and international objectives for reducing carbon dioxide emissions.

Planning remains, however, largely a municipal exercise even if the regional land use plan is a powerful mechanism for planning, especially with respect to transport development and green space. The force of the more strategic regional plan is still dependent to a great extent on the wilful co-operation between municipalities. Within the Helsinki region, there is clear support for more concentration in the Helsinki Metropolitan Area that is seen as more favourable in terms of sustainable development and transport infrastructures. However, things are more complicated at the scale of the GHR as no such mechanism exists, or at the scale of Helsinki Metropolitan Area where the four municipalities pursue different strategies. This has recently been expressed in local political debates. Social democrat councillors in Helsinki suggested planning land use and housing in the whole metropolitan area. They got support from social democrats from other municipalities (including Vantaa where they run the council) and from the Greens. To some extent, in countries like Finland where political parties are still well established, they could, in theory, become an integrating mechanism in the governance of the area. However, the municipality of Espoo rejected the proposal. While the four municipalities have agreed to organise an informal level of co-ordination and to produce a "vision" for

the whole metropolitan area with some principles and guidelines, it remains to be seen how far this will lead to integrated decision making in the metropolitan area.

A relatively new phenomenon has emerged where groups of citizens oppose new developments close to their property. The rise of NIMBY movements (Not In My Back Yard), largely widespread in other countries, has taken Finnish authorities by surprise. It reveals a different social pattern, a less homogeneous country and resistance towards new comers. The Helsinki city council has developed new procedures to consult with inhabitants organised in small groups. Officers have worked with inhabitants to debate and make choices about priority areas that should not be built. Conflicts have arisen on several occasions either to oppose new housing or to prevent the development of transport infrastructures, something that has been observed elsewhere too. There is for instance strong opposition from inhabitants from small islands on the west side close to the metro line, to accept new housing developments.

Modernist design – artistic and cultural identity of the region

Urban planning and architecture experienced a major transformation during the 20th century. Starting with the upheaval of the traditional canon of theory and practice early in the century, Modernism came to completely change the way we design the built environment by the mid-century. The Modernist project was an ambitious and radical attempt to completely rethink architecture, which had come to be thought of as antiquated and even immoral in its decorative and monumental excesses. The new movement gave architecture and urbanism a much more direct connection to and expression of the new industrial technology of mass production and of new social imperatives. In the thrall of engineering and science, Modern architecture was meant to embody and promote honest, rational design of buildings that would house families, institutions, commerce and industry in economical and straightforward structures. There was a strong agenda of social housing and commitment to a less hierarchical and more democratic society, especially after World War II. In city and town planning, Modernism also manifested itself with rational master planning and zoning that separated the different functions of the city into large single-use zones, *e.g.*, housing, retail, office, institutional, recreation. The separation of pedestrians from vehicles, the replacement of the traditional street by the pedestrianised superblock and the boulevard by arterials, and the construction of the limited access "autostrada" in and around cities all became standard practice.

Finnish architects, led by Alvar Aalto, were among the world leaders in the Modern movement and contributed seminal and influential works. Prior to the rise of Modernism, Finnish masters such as Eliel Saarinen and Lars Sonck had been important designers in the national Romantic style at the turn of the century, when the Garden City movement and the first garden suburbs of Helsinki were planned.

Saarinen's plan of 1915 was a particularly beautiful and powerful example of a later, more urban vision for the city. Later in the 1950s, Garden City principles came together in Espoo with Modernist architecture at Tapiola, one of the most famous and successful examples anywhere in Europe of new town planning after World War II.

Today, Modernist architecture is not so much a movement as a style. It has been seriously challenged by Postmodernism and subsequent design movements, although none of these movements have been very strong in Finland. The minimalist, abstract forms of Modernism have been attacked as too cold and rational. At the scale of the community, its rationalist separation of land uses into Cartesian zones and campus-like superblocks and districts have come under attack from both neotraditionalists, such as the New Urbanists, in America and Post Urbanists in Europe. They contend that the traditional street fosters more vibrant community life than pedestrian campuses and precincts, whether they be office/technology/science parks or shopping malls. Compact, walkable urbanism that mixes land uses and social groups within a grid of streets and alleys is being increasingly advocated and built elsewhere.

Architects and urban planners have resolutely stuck with Modernism longer in Finland than most countries, probably because its egalitarian ideals and stripped, honest, transparent construction resonate with basic Finnish values and sensibilities. They have slowly refined and perfected it, most recently in an idiom of glass. As a consequence, there is a large inventory of buildings of excellent Modernist design, representing perhaps the highest average in the world. Despite the very high average, there are some problematic practices lingering in Finland from Modernist architecture and town planning. For instance, land use planning still emphasises campus-style site plans, with too little physical definition and re-enforcement of the street and sidewalk as a primary place for social interaction (with retail shops for instance). And there is increasing dependence on and use of the automobile, even for short trips that could be more conveniently taken on foot in traditional settlement patterns. Hypermarkets and shopping malls with aggressive signage and large parking lots are becoming the norm in parts of Vantaa and Espoo.

Other problems associated with Modernist architecture and urban planning are such phenomena as placelessness, social dysfunction, automobile dependence, inhuman scale, and environmental degradation. Indeed, Modernism is now thought of by some theorists and practitioners as actually sponsoring the attitude that led to the over-exploitation of natural resources, fragmenting of the social environment, and the despoliation of the natural environment. Although Scandinavian Modernism has been softer and more sensitive to the environment, it has not escaped some of the other shortcomings. Housing projects, for instance, are still designed in a limited number of architectural styles and types. Although richer in architectural variety

Box 3.2. **The design *charette***

Charrette is a French word meaning wagon, used by architecture students a century ago at *École des Beaux-Arts* in Paris. Students worked round the clock to a deadline, even to the point of running after and jumping on the wagon that was dispatched by the professor to the student quarter to pick up their drawings. To be *en charrette* was to draw to the very last moment. The word has been revived in the United States in recent years to describe a design workshop in which designers work intensively on a problem and present their findings and proposals in a public forum. It is an illustrated brainstorm, typically a two- to five-day event. Three to four competing teams led by distinguished guest design professionals, assisted by local university faculty and students, develop different design solutions for the same project. The design professionals and students are drawn from the architecture, landscape architecture, urban design, and planning disciplines, sometimes supplemented by artists, historians, economists, developers, etc.

The charrette typically deals with an emerging local urban design issue of social and civic importance. There are three basic types: ones that test new public policies or design ideas on real sites, ones that respond to requests for help from neighbourhood groups or government agencies, and ones that explore a particularly glaring problem or tempting opportunity presented by a specific site. They are meant to advance feasible but creative solutions to issues for real clients and users, as opposed to being a conceptual or pedagogic exercise for the sake of faculty or students. The sites are often open or under-utilised areas from two to two hundred hectares in size. The site needs to contain sufficient open land to exercise a full range of design imagination and creativity. Abandoned or under-utilised industrial or military lands or deteriorating neighbourhoods or districts are prime candidates.

A charrette produces drawings and slides of the three or four design proposals. (A single-team charrette only generates one collective proposal and does not benefit from the competition between teams.) The intensive event can generate a great deal of publicity for the project. The public presentation, often held at a prominent local venue, can be attended by hundreds of citizens and officials. There can be follow-up presentations to community groups. Charrettes can be published and aired widely by the local media. Sometimes they precipitate the commissioning of actual projects. Other times, charrettes simply generate and illustrate visions for the public and provide a large gene pool of ideas for discussion, dissemination and ultimate use at a later time. They can reveal what a project's site and programme want to be, as well as illustrate what special interest groups and stakeholders desire. They can be synergistic: they help the community solve problems and build consensus; they test new ideas and policies that are generated within the community, the design professions, or the university; they seize on forgotten places and nascent opportunities; they build the community's understanding of itself and its confidence to pursue a vision.

Design charrettes can be hosted by community groups, universities, or other institutions. Universities and their schools of architecture and planning are peculiarly well-suited for charrettes because of their studio facilities and legions of architecture

Box 3.2. **The design *charette*** (*cont.*)

students. Helsinki University of Technology would be a logical host for a charrette. All the participants should be there for the duration of the workshop, which may be convened at the university or on the actual site in question. Almost without exception, the teams accomplish a remarkable amount of work in a remarkably short period, forced by a clock that ticks much faster than normal. The chemistry of both collaboration with teammates and competition between teams always seems to unleash ideas that would otherwise remain overlooked in slower paced, more linear design methods. It is a good way to generate and test a broad spectrum of ideas very quickly, which is often of critical importance in the early stages of a project. The results of a charrette should be seen as a sort of gift to the community from the design world – one that is neither perfect nor final. It is illustrative rather than definitive and, like any vision, its proposals must be reworked by others. It should be seen as the beginning, not the end of a process.

than Modernist social housing in many other countries and that once prevailed in Finland, housing can still sometimes be overly repetitive, monotonous and bland.

There are still a limited number of dwelling types being built, primarily three: blocks of flats, terrace housing and detached houses. Contemporary attempts to add architectural variety in housing blocks of flats, such as at Herttoniemenranta, are less monotonous than the longer and more repetitive housing blocks from the late 1950s. Nonetheless, the variation in style and detailing would be less superficial and cosmetic if the underlying architectural types were more varied. (Social problems might also be less frequently masked and thereby less perpetuated by such consistently designed and maintained architecture.) New types of housing, such as maisonettes (two-story flats), live-work housing (living space connected to work or retail space), terrace housing over flats or shops, loft housing, accessory dwelling units (rental units attached to or detached from the primary unit), co-housing, etc., should be encouraged to increase neighbourhood diversity.

Although many of these architectural and urban problems are far more virulent in places like the United States, eastern Europe and Russia, some of these problems are growing in frequency and intensity. Nonetheless, architecture and urban planning are for the most part exemplary in Finland and the Helsinki region. The fact that the Finnish government has adopted an official Architectural Policy is testimony to the extraordinary importance that the country places on architecture. This document states the "*core of national and local culture is the built environment, where buildings of different ages complement each other and are adapted to the natural surroundings*". It

goes on to delineate that public buildings should meet high design standards and set a good design example, especially through the design competitions, which remain a venerable tradition in Finland. It also promotes raising the awareness of architecture among the general public and elected officials, as well as upholding the international reputation of Finnish architecture, through increased education, research, exhibits, publications and awards. "*Decision makers, elected persons and functionaries of the municipalities will be offered training in architecture.*" (See Box 3.3 for a description of the Mayor's Institute of City Design, an American programme that brings mayors to annual conferences in which they become personally involved in actual urban design problems.)

Future growth of GHR and housing and office space provision

Metropolitan Helsinki has no housing crisis – there is virtually no homeless population – only a shortage and affordability problem. However, housing is one of the most contentious intermunicipal issues. Shortage is most acute in the city of Helsinki. Both Vantaa and Espoo were rather dispersed suburban locations but their continuous rise over time lead to their active transformation into secondary urban centres. Their political élites are keen to contribute to the making of an urban system with shopping centres, offices, services; the functions of urban centres. That accompanies a movement of differentiation of these two municipalities from Helsinki, which have large reserves of land to build. It also goes together with more competition to attract so-called prestigious centres; for instance the World Trade Centre Finnish offices which may go to Vantaa. Espoo in this regard has more semi-detached houses, less housing for immigrants, less high-rise or small building blocks. Because of the rapid expansion of the urban areas, demand for new housing has been on regular increase. This has also led to social differentiation among municipalities. In the past decade 1990-1998 (Table 3.1), Espoo has increased its stock of housing by 22.5%, Vantaa by 18.8%, Helsinki by 12.0%.

The rising cost of housing is the greatest challenge. This increase, especially steep in the late 1980s and late 1990s, is a function of several factors: rising construction and land costs, increasing unit sizes, and lack of sufficient supply. Real estate market volatility in the 1970s resulted in the creation of the HITAS quality and price control system in 1978 to eliminate speculation on lots rented from the municipality. Its main objectives have been to ensure the availability of affordable and good quality housing to all social groups, to mitigate social segregation based on income and tenancy and to increase housing stock to control upward pressure on the market price of dwellings. The system is based on a contract between the city and the developer when the city leases the plot, covering 40 000 dwellings, 13 000 of which belong to the owner-occupied sector. The city regulates quality and selling price of dwellings when first offered on the market and regulates the resale price using a composite index of construction cost and housing market

Box 3.3. **Mayor's Institute of City Design**

Because the Finnish Government Policy on Architecture requires the training of decision makers, elected officials such as mayors, and municipal functionaries in matters of architectural design, it might behoove authorities to consider a highly successful initiative in the United States. Since 1986, the National Endowment for the Arts (NEA) has sponsored the Mayor's Institute on City Design. Over 500 mayors from cities in all 50 states of the country have participated. Every year, there is a national event for mayors of large cities and four regional events for mayors of smaller cities. In each case the mayors of eight cities are invited to attend a workshop/meeting hosted at a university with an architecture school. The Helsinki University of Technology would be the logical host, although the institute could rotate among several leading Finnish universities.

The event takes place over two and a half days. Attendance is limited to eight mayors, who attend at no expense to the municipality but must come for the entire session or decline the invitation. They are discouraged from bringing members of their professional staff on whom they might normally depend for urban design advice. During the working sessions, each mayor personally presents for discussion a project currently underway in his or her city to a panel of distinguished design faculty, professionals and economic consultants, as well as to the other mayors in attendance. The support panel consists of accomplished architects, urban designers, landscape architects, and experts on housing, public finance and governance. A round table format ensures a high degree of interaction in which participants identify critical design features and creative implementation strategies.

It is a rare opportunity for municipal leaders to discuss critical design and development issues in their city with a team of some of the country's most talented and experienced design and development professionals. There are fewer than twenty participants, including mayors and design professionals to create a non-threatening atmosphere that encourages the mayors to venture into areas of design and planning that they might otherwise delegate to subordinates. Many mayors return home from the institute as passionate and insightful urban design advocates. They are better equipped to lead their communities through land use and urban design issues, which are often controversial and complex. Indeed some mayors return in subsequent years. The results have been new waterfront parks, creation of historic districts, attractive and affordable housing, energetic town centres, improved transportation systems, and more human-scaled public buildings.

prices. A flat buyer or renter pays a price related solely to the actual building costs, with the rent of tenements regulated by capital and maintenance costs. By finance and tenancy, HITAS dwellings can be market-financed and/or state-subsidised, owner-occupied or rented. The city favours mixed developments containing all types of dwellings. The system is not without its critics, but the mixing principle of HITAS has undoubtedly contributed to the balanced social structure of the city

Table 3.1. **Housing stock 1990-1998**

	All dwellings									Change of housing stock	
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1990-1998	
										Total	%
Finland	2 209 556	2 249 672	2 297 359	2 331 406	2 352 156	2 373 973	2 390 843	2 416 378	2 449 115	239 559	10.8
Espoo	72 369	74 923	77 445	79 833	81 502	83 462	84 927	86 723	88 640	16 271	22.5
Helsinki	259 033	264 276	269 367	273 616	276 767	281 358	282 987	285 659	290 128	31 095	12.0
Hämeenlinna	21 143	21 704	22 109	22 524	22 669	22 842	22 953	23 164	23 639	2 496	11.8
Lahti	45 103	45 938	46 907	47 860	48 353	48 800	49 041	49 773	50 591	5 488	12.2
Porvoo	18 173	18 667	19 215	19 546	19 943	20 026	20 232	20 246	20 429	2 256	12.4
Vantaa	65 334	67 813	69 634	71 386	73 195	74 244	75 161	76 198	77 597	12 263	18.8

Source: Statistics Finland.

and to mitigate the problems of speculative bubbles that have plagued some urban real estate markets.

The municipalities are trying to keep up the supply of units but have been unable to match demand, particularly in the city of Helsinki. The city's four-year plan for 1998-2002 calls for the construction of 4 100 units (initially 4 500) per year. Of these, approximately a quarter would be built by the city directly. The programme targets a healthy distribution and wide mix of occupancy, financing and rental options, but as stated earlier, a relatively narrow mix of architectural types. Construction levels have been higher than most, if not all, European cities, according to 1994 figures. If this pace continues, the availability of land will become an even more critical issue.

The most promising possibilities for new land on which to build housing is the space that is freed up periodically when factories, railyards, transport terminals and harbours are made obsolete or redundant by new requirements or technology and are abandoned or moved from central industrial areas. Often vacated structures can be gainfully adapted to new uses, such as housing, retail, office and institutional (thereby adding to the architectural diversity of the building stock, as well as sometimes providing economical space). In many cases, large areas of the city can be cleared for major new projects. The construction of the new harbour at Vuosaari would open up significant redevelopment possibilities in the existing harbour areas. The old airport at Malmi and the central railway goods yard and freight handling station offer similar opportunities, as do Laajasalo oil harbour and storage facilities. Although the specific opportunities and constraints vary from site to site, it is usually a sound planning practice to displace industry to the periphery and replace it with more people-intensive uses in the city centre and along waterfront.

All told, it appears that there is enough land available to slowly but steadily increase the city of Helsinki's population by about 10% to an ultimate build-out of approximately 600 000 inhabitants. Indeed, some 80% of the available land is owned by the city. Growth may also require a more aggressive infill housing policy, *i.e.*, building compact development on small vacant sites, interstitial sites and on the edges of natural areas. Growth above 600 000 for the city of Helsinki is not currently feasible given the relatively young vintage of the current building stock of low-rise and medium-rise buildings. Eventual replacement of this building stock with high-rise buildings is not envisioned and would not seem to be in keeping with the character, values and traditions of Helsinki. Nonetheless, the greater the density of development and redevelopment is in Helsinki, the more advantageous it is to the region, as it will pre-empt urban sprawl and its attendant problems.

In addition to housing provision, another strategy for supplying office space is also important. Total office stock of the Helsinki Metropolitan Area is about

7 million m^2, including nearly 2 million m^2 in Helsinki's inner city. The CBD is defined as the area south of, and directly adjacent to, the central railway station. Major property owners in the region are pension funds, the state, the banking sector, and insurance and property investment companies. Capital values for office properties in the centre of Helsinki are estimated at approximately 2 500-4 000 EUR/m^2 and at more peripheral locations, about 1 500-3 000 EUR/m^2. The current rents in Helsinki centre are about 200-300 EUR/m^2. In Helsinki as well as in other Nordic capitals, the demand for office space was on an upward trend for over seven years, office demand was increasing, since 1996, leading to continuous rent increase and lowering vacancy rate (7% in 1995 and 2% currently). The economic slump since summer 2001, in particular in the information technology sector has lowered demand, thus vacancy rates have risen. Decline in demand coupled with a continuing supply of new-built offices has led to fall in rents. Nevertheless, CBD vacancy rates remain very low in international terms. In the Helsinki Metropolitan Area, new commercial construction such as large shopping centres continues at a relatively high level, most of which are outside the immediate city centre on new-planned business campuses.

Long-distance commuting is currently on an increasing trend in Finland as well, although commuters still remain some 4% of working population.[1] According to research carried out by Technical Research Centre of Finland (VTT), the number of potential telework population is estimated between 450 000 and 820 000, 20 to 40% of the working population. If 200 000 of this working population transfers to telework one day a week, annual socio-economic saving from driving expenses, accident expenses and emission costs can be considerable. This is an example of alternative solutions for spatial development. An integrated territorial strategy is thus necessary for the GHR that can integrate goals of regional development, transport development and labour policy by satisfying demands for both housing and office space.

Policy recommendations

The following observations, suggestions and recommendations attempt to deal with more specific and topical issues confronting the region:

- Redevelop unused and under-utilised urban land, especially obsolete industrial sites. Assuming the new harbour at Vuosaari is built, a top priority would be the western harbour at Jätkäsaari and the eastern harbour at Sörnäinen. The central railyards and the Laajasalo oil harbour and storage facilities are other priorities. Projects like Herttoniemi and Ruoholahti are good existing examples of such redevelopment.
- Develop new communities on the urban periphery, preferably on rail lines, such as the proposed new town at Marja Vantaa. Espoo centre is a good

existing example of such new towns. It is located on a rail line that allows easy commuting to central Helsinki and its town centre is dense, low-rise, mixed-use, walkable and has pedestrian-scaled public spaces.

- Complete the railroad loop to the airport with the construction of the Marja line. Beware of the development of "edge city" elements around the airport, such as hypermarkets, suburban malls and office parks, which are completely dependent on automobile access and could start a chain reaction of other American suburban phenomena that may not be compatible with Finnish values and lifestyles.

Adopt policies that promote and strengthen:

- Design and artistic aspects so as to enhance the identity and cultural value of Helsinki. New urban design and planning tools, such as design charrettes (Box 3.2) and urban design codes, which prescribe desired architectural types, building materials, street types, etc., should be preferred to zoning codes, which proscribe building type, building bulk and land use and which tend to prohibit undesired outcomes rather than promote desired outcomes. Urban design codes, as espoused in America by New Urbanists, rely more on diagrams, charts and images than on text and, as a consequence, are often shorter than traditional zoning and building codes.
- Green space that can provide a distinctive identity for the region. In Helsinki, 35% of the land is conserved as green area that constitutes an important local advantage as a metropolitan area. It can be integrated with the new urban design. Strategically planted trees where sidewalk widths allow them would soften streetscapes considerably.
- Development and redevelopment that is dense, socially diverse, mixed-use, walkable and transit-oriented, rather than sprawling, auto-dependent, single-zoned development that is socially and economically homogeneous. Critically reconsider projects such as suburban-style technology parks and shopping malls, which may tend to sponsor more automobile-oriented sprawl.
- "Fair share", *i.e.*, that each neighbourhood, community and municipality take its fair share of social housing, social services, traffic, etc. Resist the excessive accumulation of wealth in suburban communities, such as Espoo and Kauniainen, and of social problems and social disparities in eastern Helsinki. If the region becomes more polarised economically, the political power that inevitably follows wealth, will tend to exacerbate the unfair concentration of problems in poorer and less politically powerful areas.[2]
- Citizen participation in all land use and transportation planning. The Finnish Government's Architectural Policy "*guarantees everyone … an opportunity to influence decision making regarding the environment*". Recently, Decision 5 goes on to state that the "*opportunities for citizens to influence decisions concerning their own living environment will*

be strengthened". Community design workshops (Box 3.2), community design boards that review and comment on architectural plans prior to approval, and community design centres that provide free design services to needy citizens are all worth considering and trying.

- Diversifying types of housing that will help inhabitants of various life stages and working styles. New or hybrid types of housing, such as live-work housing (units that combine work and residential space), accessory units (rental units attached or adjacent to primary dwelling units), lofts (converted industrial space), co-housing, terrace housing over flats, penthouses on top of commercial space, etc., should be promoted. Vuosaari and Herttoniemi provide successful examples of this type of development. A greater variety of residential architectural types will not only enrich the quality of the built environment and maintain architectural heritage, but also increase affordability and decrease commuting time in many cases.

Notes

1. Technical Research Centre of Finland (VTT) with long distance defined by a commute of more than 50 km.
2. These issues are developed more fully in Chapter 7.

Chapter 4

Fiscal Implications for Development

Introduction

Like the other Nordic countries, Finland has a large public sector that provides a generous set of social services. In addition, it relies heavily on local governments to deliver those services. Although heavy reliance on local governments to provide social services is inconsistent with standard models of fiscal federalism, Finland manages this arrangement by imposing quite high standards in the form of "recommendations" from the centre and by efforts to equalise the revenue-raising capacity of the various districts. In some ways, the system is best described as one in which the municipalities serve as agents of the state rather than as one of autonomous local governments making their own decisions about service quality.

The central fiscal question for the Helsinki region is whether this approach to the provision of social services is viable in the future as the region seeks to enhance its competitive position in the international market place. One issue relates to the fact that all the cities within the Helsinki Metropolitan Area are large contributors to the finances of other cities through the tax equalisation scheme. Helsinki, itself, contributes so much in that way that currently net revenues from the central government (transfers for services minus equalisation payments) are projected to be negative. These large equalisation payments mean that the municipalities in the Helsinki region are directly subsidising many small and struggling municipalities throughout the country. Compounding the problem for the region are structural incentives for the central government to widen and raise the standards for the delivery of social services. A second issue relates to the effects of fiscal competition among cities within the Helsinki region. Although the cities have limited flexibility to compete with respect to the quality of services they offer, they do compete for the tax base and, in particular, for types of land uses that enhance their fiscal condition, and this fiscal competition could well be detrimental to the long-run health of the Helsinki region.

The cultural backdrop of Finland's fiscal system

Any analysis of municipal finance and of the fiscal relationships among governments in the Helsinki region logically begins with an understanding of the culture of Finland. The two most critical characteristics for understanding how local governments operate are the Finns' strong commitment to social egalitarianism and their tradition of local democratic governments. This context both helps one understand the structure of the current Finnish fiscal system and provides significant constraints on changes to that system. The commitment to social egalitarianism plays out in many ways. Within cities such as Helsinki it motivates policy makers to spread social housing throughout the city so that poor or otherwise disadvantaged households do not end up in spatially concentrated areas. Finns take great pride in the absence of the urban slums that are common in so many other countries. At the national level it results in laws and recommendations that assure all residents of Finland equal access to a wide range of public services, regardless of where they live and regardless of their economic circumstances. With respect to some services such as daycare for children 0-6, such access is referred to as a "subjective right" and can serve as the basis for legal challenges when appropriate services are not provided.

The country's long tradition of and commitment to local governments means that it is the local governments, not the central government, that are responsible for providing most social services, including education, daycare, health, services for the elderly and monetary assistance. Moreover, the Finns take pride in the fact that their local governments have full authority to set their own municipal income tax rates. Currently the country has 448 local governments serving its 5.5 million people and these municipalities range in size from 122 people to 560 000 people in the city of Helsinki. The strength of the commitment to local fiscal autonomy is evident from the difficulty that the Finnish central government has faced in trying to get small municipalities to consolidate into larger units. Moreover, the power of municipal boundaries is indicated by the fact that the Ministry of Labour continues to have separate regional offices in the Helsinki region's separate cities despite the fact that that relevant labour market is larger than any of the individual cities.

Vertical division of responsibilities and taxes

Finland is a unitary state in the sense that all powers of the local government come directly from the central government. This structure contrasts with federal countries such as the United States, Canada, Germany, and Switzerland in which sub-national governments, usually at the intermediate level of states or provinces, have their own constitutionally protected powers, some of which they delegate to local government. For all practical purposes, Finland has only two levels of government: the central government and local authorities (municipalities). To be sure

there are also regional councils in Finland – 19 plus the autonomous Åland Islands – that are responsible for regional development. However, the regional councils are dependent on the municipalities in that they are comprised of representatives from the member local authorities and receive all their funding from their members.

Division of responsibilities

Within this system the local governments have very large spending responsibilities, including for most social services, education (other than universities) and property management (Box 4.1). Many of these responsibilities are required by national law, with standards or recommendations about appropriate service levels dictated by the state. Table 4.1 provides a summary overview of these responsibilities and their financial impacts on local government finances. The first and last columns highlight the significant role of social welfare and health care services in the operating costs of all municipalities. In 1998, such costs accounted for more than 50% of all operating costs. The last column shows that as a share of operating costs net of operating revenue, social and welfare services loom even larger. Operating revenue includes user fees, sales of goods, and miscellaneous transfers from the central government and the EU in addition to tax revenue. By law, user fees are limited to the total costs of production, including fixed asset depreciation. The next-to-last column shows how the role of operating revenue varies across the service areas. Such revenues offset about 12% of the costs of social welfare and health care services, 9.5% for education and culture, and 67% of other services. This last category includes the enterprise functions of business premises and leasing services, water supply, and energy services which are financed fully from charges and other operating revenue.

The central government is responsible for defence; all social insurance programmes, including those for unemployed workers; higher education; and public protection and the courts, including police protection. It is worth pointing out that national policies are designed to treat all parts of the country equally. This treatment is particularly pertinent with respect to higher education in that it results in public universities being geographically distributed around the country, and all being treated equally. This uniform treatment may not serve the needs of the Helsinki region very well, given its particular needs for highly trained managers. Although private universities might meet the demands in other countries, there are no private universities in Finland.

Division of taxing authority

The major taxes at the national level are the progressive income tax, the value added tax, and contributions for social security. The income tax is of particular importance in that it is also the primary tax source of the municipal governments.

Box 4.1. **Responsibilities of Finnish municipalities**

Daycare. Available to all children under school age after maternity. Municipalities must provide municipal daycare or pay a home-care allowance to the families of children under three who are cared for at home.

Care for the elderly. The main legislated functions include a home-help service, an auxiliary service, support for family care, housing service and institutional care.

Other social services. Includes services for the disabled and the mentally handicapped.

Municipal income support. Municipalities are ultimately responsible for residents' subsistence. A person who cannot earn a reasonable living can receive a municipal income support.

Basic health care. Local authorities maintain about 230 health centres, 140 of which are municipal centres and the others are joint municipal boards. Municipalities are also responsible for preventive health care in the firm of prenatal clinics and child health clinics.

Hospitals. Every municipality is required to belong to a joint municipal board administering a hospital district.

Comprehensive schools. Almost all comprehensive schools, which offer nine years of compulsory education, are owned and maintained by municipalities. Instruction and textbooks are free, as is a daily hot meal, health and dental care and transportation for those who live at a distance from the school.

Upper secondary schools. Instruction and a daily hot meal as well as health and dental care are free in upper secondary school.

Vocational education. Ownership of vocational institutions varies. They may be owned by one or more local authorities, by the state or privately. The percentage of municipal vocational institutions is growing.

Adult education. Municipalities provide adult education programmes and upper secondary schools or adults.

Public libraries. Municipalities maintain libraries whose services are free of charge.

Arts and leisure. Support for cultural activities and sports clubs. Municipalities build and maintain sports facilities and premises for young people.

Land-use planning and building supervision.

Management of real estate, housing and land. Municipalities own about 10% of the country's housing stock. Most of the funding for social housing comes from the state, but a city such as Helsinki ends up paying about 10% of the costs of social housing.

Traffic infrastructure and green belts. Includes arranging for public transportation.

Water services and sewerage. Mainly the responsibility of local authorities. Financed by rates paid by users.

Box 4.1. **Responsibilities of Finnish municipalities** (*cont.*)

E*nergy supply*. Usually only the bigger cities have their own energy authority. Elsewhere electricity distribution is handled by private companies or companies jointly owned by several local authorities.

W*aste management*. Responsible for arranging for the disposal of solid waste. Generally provided through contracts with private companies.

E*nvironmental protection*. Local authorities are required to monitor air quality and promote air pollution control, and other aspects of the environment.

Source: The Association of Finnish Local Authorities (1996).

With respect to earned income, spouses are taxed separately and a standard 3% allowance (up to a maximum amount) is allowed for work-related expenses. Marginal tax rates as of 2001 range from 14 to 37% with the 37% applying to income over EUR 52 475 (Ministry of Finance). Incomes below EUR 11 100 are not subject to the state tax. Capital income is taxed separately at a 29% rate, which is also the rate that applies to corporate profits.

Municipal governments rely primarily on the income tax. The tax base is the earned income of local residents that includes fringe benefits, the estimated labour share of non-incorporated business income, social security benefits and exercised stock options, and is identical to that used by the central government. Municipal tax rates are flat and municipalities have the power to set the rates. Across the country, these rates ranged between 15.00 and 19.75% in 1998, with an average of 17.53%. Within the Helsinki Metropolitan Area in 2000, the range was even smaller; the rate was 16.50% in Helsinki, 17.00% in Espoo, 17.75% in Vantaa, and 15.50% in Kauniainen. In addition, the municipalities receive small amounts of revenue from the real estate tax, for which they can set their own rates within bands prescribed by the central government. In 2000, the bands were 0.20 to 0.50% for housing and 0.50 to 1.00% for general property which includes commercial and industrial property.

They also receive a share of the revenues from the corporate income tax. Prior to 1993, corporations paid some taxes directly to the municipalities, but since 1993, they have paid all of them to the state at a rate and the state has returned a share to the municipalities. This rate was set at 25% in 1993 and has been increased gradually to the current 29%. At the time of the policy change the municipalities' share was maintained at its previous level, but the state has reduced the municipal share almost every year since then. As the director of finance in Helsinki commented, it is easier to deal with volatility in revenue than to deal with a continual decline. The

Table 4.1. **Municipal spending by task, 1998**

	Operating costs		Fixed asset depreciation	Operating revenue		Operating revenue/ total annual costs (%)	Operating costs, net of operating revenue EUR/ resident
	Total	Wages and salaries		Total	Payments (user fees)		
General administration	773 079	214 055	16 965	175 845	6 380	22.3	116
Social welfare and health care services, total	9 901 258	2 817 808	39 620	1 163 484	648 201	11.7	1 702
Child day care services	1 843 112	847 320	5 877	246 366	217 309	13.3	311
Institutional care for the elderly and handicapped	746 191	315 232	6 745	159 391	119 725	21.2	114
Other institutional care for the elderly and handicapped	595 365	132 888	3 974	95 875	47 759	16.0	97
Primary health care services	2 037 845	779 987	14 167	295 474	160 732	14.4	339
Special medical care services	2 769 461	142 880	2 646	40 415	22 941	1.5	532
Education and culture, total	4 628 287	2 281 926	99 443	450 526	96 524	9.5	814
Comprehensive school	2 432 424	1 339 651	40 481	68 331	4 337	2.8	460
Senior secondary general school	404 893	254 240	5 135	9 787	1 668	2.4	77
Vocational schools and colleges	417 621	173 978	7 906	131 258	19 455	30.8	56
Libraries	211 534	91 824	5 113	17 011	3 954	7.9	38
Sports and recreation	347 220	90 369	30 677	58 333	23 630	15.4	56
Other services, total	4 012 003	1 142 599	670 140	3 170 730	131 513	67.7	164
Community amenity services	273 751	132 975	25 682	92 237	13 624	30.8	35
Traffic routes	471 061	65 734	183 462	85 742	24 558	13.1	75
Fire and rescue services	282 139	142 873	12 031	57 889	16 953	19.7	44
Business premises and leasing services	1 180 252	260 865	274 697	1 462 319	5 021	100.5	–55
Water supply and sewage services	264 126	43 113	97 470	303 102	3	83.8	–8
Energy supply services	110 730	8 815	11 089	136 385	–	112.0	–5
Current finances, total	19 314 623	6 483 386	826 170	4 960 585	882 620	24.6	2 796

Note: The irrevocable EUR/FIM conversion rate is applied to data relating to years prior to the year of Euro Zone accession (1999). This method facilitates comparisons within one country over time but these data cannot be applied to cross-country comparisons.
EUR 1 000, unless otherwise noted.

Source: Ministry of Finance.

Table 4.2. **Local revenue by type of municipality, 1998**

	Grouping of municipalities			
	Mainland Finland	Urban	Semi-urban	Rural
Total revenue	19 398 643	12 430 437	2 789 643	4 178 563
Per cent of total revenue				
Tax revenue	60.5	63.0	61.6	52.3
State subsidies	16.3	10.3	22.5	30.2
Revenue from operations	23.2	26.7	15.9	17.5
Total tax revenue	11 737 518	7 832 463	1 719 170	2 185 885
Per cent of total revenue				
Income taxes	78.5	78.4	82.3	76.0
Real estate taxes	3.9	4.0	3.4	3.9
Corporate taxes as per cent of tax revenue	17.5	17.5	14.3	20.1
Total operating costs	17 412 400	10 956 103	2 575 203	3 881 094
Per cent of operating costs				
Annual margin	7.2	9.4	3.5	3.5
Depreciation	6.2	7.2	5.1	4.2
Net surplus (+) or deficit	0.8	1.8	–1.5	–0.3

Note: The irrevocable EUR/FIM conversion rate is applied to data relating to years prior to the year of Euro Zone accession (1999). This method facilitates comparisons within one country over time but these data cannot be applied to cross-country comparisons.
EUR 1 000 and percentages.
Source: Ministry of Finance.

decline is particularly difficult for Helsinki this year with the government's proposal to cut the local share by 50%. While the revenue loss to municipalities is offset in the aggregate by an adjustment in the way the VAT is refunded to municipalities, the net effect of the change to Helsinki is a significant decline in revenue. Finally, as already noted, local governments receive significant amounts of revenue from user charges and other operating revenue.

