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Abstracts of Papers

The abstracts listed below are arranged in alphabetical order of author / lead author

Differential Impacts of Large-Scale Transportation Project on Land

Values Haim Aviram (Faculty of Architecture and Town Planning/Faculty of Civil Engineering) and Daniel Shefer (Faculty of Architecture and Town Planning), Technion-Israel Institute of Technology

There is wide acceptance of the fact that there is an impact of major transportation projects on land values. However, not many studies document these differential impacts by land-use type. Studies that detect these differential impacts do so primarily with respect to land price. Nevertheless, even the same land-use type may be impacted differentially depending on its locational characteristics, intensity of use, land ownership, etc. Thus, these parcels of land may be referred to as 'sub-land-use types' that could be impacted differentially by the transport project, at least as far as the magnitude of the impact is concerned. Three major variables that define such sub-groups are considered in the present study: 1) the relative improvement in accessibility offered by the project; 2) the amenities of the neighborhood; and 3) its economic status. We hypothesize that the level of these three variables will jointly determine the change in land values of sub land uses. Furthermore, the relative importance of these variables is land-use type specific. The empirical part of the study deals with the land-value impact of the Ayalon Freeway, in the metropolitan area of Tel-Aviv. The study covers a period of over 25 years, from the project's early inception. A considerable amount of data was collected in order to test the hypotheses regarding the differential impacts of transportation project on land values by land-use type.

Economic Growth, Inequality and Spatial Demographic Distribution

Raphael Bar-El (Department of Public Policy and Administration) and Dafna Schwartz (Department of Business Administration), Ben-Gurion University of the Negev

One of the most important challenges of economic policy is the combining of economic growth and the reduction of inequality and poverty. The change of the regime in Brazil can be seen as a reaction to the failure of economic policy in this field. We focus on the case of one of Brazil's states in the Northeast, Ceara, that experienced a rapid macro-economic growth in the last decade, but with no reduction of poverty and inequality. Established economic theory shows that economic growth generally implies a changing economic structure (relatively less agriculture, and more industry and later services), and a process of urbanization. Our hypothesis is that in addition to industrialization and urbanization, a component of spatial urban restructuring is necessary for the achievement of a more egalitarian economic growth. The persistence of inequalities and high levels of poverty in spite of the macro-economic growth can be explained by an inadequate process of urbanization and by the increasing level of urban concentration in the metropolitan region. We test this by comparing data on the macro-economic growth of Ceara with data on various spatial and economic variables: trends of urbanization; the concentration of urban population; changing economic structures (the distribution between agriculture, industry and services) in the regions outside the metropolis; and levels of productivity. Results show that there is a persistent and even increasing inequality of income distribution in the state despite macro-economic growth, and that this does not represent an efficient free-market equilibrium. The growth of productivity in agriculture and in services is zero, the urbanization process is inadequate (leaving much of the rural population in a state of hidden unemployment), and the migration process leads to too heavy a concentration in the metropolitan region. The main conclusion is the need for the adoption of a regional policy, involving a spatial reallocation of public expenditure for physical and human infrastructure, leading to spatial urban restructuring.

Regional Development Agencies: Which Model for a Small Country?

Ross Brown (Knowledge Management Directorate, Scottish Enterprise) and Mike Danson (Paisley Business School, University of Paisley)

A regional development agency (RDA) is ‘a regionally based, publicly financed institution outside the mainstream of central and local government administration, designed to promote economic development’ (Halkier and Danson, 1997. Intervening and interacting with the economy at the most appropriate jurisdictional level (Armstrong, 1997), RDAs can bring substantial resources to bear on problems of local economic development, combining regional, industrial and training policies and resources on specific projects. RDAs represent the manageable ‘bottom-up’ alternative, being flexible and receptive to the specific needs of indigenous industry within the region (Danson, Lloyd and Newlands, 1993). A number of responsibilities, which otherwise may be split between different departments or quasi-government agencies (such as the provision of property and sites, the attraction of inward investment, brownfield regeneration, cluster strategies, and urban redevelopment), by being located within a single organization, can reduce costs and realise synergies (Moore and Booth, p.119). Following a Europe-wide survey, a model RDA was defined by Halkier and Danson (1997, p.245) as a body which: first, is organisationally in a semi-autonomous position *vis-à-vis* its sponsoring political authority; second, supports mainly indigenous firms by means of ‘soft’ policy instruments; and third, is a multifunctional and integrated agency, the level of which may be determined by the range of policy instruments that it uses. Although RDAs have been established across the countries of the OECD, change since then, and enlargement and deepening of the EU in particular, has raised questions over the continuing relevance of this model framework to analyse the RDA. This paper reports on a new survey of RDAs, conducted in association with EURADA, which suggests RDAs are being demerged and disaggregated into smaller bodies with more focused functions, but with a high degree of control over their operations. However, in the Celtic countries, which provided the role models for many RDAs, ever more responsibilities are being accumulated by Scottish Enterprise, while there is uncertainty in Ireland. England has latterly established RDAs, with wide ranging powers and responsibilities, but with limited democratic control. These apparent contradictions will be explored in this paper.

