Quantitative Indicators Measuring Contributing Factors for Local Economic Development Dataset User Guide

Cecilia Wong
University of Manchester

Local Authority District codes: **lad**
- Based on NOMIS lad codes

Unitary Authority and Local Authority District codes: **ualad**
- Based on NOMIS ualad codes

Accessibility to Main Airports in England
- definition: areas with good access to main airports within 1 hour road journey (use Androute programme to calculate the journey time). The accessibility index is weighted by the capacity of airports in terms of their share of passengers and the no. scheduled EC flights, other international flights and all overseas flights. Index value = share of passengers * share of flights * 100. Max. value = 100, min. value = 0.
- source: UK Airport Annual Statements of Movements, Passengers and Cargo 1997, Civil Aviation Authority, London (Table 1 and 5).
- date: 1997
- coverage: UK
- data description:
  airsize: share of passengers
  ecindex: EC accessibility index
  intindex: other international accessibility index
  airindex: overseas flight accessibility index
- benchmark: total passengers of all airports in England with scheduled flights (non-domestic) = 126400('000), total EC scheduled flights = 527351, total other international scheduled flights = 225501.

Accessibility to Main Ports in England
- definition: areas with good access to main ports within 1 hour road journey (use Androute to do the search). The index examines the share of total national tonnage of goods handled in the ports, max=100, min=0.
- source: Port Statistics 1997 Table 2.7, HMSO, London.
- date: 1996
- coverage: UK
- data description:
  pshport: percentage share of national traffic
- benchmark: total traffic in all English ports = 92526 ('000) tonnes.

Accessibility to Main Business Service Centres
- definition: road accessibility to main (top 8) business service centres weighted by the share of business employment in England. i.e. {[1- (travel time to London/mean travel time to

London)] * London's share of business employment * 100} + all other centres .... / 8

- source: business employment ranking based on 1995 Annual Survey of Employment, accessibility is calculated from Androute. Index value: max = 2.45, min = -13.95.
- date: 1995 and current
- coverage: UK
- data description:
  accbcen: accessibility index to main business service centres
- benchmark: mean travel time and share of business service employment - London (150 min, 21.08%), Birmingham (138, 3.73), Leeds (176, 1.73), Manchester (181, 1.43), Nottingham (151, 1.35), Edinburgh (394, 1.32), Glasgow (366, 1.30) and Bristol (165, 1.12).

Building Society Assets
- definition: the presence of headquarters of building societies and their assets (£'000).
- source: Building Societies Year Book 1997/98, Franey and Co. Ltd., London.
- date: 31 December 1996 members of the Building Societies.
- coverage: UK
- data description:
  sbasset: percentage share of national building society assets.
- benchmark: England = 116399642 (£'000)
- limitations: since building societies do lend money to applicants in different geographical locations and home owners can seek a mortgage to other building societies. So, it may not be a very meaningful indicator.

Business Services
- definition: total number employed in information based business services which includes marketing research, business and management, consultancy activities and labour recruitment and advertising (Keeble et al's definition: 1992 SIC - 7413,7414,7440,7450).
- source: 1995 (revised), 1996 Annual Survey of Employment
- date: 1995, 1996
- coverage: GB
- data description:
  pbser96: percentage of business service employment in 1996
  cbser56: percentage change in business service employment between 1995-96
  lqbeg96: location quotient benchmarked against England in 1996
- benchmark:
  1996 total employment in England = 19070275,
  total employed in business services = 627578 (3.29%).

Venture Capital and Finance
- definition: the UK venture capital industry embraces classic venturing (which is a minority activity in the UK) and development capital/MBO activity. The informal venture capital market is made up of private investors, sometimes called 'business angels'.
- source: survey findings of the British Venture Capital Association, reported in the "Venture Capital in the UK: a Report and Guide to the Venture Capital Industry" by the DTI, 1996, HMSO, London.
- date: the survey was carried out during 1995
- coverage: UK

- data description:
  venture: number of venture capitalist firms
  bangel: number of business angels
- benchmark: total no. of venture capitalist firms in England = 89; total number of business angels in England = 132.
- limitations: The level of venture capitalist fund allocated to seed capital activity in the UK, which is almost exclusively technology-based, is so small (less than 1%) that the BVCA does not even record this investment category separately in its annual statistics (p. 73). So, it is difficult to use this information as an indicator to examine hi-tech development. Furthermore, the information provided in the survey vary among the firms, it is thus difficult to make use of the information on number and sum of investment to refine the indicator.

