

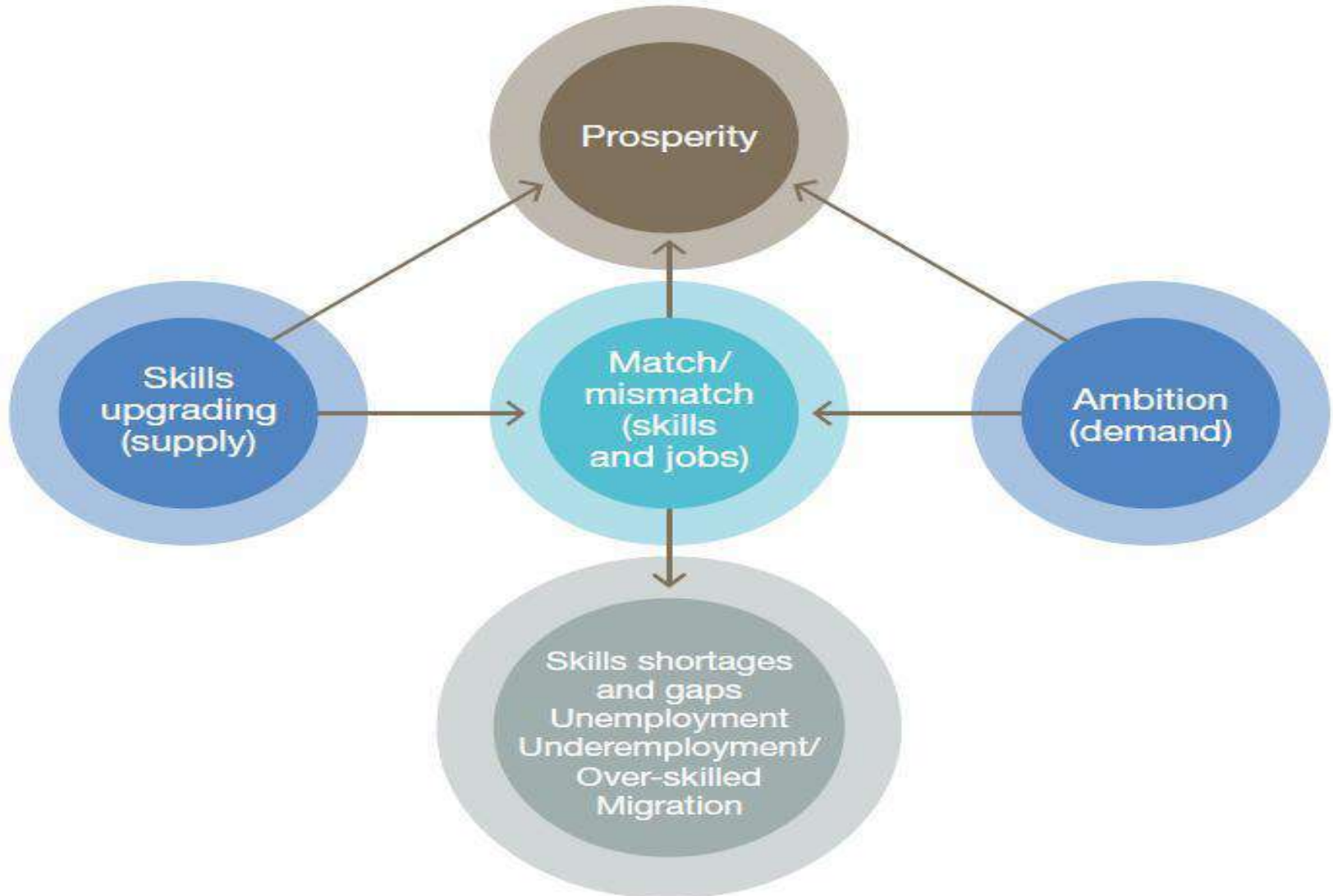
Labour Markets: from National to Local

22 November 2010

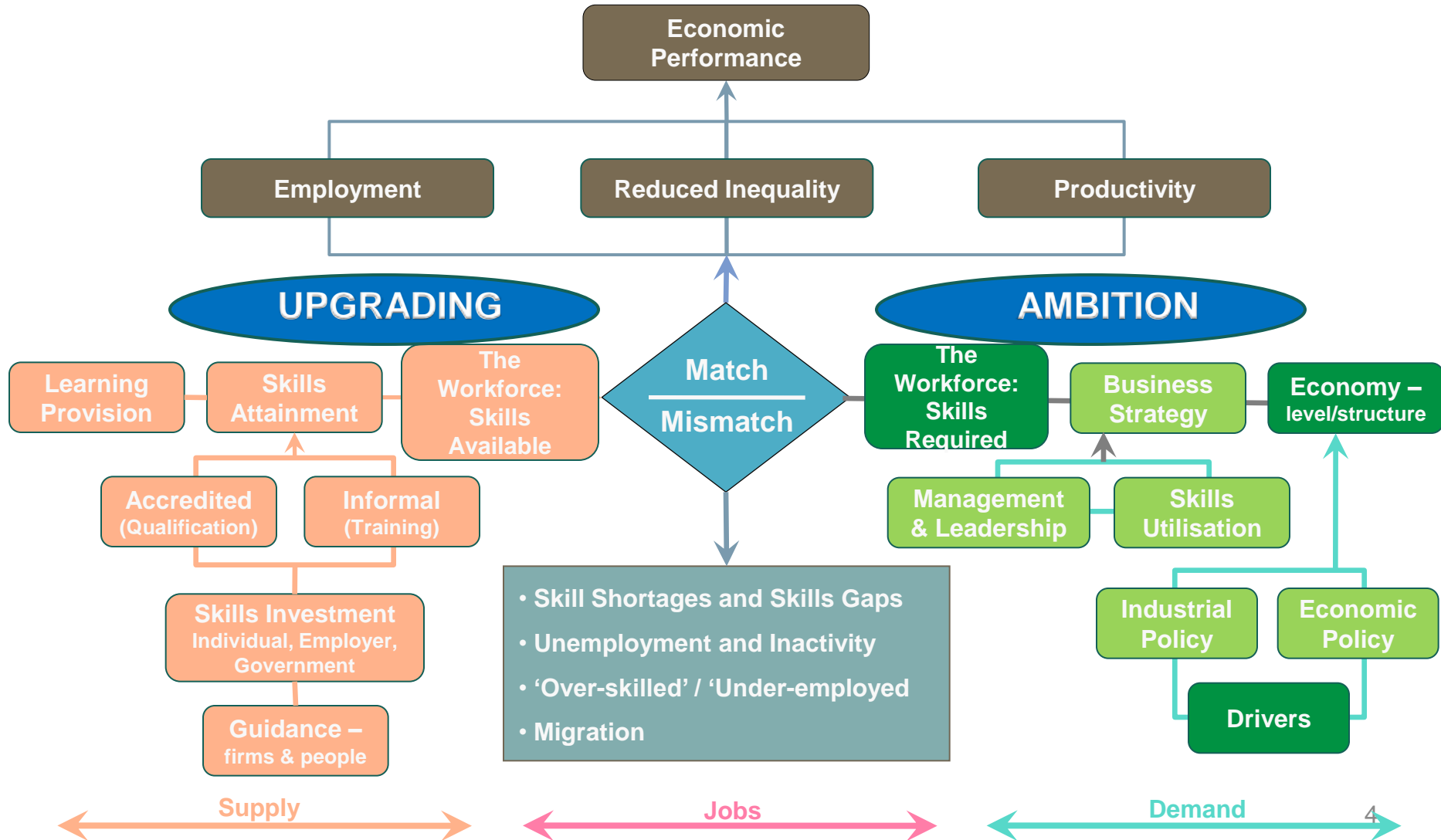
UK Perspective Future Demand for Skills: A Foresight Approach