Table 4.2 summarises the distribution of local revenue sources for all municipalities and also for municipalities grouped by their degree of urbanisation.[1] The top panel shows that tax revenue accounts for about 60% of total revenue for all municipalities with the proportion being slightly higher in the urban areas. The main difference among the types of municipalities is that the urban areas receive a smaller share of their revenue from state transfers and a larger share in the form of revenue from operations. The reasons for the lower share of state transfers are discussed below. The middle panel shows the breakdown by revenue source. For the country as a whole, 78.5% of local tax revenue is from the income tax, 3.9% is from real estate taxes and 17.5% is from corporate income taxes, with the patterns being quite similar across the types of municipalities.

Intergovernmental fiscal relations

Intergovernmental financial flows take two main forms. The first is made up of transfers by programme area to the municipalities from the central government. The second is equalisation payments from the municipalities with large taxable capacities to those with low taxable capacities. In addition, the state has a small discretionary pot to assist municipalities with unexpected budgetary problems.

The sector specific transfers come primarily through the central government Ministries of Social Affairs and Health, and Education. Prior to 1993, these transfers were based on actual expenditures by municipal governments, but that approach was abandoned because policy makers recognised that transfers in that form could lead to excessive spending and low incentives for efficient provision of services. The current system provides transfers in lump sum form and is intended to compensate municipalities with heavy service demands for the additional costs that they face in providing public services. This approach recognises that factors outside the immediate control of local officials make it more costly to provide public services in some cities than in others and should be compensated at least to some extent by the central government. Thus, for example, a city with many young families and consequently many children would receive more assistance per resident for daycare services than one with a smaller proportion of young families. In general, factors such as population age, economic structure, unemployment rate and illness rate of the inhabitants would affect the costs of providing social welfare and health services and hence are factored into the transfer formulas for those services. Some additional adjustments are made for particular needs, such as Swedish speaking families, and for the geographic size of the municipality. The transfer payments are intended to make the costs borne by local governments the same per inhabitant regardless of actual costs. The transfers by programme are in effect lump sum transfers to the municipality and, because money is fungible can, in effect, be used for any purpose

The second component of the aid flows is designed to make more equal the revenue-raising capacity of the municipalities. Revenue raising capacity is defined as a weighted average of the local tax bases where the weights are the average national tax rates for each base. Any municipality with revenue-raising capacity below 90% of the per capita average receives equalisation payments sufficient to bring it up to that threshold. Any municipality above that threshold pays into the pot 40% of the differential above the 90% figure, with a cap (until this year) of 15% of total revenues. Because the cities in the Helsinki Metropolitan Area all have large taxable capacity, they all make large equalisation payments to other municipalities.[2]

During the 1990s, the most striking fact about the state transfers (including the equalisation flows) was their substantial decline. Grants per capita to the Helsinki region fell by about two-thirds from their peak in 1991 to 1999. As shown in Table 4.2,

in 1998, state transfers accounted for only 10% of total local revenue in the urban areas. That proportion is even smaller in the large cities in the Helsinki Metropolitan Region. The major reason for the decline was the budgetary pressure faced by the national government as a result of the serious recession in the early 1990s. Given the important role of municipalities, it was inevitable that restoring budget balance in the early 1990s led to cuts in central government transfers to local government. The municipalities responded by raising their local income tax rates and have been able to manage because of the overall growth in the economy during the latter half of the 1990s.

Evaluation of the relationship across levels of government

In some ways, the Finnish local authorities have significant autonomy. At the same time, their actions are strongly influenced by the national government. The purpose of this section is to evaluate these relationships from the perspective of other countries and the literature on fiscal federalism.

Overall size of government

Finland has a large public sector compared to most other EU countries and even larger when compared to the United States and Japan (Table 4.3). As measured by general revenue as a per cent of GDP in 2000, Finland at 55.1% ranks behind only the Nordic countries of Sweden at 62.4% and Denmark at 57.0%, and that pattern has held throughout the 1990s. Whether this share is too high is a difficult question and one that is not answered here. It does require high tax rates, including high tax rates on income, that could have deleterious effects on the work effort of many residents and also on the ability of the Helsinki region to attract high-wage workers from elsewhere.[3] A recent OECD study examines the effective tax burdens on low and middle-income tax brackets for the same countries listed in Table 4.4. These burdens include taxes on wages, employee and employer contributions to social security and cash benefits from social security. The study puts Finland quite high on the list. For example, for a married couple with two children in which one of the spouses has average wages and the other has no wages, the tax burden is 39.8% in Finland. This tax burden on wages is below that in Belgium and in Sweden, about the same as in France, and higher than in all the other countries (OECD, 2001f). While the pattern differs somewhat depending on the household type, the conclusion that Finland imposed high tax burdens on earned income is clear.

These high-tax burdens have two adverse consequences. First, they provide disincentives for work, and could be one explanation for the increasing problem of long-term unemployment in Finland. Second, they make it difficult to attract foreign workers to Finland and the Helsinki region.

Table 4.3. **Overall revenue share, by country**
Per cent of GDP, sorted by revenue share in 2000

	2000	1999	1991-1995
Sweden	62.4	62.1	58.7
Denmark	57.0	59.1	57.0
Finland	**55.1**	**53.6**	**53.8**
France	51.9	52.1	48.5
Austria	50.5	51.6	49.5
Belgium	50.0	50.0	48.4
Netherlands	47.4	47.5	49.5
Germany	47.0	47.2	45.1
Luxembourg	46.5	47.3	–
Italy	46.1	47.1	45.5
Greece	43.8	43.3	35.5
Portugal	43.2	42.7	37.4
United Kingdom	42.0	41.4	37.0
Spain	39.5	39.6	39.8
Ireland	38.1	38.4	37.5
United States	33.7	33.3	30.9
Japan	30.3	24.5	32.3
EU15	**47.0**	**47.2**	**45.2**
Euro area	47.7	47.7	45.9

Source: European Economy, Supplement A, No.3/4 March/April; Commission estimates. Adapted from Table 1 in Ministry of Finance, Finland, Economic Policy Challenges in Coming Years, 2001.

Evaluation of the division of spending responsibilities

Compared to other countries, Finland relies to an unusually large extent on local governments to deliver and finance public services. In the absence of good data with which to compare the spending of Finland's local governments with that of other countries, Table 4.5 compares countries in terms of their revenue-raising responsibilities. The table shows that Finland ranks fifth among the 30 member countries in its reliance on local taxes as a share of all taxes and third in terms of local taxes as a share of GDP. Only Denmark, Sweden, Japan and Iceland had higher local tax shares in 1998 and only Denmark and Sweden have higher local tax burdens relative to GDP.

The standard model of fiscal federalism

The standard model of fiscal federalism as developed in the late 1950s by Richard Musgrave (1959) and elaborated by Wallace Oates (1972) provides basic principles for the assignment of spending responsibilities among levels of government. This standard framework provides a useful starting point for understanding

Table 4.4. **Income tax plus employee and employer contributions less cash benefits, by family type and wage level (as % of labour costs), 2000**

	Family type							
	Single	Single	Single	Single	Married	Married	Married	Married
	Children							
	None	None	None	2	2	2	2	None
	Wage level (%APW)							
	67	100	167	67	100-0	100-33	100-67	100-33
Australia	18.1	22.6	29.8	–19.3	7.7	14.5	17.2	19.0
Austria	40.3	45.1	50.1	15.7	29.6	32.3	34.6	43.0
Belgium	49.9	56.2	61.8	33.4	40.4	45.5	49.3	52.8
Canada	26.8	31.3	33.9	3.8	21.2	24.9	27.8	28.2
Czech Republic	41.6	43.0	45.3	15.0	24.8	33.2	37.0	41.8
Denmark	41.3	44.4	51.7	15.7	31.2	36.3	39.2	41.3
Finland	42.4	47.2	52.9	27.4	39.8	38.9	40.8	44.5
France	41.2	48.1	50.0	32.0	39.0	39.0	40.8	43.8
Germany	46.1	51.3	55.7	29.5	33.1	39.5	43.7	46.1
Greece	34.3	35.7	40.3	34.3	35.8	35.5	35.2	35.9
Hungary	49.2	51.4	57.1	25.9	37.0	40.0	41.9	50.6
Iceland	17.3	24.5	30.3	–12.4	–1.3	7.5	13.6	17.5
Ireland	18.1	28.8	39.4	–0.9	15.5	20.3	21.8	23.5
Italy	43.0	46.4	50.5	26.9	36.3	40.5	43.5	43.2
Japan	23.1	24.0	26.9	20.2	20.1	21.7	22.4	23.2
Korea	15.2	16.6	21.1	14.8	15.8	15.4	15.8	15.9
Luxembourg	30.0	35.2	43.5	4.4	10.9	14.2	19.4	27.8
Mexico	9.7	15.0	21.6	9.7	15.0	11.9	12.8	11.9
Netherlands	40.5	45.0	44.3	22.9	35.4	37.5	40.0	41.5
New Zealand	18.7	19.4	24.7	–1.4	15.2	18.7	19.1	18.7
Norway	34.4	37.3	44.4	14.2	27.3	29.2	31.6	34.8
Poland	41.8	43.0	43.9	36.9	38.0	39.4	42.5	41.8
Portugal	30.4	33.5	38.9	22.0	26.2	27.5	29.0	32.1
Spain	32.9	37.6	41.4	28.3	30.6	34.9	34.0	36.2
Sweden	47.8	49.5	54.2	37.8	42.8	43.6	44.8	48.6
Switzerland	27.3	30.0	34.3	12.5	18.1	20.5	23.8	27.5
Turkey	38.9	40.2	35.4	38.9	40.2	39.6	39.7	39.6
United Kingdom	25.6	30.3	33.0	–4.4	22.6	20.8	24.6	25.6
United States	29.0	30.9	36.7	9.0	21.6	24.8	26.8	29.6

Note: Two-earner family.
Source: OECD (2002c).

and evaluating how the Finnish system works. According to the standard model, the stabilisation function of government ideally should be assigned to the highest level of government. Leaving that function aside, we focus instead on what Musgrave refers to as the distribution and the allocation functions of government.

Table 4.5. **Local taxes as share of GDP and of total taxes, 1998**
Per cent, sorted by local taxes as share of total taxes

	Local taxes as share of total taxes	Local taxes as share of GDP
Denmark	31.9	15.8
Sweden	30.4	15.7
Japan	26.1	7.0
Iceland	22.9	7.8
Finland	22.2	10.2
Norway	18.4	8.0
Korea	17.0	3.9
Spain	17.0	5.8
Turkey	15.4	4.4
Switzerland[1]	13.9	4.8
United States[1]	12.1	3.5
Czech Republic	12.1	4.6
Italy	11.8	5.0
France	10.4	4.7
Austria[1]	10.1	4.5
Poland	9.0	3.4
Canada[1]	8.9	3.4
Germany[1]	7.8	2.9
Luxembourg	6.3	2.6
Portugal	5.9	2.0
New Zealand	5.9	2.1
Belgium[1]	4.8	2.2
Hungary	4.4	1.7
Slovak Republic	4.0	1.5
United Kingdom	3.8	1.4
Australia[1]	3.4	1.0
Netherlands	3.2	1.3
Ireland	1.9	0.6
Greece	1.1	0.4
Mexico[1]	0.6	0.1

1. Indicates a federal country with an additional intermediate level of government not included as local.
Source: OECD (2001d).

The basic principle with respect to the distribution function is that responsibility for redistributing income and providing a social safety net for low-income households should be assigned to the higher level of government. Normally the higher level of government is preferred for four reasons. One reason is fair and uniform treatment of poor households. If sub-national governments are given responsibility for the provision of services for poor households, services are likely to vary across jurisdictions depending on the wealth of each jurisdiction relative to its proportion of poor people. As a result, a poor person who happened to live in a poor jurisdiction would be worse off than one living in a wealthy jurisdiction,

an outcome that many would deem unfair. A second reason is that local provision of redistributive services could lead to under-provision of those services as jurisdictions reduced such services in order to attract or retain higher income tax payers and to discourage the poor from living in that jurisdiction. A third is that when redistribution is attempted at lower levels it could well be self-defeating as higher-income people move out of the jurisdictions in which poor people live to avoid the burden of paying for their social services. A fourth and final reason relates to macroeconomic policy considerations. Requirements that the budgets of sub-national governments be balanced mean that during recessionary periods, local governments would either have to reduce their spending on social services or raise their taxes, just the reverse of what would be called for from the perspective of counter-cyclical fiscal policy.[4]

The allocation function of government relates to the provision of public goods and services. The basic idea is that for efficiency reasons spatially defined benefit regions should correspond to tax paying regions so that those who benefit from the services pay for them, and importantly, also decide on the quality of services to be provided. Efficiency in this context refers both to the economists' concept of allocative efficiency; that is, provision of services in line with consumer preferences, and to productive efficiency; that is to production of the public goods at the lowest possible cost. When citizen taxpayers are both making decisions about service quality and paying the costs, they have strong incentives to monitor the costs of providing public services. Alignment of this type implies that some services are best provided at a neighbourhood level, others at a municipal level, still others at a regional level, and some, such as national defence, at the national level. Importantly, it allows for differing levels of public services in different jurisdictions. If residents of one city are not happy with the service levels provided by that city they can try to change the quality through the local political process in that city or can move to another municipality with a preferred package of services and tax burdens. Because in practice political jurisdictions often do not correspond precisely to spatially defined benefit regions, intergovernmental grants are needed to adjust for tax or service spillovers from one jurisdiction to another and also to adjust for equity considerations.

The Finnish approach

The Finnish fiscal system – and also that of the other Nordic countries – clearly does not fit this standard model, especially with respect to the provision of redistributive social services. So how does Finland manage to provide social services at the local level without running into the problems that typically argue for more centralised provision? The answer can be found in part in the standards or recommendations the central government sets for public services. Such standards or benchmarks are typically in the form of input requirements, such as the number

of adult care givers per child in daycare, the number of teachers per student in primary school, and the minimum amount of space per child. Furthermore, because the country treats both Swedish and Finnish as national languages, some services have to be provided in Swedish as well as Finnish when parents request it. Although the public officials we interviewed disagreed about the legal status of such standards, municipal governments appear to treat many of them as if they were laws and, like Finnish people more generally, seek to be law abiding. The municipal governments are subject to audit and also, in some cases, to legal challenges if they fail to provide adequate services. In addition, block grants from the state do reflect notional expenditure needs. Notional spending on social welfare and health care is based on the age structure of the municipalities' population. Also, social welfare grants take into account the level of unemployment.

This setting of clear expectations for service quality by the central government both solves the fairness problem and minimises the potential problem of the race to the bottom; that is, the tendency for municipalities to scrimp on the provision of public services in order to maintain their competitive positions. Local governments in Finland are essentially not permitted to opt out of providing certain services, to limit the residents to whom they provide those services, or to reduce the quality of those services. Although such service requirements might be viewed as minimal requirements, the fact that the standards are typically quite high and many municipalities are strapped for funds make the standards in fact the common level of services provided. In the GHR, municipal officials generally assert that the quality of services is essentially identical across municipalities within the region. The fact that transfers are adjusted for municipality-specific characteristics that affect costs and that the revenue-raising capacities of municipalities are partially equalised serves to counter in part the other potential problem of local provision; that of wealthy taxpayers avoiding the burden of supporting redistributive services by congregating in municipalities with large tax bases and few social problems. With the Finnish system of equalisation payments taxpayers cannot fully avoid their fair share of financing social services. Some of the local tax payments made by residents in wealthy jurisdictions in effect are transferred to other jurisdictions.

Evaluation of the Finnish model

Thus, from the perspective of needy households; that is, those most in need of social services and least able to pay for them, the Finnish model appears to work remarkably well. Despite the country's almost complete reliance on local governments to provide social services, such households appear to receive high quality services no matter where they live. Moreover, within the Finnish model, individual municipalities have appropriate incentives to provide those services in a relatively cost-efficient way. The more efficiently they can provide those services, the lower they can keep their municipal tax rates or the more funds they can

free up for other public purposes. A related benefit is that the delivery of social services can be tailored to the needs of particular local populations and does not require significant central bureaucracies and bureaucratic procedures.

From other perspectives, however, the Finnish model is subject to criticism. One such perspective is that of the taxpayer who has to foot the bill for this generous set of services. The problem is not simply that service levels are generous and hence expensive. To the extent that Finnish residents, with their strong commitment to an egalitarian society, are willing to pay for such services, the high tax cost should not be viewed as a problem. Problems arise, however, to the extent that there is an upward bias in the decision-making process that results in excessively high standards for social services, and to the extent that the per unit cost of such services is higher than need be because of the large number of local governments. The decision-making process is flawed because the central government is making decisions about the rights of citizens to certain public services and about the standards or recommended qualities of those service while the local governments are paying most of the costs in the form of local taxes. In the US context, these required services would be referred to as "unfunded mandates". Such unfunded mandates are undesirable – and increasingly not permitted in the US fiscal system – because they lead to excessively high spending.

Regardless of their size, all of Finland's 448 municipalities are required to provide a full range of public services. The average municipality has 11 444 people, but the median municipality has only 4 802 people with the size distribution of municipalities shown in Table 4.6. Almost 60% of the country's 448 municipalities have fewer than 6 000 residents and 20% of them have fewer than 2 000 residents. The many small municipalities make it expensive to provide the standard level of public services. To be sure, there are many co-operative arrangements through which small municipalities can jointly provide public services such as hospital care. Nonetheless,

Table 4.6. **Size distribution of municipalities, 2000**

Population size	Number of municipalities	Cumulative per cent	Annual margin 2000 EUR/resident
< 2000	88	0.20	[1]
2 001-5 999	179	0.60	–11
6 000-9 999	76	0.77	82
10 000-19 999	55	0.89	118
20 000-39 999	32	0.96	217
40 000-99 999	12	0.99	156
100 000 and over	6	1.00	729
Total	448		

1. Included with the next entry.
Source: Ministry of the Interior, Finland.

the small size of many municipalities undoubtedly makes the total cost of providing social services higher than it would be with larger municipalities because of the need to replicate administrative structures and because small municipalities cannot take advantage of economies of scale in production.[5]

Small municipalities not only have high per resident costs of providing public services but they also are not well-suited to bearing the risks associated with unexpected demographic and economic shocks. Such risks are more appropriately borne by higher levels of government and/or larger governments where they can be pooled and where there is more flexibility to respond to them. Evidence of the problem emerges from the current requests for discretionary assistance from the central governments. Over 300 municipalities have requested such assistance in 2001 because of unanticipated budgetary shortfalls related to the slowing of the economy and most of those municipalities are small. These requests reflect low annual operating margins (measured as revenue minus operating costs, including interest costs but excluding depreciation) for small municipalities. As shown in the final column of Table 4.6, the municipalities with fewer than 6 000 residents had the least operating flexibility in 2000 and, as a group, spent more than their revenue.

A final perspective from which one can evaluate the division of expenditure responsibilities in the Finnish model of fiscal federalism is that of the typical (non-poor) citizen-taxpayer. The Finnish system seemingly fails to provide the major benefit of local provision of public services touted in much of the public finance literature, namely the availability of jurisdictions with differing expenditure and tax packages. According to the standard literature, variation in expenditure and tax packages, especially if such variation occurs within a metropolitan region, promotes allocative efficiency in that it allows citizen-voters to express their preferences for public services through a combination of the local political process and the decision of where to live. Questions to public officials about variations in the range and quality of services across jurisdictions – especially those in the Helsinki region – invariably elicited the response that the quality of basic services did not vary much across municipalities.[6] Only with respect to optional or non-basic services, did some variation emerge. One example of that variation emerged with respect to the provision of education in Helsinki. Given the importance of technology to the economic health of Helsinki, that city has chosen to provide more technology instruction than is provided by most other cities and also provides computers to all teachers who know how to use them. In addition, Helsinki provides some specialised schools at the upper secondary level not available in other nearby cities. At the same time, however, residents of nearby Espoo and Vantaa can send their children to those schools with the costs paid by their home cities.

This limited variation in service quality across municipalities largely reflects the high standards and wide range of basic services required by the central government.

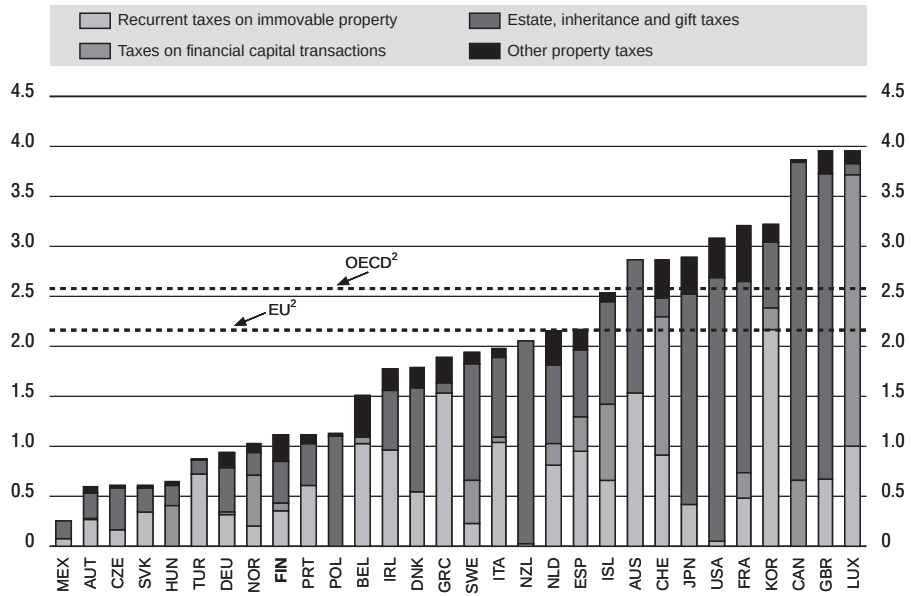
After spending funds to meet the standards for basic public services most municipalities have little budgetary flexibility to provide additional services. Only those cities with large tax bases and operating surpluses appear to have the flexibility to provide additional or higher-quality public services. While not consistent with the standard model of fiscal federalism, this uniformity of service levels need not generate a significant loss in allocative efficiency in the Finnish context. In general, the magnitude of the loss depends on two factors: the homogeneity of the residents within each municipality with respect to their preferred level of public services and on the extent of variation in preferred levels across municipalities. Given the cultural homogeneity of the Finnish people and the country's strong egalitarian tradition, it appears that most people have quite similar preferred levels of public services and that there may not be large differences in preferred levels across municipalities relative to the differences within municipalities. To the extent this characterisation is valid, the efficiency loss would not be very large. However, this issue is investigated further below in the context of variations across municipalities in the GHR.

A final criticism related to the preferences of taxpayer-voters arises with respect to how municipalities deal with shortfalls in revenues. The economically efficient manner of dealing with such shortfalls would be for municipalities to cut back services in such a way as to minimise the loss in consumer welfare. Depending on the nature of consumer preferences, that might require cutting one or more services substantially more than other services. In fact, however, most Finnish municipalities appear to deal with revenue shortfalls using a "cheese-slicer" approach, that is, by cutting all services by the same per cent across the board. While that approach may be the fairest way to deal with revenue shortfalls in the context of centrally-mandated levels of social services, it is undoubtedly not the most efficient approach to the allocation of a smaller pie.

E*valuation of the taxes used by municipalities*

Like its Nordic neighbours, Finland relies more heavily on the local income tax and much less heavily on the property tax than many other OECD countries (Figure 4.1). This pattern emerges clearly from the data in Table 4.7 based on 1995 data (OECD, 1997). In the top half of the table, the countries are ranked by the share of local government revenue from income and profits taxes. As can be seen, the four Nordic countries are in the top five of the list with income tax shares greater than 89%. Local governments in the federal countries of Switzerland, Germany and Belgium derived a high share of revenue from taxes on income and profits. With respect to property taxes, the shares for the Nordic countries, including Finland, are all less than 10% and are significantly lower than those of most other countries.

Figure 4.1. **Property taxation: an international perspective**
Tax revenue as a % of GDP, 1999[1]



1. 1998 for Mexico.
2. Total property taxes; weighted average using 1995 GDP and purchasing power parities.
Source: OECD (2001d).

Income taxes versus property taxes as a local revenue source

Both the income and the property tax have advantages and disadvantages as sources of local revenue. Although in some contexts the local property tax might have a slight edge over the income tax, both tax sources are quite suitable as local revenue sources. Hence, Finland's heavy reliance on local income tax revenues should not, by itself, be viewed as a problem. However, as explained below in the section on policy recommendations, a persuasive case can be made for a more balanced local tax structure that would include heavier reliance on the property tax.

The main advantage of the local income tax is that it is a personal tax and the tax burden varies directly with the ability-to-pay of the local taxpayer. It should be remembered, however that the tax base at the municipal level does not include capital income and that income is taxed at a flat rate. Thus, the local income tax is not a progressive tax and could well be regressive with respect to total income at the higher end of the income distribution where income from capital is important.

Table 4.7. **Tax revenue from the main local taxes as percentage of total tax revenues of local governments, 1995**

Sorted by share of local government revenue from income and profits taxes

	Income and profits	Property	General consumption taxes	Specific goods and services	Taxes on use	Other[1]
Unitary countries						
Sweden	99.7	–	–	0.3	–	–
Finland	**95.1**	**4.8**	**–**	**–**	**0.1**	**–**
Denmark[2]	93.4	6.5	–	0.1	0.1	–
Luxembourg[2]	93.2	6	–	0.7	–	–
Norway	89.6	9.9	–	–	0.6	–
Czech Republic	86.7	6.4	–	0.3	6	0.6
Iceland	72.7	19.1	8.2	–	–	–
Poland	53.6	37.9	–	–	8.5	–
Japan	52.7	31.6	–	9.6	5	1
Turkey	28.1	2	30.8	6	0.5	32.7
Italy[2]	22.4	43.4	–	8.2	15.6	10.4
Portugal	20.6	40.4	18.9	16.2	3.7	0.2
Spain	16.4	38.9	13.8	11.2	16.5	3.2
France[2]	15.1	34.6	–	4.9	7	38.4
Korea	11.1	58.5	–	–	11.5	18.9
Greece[2]	–	–	0.5	14.4	23.6	61.5
Hungary	–	22.1	68.5	0.8	6.5	2.2
Ireland[2]	–	100	–	–	–	–
Netherlands[2]	–	66.1	–	1.5	32.2	0.1
New Zealand	–	90.2	–	2.1	7.7	–
United Kingdom[2]	–	97.5	–	–	–	2.5
Federal countries						
Switzerland						
State	76.5	16.3	–	1.2	6.1	–
Local	85.6	14	–	0.3	0.1	–
Germany[2]						
State	51.9	6.1	35.4	1.8	4.7	–
Local	79.6	19.3	–	0.5	0.3	0.3
Belgium						
State						
Local	76.7	–	1.2	–	17.6	4.6
Austria						
State	52	0.8	30.8	6.2	5.1	5.1
Local	53.8	10	18.1	9.4	2	6.8
Canada						
State	52.7	7	21.9	12.8	5.5	–
Local	–	85.3	0.2	0	1.3	13.2
United States						
State	38.7	4.2	33.1	16.3	7.7	–
Local	5.8	73.8	10.6	4.8	5	–
Australia						
State	24.7	27.9	–	17.3	30.1	–
Local	–	99.6	–	–	0.4	–

1. Includes social security contributions attributable to state and local governments (Austria), residual taxes mainly on business (Austria, Canada, Denmark, France, Germany, Greece, Italy, Netherlands, New Zealand, Norway), taxes on net wealth (Norway), and taxes at death (Finland and Portugal).
2. Payments to the European Union are excluded from these comparisons.

Source: OECD (1997b).

Nonetheless, the tax does distribute burdens roughly in line with taxpayers' abilities to pay. In addition, the income tax also satisfies the benefit principle of tax equity to the extent that the revenues are used to provide public services to local residents. The main drawback of the local income tax in the Finnish context is that the combination of national and local income tax rates leads to high marginal tax rates. The top marginal national rate of 38% combined with a typical municipal rate of 17% generates a marginal rate of 55%. The dead weight or efficiency loss associated with these distortions increase exponentially with the tax rate raising concerns over this pyramiding of tax rates. Thus, for example, a doubling of the marginal rate increases the dead weight loss four-fold. Another potential problem is the possibility that the tax may distort a household's decision about where to live. This concern, however, is mitigated to some extent by the fact that housing prices are likely to be higher in the city with the low tax rate, all other factors held constant, and, in the Finnish context, by the fact that local income tax rates do not differ much across municipalities.

The main purported advantages of the property tax are its similarity to a benefit tax, its broad base that includes business as well as residential property, and the fact that the revenues it generates are relatively stable over the economic cycle. A long literature associated with the Tiebout model of local choice in the United States has spelled out the conditions under which use of the property tax would lead to efficient levels of local services, especially in suburban areas where residents have many choices among local communities. The fact that differentials in local fiscal packages are capitalised into local property values plays a prominent role in these models.[7] However, since variations across metropolitan jurisdictions in any local tax will be capitalised into property values, the difference between local property tax and income tax financing may not in fact be very large. Of more importance is the broader base of the property tax due to its inclusion of business as well as residential property. Given that the local public services, including for example, local roads and fire protection, benefit all types of property, the property tax may be more consistent with the benefit principle of tax equity than an income tax on residents alone.

Even more important is the fact that the property tax base tends to be more stable than the income tax base over the economic cycle. Given that local public services must continue to be provided – and perhaps expanded – during economic downturns, the stability of revenues over the cycle matters. The other side of this coin is that during economic downturns individuals will still be required to pay property taxes even though their income – and hence, their ability to pay taxes – may have fallen. Thus, the consideration of stability may argue more for a diversified tax base than for sole reliance on one tax or the other.

Another often-expressed concern about the property tax is its regressivity: that is, the belief that it imposes heavier percentage burdens on households with

low income than on those with higher income. This regressivity is predicated on the assumption that the tax burden in ultimately borne by the users of housing in the form of higher housing prices and by the consumers of business products in the form of higher prices. Because lower-income households spend greater fractions of their income on housing and consumption than do higher-income households, they end up bearing the larger burden. An alternative view of the property tax is that the burden is ultimately borne by the owners of capital and hence the burden may be proportional or even progressive with respect to household income. The validity of this alternative view depends in part on the size of the jurisdiction to which the property tax applies. The larger the jurisdiction, and hence the less opportunity to avoid the tax burden by moving to another nearby jurisdiction, the more valid is the alternative view. Thus the geographic region to which the property tax applies is an important consideration and one that features prominently in the policy recommendations below.

Corporation income taxes

In many ways, the corporate income tax is a poor revenue source for local governments. Its major failing is the volatility of revenues over the economic cycle (Table 4.8). When corporations are doing well and earning profits, local revenues increase. However, when profits fall, so do local government revenues. Moreover, because the revenues accrue to the city where the firms are located (as measured by employees), cities have strong incentives to try to attract such firms which could in some cases lead to wasteful tax competition. Tax competition through strategic setting of tax rates would further increase the potential for wasteful competition. Finland has avoided this later source of competition by setting a single

Table 4.8. **Volatility of tax revenues**

	Tax revenues as a share of GDP (%)					Volatility over the period 1990-2000[1]
	1980	1990	1995	1999	2000	
Personal income tax	14.0	17.2	16.3	14.7	15.1	0.07
Corporate income tax	1.4	2.0	1.8	4.2	5.4	0.60
Social security contributions	7.0	9.7	12.4	11.8	11.1	0.07
Property taxes	0.7	1.1	1.0	1.1	1.1	0.06
Taxes on goods and services	12.9	14.6	13.3	14.3	13.6	0.03
Memorandum items						
Total tax revenues	36.2	44.7	44.9	46.3	46.5	0.02
Municipal personal income tax	7.2	8.8	8.5	7.8	7.3	0.07
Municipal corporate income tax	0.7	0.8	0.8	1.7	2.1	0.56

1. Volatility measured by the coefficient of variation for the tax revenue to GDP ratio.
Source: OECD (2001d).

uniform national tax rate on corporate profits. Nonetheless, the other problems of the corporate income tax as a local revenue source remain.

Evaluation of the intergovernmental aid flows

As described earlier, the intergovernmental flows have two main components. One component is made up of transfers from the state for particular services. The second is the equalisation flows from municipalities with large revenue-raising capacity to those with smaller capacity.

The state transfers for particular services are in effect lump sum grants. Lump sum grants are independent of the level of spending selected by the municipality and generate only income effects on public spending. Added to – or subtracted from – these transfers are the equalisation payments, which are also in lump sum form. Assuming that the net flow is positive, municipalities have more resources and, hence, are likely to spend somewhat more on public services than otherwise would have been the case. Because funds are fungible, however, the additional funds need not be spent on the public services for which they were intended and could potentially be used to reduce local tax rates or to increase other public services. This danger is mitigated in the Finnish case given demanding standards on the quality of the services that are imposed on the municipalities.[8]

In light of the goal of assuring that all municipalities are able to provide the minimum quality of pubic services to all their residents, the two-part system has some very nice features. The adjustment of the transfers for cost differences based on factors outside the immediate control of local officials, for example, is commendable, as is the effort to equalise the revenue-raising capacity of the municipalities. Given the transfer is provided in lump sum form, however, it does not by itself assure that municipalities provide the standard levels of service. In addition, the system may well induce central policy makers to require overly generous levels of public services.

The current system of intergovernmental flows can be criticised for its lack of transparency. One city's director of finance admitted that only about five people in the central government fully understand all the details of how the system works. As he noted, the numbers are all available but the problem is that they are very difficult to understand. A similar theme emerged from other local officials who emphasised that the transfers they received from particular ministries were "statistical subsidies" and were not in effect received because of the offsetting tax equalisation payments. The system is difficult to sort out in that almost none of the available data distinguished between the transfers and the equalisation payments and none of it showed programme transfers as a share of total programme costs. Moreover, the logic of intergovernmental aid flows was further complicated by the government's decision in 2001 to reduce the municipal share

of corporate income tax revenues in "exchange" for a change in the way the government deals with value-added refunds. The combining of those two changes had the political advantage of assuring that most of the country's 448 municipalities would be net gainers, but had the disadvantage of complicating and making less transparent the overall system. Further, it highlighted the vulnerability of cities such as Helsinki – which is a big net loser under the new arrangement – to central government decisions about the corporate income tax.

Municipal relationships in the Greater Helsinki Region

Of central importance to the competitiveness and future of the Helsinki Region is the relationships among the various municipalities within the region. The relevant municipalities can be divided into three groups: the core metropolitan area, which includes the four cities of Helsinki, Espoo, Vantaa, and Kauniainen; the rest of the Helsinki Region which includes eight surrounding municipalities from which many people commute to work in the core area; and the Greater Helsinki Region, which includes an additional 50 municipalities, among which are the cities of Hämeenlinna, Lahti, and Porvoo. Three of the cities within the core metropolitan area are quite large: Vantaa with a population of 179 000, Espoo with 217 000, and Helsinki with 560 000. The fourth city, Kauniainen, with its 8 500 residents is located in the middle of the city of Espoo. The other eight cities in the Helsinki Region are all much smaller. Six of them have populations that range from 32 000 to 42 000, and the other two have populations of 17 000 and 24 000. The outlying cities of Porvoo, Hämeenlinna, and Lahti have populations of 45 000, 46 000, and 98 000 respectively.

