



# WHAT INFLUENCES THE REGIONAL ENTREPRENEURSHIP LEAGUE TABLES IN ENGLAND AND WALES?

or

## ***Regional Entrepreneurship League Tables in England and Wales: The irrelevance of policy***

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## Why is this an important issue?

- Governments observe that a large proportion of employment is in small firms
- Many also believe that new and small firms “create” jobs
- Some believe that more new firms [entrepreneurship] enhances wealth and job creation
- **But Expenditure is huge: More than Police or Universities**
- Does policy work in low enterprise areas?

# What does theory have to offer?

- OPTION 1: Culture, Attitudes and Context: **Explains persistence**
- OPTION 2: Entrepreneurship is like any other labour market choice: Take-up reflects competing labour market opportunities: **Explains persistence and change**



# A Theory of Persistence : Cultural

***Entrepreneurship Culture:*** “positive collective programming of the mind” or an “aggregate psychological trait” of the population oriented toward entrepreneurial values such as individualism, independence, and achievement.”

This is reflected in informal institutions as:

*“norms, values and codes of conduct in a society that are in favour of entrepreneurship”*

## Theory of persistence: culture

Such cultures are time-persistent because of:

*“the intergenerational transmission of entrepreneurial role models and values; (the) social acceptance of entrepreneurship; the existence of entrepreneurial supporting services and institutions”*

# Path dependence and self-reinforcing mechanisms

*Entrepreneurship is a **geographically localised phenomenon, a spatially uneven process that persists** over time, implying that regional entrepreneurship is a **path-dependent process***



# Locally self-reinforcing mechanisms

- **‘Demonstration’** effect that **role models** play in stimulating regional entrepreneurship and by increasing the societal acceptance
- **Previous acts of entrepreneurship create further entrepreneurial opportunities** by altering the economic environment new entrepreneurs are faced with and called to adjust and react upon as well as by expanding previously identified market niches
- **market expansion** effects by the **wealth** created by previous entrepreneurs

# Explanations for time persistence

## **Entrepreneurship culture:**

- ✓ *Past regional entrepreneurship rates determine future ones* (Andersson and Koster 2011; Fritsch and Wyrwich 2014; Fotopoulos 2014 ).
- ✓ The effect of *past local small firm prevalence* is positive and significant in determining future regional entrepreneurship rates (Suetzer et al 2015, EER).



# YES BUT...

- At national level entrepreneurship rates have risen 4X in 90 years
- Aren't entrepreneurs supposed to identify opportunities rather than being constrained by local circumstances?
- Family businesses generally don't last more than 1 generation [in the UK]
- Is it performance or starts that matter to a region?

# The case against culture

- The type of entrepreneurship is a **response to** change [Baumol 1990]
- Individuals shift in and out of entrepreneurship in response to utility changes – earnings
- The scale of entrepreneurship reflects its attractiveness compared with other options
- Cultural attitudes reflect – but do not cause - these changes

# A Theory of Change: Risers [ Region A]

1. **Wages rise in A**
2. **Marginal entrepreneurs shift to employment**
3. **FALL in firm numbers in A**
4. **Firm quality in A rises**
5. **Banks lend more**
6. **Output of firms rises**
7. **Demand for labour rises**
8. **This attracts in-migrants**
9. **Many cannot get wage employment**
10. **They become s/e**

Ghatak, M., M. Morelli, and T. Sjöström. 2007. "Entrepreneurial Talent, occupational choice and trickle up policies." *Journal of Economic Theory* 137, 27-48.



