

# The impact of system reform on commissioning in the NHS

Mark Dusheiko, Maria Goddard, Hugh Gravelle and Rossella Verzulli  
Centre for Health Economics, University of York

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## Presentation outline

- Introduction
- Aims
- Data sources
- Methods
- Empirical findings
- Discussion and conclusions

## Introduction

- Policy aim: Commission health care services to secure the best quality care and health outcomes for local populations within a fixed budget.
- Payment by Results (PbR), Patient Choice and Practice Based Commissioning (PBC) increase the ability of patients and commissioners to “shop around” amongst secondary care providers.
- Policies sought to encourage new types of NHS providers (Foundation Trusts) and entry by private sector providers.

## Aims

- Estimate effects of the introduction of PbR, Patient Choice and Foundation Trusts (FTs) on the concentration of elective admissions.
- Identify effects by exploiting
  - phased introduction across HRGs
  - geographic variation in Patient Choice, FTs

## Previous findings

- GP fundholders used more providers; had less concentrated admissions, and were more active purchasers.
- Abolition of Health Authorities, GP fundholders and introduction of PCTs increased concentration.
- Merging of NHS Trusts increased concentration.
  - See: Dusheiko et al. Health Economics, 17:907-926.

## Why investigate admission concentration?

- New reforms encourage purchasers to consider alternative providers
  - Easier to change provider
  - Patient preferences
- Providers encouraged to attract patients
  - Improve quality, reduce waiting times and increase efficiency;
- Influence of reforms reflected by changes in admission concentrations across providers

**Table 1.** Implementation of reforms

Policy	Apr 2003	Apr 2004	Apr 2005	Jan 2006	Apr 2006	Apr 2007	Apr 2008
PbR	First 15 HRGs under PbR	Second 33 HRGs under PbR	Tariff 25% for remaining HRGs		Tariff 50% for remaining HRGs	Tariff 75% for remaining HRGs	All Trusts reach 100% PbR price
PbR and FT		First 25 FTs authorised	Further 7 FTs authorised		Further 27 FTs authorised	Further 30 FTs authorised	Further 26 FTs authorised
Patient Choice				Eligible NHS patients offered choice of 4 providers			NHS patients offered choice of providers meeting NHS standards

Sources: Audit Commission of Healthcare Commission; Street A. and M. Miraldo (2007)