One set of issues relates to the variation in spending and taxes across the municipalities. Another relates to variations in the underlying economic and socio-economic factors that affect the fiscal health of each municipality, and the extent to which those factors are changing over time. The final set of issues is the degree of fiscal competition or co-operation among the cities.

Variations in spending and taxes across municipalities

Table 4.9 shows the variation in tax revenue and operating spending for the cities in the core metropolitan area, the other municipalities in the Helsinki Region, and the three major cities in the rest of the Greater Helsinki Region. In interpreting these variations, it is worth bearing in mind the reasons spending and taxes (per resident) may vary across cities. One reason is variation in the capacity of cities to raise revenue. Cities whose residents have low personal income and with few profit-making corporations are able to raise less revenue per resident than those with wealthier residents and more corporations. Although low-wealth cities are empowered to compensate for their small income tax bases by raising

Table 4.9. **Revenue, spending and annual margin, Greater Helsinki Region, 1999**

	Tax revenue	State subsidies	Operating spending									Annual margin	Margin as per cent of depreciation
			Total	Admini-stration	Per cent of total	Social welfare and health	Per cent of total	Education and culture	Per cent of total	Other	Per cent of total		
Helsinki	3 386	97	3 218	195	6.1	2 110	65.6	883	27.4	30	0.9	816	201.5
Espoo	3 127	0	2 825	114	4.0	1 676	59.4	811	28.7	223	7.9	472	196.9
Vantaa	2 749	174	2 771	118	4.2	1 749	63.1	732	26.4	173	6.2	164	84.0
Kauniainen	3 502	158	3 359	128	3.8	1 583	47.1	1 342	39.9	307	9.1	590	190.4
Other Helsinki Region municipalities (8 cities)	2 933	238	2 946	142	4.8	1 830	61.9	836	28.4	139	4.9	511	171.0
Porvoo	2 489	415	2 611	–40	–1.5	1 702	65.2	741	28.4	208	8.0	284	200.8
Hämeenlinna	2 262	684	2 885	98	3.4	1 771	61.4	820	28.4	196	6.8	169	74.4
Lahti	2 178	505	2 573	97	3.8	1 703	66.2	728	28.3	44	1.7	126	98.8
Mainland Finland	2 286	616	2 796	116	4.2	1 702	60.9	814	29.1	164	5.9	245	116.0

Note: All figures are in EUR per inhabitant unless otherwise noted.
Source: Respective Greater Helsinki Region municipalities.

the local tax rate, their effective power to do so is limited both by fiscal competition for residents with other cities and by citizens' concerns about high marginal tax rates. Low capacity to raise revenues from own sources is more effectively offset by the Finnish tax base equalisation programme.

The first column of Table 4.9 shows that local tax revenue per capita varies from a low EUR 2 178 in the outlying city of Lahti to a high of EUR 3 502 in the small city of Kauniainen. All four of the core metropolitan cities are wealthier than the average for the rest of the Helsinki Region and also than the three outlying cities. The second column shows that state transfers (including equalisation payments) are higher in cities with below average tax revenue. Thus, the combination of transfers and equalisation flow offsets some, but not all, of the differences in own source revenues.

On the expenditure side of the budget, the major reason for differing per resident spending levels and patterns is the mix of residents in the city. Cities with large proportions of needy families, for example, will spend more per resident to serve those families than will cities with smaller proportions. Thus, for example, despite their larger revenue raising potential, Espoo and Kauniainen devote smaller shares of their budgets and spend less per resident on social welfare and health services than do any of the other cities. The presence of business activity in a city also boosts spending, especially spending in the administrative and other categories, as the city provides services such as fire protection for those firms. Given that fire protection is included within the administrative category for Helsinki, that consideration helps explain that city's high spending on administration.

Another set of potential explanations for variation in public spending is differences in the per unit costs of providing public services. One such difference can be ruled out in the Finnish context; namely, variation in wages for public employees. That factor is not relevant in Finland because virtually all public wages are centrally negotiated.[9] Nonetheless, costs of providing a given level of services could still vary across cities because of differences in land values – and hence in the costs of public facilities – and also differences in the efficiency with which services are provided. Higher land costs would have their greatest effects in the city of Helsinki which is the most built-up of the cities and where available land is limited. The contribution of these higher land costs in Helsinki is difficult to determine and could well be mitigated by the fact that the municipality owns much of the land.[10] That land still has a high opportunity cost, but it is not clear whether that opportunity cost enters into any of the financial statements. Any differences due to production inefficiencies are extremely hard to measure so their role in explaining the observed differentials in spending within the Helsinki Region is impossible to gauge. As noted earlier, production inefficiencies are likely to be greatest in small cities that are unable to take advantage of economies of scale.

Finally, the observed differences in spending levels could also be attributable to differences in the quality or range of services provided. Such differences undoubtedly exist, but, for reasons discussed earlier, are likely to be smaller than in many other countries. In any case, the spending differences in the table do not by themselves represent differences in service quality.

The final two columns in Table 4.9 report information on the annual margin, which is the operating surplus (or deficit) of each city. It represents the difference between annual revenues and operating costs including interest costs, but excluding depreciation. At a minimum, the margin should be large enough to cover depreciation expenses.[11] Any excess over that amount can then be used to finance capital expenditures or as reserves. By that criterion, three of the four cities in the metropolitan area appear to have had an ample surplus in 1998. The one exception is Vantaa, which along with Hämeenlinna, was experiencing significant fiscal pressure. Among the eight cities in the rest of the Helsinki Region, two had annual margins that fell short of depreciation expenses.

Although many of these surpluses may have been adequate in 1998, the picture has already deteriorated somewhat and could deteriorate further. The surpluses in the Helsinki Region are currently projected to decline significantly with the proposed cut back in the corporate share of taxes. The effects of a stagnant or declining economy, should that materialise, will worsen the situation further as cities strive to maintain services at a time when resident incomes are not growing. In that environment, cities' heavy reliance on local income taxes, which has clearly been helpful to them during the heady days of economic growth in the second half of the 1990s, could present them with serious new fiscal challenges.

Underlying fiscal health of cities in the Greater Helsinki Region

Underlying the actual patterns of taxes and spending across cities are more fundamental factors that affect the ability of cities to meet the service needs of their residents. This section looks at the factors that influence either the revenue-raising capacity or the expenditure needs of each city. In addition, it provides insight into one of the central issues related to local government finance, the extent to which households sort themselves into relatively homogeneous communities that are differentiated from other communities.

To those ends, Table 4.10 reports information on various economic and social characteristics of the major cities in the Greater Helsinki Region. The table reports actual measures for each city and also how the measures for each city compare to those of the city of Helsinki. These comparisons to Helsinki are designed to highlight the differences among the cities. The greater are the differences across communities, the greater is the sorting of households and the greater are the fiscal challenges faced by some communities relative to others.

Table 4.10. **Socio-economic characteristics of the Helsinki Metropolitan Area and selected GHR municipalities**

	Estimated income per capita (EUR)	Income relative to Helsinki	Per cent with upper secondary education	Education relative to Helsinki	Per cent of families receiving social subsidies	Social subsidies relative to Helsinki	Children and adolescents in custody per 1 000 children	Children and adolescents in custody relative to Helsinki	Unemployment rate	Unemployment rate relative to Helsinki	Long-term unemployment as % of jobless	Long-term unemployment relative to Helsinki	Owner-occupancy housing share (%)	Owner-occupancy housing relative to Helsinki	Sales price of flats EUR per m^2
	1999	%	1999	%	1999	%	1999	%	1998	%	1999	%		%	1999
Helsinki	20 219	100	65.20	100	10.4	100	23.39	100	11.93	100	32.82	100	46.1	100	1 896
Espoo	19 319	96	70.00	107	7.9	76	9.95	43	8.13	68	34.65	106	56.1	122	1 611
Vantaa	15 855	78	60.80	93	10.2	98	13.77	59	10.47	88	31.82	97	56.5	123	1 337
Kauniainen			78.60	121	5.1	49	0.94	4	5.66	47	34.01	104			
Other Helsinki Region municipalities (8 cities)			60.1	92	8.0	77	8.15	35			32.94	100			
Lahti	12 534	62	57.60	88	10.9	105	16.24	69	19.95	167	37.00	113	54.6	118	938
Hameenlinna	12 937	64	61.20	94	10.6	102	11.53	49	15.71	132	32.68	100	58.8	128	1 061
Porvoo and Uusimaa Regional Council	13 827	68	56.60	87	9.7	93	10.69	46	11.0	92	29.12	89	57	124	1 132
Finland	13 288	66	58.50	90	9.5	91	10.80	46	15.18	127	28.15	86	60	130	1 175

Note: Income per capita estimated by dividing municipal tax by the municipal tax rate. This method assumes that the municipal taxes are income taxes alone.
Source: City of Helsinki Urban Facts.

The table begins with two measures of the economic and social background of local residents, average estimated income per capita income and the percentage of residents over age 15 who have attained at least an upper secondary education. Within the metropolitan region, the residents of Vantaa have lower average income and lower educational attainment than the other three cities and the residents of Kauniainen are significantly better educated. Across the region, the average socio-economic characteristics of all four of core cities are significantly higher than those of the three outlying cities.

The following two city characteristics contribute directly to spending pressures. They are the per cent of families receiving social subsidies and the number of children and adolescents in the custody of the social welfare authority per 1 000 children aged 0-17. With respect to the families receiving social subsidies, of note are the small ratios for Espoo and Kauniainen and the high ratios for Helsinki, Vantaa, Lahti and Hämeenlinna. With respect to children in custody, the pattern across cities is less clear but does indicate the fact that Helsinki has far greater proportions of such children than any of the other cities. The main point is that families and children in need of services are not evenly distributed among cities in the Helsinki Region.

Other measures in the table include the unemployment rate, the portion of the unemployed who are long-term unemployed, the share of owner-occupied housing and the sales price per m^2 of flats. The last two measures highlight the distinct characteristics of the city of Helsinki. Compared to the other cities in the table, Helsinki has a lower share of owner-occupied housing, much higher housing prices, and more business activity. The greater share of business activity means that Helsinki faces greater expenditure pressures related to business activity than do the other cities. The other side of that coin, however, is that it also reaps greater revenue from its share of the corporate income tax.

Although these differences are quite small compared to those in other countries, particularly the United States with its distressed central cities and affluent suburban areas, they are, nonetheless, noteworthy because of the large responsibilities borne by Finnish local governments for social services. While the current differences appear to be manageable, they could become less manageable if the differences were to increase over time.

Determining whether the cities are diverging in their characteristics over time is not a straightforward task largely because of the deep recession Finland experienced in the early 1990s. Because that recession affected cities differentially and cities recovered at different speeds, it is difficult to know what year to use as the starting point for any analysis of trends. For example, starting in 1994 rather than in 1995 makes a big difference for income growth in Helsinki because of the city's very weak economy in the earlier year. An alternative strategy of using the late 1980s as the starting year might be preferred in terms of providing

Table 4.11. **Changes in income and socio-economic status by municipality, 1995-1999**

	Estimated income relative to Helsinki	Estimated income relative to Helsinki	Change relative to Helsinki	Per cent of families receiving social subsidies relative to Helsinki	Per cent of families receiving social subsidies relative to Helsinki	Change relative to Helsinki
	1995	1999	1995-1999	1995	1999	1995-1999
Helsinki	1.00	1.00	0.00	1.00	1.00	0.00
Espoo	0.93	0.96	0.03	0.85	0.76	–0.09
Vantaa	0.81	0.78	–0.02	0.91	0.98	0.07
Kauniainen				0.55	0.49	–0.06
Helsinki Region (8 cities)				0.94	0.94	0.00
Lahti	0.65	0.62	–0.03	1.00	1.05	0.05
Hameenlinna	0.67	0.64	–0.03	0.96	1.02	0.05
Porvoo	0.72	0.68	–0.04	1.01	0.93	–0.08
Finland	0.67	0.66	–0.01	0.81	0.91	0.10

Source: City of Helsinki Urban Facts.

information on long-term trends but would miss the effects of the recent changes in the international economy on Helsinki's growth. In light of this concern, Table 4.11 reports changes between 1995 and 1999 (the latest year for which data are available).

Included in the table are the two most telling characteristics from the previous table; per capita income and the percentage of families receiving social subsidies. Reported in the table for each of the cities is the specific characteristic expressed as a fraction of the Helsinki value for 1995 and 1999, and also the difference between the two relative measures.

The table shows that Espoo's situation relative to Helsinki is improving in the sense that the income of its city residents is rising faster and the proportion of families on subsidies is growing more slowly. The pattern would undoubtedly be similar for Kauniainen were income estimates available for that city. In contrast, Vantaa's situation is deteriorating in that the income of its residents is growing more slowly and the proportion of families receiving subsidies is growing faster than in Helsinki. Also negative are the relative trends in the two outlying cities of Hämeenlinna and Lahti.

Despite the short period of these trends, they do suggest a widening gap in the underlying fiscal strength of the cities within the metropolitan region and

between the metropolitan region and the outlying cities. If the sorting of households within the metropolitan area continues, it could lead to serious pressures on the ability of the region to meet the demands of Finland's welfare state.

Fiscal competition among the cities

Fiscal competition can be defined as the implementation by local governments of taxing and spending policies with the strategic goal of attracting residents or business firms to or retaining them in the jurisdiction. From some perspectives, fiscal competition among local governments within a metropolitan region is highly desirable and serves as the *raison d'être* for a system of local governments. Competition among governments can, for example, serve as a constraint on monopoly governments who might otherwise not be very responsive to local constituents.[12]

The benefits of fiscal competition have been most fully developed by economists in the context of the Tiebout model mentioned earlier. That model posits competition among cities for local residents as the mechanism that leads to efficient levels of public services – that is, service levels in line with consumer preferences – and least-cost production of those services. In such models, the taxes households pay to the local government are essentially benefit taxes that are similar to prices that consumers pay in the private market for goods and services. Although such models are most appropriate when applied to residential, rather than business, location decisions, they have also been extended to firms (Oates and Schwab, 1991). Within the context of some of those models, competition for firms eliminates the fiscal surplus that communities can extract from firms with the result that firms end up paying only those taxes that reflect the true costs of the public services from which they benefit plus any additional negative externalities their presence imposes on the community.

Competition is less positive, however, when local governments are engaged in the provision of redistributive services as is the case in Finland. In that case, a city wishing to minimise the costs of services on its residents has an incentive to increase the proportion of residents with high income – and hence high ability to pay taxes – and to limit the number of residents who are likely to impose costly service demands on the city. Fiscal competition of that type is undesirable because it can lead to large concentrations of needy residents in some jurisdictions and it permits some taxpayers to avoid their fair share of the burden of providing services for needy households. Similarly, competition for business firms can be undesirable if business firms end up making location decisions in response to monetary rather than true economic differences across jurisdictions. Thus, for example, if a firm could maximise the difference between its sales revenue and its production costs by locating in City X but is induced by financial

incentives to locate instead in City Y, such an outcome would be undesirable and would be detrimental to the overall economic health of the region.

Thus, the question is: what is the nature and extent of fiscal competition in the Helsinki Region, and particularly among the four cities in the core metropolitan region?

The presence of strong central standards for the delivery of social services limits the ability of cities to compete for residents by reducing the quality of service. Indeed, with respect to service delivery, the effects of competition are likely to be positive, as competition and the associated desire to keep tax rates at reasonable levels relative to nearby cities provides appropriate incentives for city governments to provide services efficiently. Less positive are the incentives city governments face with respect to the mix of city residents. Moreover, given the extensive control that city officials have over local land use and housing development, cities have a powerful tool to influence that mix, should they choose to use it. By making land available for expensive housing and by restricting the amount of housing available for families requiring social subsidies, cities can increase the numbers of wealthy households relative to needy households. The socio-economic patterns and trends documented in Table 4.10 and 4.11 above for the Helsinki Region suggest that some of the cities in the region are currently using such powers, either explicitly or implicitly, toward that end.

The cities in the Helsinki Metropolitan Area also have strong incentives to encourage corporations to locate in their cities. Such corporations provide two types of fiscal benefits. One is revenue from the corporation income tax. Because the Finnish government sets a uniform tax rate on corporate profits, cities cannot compete for corporations by reducing the local tax rate. The uniform tax rate makes it possible for Finnish cities as a group to extract some fiscal surplus from corporations which accrues to the budget of the city in which the corporation is located. The magnitude of that surplus depends on the extent to which the central government shares the revenues with the local governments and on the costs to the cities of providing additional services to the firms. The other fiscal benefit to a city is the indirect benefit of a larger income tax base that comes from the jobs and incomes provided by the corporation. Of course, within a metropolitan area, some of the jobs could well go to residents of nearby cities who commute to their city of work.

The main way Finnish cities can compete for corporations is through the expenditure side of the budget. Expenditures on industrial parks and on business incubator programmes are examples of such expenditures. This competition for firms is undesirable to the extent to which cities are wasting resources by competing with each other for corporations. In the extreme case in which resources are used by one city simply to move a firm from another city – so that the competition

has the characteristics of a zero sum game – the resources are wasted from a social perspective. In a less extreme situation, resources may be wasted to the extent that the cities in the metropolitan area are missing opportunities to work together to recruit firms to the area. Given that the Helsinki Region (the four metropolitan cities plus the eight surrounding cities) constitute a single labour market area, the whole area could well be better off if the cities worked in concert to recruit firms and if any direct fiscal benefits from corporate activity were more broadly shared within the region. Any such sharing, however, would have to take into account the additional fiscal costs facing a particular city as a result of the presence of the firms. From the perspective of the regional economy, it is important that individual municipalities continue to receive positive net fiscal benefits from having firms within their city boundaries.

Policy recommendations

Transfer programmes should be modified to make them more transparent and more explicitly oriented toward the goals of the central government. An additional advantage of this redesigned system is that it would reduce the bias of the current system toward excessively generous service standards without interfering with the Finn's basic commitment to the welfare state.

Debate regarding new fiscal instruments to address the unique development problems of rapidly growing metropolitan areas should also be seriously engaged. Although the concern over high tax rates in Finland is well placed, especially given growing concern over the impacts of international tax competition, the debate should extend to issues of tax mix, the special co-ordination problems of metropolitan development, and ensuring that the eventual tax base benefits directly from the new needs of public spending. There are strong fiscal justifications for maintaining the current system of autonomous municipalities within the GHR, but there are a limited number of areas that could benefit from greater region-wide co-ordination.

Redesigning intergovernmental programmes

As noted earlier, the current intergovernmental transfer system is in some ways quite carefully designed and represents a commendable effort to assure that municipalities have the revenue capacity they need to meet the service needs of their residents. Nonetheless, the separation of the sector transfer from the tax base equalisation makes the aid package difficult to understand and weakens the link between intergovernmental transfer and budgetary decisions made by local governments. Second, because the transfers are essentially lump sum grants, the current system does not by itself assure standard levels of public services. Third,

it biases upward the willingness of policy makers at the central level to set high service standards.

To improve the system, one or more foundation programmes of intergovernmental aid should be substituted for the existing combination of sector-specific transfers and tax base equalisation programme.[13] The goal of a foundation programme is to assure that each local government provides the standard or target level of public services and does so at a reasonable tax rate. This foundation aid approach is quite similar in spirit to the current system. In contrast to that system, however, in which sector specific transfers may be offset by equalisation payments, this approach would more clearly link government aid to each municipality's fiscal needs in that policy area relative to its revenue-raising capacity. In addition it would force municipalities to determine what portion of their overall tax rate is needed to finance the particular set of services. The tax rate in all cases would have to be at or above the required minimum rate. With such a system it would be straightforward for municipalities to report to the public the proportions of their local taxes that are devoted to each broad functional area and to report the amount of aid in each area from the central government. As a result, the system would be more transparent both to city officials and to the general public.

Further, this approach is more consistent with Finland's emphasis on assuring a standard of service to all inhabitants. Because the financial incentives under the current approach are limited to what economists refer to as "income effects" the central government is currently forced to rely on the willingness of municipalities to treat the "recommended" service levels as if they were law. In contrast, this alternative approach provides strong financial incentives for local governments to spend at least enough to provide the standard level of public services.[14] If they fail to impose a tax rate sufficient to do so they do not receive the aid.

Third, foundation programmes put more explicit pressure on the members of Parliament to take account of the costs of any decisions they make with respect to the range and quality of public services. Any expansion of social services, for example, would require that they specify the required minimum local tax rate and that they appropriate enough transfer funds for all municipalities to provide the standard level at the specified tax rate. By making the costs of their decisions more transparent, the foundation aid approach makes it more difficult for them to ignore such costs as they are making decisions about the rights of citizens to particular services.

A related benefit would arise during an economic downturn. Instead of simply being able to shift budgetary pressures from the state to the municipalities by cutting state transfers to local governments as they did during the recession of the early 1990s, state policy makers would be forced to grapple more explicitly with the various tradeoffs. If they chose to maintain service levels, for example, they

would be forced to decide whether to raise the central government transfers to offset the lower tax bases at the local level or to raise the required minimum tax rates included in the foundation formula, or to do some combination of both. Alternatively, however, they could choose to cut the standards for one or more public services.

To be sure, the foundation system "distorts" local decisions in that it essentially forces them to spend at least enough to reach the standard service level, but this effect is desirable to the extent that it reflects the value the country places on assuring high-quality services to all residents. Once municipalities reach that level of spending, they face no disincentive to spend more provided their local citizens value such spending enough to pay for it out of local taxes.

Of course a number of details would have to be worked out to implement this system, including, for example, the setting of the minimum tax rates. One possibility is to set the minimum tax rate so that the city with the strongest fiscal health (that is, largest tax base relative to its cost index) would receive no aid, given the specified standard service level. In that scenario, all other municipalities would receive state assistance as determined by the formula. An alternative is to set it in such a way that one or more municipalities would receive negative aid according to the formula. For both political and transparency reasons, the simplest thing to do in that case would be to move such cities outside the formula and give them no state assistance. Thus, the setting of the minimum tax rate can be viewed in part as a way of establishing which cities will receive no aid.

Finally, it is worth pointing out that in this system of foundation aid (provided it is designed with no negative aid), there would be no flows of revenue from one municipality to another as is essentially the case in the current system. Instead, all transfers would come from the central government and would be financed out of national taxes, with the primary source being the progressive income tax. Thus taxpayers throughout the country would be asked to pay their fair share of the costs of the transfers based not on the revenue-raising capacity of a jurisdiction in which they happened to live but rather based on their own ability to pay taxes. Relative to the current system, this would be a fairer way to finance the Finnish welfare state.

Matching limited taxing and spending powers to the scale of metropolitan problems

To address the spillover of fiscal and social benefits and costs throughout the region, some bold and creative action is required at the regional level. The two primary goals of such action should be 1) to assure that social housing is distributed in a fair and efficient way initially throughout the Helsinki region, and over time throughout the Greater Helsinki Region; and 2) to develop and implement a regional strategy for the coherent and balanced economic development of the region, with attention to the quality of the environment as well as to the economy.

One option would be to initiate some form of regional sharing of the local revenue from the corporation income tax. Doing so would provide a financial incentive for the municipalities within the region to work together in the recruitment of firms and would lead to some sharing of the wealth among the municipalities. Under such a scheme, some portion of the local government share of the tax revenue from corporations in the Helsinki region would be put into a regional pot to be distributed back to all the municipalities in the region using a formula designed to be equalising. It would be important not to put the whole local share into the pool since municipalities need some compensation for the extra service demands associated with the presence of corporations within their boundaries. While that strategy has some appeal, the volatility of the tax revenue from that source plus the fact that the central government seems to be intent on reducing the local share, reduces its attractiveness as a long run strategy for the Helsinki region.[15]

Given the central goal of assuring the fair distribution of social housing throughout the region, any regional authority must have power to negotiate deals with municipalities that will be in the interests of the region as a whole. This is essential for assuring that the Helsinki region does not follow the lead of so many urban areas, especially those in the north eastern and central parts of the United States where sections of the urban area, typically the inner cities but increasingly some of the older inner suburbs as well, become the repository for the disadvantaged and the disenfranchised as the rest of the urban area becomes increasingly wealthy. Maintaining a relatively even distribution of poor households throughout the Helsinki region is important, it should be noted, even if social services are fairly financed along the lines discussed above. However desirable fair financing of social services may be, it does not eliminate all the negative externalities associated with concentrations of low income or immigrant households. From the competitiveness perspective, greater co-ordination of the Helsinki region is required to compete successfully with its larger European counterparts in the international market place. While some differentiation of the municipalities within the Helsinki region is desirable for the reasons given earlier, the region will also need to function for some purposes as a coherent whole.

To achieve these goals, the new regional authority will need significant powers and its own tax revenue. Those powers would need to be worked out but might include the authority to buy land from the municipalities or private owners to use for social housing, to compel the individual municipalities to comply with the overall goals of the regional land use plan, and to be at the table in negotiations with firms that were being recruited to the area. It might also include the power to work with the government and existing universities in the region to develop additional university programmes of particular importance to the economic development of the region. Importantly, the authority would need to be structured to reflect

the interests of the whole region, and not simply the interests of the individual municipalities. Indeed, the main purpose of the new authority would be to permit the region to rise above the competition between municipalities.

The preferred tax base for this new regional authority is a regional real estate tax. A regional tax implies that a uniform rate (or set of rates if the property is distinguished by type) would apply to all taxable real estate throughout the region and that revenue would accrue directly to the regional authority. Property is the preferred base for this tax for several reasons. First, as was noted earlier, the property tax base is relatively stable over the economic cycle and hence would generate relatively stable revenues over the cycle at the same time that revenues would grow with the long-term growth of the economy. Second, the property tax can be justified in terms of the benefit principle. Given that the main function of the new regional authority is to promote the growth of the local economy in a fair and efficient manner, the beneficiaries of its actions will be in part the owners of property in the region. Third, it would provide some needed balance to the overall tax structure of the region, and might permit some reduction in municipal income tax rates, either in absolute terms or relative to what they would be in the absence of this new regional authority.

While some people might object to the property tax on the grounds of its regressivity, that objection is far less valid, and possibly incorrect, for a region-wide tax than it would be for a local property tax whose rates varied across municipalities. As was noted earlier, there has been a lively debate among economists about whether to view the property tax as a tax on the users of capital (such as renters and consumers) or as one on the owners of capital. In fact, both views have some validity and which one is more relevant depends on the context. In general, the larger is the geographic area to which the property tax applies, the more appropriate it is to view the tax as a tax on capital and hence as not regressive. The intuition is that the larger is the area, the less elastic will be the supply of investment to the taxable region and hence the greater will be the share of the burden borne by the owners of capital since they cannot easily avoid the burden by investing elsewhere. In contrast, when real estate taxes are used by municipalities, a rise in the tax rate of any one jurisdiction is likely to induce firms to disinvest in that jurisdiction with the result being higher housing prices in that municipality and, hence, a higher burden on low-income households who spend large proportions of their income on housing.

Notes

1. Urban municipalities are those in which at least 90% of the population lives in urban settlements, or in which the population of the largest urban settlement is at least 15 000. This definition means that the category includes many small towns as well as the big cities in Helsinki and other regions.
2. In addition, a small discretionary pot of funds is available to help municipalities that face shocks to their finances, caused, for example, by the closing down of a factory. In 2001, more than 300 municipalities requested such assistance, most of whom will not get any. Although most of the needy municipalities are very small, a few larger cities, including the city of Lahti within the Helsinki region, are included within the supplicants.
3. Recent *"cuts in statutory rates amounted to* 2% *between* 1997 *and* 2001. *Most other initiatives have been targeted to low-paid workers to increase work incentives. The lowest tax bracket was abolished in* 2001, *effectively raising the threshold below which labour income is not taxable. As a result, over* 42% *of income earners will likely be exempted from state income taxes in* 2001, *up from* 35% *in* 1999. *The successive increases in the coverage and generosity of the earned income tax allowance* (EITA) *have, however, been the most significant move. To improve work incentives for the low-paid further, the* EITA *no longer applies to unemployment benefits since* 1997, *thus contributing to lower the reservation wage for the unemployed. These measures, combined with a strong economy, have lifted the participation rate. It has not yet climbed back to its pre-recession level of the early* 1990s, *but is high by international comparison."* (OECD, 2002*c*, p. 83).
4. A strict budget-balance rule for local governments does not apply in every country. For instance, in Norway, local governments have two years to restore a balanced budget.
5. Early US research suggests that the minimum costs for many services including education and fire protection require a population of at least 20 000 (Bish and Warren, 1972). Without further research for the range of services provided by a Finnish municipality, it is hard to be precise about the cost-minimising population in the Finnish context. Nonetheless, from the perspective of costs, it appears quite clear there are currently far too many Finnish municipalities and perhaps twice as many as would be desirable. One representative of the Ministry of the Interior indicated that the appropriate minimum size for a municipality, with the exception of those in the sparsely populated northern part of the country, would be 10 000 residents. A city official in the Helsinki region indicated that the appropriate number of municipalities would be about 200.
6. This may reflect more about the equality of inputs than about the equality of public service outputs.
7. These and related issues are thoroughly discussed in Oates (2001) and in Ladd (1998).
8. *"Until recently, annual negotiations between the state and the municipalities have been practically the only instrument to ensure that municipalities' tax and spending decisions do not contradict the central government's fiscal programme. In addition, a law requiring municipalities to balance their budget over a*

three-year period has been introduced in 2001. H*owever, the volatility of municipalities' tax revenues, combined with the two-year delay in redistributing these revenues across municipalities may make this rule difficult to implement. Furthermore, the law does not include sanctions in case of deviations from the rule*." (OECD 2002c, p. 110).

9. The Trade Union for the Municipal Sector (KTV) has proposed a wage supplement for the Helsinki Metropolitan Region to compensate for higher living costs relative to the rest of the country. See *www.helsinki-hs.net/news.asp?id*=20020513IE6.
10. Finnish municipalities typically own relatively large amounts of the land and local housing stock.
11. Budgeting by municipalities is similar to that used in the private sector. Hence, like private sector firms, Finnish cities are required to account for depreciation of public facilities.
12. For the pros and cons of competition, see Kenyon and Kincaid (1991).
13. See Ladd and Yinger (1994) for a more complete discussion of the link between programme goals and the form of the aid.
14. In the context of the economist's standard model for predicting the effects of a subsidy programme on local spending, the foundation programme introduces a kink in the local budget constraint at the standard level of public services. As a result, local jurisdictions face a strong incentive to move to that kink, or possibly beyond it.
15. A detailed description of a revenue-sharing plan in the Minneapolis-Saint Paul metropolitan area is provided in Luce (1998).

Chapter 5

Guaranteeing Social Inclusion

As a result of a deep-rooted tradition of social equity and integration, the Finnish welfare state has limited social inequalities within the Helsinki Metropolitan Area in contrast with other European or American cities marked by a clear spatial concentration of poverty and exclusion in deprived neighbourhoods. The substantial increase in long-term unemployment induced by the recession in the early 1990s has begun to challenge this model of social integration. Despite the high degree of homogeneity that prevailed in the Helsinki region, some disparities seem increasingly salient and reflect the possible emergence of a multidimensional segregation process within the area. Even though spatial polarisation has remained comparatively moderate in Helsinki, persistent unemployment among the low-educated population and growing income disparities are calling for the restructuring of past policies that were too focused on physical improvement and the elaboration of a preventive community-based strategy of action. In order to curb unemployment, which constitutes a black spot in the region, labour market policy could be significantly rationalised through well-designed mechanisms of regionalisation and co-operation in order to target the most relevant categories of the population and foster a dynamic process of economic and social integration. Along with the arrival of a new population of immigrants, the Helsinki region needs to find ways to embrace multiculturalism and promote new opportunities of social cohesion while preserving the richness of social diversity.

Spatial polarisation

In contrast to many metropolitan areas in other OECD countries, Helsinki has been able to prevent the emergence of significantly deprived neighbourhoods. Spatial differentiation is better described by varying degrees of attractiveness. Most of the less attractive neighbourhoods are found on the outskirts of larger municipalities. Built in the period after 1960, they mainly consist of high-rise flats built of concrete or prefabricated materials, usually financed through government loans. Overall, social polarisation between the municipalities of the region or different areas has remained moderate. There are no slums, *i.e.*, areas of cramped

and low-quality housing with poor hygiene and sanitation, nor urban distressed areas as one can find in many European or American cities. Underlying this balanced spatial structure are the comprehensive Finnish welfare state that dampens socio-economic differences, an ethnically homogenous society and integrative housing policy discussed in Chapter 3.

The policies directed to social integration worked remarkably well up to 1990 at which time the city of Helsinki had achieved its most balanced socio-economic structure in recorded history. The trend reversed in the 1990s with some spatial differences becoming more salient. Recent studies suggest that socio-economic differences between housing areas have been slowly increasing (Vaattovaara, 1998, Kortteinen and Vaattovaara, 1999). In the early 1990s, residential areas, principally in the eastern and north eastern parts of the region where the population was older and less educated, *i.e.*, persons with primarily working class backgrounds, were hit the hardest and most immediately by unemployment. Not only did unemployment grow faster and stronger in these areas; the economic recovery of these areas started a few years later than elsewhere, and it has remained sluggish. Thus, spatial differentiation appears to be reinforced even after the upturn of the late 1990s. Although the problems of these areas are generally limited in extent and intensity, the persistence of high rates of long-term unemployment and less developed service infrastructures could produce greater incidence of stigmatisation and neighbourhood polarisation in the future. Even if the structure of urban poverty remains dispersed, there is a need to take preventive measures in order to stop a possible circle of decline in these areas.

In 1995, a national project for 49 housing areas was launched with the aim to improve the shape of ageing buildings and the attraction of these areas. The Helsinki Neighbourhood Project included four eastern and north eastern suburbs: Kontula, Myllypuro, Pihlajisto and Vuosaari; all these areas were built during the 1960s and 1970s. For each neighbourhood, the city drew up development plans in co-operation with local actors. Funding for these projects was made through an agreement between the city of Helsinki and the Government Housing Fund. Total annual amount started with EUR 50 456 in 1996 and reached EUR 336 376 in 1999.[1] Despite successful achievements of the Suburban Project, important social differences remain in these areas: the income level of the population remains below the general level of the city, the proportion of inhabitants with only minimum education is growing and unemployment remains high.[2] In this context, a new phase of the project was launched in January 2000 and will last until December 2003. This second phase is run by the Ministry of Environment and involves various ministries, the Government Housing Fund and the municipalities. Vuosaari is no longer included in the project while Pihlajisto has been extended to Pihlajamäki. In addition, the second Helsinki Neighbourhood Project includes Kivikko, a neighbourhood that has been selected by the EU URBAN programme.

In fact, an EU URBAN programme has been operating alongside the neighbourhood project in Helsinki. Two out of the four neighbourhoods selected in the first Helsinki Neighbourhood Project – Kontula and Myllypuro – were also part of the EU's URBAN programme 1994-1999. The EU URBAN I programme also concerned another neighbourhood in Helsinki (Kivikko) and four neighbourhoods in Vantaa (Koivukylä, Havukoski, Rekola and Askola). Total funding for the EU URBAN I programme in Helsinki and Vantaa amounted to EUR 4.0 million and the government support was about EUR 1.9 million.

Helsinki-Vantaa has again been selected for the URBAN II Community Initiative Programme (2000-2006) with a total EU funding of EUR 5.3 million. Government funding amounts to EUR 6.7 million and comes from different ministries. The programme again relates to the eastern part of the Helsinki Metropolitan Area. Key initiatives aim to 1) improve the level of services and diversity of the area, safeguarding existing jobs and creating new ones; and 2) promote community participation and capacity building that includes support for families in difficulty, for the long-term unemployed, for immigrants with health problems and for drug users. Government funding is split into five different administrative bodies. Thus, there is a need to have one single co-ordinated body that will manage the fund.