A Multi-Criteria Approach to Assessing Sustainable Transport N. Herb
Castillo and David E. Pitfield (Department of Civil and Building Engineering
Loughborough University)

In recent years, sustainable transport has become a fundamental goal of UK transport policy. Despite the continuing popularity of this concept, no formal analytical framework currently exists to assist decision-makers and planners in assessing progress towards sustainable transport. This paper describes a robust, systematic and rigorous methodology for deriving a small, appropriate set of sustainable transport indicators that, when presented simultaneously, can provide an insight into the sustainability of a transport system. The methodology is based on the application of multi-criteria analysis (MCA), namely, the 'analytical hierarchy process' and the 'weighted sum model'. The strength of this approach is that it allows incorporation of the subjective assessments of pertinent stakeholders, which is a key tenet of sustainability. The study commenced with an extensive literature review of past work and approaches to assessing sustainability, with particular emphasis on work related to transport, regional and urban sustainability. This review resulted in the derivation of: 1) a set of criteria that sustainable transport indicators should meet; and 2) a large comprehensive pool of indicators related to sustainable transport. The aim was to systematically reduce this large pool to a small, manageable and useful subset, which could prove useful as a decision-making aid to planners and policy makers concerned with sustainable transport. The first step towards reducing the size of the indicator pool was the assignment of scores to each indicator based on how well it met the various criteria/characteristics of a good sustainable transport indicator. To obtain weightings for the various criteria, a survey was conducted among municipal transport planners at local UK authorities, in which they were requested to express their preferences among the various criteria that good sustainable transport indicators should meet, as had been derived from the literature review. AHP was then used to quantify the transport planners' subjective assessments and the resulting numerical values were taken as weightings for the various criteria. The final stage of the analysis was the calculation of a cumulative weighted score for each indicator. The indicators with the highest cumulative weighted scores were then selected for inclusion in the small subset of sustainable transport indicators, referred to as the 'sustainable transport profile'. This multi-criteria analytic approach to assessing sustainable transport was found to be very sound, since it allows for inclusiveness and as such, the indicators selected are more reflective of the needs of local residents and more relevant to the specific nuances of the area to which they are to be applied.

Decomposing the Dynamics of Regional Earnings Disparities in Israel

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(Department of Economics), Hebrew University of Jerusalem, Mt Scopus

The literature on regional-growth convergence and economic disparities has tended to confound four interwoven measurement phenomena: 1) mean reversion (so-called beta convergence), where richer regions move towards the average from above and poorer regions from below; 2) diminishing inequality (so-called sigma convergence), where the horizontal or spatial distribution of income becomes more equal; 3) mobility, where the rank of a region in the overall distribution of income changes either upwards or downwards; 4) leveling, where the richer regions become poorer (leveling-down) or the poorer regions become richer (leveling-up). We use a new statistical methodology, which treats these four phenomena on an integrated basis. This decomposes regional disparities into its underlying causes: the degree of Gini divergence; the degree of immobility; and the rate of leveling across regions. We show that changes in the degree of beta convergence are induced by reinforcing changes in these components. The methodology is applied to Israeli regional earnings and house-price data. We find that whereas earnings are strongly sigma divergent during the 1990s this trend is somewhat offset when regional cost-of-living differences are taken into consideration. In this event, regional housing markets seem to mediate the divergence induced by regional labor earnings. We also suggest a simple approach to creating regional deflators in the absence of regional consumer price indices. For all its crudeness, this method is an improvement on the common practice of side-stepping the issue that characterizes so many studies. Finally, we relate our findings to those anticipated by ‘amenity theory’.