Commercial and Industrial Floorspace
- definition: floorspace by five main categories: factory and mills, office, shops and restaurants, shops with accommodation, warehouse and workshops. The indicators used here are factory, office and warehouse per 1000 economic active population and shops (group the two category together) per 1000 population.
- source: DoE Commercial and Industrial Floorspace Statistics (1995), HMSO, London.
- date: 1994
- coverage: England and Wales
- data description:
  efactory: factory floorspace ('000 sq m) per 1000 economic active population
  eoffice: office floorspace ('000 sq m) per 1000 economic active population
  ewarehse: warehouse floorspace ('000 sq m) per 1000 economic active population
  pshopres: shops and restaurants floorspace ('000 sq m) per 1000 population
- benchmark: England=128494, 61735, 80129, 6378, 150425 (£'000 sq m) respectively for the five main types. The four indicator values are 5.6, 2.7, 6.5 per 1000 economic active population and 2.3 per 1000 population.

Commuting Distance
- definition: based on the assumption that reasonable one way travel to work journey is 5 miles, so any commuting distance which is 10 miles or above is regarded as long journey.
  * all commuters = (wa40001 + wa40009)
  * long journey commuters = (wa40005 + wa40006 + wa40007 + wa40008 + wa40013 + wa40014 + wa40015 + wa40016)
- source: 1991 Census Special Workplace Statistics (10%) Table A4
- date: 1991
- coverage: UK
- data description:
  ljcom: percentage of commuters who travelled over 10 miles per day.
- benchmark: 467389 / 1719700 *100 = 27.18%.

Commuting Independence
- definition: examining the ratio of those living and working within the same area to the sum of inward and outward commuters (Grieco, 1985, Regional Studies, 19(1): 9- 18 – Champion et.al.'s index of commuting independence).
  * core-worker/residents = (wa30002 + wa30011)

* out-commuters = (wa30003 + wa30012)
* in-commuters = (wb30003 + wb30011)
- source: 1991 Census Special Workplace Statistics (10%)
- date: 1991
- coverage: UK
- data description:
  indcom: corewk / (outwk + inwk) * 100
  rcflow: inwk / outwk
- benchmark: indcom = 225286 / (1494436 + 1496415) = 7.5%, rcflow = 1.00132.

Crime Risk
- definition: the average insurance premium paid by households living in each district. The premium is calculated by taking the average charges of three insurance companies. The average premium cost for each local authority district is calculated by aggregating the household weighted average cost of the relevant postcode districts.
- source: insurance premium rating guides from General Accident, Commercial Union and Norwich Union.
- date: early 1998.
- coverage: GB
- data description:
  wpremium: household weighted insurance cost
- benchmark: England = £6.52

Derelict Land
- definition: percentage of land which is derelict land (Table 5) and the amount justifying reclamation (Table 6).
- source: DoE Survey of Derelict Land in England (1995), HMSO, London.
- date: 1993
- coverage: England only
- data description:
  sderelic: percentage share of national derelict land
  ederelic: hectacres of derelict land per 1000 economic active population
  rreclaim: percentage of derelict land justified for reclamation
- benchmark: England = 34566 ha, 0.26%, 34566/23113842*1000 = 1.4955 ha per 1000 economic active population.

Employment Land Capacity
- definition: the amounts of urban land (ha) per 1000 economic active population.
- source: DETR supply the data on request.
- date: 1991
- coverage: GB
- data description:
  empland: urban land per 1000 economic active population
- benchmark: England urban land = 1079672, economic active population=23113842, indicator value = 46.7.