**Table 2.** First 15 HRGs under PbR

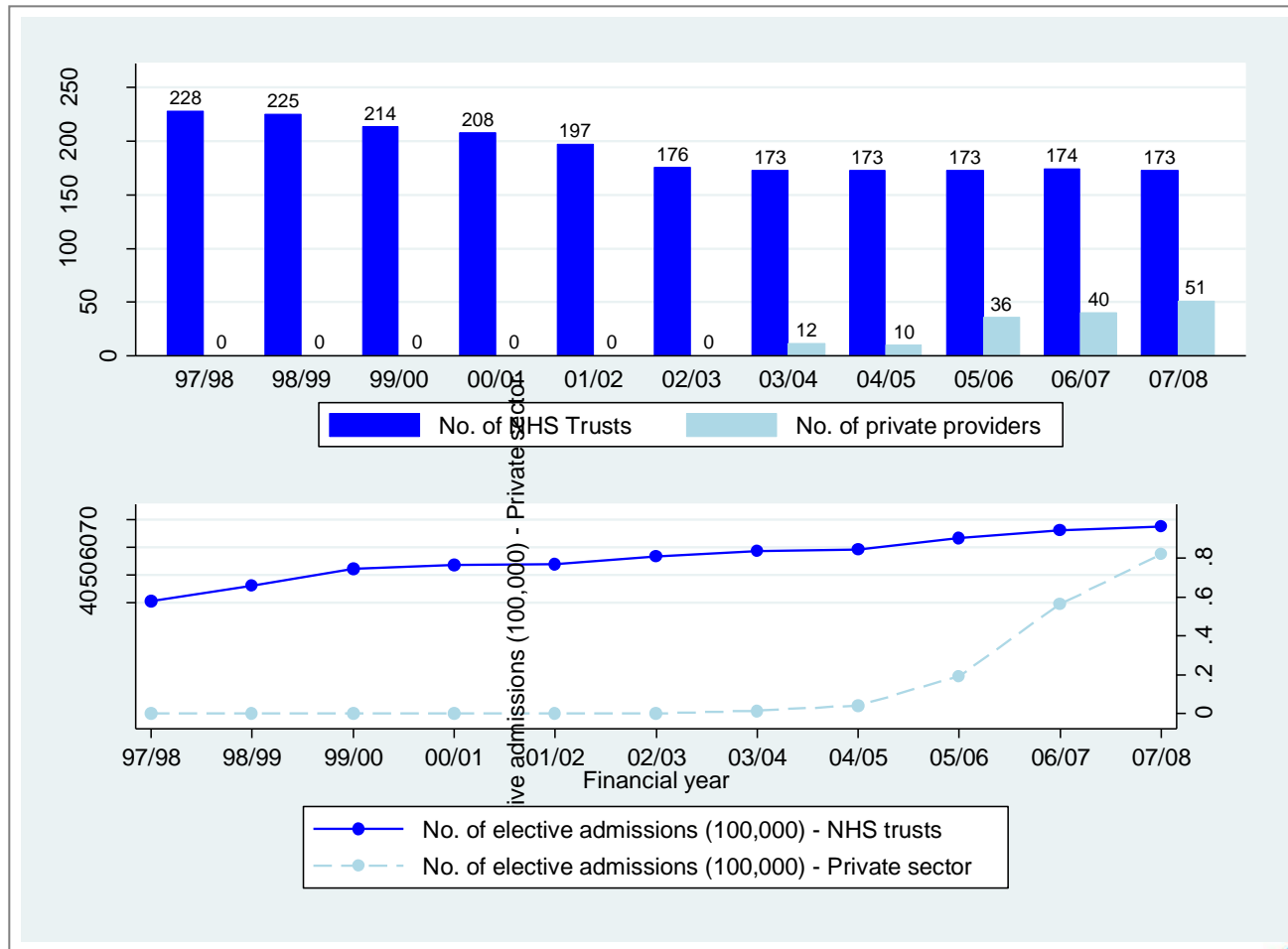
HRG Chapter	PBR wave	Code	Label code
<b>Eyes and Periorbita</b>	1	B02;B03	Cataract Extractions with Lens Implant
<b>Cardiac surgery and primary cardiac conditio</b>	1	E03; E04	Cardiac Valve Procedures; Coronary Bypass
	1	E15	Percutaneous Transluminal Coronary Angioplasty
	2	E13; E14	Cardiac Catheterisation
	2	E16	Other Percutaneous Cardiac Procedures
<b>Musculoskeletal system</b>	1	H01; H02	Hip Replacement (Bilateral; Primary)
	1	H03; H04	Knee Replacement (Bilateral; Primary)
	1	H10	Arthroscopies
	2	H09	Anterior Cruciate Ligament Reconstruct
	2	H11; H12	Foot Procedures
	2	H13; H14; H15	Hand Procedures
	2	H16; H17; H18; H19	Soft Tissue or Other Bone Procedures
	2	H20; H21	Muscle, Tendon or Ligament Procedures - Category 1
	2	H22	Minor Procedures to the Musculoskeletal System
<b>Skin, breast and burns</b>	1	J02; J03;	Major Breast Surgery including Plastic Procedures
	1	J04; J05	Intermediate Breast Surgery
<b>Vascular system</b>	1	Q11	Varicose Vein Procedures
<b>Digestive system</b>	2	F71; F72	Abdominal Hernia Procedures
	2	F73; F74	Inguinal Umbilical or Femoral Hernia Repairs
	2	F75	Herniotomy Procedures
<b>Hepato-biliary and pancreatic system</b>	2	G11; G12; G13; G14	Biliary Tract - Complex Procedures
<b>Urinary tract and male reproductive system</b>	2	L27; L28	Prostate Transurethral Resection Procedure
	2	L29; L30	Prostate or Bladder Neck Minor Endoscopic Procedure
<b>Female reproductive system</b>	2	M01	Lower Genital Tract Procedures