**Agriculture and Tourism Externalities and their Implications for
Development Policies in Rural Regions** Aliza Fleischer and Anat
Tchetchik (Department of Agricultural Economics and Management, Hebrew
University of Jerusalem, Rehovot)

In many rural regions, tourism is accepted as a natural part of the socio-economic fabric juxtaposed with agriculture. It is clear that rural tourism is based on rural amenities. It is not clear, however, how this relates to agriculture. Are these inter-relationships of mutual benefit, in the sense that while rural tourism provides the farmer with auxiliary funding to continue agricultural activity, the latter is an important or even necessary component of rural tourism? Do active farms with rural tourism enjoy positive externalities and run their businesses more efficiently than firms with only a single activity? The objective of this paper is to investigate whether rural-tourism enterprises based in an active farm differ from those without agricultural activity and what are the externalities. The analysis is based on a face-to-face survey of 200 operators of B&B enterprises in Israel. About 40% had an active farm, which allowed us to compare between the two types of rural tourism businesses: those with and those without agricultural activity. The demand side of the rural-tourism market was analyzed using hedonic prices method. The supply side was analyzed by using Cobb-Douglas production estimation for rural accommodations. We found that the active farm does not have any value for the visitors. However, on the production side, farmers seem to benefit from the existence of an active farm. A firm producing agricultural goods and tourism services appears to use its production factors more efficiently in producing tourism than firms managed by non-farmers. These findings have important policy implications, since it is possible that support for agricultural production is indirectly channeled into support for tourist activities. In this case reducing support for agriculture, while increasing support for non-agricultural activities such as tourism, might not have the desired impact on firms with these two activities. The support funds for agriculture indirectly help tourism production. Reducing these on one hand, and increasing direct support for tourism on the other hand, might actually represent conflicting approaches.

Trajectories for the Economy of Northeast Brazil under Conditions of Resource Constraints Geoffrey J.D. Hewings, Chokri Dridi and Joaquim Guilhoto (REAL, University of Illinois)

There is a growing recognition in the economic-development literature that one of the major impediments to growth and development in the next several decades will be access to water. In recognition of this emerging problem, the present research aims to provide a formal link between water consumption and economic growth and development. This is accomplished by linking an econometric input-output model of the Northeast Brazil economy to a water allocation model. The work can be considered as an important first step in placing water allocation the policy-making agenda. Additional steps will require links to issues of climate change and water availability, potential water transfers between regions and sectors, and consideration of the way alternative development strategies can be proposed that are in harmony with water availability. Results of the analysis revealed that water re-allocation played only an important role directly on the agricultural sectors, the major consumers of water in the Northeast of Brazil. Re-allocation was driven by an objective to maximize value added. Over the period 1999-2012, the impact on the six agricultural sectors was to reduce their output and employment by of 15% annually. The reduction in employment in the rest of the economy was a little over 1% annually. However, since the agricultural sectors continue to employ a significant percentage of the labor force, the aggregate loss of employment amounted to 6% on average, over 1 million jobs annually. These preliminary results suggest the need for an active link between policy making and economic development, when resource constraints are present. Some balance has to be struck between allocation and reallocation on the one hand (perhaps driven by concerns with economic efficiency) and on the other hand the anticipated losses of employment for part of the labor force with few other alternatives.

Skills Mismatch and Spatial Mismatch in Urban Areas Donald Houston
(Department of Geography, University of Dundee)

The skills profile of people who live in urban neighbourhoods has been shown to be strongly associated with neighbourhood unemployment rates. There is said to be a 'skills mismatch' between the unemployed and the job vacancies available. According to this perspective, metropolitan housing markets concentrate people disadvantaged in the labour market together, thus accounting for the spatially uneven pattern of unemployment observed in most urban areas. This paper elaborates on three key weaknesses with this perspective: 1) it does not explain specifically why unemployment rates are consistently higher in the inner parts of urban areas; 2) it makes little or no reference to the marked deconcentration and restructuring of employment which has been occurring within metropolitan areas since the 1950s; and 3) it does not consider the influence of spatial frictions within local labour markets. The 'spatial-mismatch hypothesis' that has been developed in the US is introduced as an additional explanation, namely, that there is a spatial mismatch between new decentralised patterns of job openings and the residences of manual workers. How the spatial-mismatch hypothesis translates across the Atlantic is given consideration. The paper concludes by outlining how spatial and skills mismatches in local labour markets could be mutually reinforcing, and sketches a diagrammatically (and mathematically) specified conceptual framework by which the two are reconciled, incorporating insights from both urban and labour market theories. Two important implications for theory are identified. First, the proximity of jobs to neighbourhoods within metropolitan areas needs to be considered in understanding the level of unemployment in small areas. Second, and more generally, explanations of unemployment need to differentiate more clearly between explanations of the spatial distribution of unemployment, explanations of the probability of different individuals being unemployed, and explanations of the overall level of unemployment.