So far, most public initiatives to limit the deterioration of suburban neighbourhoods in Helsinki have focused principally on physical improvements. Even if direct targeting of housing programmes such as the national Building Renovation Programme (1992-1996) aimed at suburban areas had clear social objectives, the approach has remained too sectoral. This orientation, which focused mainly on localised problems relating to specific housing developments, was sound as long as less attractive neighbourhoods were linked with undesirable architectural style and urban form. But the increasing concentration of low-income earners and unemployment in some neighbourhoods call for a more global, multisectoral approach. An OECD study on urban distressed areas recommends that such strategy should target the residents of deprived neighbourhoods, in order to facilitate their social and economic integration (OECD, 1998). This could be achieved through various initiatives, including training and job-seeking programmes. The fact that URBAN II includes actions aimed at developing enterprise activity and employment and supporting inhabitants' initiatives to improve their living environment and to develop the Information Society is a good step in this direction. Meanwhile, it would be important to increase the desirability of the eastern parts of Helsinki. Actually this kind of policy is already in action under the programme of the Eastern Helsinki Development Project. This includes various actions, including attracting educational facilities such as universities or developing cultural amenities. The observation that Helsinki is relatively deficient in its endowment or production of "positive marginalisation" relative to other European cities has provoked thinking on how to remedy this situation. Initiatives focused on

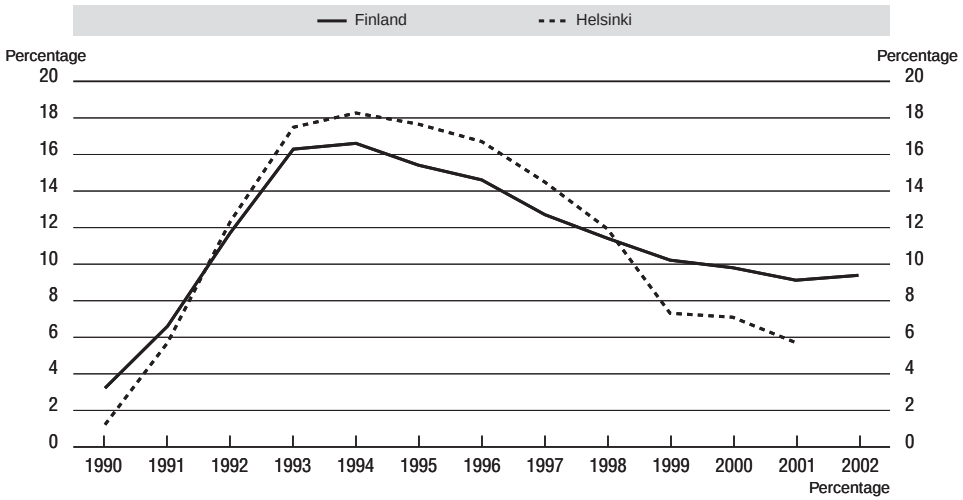
more disadvantaged neighbourhoods may be an effective way to reduce this deficiency while also increasing the attractiveness of these neighbourhoods. During the second half of the 1990s, the municipality of Zurich transformed some distressed neighbourhoods into mixed-service business-cultural-residential zones. Some of them have become cultural hot spots, surrounded by new residential areas, and a major attraction also for non-resident and foreign visitors (OECD, 2002*b*).

Analysis of the nature of the new spatial polarisation strongly suggest that it is linked not only with the severity of the recession of the early 1990s but especially with the new nature of economic growth which is mainly based on ICT technologies (Kortteinen and Vaattovaara, 2001). Most firms of the new information sector have been located in the centre of the city or in its western parts, surrounding the Helsinki University of Technology. Practically all firms responsible for the new growth of the region are situated around the bay of Ruohalahti, *i.e.*, the western part of Greater Helsinki. Biotechnology is an emerging growth industry that has demonstrated even stronger localisation tendencies around research institutions and hospitals (Sommers and Carlson, 2000). Diluting potential localisation benefits by attempting to redirect knowledge-intensive business location to less advantageous neighbourhoods does not appear as an appropriate solution.[3] Rather than focusing on the location of firms, efforts should be made to enhance skills and educational level of the residents in the less advantageous neighbourhoods, and improving the attractiveness of these neighbourhoods to current and prospective residents, drawn to areas with greater diversity.[4] These objectives are met by the city of Helsinki by allocating some EUR 30 million per year in the activities mentioned here.

Dealing with unemployment

Unemployment stands out as a decisive factor inducing social exclusion within the Greater Helsinki Region. Along with the economic recession of the early 1990s, demand for labour declined sharply in Finland and there followed a dramatic increase in the unemployment rate, which rose to a peak of 16.6% by 1994. Long-term unemployment[5] – which was practically non-existent in Finland at the beginning of the 1990s – increased rapidly during the downturn and accounted for about 30% of all unemployed people by the mid-1990s. Many traditional industries that had supported the prosperity of the southern urban areas such as the region of Helsinki were hit hard. However, economic recovery had a positive impact on employment, particularly in the capital area, *i.e.*, in Helsinki and its surroundings. The Helsinki Metropolitan Area undeniably enjoys notable development prospects and is driving the country's economic growth in leading fields of activity such as information technology industries, which accounted for more than a third of the total job growth in Helsinki over the period 1994-1999. Unemployment rates in Helsinki are now under the national average (Figure 5.1). Moreover, disparities in unemployment rates have appeared within the Helsinki region: in 2000, the

Figure 5.1. **Unemployment rates in Helsinki and Finland, 1990-2002**



Note: 2002 rate recorded in February 2002. Data not available for Helsinki in 2002.
Source: Statistics Finland.

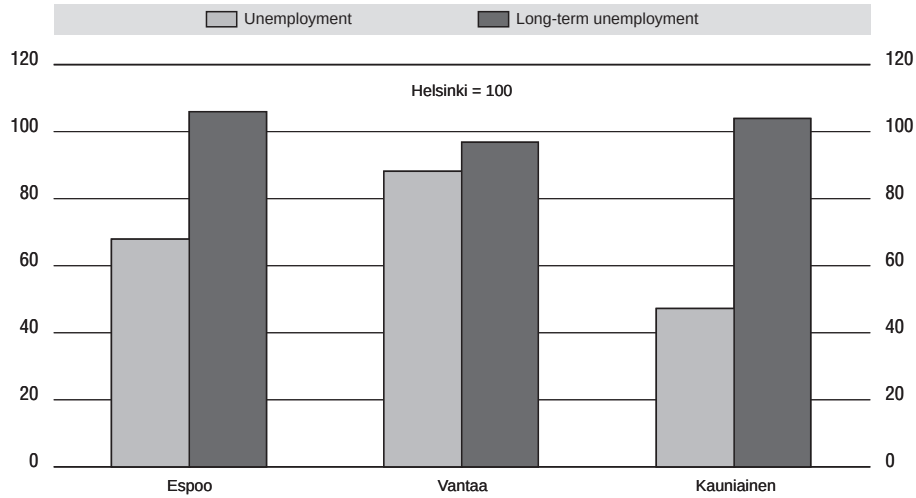
city of Helsinki was the most affected (8.2%), followed by Vantaa (7.2%), Espoo (5.9%) and Kauniainen (4.1%), but the share of long-term unemployment is higher in Espoo and Kauniainen (Figure 5.2). The persistence of unemployment black spots within the region now poses new policy challenges.

The problem of unemployment has long been addressed through passive labour market policies based on common social welfare. Considering that Finland is endowed with a Nordic model of social security providing a comprehensive package of unemployment benefits, labour market policy has largely functioned as a welfare support system that secures a basic livelihood income to the unemployed. Incentives for the unemployed to seek a job have remained weak, insofar as the replacement rate[6] in the initial period of unemployment (taking into account housing and other allowances) for a couple with two children for example stands at 84%, which ranks among the highest in OECD member countries. Focus has thus been progressively shifted from passive labour market measures to active labour market programmes (ALMPs), mainly consisting in labour market training and subsidised employment (Box 5.1).

Since April 2000, the city of Helsinki is carrying out Employing Helsinki, which is a group of eight employment projects[7] under the European Social Fund (ESF)

Figure 5.2. **Unemployment and long-term unemployment in the Helsinki Metropolitan Area, 1999**

Index Helsinki = 100



Source: Ministry of Labour, Finland.

Objective 3 programme and co-funded by the city of Helsinki, the ESF and the Uusimaa Employment and Economic Development Centre. Its priorities are the promotion of equal opportunities, the improvement of the position of immigrants and the development of prerequisites for learning. However, the centralisation of employment policy across the whole country is a primary concern in considering further reform measures as each municipality uses the same tools despite significant differences across local labour markets.

A regionally diversified employment policy would contribute to helping Helsinki and other municipalities apply locally adapted measures to their local priorities and integrate different policy instruments into a more place-based employment and development strategy, as has been done in other OECD member countries (OECD, 2001b). The experience of Ireland demonstrates the efficacy of local partnerships in employment creation. The partnerships were implemented throughout the 1990s on the basis of the National Programme for Economic and Social Progress (1990-1993), the Programme for Competitiveness and Work (1994-1996) and the EU-funded Community Support Framework that developed a programme called Local Urban and Rural Development. This led to the creation of 38 local partnership companies, whose services include local employment services (LES) offering intensive

Box 5.1. **Labour market policies in Finland**

On the one hand, labour market training is focused on enhancing the employability of people by maintaining and improving their skills. Job seekers attend training courses delivered by local employment offices[1] and get a training allowance similar to unemployment benefits. On the other hand, subsidised employment consists of direct job creations and employment subsidies. The most radical application of this policy was the Employment Act of 1988, which obliged central and local governments to hire long-term and young unemployed people in a six-month temporary job with a substantial subsidy from labour market policy funds. Many evaluations indicate that labour market training does have a positive and significant impact on employment, whereas the results of subsidised employment were more mixed. Increasing awareness of the need for a coherent and comprehensive policy where both passive and active measures could be used to revitalise the labour market and enhance employment led the government to launch a comprehensive National Action Plan for Employment in 1998 which focused on enhancing the functioning of the labour market and preventing exclusion from it.

However, the still high unemployment rate reflects the limited scale of labour market reforms and some acquiescence by policy makers notwithstanding the challenges posed by the extreme depth of the recession in the early 1990s, a relatively late start with labour market reforms and the time lag for labour market reforms to raise performance (OECD, 2002a). The measures taken in 1997, which made requalifying for unemployment benefits somewhat more difficult and less attractive, have not broken the vicious circle of long unemployment spells, ALMP interludes and short periods of employment. In order to strengthen the effectiveness of the labour market policy, the government has proposed further reforms of the public employment service to be implemented in 2002. For example, it was suggested to lengthen the period of the "combined subsidy" programme, so that the employer who hires a long-term unemployed person will receive the person's labour market support and an additional employment subsidy for two years instead of one from 2002 onwards.

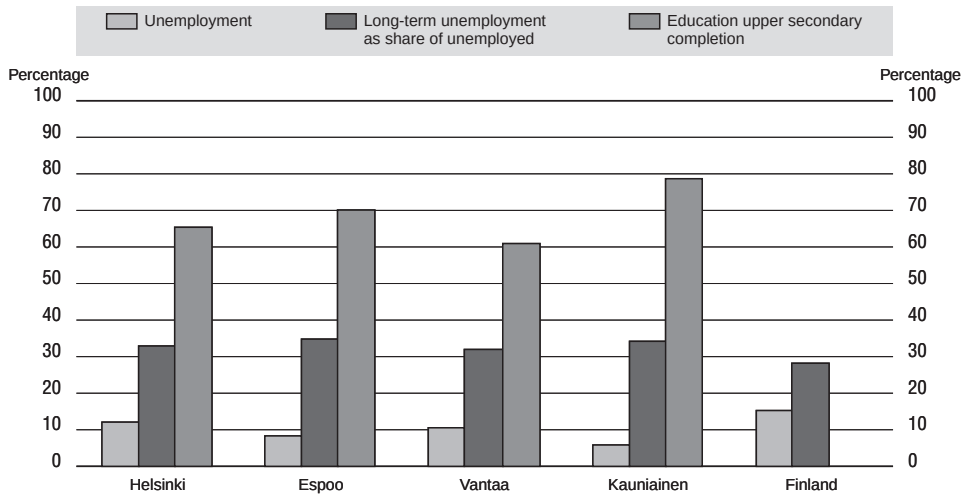
1. There are 186 employment offices in Finland, a little less than half the number of all municipalities. They constitute units of state administration at the local level and are in charge of unemployment registration, offer labour market training courses and provide information on study opportunities, salaries, job profiles, etc.

personal guidance, counselling and employer-liaison services. Local management of the LES in the Finglas/Cabra partnership area, for example, has given it scope to develop a large range of complementary services, such as customised training courses for lone parents and ex-offenders. Another example of local employment policy is the territorial employment pacts (TEPs) in Austria, which were initially orchestrated by the EU and are now seen as a key policy tool to effectively link

national employment policy and local action. Even though employment remains a federal responsibility in Austria, the public employment service (A*rbeitsmarktservice*, AMS) has adopted a decentralised structure with significant autonomy in policy design at the regional level (*land*) and sub-regional level (district and groups of districts). Such examples could inspire new initiatives in Finland focused on a better distribution of responsibilities and resources in the field of labour market policy. It is paradoxical indeed to observe that Finland has a well-established tradition of consensual policy making at national level, but that the concept of partnership at the local level is of very recent origin. The city of Helsinki is co-financing with the Ministry of Labour a set of new joint service centres for unemployed people in suburban neighbourhoods (four in Helsinki). Their objective is to offer both state employment services and the city's social subsidy services in the same place. This valuable initiative is scheduled to be maintained until the end of 2003. In order to realise its full potential, decentralisation of labour market policies through effective local partnerships should be backed up by solid co-ordination between all the actors involved, an adequate provision of resources and scope and an effective mechanism of monitoring and evaluation.

Analysis of spatial disparities within the Helsinki Metropolitan Area shows that unemployment is strongly associated with the level of education (Figure 5.3). In order to anticipate the type and volume vocational training needed in the region, a regional forecasting model was created in spring 2000. On this basis, the Intellectual Capital Online project – co-funded by the ESF, the Ministry of Education and the city of Helsinki – is now developing an interactive forecasting forum for the region on the Internet. In the perspective of enhancing educational opportunities for the unemployed, a valuable option besides formal education and training could be to promote entrepreneurship and self-employment among the job seekers. In Helsinki, about 25% of the new arrivals to the entrepreneurship advice service are unemployed, and out of those, about 30% end up setting up a new business. The city of Helsinki is already co-financing several business incubation centres that are specialised in a particular business sector, such as Arabianranta Business Incubation Centre (media, design and culture), Helsinki Science Park Ltd. (bio-sciences), Travel Park (travel and tourism) and Twin Technology Business and Innovation Centre Twinbic Oy (technology). Many OECD member countries have developed support programmes so as to reduce joblessness in deprived local communities, sometimes instituting specific schemes to assist target groups (OECD, forthcoming). In Japan, for example, as concern was growing about joblessness among persons in their early 60s, the Ministry of Labour has proposed in 2000 to provide significant subsidies for the start-up of businesses established by three or more people over the age of sixty (up to JPY 5 million covering two-thirds of start-up costs). A public initiative in Ireland has also sought to encourage expatriate employees to return to set up firms. At the local level, policy

Figure 5.3. **Unemployment and education in the Helsinki Metropolitan Area and Finland, 1999**



Note: Unemployment, 1998 figures; Long-term unemployment, 1999 figures; Education, no date.
Source: Territorial Review of Helsinki: working paper.

options such as investment in pre-start advisory services and promoting co-operation agreements with local banks and other financial intermediaries to facilitate access to finance for entrepreneurs could contribute to generating a new impulse to local initiatives and countering welfare dependency. It should be kept in mind that pro-entrepreneurship policies are unlikely to yield major employment effects in the short-run, notably because the enterprise survival and growth rates remain low and self-employment support programmes do not have a large multiplier effect (since the self-employed do not tend to hire large numbers of additional workers). However, enterprise creation is part of a broader process of local economic development and it provides a cost-effective alternative to paying unemployment insurance. Its benefits seem to be more visible when support programmes target specific categories of the jobless population, such as youth, women and ethnic minorities, which is particularly noteworthy in the case of Helsinki with regard to its new challenge of multiculturalism and social diversity.

Immigration issue and multiculturalism

The foreign population in Helsinki is small relative to many other OECD metropolitan areas. It represents only 4.7% of the population of the municipality. There

are about 28 000 non-nationals in the metropolitan area, a fifth of which are political refugees (39 500 citizens with a foreign background and 33 400 people that speak another language than Finnish as their mother tongue). Most immigrants come from Russia and former Soviet Union states, Estonia, Somalia, Kosovo and Iraq. Generally immigrants, especially the new groups that are arriving in Finland, have a low level of education. Unemployment is also high among the foreign population: in 1998, it stood at 33.7% for non-nationals. The unemployment rate among native speakers of Russian was between 50 and 60% and 35% for Estonians.[8]

The relative absence of deprived neighbourhoods in Helsinki can be partly explained by a voluntary policy to disperse spatially ethnic minorities within the city. Moreover, as in the whole country, measures have been implemented for the integration of immigrants within the society. The integration programme consists of an individual plan for integration for each immigrant. The means of integration are 1) learning Finnish or Swedish; 2) getting to know the country of residence and its customs; 3) obtaining employment; 4) preserving one's own language and culture. According to the law, the municipality compiles an integration programme that includes aims, procedures and resources for integrating the immigrants into the municipality in question. For this purpose, the municipality works closely with employment offices. Projects are funded by the city and the Ministry of Labour through the European Social Fund. Projects to improve the employability of immigrants include the Immigrants' Employment and Family Support Projects, an Open Learning Centre and a Youth Activity Centre. The Finnish citizenship law also facilitates the integration of immigrants: children born in Finland become automatically Finnish citizens; and it takes five years of residency to claim Finnish citizenship. Moreover, there are some well-organised community organisations of immigrants which receive public support, including from the EU-sponsored URBAN II programme which helps immigrants within poor neighbourhoods on the east side of Helsinki and in Vantaa. Examples include the Somalian association in Vantaa and a network of orthodox churches that support Russians all over the areas. Some immigrants are also represented in administrative functions like in Espoo and Vantaa where there are councillors from Somalia and Bangladesh.

Despite the relative success of immigrant integration, persisting unemployment in the region has given birth to some racist struggles. Finnish society always represented itself as remarkably homogeneous – despite the Laps and the Swedish minority – and immigration comes as a shock for some part of the population. Classic issues of long-term unemployment, benefit claims for families, law and order are now raised in relation with the immigrants. This issue is gaining salience on the political agenda. The Finnish government has drafted a plan of action to fight racism and urged the municipalities to give support to organisations that promote multiculturalism as well as groups formed by immigrants and other minorities themselves.[9] The Helsinki municipality promotes social integration of immigrants in a number of

Box 5.2. **The International Cultural Centre Caisa**

The International Cultural Centre Caisa has been functioning in the centre of Helsinki since 1995 and its activities include cultural evenings that are open to the public, discussion forums, art exhibitions and concerts. The centre offers the possibility of studying languages as well as ethnic dance and other forms of culture. Immigrant and multicultural organisations hold meetings and different national festivities on Caisa's premises. The premises include a café and a newspaper reading room that also grants the possibility of using the Internet.

Advisory services for immigrants are an important aspect of Caisa's activities. New models for the education and on-the-job training of immigrants are developed with the help of the Open Learning Centre project. Persons with an immigrant background are trained to guide the centre's users to use the expertise and services provided by different city departments. Unemployed immigrants receive counselling with regard to further education and are assisted in finding apprenticeships or jobs. The aim of personal counselling is to find a sustainable employability path for the client which makes use of the person's previous training and experience.

The services of the Open Learning Centre are an integral part of Caisa's overall activities. Users of Caisa's advisory and educational services can also partake in the range of cultural events offered by the centre. These events can serve as a source of up-to-date information in addition to facilitating social networking. The overall objective of the International Cultural Centre Caisa's Open Learning Centre is to build training and employability paths in order to further the active integration of immigrants. The project, which runs until the end of the year 2003, is planned and implemented in co-operation with other administrations, the Employment Office, NGOs and businesses. The project is financed by the city of Helsinki, the European Social Fund and the Uusimaa Employment and Economic Development Centre. The target groups are immigrants who are either unemployed or under threat of becoming unemployed. Special emphasis is put on facilitating the employment of educated immigrants. The Open Learning Centre provides the possibility to engage in self-directed learning and fact-finding.

ways from housing to training and culture. It has also created a centre for multiculturalism (CAISA centre) which organises cultural activities and provides services for immigrants from all parts of the world (Box 5.2). Espoo is more cautious in welcoming immigrants. Services provided to these groups are more limited though Espoo also has a municipal integration programme, an advisory board for multicultural affairs (including six out of 22 members from minorities) aiming at promoting ethnic relations, multiculturalism and integration and a guidance centre network.

Finland is entering this new era of globalisation as a largely homogeneous country that must find ways to embrace multiculturalism. Finland has remained

very homogeneous as a population and also quite isolated for a long period. Meanwhile, the remaining strong egalitarian model of the Finnish society has also largely prevented any massive differentiation in terms of spatial segregation. However, the Finnish society is changing and there is a fear of social changes brought forward by European integration processes and the arrival of immigrants. Some parts of the population, especially middle-class families, may become more eager to protect themselves from what they see as the threats of a multicultural city. On the other hand, multiculturalism can be a major element of dynamism of contemporary cities. Not only the integration of immigrants becomes crucial, but also the attraction of educated middle classes likely to contribute actively to the development of local firms. The project to create an international university (beyond the eight existing universities) is an example of this strategy as it intends to attract good students from all around the world who may not come spontaneously to Helsinki.

Foreign entrepreneurs bring new initiatives to the business environment and immigrants will be increasingly needed to compensate for the declining domestic labour share in an ageing society. The current worker-pensioner ratio in Finland is 4.5 to 1, which suggests that up to 2.1 million foreign workers will be needed by the year 2020.[10] In this respect, upgrading the skills of immigrants is essential as well as attracting new skilled foreigners. Social diversity is a crucial component to attract and retain enterprises, especially high-tech industries. To attract foreign highly skilled workers, Finland has recently lowered the tax burden on "*foreign key persons*". However, the increasing mobility of highly qualified persons, motivated by both monetary and non-monetary incentives, makes quality of life and regional attractiveness a top priority for promoting the development of knowledge-intensive industries. This can only be achieved through a global and comprehensive urban strategy.

Notes

1. The irrevocable EUR/FIM conversion rate is applied to data relating to years prior to the year of Euro Zone accession (1999). This method facilitates comparisons within one country over time but these data cannot be applied to cross-country comparisons.
2. See *www.hel.fi/tietokeskus/en/tutkimuksia/korhonen00.html*.
3. The experiences of enterprises zones in United States or the free zones in France (*Zones Franches Urbaines*) provide examples of public policies providing incentives for business location in more disadvantaged areas. However, they do not appear applicable to the Helsinki case. They essentially provide locational incentives for firms using mostly low-skilled labour to locate in distressed areas that have lost significant employment in recent years. While the policy has arguably been appropriate in areas that already suffer from severe spatial polarisation, polarisation remains limited in Helsinki both in terms of size and intensity. Adopting such policies in a region like Helsinki could reinforce rather than lessen incipient spatial processes.
4. See Florida and Gates (2001) for a study examining the strong association between the level of ethnic diversity, bohemian lifestyle choices and social tolerance with the success of knowledge-intensive industry in the 50 largest metropolitan areas of the United States.
5. Defined as unemployment lasting for a period in excess of one year.
6. The replacement rate is the ratio of out-of-work and in-work income.
7. For example, the Electronic Appliance Recycling Project, the Eastern Helsinki Employment Model 2000-2003 and the Open Learning Centre.
8. See *www.helsinki-hs.net/news.asp?id*=20010320IE3&*pvm*=20010320.
9. At national level, the programme calls for the establishment of a post of a special ombudsman to deal with complaints of discrimination.
10. See *www.helsinki-hs.net/news.asp?id*=20001003IE9&*pvm*=20001003.

Chapter 6

Regional Competitiveness with a Special Focus on the ICT Sector

Introduction

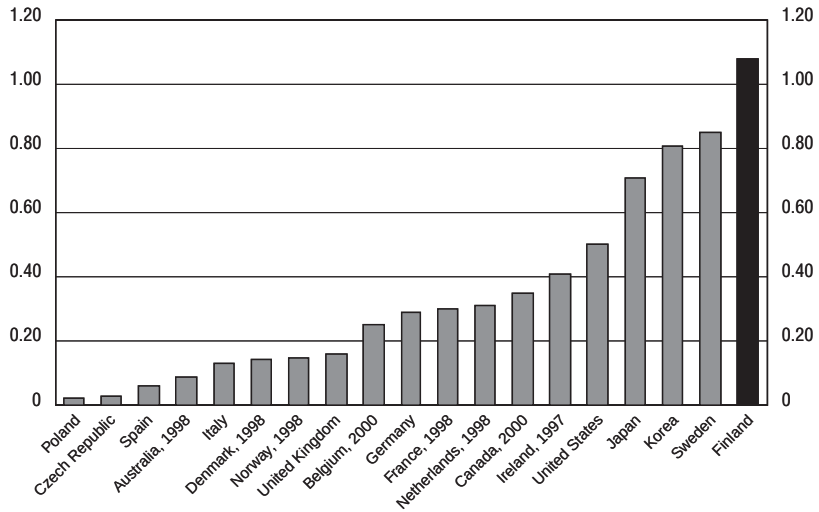
The case of the Greater Helsinki Region (GHR) exemplifies the complexity of the events and interactions that cross economic, social and political spheres and lead to the emergence and sustainability of an ICT cluster. This cluster is both the result and major driver of the internationally known Finnish Information Society (Box 6.1). Its very nature and the challenges it faces can be better appreciated from a comparative perspective. Thus, the focus of this chapter is neither on the Finnish ICT cluster nor the GHR ICT cluster *per se*. Rather, the emphasis is on assessing the relevance of development of selected ICT centres (Portland, Oregon; Dublin, Ireland; and Tel Aviv, Israel) *for* the GHR ICT cluster (see Annex 1). Despite the unique formation and evolution of each of these cases, the comparison provides further insight to the peculiar environment and drivers found in high-tech clusters. Likewise, this analysis highlights both challenges and threats faced by ICT-intensive areas providing lessons from which the Finnish ICT cluster could benefit (see Annex 1). Three principal aspects will be addressed in this chapter. The first part is **contextual and historical**. It sets a framework for the analysis of the factors related to the emergence of ICT clusters and compares the different development paths found in Portland, Dublin and Tel Aviv with the experience in Helsinki. The second part is **strategic**. It identifies **current challenges and threats** faced by the Helsinki ICT cluster *vis-à-vis* the experiences of the comparison regions. In the final part, **policy recommendations** will be proposed to ensure the competitiveness of the Helsinki ICT cluster in light of the three comparison regions' experiences, as well as international developments in the ICT clusters more generally.

The experience of the GHR cluster shows how individuals and particular circumstances are important in initiating events. However, in order to reinforce these positive perturbations, national policies that create the necessary preconditions for the emergence of an ICT cluster and in coping with the growth and demands once it is launched must be in place. In fact, a number of chance events and circumstances

Box 6.1. **Finnish Information Society in comparison to other OECD member countries**

Figure 6.1. **Business R&D expenditure in selected ICT manufacturing industries, 1999**

ICT in percentage of GDP

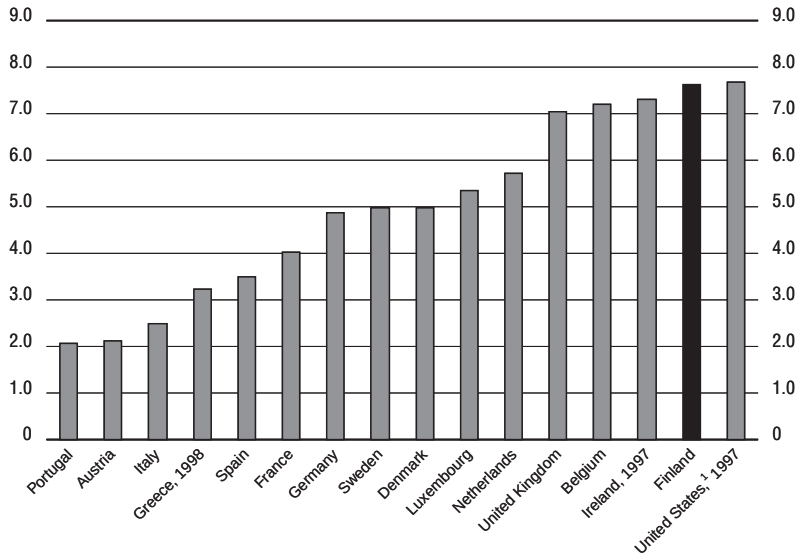


Note: 1999 or latest available year.
Source: OECD, ANBERD database, May 2001.

played an important role in making the Finnish ICT cluster happen. The previous history of the telecom sector in Finland, strong research expenditure, the "stress" of the recession of the early 1990s, and public policies able to set up the right framework conditions, are among the factors that allowed GHR and Finland to become a point of reference for the ICT world market. The experience was exceptional in the successful implementation of a high-risk/high-return strategy. The high returns owe to the ability to exploit opportunities throughout the value chain from R&D to production and services. The high risk owes to the concentration of these activities in a single industry within the ICT sector. The strategic challenge for the Finnish ICT cluster that should be reinforced by all levels of government, therefore, is to evolve a lower-risk/high-return strategy by developing ICT activities

Box 6.1. **Finnish Information Society in comparison to other OECD member countries** (*cont.*)

Figure 6.2. **Scientists and engineers as a share of the labour force, 1999**



1. The definition of scientists and engineers is somewhat broader than that of other countries.
Source: OECD (2001e), based on data from the Eurostat Labour Force Survey, the US Current Population Survey and STAN database.

beyond the current cluster scope. Policies to help realise this objective are illuminated by the analysis of how the comparative ICT regions have developed and are coping with the evolving pressures of this dynamic sector.

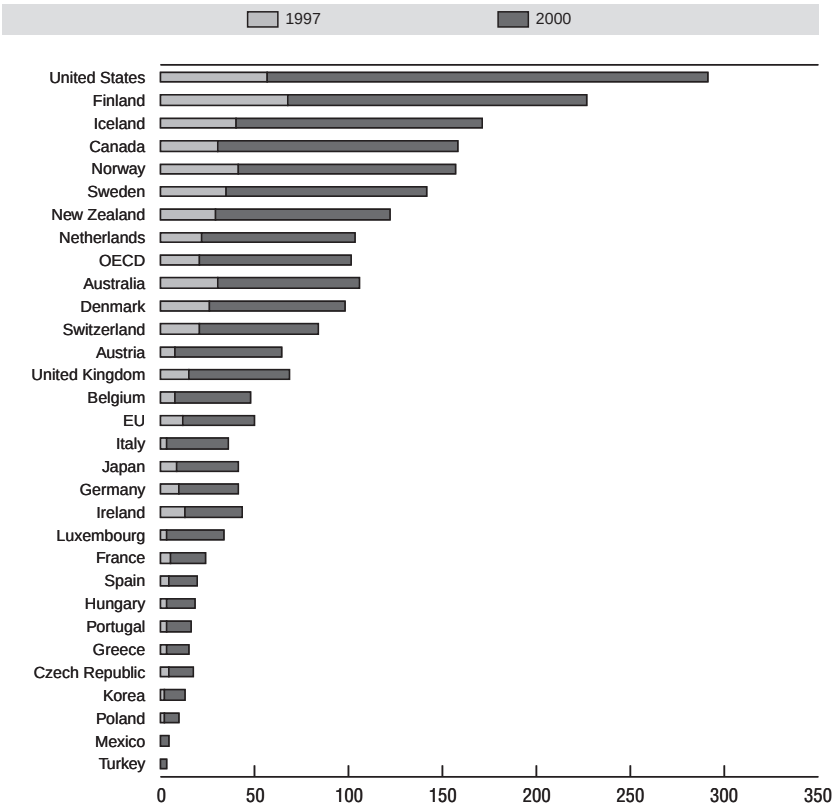
The emergence of ICT clusters

Genesis and evolution of the Finnish ICT cluster

Although from the late 1800s to the late 1900s, the two major clusters of forestry and engineering dominated Finnish industry, by the mid-1990s, the mobile segment was the fastest growing sub-cluster in Finland.

Box 6.1. **Finnish Information Society in comparison to other OECD member countries** (*cont.*)

Figure 6.3. **Number of Internet hosts per 1 000 inhabitants, gTLDs adjusted,[1] July 1997-October 2000**



1. Global top-level domains (gTLDs) are distributed to country of location.
Source: OECD (2001e), OECD calculations based on Netsizer (*www.netsizer.com)*, May 2001.

Historically, Helsinki has been the site of developed communication systems due to its considerable importance in terms of defence and security arising from its key geographical location as a coastal city. Under the Russian authorities in the

late 19th century, the Finns seized the political opportunities offered by decentralised telephone communications and pushed the control of telecommunications from St. Petersburg to Helsinki. The ensuing combination of Helsinki's location and communication efforts provided the initial conditions for the eventual emergence of Finland's ICT cluster and establishment of GHR as its hard core.

Since the early 1990s, Nokia, the leading global mobile vendor, has shaped Finland's ICT cluster[1] and economic growth. In effect, its Finnish locations are identical with the country's ICT clusters, leading to broader implications for GHR. Certainly, Finland's remarkable turnaround over the past decade demonstrates the impact of strong political institutions, macroeconomic management and focus on technology. This turnaround is reflected in recent competitiveness reports that rank Finland as one of the most highly competitive countries (World Economic Forum, 2001). However, many studies have downplayed the role of microeconomic factors as the key driver of this growth. In contrast, the present review has explicated the opportunities and threats inherent in hypergrowth driven by single-firm dependency, which take into account ICT activities that may be highly localised and generate quite varied development paths in different regional economies *within* a given national economy (Saxenian, 1994, pp. 2-4).

N*ordic* S*tandard and* GSM

In contrast to most other European countries, the Nordic topography favoured the use of mobiles due to the dispersed population in remote places. Additionally, the historical Finnish competition in local telecom services and pro-technology approach to mobile communications also contributed to the rise of the cellular business, and were significant factors in the evolution from pre-cellular to the 2G[2] era.

In November 1968, the PTT authorised construction of a national mobile network, and in June 1969, the Nordic Mobile Telephone Group (N*ordiska* M*obil* T*elefongruppen*, NMT) was established, whose task was to develop a new mobile telephone system. It began by outlining system requirements based more on market needs than technical parameters. The strategy for the introduction of mobile services was *not* geared toward profitability, but by the public-sector service values of the Nordic PTTs, which integrated mobile operations with the rest of their activities. Since the price for fixed subscriptions became low and posed a barrier to potential users, revenues would be highly dependent on adequate traffic levels and cost-leadership strategies. As mobile phone equipment became lighter and less expensive, market forecasts indicated rapid adoption rates. NMT was the world's first multinational cellular network and was successfully introduced in several European and non-European countries (Steinbock, 2001b).

With the gradual unification of the European markets at the end of the 1980s, the European Conference of Postal and Telecommunications Administrations (CEPT) decided to develop a common standard for digital mobile telephony, *i.e.*, Global System for Mobile Communications (GSM). The early initiatives by the European Commission stimulated the introduction of the GSM standard. In the late 1980s, the concept of GSM matched the EC's objective of providing comprehensive pan-European services and standards, as well as its willingness to transform European telecommunications from domestic monopolies into a fully competitive environment (Steinbock , 2001a). Concurrently, Finland entered the era of deregulation in telecommunications. Radiolinja was a mobile communications provider founded in 1988 by the Finnet Group as a speculative venture that sought a license to operate a second GSM network. Typically, both networks were headquartered in GHR. In 1990, the provision of mobile communications services was opened to competition; PT and Radiolinja received digital GSM licenses. In the spring of 1992, Finnish mobile communications operators became the first in the world to offer commercial GSM service. It was the GSM that provided the foundation for the growth of the Finnish telecom/mobile cluster and Nokia's cellular success from around 1993 to 1997.