Dr Richard Garrett
22nd November 2010

Framework for Policy Analysis



Framework for Policy Analysis

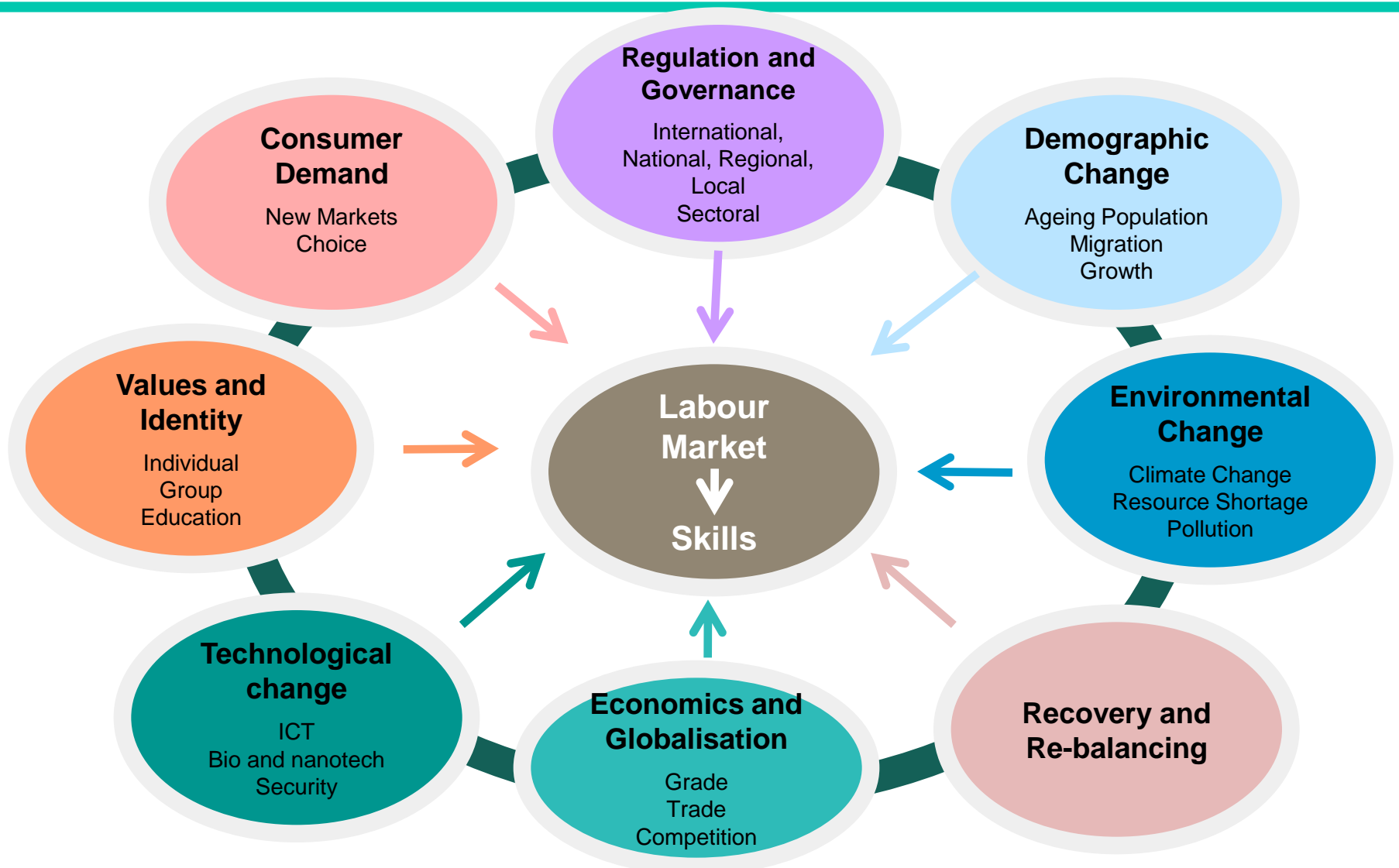


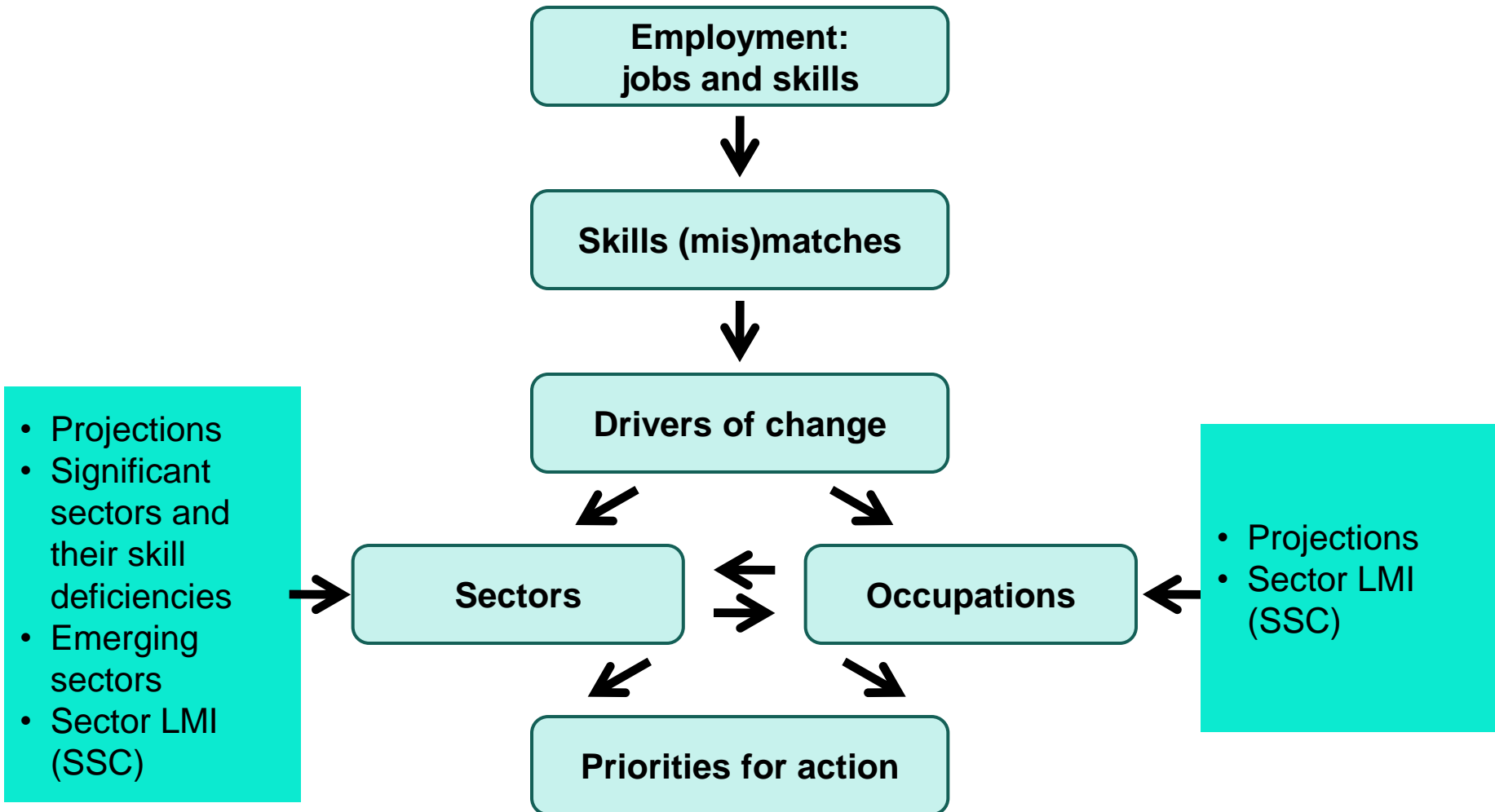
Foresight Information

	Immediate needs	Future needs
Existing Industries	Working Futures	Working Futures Drivers of demand
Emerging industries	Drivers of demand	Drivers of demand

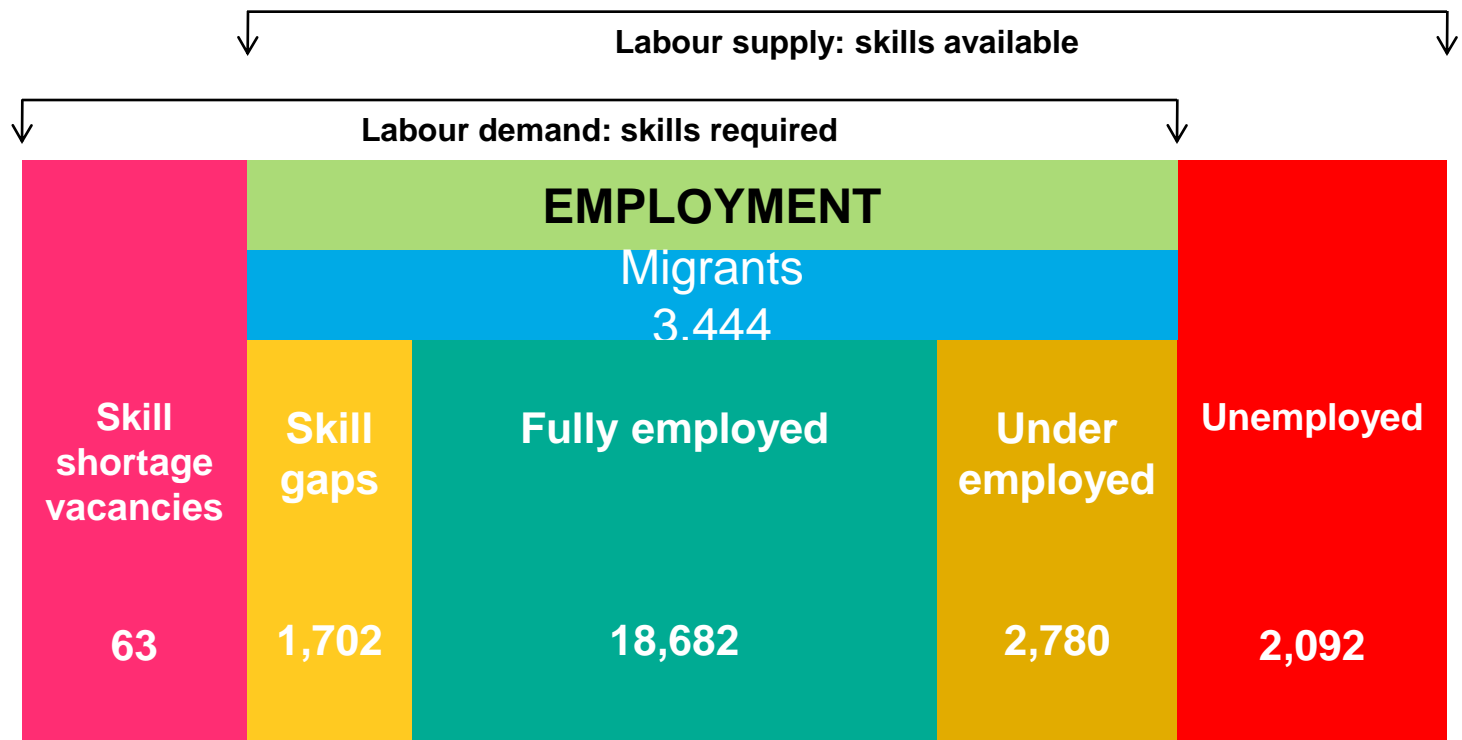
- Working Futures 2010-2020
 - Sector (inc SSC), occupation, UK nation and region
 - Job status and gender
 - Expansion, replacement and total demand
 - 107k new jobs in Scotland 2007-17 (6.3%) (pre-recession data!)
 - P&U -22%; Manu' -17%; Constr' 7%; D&T; 4%; Bus' 14%; NMS; 5%