Earnings

- definition: average hourly earnings excluding over-time.
- source: New Earnings Survey 1997 Part A, Table A21.
- date: April 1997.
- coverage: GB
- data description:
  indearn: earnings expressed as a percentage of the national average
- benchmark: England average earnings: 874.73 pence.
- limitations: problem with suppression in some UAs, London Boroughs, Welsh and Scottish areas.

Economic Activity Rates
- definition: age 16 + who are economic active and by male and female (L08:20/L0801; L08:286/L08:267; L08:552/L08:533).
- source: 1991 Population Census
- date: 1991
- coverage: GB
- data description:
  recoact: economic activity rate
  rmecoact: male economic activity rate
  rfecoact: female economic activity rate
- benchmark: England=61.44, 73.70, 50.22.

Enterprenuership
- definition:
  the birth rate of small firms: 1994/96 new registration/1991 economic active population;
  the death rate: 1994/96 de-registration/(1994 initial stock + 1994/96 registration); and
  self-employment rate.
- source: Nomis VAT data (excluding agriculture), 1991 Population Census.
- date: 1991, 92, 93, 94, 95, 96
- coverage: UK
- data description:
  birth: birth rate
  death: death rate
  vital: survival rate
  leap: birth * vital / 100
  rself: self employment rate
- benchmark:
  England birth rate=428085/23113842 *100 (1.85%); death rate = 436780 / 1699740 *100 (25.70%); vitality rate = 74.3%; leap = 1.37%; self –employment = (895683+1805931) / 23113842 (11.69%)
- limitations: the VAT data do not include very small businesses which do not register for VAT (i.e. turnover less than £45,000 per year).

Hi-Tech Employment
- definition:

Old def: match DTI 1987's definition by Butchard with 1992 SIC. This definition includes both manufacturing and service employment in relation to hi-tech industries. (SIC 92: 2416, 2417, 2441, 2442, 3001, 3002, 3110, 3120, 3210, 3220, 3230, 3310, 3320,3330, 3340,3530, 6420,7210, 7220, 7230, 7240, 7260, 7310, 7320). Other reference: C Thompson (1998); Begg and Cameron (1988) and Hall et al (1987).

New def: DTI 1998 definition (based on the OECD definition). This definition does not include service employment any more. (SIC 92: 24.4, 30.0, 72.5, 35.3, 33 ex. 33.3, 31.1, 31.2, 31.4, 31.6, 32, 22.14, 22.3).

- source: 1996 Annual Survey of Employment.
- date: 1996.
- coverage: GB

  oulqhteg: location quotient of high tech employment, old definition, against England average
  nulqhteg: location quotient of high tech employment, old definition, against England average
  oupht96: percentage of high tech employment, old definition
  nupht96: percentage of high tech employment, new definition

- benchmark:

  old definition – England = 954044 (1995), 1007245 (1996) i.e. 5.28% of all employment;
  new definition – England = 526485 (1995), 544211 (1996) ie. 2.85% of all employment.

- limitations: the 1996 AES data has now been revised to include employees working in VAT and non-VAT workplace, so cannot compare with the old data.

House Price

- definition: all transaction of sales gone through Inland Revenue's registration system (all house types).
- source: HM Land Registry Residential Property Price bespoken report CD-ROM (http://www.open.gov.uk/landreg/home.htm).
- date: average house price of the 4 quarters in 1997.
- coverage: England and Wales, data available at postcode sector level
- data description:

  whprice: average house price weighted by the number of households when aggregated to local authority district level.

- benchmark: England = £70,064
- limitations: problems with small number of transactions involved in some small Welsh UAs; charge £25 per LAD report (on request), so cheaper to purchase for the whole country as it costs £ 145

Housing Tenure Choice Index

- definition: the degree of distribution between 4 types of tenure - home ownership; private rental sector, council housing and housing association tenants. It is calculated by = {1- [(proportion of tenure1)^2 + (proportion of tenure 2)^2 + (proportion of tenure 3)^2 + (proportion of tenure 4)^2]} * 100. The value ranges from 0 (absolute monopoly) to 75 (maximum choice).
- source: 1991 Population Census LBS Table 20 Cell 01 to 08.
- date: 1991
- coverage: GB
- data description:

  hherf: housing choice index

- benchmark: England=49.4 (owner occupation 67.76%; council tenants 19.83%; housing association tenants 3.15%; private rental sector 9.26%).