The Limits of Regional Systems of Innovation: The Pharmaceutical Industry and Environmental Regulation in Ireland David Jacobson (Business School, Dublin City University) and Rachel Hilliard (Department of Management, National University of Ireland)

EU environmental policy has the broad aim of influencing the innovation process and technological development within firms in favour of cleaner technology responses. Even before this policy had become a directive (in 1996), Ireland had introduced a progressive programme of environmental legislation. This included the establishment of a national environment protection agency (EPA) in 1992 and a system of integrated pollution control (IPC) licensing in 1994. In this paper we evaluate this policy through an examination of how pharmaceutical companies in Ireland have responded to more demanding environmental regulations. The new regulations require the adoption of cleaner technology and continuous environmental improvement through both technical and organisational change. Our analysis operates at both the meso and micro levels, using the theories of systems of innovation and firm-specific dynamic capabilities. At the meso level we focus on Cork County Council (responsible for seven of the 16 firms in the study) versus other local authorities (responsible for the remaining nine) to explore evidence of regional differences in the competency of firms and regulators. We argue that a Cork regional system of innovation (specifically in environmental management) has evolved over the last 20 years. The key question is whether this regional system of innovation explains the differences in environmental management competence of the pharmaceutical firms in the study. Here the micro level is adopted. Using the evolutionary theory of the firm, we show that external institutions face limits to their ability to influence the innovation process and technological development of firms. We identify, specifically, the central mediating role of firm-specific dynamic capability.

**Post-Industrial Lifestyle Attributes and the Value Stretch Model:
Three Israeli Case Studies** Baruch Kipnis (Department of Geography,
University of Haifa)

Lifestyle studies have gained momentum in recent years, particularly in countries with advanced economies. Such studies have been designed with the objective of identifying behavioral patterns and as indicators of culture, which are, like many other aspects of our life, class and place differentiated. This paper seeks to verify the existence of hyper-consumption oriented lifestyles in Israel. A series of three studies, employing the same questionnaires, was carried out using the 'value stretch model', whereby subjective values are assigned by the sampled interviewees to 72 lifestyle attributes. The three case studies were: a sample of university students from five campuses, along with a control sample of older students from special enrichment university programs; a study of three neighborhoods located along the northern slope of Mount Carmel in Haifa; and a study of R&D and non-R&D workers in the Israeli hi-tech industry. The paper explores the many meanings of the lifestyle concept, and examines how the samples in the three case studies perceive them. It focuses on the following questions: 1) what are the most important lifestyle attributes of young people (students), who are expected to exercise a role of 'human agencies' of change and development, compared to those of older people, and are there significant differences when gender and economic factors are taken into consideration? 2) are there inter-neighborhood differences in lifestyle, assuming topography to be a factor determining the socio-economic structure of the sampled populations? 3) are there major differences in lifestyle attributes among hi-tech industry workers stratified by type of work (R&D and non-R&D), gender and age? 4) assuming that the 'value stretch model' simulates different development 'time horizons', how could the findings influence future development strategies and policies?

Urban Spatial Expansion: A Search for a Unified Method of Analysis Shaul Krakover (Department of Geography, Ben-Gurion University of the Negev)