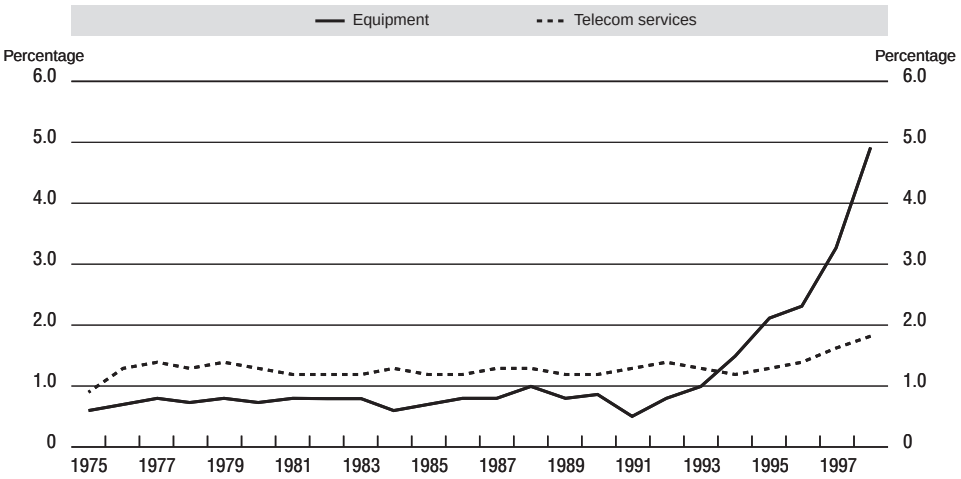
D*omestic* ICT[3]

In 1999, the gross value of cluster production amounted to an estimated EUR 21.4 billion. The ICT cluster was dominated by equipment manufacturing and electronic components, which represented in excess of 70% of the value. The value added generated in the cluster represented 40% of the gross value of production. In 1992, the cluster reached a turning point in its trend rate of growth and grew at an average annual rate of 20% (manufacturing 32%, services 12%) until the end of the decade. By 1999, the cluster's share of GDP was 6.9%. Concurrently, the composition of ICT value added in GDP had shifted. In the early 1980s, ICT services comprised more than 1.5% in GDP and increased to over 3% by the end of the decade. The expansion of ICT manufacturing, however, has been even more impressive. In the early 1990s, after steady growth, it declined to less than 0.5% of ICT value added in GDP. However, it soared to close to 4% by the end of the decade. In 1999, the ICT cluster accounted for 3.6% of total employment. Despite the relative significance of the ICT cluster in the Finnish economy, the share of ICT firms is only 1.4% of the total (Figure 6.4).

I*nternational* ICT

Among the OECD countries, Finland is behind several IT-oriented countries in total ICT exports. However, the high share of many low-cost countries stems from the exports of foreign firms. In telecom exports, Finland has become the most specialised country during the 1990s. In absolute terms, Finland accounted

Figure 6.4. **Share of ICT value added on GDP**



Source: Statistics Finland.

for 5.4% of total OECD telecom equipment exports, holding the seventh position in a 1998 cross-country comparison.

Greater Helsinki ICT

Through the 1990s, ICT growth in Finland's key cities exacerbated existing regional disparities. About half of the nation's wealth is concentrated in the south's five main urban areas and the figure rose by nearly 2 percentage points from 1995 to 1997. At the same time, demographic concentration rose by only 0.4 percentage points. Between 1990 and 1998, the smallest relative decreases in employment – below the national average – were in the three main urban sub-regions: Helsinki (in the Uusimaa region), Turku (in the Varsinais-Suomi region) and Oulu (in the Pohjois-Pohjanmaa region).[4]

In the short term, the Greater Helsinki Region's economy is highly dependent on Finland's entire national economy, which, due to its small size and heavy reliance on exports, is fairly sensitive to economic fluctuations. In the long term, GHR should accelerate the cultivation of other solid world-class clusters, in addition to the ICT cluster, in order to diversify its base of competitiveness.

There are some current indicators for competitiveness and efficiency in GHR. According to the results of recent studies, Helsinki ranked among Europe's top five business cities. Helsinki's strengths stemmed from the adoption of new tech-

nologies, quality of life, safety, and education. The relatively high unemployment rate, however, scored low points (Murphy, 2000). In efficiency studies, the business sector in GHR has been estimated to produce almost 50% more output than the weakest area, given the same resource input (Susiluoto-Loikkanen, 2000). Typical explanations for the GHR efficiencies involve scale economies and high-quality production structure. However, while the Helsinki region received the highest scores in human capital, concentration, and accessibility in a recent study of Finland's more than 80 NUTS 4 regions, it ranked only fifth in the innovation index (Huovari, Kangasharju and Alanen, 2001). The results appear to reflect strategic weaknesses in translating ideas and technologies into viable commercial products and services.

- GHR production structure

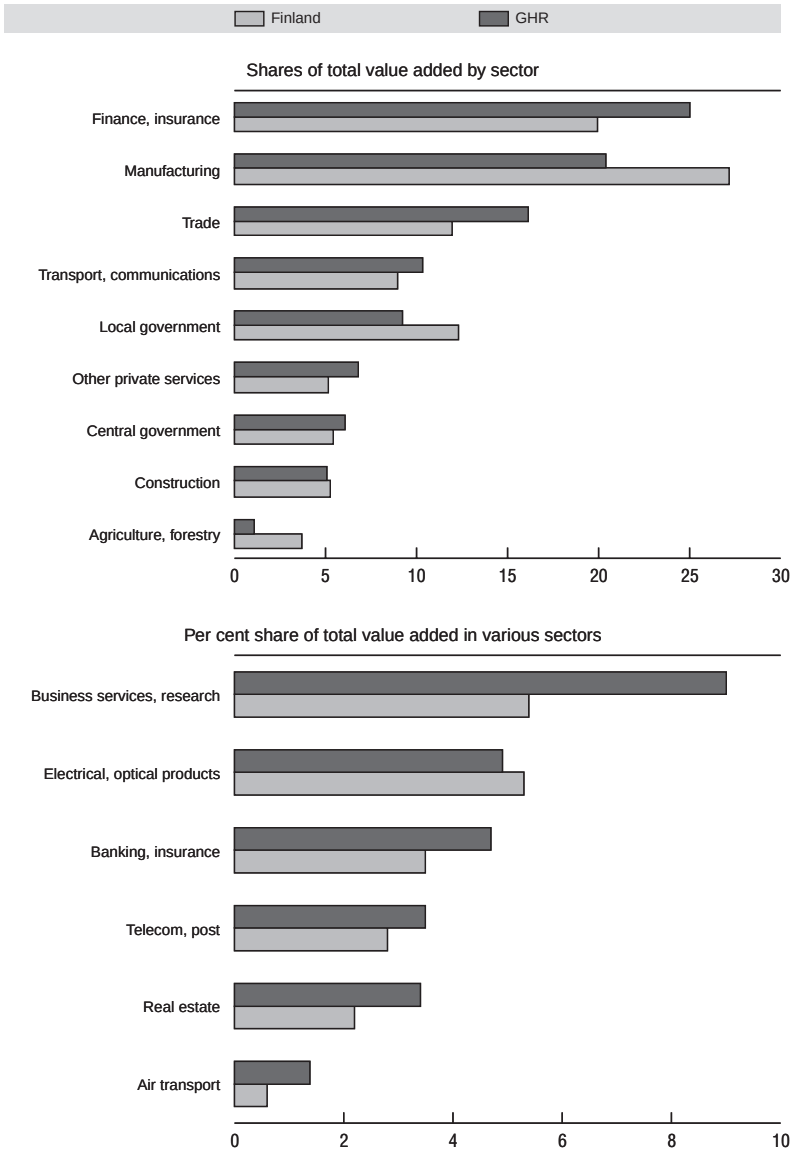
The production structure of the area differs from that found in the rest of the country in a way that is typical of metropolitan areas. Service industries are more prevalent than in the country as a whole (Figure 6.5). Structural differences between the metropolitan region and the country as a whole are most clearly apparent in trade and finance. The concentration of state functions in the metropolitan region results from a centralised state administration. Manufacturing occupies a less significant position in the GHR than in the country as a whole, even though almost one-third of the country's manufacturing takes place within the GHR (Figure 6.6). Whereas ICT segments, particularly business services and research, have 5.4% of value added in Finland, they represent 9.0% in GHR.

Among all jobs in Finland in 1998, 37% were found in the Greater Helsinki Region with 48% of ICT jobs located in Greater Helsinki. After economic recession had bottomed out in 1993 and employment began to grow in GHR, the ICT cluster boosted these developments (Figure 6.7). In 2000, in Helsinki alone, the ICT sector employed an estimated 59 000. With 24 000 information sector jobs, Espoo comes second after Helsinki and is followed by Oulu (10 500) and Tampere (13 500).[5] Along with Salo, Helsinki, Espoo, Tampere, and Oulu house Nokia's central operations. In addition, from 1996 to 2000, jobs in the Helsinki Region increased by 44% in education, 40% in business services, 24% in the telecom sector and 20% in electronics manufacturing. The varied structure of business enterprises in the GHR implies a strong interdependence between various production sectors (Susiluoto, 1997).

- GHR exports

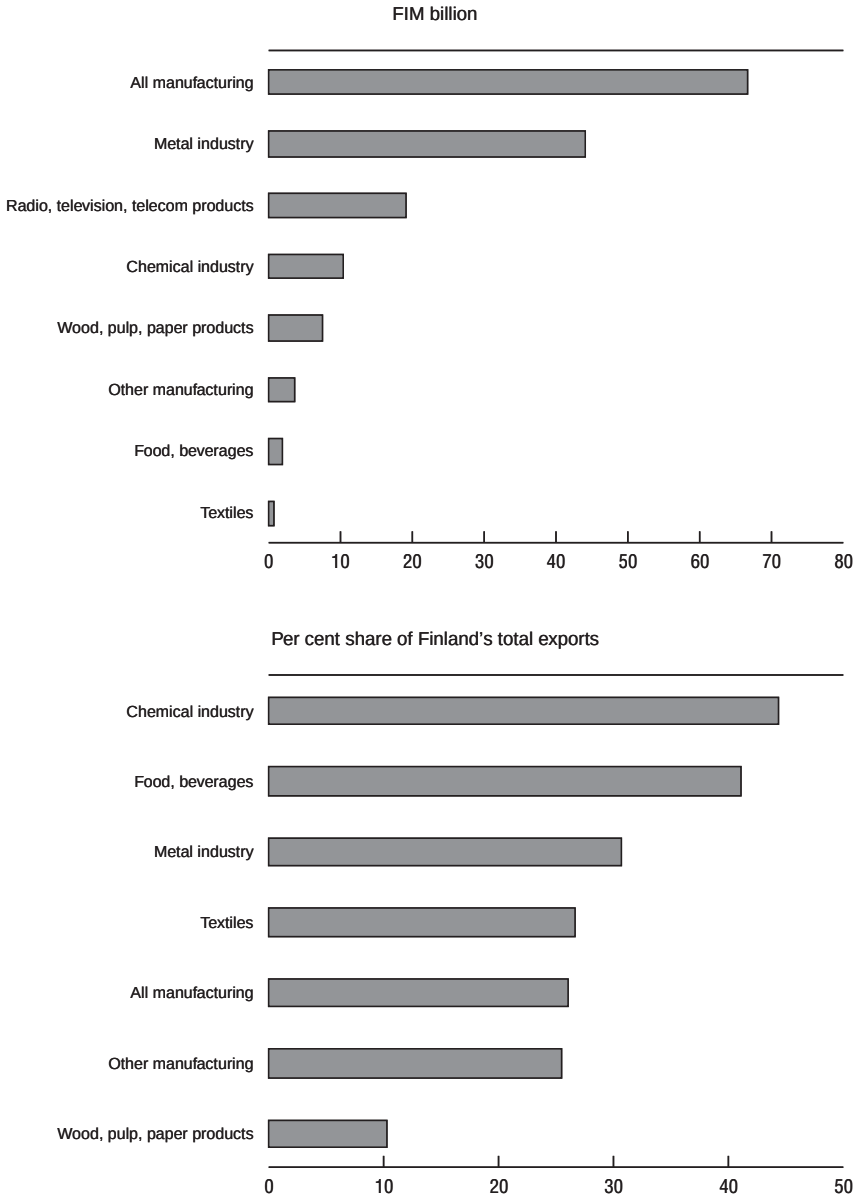
GHR is very open in terms of trade relations with the rest of the national economy, which is demonstrated by a regional input-output analysis (Statistics Finland, 2000, p. 19). In 1999, GHR's exports to foreign countries were EUR 11 billion. Yet, manufacturing in GHR is not export-driven. In 1999, GHR's

Figure 6.5. **Structure of production in Greater Helsinki Region and Finland, 1998-1999**



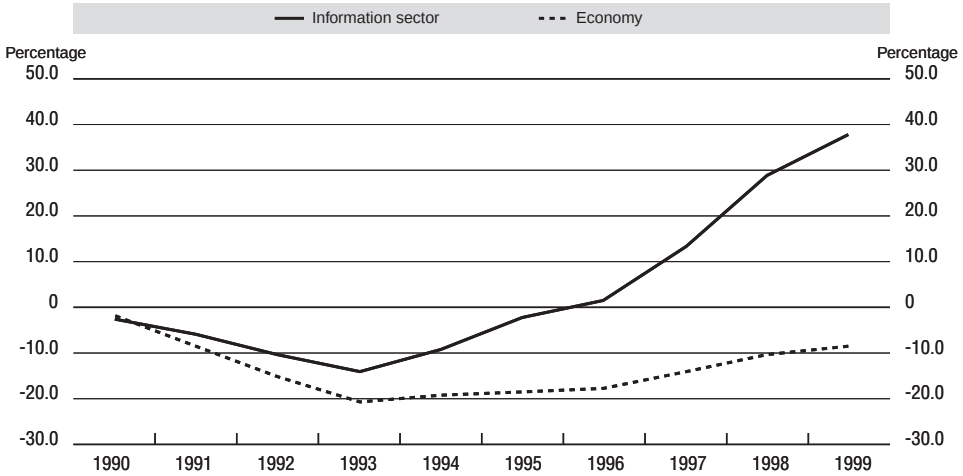
Source: City of Helsinki Urban Facts and Statistics Finland.

Figure 6.6. **Greater Helsinki manufacturing exports, 1999**



Source: City of Helsinki Urban Facts and Statistics Finland.

Figure 6.7. **Annual employment growth in the information sector and in the economy as a whole**



Source: Statistics Finland.

exports of manufactured products accounted for 26% of the corresponding Finnish total, 30% of the country's total industrial value added and 42% of total Finnish GNP. The export of products manufactured in GHR grew rapidly after the recession at approximately the same rate as total Finnish exports or the pace of Nokia's hypergrowth. The trade balances with the rest of Finland and with aggregate foreign countries were positive, and domestic trade flows were larger than foreign ones. Of the area's industrial production, only 26% remained in the province itself in 1995, and more sales were registered abroad than domestically.

- Toward a learning city

More recently, GHR, particularly Helsinki, has witnessed a number of efforts to turn the metropolitan region into a "learning city". At the *national* level, there has been a substantial policy consensus to develop Finland into an Information Society through the cultivation of the ICT cluster, as well as investments in education, research, and product development.[6] At the *local* level, such objectives translate more easily to friction, despite broad national consensus. In 1999, approximately one-fifth of the entire country's households had a home computer, while the metropolitan area's share had already approached half of all households (44%). In households with three or more persons, the situation was different; approximately three out of every five households had a computer at home and in the Helsinki Metropolitan Area, families' share is

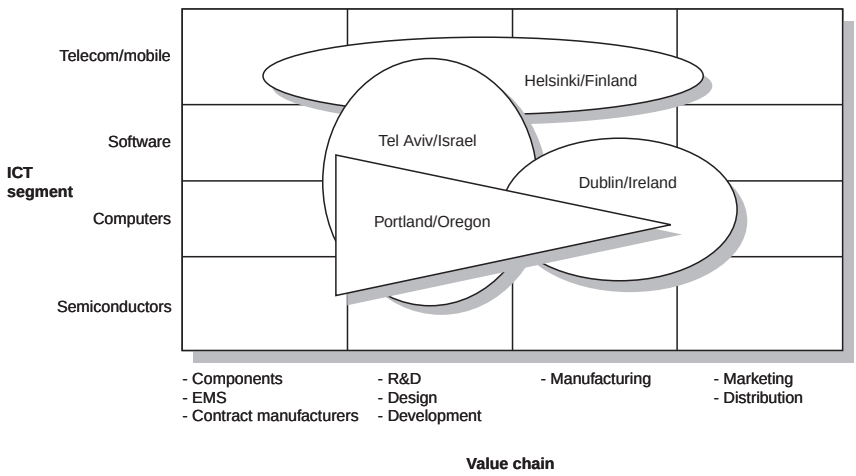
already approaching the 80% limit. Furthermore, the major urban concentrations in Finland have developed their own IT strategies. These *local* initiatives focus on educational level, IT skills, promotion of competitiveness, improving entrepreneurship, and opportunities for interaction and co-operation.

The reality of GHR may not entirely match the new rhetoric. Even if all the major cities in GHR develop action plans for building a local Information Society, studies have found a weak "organising capacity" of GHR in reinforcing the local ICT cluster. In telecom and new media policies, there has been little integral vision and strategy, which may hamper the dynamics of the region (van den Berg *et al.*, 1999). While the municipal actors like to compare Helsinki to Seattle or Berlin, GHR, like Finland as a whole, has a highly homogeneous population base (ethnicity, language, religion, culture) and an exceptionally low degree of immigration in international comparison; therefore, it is characterised by equally undeveloped multiculturalism.

Comparison regions: alternative ICT *paths*

In terms of strategic positioning, there are significant differences between the Helsinki, Dublin, Tel Aviv and Oregon metropolitan regions. At the broadest level, these dissimilarities can be depicted with a matrix of the global value chain and the ICT segment (Figure 6.8). The Finnish ICT firms inhabit the telecom/mobile segments, from suppliers to marketing, though dominating R&D and manufacturing

Figure 6.8. **Positioning: ICT clusters in Helsinki/Finland, Tel Aviv/Israel, Dublin/Ireland, and Portland/Oregon**



Source: OECD/TDS/TRG.

areas. By the end of the 1990s, however, all have sought to move to the downstream side of the value chain (software), due to the commodification of the handsets and increasing price erosion on the upstream end. As the growth core of the Finnish ICT, GHR reflects similar characteristics, although the emphasis is more on support and headquarters functions a well as R&D.

In contrast to the highly focused Finnish firms, the Israeli firms are more concentrated on the R&D stage of the global electronics value chain (*i.e.*, niche segments where the base of competition is more about knowledge than low-cost strategies or high production volumes). The Irish ICT sector is focused much more strongly on computers, computer components and software production and development, with the externally owned element of the sector concentrated most strongly in ICT manufacturing and software reproduction, localisation and distribution. Finally, the ICT segment of metropolitan Portland is reminiscent of the Finnish ICT segment in that it is concentrated on an extensive industry and reflects high differentiation. However, it inhabits the semiconductor segment (Box 6.2).

The Israeli ICT concentration is perhaps the most interesting for a small country like Finland and a small metropolitan region like GHR. Due to the diversity of markets served by the Israeli ICT firms, the sector may be more robust in the face of deteriorating market conditions and less vulnerable to cyclical variations. This is a highly tempting prospect to the Finnish ICT firms, whose dependence and focus on telecom/mobile implies significant strategic inflexibilities and increasing vulnerabilities.

In Ireland, large-scale FDI in high-tech manufacturing and the software sector has fundamentally changed and internationalised the economy, although there are increasing risks implicit in this development strategy. In particular, much inward investment to Ireland has been production-oriented with relatively low levels of R&D investment and employment and is concentrated in computer and components manufacture and software development.[7] Undoubtedly, the key factor shaping the position of Ireland in global high-tech markets has been the massive flow of inward investment from the United States, which gives Ireland a significant role in global software markets.[8] Yet, prior to the mid-1980s, this was largely concentrated in computer and computer components. As a result, electronics exports from Ireland are dominated by computers and computer components, which together accounted for 63.5% of all electronics exports. Activity in this sector in Ireland is also strongly concentrated in the production and distribution phases of the value chain; developmental work is primarily done elsewhere.

The key issue in Finland's case is not simply the dependency of the Finnish economy on the growth of Nokia, but how to cultivate Nokia's clusterisation *vis-à-vis* new, related and non-related vital clusters and thereby nurture increasing diversification in the Finnish economy, including GHR. Similar issues affect Israel's "Silicon

Box 6.2. **Comparison regions: Tel Aviv, Dublin and Portland**

Israel's "Silicon Wadi": focus on knowledge, not on a single industry

In the Israeli ICT, particularly in Greater Tel Aviv, the common denominator is the focus on knowledge rather than a single industry. This strategic policy choice minimises single industry dependencies, cultivates diversification, and builds on the cluster strengths.

At the end of the 1960s, the Israeli model of development – state regulated capitalism – shifted away from the promotion of basic industries toward more export-oriented, capital-intensive and eventually, high-tech sectors (*i.e.*, R&D).[1] Concurrently, rapid structural change took place in the indigenously owned sector as military build-up continued and related civil electronics and aircraft industries expanded.[2] The rapid development of the Israeli electronics industry over this period was threatened during the early-1980s by macroeconomic crisis and sharp domestic inflation. With changes in the political scene and a shift towards more free-market economic policies, a gradual change in attitude in favour of the small business sector occurred (Feitelson, 2001).

Geopolitical changes in the 1980s and early 1990s reinforced this effect and provided the human capital on which much recent Israeli entrepreneurship was based.[3] Encouraging entrepreneurship and developing high-tech businesses were seen as key elements of the absorption programmes designed to cope with immigration from the FSU (former Soviet Union).[4] Other developments in business support in the early 1990s, particularly the government-initiated development of the Israeli venture capital industry, have also played a vital role in Israel's subsequent success in high-tech markets.[5] From 1990 to 2000, Israeli exports of manufactured ICT products grew five-fold while service exports grew ten-fold. Furthermore, since the mid-1990s, employment in ICT services in Israel has exceeded that in ICT manufacturing. By 2000, the ICT sector accounted for a third of all Israeli exports but only 6% of national employment.

Dublin's ICT expansion: using inward FDI for internationalisation

The Irish ICT cluster provides different lessons to Finnish ICT firms and GHR. The common denominator originates from the use of inward FDI as an instrument of internationalisation.

The absence of a strong industrial tradition and emphasis on applied scientific research has limited the competitive strengths of many Irish companies – particularly in terms of their innovative capacity and ability to adopt new technologies. Combined with significant flows of inward investment, particularly from the United States, this led to the development of a dual economy in Ireland. It is characterised by both a technologically advanced, externally owned sector, which is based largely on R&D that is conducted elsewhere, and a technologically weaker and indigenously owned sector that is concentrated in more traditional industries (Wrynn 1997). This situation persisted largely unnoticed until the mid-1980s when a macroeconomic

Box 6.2. **Comparison regions: Tel Aviv, Dublin and Portland** (*cont.*)

crisis highlighted the lack of competitiveness of much of the indigenously owned industry in Ireland. A major reorientation of Irish industrial and economic policy followed, which focused on internationalising the whole economy. Positive developments in the competitiveness of Irish indigenous businesses have been swamped by the impact of continued large-scale inward investment from the United States. According to the IDA (Industrial Development Authority), by 1998, 61% of electronics plants in Ireland were US-owned and accounted for 82% of electronics employment. Since the mid-1980s, Ireland has also benefited from massive FDI by major US software companies. Microsoft, Oracle, Lotus, and others have major operations in Ireland, reproducing and selling packaged software products primarily to EU markets. Ireland has become the major European centre for software production and is now the world's largest exporter of software products. OECD figures (OECD, 2000*b*) show that in 1998, software exports from Ireland were USD 3.29 billion, larger than the USD 2.96 billion from the United States.

Portland's "Silicon Forest": overcoming dominant firm dependency

Like Finland, Oregon was highly dependent on natural resources until the rise of the ICT cluster, particularly forestry. The seminal event in the development of the ICT cluster in metropolitan Portland was the establishment and growth of Tektronix, one of the world's leading makers of oscilloscopes, a variety of test and measurement equipment, and other electronic devices. The company grew from 32 employees in 1948 to 24 000 in 1981. Important parallels between the development of the Portland high-technology cluster and the Silicon Valley include personal, business, management and organisational ties. Tektronix's reputation for technological prowess, egalitarian management style, and wide latitude for researchers to pursue their own ideas on company time attracted some of the best engineers in the nation. In 1975, Hewlett Packard established a manufacturing plant in Corvallis, Oregon, about 85 miles south of Portland. In 1976, at the suggestion of Tektronix management, Intel investigated and chose a site in Aloha, Oregon, just a few miles from Tektronix main campus in Beaverton. By 1994, the success of Intel's microprocessors, particularly its Pentium products, and the continuing decline in employment at Tektronix made Intel the state's largest ICT firm.

Due to the recession that the United States experienced in 1980, which struck Oregon severely, employment dropped more than 10% in Oregon. Its ICT producers, led by Tektronix, suffered a significant cyclical downturn for their products, which was exacerbated by the strong capital goods character of local production as well as the emergence of new competitors in Tektronix traditional instrumentation markets.[6] The severe recession of 1980-1982 prompted Oregon's state government to double its efforts to recruit out-of-state firms to develop new ICT manufacturing facilities, particularly in the Portland metropolitan area. While much attention in the mid-1980s was focused on the wave of foreign investment in high technology, this was also a period of intense entrepreneurial energy.

Box 6.2. **Comparison regions: Tel Aviv, Dublin and Portland** (*cont.*)

The rapidly growing market for personal computers created many new market opportunities, and local entrepreneurs and engineers founded new firms to tap these markets. Many drew personnel or technical expertise from former employees of Tektronix and Intel. In the 1990s, Intel's Portland operations became a key centre for the design of successive generations of processors. The region's growth was also fuelled by the continued expansion of the spin-off firms and those started in the 1980s, further new firm formation by local entrepreneurs, and the attraction of many firms that were suppliers to the local semiconductor producers. Many new firms flourished in software, semiconductor manufacturing equipment, and display technologies.

1. The main form of assistance for Israeli private sector companies over this period was capital grants for investment which were first made available in the 1950s (Lavy, 1994). As early as the 1960s, the Israeli government – through the Ministry of Industry and Trade – also supported the development of science parks at universities (Felstenstein, 1994). Also during the 1960s, the Israeli government began to give R&D grants to individual firms, a development that Teubal (1993) suggests might be the first instance of this type of policy intervention.
2. From 1968 to 1983, for example, high-tech industry in Israel increased its share of output from 6% to 24% and its share of exports from 5% to 28% (Teubal, 1993). During the 1970s, the Israeli economy became more open to trade and foreign investment and bi-national R&D funds were established with the United States (*i.e.*, BIRD) and Germany (*i.e.*, Israel-German Foundation or GIF). Relatively unsuccessful attempts were also made during this period to attract more inward investment, particularly to more peripheral areas (Shefer and Bar-El, 1993).
3. Two factors were particularly important. First, the cancellation in 1987 of the Lavi fighter project, the end of the Cold War and the easing of the geopolitical situation in the Middle East reduced both export and domestic demand for military hardware and released substantial amounts of highly skilled labour into the Israeli labour market. Cooke *et al.* (2001) suggests that key developments over this period related to firms specialising in anti-virus software, software protection and encryption technologies (*e.g.*, Carmel Software, Iris, BRM, and Eliashim). Secondly, post-1989, mass immigration to Israel from the FSU has added nearly a million to the Israeli population and vastly increased the nation's endowment of human capital.
4. Initially programmes were sponsored and supported by the voluntary and community sectors but were quickly granted state backing (Goldberg and Lavi-Steiner, 1996; Modena and Shefer, 1998; Roper, 1999).
5. Post-1990, the strengths of the Israeli knowledge base – particularly in network security – proved to have strong commercial application as Internet growth stimulated demand for encryption and other network security systems. Israel's academic and wider research community also played an important part in the growth of Silicon Wadi (De Fontenay and Carmel, 2001).
6. The Decline of Tektronix had number of important implications for the regional economy. First, the company abandoned its traditional policy of vertical integration, spinning off many internal operations into new businesses or selling subsidiaries to new owners. Second, faced with limited opportunities to further pursue their research activities in Tektronix, several engineers and managers, left to start their own firms and commercialize these technologies. Third, the local labor market was flooded by engineers and others with substantial experience in ICT manufacturing that had been laid off by Tektronix.

Wadi", Dublin's ICT cluster and Portland's "Silicon Forest" as well, but in Finland, the problem is more acute due to the dominant-firm dependency.

Current ICT challenges

At the national level, the Finnish ICT cluster builds upon domestic R&D and manufacturing to exploit a global value chain: terminals, infrastructure equipment, and, more recently, Internet communications products and services.[9] Through high-quality educational institutions, universities, and R&D, factor conditions provide infrastructure support for cluster development, facilitating both sustaining and disruptive innovation. Concurrently, related industries (ICT consultancies, public and private capital, standardisation) and supporting industries (contract manufacturing, components, electronic manufacturing) provide vertical systems for increasingly global firm strategies and domestic competition. Demand conditions comprise highly demanding and sophisticated buyers, including operators, government, consumer and corporate markets. Public policies continue to shape the cluster, *vis-à-vis* government, competition policy authorities, regulations, standards, and public-sector demand. Finally, chance conditions consist of uncontrollable, external events that have particular significance and relevance to cluster developments. The Finnish ICT cluster is intertwined with the Greater Helsinki Region ICT sub-cluster, which forms the geographic growth core of Finnish agglomeration economies, just as telecom and mobile segments comprise its industry centre.

Public policies: central vision, local initiatives

Despite Finland's high mobile and Internet penetration, there is a disconnect in Finnish ICT policies. While bold centralised visions are drawn at the national level, economic and societal linkages have not been integrated as consistently at the regional or local level. It is useful to examine these developments in light of the following: 1) industrial policies; 2) regulation; 3) competition policies; and 4) R&D policies.

As regards to the first aspect, in Finland, traditional industrial policies, such as targeting and subsidies, were rejected in the early 1990s. These changes were not unique to Finland and in fact, emulated the EU's industrial policies and directives. The momentum toward change, however, accelerated dramatically with the recession in the early 1990s, when a national sense of urgency enabled policy designers to experiment with new tools and instruments. Mainstream literature on this topic[10] greatly influenced the Finnish debate on the transition from the public sector-driven "traditional industrial policy" to more market-driven "national industrial strategy". Subsequently, clusters have been widely used as conceptual tools in industrial policy design by a number of national institutions, and cluster thinking

has contributed to a dialogue between the government, public sector and private sector, by providing a common language.

Unfortunately, the momentum of the movement toward market-driven strategy was eclipsed in the mid-1990s after the economy jumpstarted (Porter, 1998; Steinbock, 1998). The rejuvenation of the economy and accelerating economic growth evolved at the expense of structural unemployment. In the absence of political consensus over more flexible labour markets and more rapid internationalisation of the economy, the government adopted a "cheese-slicing" approach, cutting a little from everywhere. Drastic cuts in Finland's high tax rates were not made. Such initiatives were perceived as a weakening of the welfare state, in which job markets are driven by (highly centralised) collective bargaining agreements between the government, unions and employers. In the long run, this national strategy has an underlying contradiction between highly centralised incomes policies and the pressure toward highly decentralised job markets due to globalisation. Despite adjustment, restructuring, and recalibration, the 1990s left the Finnish welfare state structurally intact. Due to the hesitation to tackle the difficult issue of unemployment, the problem became structural in the course of the 1990s and a "new underclass" has since evolved in Finland. In addition to farmers in remote areas, the new poor comprise a significant number of working-age Finns in eastern and northern Finland – *i.e.*, outside the growth centres of the Finnish ICT clusters. In Finland, the discourse on the proposed solution has been polarised between the old social-democratic welfare policies and the new neoliberal economic policies. Yet, as OECD studies have demonstrated, traditional territorial policies, concerned with the equitable geographical distribution of resources, are not an appropriate answer to the new conditions engendered by globalisation. A highly polarised political discourse may have neglected the available range of alternative policies, which stress the compatibility of efforts at economic and growth *and* social cohesion.[11]

Despite substantial regional and local implications, the traditional policy initiatives were national and centralised by nature. While there has been a long-term substantial policy shift from such initiatives to more localised, bottom-up solutions in *regional* policy, the national goals may not have been adequately harmonised with the regional realities. It is this "synchronisation" between lofty national ICT initiatives and regional/municipal implementation that should be the common denominator of future ICT policies.

In terms of regulation, starting in the early 1980s, Finland, among the most competitive industry pioneers, entered the era of deregulation in telecommunications. As the mobile advances stimulated competitive intensity in new and emerging markets, they also contributed to extensive changes in the overall telecom sector. In Finland, these shifts were codified in the Telecommunications Act of 1987 and the Telecommunications Market Act of 1997. The former reflected the

Finnish players' search for first-mover advantages in telecom/mobile markets, whereas the latter represented efforts to "harmonise" these strategic moves with the EU directives and reforms. This final step worked against the pioneer strategies that have generated great first-mover advantages for the Finns. The implications have been primarily national. Yet, since GHR forms the growth core of the Finnish ICT cluster, the arresting consequences have been felt primarily in the metropolitan strategy and policy centres.

The Finnish regulatory approach in telecom policy builds on pro-competitive policy, light-handed regulation, and technology-neutral competition. The market is subject to general competition and consumer protection legislation. The telecom authorities reportedly pursue minimum interference policy, intruding mainly in cases of inadequate competition. The approach has been considered less interventionist than those of many other OECD countries.

Despite the policy objective to enhance high-speed transmission capacity in Finland, in 2000, the government decided not to engage in direct infrastructure provision, to ensure technology neutrality and free functioning of the market. In general, the government has sought to promote pioneer strategies and early-adopter policies. Although these strategies and policies have facilitated the emergence of new markets, they have not promoted new entrepreneurship or facilitated internationalisation. For instance, when Finland pioneered 2G and granted the 3G generation network licenses free of charge, the process supported incumbent industry leaders rather than new start-ups or challengers.

In 1999, the R&D expenditure in Finland reached EUR 3.7 billion, representing over 3% of the GDP. With this share, Finland ranks second in the world in R&D input, which reflects the government's decision in 1996 to increase R&D funding systematically. The target for 2001-2004 is to increase the funding in line with the GDP growth rate. The share of public R&D funding was stipulated at 40%, but due to intense growth in private R&D investment, the share has declined and was about 30% in 1999. The public decision to increase the level of R&D funding was made to counter the significant downsizing of general public expenditure throughout the 1990s. Specific attention has been attached to the cross-sectoral diffusion of knowledge; thus, a share of these funds was directed to sectoral ministries' cluster programmes. Convergence and globalisation have compelled the public funding to be redirected from technology-orientation (forepart of the innovation chain) towards market-orientation (end of the chain). The new approach has materialised in a series of digital media technology programmes, catalysing export-oriented digital content service production. Contrary to established technology-oriented practice, R&D funding has also been allocated to *service* development to support creation of interactive multimedia concepts and production platforms. Important weight has been put on co-operation between actors in different phases of the value chain, including newly emerged venture capitalists (Paija, 2001). Despite the

obvious benefits, these postures have also contributed to the increasing role of public monies in R&D and commercialisation. The unintended consequence has been the increase in public risk exposure.