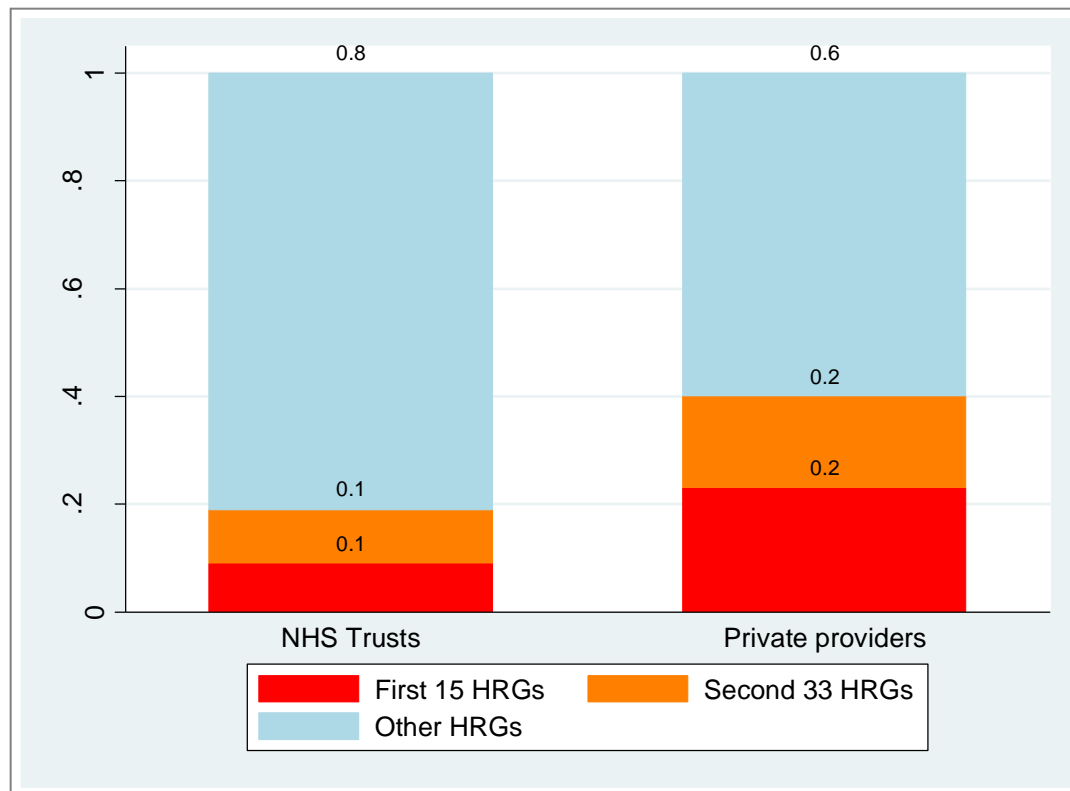
## Data sources

- Hospital Episode Statistics (HES)
  - First finished consultant episodes for elective admissions from 1997/98 to 2007/08.
  - Includes NHS patients admitted in independent hospitals or treated privately in NHS hospitals.
- National Patient Choice (NPC) surveys
  - Proportion of patients offered choice between May 2006 and March 2007.
- Monitor data
  - NHS FTs status by authorisation date.