The objective of this paper is to point out the divide that exists among the conventional methodologies available for the study of urban spatial expansion (USE) processes. As an outcome the paper suggests working towards the construction of a unified USE method. Previous studies attempting follow-up of the urban expansion processes have utilized one of the following four methodologies: 1) delineation of the urban area by a series of air or satellite images covering the edges of the built-up area; 2) examination of changes in commuting data for the delineation of labor-sheds; 3) analysis of population or employment density data for the study of deconcentration; and 4) analysis of population or employment growth data for the study of decentralization. Each methodology has its own theoretical background and conceptual underpinning. Also, each of these methodologies has certain known advantages and disadvantages. Nevertheless, nowhere in the literature has an attempt been made for a comparative study, wherein all methodologies are applied to the same data set. On the contrary, from a literature review of studies using the different methodologies and especially the latter two, it appears that these methodologies remained rather alien to each other. The most widely employed method utilized for the identification of urban expansion involves the examination of changing urban density gradients (Clark, 1951; Mills, 1970; Parr, 1985). The process underlying this method has been termed as deconcentration (Berry and Kasarda, 1977). It usually emphasizes the outward shift of the point of the highest population density (Newling, 1969; Shachar, 1975). This point is located fairly close (generally a few kilometers) to the metropolitan central city (Barkley *et al.*, 1995). A relatively less-used method for the study of urban expansion involves the analysis of decentralization (Berry and Kasarda, 1977; Krakover, 1986). Here the measure most frequently used is the growth rates of population or employment in geographical units along a cross section from the city center to its periphery (Krakover, 1983; 1986). According to this methodology, the highest point of growth is usually found farther away from the city center, well beyond the highest point of population density (Krakover and Borsdorf, 2000). A comparison of these various methods reveals a whole host of other differences in terms of their specific objectives, mathematical formulation, data requirements, ways of handling polycentricity, etc. These differences may provide a partial explanation for the prolonged division that marks the separate progress made in each methodological branch. The comparative examination reveals a need to develop a unified model that will incorporate the advantages of all methodologies for the study of urban expansion processes.

Cities and 'Embryonic' Clusters: Biotechnology In Scotland Joseph Leibovitz (Department of Urban Studies, University of Glasgow)

The cluster concept has been promoted in recent years as a panacea for economic development, both locally and nationally. One source of theoretical and empirical ambiguity in the concept is related to the spatial processes underpinning cluster development, and to the relationship between cities and clusters in particular. This paper examines the case of the biotechnology cluster in Scottish cities, with particular reference to Glasgow and Edinburgh. The promotion of a biotechnology cluster has become a priority for Scotland's economic development strategy because of its potential role in the knowledge-driven economy. The paper examines the major locational dynamics affecting biotechnology in Scotland, and interrogates the balance between the major forces driving the development of biotechnology firms in their urban location. It concludes that the importance of cities to cluster growth lies mainly in the size and diversity of their labour markets, in the presence of key research institutions and public sector anchors, and in the provision of infrastructure and services. At the same time, historical legacies, national and international regulatory frameworks, and external linkages play an important role in shaping the development trajectory of Scotland's biotechnology cluster.

Gender Differences in Graduate Migration among UK regions Philip McCann (Department of Economics, University of Reading) and Stephen Sheppard (Department of Economics, Williams College)

In this paper we analyse the employment-migration behaviour of some 90,000 UK university graduates from the mid-1990s. Our modelling distinguishes between different types of sequential migration behaviour from domicile to higher education and then from higher education to first employment. In order to do this, we develop a multinomial logit model, which captures the different migration streams. By controlling for a range of variables related to human-capital acquisition and local economic conditions, we are able to identify the human-capital impacts on the different types of sequential migration streams. Our findings indicate that male university graduates who are educated locally are more likely to migrate away to other UK regions for employment than is the case for equivalent locally-educated female graduates. However, for those students who moved away for higher education, our findings indicate that female graduates are generally more migratory than male graduates. We suggest that the explanation for this result lies in the fact that migration can be used as a partial compensation mechanism for gender bias in the labour market.

Employability and Urban Labour Market Policy Ronald McQuaid, Malcolm Greig and John Adams (Employment Research Institute, Napier University)

This paper considers the concept of employability of unemployed people in urban labour markets. It sets this within the long-term context of labour-supply employment policies moving from uniform eligibility criteria to increased focusing upon specific target groups of unemployed people, such as the young, single parent or long-term unemployed, specifically considering the UK government's New Deal policy. A survey of 169 face-to-face interviews with unemployed job seekers is divided into those who were successful or unsuccessful in finding employment within six months. A factor analysis of the attributes of the job seekers is carried out in order to develop typical profiles of (un)successful job seekers. These attributes go beyond the socio-demographic and human capital attributes, which commonly define current policy target groups, and also include: personal financial attributes; search channels used; spatial characteristics (including local-demand factors and attitudes towards travel); and residential variables. High levels of accumulated human and financial capital, non-metropolitan residence and accessibility to centres of employment were found to have a positive impact upon job search success. Older, long-term unemployed have significantly lower chances of finding employment, supporting the focus of New Deal 50+ policy. Results suggest that government initiatives should not only targeted those groups with poor human capital or specific socio-demographic characteristics, but also need to take greater account of wider factors such as the transport accessibility of unemployed people to centres of employment. Further analysis into the results is underway.