Strategies and competition: sustaining global advantage

Firm rivalry: the ICT *players that count*

In 2000, the list of Finland's top 500 companies included some 30-40 ICT leaders (Table 6.1). Among the Finnish-owned ICT firms, the list was dominated by mobile equipment vendors (infrastructure, terminals), suppliers (components, contract manufacturers, electronic manufacturing services), and network operators (carriers, ISPs, mobile services). Among vendors, Nokia enjoyed relative and absolute leadership. Its sales were more than 30 times those of its closest rival, while other players focused on R&D via market presence or competed in international niche segments. Most had headquarters in GHR.

Toward the end of the 1990s, Finland became something of a test bed for R&D by a number of multinational ICT manufacturers. These manufacturers have also intensified co-operation with local firms, and some have entered the market through acquisitions. However, many of these players, and certainly the largest of them, have had a substantial presence in Finland since the 1960s and 1970s. In other words, the "mobile Internet" boom has not really changed incremental longstanding trends.

In Finland, traditionally, professional managers have not been as much driven by international business as their colleagues in Sweden. Thus, technology skills have not gone hand in hand with professional business skills (SITRA, 2000). In terms of cluster developments in GHR, the Northern Dimension Initiative (1997) holds substantial promise. Finland enjoys a key position in the foreign trade of the Baltic Rim states; it stands to benefit significantly, if these small countries can develop into wealthy democracies. In such a scenario, Helsinki and Stockholm would compete with Berlin on the location for regional offices on the Baltic Rim by foreign companies. According to recent research, Finland – particularly GHR – has rapidly evolved into a business centre especially for central and eastern European transitory economies (Luostarinen, 2000).

Location and firm-dependency

To acquire a comprehensive view of Helsinki's unique situation, it is valuable to look at a comparison between Helsinki and Portland, which represent two similar but distinct cases of the ICT cluster evolution. The economic settings are remarkably similar: moderately sized metropolitan areas at the periphery of their respective continents, the largest cities in relatively small states, a traditional

Table 6.1. **Leading/strategic firms of the Finnish ICT cluster, 2000**

Firm	Headquarters	Industry	Net sales (MEUR)	Employees	Position, 2000
		Infrastructure and terminals			
Nokia	Espoo	Electronics	30 376	58 708	1
Tellabs Finland	Espoo	Electronics	825	2 482	57
LM Ericsson Finland	Kirkkonummi	Electronics	176	1 073	193
Teleste	Turku	Electronics	99	616	292
Benefon	Salo	Electronics	59	377	435
		Network operators			
Sonera	Helsinki	Telecom services	2 057	10 305	25
Elisa Communications	Helsinki	Telecom services	1 244	6 161	35
Turku Telephone	Turku	Telecom services	64	557	413
Finnet International	Helsinki	Telecom services	63	118	417
Vaasa Telephone	Vaasa	Telecom services	59	525	436
		Components			
Elcoteq Network	Lohja	Electronics	2 214	9 630	22
Perlos	Nurmijarvi	Chemicals/plastics	452	3 503	91
NK Cables	Helsinki	Metals	286	1 013	124
Flextronics International Finland	Hameenkyro	Electronics	281	1 091	126
Aspocomp	Helsinki	Electronics	240	2 007	144
Salcomp	Kemijarvi	Electronics	181	679	187
JOT Automation	Oulunsalo	Electronics	140	714	225
PKC Group	Kempele	Electronics	129	932	238
SCI Systems	Oulu	Electronics	120	463	250
Honeywell Finland	Espoo	Electronics	102	578	286
Filtronic LK Finland	Kempele	Electronics	87	965	328
ADC Telecommunications	Oulu	Electronics	82	625	344
Electrobit	Oulu	Electronics	58	568	439
		Application software			
TietoEnator	Espoo	IT	1 120	9 934	40
IBM Finland	Helsinki	IT	361	933	109
Stonesoft	Espoo	IT	60	450	432
Fujitsu Siemens Computers Finland	Espoo	IT	93	184	309
Stonesoft	Espoo	IT	60	450	432
Xerox Finland	Espoo	IT	53	325	479
Aldata Solution	Vantaa	IT	51		
		Content/aggregators/ finance/retailers			
Merita Bank	Helsinki	Finance/ Investment	3 952	11 349	9
Sanoma WSOY	Helsinki	Media	1 448	10 350	29
AlmaMedia	Helsinki	Media	484	4 236	87
Hewlett-Packard Finland	Helsinki	Wholesale trade	451	364	92

Table 6.1. **Leading/strategic firms of the Finnish ICT cluster, 2000** (*cont.*)

Firm	Headquarters	Industry	Net sales (MEUR)	Employees	Position, 2000
YLE Finnish Broadcasting Company	Helsinki	Media	361	4 595	108
TS-Yhtyma	Turku	Media	247	1 903	140

Source: Steinbock (2002), *Finland's Wireless Valley: National Policies, Global Industry* (Helsinki: Finland's National Technology Agency).

reliance on forest products and metals industries. In both cases, the successful strategies of locally dominant firms played a decisive role in the growth of the cluster (see Box 6.2). Both regions exhibit considerable path dependence in the technological competencies that characterise the ICT cluster, with their roots traceable in both cases to early experimentation with radio communication in the 1920s. In both regions, the flourishing high-tech cluster has fundamentally changed the entrepreneurial culture of the region and has stimulated – and been stimulated by – the growth of localised venture capital resources.

The success of these two firms has clearly been the most critical economic development in Helsinki and Portland's ICT respective clusters during the 1990s. Nokia is the world's leading provider of mobile telephone handsets; Intel is the world's leading provider of microprocessors. Nokia's headquarters is in Espoo, just outside Helsinki proper; Intel's largest single employment site in the United States, and a principal centre for research and development, is located in Hillsboro, just outside of Portland. Nokia is at least five times larger than Finland's next largest ICT manufacturer; Intel's Oregon employment is at least triple the state's next largest manufacturer. (It employs approximately 15 000 persons in the Portland area.) Both companies have recorded prodigious growth in employment, sales, and – until recently – market valuations.

In Portland and Helsinki, the largely corporate strategies of these two respective firms played a decisive role in the development of the region's ICT cluster. In Helsinki, it was Nokia's decision in the late 1980s and early 1990s to systematically divest its traditional operations in paper products, rubber and electrical cables and to emphasise telecommunications. In Portland, Intel's decisions to abandon the commodity DRAM (dynamic random access memory) market in the 1990s, invest its resources in microprocessor development, and locate several of its key research efforts in Oregon were decisive.

Despite the leading role played by these firms in their respective cities, important differences exist between them. Most critically, the two regions have relied on fundamentally different strategies to augment the availability of skilled labour. Finland has dramatically increased the scale of higher education and technical

training, while Portland has relied primarily on its ability to attract migrants. The local market has played a more important role in Finland, where the early advent and rapid adoption of mobile communications helped give the local ICT firms a market edge. The scale and focus of government policies differ substantially between the two regions. Oregon has offered tax incentives for large-scale investment, bolstering quality of life (to attract labour), and undertaken relatively modest efforts to encourage venture capital and subsidise pre-commercial research. Finland has aggressively subsidised research, made a substantial investment in venture capital, and as noted, increased the scale of its educational system.

Nokia is a much more dominant influence in Helsinki than Intel is in Portland. A number of other large ICT cluster firms are sub-contractors to Nokia, such as Elcoteq, a contract-manufacturing firm. Despite the emergence of a number of independent firms that sell into different markets, the Helsinki ICT cluster can fairly be described[12] as a hub-and-spoke industrial district, with Nokia at its centre. However, while Intel is the most dominant firm in Portland, the region has a number of firms and technological specialisations that are not directly tied to Intel and microprocessors. In addition to Intel, the region has major producers of silicon wafers, semiconductor manufacturing equipment, printers, display devices, and other electronics. Portland's cluster represents a more diversified mix of ICT activities, with relatively few firms that exist primarily as suppliers to Intel.

Industries related to the Finnish ICT *cluster*

Providing generic technology, Finnish ICT also depends on a constantly growing number of *related industries*, producing complementary or value-adding services to the infrastructure. The list of ICT leaders included financial services and media companies that sought to exploit their learning curve in the Internet and mobile operations, through internationalisation. In 1999, the Finnish banking industry, with domestic headquarters in GHR, was the world leader in Internet banking. In contrast to the United States, however, the dominant Finnish online banks were subsidiaries of incumbent leaders. In Finland, this has been perceived as a strategic strength of the industry; a more critical viewpoint would also refer to deficiencies in entrepreneurship and effective competition. Furthermore, many of the winning ICT firms have been acquired by larger Finnish or foreign entities.[13]

Aspirations in the "*development and global competence of the* Finnish *content industry*" have high rankings on the national agenda.[14] In practice, there is little demonstrable evidence of such capabilities. The only tangible spillovers have been in rapid learning curves associated with high mobile and Internet penetration, which has contributed to the efforts by SanomaWSOY (the country's leading content producer) to transfer these ICT capabilities into other geographic regions, through internationalisation.

Factor conditions: internationalisation

In the Finnish ICT cluster, factor conditions encompass several variables, including corporate finance, R&D and innovation, venture capital, and higher education. Since the beginning of the 1980s, the liberalisation of Finnish capital markets has reshaped the institutional environment of corporate funding. Through the investment economy, domestic banks played the primary role as lenders and through boards. With the 1990s, Anglo-Saxon models of corporate finance and governance arrived in Finland, first via Helsinki. Concurrently, the role of international resources – through Nordic co-operation, European integration, and the global technology sector – has accelerated in Finland, and, again, first via Helsinki.

Capital markets: the Helsinki Stock Exchange

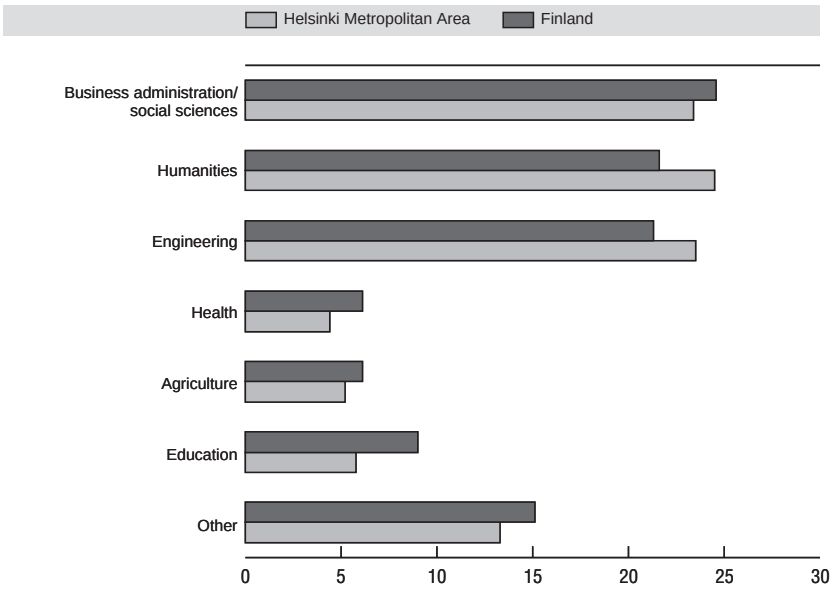
In Finland, the transition from the investment economy to innovation economy has coincided with the shift from patient capital to fluid capital and the accompanying internationalisation of the Finnish capital markets. As the stock market has grown increasingly important, the role of Finnish banks has been reduced. In 1985, domestic banks accounted for 92% of the turnover on the Helsinki Stock Exchange (HSE), but by 1995, they accounted for only 22%. Finland discouraged foreign direct investment until 1993, when laws restricting foreign ownership were abolished. As the restrictions were removed, foreign investment rose rapidly.[15] By 2000, foreign holdings accounted for 74% of total market capitalisation of shares (Steinbock, 1998, Chapter 10).

The university system

At Finnish universities,[16] business and administration and social science are the most popular fields of study, accounting for one-fourth of all students in 1999. Conversely, in the Helsinki Metropolitan Area, the largest field of study is the humanities, followed by engineering, and business and administration and social science (Figure 6.9). Polytechnics in Finland had a combined enrolment of approximately 100 000 students in 1999. Approximately one-third of the students studied technology and transport. Polytechnics in the Helsinki Metropolitan Area enrolled approximately 22 800 students, 37% of whom studied business and administration. The interaction between the industry and ICT-oriented universities (in Helsinki, Lappeenranta, Oulu and Tampere) has active and long traditions in product and process development. An important party in the science-industry dialogue is also the Technical Research Centre, the largest public research unit in Finland.

Rapid growth in the electronics industry has exhausted the resources of available skilled labour. The government has reacted by increasing openings in higher education institutions. Between 1993 and 1998, the total intake in universities grew nearly two-fold and in polytechnics nearly three-fold. However, this has not erased the

Figure 6.9. **University students by field of study, 1999**



Source: Statistics Finland.

chronic lack of educated labour in the cluster. In 1998, the government adopted a programme for increasing education in the information industry fields from 1998 to 2002.

Today, wide and deep labour markets are an important resource for the future development of the ICT clusters in Helsinki as well as in Portland. Thus, a valuable comparison can be found in Portland's success in improving perceived quality of life to recruit skilled workers may be indicative of the potential of policies to encourage immigration as one way of bolstering the growth of the ICT sector when local labour markets are tight. In this regard, the low level of immigration and multiculturalism in Helsinki appear to pose substantial obstacles.

Finnish innovation and R&D

In GDP terms, Finland's highly input-driven R&D expenditure is the second highest in the world after Sweden.[17] In the mid-1980s, industry and government began to pay increasing attention to the development of high technology, eager to specialise in the high value-added products of the electronics industry. Due to the small size of their firms, the leaders of the electronics industry banded together to share R&D expenses. The government, in turn, facilitated this co-operation through

the establishment of the National Technology Agency in 1983. In 1985, Finland's R&D remained less than 1.5% of the GDP, well behind the OECD average of 2.2%. A steady rise brought the figure to more than 2% in 1991.

With the new national cluster strategy in place, the domestic innovation system became a key priority in the government agenda around 1992 and 1994. Between 1984 and 1998, the proportion of R&D investments of Finland's GDP increased from 1.40% to 3.01%. By 2000, the volume of European co-operative R&D in Finland was nearly EUR 168 million annually. In the 1990s, the Finnish companies in particular increased R&D investment by 15-20% annually. By 1995, the value of high-tech exports *exceeded* that of imports. With the rise of Finnish R&D, the electronics and electrical industry has become the third supporting pillar for Finland's economy, alongside the traditional forest and metal and engineering industries.

On the public side, a key actor has been Tekes, Finland's National Technology Agency. Tekes provides funding and expert services for R&D projects and promotes national and international networking. Its customers also include foreign companies conducting R&D activities in Finland. In Finland, these two, in effect, have had many joint and overlapping projects. Furthermore, most of these actors – certainly the most critical ones – are concentrated in Helsinki or GHR. However, their strategic and policy decisions, though headquartered in GHR, are national by nature. Between 1995 and 1999, R&D expenditure in Finland grew in nominal terms by more than 78%, and in the Helsinki Region (NUTS 4) by 67%. In 1999, the R&D expenditure of Helsinki Region was EUR 1 732 million and accounted for 44.6% of the entire Finnish R&D expenditure.

If Finnish ICT is driven by rapid globalisation, many advocates of the innovation system would like to facilitate its *internationalisation*. Yet, Finland remains the most ethnically homogeneous country in the EU due to its strict, longstanding application of immigration policies. In 2000, the total number of foreign citizens living in Finland was estimated at 93 000, only 1.8% of the population. The ratio – 0.06 immigrants per 100 inhabitants – is the lowest after France and well below the EU average of 0.22 (Eurostat). In GHR, despite vigorous migration during the 1990s, natural population growth accounted for as much as 45% of population growth. Some 70% of individuals moving into the area came from other parts of Finland. The proportion of foreign nationals in GHR (2.8%) and in the core Helsinki Region (3.5%) are relatively low by international standards.[18] Indeed, key parts of the macroeconomy suffer from a shortage of highly skilled labour. Nowhere is this problem more pronounced than in the acute shortage of IT talent, which has forced companies to recruit from abroad.

E*mergence of venture capital*

Prior to the 1980s, only four venture capital firms had been established in Finland. In the booming 1980s, some old and 15 new VC organisations started

transforming their operating models and ownership. In 1990, the Finnish Venturing Association was established by 18 founding members (Lovio, 1993, p. 227). The electronics industry had been one of the most popular targets in the VC and development company activities. By the late 1980s and early 1990s, *all* of these firms were in serious trouble, due to the Finnish recession and banking crisis. Prior to the 1990s, *regional funds* rather than VCs had served as the historical drivers of the investment-driven economy. It was with the launch of Start Fund of Kera Oy (1990) that the public sector sought to stimulate the nascent Finnish venture capital *industry*.

Two pivotal events – the success of Nokia and explicit government policies to support venture capital – have driven the emergence of venture capital and the expansion of entrepreneurship in Finland. Nokia's success has served both as a training ground for entrepreneurs and as a strong demonstration that local ICT businesses can succeed in the global market. These developments are not strictly comparable to those in the comparative regions. In Portland, Dublin, and Tel Aviv, entrepreneurial energy has been a more natural and inherent element of the competitive environment. In Finland, many elements have worked against it, including the Nordic tradition of the welfare state, technology and engineering over managerial and marketing capabilities, collective and egalitarian values, a highly homogeneous population base, incentives against aggressive new entrepreneurship, and a preference for consensus management instead of bold and divergent initiatives. The government's policy of pump-priming venture capital investment (public funds accounted for a majority of venture capital under management through 1994) stimulated the growth of private venture investment as well as the expansion of the capability of investment managers (Finnish Venture Capital Association, 2001).

After the mid-1990s, the Finnish ICT cluster witnessed a rapid emergence of venture capital, which created new opportunities for ICT start-ups. Some 54% of the VC investment funds targeted high-tech enterprises. In terms of VC investments, some 60% of the firms that received VC funding were high-tech enterprises. However, only 5% of dot-com firms (Internet-driven enterprises) received VC investment funds. As a result, start-up enterprises have become more ambitious with significantly improved potential for a successful international launch. Furthermore, some 85% of the funds originated from Finland, and only 15% from foreign sources. In regional terms, some 42% of VC investments (full portfolio) took place in southern Finland (primarily GHR), whereas the portion of foreign investments amounted to 26%. Venture capital continues to be predominantly Finnish by origin.

At the end of 2000, Finland's Venture Capital Association had 35 member organisations. Half a dozen were public. Between 1991 and 1994, the portion of public VC grew close to 70% of the total; thereafter, the role of private VC has accelerated rapidly, accounting now for most funds. By 2000, private VC accounted for 91% and public VC for 9% of the total (EUR 563 million). Concurrently, private VC

has increasingly penetrated the expansion phase of the target firms, while public VC has shifted to high-risk funding that private VC firms are not willing to bear.

Demand conditions: sustaining early adoption

Since 1996, Finland has been the leader in mobile penetration. In 1998, mobile subscribers outnumbered wired subscribers. Mobile phones have established their role as consumer products; in 1999, households held more mobile phones (78.5%) than fixed telephones (75.8%). Furthermore, mobile phone replacements have exceeded the number of new subscriptions. Consequently, the share of fixed communications of operator turnover has been declining at the expense of mobile communications – from 99.7% to 40% between 1991 and 1999. Finland ranked the first in Internet host penetration rate, by 121 per 1 000 inhabitants in 1999.

Due to competitive pricing, Finnish telecom services were cheapest in OECD comparison by the mid-1990s. With the OECD market liberalisation, Finland's efficiency in fixed-line charges has deteriorated, but has been in line with the general rebalancing trend toward higher local charges in member countries. However, in data, including Internet, and digital mobile services, Finland is leading in lowest pricing in the OECD in 1998. Low pricing – together with the introduction of cheaper portable phones replacing auto phones – were major factors behind the breakthrough of mobile communications. But as cost advantages have been migrating to Asia Pacific, the competitive value of these historical benefits is declining.

The Finnish market still serves as an important laboratory as long as the quality of domestic demand and industry foresight reflects trends in lead markets. There are substantial regional variations in the ICT demand even in Finland. If the greatest penetration figures and the most sophisticated use phenomena accumulate in GHR, substantial marginalisation remains elsewhere in the use and mastery of mobile and Internet technologies.

Policy recommendations

Like many other metropolitan regions, the Greater Helsinki Region (GHR) is more focused on services than production facilities. However, it continues to form the hard centre and the growth core of the Finnish ICT cluster; and the significance of this concentration is unlikely to change in the future. As a result, the following policy recommendations, in most cases, apply on national, regional, and local levels.

Connecting national visions with local implementation

The specialisation of the Finnish ICT cluster has contributed to significant agglomeration economies and territorial capital, while enabling the key locations to become more competitive and thereby attracting more firms. However, this

specialisation has also resulted in two typical threats. First, activities have concentrated in certain areas. While this is not necessarily detrimental to other areas, it has been perceived to worsen territorial disparities. Second, and more importantly, a region's development is more fragile if it is dependent on a single sector rather than several sectors. Informed policies and strategies attempt to diversify the current base of competencies and capabilities, but far more needs to be done.

Instead of the instruments of classic industrial policies (*e.g.*, massive subsidies, costly national projects, efforts to create techno-cities *ex nihilo*, and protectionist employment policies), the following recommendations build on a new territorial policy paradigm.

1. The prosperity of GHR and the hard core of the Finnish ICT cluster are not the only problem. Rather, the challenge is to cultivate similar agglomerations of wealth elsewhere, as well.
2. The objective is not to attract investment to regions in difficulty by granting subsidies, tax breaks or benefits in kind to enterprises. The challenge is to make every effort to ensure that all regions are able to maximise their development opportunities (endogenous development).
3. The new paradigm does not imply the sudden rupture of all forms of assistance and compensation. The challenge is not to artificially maintain the same level of infrastructures in all regions, but to ensure a favourable environment for enterprise development.
4. The infrastructures in question are intangible as well as tangible (*e.g.*, dissemination of knowledge and greater market flexibility and operational efficiencies). These play a primordial role in promoting the comparative advantages of a region as regards to endogenous development.
5. Finally, governance involves ensuring that territorial policy formulated at a national level is compatible with the development policies pursued in regions and cities. Therefore, a fair distribution of responsibilities and financial resources has to be organised among the central, regional and local levels of intervention.

The last aspect, level compatibility, is particularly vital to the Finnish ICT cluster. After all, most ICT initiatives have been national by nature but local by consequences. It is this disconnect that permeates the Finnish innovation system – bold national visions, prosaic everyday implementation, and the frequent lack of compatibility between the two.

Strategic positioning in the ICT *cluster*

The Finnish focus on telecom/mobile industries has not been without significant risks. Real concerns exist for the sustainable and renewable advantages of

the Finnish ICT cluster – nationally and especially in GHR. Indeed, the current strategic positioning of the Finnish ICT cluster builds on a high-return/high-risk scenario. It is high-risk because of the significant dependence on a single product market with the implicit vulnerability to weakening demand conditions for telecom equipment (*e.g.*, HEX fluctuations, Internet slump, mobile downturn). It is high-reward because, due to Nokia's past success, the cluster has managed to capture much of the value added generated by ICT R&D and product development. This is all the more important because Nokia continues to produce half of all ICT production in Finland and so much value added generated remains within the country. Yet, it is also a formidable challenge because, in mobile communications, it is very difficult to sustain industry leadership across multiple technology generations (OECD, 2000a, p. 23; Steinbock, 2001a).

The strategic positioning of the Finnish ICT cluster contrasts in particular to that of two of the comparison regions: Dublin and Tel Aviv. The Tel Aviv ICT cluster spans a range of product areas but is concentrated in the development phase of the value chain. From a national perspective, this can be seen as a low-risk/medium-reward strategy. In turn, the Irish cluster has focused on the production phase of the value chain with activity dominated by computers and computer components. This has been a medium-risk/low-reward strategy for Dublin because of the single product focus and the fact that profits from the Irish ICT sector are largely remitted to US parent companies. From an Irish standpoint, this strategy has been successful but the cluster remains vulnerable to capital flight towards lower-cost production locations.

Continuation of Finland's current high-risk/high-return strategy suggests several future scenarios. On the upside, the Finnish ICT cluster has been well-positioned to benefit from continued growth in mobile communications. In the future, appropriate strategic decisions may continue to yield high returns. Current competitive realities render little evidence for this upside scenario. On the downside, however, because of its tight product market focus, the Finnish ICT cluster faces several risks. Most importantly, in the long term, market growth may not prove as rapid as it was during the late 1990s due to the transition from original demand to replacement demand (Steinbock, 2002b) with attendant problems of increased cost competition.

The strategic challenge for the Finnish ICT cluster that should be reinforced by all levels of government, therefore, is to evolve a lower-risk/high-return strategy by developing ICT activities beyond the current cluster scope. To some extent, current Finnish ICT strategies and policies reflect such efforts (*e.g.*, use of learning and positive externalities in forestry and biotechnology, learning transfers in online banking and new media). However, instead of remaining peripheral, these objectives could be integrated into explicit and bottom-up territorial policies of related diversification. Given Finland's cost-structure and geographical position, an "Irish FDI strategy" towards diversification may not be relevant or

appropriate. More feasible, perhaps, is an "Israeli diversified technology development approach" focusing on developing competencies in the R&D, design and development phases of the product life cycle across a range of product areas. Such an approach, however, requires greater focus on private and international risk capital, profitable commercialisation, and – most importantly – profitable new business formation. These requirements, in turn, are necessary to create new and renew old strategic advantages in the Finnish ICT cluster, just as they make it necessary to better facilitate the transition of the macroeconomy from top-down centralisation to bottom-up decentralisation.

Cluster conditions: future challenges

The three key challenges of Finland's current economic agenda could be described as the slowdown of growth, dependence on Nokia and persistent unemployment. After the booming 1990s, the *slowdown of growth* ensued with the slowdown of the technology sector and the birth pains of the 3G transition in Europe. This reflected the business cycle as well as the end of the catch-up period. Second, the *dependence on Nokia* by the Finnish economy has been evident through these years. However, it can be considered a natural stage in the development process. Finally, *persistent unemployment* in the macroeconomy, which has coincided with the shortage of highly skilled labour in the ICT cluster, represents a serious structural problem.[19]

Dependency and diversity

Recognising the current dependence of the Finnish ICT cluster on a single industry segment, agencies responsible for developing the Finnish innovation system should emphasise the promotion of diversity in ICT R&D, production, segment orientation and application. Due to the focus on technology innovation, available evidence also indicates lack of expertise in downstream activities (distribution, marketing and sales, service) and support activities (managerial know-how, particularly global managerial strategies and international business), which should be promoted along with and as intensively as diversity. Otherwise, the key elements in this strategy – entrepreneurship and greater internationalisation – will not translate from policy documents into empirical business realities.

Generational platforms and core products

The products of ICT manufacturers are primarily long-lived durable goods and thus, are subject to cyclical changes in the growth in demand for their products. This product generation evolved with an extraordinary bull market and the Internet revolution in the technology sector. The accompanying economic growth in key sectors

ended in 2000 and 2001, while extraneous uncertainty in the ICT segments accelerated dramatically with the events of 11 September 2001.

The recent rapid growth of the ICT clusters in Portland and Helsinki has been propelled largely by the rapid and widespread adoption of PCs and mobile communications. In many key markets, household penetration rates may be reaching saturation. PC shipments declined for the first time in 15 years in the second quarter of 2000 (Gartner Dataquest, 2001). Worldwide shipments of mobile phones fell 8% in the second quarter of 2001 (van Grinsven, 2001). From the Finnish standpoint, the critical issue is not just whether business and consumer markets will demonstrate substantial interest in 2.5G/3G technologies, but the shift from original demand to replacement demand (Steinbock, 2002*b*).

Recently, the very determinants that have contributed to the extraordinary success of the Finnish ICT cluster have been dissipating.[20] A converging set of determinants caused the Nordic countries to take the lead in the nascent cellular services. Yet, many of the *key drivers*[21] have been relatively similar in *all* Nordic countries. They may explain the rapid penetration of the digital cellular in the Nordic countries as opposed to other developed cellular markets, but they do not explain the superior performance of the Finnish telecom/mobile cluster *vis-à-vis* the other Nordic countries.

The Finnish success, in particular, is related to catch-up benefits, public policies, and firm-specific first-mover advantages, which may prove unsustainable.[22] Catch-up benefits are one-time advantages; due to global telecom reforms, Finnish policies have been adopted by rival countries, locations and firms.

Evidence of sectoral, cluster, segment and product developments indicates that past success is not a good prognosticator of future performance in these critical ICT segments. Volatility is likely to require appropriate microeconomic policies to cushion the local economy from the effects of downturns.

Innovation systems, technology development, and risk capital

The circle of innovation, technology development and early-seed venture capital is particularly critical to GHR. In comparison to Israel's Silicon Wadi,the cluster has not been as successful with commercialisation. The reasons stem from the central pillars of the innovation system. First, the national innovation system rests on the university system, which is owned by the state. Second, in technology development, Tekes has been more careful to structure development projects in a way that promotes commercialisation. Third, in venture capital, private players play an increasing role, but public risk capital dominates early seed funding – the most critical link – and the industry's degree of internationalisation is not close to that of Silicon Wadi.

In other words, the system is highly input-driven rather than output-driven, which may explain perceived problems in commercialisation. Furthermore, productivity in much of the Finnish economy – outside the ICT cluster – is poor or mediocre relative to that in much of the rest of the EU (OECD, 2000a). While the ICT cluster cannot rely on Nokia's high growth in the future, neither can the less productive sectors of the Finnish economy expect the ICT cluster to replicate its past hypergrowth.

There are three key implications for other regions in the case studies of Helsinki and Portland. First, innovation, technology development and risk capital seem critical to the development of an ICT cluster. As discussed in Box 6.2, both Portland and Helsinki have drawn on existing resources and/or through public intervention developed their strength in each of these areas during the 1990s. Second, different places need to pursue different, appropriately tailored strategies. Helsinki and Portland pursued decidedly different public policies to support the development of their ICT clusters. In Finland and GHR, government policy was pivotal in creating the necessary demand conditions in the early mobile business via deregulation in telecom services. In contrast, Portland relied more on public policies that enhance the region's attractiveness to skilled workers and provided continued incentives for large-scale capital investment. Third, since clusters emerge and evolve on a pre-existing knowledge base, its core competencies matter along technological path-dependency. Thus, like Portland and Helsinki, other regions should identify their unique resources and capabilities, and then build on their particular technological strengths.

Entrepreneurship

Developing a summary model from the Israeli and Irish models for high-tech entrepreneurship in Helsinki is useful to highlight the strengths and shortcomings of the current situation in Finland. In Tel Aviv, the importance of entrepreneurship is evident in both the software and high-tech manufacturing sectors, which is evidenced by the number of Israeli IPOs and strategic alliances with global high-tech businesses.[23] Whereas in Dublin, high-tech entrepreneurship is most evident in the software sector, although relatively few Irish-owned companies have achieved a global market presence. Drawing together many of these factors, the development of the Israeli growth model can be summarised as "army/academic-research-start-up-VC-IPO-merger" and the Irish growth model as "research-training-FDI-subsidised start-up-supplier-spin-off-generic-sub-contract."[24] A notable common feature of both the Irish and Israeli clusters of ICT start-ups is that they are strongly concentrated in the two capital cities. This may reflect the particular advantages offered by cities to high-tech industry in terms of the easy availability of highly skilled labour, high-quality business services and the local availability of technological and financial partners. The suggestion is that Helsinki is likely to

play a crucial role in any strategy to develop or encourage high-tech entrepreneurship in Finland.

In Helsinki and Finland, high-tech entrepreneurship and start-ups have yet to achieve prominence in Finnish high-tech industry. In particular, relatively few Finnish start-ups have achieved a global market position. Changing this situation may be the key route by which Finland can promote greater diversity within its high-tech sector. Building on the Israeli and Irish models outlined earlier, a feasible model for Helsinki might be "research training/academic research-subsidised/guided start-up-VC-IPO-merger." First, Finland clearly lacks the FDI or military sectors that have stimulated much high-tech entrepreneurship in Ireland and Israel. Finland does, however, have a well-developed and commercially focused higher education system and an institutional and financial commitment to supporting commercially oriented research. This provides a key source of potential new technologies upon which high-tech start-ups may be based. Second, through the National Technology Agency, the National Fund for Research and Development and other institutions, Finland currently provides substantial support for start-up companies. Drawing on this and the managerial resources of Finland's larger companies in the high-tech and more traditional sectors, mentoring and guidance programmes will increase the probability that high-tech start-ups succeed. Third, VC-IPO-merger activity has developed rapidly in recent years in Helsinki with increasing availability of local VC funding and some external investment. Further development in this area is likely to be necessary. Furthermore, strong FDI, more market-driven new entrepreneurship and internationalisation are found to be lacking.

Key recommendations in this area relate to the creation of a culture that encourages entrepreneurship and provides appropriate support structures. This may be necessary to counter the "conservative entrepreneurship" which characterises Finnish society. Therefore, the promotion of high-tech entrepreneurship and start-ups should be viewed as a central policy objective and such an entrepreneurship strategy should be clearly defined. Key issues that might be addressed in the formulation of this strategy include:

- measures to develop and strengthen the "enterprise culture";
- development of materials publicising successful entrepreneurship;
- development of physical and virtual business incubators;
- promotion of measures to encourage mentoring and other forms of expertise transfer from larger companies to smaller firms;
- strengthening of support arrangements for high-tech start-ups; and
- further support for venture capital development.

Many such instruments exist already. Yet, as long as the system of innovation remains domestic and input-focused rather than more international and market-driven, conservative entrepreneurship may reign over competitive entrepreneurship.

Internationalisation

Internationalising forces in Finland operate largely through the country's participation in EU programmes and through export market development. Migration to Finland is limited. Attracting inward investment in R&D or design facilities may be feasible and may contribute to the further internationalisation of the Finnish economy. In the long run, greater attention should perhaps be paid to the United States as a source of potential investment. Another possible approach that has proved advantageous for Israel is the development of bilateral R&D support or funding agreements. These can provide the basis for initial R&D co-operation, which may then develop into more concrete, strategic partnerships. Key targets involve core clusters in the technology sector and mobile communications within and outside the EU.

Helsinki authorities should provide transparent funding and actively seek R&D-based inward investment projects. These would provide high-quality research training and contribute to the internationalisation of the Finnish economy. The Finnish government should then develop a network of bilateral R&D support or funding agreements with other major world economies. One model for this might be the Israeli-US BIRD fund.

Presently, many of these instruments do exist, but primarily in top-down forms of direct or indirect public support. Instead, they should be cultivated via bottom-up forms of market-driven forces.