**Figure 1.** Number of providers and elective admissions, by type of providers and by year



**Figure 2.** Elective admissions (%) in 2007/8, by type of provider and by HRG subset



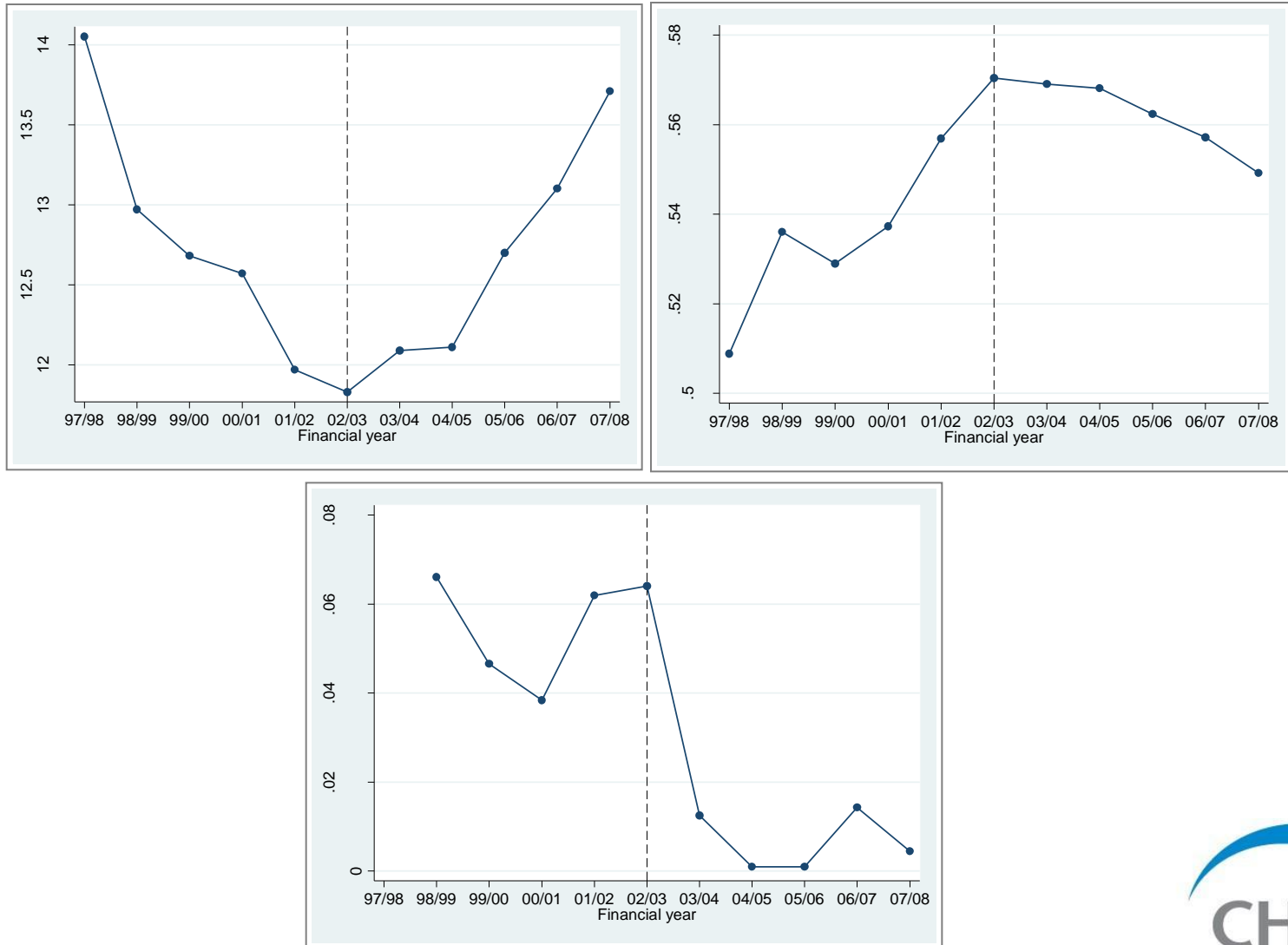
## Methods: Outcome measures

- Six measures of commissioning activity for ‘frozen’ 2004/05 PCTs.
- Three measures of concentration of admissions:
  - (i) Number of NHS and private providers responsible for 99% of admissions;
  - (ii) Share of total admissions at the PCTs largest provider;
  - (iii) Index of concentration (Herfindahl) at PCT level (sum of squared shares of admissions at each provider for each PCT).
- Three measures of changes in admission pattern (‘switching’):
  - (i) Share of admissions at hospitals never used before;
  - (ii) Share of admissions dropped from existing hospitals;
  - (iii) Average change in provider shares.