Identifying the Effects of Household Consumption Patterns on the Demand for Transportation: a Conceptual Model Orit Mindali (Department of Geography) and Ilan Salomon (Department of Geography, School of Public Policy), Hebrew University of Jerusalem, Mt Scopus

The growth in the consumption of goods over the last few decades has brought a transition into what is presently labeled the 'consumer society'. Consumption of goods has not only expanded in magnitude and in variety of forms, but has become a cultural element in modern societies. Nowadays, consumption is characterized by rapid growth of individual expenditure and by an increasing amount of travel associated with this. Recent developments in information technology (IT) have expanded the range, type and number of possible spatial interactions, including consumption-related travel. E-commerce represents a small but rapidly growing proportion of retail sales, and the hypothesized trade-off between IT and travel suggests the potential for travel reduction. Understanding the changes in household consumption patterns, together with an analysis of the spatial and transportation implications, in the presence of IT-based options, can assist in forecasting the externalities and recommend means of intervention to reduce the deterioration of the environment. The 21st century is likely to witness a continuous development of the 'consumption age'. Consumption patterns will increasingly depend on transport systems and on emerging telecommunication systems, as the average distance that a good 'travels' increases. The complex logistic chain, starting from the production and ending with the delivery of a product to the final consumer is characterized by a variety of structures and forms of distribution. This paper focuses on the final stage of the chain, namely, the delivery to the end consumer. Against the complexity of the emerging e-commerce and conventional commerce patterns, a conceptual model is developed to shed some light on the relationship between household characteristics, shopping types (e.g. routine versus impulsive), retail-system characteristics, and consequent travel choices.

The Polycentric Urban Region: A Useful or Dangerous Concept John Parr (Department of Urban Studies, University of Glasgow)

The last decade has witnessed the emergence of the 'polycentric urban region' as an important focus in urban and regional analysis. Indeed, the polycentric urban region (which, for the sake of simplicity may be regarded as a set of neighbouring but spatially separate urban centres, existing as some identifiable entity) has recently become the focus of several special issues of journals and edited volumes of collected papers. Even at this relatively early stage, however, it is clear that much is being claimed for the polycentric urban region (PUR), and any perusal of the literature reveals this, in several important respects. First, in terms of spatial structure, the PUR is seen as a distinctive form of region. Second, the PUR (by virtue of this distinct spatial structure) is viewed as having the potential for superior economic performance. Third, the PUR is regarded as a desirable organising framework for public-policy intervention. These claims have yet to be satisfactorily substantiated. As with any new concept, a certain ambiguity presently surrounds the PUR, and the term continues to be employed in a variety of ways. The emergence of a wholly satisfactory standard definition is made no easier by the differing scales at which the concept of the PUR is considered. It is not the intention either to endorse the concept of the PUR or to dismiss it, but rather to accept the premise (at least initially) that the PUR represents a potentially useful concept. The broad objective of the paper is as follows: 1) to specify the essential characteristics of a PUR, and to discuss the manner in which it differs from other types of region; 2) to consider the reasons for the emergence and continued development of the PUR; and 3) to examine the policy relevance of the concept, particularly in the design and implementation of strategy. While the primary focus will be on economic and economic-related facets of the PUR, the importance of social, cultural and political considerations is certainly recognised.

Spatial Patterns of Crime in Israel: Investigating the Effects of Interurban Inequality and Proximity Boris Portnov (Department of Natural Resources and Environmental Management, University of Haifa)

Many crimes in Israel are perpetrated by those who live outside localities where the crime is actually committed. As a result, crime rates are strongly influenced by settlement patterns: the highest rates of crime, specifically against property, occur in wealthy towns surrounded by poor ones. In order to measure the effect of urban inequality and proximity on crime rates, the Index of Relative Income (IRI) is proposed. This index is estimated as the ratio between the average income in a town and that in its neighbouring localities. The data for the present analysis are drawn from the Israel Police crime database and cover the period between 1990-99. The analysis starts with a brief discussion of previous studies of urban crime in Israel and abroad, and is followed by an analysis of indicators of urban location that measure interurban inequality and proximity. As the analysis indicates, the proximity of urban localities with contrastingly different levels of development helps to explain the variation of property-crime rates. This implies that the spatial inequality of urban development may give a rise to property crime. The findings of the present study lend support to regional-development programs, aimed at minimizing spatial disparities in regional and urban development.