Notes

1. The term ICT cluster encompasses economic agglomerations that form an intermediate zone between sectors and industries in metropolitan areas. The tradition of cluster research originates from the writings of Marshall and studies of industrial districts. In Finland, the dominant approach originates from the "Competitive Advantage of Nations" (CAON) project by Michael E. Porter, whose works have had a critical impact in the Finnish ICT strategies. On the cluster definition, see Porter (1999). On the role of cluster analysis in Finland's national and telecom strategies in the 1990s, see Steinbock (1998). On the Finnish clusters, see Hermesniemi *et al.* (1996) Rouvinen and Ylä-Anttila (1999).
2. 2G stands for "second generation" and indicates the wireless technology that is now giving way to so-called 3G, "third generation" wireless systems that allow the delivering of far higher data rates and the diffusion of wireless Internet and other data applications.
3. The sources of the domestic, international and GHR ICT markets originate primarily from a slate of studies, reports and surveys by Statistics Finland, Finland's Ministry of Transport and Communications, Finland's Ministry of Interior, and the Research Institute of the Finnish Economy (ETLA).
4. Paradoxically, the very same sub-regions have also witnessed the highest increases in unemployment: these sub-regions become attractive as a refuge for job-seekers at times of crisis, but cannot cope with the influx and their unemployment rates have skyrocketed (over 300% in the Uusimaa region). See OECD (2001c), pp. 57-59.
5. The service, telecom and data processing businesses provide examples of particularly rapid growth. According to Statistics Finland's Business Register, of the 14 400 jobs created in these fields from 1993 to 1999, 11 000 (76%) were in Helsinki, Espoo or Vantaa. This implies an 82% growth in these fields for those cities. Other branches that tend to gravitate to Helsinki are publishing, radio and TV broadcasting, advertising, and business consulting; 84% of the job increase from 1993 to 1999 occurred in Helsinki, Espoo, or Vantaa.
6. For instance, SITRA (1998); Castells (2000); Castells and Himanen (2001).
7. In the long term, the Irish economy depends significantly on technology transfer by US high-tech companies and their continued commitment to Ireland as an operating location. The implied degree of external dependency and vulnerability to capital flight is illustrated by the fact that only two Irish-owned firms appear in the list of Ireland's top 20 electronics companies (Shefer and Frenkel, 1998, Table 5), and only around 2% of patent applications made in Ireland are now made by Irish residents. See OECD (1997), Table 1.
8. The main focus of the Irish software industry – particularly the externally owned component of the sector – is in the production, distribution and marketing of software packages rather than their development.
9. This section is indebted to Steinbock, D. (2002a).

10. Particularly Michael E. Porter's (1990) cluster research and framework.
11. Compare OECD (2001c).
12. See Markusen's (1996) classification system.
13. Of the 185 new foreign companies established and acquisitions by foreign companies in the first 11 months of 2000 in Finland, 80 were ICT-related (Invest in Finland Bureau) – and most were headquartered in GHR.
14. In 1999, the government initiated the *Content Finland Programme*, an interministerial agenda for the period 2000-2003 to improve the preconditions of Finland to develop it into a leading country in providing content industrial products – in addition to telecommunications technology (Ministry of Trade and Industry, 1999*a*).
15. The annual average of FDI between 1988 and 1993 amounted to only USD 472 million, in comparison to an annual average of USD 3.4 billion between 1994 and 1999. Membership of the EU in 1995 and EMU in 1999 have accelerated FDI developments.
16. In order to raise the resource capabilities and competitiveness of Finnish universities to the level of the first-tier European countries, these universities would have to become more attractive. Similarly, they should be able to differentiate their spending strategies and employment policies, among other things. In the absence of fiscal autonomy and as public-sector institutions, however, they have not been able to embrace the change. By 2001, two proposals, in particular, triggered substantial debate on these matters, in Finland. In one case, Paavo Uronen, rector of the Helsinki University of Technology (HUT), advocated the launch of an "international IT university" in Finland. In another, Eero Kasanen, rector of the Helsinki School of Economics, spoke for greater fiscal autonomy in the spending strategies.
17. This account of the Finnish innovation system is indebted to Steinbock (2001*b*).
18. In absolute numbers the rest, for example coming from abroad, amounted to 30 000 people. The 1990s saw an increase in foreign nationals in the area from 14 000 to the current 50 000. Of these, 40 000 live in the Helsinki NUTS 4 Region. The majority of these foreigners have come from outside the European Union.
19. Porter's work has served to develop this thesis.
20. These notes on the dissipation drives of the Finnish ICT cluster stem from Steinbock (2001a).
21. Key drivers, such as dispersed population, rapid technology adoption, relatively high-income levels, market-driven public policies, historical local competition and price parity (fixed, wireless), absence of handset subsidies, calling party pays.
22. The end of the Cold War and the collapse of the Soviet trade allowed the Finns to catch up with the market developments that the Scandinavian countries had enjoyed for decades. Since the 1980s, the Finnish authorities have consistently liberalised faster than their Swedish colleagues in the public sector. In the marketplace, Nokia, Sonera and other ICT firms have consistently been faster than their Scandinavian competitors in first-mover strategies, primarily because of Nokia's strategic decisions.
23. Cooke *et al.* (2001). The factors underlying Israeli high-tech entrepreneurship are numerous and are characterised by the following key influences: 1) changes in the political and social environment and moves toward a more free market approach to economic development; 2) high levels of human capital resulting from migration and investment in higher education and research; 3) the commercialisation of defence technologies and commercialisable research in universities; 4) excitement generated by a

number of high- profile and rewarding IPOs and mergers; 5) the rapid growth of the venture capital industry and accompanying business support; and 6) state support mechanisms including R&D grants and the Technology Incubators.

24. Cooke *et al.* (2001). Key factors in the growth of the Irish software sector have been the following: 1) large-scale ICT training provision and the consequent availability of skilled labour; 2) the experience, training, market awareness and networks provided for individuals by working in a multinational inward investor to Ireland; 3) rapidly growing home markets among both inward investors and the co-evolving financial services sector; 4) significant state support for business start-ups alongside emergent incubator facilities; and 5) developments in the Irish venture capital market and access to external venture capital funding particularly in the UK urban regeneration initiatives in Dublin, which have provided cost-effective office and infrastructure access.

Chapter 7

Urban Governance and Metropolitan Co-ordination

Introduction

The system of constraints and opportunities for cities is changing. The pressures exerted by the state, and by the whole society, toward uniformity and homogenisation have become less distinct. At the same time, local authorities in Europe have to face changes brought about by integration, economic globalisation, individualisation, growth pressures of conurbations, state restructuring, and competition. Within cities, problems and priorities are beginning to be articulated differently from those that exist for the rest of the country. Actors' interests, perceptions, and strategies are diverging. Redrawing the boundaries of the political playing field has the direct or indirect effect of repositioning cities, especially the largest of them, within states. Close links, developing transversely with other European cities and vertically with the EU, have impacts on the way city councils organise. Elected representatives – especially the most important of them, the mayor or equivalent – are being given a more important role in representing the city to the outside world and in building links between interests. Cities' political and administrative élites are benefiting from their increased autonomy, creating more innovations and experiments in organising and running services. In short, there are pressures on actors within cities to express the city's common good, to define strategies for relating to the EU, firms, the state, the region, or other cities, and to manage social and cultural conflicts within the city. This is happening within nation-states that have not abandoned their highly developed welfare state foundations.

After the recession of the early 1990s, Finland has organised a formidable recovery, has restructured the state, and has benefited from the success of high-tech firms. The point of departure is therefore a high level of ability to link social policy, quality-of-life issues, collective action to solve problems and economic development within the new opportunities and constraints presented by European integration.

The evolution of European urban governance

European cities were originally cities that represented points of articulation between trade, culture, and forms of political autonomy. Then, when the nation-state

gained a monopoly over organising culture, political power, and different forms of exchange, European cities became integrated into this national whole. Integration meant that the nation-state, which organised the economy, became the main force influencing the future evolution of cities. The more the city was integrated into the state, the more dominant "those who made it their business to serve the state" became. But nation-states are now facing a process of restructuration all over Europe that is changing the competitive, regulatory and networking role of European cities.

Autonomy and interdependence

The city council and the city remain fundamental political institutions in European societies. Major reshaping is taking place in many of them, directed towards diversifying modes of management of different services, confirming the role of mayors and their deputies, and professionalising the management of local government. Moreover, even though city councils may be at risk of fragmentation and de-territorialisation, the principles of local government have been confirmed and codified at the European level, guaranteeing the rights of local authorities. The Council of Europe's "European Charter on Local Autonomy" (15 October 1985) has made local autonomy one of the shared values of European states, and this despite considerable differences of political and administrative organisation (Marcou and Delcamp, 1999). This document has been signed and/or ratified by most European states, and thus it marks the institutionalisation of the principle of local autonomy. The charter, with its strongly normative content, was taken up as a reference document by the Committee of the Regions, and is playing a similar role for the democracies of eastern Europe now negotiating to join the European Union (Marcou and Delcamp, 1999). So this charter, which was drawn up over a long period, has set in motion a dynamic of institutionalisation involving monitoring its implementation, networks of independent experts, and negotiations with national governments and the European Union: in other words, "*gradually establishing an international system for monitoring its application*" (Marcou and Delcamp, 1999, p. 148).

In organisational terms, the developments outlined above reveal both a blurring between the usual models and an increase in internal differences, moving away from hierarchies and towards horizontal, contractual relationships. In relations between elected representatives and citizens, and between political regulation and civil society, something is shifting towards more autonomy for the various actors, increased legal control over relationships and conflicts, and more consultation. However, city councils retain a strong presence, and their political expertise and influence are also tending to increase. By comparison with American public-private partnerships, which frequently vest most power in the private sector, European public-private partnership experiments remain fairly limited, except in the United Kingdom, and city councils still have strong capacities for initiative and control. City councils have

developed their mode of action in two directions in particular: consideration of group, neighbourhood, residents' demands, and management of urban services.

There is a large literature on local autonomy in Europe that falls mainly within the field of comparison between states. Posed in these terms, the question of local government autonomy now seems somehow both obsolete and increasingly crucial; obsolete, because the end of a particular phase for the state transforms the interplay of constraints and opportunities for local governments, especially in cities. The question is no longer simply what level of autonomy characterises local authorities within the state, but rather what capacity territories have to become collective actors of European governance. What can local governments do to improve their citizens' living conditions? What is their capacity to exert pressure on their own future evolution, especially as far as their development is concerned? Can they restore coherence and social integration? All this reflects different types of autonomy (King and Pierre, 1990), not only in relation to the state but also to other levels of government, to other territories, and to the actors of the market and civil society. From the more traditional perspective local authorities have generally gained areas of autonomy in terms of internal organisation, management of services, and implementation of policies, even though financial monitoring and audits have also tended to become stronger. In other words, they have more autonomy, but in a more difficult and, in terms of various forms of interdependence, a more constraining environment.

In this regard, the institutionalisation of Europe means that European public policies, rules, procedures, conflict-solving mechanisms, debates, and norms are now relevant to all cities within the EU. Europeanisation processes provide a new structure of opportunities for cities, and incentives to engage with other actors to promote their spatial or sectoral interests through both vertical and horizontal networks. But it also represents a new structure of constraints, of rules that limit their autonomy and overlap with national or regional institutions. The EU therefore sets new parameters, within which urban governance modes may be organised and are encouraged. Keating (1998, p. 185) has shown in detail the importance of the EU in structuring the "new territorial politics" in western Europe, within and beyond the state: "*The new territorial politics is focussed less on territorial management and national integration, and more on territorial competition, within national arenas but also within Europe and the wider market*".

From a political and institutional standpoint, the institutionalisation of Europe is the main factor creating a different sort of polity in Europe, a different frame of opportunities and constraints for political entrepreneurs in cities and regions, which have the chance – if they want to take it – to operate beyond the limits of national centre-periphery relations. At that level, the argument makes sense for all subnational entities; but because EU programmes have been organised in terms of regional policy and because of the dynamics of regional movements and identities since the 1960s, most of the arguments up to now have been based on regions.

Europeanisation processes have potentially very destabilising effects on cities (Box 7.1). At first, Europe represented an international stage for cities and their elected representatives; it gave a form of recognition, a new political legitimacy for representing citizens beyond the state's borders, with possibilities for integrating horizontal and vertical networks and bypassing the state, and with access to new resources – in other words, new room for manoeuvre and new opportunities for political entrepreneurs. Europe seemed to represent modernisation, the culture of a new generation of elected representatives. The second stage saw the constraining, destabilising effects of this European governance come fully to light. The criteria that have to be observed in order to obtain funding seem even more rigid and strict than those pertaining to national programmes. Behind flexible networks and forms of interdependence lie complex rules, the difficulty of exerting pressure on choices, and the constraints of coalitions and networks. Elected representatives have finally discovered the limits of their activities – norms that seem to have come upon them like a bolt from the blue. Thus, the European integration dynamic has a destabilising effect because of the uncertainties associated with it.

Leadership

Within the European Union, the powerful city councils of northern Europe were remarkable more for their political legitimacy within the state than for the political influence of their leaders. Since the committee structure was the most general form, either there was no mayor as such, because local government was organised on the basis of specialised committees, or the mayor was barely first among equals.[1] Local government functioned on an essentially collective, consensual basis.

In contrast to the committee model of organising city councils, the urban mayor model is becoming more popular in European cities, thus making political leadership more visible. Therefore, mayors and city councils have political resources with which they can try to engage actors within cities in the making of collective strategies. They are keen to see their cities becoming political actors in Europe, despite the uncertain shape of electoral participation in politics. Finnish, Norwegian, Swedish, and Danish chief executives, traditionally a fairly homogeneous group, have all changed profoundly, moving in the direction of a greater capacity for leadership and for managing links between different interests and groups (Klausen and Magnier, 1998). Traditional administrators are gradually giving way to managers motivated by management efficiency and by politics, in the sense of positioning the city council within a set of vertical and horizontal relationships, whether intergovernmental or not, and in the sense of articulating a common good and a plan for the city council.

Box 7.1. **What does Europeanisation mean for the Greater Helsinki Region?**

Finland prepared very carefully when joining the EU. Civil servants were sent to Brussels in advance and the negotiation with the EU was rather smooth. Finland has enthusiastically opted for the EU integration and hopes to play a key role on the eastern frontier of the EU with the progressive enlargement of the EU integrating the Baltic states. It is therefore essential to stress the fact that Finland has worked hard to be seen as an excellent pupil within EU, a view widely held beyond Finland.

Beyond top-down programmes and rules (that is, largely coercive and normative institutionalisation), the increased density of transnational relations and networks among social and political actors is a key indicator of the institutionalisation of Europe, at levels beyond and below nation-states. Indeed, as far as cities and regions are concerned, hundreds of horizontal networks have now spread all over the EU, nearly always related in one way or another to EU programmes and incentives. Over some time now, interactions between individuals and groups have been routinely organised within networks of cities from different member states. Eurocities has gone from six founder members in 1986 – Birmingham, Barcelona, Lyons, Milan, Frankfurt, and Rotterdam – to a hundred or so members (all cities with populations over 250 000), with an office staff of about 15 people in Brussels, closely linked to experts. Eurocities' objectives are defined in terms of active lobbying within the European Union – in other words, ensuring that the problems of large cities are taken into account transversely in European public policies – and of developing ways to exchange experiences and expertise within the network. Among other things, Eurocities has played an important role in defining the URBAN programme and in developing statistical indicators that may contribute to benchmarking initiatives. Eurocities is currently chaired by the Mayor of Helsinki, evidence of the increasing European role of the city élites.

EU regional policy is a second well-known mechanism through which European local authorities are being gradually integrated within the European governance. In the GHR Objective 2 money has helped fund, for instance, Sibelius Hall in Lahti and the second round of the URBAN programme includes a Finnish programme (a zone comprising parts of Helsinki and Vantaa).

Although at first seduced by the new political horizons of the European Union, local authorities have gradually learned that EU institutionalisation is accompanied by a new set of constraints. The most obvious case of serious conflict of interest took place with the new harbour. The project to move the harbour from the centre of Helsinki to the eastern part of the city has been in the making for a number of years. There is a consensus to move the harbour but its new location has been disputed. One major issue concerned the city of Vantaa that initially opposed the project because of increased road traffic. Amendments to the original plan have led the Vantaa council to accept the new harbour location and to work closely with the Helsinki city council. However, neighbourhood groups and the Green Party have not been won over. The proposed location of the new harbour

Box 7.1. **What does Europeanisation mean for the Greater Helsinki Region?** (*cont.*)

would have a negative impact on some protected bird species. The Greens therefore appealed to both the Council of State on grounds that the plan failed to satisfy national guidelines for sustainable development and to the European Commission as the harbour would breach a Natura 2000 area. The dual appeals were much to the irritation of the government and the city council of Helsinki.

In the area of direct democracy (apart from the spread of the elected mayor model – which uses a wide variety of methods), mechanisms have been introduced to try and achieve greater participation by citizens. Different forms of political involvement and participation in democracy are the objects of differing initiatives: "citizen conferences", popular initiative referenda, petitions, court actions. Democracy is viewed more and more actively, either in terms of consultation or of mobilisation, social movements and collective action, so various forms of participation are developing. More generally, mechanisms for citizens to be consulted and to participate in decision-making processes have become the norm in political discourse, despite difficulties and unequal degrees of willingness to translate this into practice. More powerful but also more vulnerable than they used to be, elected representatives unceasingly attempt to mobilise residents, if only to increase their own legitimacy. A very wide variety of experiments has been set up across Europe, such as Scandinavian "free local government", with its neighbourhood committees.

Urban governments (in the sense of elected representatives and public servants) still play the role of representing and articulating a "common good for the city" but the question remains: to what extent? Organised within nation-states that are still major political institutions, they still perform function for the state together with having more responsibility because of the decentralisation, restructuring and differentiation of the state and the fragmentation of public policies. Cities/urban regions like Helsinki are becoming a site of aggregation and representation of different interests.

Metropolitan government: reorganisation and conflict

After a decline during the 1980s, metropolitan plans came to the fore again, and with greater vigour, in the 1990s. Several factors governed this renaissance: the strengthening of metropolisation, which heightened the issues involved in

managing the peripheries of historical cities, and processes of Europeanisation and globalisation. At the point when, in a fairly assertive manner, cities redrew the shape of the playing field and began to try to exist politically, culturally, and economically on the European level or even beyond, the issue of scale became central again. Rationales of economic and political competition are not the only things being called into question. Individual states and the European Union are actively pushing in this direction: changes in urban and regional policies make it almost vital to strengthen institutional capacities in order to obtain resources and implement public policy programmes. Metropolitan governments are very much part of a dual logic. On the one hand, a logic of mobilisation operates through groups and organisations able to act on the European playing field. On the other hand, a logic of reshaping states operates, which have adapted their policies and their modes of action in territories in response to the imperatives of economic competition and financial constraint.

Even though, in the 1960s, the issue of size was buried under the superficial search for optimum management – with good reason, since different services and different public policies do have different optimal sizes – the specific issue of the size of city government has now re-emerged with increased vigour. This redefinition of scales is anything but neutral, since it results from conflicts between groups and interests, is accompanied by reorganisation of powers, and alters the parameters of conflicts between social groups and the parameters of domination. Groups and organisations mobilise to extend scales of city government, citing better management of major services and claiming to combat fragmentation in public policy. They also justify this mobilisation either by citing efficiency in economic competition between territories or by claiming they will implement policies directed towards sustainable development: for example, transport policies. Others oppose these changes. Yet others mobilise in the name of local democracy and citizen participation, claiming to bring citizens closer to levels of government and pleading the cause for decentralisation of city government to neighbourhoods as well as opposing the more technocratic logic of city regions. Politically, positions vary according to national and local situations: metropolitan government has long been encouraged by social democratic reformers in the name of equality, solidarity, and management efficiency, while the neoliberal right has tended more to defend division into small competing units, strengthening possibilities for citizens to choose.

Attempts at creating metropolitan governments have, in most western countries, ended in failure and contested experiences: British metropolitan districts, French *communautés urbaines*, the metropolitan corporation of Barcelona, Scandinavian experiments, and Dutch endeavours. Lefèvre (1998) has highlighted two factors that explain these setbacks: failure to consider issues of legitimacy, favouring a rational functional approach instead, and the authoritarian way in which states have acted to enforce

forms of reorganisation that were detrimental to populations and to well-embedded basic local authorities.

There is a point at which the simple application of economic logic in co-ordinating activities at the scale of a more or less identified city region, in order to deal with competition from other European cities, comes into conflict with other logics, especially with the political logic of cities and their longevity. Therefore, it is useless to identify a level within a depoliticised model of "good governance", as if this would guarantee some fantasy version of economic efficiency. Reorganisation of scales is a political process that is neither predetermined nor linear. It has linkages with existing structures, with group and organisational strategies, and with political entrepreneurs at different levels: levels determined in the context of European unification and the transformation of capitalism. This kind of reorganisation occurs in all cities where there is simultaneous experimentation with different scales of proximity in service management: the municipal scale, the intermunicipal scale of the conurbation, and beyond these to the scale of the city region, which extends urbanisation. This last scale, in general, uses a fairly light touch in co-ordinating things. But while it may be the place where co-ordination of public policy – transport, the environment, or to attract business – is learned, it is rarely a site of democracy (Leresche and Joye, 1995). Thus, the Danes and the Swedes are attempting to invigorate a city region, Öresund, linking Copenhagen and Malmö with a new bridge and including the city region of Copenhagen (with a population of 1.8 million), Greater Copenhagen (19 city councils, with 1.2 million inhabitants), and the city council of Copenhagen (population 490 000). The same issues arise when one looks at Lyons, the Urban Community of Lyons, and the city region of Lyons, or at Lausanne, Geneva, and Montreux, which could be integrated into a Lake Geneva metropolis. From the perspective of competition between urban regions mediated to some extent by size, a well-managed Greater Helsinki Region is a possible response. This is an issue that will be assessed in much greater detail below.

Competition and co-operation in the GHR

Competition and co-operation between public authorities in vertical and horizontal terms has become a key issue for all countries. The centre-periphery model, which classically defined relations between the state and local authorities, has been profoundly transformed over the last two decades in most countries. In Finland, the recession of the early 1990s was the profoundly disturbing exogenous event that set in motion the process of state restructuring. Local authorities first suffered from state centralisation of tax and expenses but were granted with increasing power, a different tax system and room for autonomy. Powerful municipalities were mainly in charge of providing services to citizens, from energy to social services. Financial incentives have made them more entrepreneurial, outside looking and involved in

business developments without giving up the focus on their classical key tasks. In housing for instance, examples of public-private partnership emerged on a limited scale to create innovative mix of social and middle-class housing, for instance in the area close to the old harbour in Helsinki.

The economic crisis of the early 1990s posed a particular challenge to existing practices of urban governments, and precipitated local government management reforms. In Finland, implementation of budget cuts was accompanied by increased freedom for some 400 municipal governments to organise themselves as they saw fit. Decentralisation of powers, autonomy and flexibility, including the introduction of principles that fall partly within the sphere of management (whether "new public management" or not), have led to strongly differentiated practices in organising and running urban governments in Finland (Heuru, 2000) and Sweden (Häggroth and Peterson, 1998). Despite the existence of sizeable structures for co-operation (gathering statistics; performance indicators; target norms), particularly directed at tracking the development of social policies, there are very strong pressures within the system towards increasing autonomy for cities. And, despite resistance, political leaders, as well as the part of the state bureaucracy inside the ministry responsible for cities and regions, are increasingly tending, through public policies, to recognise differentiation between cities. In those terms, municipalities within the GHR have a different evolution from the rest of the country, a difference noted for instance in fiscal terms.

E*lements of vertical integration*

The changing role of central government is best analysed through the rule systems. In the environmental domain for instance, municipalities have great power to control urban growth and to act in favour of sustainable development. In Finland, the access to nature is seen as a basic right and the guidelines rightly became a major political issue. The role of the central governments has been very much discussed in that domain. The Ministry of Environment (in charge of housing and land use policy among other things) has come out with a *charte*, a set of guidelines (including European rules and principles such as Natura 2000), general principles, and policy instruments for municipalities. By contrast to the former system where municipalities had to respect strict, detailed central regulations, they now have more legal power to control land development and to implement urban policy, including urban planning. Local plans used to go back to the ministry for approval. The preparation of the new planning legislation took a long time. Three ideas were central:

- to give enlarged powers to the municipality and to reduce central control;
- to have a more open process, to widen public participation at all levels of the planning process at different levels of government; and

- to modify the main conflict-solving mechanism. Instead of appealing to the central government or the administration, citizens can now appeal decisions of local authorities to the administrative court.

Now the government has set national land use objectives that are written down in a regional land use plan and local detailed master plans. The regional plan is prepared by the regional councils in close co-operation with the municipalities. The regional plan is currently the only land use plan, which has to be submitted for approval by the central government. The national guidelines have legal status. They are prepared through a large consultation process, all the sectors of the Finnish society are represented and consulted; local and central, public and private associations. Approval by the Council of State legitimised the process and document.

However, the planning system seems now more vulnerable as citizens can appeal by claiming the local plan does not respect the national guidelines. They can appeal up to the highest administrative court, the Supreme Court of Administration. This is becoming an important conflict-solving mechanism that signals a significant change to national regulation and political control which used to be the two main mechanisms of co-operation and conflict resolution. For instance, both the central government and the city of Helsinki have agreed to move the harbour from its central position to the eastern part of the city, in the new location of Vuosaari. This has become a key issue for the co-operation between Vantaa and Helsinki. However, a group of neighbourhood and environmental groups have made an appeal against the project because traffic connections would go through a Natura 2000 reserve, Porvarinlahti's conservation area. The groups have argued that this conflicts with the Natura 2000 regulations. The Supreme Court of Administration gave its decision in June 2002 and rejected the appeal.

The issue of locating hypermarkets/shopping centres just outside large municipalities also sheds light on the new context of relations between the state and municipalities. In the new tax regime, municipalities have incentives to attract commercial investments in order to receive a share of the corporate tax. But the development of out-of-town shopping centres is seen by the central government and also partly by the municipalities of the Helsinki region as increasing traffic and having a negative effect on the commercial dynamism of the city centres, hence not contributing to the general well-being of the country or the region. There is currently a major project on the eastern side of the Helsinki region that the Ministry of the Environment does not favour. Accordingly the ministry did not approve the recent regional plan which was to enable the construction of that commercial centre. Again, the court will decide the legality of the decisions of the local authority and the ministry and whether the appeals of the municipality and the regional council against the decision of the ministry have merit. This is not the only way to act for the central government. Because it is less involved in day-to-

day regulation of the whole system, it feels more legitimate to use its power in what is considered as its key project. The central government still has many policy instruments to "seek consensus" or to put pressure on reluctant municipalities (financial ones in particular). In the legal field itself, 13 Regional Environmental Centres can also launch an appeal against a local authority or can make a request for amendments. Nevertheless, in this new more legal system, there is a feeling on the municipal side that the central government has more power to react against municipalities and to block decisions rather than to construct positive outcomes or to create consensus. The question of how to make policy for the Greater Helsinki Region in that context is made more difficult.

Co-operation within the Greater Helsinki Region

The rapid growth of the Helsinki region beyond Helsinki and the restructuring of the state within European integration create a new context and new sets of interdependence. Existing tools and modes of co-operation were not designed for this interdependence. First, there is already a process of urban sprawl at work all over the GHR. Beyond the city of Helsinki itself, there is by contrast an organised movement of urbanisation of what were once suburban peripheries in Vantaa and Espoo. But the growth is now spreading all over the GHR. Second, this has important consequences in terms of land use, the cost of public investment in major infrastructures (roads or public transport for instance). Third, middle-size towns such as Lahti or Hämeenlinna are starting to benefit from the dispersal of the Helsinki growth. The Ministry of the Interior would like to concentrate the growth in those towns (up to the Helsinki Tampere corridor) rather than witnessing uncontrolled, dispersed urban sprawl. Co-operation between municipalities within the Greater Helsinki Region is therefore required to achieve those goals despite the long-established autonomy of municipalities that may prevent it.

At the international level, the ministry is very much concerned with the competitiveness of what it sees as the core region of Finland. Despite various rankings that identify the Helsinki region as one of the most competitive in Europe, the fickleness of these rankings is evidenced by Helsinki's recent meteoric rise. Apprehension over the competitiveness of Helsinki is compounded by the city's small size relative to St. Petersburg (5 million inhabitants) on the one hand, and larger urban conurbations in western Europe on the other. Although size is far from being an obvious factor of economic success, Helsinki is commonly perceived as a microurban centre in European or international comparison. It fears marginalisation on the north east corner of the EU and wants to address competition from, for instance, neighbouring Scandinavian countries as illustrated by the bridge between Copenhagen and Malmö, and the new district of Ørestadt to the south of Copenhagen. [2] To some extent, a well-managed Greater Helsinki Region could be a response to the question of size within the so-called competition between

urban regions. There are no ambitious plans for mergers, but the ministry sees its task as raising those strategic issues and the Greater Helsinki Region is one mechanism through which issues of co-operation on planning growth might be raised. The other critical strategic issue is economic competition, particularly in terms of representation to the rest of the world.

These strategic issues are being raised at the same time that the new legislative framework strengthens municipalities' autonomy and search for investment. This new dynamic of competition is a further obstacle to co-operation at a time when the ministry itself may have less capacity to impose co-operation. It fears that classic political and cultural opposition between rural and urban municipalities will only develop in terms of economic competition to attract inhabitants, economic activities, and shopping centres. The scenario of the metropolitan catastrophe, *i.e.* anarchic urban sprawl fuelled by economic growth, internal migration and globalisation processes, is seen in the ministry as a risk which has to be tackled for reasons related to social cohesion, economic competitiveness and sustainable development. The idea of the Greater Helsinki Region, is a policy device to put forward this agenda and to make various local actors think in those terms, in a more or less compulsory way. The GHR policy is seen as necessary to foster the international competitiveness of the whole region and therefore to increase the development of Finland as a whole. What is good for GHR must be good for Finland, a view that does not attract full support within political parties organised around the defence of rural Finland.

To some extent, framing the policy problems in terms of international economic competition and size of the area is a way to put pressure on municipalities to develop co-operation on key projects. International economic competition between urban regions is therefore used as a legitimising device for the ministry to obtain the much-needed co-operation from municipalities seemingly required to foster growth within the GHR without too many negative impacts on the social structure, the economy and the environment. However, the perception of economic competition is not always seen as a crucial for actors within the GHR. After the recession, the remarkable recovery of the Finnish economy has given great confidence to the Finns. To a large extent, it gives the impression that the Finnish model of innovative technology and robust welfare state is safe and coping well with the challenges of globalisation. The GHR strategy does not easily come out as a key element in those developments.

Co-operation and competition between the four municipalities of the Helsinki Metropolitan Area

Municipalities have played their own game for a number of years in relation to the central government. The issues of expansion, European integration and glo-

balisation have created new problems of interdependence within a context where the state is being restructured.

Two points are of particular relevance. First, the views about the level of co-operation between the four municipalities are clearly different. Seen from the municipalities, the co-operation works well and it has improved over the years to take into account new issues that have arisen. The view from the central government, association of local authorities or business interests point to the limits of the co-operation and to the negative impact of competition between local authorities. These conflicting forces are best demonstrated by the political pondering of a possible merge of Helsinki and Vantaa, which underlines both the co-operation between those two but also the challenges of the Espoo case. A second point relates to the Helsinki region. Finnish regions are weak levels of government, under the control of powerful municipalities. Except in the area of training, the link between region and co-operation between municipalities, not to mention integration, has hardly been mentioned at all. However, the region is the administrative level at which to organise co-operation and to foster direct co-operation between municipalities. This has come out clearly in issues related to transport.

Social services

Social services are the main distinctive element to differentiate Nordic municipalities from the rest of Europe. In Finland, social services represent 30% of the budget of large municipalities. The country has achieved remarkable success in terms of its fight against poverty. Nonetheless, this is becoming a more difficult issue. The rapid development of the metropolitan region has put considerable stress on traditional public services such as schools, hospitals, education or social services. Again, the new problems have led to increased co-operation between municipalities particularly between Vantaa and Helsinki. It is now under strain for three reasons: the rapid growth of the area, the recent arrival of immigrants, and concerns about its effectiveness. Despite the strain, the values of the welfare state are still profoundly entrenched within the Finnish society in general and within the municipalities in particular. Social services organised by municipalities with powerful national professional groups have a high level of competence that have also facilitated the diffusion of professional norms. These values and ways of working remain dominant. Within the Helsinki Metropolitan Area, except for the question of immigration, those universalist welfare values seem to prevent differentiation among municipalities. Officers in social services departments emphasise their co-operation on such issues as care for elderly people or assistance to the very poor, the long-term unemployed and drug-related social problems.

The maintenance of similar levels of social services prevents any race to the bottom, *i.e.*, the development of different levels of social assistance, or the move-

ments of poor people going from one municipality to the next to get more support. Most officers mention the need to "carry their responsibility". This is also true for the affluent suburb of Kauniainen. Overall, the trend is to put more resources into child welfare and to encourage more recipients of social assistance to come back to work and to decrease the amount of aid to adults (alcohol, drugs). It has developed very active housing and social policy to prevent increased social segregation. In some specialised areas of social services there are examples of common services organised in particular between Vantaa and Helsinki. The rationalisation of some services has been organised through co-operation between municipalities. The response to new demand, for instance HIV housing centres, has also been organised for the metropolitan area. From that point of view, the long tradition of values and norms entrenched within social professions is a powerful mechanism for co-operation. Chief officers in social services have six formal meetings a year beyond day-to-day co-operation. They also contribute to the production of the excellent statistics system concerning social needs and services. As a whole, they share the values of egalitarianism, social integration, and to some extent social control, which leads to strong positive discrimination for population groups and neighbourhoods in need.

Economic co-operation

The economic boom of the area and the success of the ICT sector bear witness to the successful close co-operation between state agencies, leading firms, the universities and more recently, municipalities (Chapter 6).[3] Furthermore, the representation of the economic future of the Helsinki Metropolitan Region among economic and political élites appears very coherent. The government, business leaders and municipalities alike have enthusiastically espoused the vision of the "knowledge society" which has already brought them success and prosperity. This translates in a complex web of agency linking research, capital, and firms. Municipalities are recent players in this game, although the Helsinki University of Technology has long benefited from local support. The creation of a joint company, Culminatum, as a centre of expertise fostering economic development illustrates this drive, which also takes place within the new regional policy and the regional centres of expertise. Culminatum's board comprises municipalities, chambers of commerce and industries, universities, science parks, incubators, foundations and firms and it plays the role of a forum for different actors. In terms of economic development, Culminatum is therefore at the heart of the co-operation between most economic actors within the urban area, including and beyond the municipalities. Municipalities are part of the network of agencies, science parks, and research centres that seems to be successful in terms of economic development as a network of middle-sized firms and a small numbers of business giants. All municipalities are eager to improve the competitive environment of firms and to

contribute to the strengthening of the local innovation environment. Co-operation is also on the increase to promote the Helsinki urban region in a coherent way and to attract foreign direct investment.

Attracting FDI

Despite the perceived advantages of scale to marketing the GHR, municipalities continue to compete among themselves to attract FDI. This reflects the relative weakness of co-ordinated regional marketing in contrast to the vigorous competition between municipalities, classically between Espoo (which was very successful) and Helsinki, but with Vantaa increasingly involved in the game. Business organisations and business leaders mention from time to time the division between municipalities as an obstacle to increasing the competitiveness of the whole area, for instance to raise the international profile or for planning issues. The municipalities reject this view and the creation of Culminatum was clearly one way to respond to these ongoing criticisms.

Logistics is the one area that has begun to demonstrate the synergies of greater municipal co-operation evidenced by the relations between Vantaa and Helsinki, resulting in increased attraction of FDI. The city of Vantaa was initially opposed to the proposed Vuosaari Harbour Project because all the additional traffic would be diverted within the municipality. In other words, the city of Vantaa would get all the disamenities from development. However, a solution was gradually put forward in a review of the plan for public investment in transport for the whole area. Vantaa negotiated a set of new roads and railways and in particular a rail tunnel from the new harbour to the end of Vantaa on the north side, to limit the ecological impact of the traffic. That was the key to the broad agreement. That solution was made possible by the fact that the municipalities together with the central government have become accustomed to the idea of the metropolitan region over the 1990s. For an issue such as the harbour, the perception of international competition has become a major impetus to co-operation and a justification for heavy public investment. While working with Helsinki on the new harbour, Vantaa and Helsinki have developed a strategy to raise the role of the Helsinki region as the logistics centre of the Baltic Sea.