Drivers of Demand





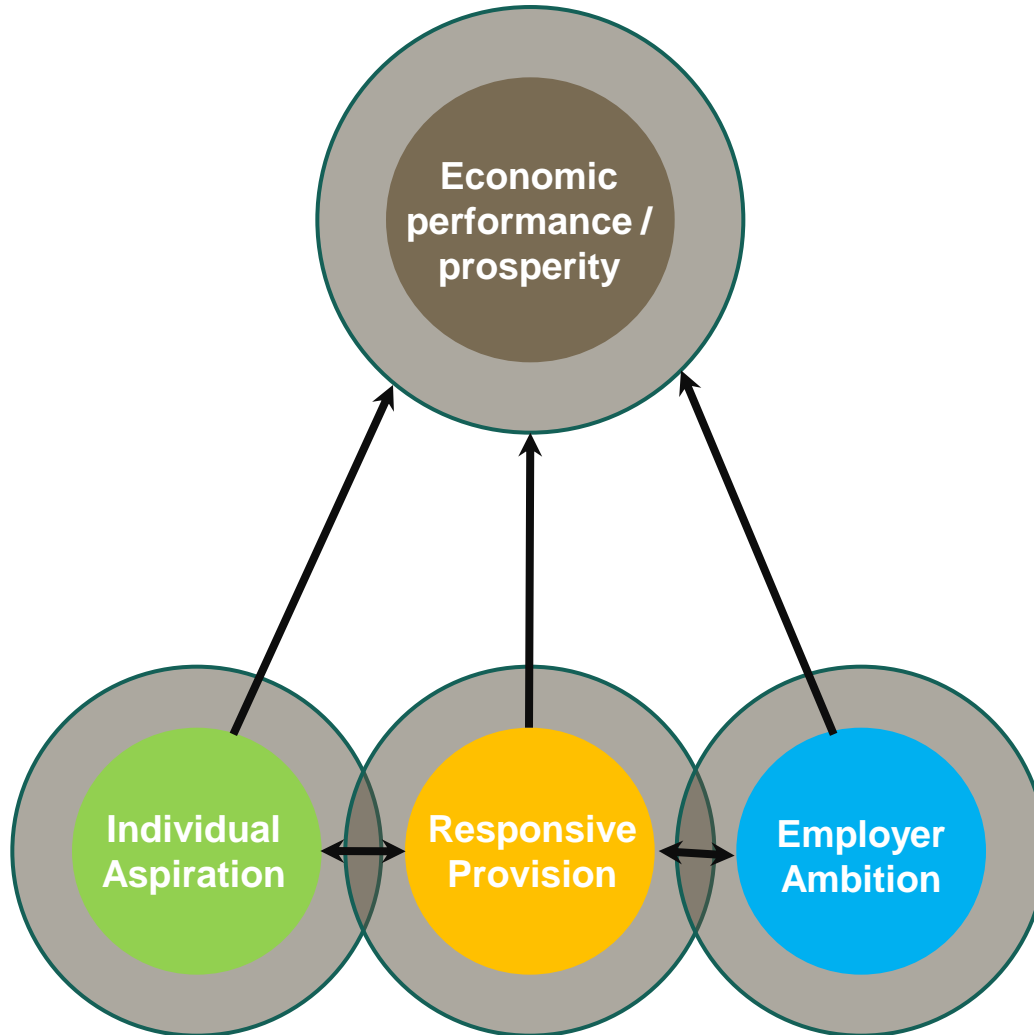
Supply and Demand



Strategic Skills Priorities

- **Red** – e.g. Corporate Managers in a range of sectors, Health and social care profs and assoc profs, Science and technology profs in Pharma', Assoc prof skills in STEM occs, Care assistants, Customer service roles
- **Pink** - e.g. Risk management in Financial services, Management of innovation in healthcare, commercialisation and IP skills, Urban planners and actuaries, STEM professionals with low carbon expertise
- **Amber** - e.g. Investment advisers, Engineers for large construction, a number of Assoc profs and skilled trades (chefs, graphic designers, support and advice workers)

The Importance of Identifying Future Demand



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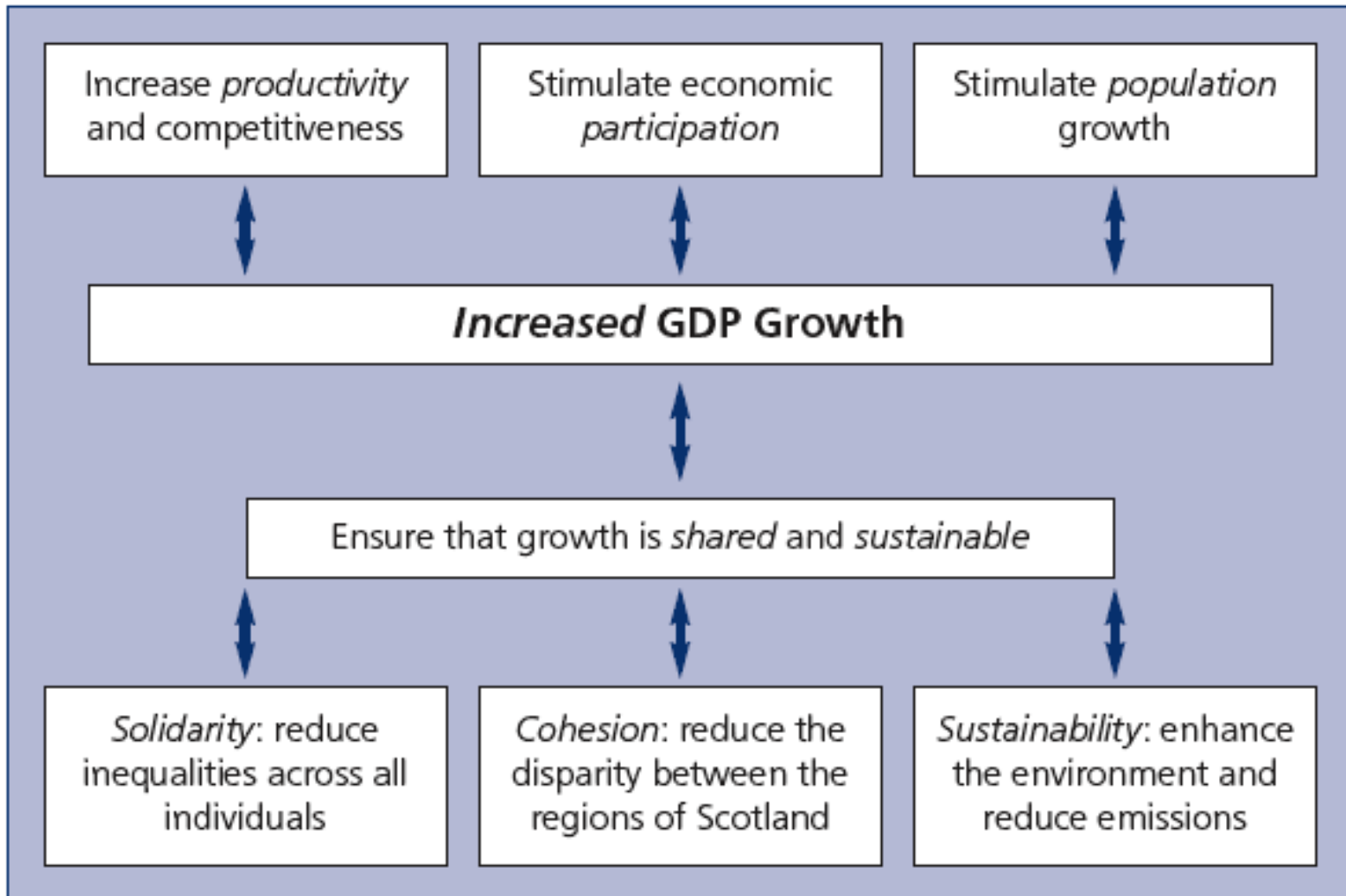
22 November 2010

Skills for Scotland: Accelerating the Recovery and Increasing Sustainable Economic Growth

22 November 2010
Steven McMahon
Skills Division

Economic Performance

The 'virtuous circle'



Comparative growth targets

Raise Scotland's GDP growth rate to
the
UK level by 2011

Average growth rates	Scotland	UK	Gap
30 years (1978 to 2008)	1.9%	2.4%	-0.5%
10 years (1998 to 2008)	2.1%	2.6%	-0.4%
5 years (2003 to 2008)	2.0%	2.3%	-0.3%

Comparative growth targets

Raise Scotland's GDP growth rate to the UK level by 2011

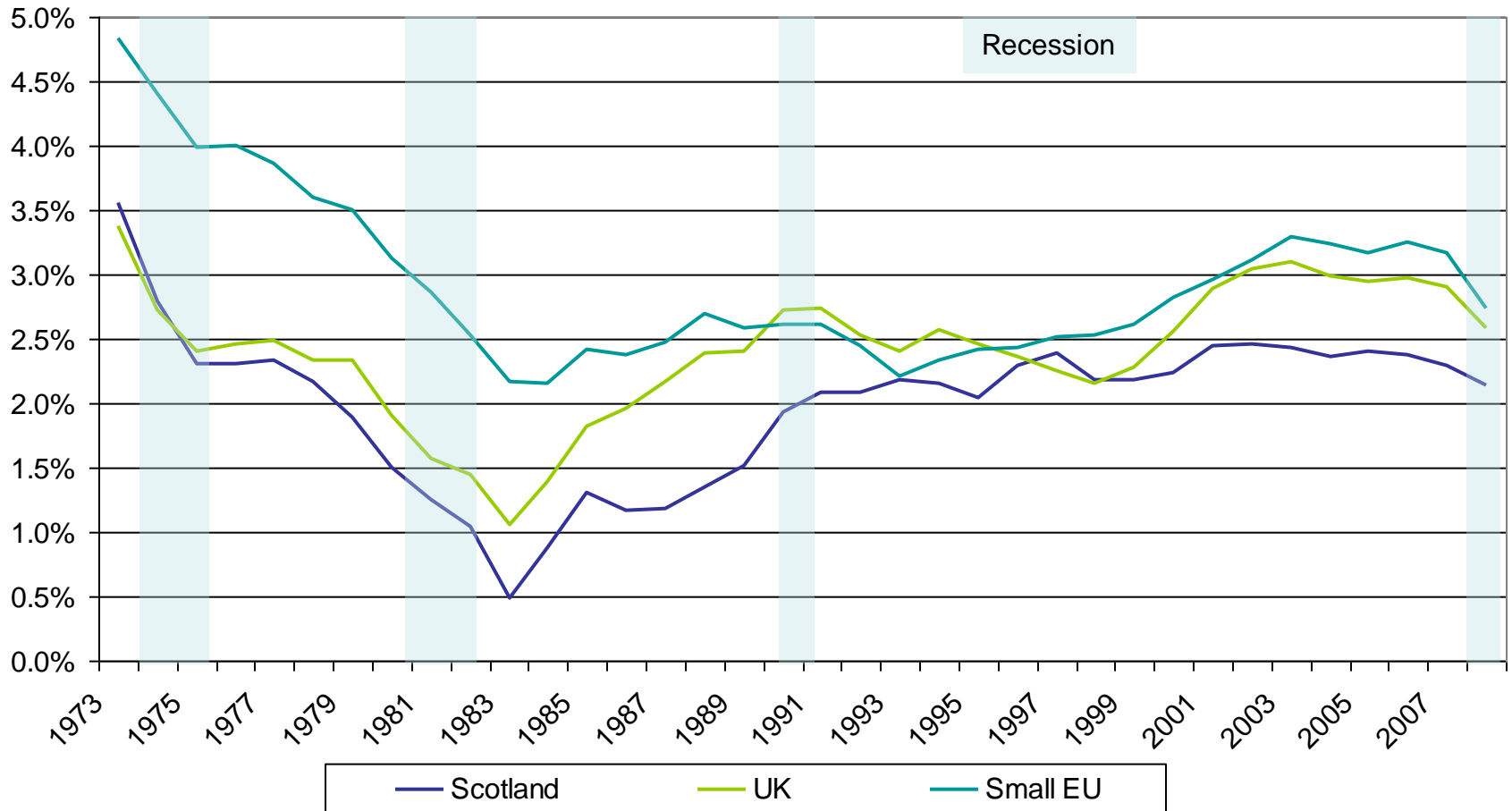
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Raise Scotland's GDP growth rate to the small independent EU countries level by 2017