Local Advantages and Global Presence: A Comparative Analysis of the ICT sectors in Ireland, Finland and Israel Stephen Roper (Aston Business School, Aston University) and Seamus Grimes (Department of Geography, National University of Ireland, Galway)

In the context of the global production network (GPN) paradigm, this paper considers the combination of local and global factors, which have contributed to the development of the ICT clusters in three small countries. Developments in each country reflect the combination of local advantages in human, knowledge and institutional capital, and each nation's global economic and socio-political linkages. A key focus of the paper is the role of each nation's capital city (or more accurately its capital city region) in the development of the ICT cluster. The consequences for the regional distribution of ICT activity within the three countries are discussed, along with the potential technological and competitive implications of this distribution. Initial sections of the paper focus on the factors which underpinned the massive growth of the ICT sector in each country in the latter half of the 1990s. This leads to an assessment of the global market position of each industry and its prospects in any future upturn. The paper also considers different aspects of the role of Tel-Aviv, Dublin and Helsinki in attracting and supporting ICT development: 1) symbolic and image factors are considered in terms of the cities' ability to attract internationally-mobile human and financial capital; 2) institutional (e.g. higher education, thickness of financial institutions) and infrastructural factors are considered in terms of the cities' ability to support and facilitate ICT companies; and 3) the role of entrepreneurship is considered alongside the availability of venture capital, etc.

Estimating the Socio-Economic Benefits of the Yarkon Park in Tel-

Aviv Daniel Shefer and Nurit Zakai (Center for Urban and Regional Studies, Technion-Israel Institute of Technology)

The aim of this study is to contribute to the knowledge connected with valuing open spaces through a case study of the Yarkon Park in the city of Tel-Aviv using two methods: the hedonic price method (HPM) and the contingent valuation method (CVM). The values to be presented in this study as measures of the Yarkon Park are partial values only. The HPM showed that if we compare an apartment located at a distance of up to 100 meters from the Yarkon Park (in the study area which included only one neighborhood) with an apartment located at a distance of 100-1,500 meters from the Park (in the study area), the value of the former exceeds the value of the latter by \$136 per square meter. The total additional value from proximity to the Yarkon Park in the study area alone is \$37 million. The CVM showed that the willingness to pay (WTP) a one time payment for the preservation of the park is NIS 514 per household. Expanded to the whole population visiting the park (about 220,000 households a year) yields a value of NIS 113 millions (about \$30 millions).

Do Investors Respond to the Needs of Start-Ups? Dafna Schwartz
(Department of Business Administration, Ben-Gurion University of the Negev)

The study examined the areas in which start-ups require assistance and the extent to which the investors, mainly venture capital funds and angels, respond to the various needs. The assumption of many studies is that the investors in start-ups, as owners, play roles that extend beyond those of traditional financial intermediaries in the development process of the venture. It is further assumed that they supported and responded to the needs for assistance. In the current study, we examine this assumption based on a questionnaire sent to senior managers of Israeli start-ups. This listed areas in which the companies might need assistance in each of the areas. The hypothesis of the study was that the existence of investors would reduce the need of companies for assistance, at least in some of the areas, as compared to companies without investors. The tests were conducted by comparing the averages using Npar tests and Mann-Whitney tests. The tests also compared the rate of companies: 1) that ranked the need for assistance as "important"; 2) that rank it "essential". The findings show that although start-ups rank financing high on the list of areas in which they need most assistance, they need assistance in other areas as well, including marketing, business development and management of strategic alliances. The relative importance of these areas grows as the ventures mature. The findings also show that the location of the company has an impact on the need for assistance, mainly in the early stage. Companies that are located in the center of the country, specifically in the Tel-Aviv area, need less assistance in most of the areas, particularly in the first phase. Surprisingly, there is almost no difference between companies with investors and other companies in terms of the need for assistance in most areas. This is the case despite the expectation that investors, seeing themselves as partners in the company, would use their business skill and resources to provide the needed assistance. These results could indicate that the Israeli venture capital market, both formal and informal, reveals the existence of a new phenomenon, namely, that many of the investors have not yet reached the maturity stage and do not have the tradition or the expertise to back their firm portfolios. It could also indicate that finding the right investors (those who can respond to the needs of start-ups in various fields) is more important than the actual financing itself.