Industrial Structure Analysis
- definition: shift-share analysis of the changing industrial structure between 1981 and 1991 based on the 1981 SIC of industrial category 1-37.
- source: 1981 and 1991 Census of Employment.
- date: 1981-1991
- coverage: GB
- data description:
  struct: structural component
  diff: differential component
- benchmark: England = +1.2%
- limitations: old data is comparable up to 1991 with SIC81, since then SIC92 is applied.

Industrial Concentration Index
- definition: based on 1992 SIC category 1-23 to assess the distribution of each area's industrial structure with an Herfindahl Index. The value range from 0 (evenly distributed) to 100 (maximum concentration of a sector). It is calculated by = {(proportion of industry 1) ^{2} + (proportion of industry 2) ^{2} + ... (proportion of industry 23) ^{2} } *100. The Ameritrust Corporation used this analysis in America to examine the business climate of each state in the 'State Report Cards' report.
- source: 1995 Annual Survey of Employment
- date: 1995
- coverage: GB
- data description:
  iherf96: industrial concentration index
- benchmark: England (95 non-revised =0.11); England (95 revised) = 10.70; England (96) = 10.69

Planning Applications Per Quarter
- definition: average number of planning applications received by local planning authorities, UDCs and national park authorities per quarter over the period (1996 Q4, 1997 Q1 to Q3). The indicator is expressed as per 1000 population.
- source: DETR's Planning Land Use Statistics Division.
- date: 1996-1997.
- coverage: England
- data description:
  planpop: average quarterly planning applications per 1000 population
- benchmark: England total 123793.54 (i.e. 345.79 per district), 3.29 per 1000 population.

Quality of Public Transportation
- definition: use the proportion of working residents (employed and self-employed) living in car owning households who use public transport to work as a proxy measure of the quality of public transport.

puser = (L820184+L820197+L820210+L820185+ L820198+
L820211+L820186+ L820199 +L820212) / wcarho (L820183+ L820196+
L820209) - (L820193+ L820206 + L820219)

- source: 1991 Population Census 10 % Sample Table 82
- date: 1991
- coverage: UK
- data description:
  pwcar1: percentage of working residents, employed and self-employed, living in car owning households who use public transport to work

Supply-Side Over-Qualification Index

- definition: compare the number of workforce who has a degree with the number of managerial and professional jobs. Supply (L84:10 + 13 + 16 + 25 + 28 + 31) and Demand (L92: 11 + 19 + 43 + 51 + 59).
- source: 1991 Population Census 10% sample data.
- date: 1991
- coverage: GB
- data description:
  rovqua: the ratio of supply of graduates and the demand of managerial and professional labour
- benchmark: England - supply = 236057, demand = 261240, index = 0.90.

Quality of Primary Education

- definition: this is measured in three different levels: number of primary school pupils per qualified teacher ratio (95/6 actuals).
- source: CIPFA Education Statistics 1997
- date: 1995/6 data
- coverage: England and Wales
- data description
  psptr: primary school pupils per qualified teacher ratio
- benchmark: England = 23.2.
- limitation: data is only available at county level for non-metropolitan or UA areas.

Quality of Railway Service to London

- definition: the quickest train journey time (in minutes) from BR station to London on 30th November (Monday) in the morning. If there is no BR station within the LAD area, use Androute to calculate the travel time (then minus 15 minutes as normal intra district travel time) and add this to the train journey time.
- source: Rail Track On-line Timetable on the Internet: www.timetables.railtrack.co.uk
- date: 1998
- coverage: Great Britain
- data description:
  indrail: index of average train journey against national average
- benchmark: average train journey time of all LAD to London = 110 minutes

Recreation Facilities

- definition: net cost spent on recreation per capita of population.