Average growth rates	Scotland	Small EU	Gap
30 years (1978 to 2008)	1.9%	2.7%	-0.8%
10 years (1998 to 2008)	2.1%	2.7%	-0.6%
5 years (2003 to 2008)	2.0%	2.6%	-0.6%

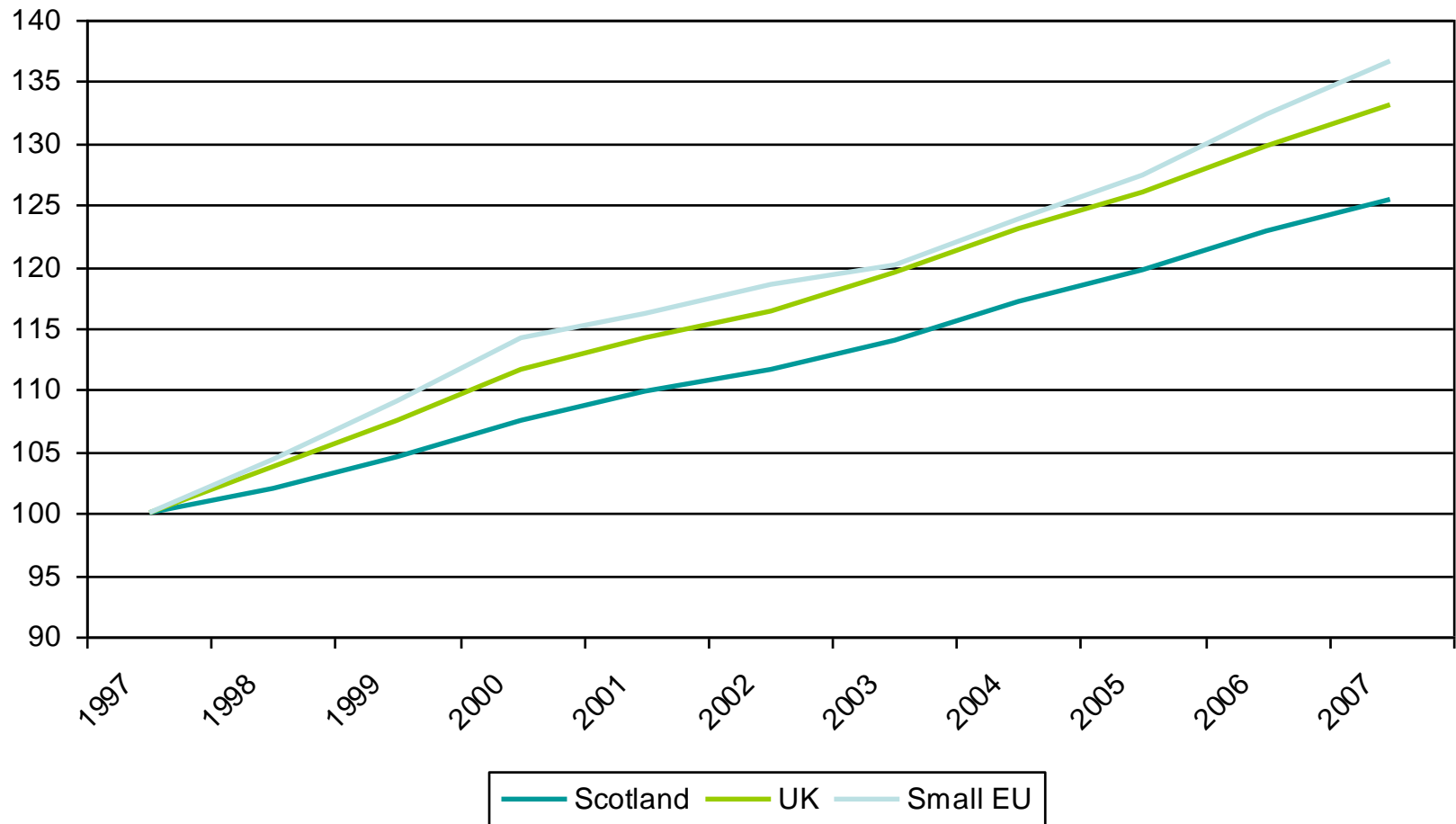
Comparative growth targets

Rolling 10 year average annual GDP growth rates for
Scotland, UK and Small EU



Scotland's output

Growth in GDP since 1997
(1997 = 100)

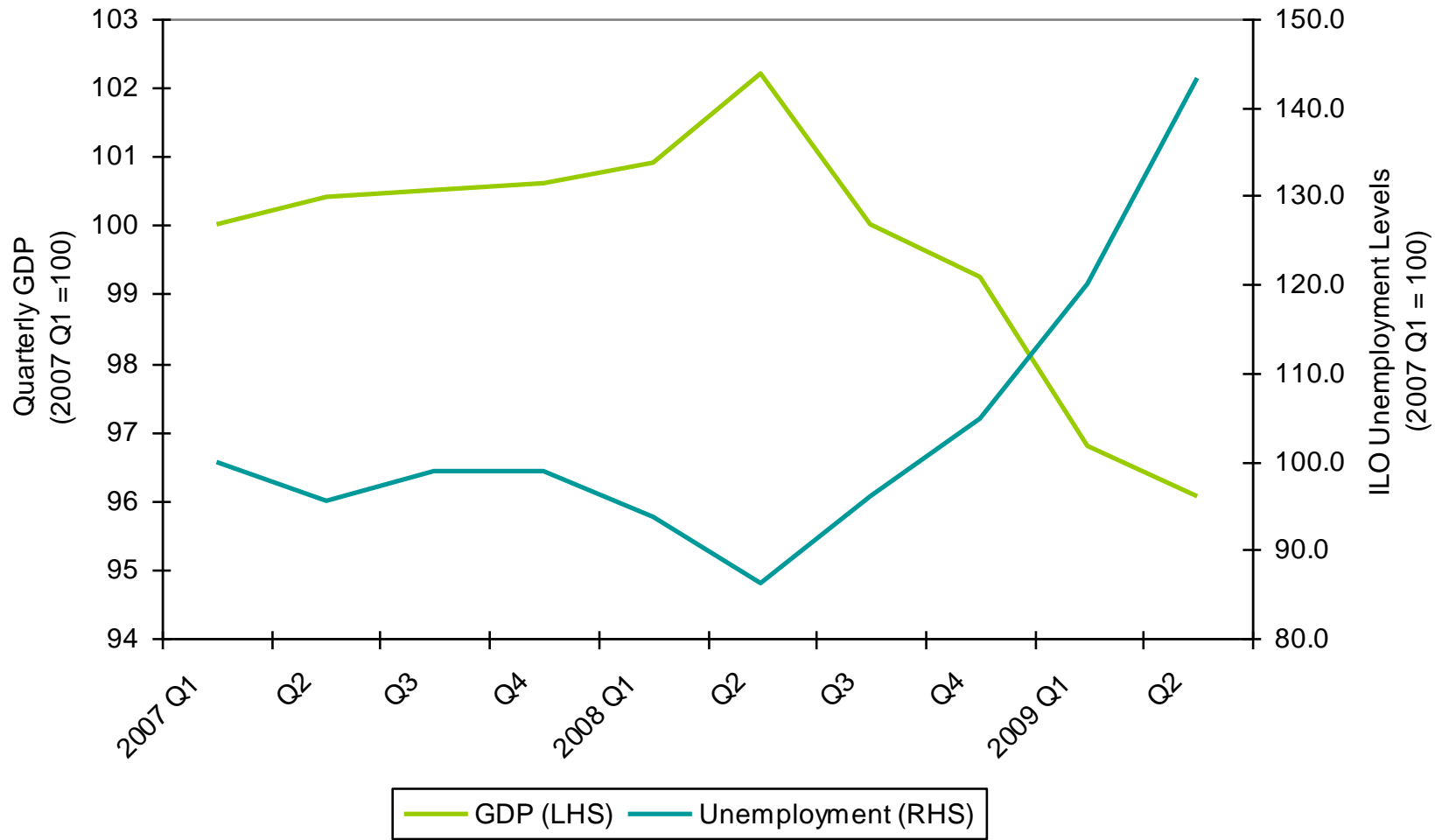


Composition of growth in Scotland

Average Annual Growth Rates (1997 – 2007)	Scotland	UK	Differential (Scotland minus UK)
<i>Productivity</i> (GDP per hour worked)	1.9%	2.3%	-0.4%
<i>Participation</i> (Employment rates in 16+ population)	0.6%	0.3%	0.3%
<i>Population</i> (Aged 16+)	0.4%	0.7%	-0.3%
Average hours worked	-0.7%	-0.4%	-0.3%
GDP	2.3%	2.9%	-0.6%