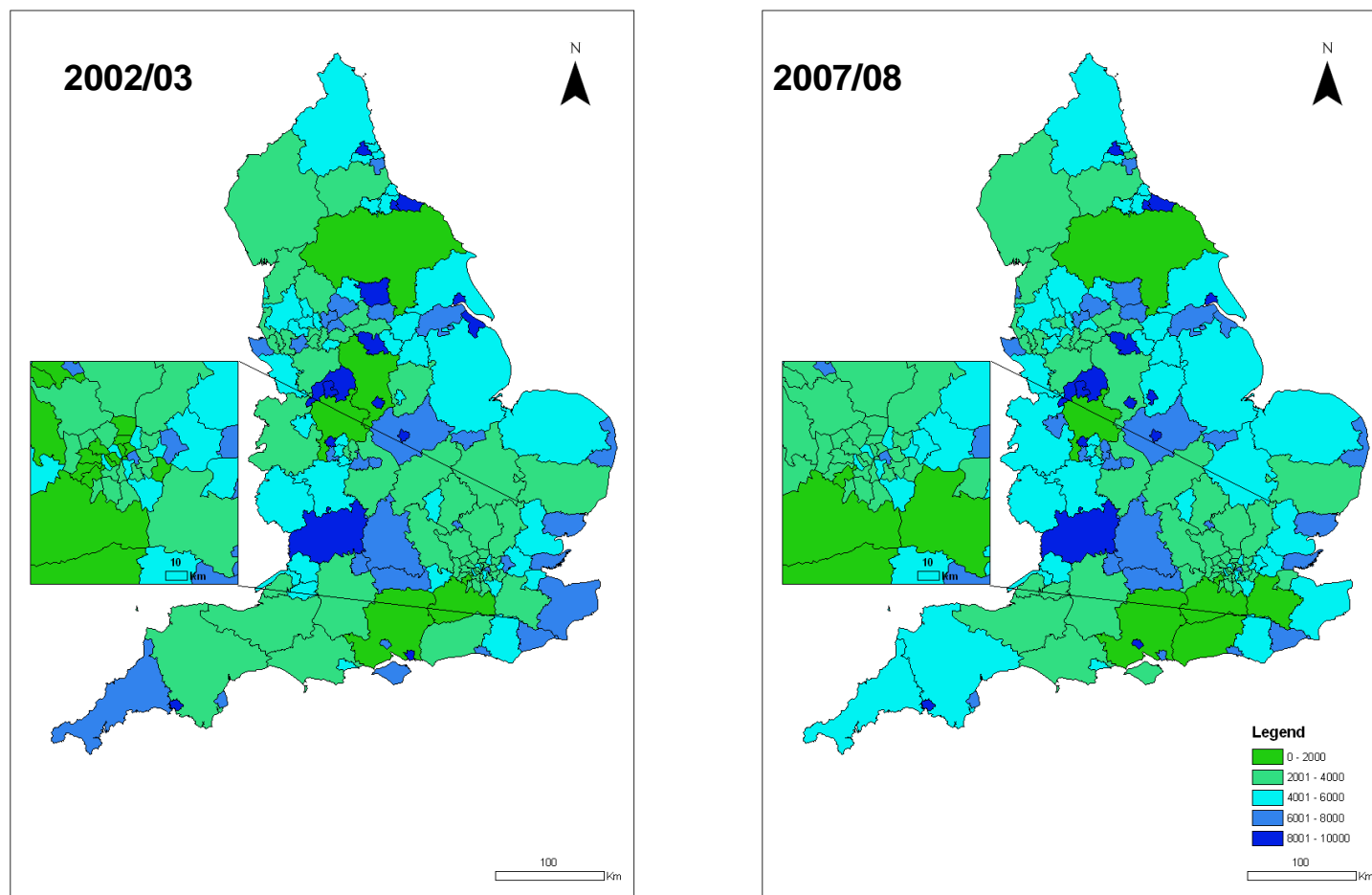
## Methods: Model estimation

- Difference in differences specification
- PCT fixed effects
- Separate time trends for early PBR HRGs
- Patient choice measure interacted with time
- Time varying Foundation Trust admission shares