Internationalisation

Another example of co-ordination is the growing emphasis on the international role of Helsinki, whatever the scale considered. There is a common interest between firms which are eager to attract well-trained workers from all over the world, and élites aiming to raise the international profile of the city. The issue of a skill shortage for firms mates well with the desire for economic growth and internationalisation of the region's political elite. The discourse of competition among

world cities used to raise the competitiveness of the area is seen as particularly important in Helsinki because of the limited size of the urban area and its relative isolation for many years. Citing size as a constraint is a powerful vehicle to bring together municipalities, including Espoo. Although Espoo has faced considerable growth over the past 20 years, its 217 000 inhabitants make it a major municipality in Finland, but hardly more than a town in the European context.

An example of Finnish networking to further this goal includes the informal committee put together by the then new Lord Mayor of Helsinki in 1997 to build a strategy for the Helsinki region and establish a Finnish-style partnership to implement it. The club comprises the four mayors, a few academics and university rectors, the director of the chamber of commerce, SITRA, the national theatre, business leaders, a leading journalist and two leading civil servants. Following this move, the city of Helsinki and its lord mayor have become very active in different transnational networks: Eurocities (already mentioned, which is chaired by Eva-Riitta Siitonen), the European Union capitals of Europe (also chaired by the lord mayor), the Union of Baltic Cities, and the Network of Nordic Cities. In the words of the mayor, Helsinki is a "pocket size metropolis" but very active on the international scene with a wide range of responsibilities. The city of Helsinki has therefore promoted an active city marketing strategy together with a foreign policy, in particular in the Baltic Sea and in Brussels. The most interesting aspect of these initiatives from the co-operation/competition perspective is that the lord mayor is clearly seen as representing the whole metropolitan region when she goes to European meetings, or when she chairs Eurocities. She articulates the views of the whole region. The other mayors do not dispute this role. This internationalisation has therefore led to the creation of the group or club (one may say oligarchy or even growth coalition to some limited extent) to define a strategy for the area and the representation of the region outside by the Lord Mayor of Helsinki. This is an interesting dynamic of the institutionalisation of a political role, which leads to the definition of a common interest for the metropolitan area and for the region. Once the strategy is in place, the group can effectively lobby for Helsinki both in Helsinki in relation with the central government (to limit financial cuts or to ask for more money for the infrastructure) and in Brussels. This informal group is a good example of a model of Finnish partnership that relies mostly on networks.

Three visions of the future: status quo, municipal merger and municipal partnership

The Helsinki Metropolitan Area used to be run by four independent municipalities, one being over-dominant, within the strict parameters of the universalist Finnish welfare state. The recession, globalisation processes, the end of the Cold War, the making of Europe, and a more individualised society are creating pressures on the model. Finland emerged from the deep recession of the 1990s by

reshaping the state, joining the EU, raising entrepreneurship and economic development priorities to accompany the boom of high-tech firms, by promoting and developing itself as the place for new technology (a learning society), quality of life, social cohesion and as the logistics corner of the north east corner of Europe on the Baltic Sea and last but not least, by accepting more immigrants, by maintaining social services and modernising public services and the management of utilities. This is quite a remarkable achievement within a few years. The question is: what next? How viable is this model? It is productive to try to envision how alternative governance architectures would fare in the medium to long-term. It is important to stress that these are not predictions or forecasts of outcomes but prospective conjectures to aid public discourse on the issue. As such, the assumptions underlying the conjectures are made as explicit as possible to promote the same commitment to transparency in the anticipated public debate.

Status quo

The simplest policy recommendation would effectively sum up the view from the municipalities: all is well, the central government should not bother about the co-operation between municipalities but rather make choices in favour of the Helsinki region to give them more resources to organise the development of the area. Municipalities co-operate very well on a number of issues, there is an increased metropolitan view of strategic issues fostering new governance development, and some competition to bring more dynamism to the area (Box 7.2).

Under this scenario the Helsinki Metropolitan Area would continue to consist of Helsinki, Vantaa, Espoo, and Kauniainen and be served in transportation and waste management by the Helsinki Metropolitan Area Council (YTV). The Helsinki Region and Greater Helsinki Region would consist of the same municipalities as today, with the same structure of regional councils. The present trends, principles and policies, such as spatial integration, municipal sovereignty and voluntary regional co-operation, would remain in place. Assumed projected outcomes are for the city of Helsinki to continue to grow to a maximum population of about 600 000 at the rate of approximately 4 000 new housing units/year for about five or six years, when available space would be consumed. Most of the land freed up by the construction of a new harbour at Vuosaari, as well as the Malmi airport and other former industrial land, would be converted to primarily residential development. Projected social outcomes based on the emerging socio-economic differences are not desirable, as the city of Helsinki would end up with a disproportionately large share of the region's poor and needy households. Although the trends are not yet dramatic, they are clear enough to cause concern given the large role that local governments play in providing social services. Immigrants dependent on social .assistance and other allowances would tend to be concentrated, with attendant social problems, in

Box 7.2. **Municipal co-ordination in the Helsinki Region – some examples**

Co-operation between the central state government and the municipalities

The committee of the central state government and the municipalities of the Helsinki Metropolitan Area with the aim of fostering mutual co-operation.

The consortium of the state government, the municipalities of the Helsinki Region and the Uusimaa council with the aim to follow-up the housing policy contract.

The committee responsible for traffic and transport issues of major importance for the Helsinki Metropolitan Area and its future.

Statutory co-operation

The statutory duties of the Metropolitan Area Council (YTV) include waste management, public transport planning and air pollution in the geographical area comprising the cities of Helsinki, Espoo, Vantaa and Kauniainen.

The health service district of Helsinki and the Uusimaa province (HUS). This district includes 32 municipalities altogether. This joint organisation provides specialised health service to 1.3 million people.

Maintenance of two polytechnics, Espoo-Vantaa Institute of Technology (EVTEK) and Laurea Polytechnic.

Development companies, foundations, associations

Culminatum Ltd. is a development company owned by the Uusimaa regional council, the cities of Helsinki, Espoo and Vantaa, and the universities, polytechnics, research institutes and business community of Helsinki Region.

The main function of Culminatum is to manage the Centre of Expertise Programme within Helsinki Region over the current second programme period 1999-2006. This programme promotes utilisation of the highest international standard of knowledge and expertise in business, job creation and regional development.

Helsinki Region Marketing Ltd. (HRM) (also Helsinki Metropolitan Development Corporation or HMDC, when operating in Russia and Baltic states) is a company which promotes international business in the Helsinki Region. HRM is a joint-stock company owned by 52% by the city of Helsinki. Other shareholders are the municipalities around Helsinki, Espoo and others, Helsinki Chamber of Commerce and the Uusimaa regional council.

The AMI-foundation, which is active in the field of adult education and related research projects and international co-operation.

The HOAS foundation, which is responsible for student housing in the Helsinki Metropolitan Area.

The association responsible for providing and developing the recreational areas in the Uusimaa province.

Box 7.2. **Municipal co-ordination in the Helsinki Region – some examples** (*cont.*)

The mayors' co-operation in the Helsinki Metropolitan Area

The mayors' co-operation in the Helsinki Metropolitan Area based on agreement. The aim is to improve the competitiveness of the region and to launch a shared vision and a co-operative strategy for the region, as well as to develop the co-operation with the central state government.

In every field and expert area of municipal functions there are special committees or working groups meeting regularly and deciding upon co-ordination, running joint projects and tasks.

In addition to the above-mentioned, there are many examples of successful networking in keeping with the Finnish proclivity for more informal, horizontal modes of organisation.

the city, although they would be spread throughout its neighbourhoods, without any distinctive ethnic area or sub-culture emerging.

The extrapolation of emerging trends also sees Vantaa slowly transformed into an "edge city", loosely based on the American model: hypermarkets, technology parks, entertainment zones surrounded by parking lots and linked by limited-access highways that connect to remote residential areas and other centres. This pattern would become the dominant mode of development, especially around the airport. Espoo and Kauniainen would become progressively wealthier and more entrenched enclaves for the affluent, especially highly paid workers in the IT economy. An international university might locate itself in Espoo, further advantaging the municipality. Their tax rates would decline relative to Helsinki and Vantaa, as would their share of social problems and social housing. Like Vantaa, population growth would outstrip Helsinki and auto-dependent sprawl would increase energy consumption, pollution, and traffic congestion.

In most western European municipalities, problems of urban segregation are often wrongly analysed in terms of segregation of the poor. By contrast, urban segregation, when considered as an issue, reveals the extent to which upper and middle classes have the desire and the resources to live among themselves. Urban segregation is most of the time a problem of the rich, which desert the urban fabric to isolate themselves. This pattern has developed in an extreme form in the

United Kingdom. In most European countries, part of the middle class still remain in the city but one can always find the middle-class suburb, usually on the western side of the city, which jealously preserves its autonomy within the metropolitan region.

This pattern is not adequate to describe the situation among the four municipalities of the Helsinki Metropolitan Area, in particular the contrast between Espoo and Helsinki and Vantaa. The percentage of families receiving social subsidies is lower in Espoo (7.9% instead of 10.4% for Helsinki and 10.2% for Vantaa but 5.1% for Kauniainen), the rate of children and adolescents in social welfare authority's custody per 1 000 is much lower over the past decade (9.95 in 1999 in Espoo against 23.39 in Helsinki), the rate of unemployment is lower (5.9 in 2000 in Espoo against 7.2% in Vantaa and 8.2 in Helsinki), its population is better educated (70% of Espoo inhabitants have attained at least an upper secondary education against 65.2% in Helsinki and 60.8% in Vantaa), there are slightly more owner-occupied dwellings. On the other hand, the average sales prices of flats, the construction of new dwellings, or the rate of long-term unemployed do not reveal such a contrast. The conservative council is probably fiscally run more strictly as the municipal loan in EUR per inhabitant is three times lower in Espoo than in Vantaa.

It would therefore be wrong to assume in a simple way that Espoo is the major rich municipal enclave of the Helsinki Metropolitan Region. Again, as with much of the discussion of fragmentation, the policy concern is motivated by incipient trends rather than evident polarisation. From a static perspective, both in terms of social structure and in terms of politics, the trends observed are not a major threat for the well-being of the whole metropolitan area due to the massive redistributive mechanisms within the Finnish welfare state and the economic development of the whole urban area. However, over time, this dynamic reveals more than simple differences of income. In many respects, Espoo has grown against Helsinki and is culturally reassessing its difference. The social and cultural dynamics may together give rise to an increased fragmentation within the urban area and the gradual separation of Espoo jeopardising first the integrated governance of the area and second the area's sense of social cohesion.

Until now, although Espoo has been a harsh competitor to attract firms and middle classes, both Vantaa and Helsinki have also done well because of the dynamism of the whole area. The remaining strong egalitarian mould of Finnish society has also largely prevented any massive differentiation in terms of spatial segregation. However, the Finnish society is changing, immigrants have become a new given, particularly in Helsinki (not so much in Espoo). Processes of globalisation create major pressure for the Finnish society that has been remarkably resilient so far. It is, however, not a given that things will remain so. In such a context of "*de-traditionalisation of society, de-nationalisation of society*" as Giddens (1994) put it, what was once a conservative suburb within a relatively integrated metropolitan region

and Finnish society, could well become something of a more isolated conservative edge city on the west. Although no public opinion survey is available, there is a feeling that living in Espoo is considered as clearly different from living in other parts of the metropolitan area. If those trends develop, *i.e.*, Espoo developing as middle class reserve more isolated from the rest of the metropolitan area with declining political and redistributive mechanisms to limit inequalities, there is clearly the risk that the interests of Espoo will markedly differ from the interests of Helsinki and Vantaa. As the state has been reorganised and as municipalities have been given more autonomy, there is a well-identified risk of serious political conflict, diverging interests and fragmentation within the urban area.

Until now, existing co-operation among municipalities on the one hand, national political co-ordination and redistributive mechanisms (through welfare) on the other have prevented such a scenario from taking place. This is therefore a potential threat for the next ten years. It could also be argued that this may be a positive development allowing more competition and more diversity within the area, which under some circumstances, may contribute to the overall competitiveness of the area. In western Europe however, this sort of dynamism has most of the time led to declining services, wasteful competition between areas and increased fragmentation making public policy less efficient. Dynamics of "secession of the rich", as it is sometimes called in reference to the American case, can develop quite quickly and lead to very negative unintended effects in terms of sustainable development, social integration and economic development. In this light, attempts at regional co-operation would meet with mixed success, with issues of tax equity, social housing, cultural life, and economic development as nagging sources of political friction. Indeed, if the interdependence of problems within the metropolitan region seem on the rise (from immigration to economic development and housing), the co-operation between municipalities remains limited to a large extent. Planning is another example, despite the existence of the regional plan. The risk of fragmentation of metropolitan governance is therefore not marginal. The city of Helsinki would gradually lose national economic and political prominence as it fell to less than half and ultimately to less than a third of the metropolitan region's population. Regional socio-economic equity would suffer.

Municipal merger

Under this scenario, the municipalities of the Helsinki Metropolitan Region area would merge into a single municipality, although all would maintain their names as sub-areas. The Helsinki Region and the Greater Helsinki Region would also need to be empowered in new and appropriate ways to compensate for Helsinki's increased power. Other municipal mergers may be appropriate within the region. Because the tax rates and level of government services does not vary much

between the existing municipalities, merger would be less problematic than in counterpart metropolitan areas in Europe and America.

Helsinki, Espoo, Kauniainen, Vantaa and Sipoo could retain their historical and cultural identities, but not their political autonomy. As power is shifted upward to the metropolitan area, it would simultaneously be shifted downward to the neighbourhood or *arrondissement*. This political arrangement would set a good example for other European and American metropolitan areas that suffer from similar fragmentation into an arbitrary mosaic of municipalities with outdated boundaries. As the metropolis grows into too many political units, it needs to consolidate; and as it consolidates, it must find ways to politically enfranchise its citizens in new political sub-units and jurisdictions that are sensibly sized and shaped.

The Helsinki metropolitan population would have room to grow to well over a million inhabitants. Land use planning in the metropolis would become more politically and administratively streamlined, as would social housing and such projects as the new harbour. Intramunicipal conflicts of interest and internecine political fighting would still exist, but would be less intransigent than with the present intermunicipal conflicts and competition. There would be, for instance, less competition over facility locations for private enterprises that bring with them high-income taxpayers. Issues of social equity, although requiring continued attention and vigilance, would be more easily addressed across the larger municipality. Spatial mixing of immigrants and other minorities over a larger geographic area would be more easily accomplished. Economic competitiveness would be potentially increased, because Helsinki could mount a larger and more co-ordinated economic strategy in the global market. In general, an expanded and diversified Helsinki would enjoy and exercise more economic, political and cultural clout in the EU and around the world.

The functional advantages of this second alternative must be assessed against existing political realities. The proposal runs directly counter to the country's strong tradition of local autonomy. To be sure, the relative similarity of service levels and tax rates within the Helsinki region would make merger less disruptive in terms of service levels and windfall gains and losses than might be the case with amalgamation of cities in other countries. However, the merger of the municipalities would deprive the area of the benefits of fiscal competition discussed earlier (Chapter 4). In the Finnish context, that competition serves as a constraint on the monopoly power of large governments and provides incentives for municipalities to provide services cost-efficiently. Those positive benefits combined with strong expected political opposition to merger argue against municipal merger at this time. Specifically, existing opposition to the suggestion may pose significant fiscal dangers. Given the strong opposition of Espoo and Kauniainen to merger, the outcome that might well emerge from the political process is one in which

Helsinki and Vantaa would be merged (an idea that has in fact been proposed). If that were to occur, the wealthier areas of Espoo and Kauniainen could deem themselves more exempt in terms of their responsibility to provide social housing and to share their wealth with the rest of the metropolitan region.

Middle ground: a range of possibilities for greater municipal partnership

There is a wide array of possibilities between business-as-usual and formal municipal merger. One possibility would be a stronger system of regional governance achieved through incentives and voluntary co-operation. Unfortunately, such a system would be prone to the risks of greater fragmentation outlined above. An alternative is to develop a system of programme contracts between ministries and municipalities. In fact, there has been some experimental contract initiatives in the Helsinki Metropolitan Area dealing with the division of tasks and resources of housing and infrastructure. The problem has been that the contract has not been binding. A stronger contract system could be developed as an official system of regional development. This would include different contracts for different regional entities and for different problems like the core area of Helsinki and the Greater Helsinki Region. As an example, a binding contract between different ministries and the city of Lahti and surrounding areas could be a means to manage the anticipated growth which will take place after 2006 when the railway shortcut will be in use reducing travel times to central Helsinki from one and half hours to 45 minutes. National policies and practices to encourage and in some cases require new forms of organisation and co-operation are suggested in the Government Programme of Prime Minister Paavo Lipponen's Second Government published on 15 April 1999.

> *"Structural and urban municipal policy appropriations will be grouped together under one heading in the state budget, thus facilitating their flexible use. Urban municipal policy will be targeted to suit the needs of different sizes of towns and cities and different types of urban municipalities. Inter-city networking will be supported. The prerequisites for the balanced development of the metropolitan area as well as its international appeal and functionality will be strengthened. Permanent cooperation and consultation procedures will be created between ministries and municipalities in the metropolitan area."*

Another possible scenario might be a super-agency or metro-authority. A much stronger YTV, for instance, could expand its functions beyond transportation and waste management to include land use planning and social housing. Because land use and housing are always contentious issues in any metropolis, it may be necessary to create a new super-agency, perhaps under a stronger metropolitan council to deal with these and other matters.[4] In any case, if the new harbour is built at Vuosaari, Sipoo should be brought into the Helsinki Metropolitan Area. The Greater Helsinki Region would also be incentivised, encouraged and in some instances required to work more closely together. NUTS 3 regional councils, for instance, might

be granted more power. It seems premature to bring all 62 municipalities of the Greater Helsinki Region together under the aegis of this super-agency. However, in the meantime, some of the smaller municipalities could be given incentives to work more closely together.

Possible outcomes would obviously depend on the degree of intraregional co-operation and restructuring. (See Chapter 4 for a discussion of the fiscal advantages of a relatively powerful regional authority with its own source of revenues.) Issues of regional social equity could be addressed more easily and expeditiously if municipalities yielded power on issues of housing policy and location of social housing to the new super-agency that controlled housing distribution across the five municipalities (including Sipoo) of the Helsinki Metropolitan Area and possibly across the 12 municipalities of the Helsinki Region. This super-agency might also control or at least co-ordinate and manage land use and other matters, such as transportation, economic development, environmental sustainability, culture and recreation.

The super-agency's management of land use and housing development would potentially increase the economic competitiveness of the region. To attract and retain a balanced labour pool, industry sectors such as IT will require increased regional co-operation in matters of tax rates, housing, transportation, culture, education, etc. Sustainability could also be fostered through the efforts of such an agency. Because ecology is blind to political boundaries, a regional approach is inherently more effective. River valleys and regional ecosystems are increasingly thought of as sensible and compelling political units. Although the Helsinki region has achieved great success in the conservation of natural areas and resources and has preserved a public network of continuous green zones or fingers across municipal boundaries, even greater strides in environmental management would be possible. Indeed, metropolitan Helsinki, with its dense central city, extensive green preserves, and ring of "forest suburbs", has the potential to be an international leader in reducing and managing its environmental footprint.

To be sure, the co-operation between the four municipalities of the Helsinki area is on the increase and has addressed some of the main problems. However, institutionalising these mechanisms of co-operation at the metropolitan area level is suggested by the newly gained autonomy of municipalities and the representation of the pressure of competition. The demonstration is clearest in assessing the limits of more informal forms of partnership.

Beyond the world of government, the governance of the area is organised by formal and informal networks. The main elements of the "Helsinki vision" produced by the Lord Mayor of Helsinki's club is of "*a Baltic Rim business and logistical centre which draws its strength from science and the arts. The Helsinki region is characterised by an enterprising spirit, high quality of life and an urban proximity to nature.*" The Helsinki region should become:

- a creative centre of technology, learning and culture;

- a centre for business and logistics in northern Europe;
- a safe, pleasant and attractive living environment.

Different projects are planned within this framework. The simple message to national authorities is that the Helsinki region should be given the resources and the autonomy to grow, to compete on the global scene. Beyond these ideas, the club has also put forward an original structure of implementation that resembles partnership. The club uses not only the resources of the main organisations (cities, chamber of commerce) but most particularly it uses the joint bodies which have recently flourished within the urban area, *i.e.*, the Helsinki Region Marketing, the City of Culture Foundation, Culminatum. All those are multipartner bodies. While it is too early to assess the performance of this governance mode, implementation of all these projects would indicate a clear move towards a more informal structure of governance at the metropolitan level. One that is arguably more flexible, responsive, oligarchic but less accountable, bringing together partners and organisations from different horizons to elaborate and implement a strategic plan for the metropolitan area including, but beyond government.

A new regional authority would provide the opportunity to constitute more formal mechanism to govern, and articulate the networks within an integrated perspective. Experiences elsewhere in Europe suggest that metropolitan governments in the classic sense are often very difficult to establish, lead to resistance and bureaucratisation. But this is only one solution. A different solution brings together elements of government to structure governance at the metropolitan level. In Britain, France, and Italy, for instance, attempts are made to give some political guidance to the area. If politics are absent, there is a risk of technocratic steering, networks that may organise within an undemocratic oligarchy excluding some interests and groups. The role of political leadership in many urban areas is to mobilise different groups beyond government and to structure a mode of governance within which different types of organisation may play a role. To some extent, because networks increase fragmentation, it also allows for some actors, some institutions, to try to control, to use, to articulate, to integrate some of these networks within their own strategies or long-term goals. Instead of going too far along the road on polycentric governance, it is recommended to organise them. The focus on the integration of different policy networks, for instance, paves the way to reintroducing politics, legitimacy, and collective choice.

Policy recommendations

The language of co-operation and governance has appeared frequently in this assessment but it should always be kept in mind that there is not one optimal governance structure and that co-operation is not a good as such; it depends on what it facilitates, how it is realised and who benefits.

The process of structuring a mode of governance of the Helsinki Metropolitan Area should be encouraged by the central government. It can take different form; election is one of them. On the tax front, sharing the revenues of company tax may be a solution to prevent fiscal competition in the area elaborated in Chapter 4. Some policies could be organised at the metropolitan level such as employment, planning, housing, anti-poverty but without creating a new administrative level. Municipalities in co-operation with other organisations have the resources to implement them.

From the Ministry of Interior's point of view, managing the growth of the Helsinki region is crucial in the long term to avoid urban sprawl and the waste of resources. In that context, the GHR is an important issue. Municipalities within the Helsinki region should also revise their co-operative strategy to increase the general well-being of Finland, to raise its competitiveness and to make it easier to negotiate with the rest of the country. The new regional strategy has gained support but the attempt to develop a more targeted urban policy for Helsinki Metropolitan Area has encountered political opposition. Raising the issue of the GHR may be a way to develop a "tailored" urban policy for Helsinki while focusing on the interdependence between the metropolitan area and the other 58 municipalities, thus framing the policy issue in a completely different way.

Beyond the four municipalities of the metropolitan area, beyond the Helsinki region in particular, most municipalities within the GHR are rural municipalities very much attached to the traditional values of Finland, as are people from the rest of the country. They see the development of Helsinki with the greatest lack of trust. This is not specific to Finland, the same is true in all centralised countries where in recent years, the major city has faced continuous growth much to the irritation of the rest of the country, from Portugal and Ireland to France and Britain. They fear that any transfer of resources to Helsinki will jeopardise their own resources or marginalise them. They also fear social changes brought forward by European integration processes and the arrival of immigrants. On the other hand, the increasing significance of the Helsinki region for the economic growth of the whole country is also quite clear. In many ways, in order to organise and sustain the growth, the Helsinki region needs financial support to make major investments in terms of transport, housing, roads, rails, harbour, airport, energy.

The problem of co-ordinating metropolitan growth is an important issue for the future and the Ministry of Interior is clearly right to worry about it particularly as there is an opportunity to develop rail links between Helsinki (Espoo, Vantaa) and towns beyond the Helsinki region. However the municipalities of the Helsinki region will not easily jump on the GHR wagon with the risk of adding constraints to their organisation. GHR should not become yet another issue of conflict between the central government and the municipalities within the Helsinki region. So far, the government has provided very few incentives to encourage co-operation at that level or to indicate what is needed.

Recommendations

A *new deal between central government and the municipalities of the* Helsinki *region*. The question is probably not to create a new administrative level, unless the GHR becomes a new region instead of the existing regions within the GHR who would be suppressed. In the new system of rules, conflict between municipalities seem to be solved in a negative way, not so much to elaborate constructive solutions. Central government should keep an active role to encourage GHR thinking. This proactive role of central government remains essential for major infrastructure for instance in terms of funding. Now that the central government has identified its priorities for the GHR, there is room to negotiate a sort of general agreement for a few years between the central government and municipalities of the GHR. For instance, it does make sense to take some money from the richest municipalities from the south to finance the rest of the country because they benefit from services and workforces trained elsewhere. The interdependence between Helsinki region and the rest of the country should be made more apparent. But that makes sense if the central government agrees to finance major infrastructures which are crucial for Helsinki region economic development and therefore for the whole country. It may be a good period to put all these elements together to negotiate some sort of joint agreement between Helsinki region or municipalities and the central government. This agreement should also receive large publicity and raise a debate in Parliament as the goal is to reassess both the role and the dependence of Helsinki upon the rest of the country, *i.e.*, how can Finland develop as a whole by making a better use of the motor, Helsinki.

Notes

1. Helsinki is run by 85 councillors including a council board of 15 elected at the proportional representation for four years. The council elects a lord mayor and four deputy mayors for seven years with respect to the balance of political forces within the council. They are each responsible for distinct sectors of work and report to the city board. The council is run by seeking consensus among political forces. The deputy mayors and the lord mayor present projects and budgets to the council board. These are half civil servants and half politicians. They head the civil servants and they work with council committees. Most of the council money is spent on compulsory budgets with norms established at the central level but there is some discretion to use funds for information technology, culture, and management. An interesting development, and a sign of Europeanisation, is the fact that there are now discussion in Finland about the role of mayors and the possibility of directly elected mayors.
2. This consists of a district with services, housing and, above all, economic activities intended to shape a new urban region – "Öresund" – extending from Copenhagen to Malmö (3.2 million people). The élites are already actively working to create an image, a labour market, a festival.
3. Helsinki was the fastest growing European metropolitan area between 1995 and 1999 with a growth rate of nearly 1.5% per annum. Other fast-growing metropolitan areas include Dublin, Oslo, Paris and Stockholm. In contrast, the average growth rate of European metropolitan areas was roughly 0.5% per annum during that period.
4. Portland Metro, an elected body governing selected issues for the 29 municipalities of the Portland Metropolitan Area, has demonstrated the efficacy of regional authorities in co-ordinated land use planning. Delineation of an urban growth boundary has been highly successful in limiting new land area brought into development to 2% despite population growth of 50% since the mid-1970s.

Annex I

Comparison Regions

Tel Aviv-Yafo, Israel

Located on Israel's western seaboard, the Tel Aviv-Yafo metropolitan area is the central hub of commercial and high-tech activity in Israel. The city occupies a key geographical and strategic position as the dominant entry point to Israel for people, capital and trade. The current population of the Tel Aviv-Yafo is around 348 000. The city is the core of Israel's largest metropolitan area, which covers around 2.65 million people.

Employment in the Tel Aviv metropolitan area has grown steadily in recent years. The majority of this employment is in financial and business services (28.6%), education and health (20.9%), wholesale and retailing (13.6%) and the other production industries which includes manufacturing (12.4%). Per capita incomes and growth rates in the Tel Aviv-Yafo metropolitan area are on average higher than those for Israel as a whole. Despite this steady growth in employment and incomes, unemployment in the Tel Aviv area has fluctuated between 7 and 9%, and there is an increasingly wide split in earnings between those employed in the globalised high-tech and commercial sectors and those in activities serving largely local markets.

Dublin, Ireland

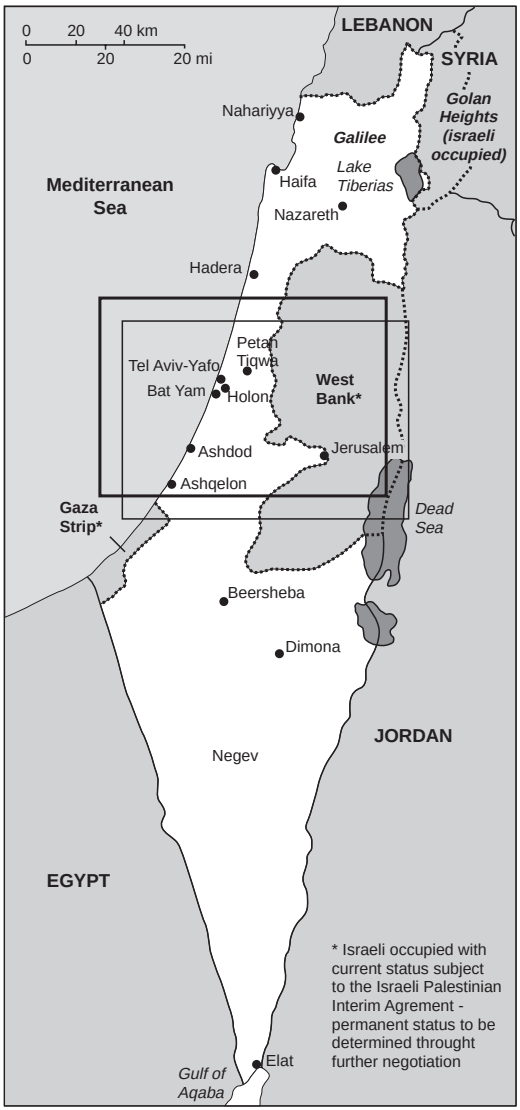
Dublin city and the wider Dublin region is situated on the eastern coast of Ireland. The Dublin region has experienced rapid population growth over the last 50 years. In 1951, the population was 693 000 compared to 1 058 000 in 1996. Over the last decade in particular, population growth has been in the urban fringe and suburban areas due to low-density extension of the Dublin conurbation around the developing orbital road network. Dublin's inner city experienced severe industry and employment loss until the mid-1990s.

Since the late 1950s, industrial policy in Ireland has emphasised inward investment and during the 1960s this led to the establishment of a significant number of new manufacturing operations in the Dublin region. Since the early 1970s, and the beginning of the wave of electronics inward investment to Ireland, policy initiatives have meant that the metropolitan concentration of FDI has been less marked. The Dublin region, however, remains a significant destination for manufacturing inward investment in electronics and related industries. It has also attracted significant inward investments in software and is the dominant centre of the rapidly growing Irish indigenous software industry.

Portland, Oregon

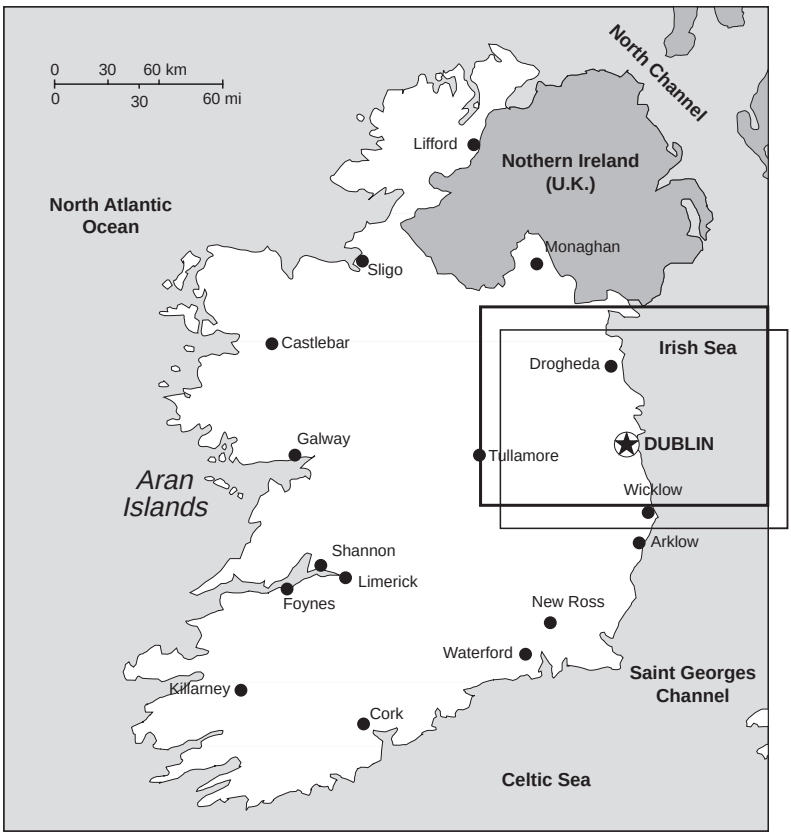
Oregon is one of the most heavily forested states in the United States, and the region's native forests provided enormous quantities of merchantable timber. During the

Figure A1.1. **ICT region in Tel Aviv-Yafo, Israel**



Source: OECD/TDS.

Figure A1.2. **ICT region in Dublin, Ireland**

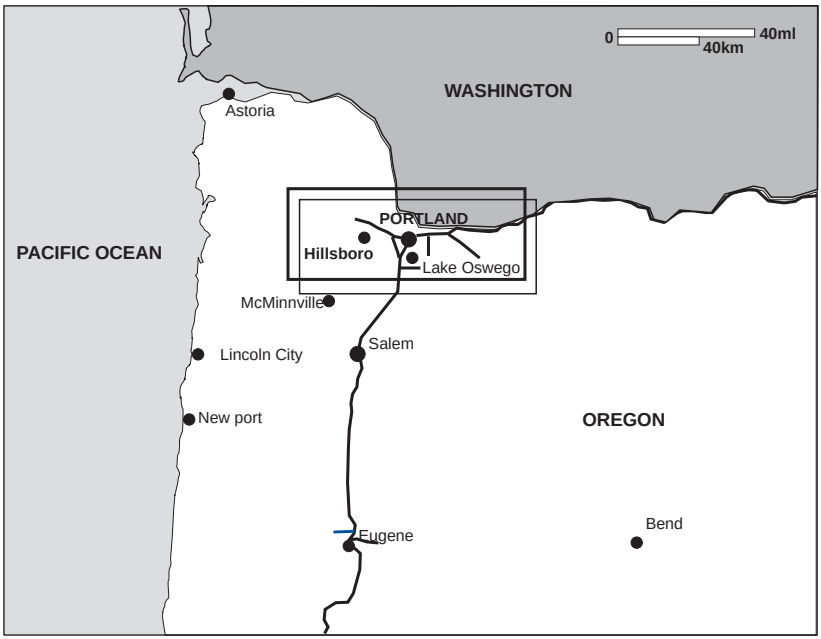


Source: OECD/TDS.

20th century, the region developed a number of important metal manufacturing industries. Portland has a long history as a centre for the export of raw materials. The city serves as a regional centre for many financial, service and distribution firms. As of 1999, the region has nearly 1.8 million residents and more than a million workers. The region's central city, Portland, has a population of 530 000.

The region has more than 50 000 businesses with a payroll and a gross regional product of more than USD 60 billion. Portland/Vancouver is the 27th most populous metropolitan area in the nation, but ranks 10th in export volume and 20th in number of manufacturing jobs. Portland largely avoided the brunt of the recession that struck the United States in 1990-1991. The region has added more than 200 000 new jobs during the decade, seen its per capita income rebound from slightly less than the national average to more than 8% above the US average, and also seen its unemployment rate decline to 30-year lows. Employment growth averaged more than 4% per year for the five years 1992 to 1997.

Figure A1.3. **ICT region in Portland, Oregon**



Source: OECD/TDS.

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