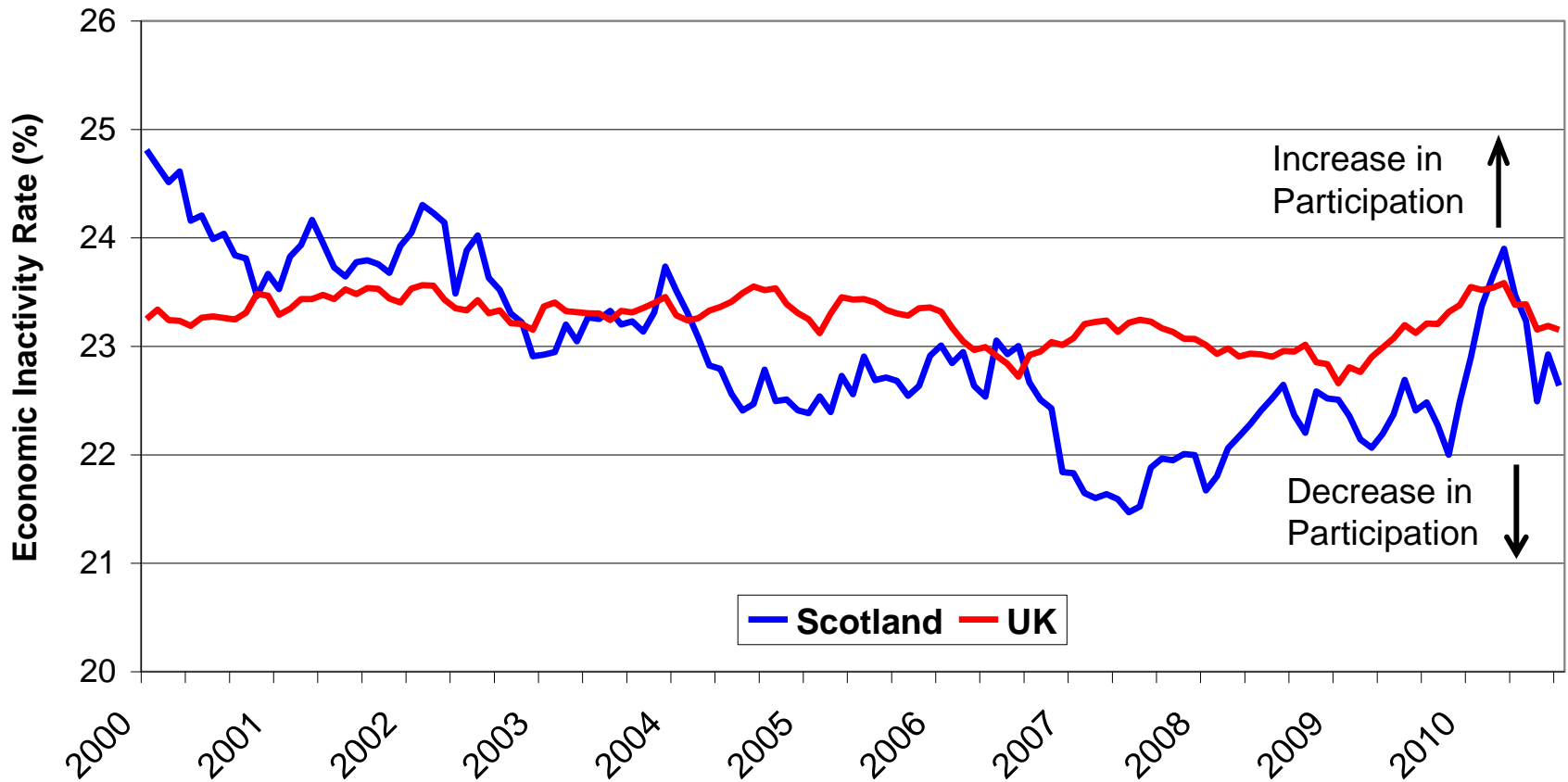
The impact of recession

Change in Quarterly GDP and ILO Unemployment Levels (2007 Q1 =100)



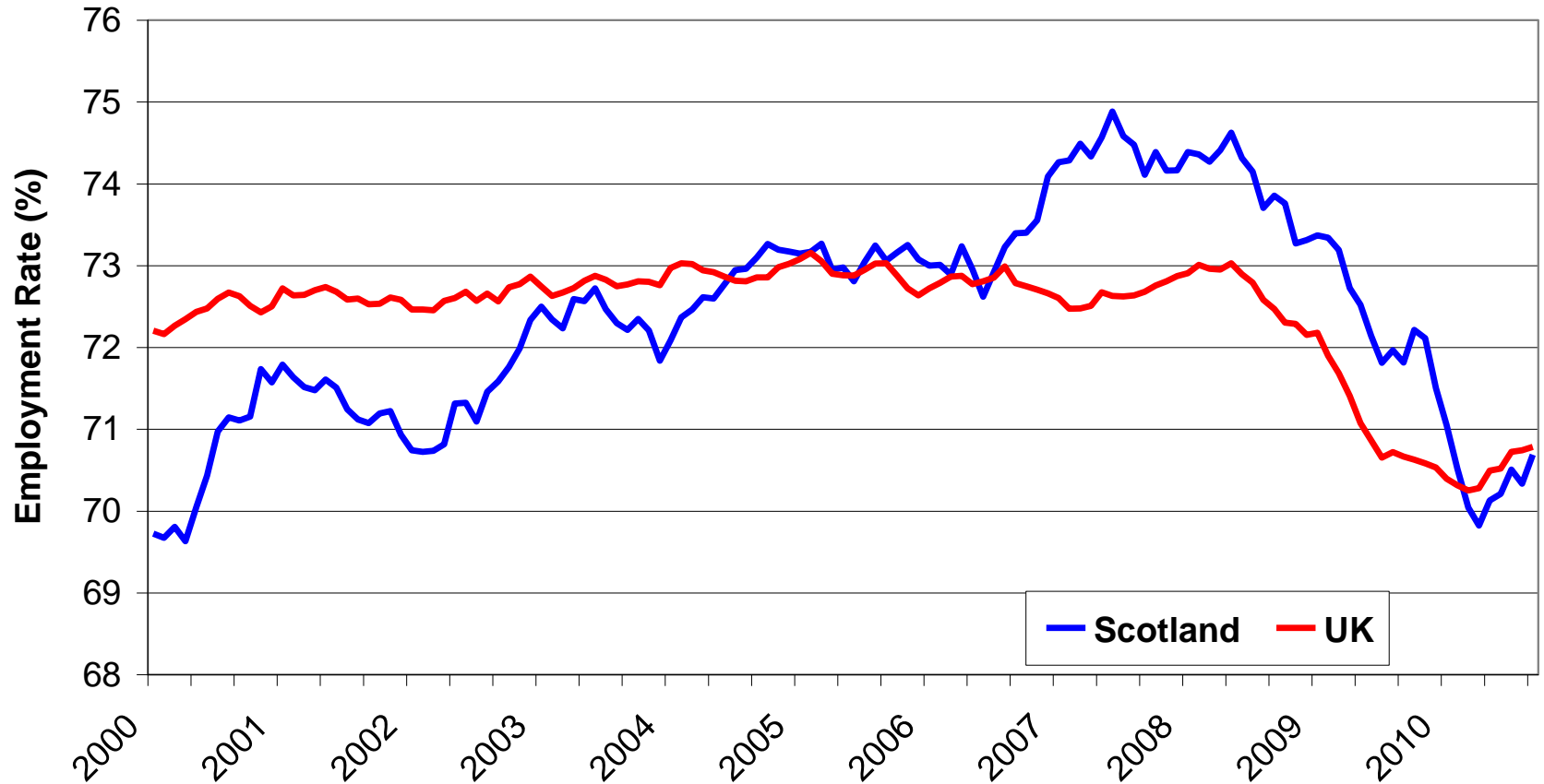
Increase in labour market participation

Economic Inactivity Rate (16-64), Scotland and UK



Pick up in Employment

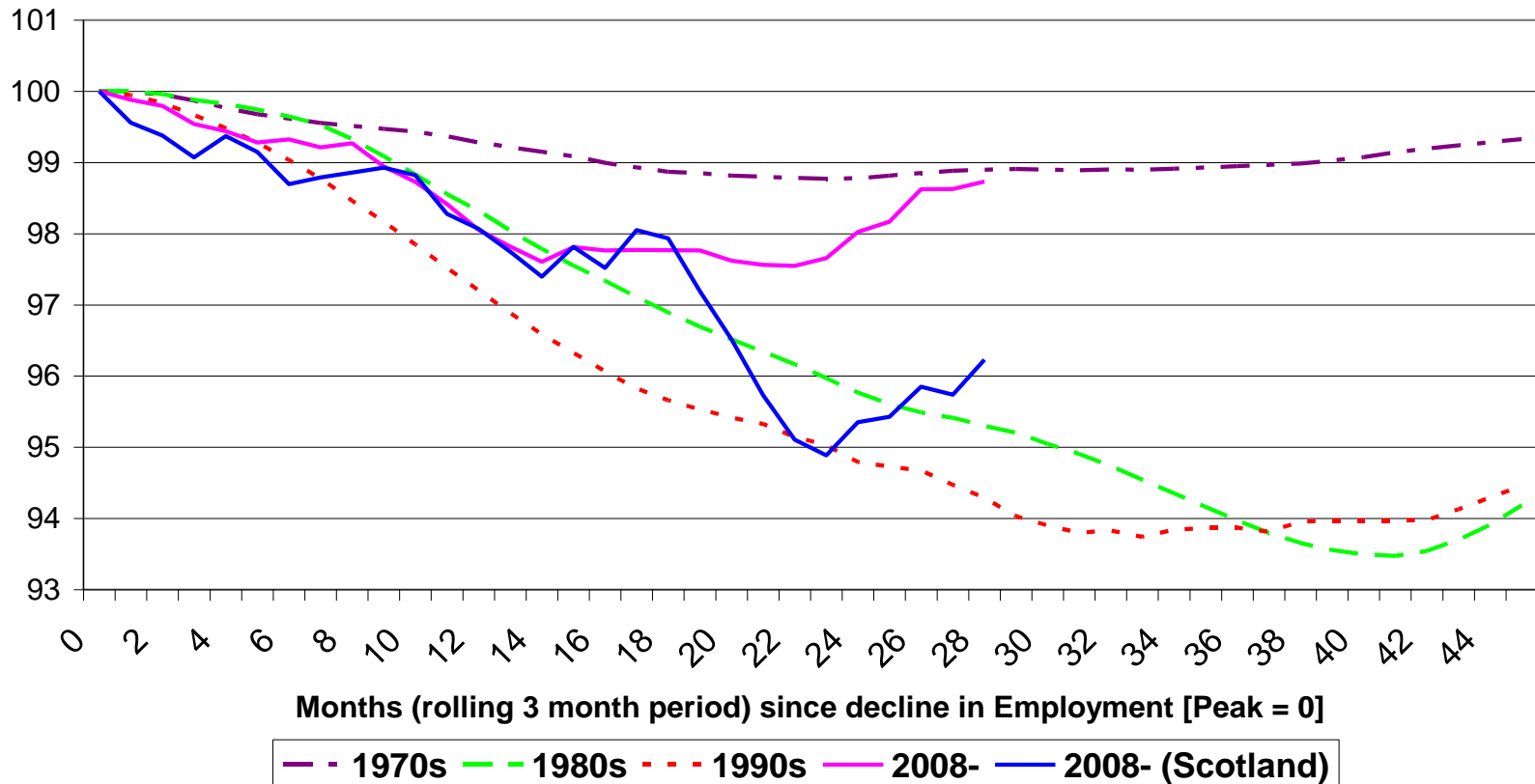
Employment Rate (16-64), Scotland and UK