Modelling Public Finance Mechanisms under Devolution in the UK J.

Kim Swales (Fraser of Allander Institute, University of Strathclyde)

The Barnett formula is the official basis upon which public funds are allocated to the UK devolved territories (Northern Ireland, Scotland and Wales) for those parts of the budget that are administered locally. In the past, actual allocations have differed markedly from the Barnett benchmarks. However, the recent moves towards devolution in the UK have both significantly increased the level of interest in the formula and further fuelled the controversy surrounding its implications for the regions of the UK. The existing literature on the Barnett formula is rather circumscribed in focusing primarily on the equity implications of the changes to government expenditure per head across the devolved regions that would accompany the strict imposition of the Barnett formula under various scenarios. There has been no corresponding analysis of the likely spatial impact on wider economic and demographic variables. This is despite the fact that the Barnett formula effectively determines the geographic distribution of a significant element of exogenous demand in the devolved territories. This paper begins to redress this imbalance, and an attempt is made to provide theoretical and empirical analyses of the system-wide effects of the operation of the Barnett formula in Scotland, one of the devolved regions of the UK. The empirical results are derived through numerical simulation with an appropriately parameterised version of our Scottish computable general equilibrium (CGE) model, AMOS. Importantly, we employ this analysis to explore the significance of the recent switch to the regular up-dating of the population weights in the Barnett formula and the additional endogeneity that this imparts to the public expenditure budgets in the devolved territories.

The Cluster Approach of Scottish Enterprise Irene Walker (Clusters and Industries Directorate, Scottish Enterprise)

This paper is concerned with the 'cluster approach' that has been employed over recent years by Scottish Enterprise, a public corporation charged with the responsibility of assisting the performance of the Scottish economy. Consideration is initially given to the nature of such a cluster approach and to the reasons for adopting this. The sectors that were prioritised as clusters are discussed in some detail, as is the involvement of Scottish Enterprise with these cluster communities. Attention is also given to the key initiatives pursued by each cluster team, and to the differences that exist among the various clusters. The implementation of the approach and its successes to date are examined, and this is followed by a review of the organisational arrangements employed in its delivery. The preliminary-evaluation evidence is then presented, and the paper concludes with an outline of the support that is being given to non-cluster sectors.

Differences in the Rate of Partial Privatization in Israeli Municipalities

Elia Werczberger (The Public Policy Program) and Yossi Katan (School of Social Work), Tel-Aviv University

This research project is concerned with one of the more important recent changes in the structure of local authorities in Israel, namely, the partial privatization and quasi-marketization of municipal functions. A steadily growing proportion of municipal functions is now supplied by commercial or not-for-profit organizations. The municipality contracts with one or more private supplier, using tendering, but remains in charge of setting objectives, determining entitlements, contracting, financing, monitoring service quality, etc. This division of labor represents a critical shift in the role of local government from that of a supplier of services to a mostly purchasing function. There seems to be considerable variation in the ability and willingness of local government in Israel to adopt this change in its role. The purpose of this research is the investigation of the factors, which may explain differences between Israeli local authorities in the rate of partial privatization. Differences in the rate of adoption are hypothesized to be the result of two potentially opposite forces: 1) the economic health of the community, this being related to the economic base, employment conditions, age of the settlement, distance from the economic and social center of the country, and budget deficits; 2) the organizational capabilities of the local authority. A sample of local authorities is studied using questionnaires and information available from published sources. Data considered include various indicators of the rate and the extent of the process, attitudes of the main actors toward privatization, and those socio-economic and spatial characteristics of the settlements hypothesized to affect the behavior of local government. The paper examines the nature of partial privatization in Israel.

An Overview of the Scottish Economy Charlie Woods (Senior Director,
Scottish Enterprise)

The presentation will look at the following aspects in some detail: recent trends in the Scottish economy; economic strengths, weaknesses, opportunities and threats for Scotland; the changing UK and European framework for regional policy; and the implications for Scotland's economic development and the work of a development agency like Scottish Enterprise. This will include looking at some recent macro data, e.g. output, structure, employment, productivity, exports and issues underlying the overall performance of the economy, e.g. R&D, skills, enterprise, population change. It will then look at the increasing focus of regional policy as a tool of improving national performance as well as regional equity, with reference to recent HM Treasury material. It will conclude by considering the strategy and action that is most appropriate for a development agency in an economy like Scotland to stimulate additional development in the current economic and policy environment.