**Figure 3.** Average levels of commissioning measures (all HRGs) over time

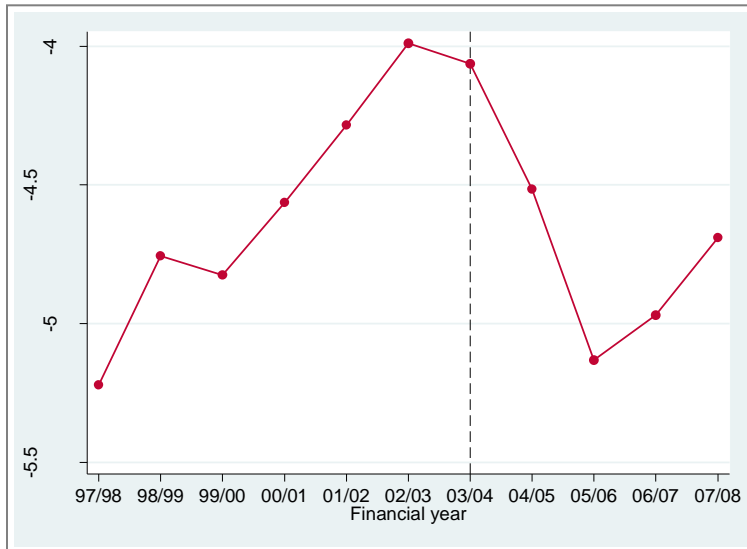


**Figure 4.** Herfindahls in 'frozen' 2006/7 PCTs in 2002/3 and 2007/8

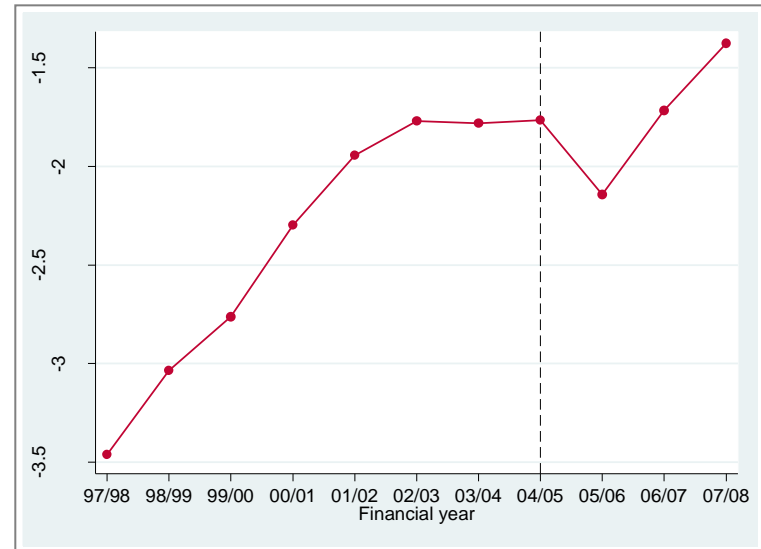


**Figure 5.** Difference in numbers of providers between PbR waves 1 and 2, and wave 3 HRGs

**PbR wave 1 HRGs vs wave 3**



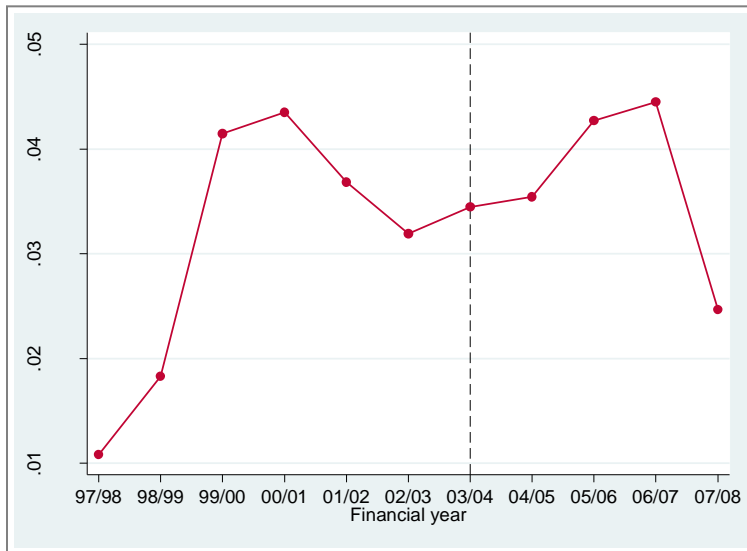
**PbR wave 2 HRGs vs wave 3**



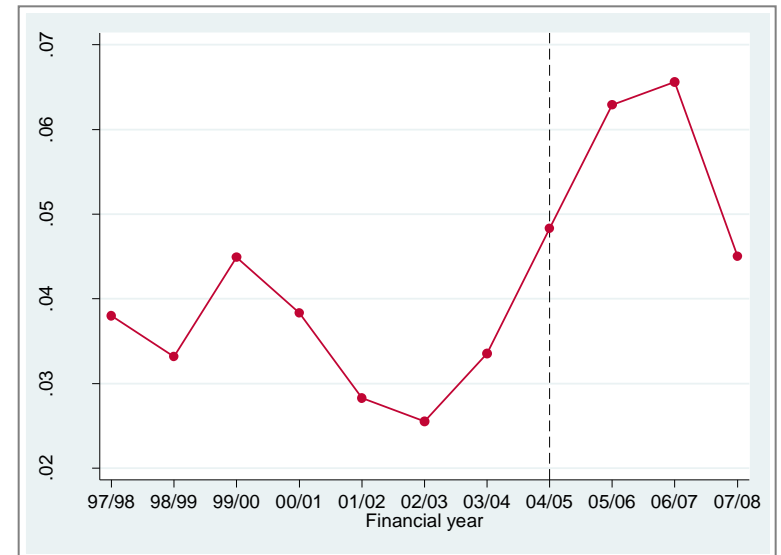


**Figure 6.** Difference in Herfindahl index between PbR waves 1 and 2, and wave 3 HRGs

**PbR wave 1 HRGs vs wave 3**

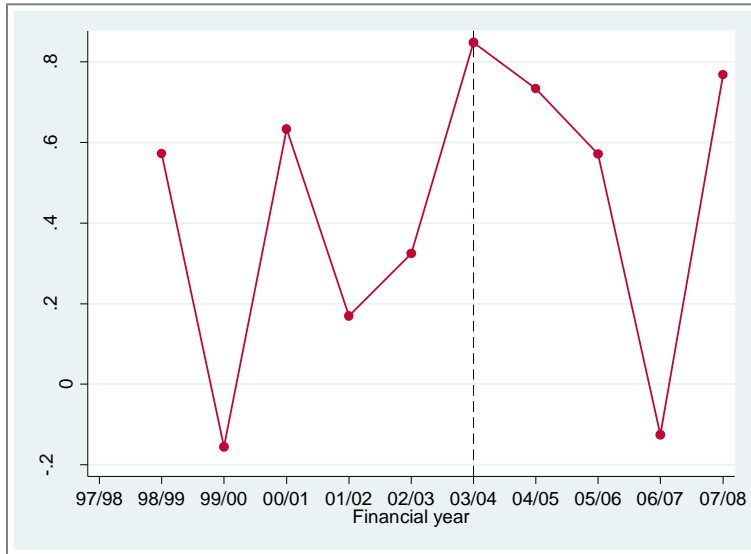


**PbR wave 2 HRGs vs wave 3**

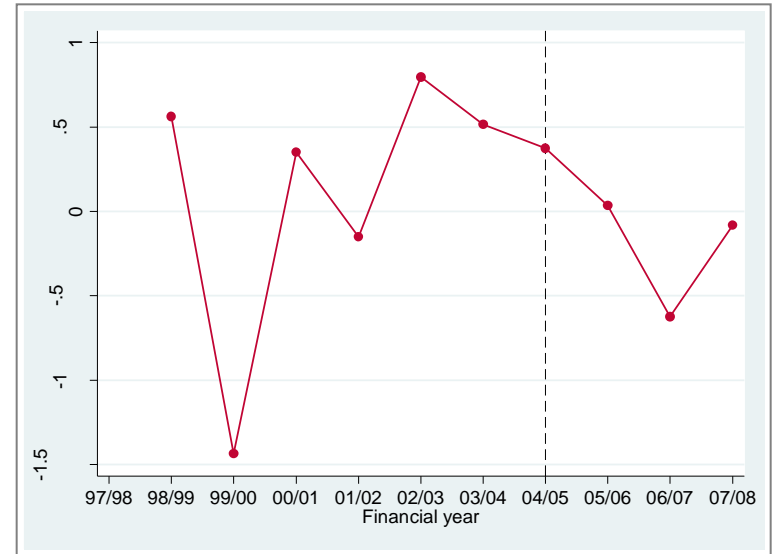


**Figure 7.** Differences in change in shares between PbR waves 1 and 2, and wave 3 HRGs

**PbR wave 1 HRGs vs wave 3**



**PbR wave 2 HRGs vs wave 3**



## Effects of Patient Choice

- Patient choice associated with significant increase in concentration:
  - 10% increase in choice associated with 2% decrease in the number of providers used;
  - 10% increase in choice associated with 5% increase in Herfindahl concentration index.
- PCTs offering more choice had significantly *less* volatility across providers.

## Effects of Foundation Trusts

- An increase in FT 'exposure' associated with a significant decrease in the number of providers used.
- Positive but insignificant association with the Herfindahl concentration index.
- Associated with an increase in switching to new providers and dropping of existing ones.

## Discussion

- Limitations
  - Difficult to evaluate inter-related and simultaneous reforms
  - Measurement of Foundation Trust effect
  - Differential trends in concentration
- Further work
  - Additional year of data
  - Practice based commissioning
  - Improved specification of FT and PbR effects
- Implications
  - Policy changes have had real effects shown in market structure

## Provisional Conclusions

- Downward trend in concentration after the system reforms of 2002/3
  - New providers, cessation of hospital mergers, PCT enlargement, increased activity, waiting time targets, PBC
- PbR associated with increased concentration and less switching.
- Patient choice associated with increased concentration and less volatility.
  - Does not imply detrimental to patient outcomes
  - Greater use of higher quality more accessible providers?
- FTs associated with increased concentration:
  - PbR effect? Quality signal??