Employment during previous recessions

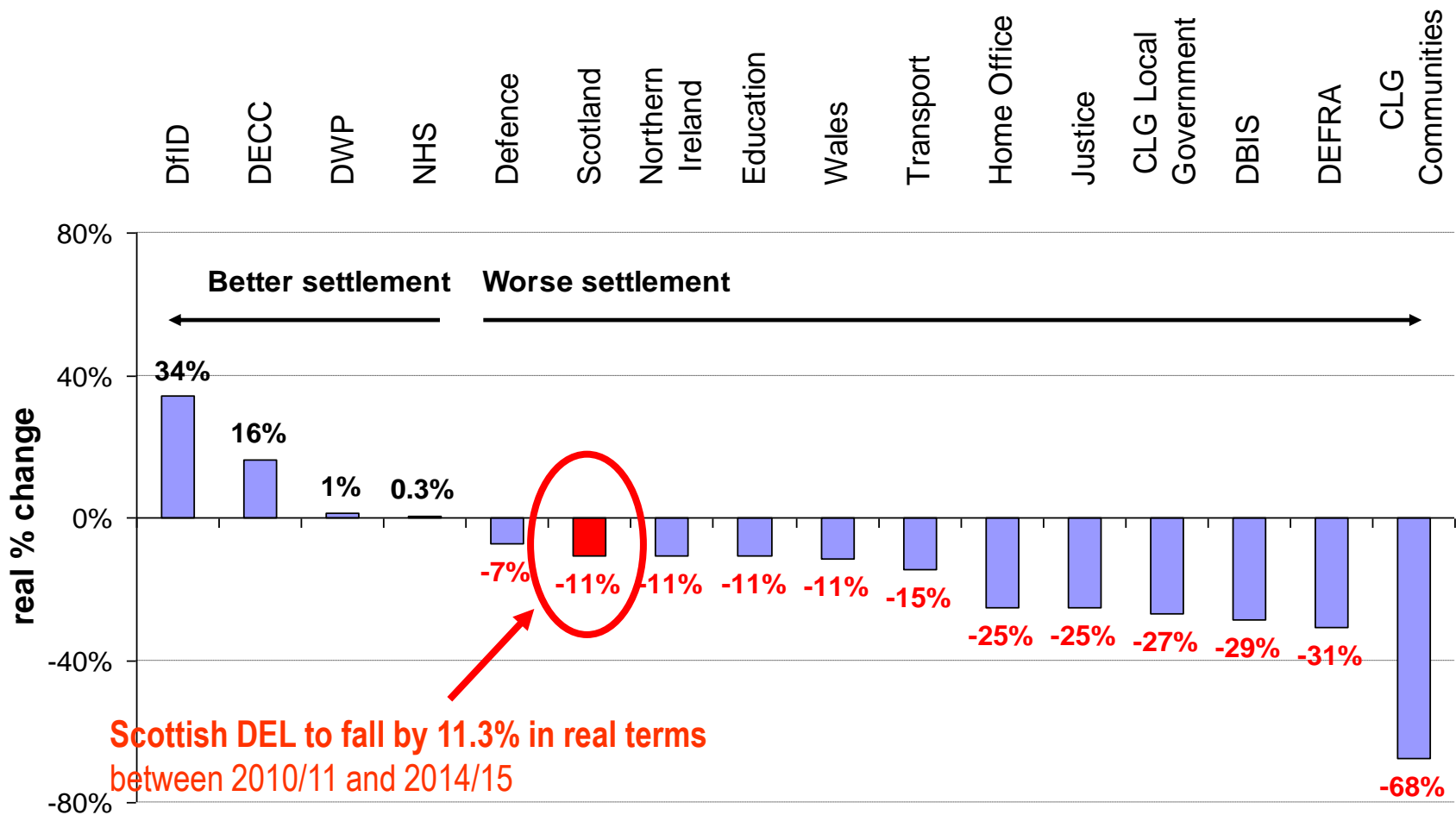
Change in Total Employment Levels (16+ population)

Pre-decline Peak (month 0) = 100



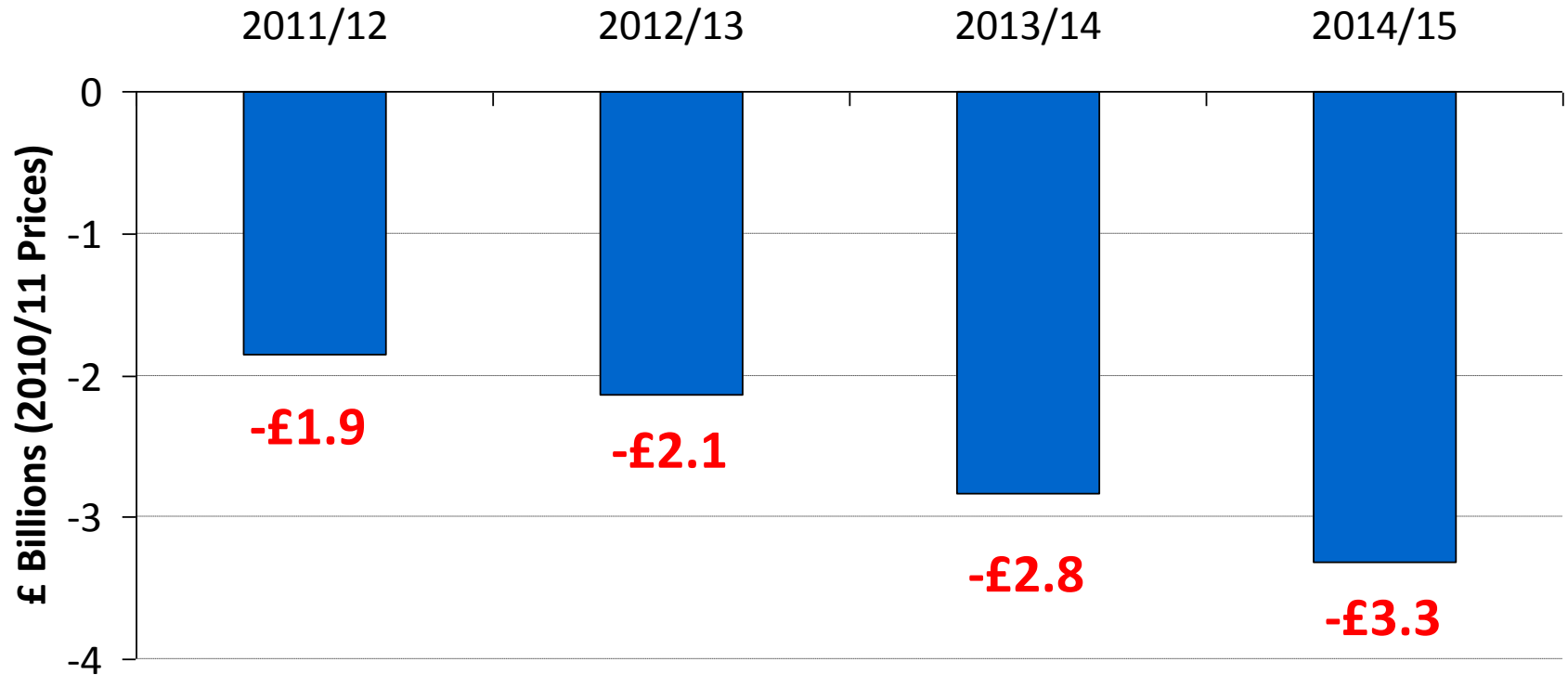
The public finances

UK Comprehensive Spending Review



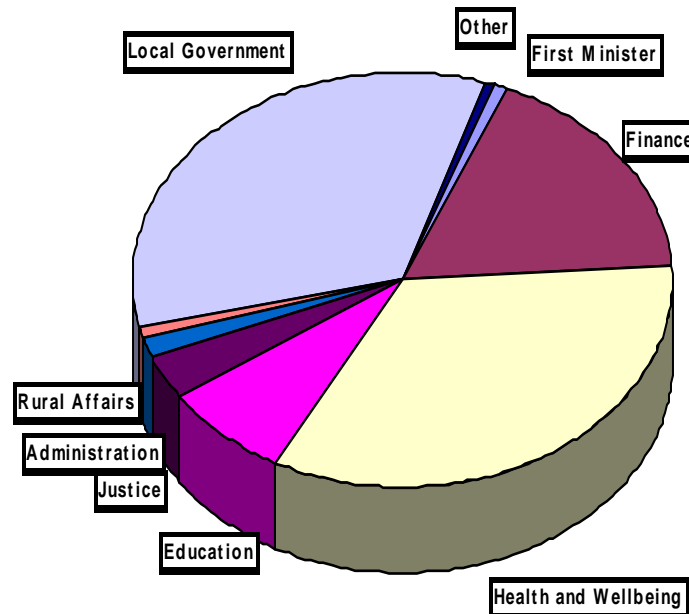
Scottish Consequentials

Real Cumulative Change in Scottish DEL relative to 2010/11



Shape of the Scottish Budget 2011/12

- 33% Local Government
- 35% Health and Wellbeing
- 8% Education and Lifelong Learning