- source: CIPFA Local Government Comparative Statistics 1996, 1997.
- date: 1995/96, 1994/95 actual spend.
- coverage: England and Wales.
- data description:
  recreat: ratio of local spending on recreation to the national average
- benchmark: England 1995/6 £20.78; 1994/95 £20.60.

Science Parks
- definition: the area (in acres) of the site of each science park (member of the UK Science Park Association).
- source: UKSPA 1996 (7th edition) ed. by Susan Cooke.
- date: 1996
- coverage: UK
- data description:
  escpk: acres of science park per 1000 employed in high tech industries (new definition)
- benchmark: England = 2090.5 acres.

Scenic Areas
- definition: percentage of area designated as Area of Outstanding Natural Beauty by DETR.
- source: supplied by DETR.
- date: 1991
- coverage: GB
- data description:
  paonb: percentage of total area which is designated as Area of Outstanding Natural Beauty
- benchmark: England = 1974291.88 / 13289288 (14.86%).

Skills of Workforce
- definition: measured those included in high skilled and low skilled SEGs. Skilled SEGs are defined by Hakim as SEG 1, 2, 3, 4, 13; low skilled SEGs are defined by Coombes et. al. in the review of the Index of Local Deprivation Part I as SEG 7, 10, 11, 15.
- source: 1991 Population Census 10% sample data.
- date: 1991
- coverage: GB
- data description:
  ehskill: percentage of economic active in high skill SEGs
  elskill: percentage of economic active in low skill SEGs
- benchmark: England skilled = 568181 (25.29%); low skilled = 356358 (15.86%); total economic active = 2247060.

Standardised Mortality Rate
- definition: SMR
- source: Regional Trends 1997
- date: 1996
- coverage: UK (UK = 100)
- data description:
  smr: Standardised Mortality Rate

- benchmark: England = 98.

Science and Knowledge Base
- definition: this index examines the quality and the number of scientists in Science and Engineering Departments of HEIs. The Ameritrust Corporation (1986:13) has used a similar index in the 'State Report Cards' report. The unit of assessment selected from the 1996 RAE is 01-32 and the quality of research is based on a seven point scale (1-7 to correspond 1, 2, 3b, 3a, 4, 5, 5*), the number of research active staff included are category A and C. The average value is calculated based on weighted average in the entire aggregation process.

  The index is based on two components: quality of research (RAE score / 7 *100) and the national share of research active scientists. The index was calculated at three levels: individual LAD level, county level (aggregated result weighted by 0.75) and the regional level (aggregated result weighted by 0.5)
- source: HEFCE 1996 RAE database (via the web).
- date: 1996
- coverage: all HEIs in GB.
  iurae: index of science and knowledge base, at the local authority level
  itrae: index of science and knowledge base, taking into account the benefit from the wider county and regional level as well.
- benchmark: England research active staff = 23232; average score 3.44.

Students with 5+ GCSE Grade A*-C
- definition: 1997 GCSE Examination results with 5+ Grade A* - C
- source: Department of Education and Employment data (supply in a CD-ROM), also available on-line on the web: www.open.gov.uk/dfee/perform.htm
- date: 1997
- coverage: England
- data description:
  pgcse: percentage of students with 5 or more GCSE passes
- benchmark: English average = 45.1%
- limitation: data is available for each school at LEA level with postcode address available. However, it is very time-consuming to re-aggregate the data into LAD scale.

Taxation
- definition: examine the average band D council tax for two adults before transitional relief and benefits.
- source: Regional Trends 1997, Table 14.4; CIPFA Education Statistics 1997.
- date: 1996
- coverage: GB
- data description:
  rctax: ratio of local council tax rate to national average
- benchmark: national average of council tax = £646

Youth Long Term Unemployment
- definition: this is used as a proxy measure of skill shortages. Age 17-34 unemployed over a

year expressed as proportion to economic active in that age cohort (L08:22-28).

- source: monthly unemployment data from Nomis; 1991 Population Census.
- date: December 1997 unemployment count, 1991 economic activity data.
- coverage: UK
- data description:
  ryunemp: youth unemployment rate
  flunemy: % unemployed that are long term youth
- benchmark: England = 138585 (12.4% of all unemployed)