Skills for Scotland 2010

A Refreshed Skills Strategy

- Alignment with Economic Strategy, National Performance Framework and Economic Recovery Plan
- Stronger progress on national targets
- Positioning Scotland for recovery and growth
- Alignment with enterprise policies, demand-led system based on high value jobs
- Targets for National Training Programmes for 2010-11
- Focus on increased flexibility and greater simplification

Achievements since 2007

- National skills body, Skills Development Scotland
- Quick, effective response to recession including targeted employer incentives
- Record investment in colleges and universities, providing more and better learning opportunities
- Additional investment in Modern Apprenticeship programme
- Integration of employment and skills services
- Development of local employability groups providing support for unemployed to find sustained employment

The skills challenge

Short term economic recovery

Flexible, responsive approach to provision to support recovery

More and better learning and training opportunities

Local skills support for local challenges and opportunities

Simple, coherent skills system for individuals and employers

Long term prosperity

High skill, high value jobs

Developing and retaining skills in key and core sectors to drive productivity and growth

Greater employer investment in skills

Better skills use to maximise productivity and more effective leadership and management to increase ambition

	2009 (% qualified)	UK Ranking (12)	OECD Ranking (30)
Low Skills	29.5	7	16
Intermediate Skills	35.6	9	22
Higher Skills	34.9	3	4

Key commitments

Empowering individuals

- Over 40,000 training opportunities in 2010/11
- Support to find sustained, productive employment
- Universal roll-out of 16+ Learning Choices

Supporting employers

- Championing effective skills use, increasing employer ambition and strengthening leadership and management
- Flexible training incentives for employers
- Skills Investment Plans for key sectors

Simplifying the skills system

- “No wrong-door approach” for skills support for employers and individuals
- Redesigning delivery of careers information advice and guidance
- Simplification of funding of employability and skills support at local level
- Alignment between SSCs and Industry Advisory Groups

Strengthening partnerships

- Transformational change in alignment between public, private and third sectors
- Improved local SDS provision through Service Delivery Agreements
- Improved linkages between colleges and local employers

Review of Post 16 Education and Vocational Training

Objectives and scope

The Review is being undertaken to help achieve:

- Significantly better value for Scottish Government expenditures;
- More effective connections on employment matters between the Scottish and UK Governments; and
- Faster progress towards the Government Economic Strategy targets and National Outcomes

There are six main themes to be covered:

- Young people and transitions to work
- Support for unemployed people
- Workforce development
- Skills investment and support, and emerging sectors
- Public investment
- Skills infrastructure and partnership working.

Call for evidence

- Evidence and ideas from the widest range of individuals, organisations and businesses in Scotland
- Examples of innovative and successful initiatives or approaches, which may be within or outside mainstream practice. These may be in Scotland or may come from other countries around the world.
- Consultative workshops and events during the course of the Review
- Contact VETReview@Scotland.gsi.gov.uk

Labour Markets: from National to Local

22 November 2010

Geography Matters:

Putting the *Local* Back Into the Local Labour Market

EDAS Event

Labour Markets: from National to Local

22nd November 2010

Dr. Patrick Watt

Head of Labour Market Research

Skills Development Scotland

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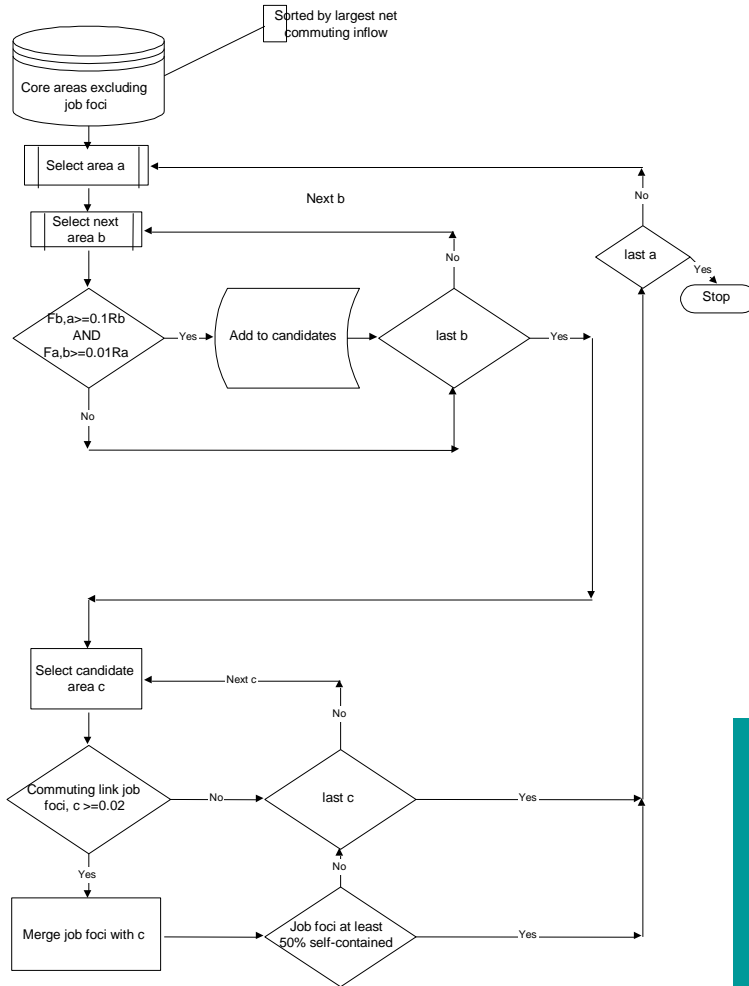
Background – where did this come from?

- Providing ‘Local’ Labour Market Information
- BiS (2010), CLG (2009) - Labour Market Geographies
 - City-Regions
 - Functional Economic Market Areas (FEMAs)
 - Travel-to-Work-Areas (TTWAs) and
 - ...the role for administrative/policy geographies
- Skills Development Scotland (SDS) role
 - ...supporting SDS staff in their day-to-day work

Travel-to-Work-Areas – True or False?

1. TTWAs are based on a theoretical underpinning of labour market process – ‘spatial arbitrage’
2. TTWAs were originally designed to provide a spatial approximation of local labour market areas
3. Approximations are needed because full self-containment is impossible
4. Measures of self-containment adequately cover the requirements for areas to be considered local labour markets
5. TTWA method is the most robust, sophisticated approach, adopted in other countries (‘state of the art’)
6. The TTWA map is a unique solution to the problem posed
7. TTWAs have a wide variety of policy uses

The TTWA Process



5 stage process
Flowchart shows stage 2
– Group core areas

Points to note:

- iterative
- hidden 'fixed' values
- commuting link definition

..moving goalposts?

“The basic algorithm is arbitrary in that there is no theoretical basis for it, it has properties of neither a statistical classification nor a natural one...it is in fact a purely heuristic procedure as a result” (Coombes and Openshaw, 1982: 143)

Other Approaches (Sebastiani (2003))

Inspired by Bayesian texture segmentation approach. Uses MCMC methods

Model Summary

$$\begin{aligned} H(\mathbf{x}, \mathbf{F}) &= H_1(\mathbf{x}, \mathbf{F}) + H_2(\mathbf{x}) \\ &= - \left\{ \sum_{i < j} \mathbf{1}(x_i = x_j) a_{ij} + \beta \sum_{(i, j)} \mathbf{1}(x_i = x_j) \right\} \\ &= - \sum_{i < j} \mathbf{1}(x_i = x_j) \{a_{ij} + \beta \mathbf{1}((i, j))\} \end{aligned}$$

Maximum Pseudo-Likelihood
Estimator

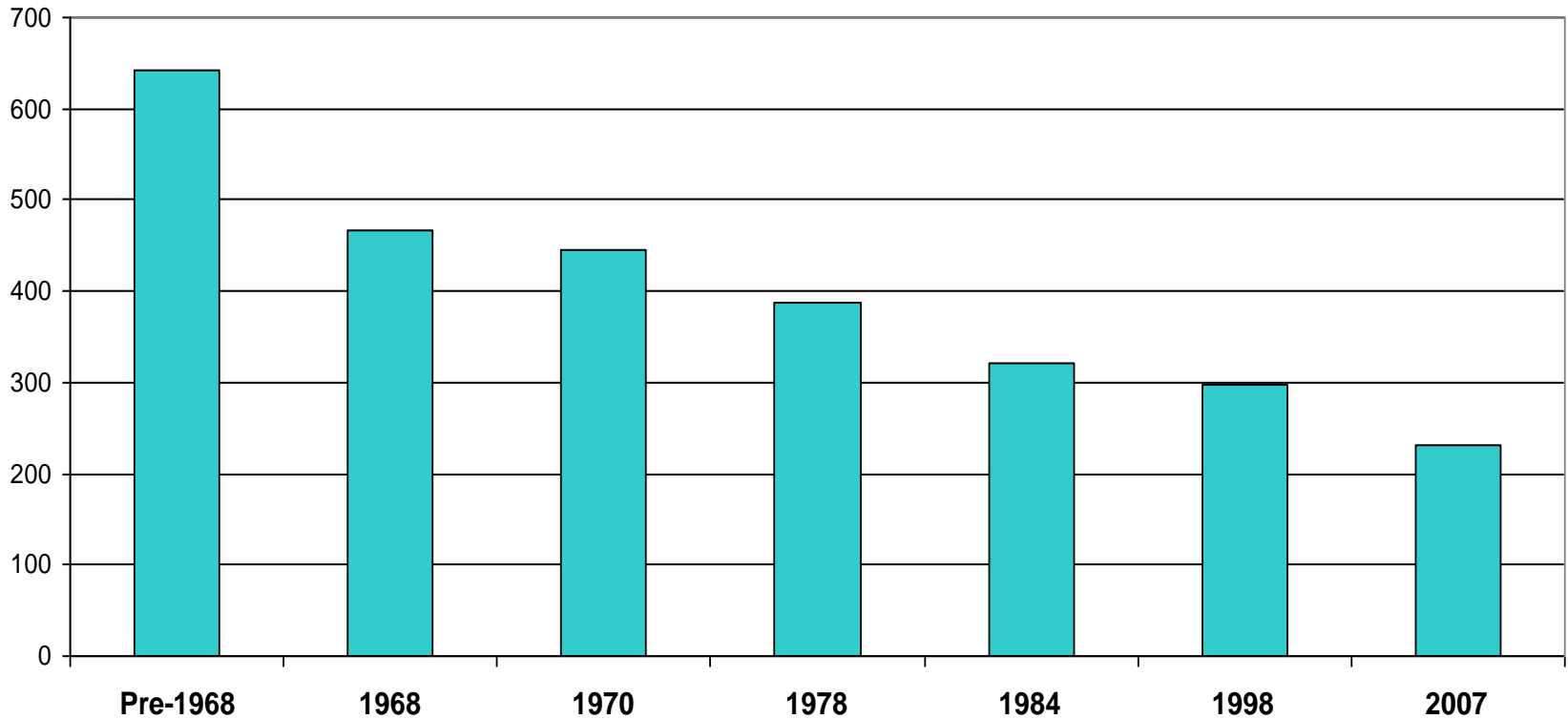
$$\text{PL}(\tilde{\mathbf{X}}; \theta) = \prod_{s \in S_0} p(\tilde{x}_s | \tilde{x}_r : r \neq s; \theta)$$

$$\text{PL}(\tilde{\mathbf{X}}; \alpha, \beta) = \prod_{s \in S_0} \frac{\exp \left[\sum_{j < s} \mathbf{1}(x_s = x_j) \{a_{sj} + \beta \mathbf{1}((s, j))\} \right]}{\sum_{z_s \in \mathcal{X}} \exp \left[\sum_{j < s} \mathbf{1}(z_s = x_j) \{a_{sj} + \beta \mathbf{1}((s, j))\} \right]},$$

A more sophisticated approach to drawing lines around areas and calling them LLMs?

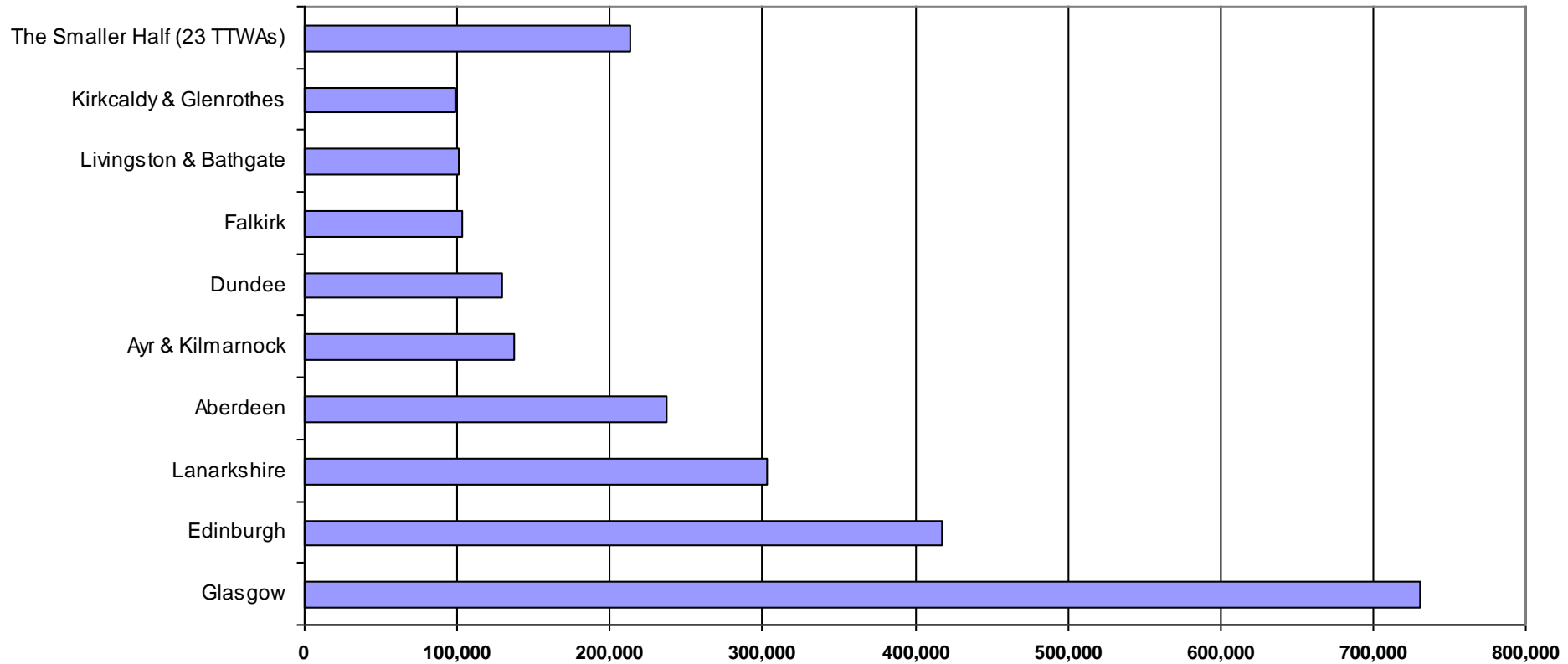
The Disappearing TTWAs

Number of British TTWAs at Each Revision



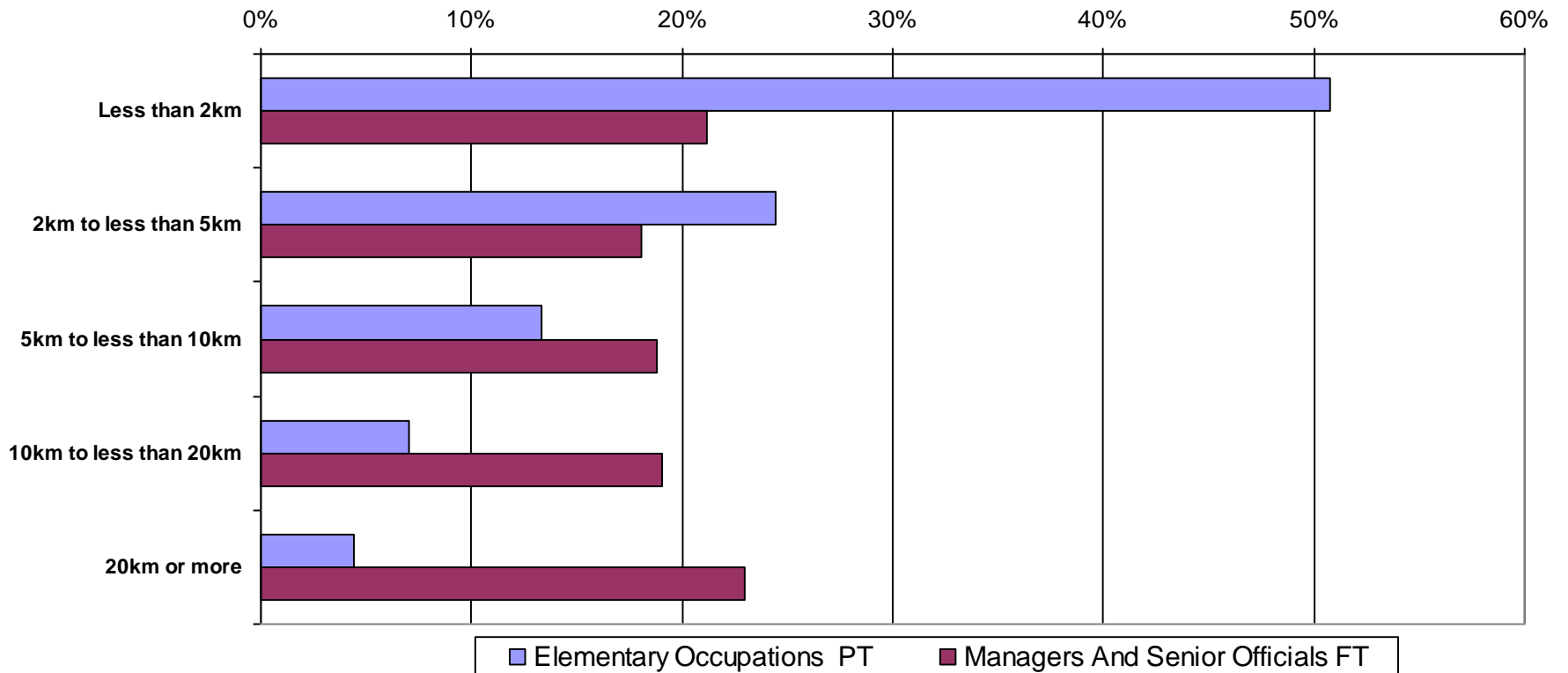
Q. How Homogenous are TTWAs?

Scottish TTWAs - Selected Workforce Coverage



Commuting Behaviour

Scotland 2001 - Distance Travelled to Work



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What's It For?

“Commuting behaviour also varies significantly with age, social class, income ethnicity, and numerous other such variables such that the ‘average commuter’ – like the ‘average worker’ of orthodox theory – is in fact a statistical myth, not a social reality. Such problems make quite intractable the process of delimiting local labour market empirically. In the final analysis, largely arbitrary judgements must be made about where to draw the line and about the acceptable proportion of workers allowed to cross it... No matter how accurate the commuting data or how powerful the computer system into which it is fed, the problems of delimiting the boundaries of the local labour market are insoluble. The task is futile because it amounts to trying to draw a line around complex and dynamic social processes.”

(Peck, 1996)

How Does the Labour Market Work?

Is it the same in theory and in practice?

The labour market works in unmarket-like ways

- effort is the commodity, which can be withheld
- implicit contracts and notions of fairness, loyalty, motivation and trust
- organisation by employers and workers
- labour supply is a household function
- the supply of labour and consumption of goods are interdependent
- subjective preferences of employers and workers

For instance, if all workers were the same, what would recruitment practices be like?

‘Big’ assumptions which help in modelling and macro-level analysis can be difficult to sustain at the local level

My principal argument here is that any differences between theory and practice are most manifest at the local level

Conclusions

- Census Commuting Data is rich, detailed and robust:
 - Is defining TTWA maps the best use of this data?
- Data-driven or policy-driven geography?
- What are 'sensible' administrative geographies?
- Which approach has stronger:
 - Theoretical basis
 - Pragmatism, based on how the labour market actually works
 - Policy and operational relevance
- Rethinking our approach to local labour markets
 - Integrated local analysis
 - Embracing dynamism, segmentation and household supply
 - Incorporating local knowledge
 - Collaborative strategy & policy
 - Targeted action

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