## A Theory of Change: Decliners [Region B]

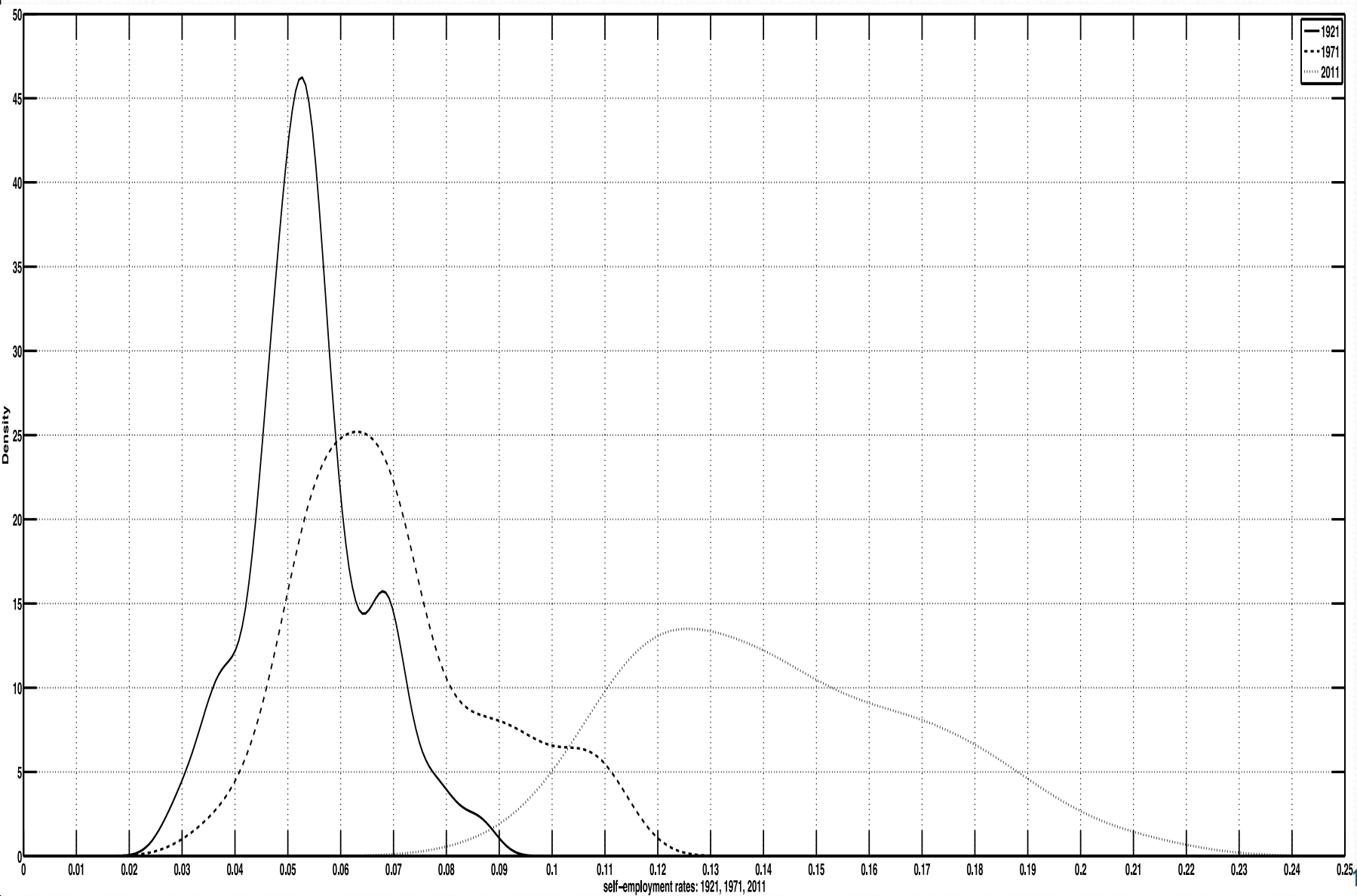
- 1. Demand for services provided by the s/e falls**
- 2. Examples: Seaside hospitality/ fishing**
- 3. S/e falls; siblings move away**

# Self-Employment rates 1921, 1971 and 2011 England and Wales

# Definitions Data etc

- All Census data apart from wage rates
- Entrepreneurship/ Self-employment incl owners of businesses
- Reliability: self-report but with nearly 100% response rates
- Comparisons over time: 1921-2001; 1971-2011
- Comparisons over space
- Rates are normalised by 18-65s
- LADs are placed in a league table with highest at 1





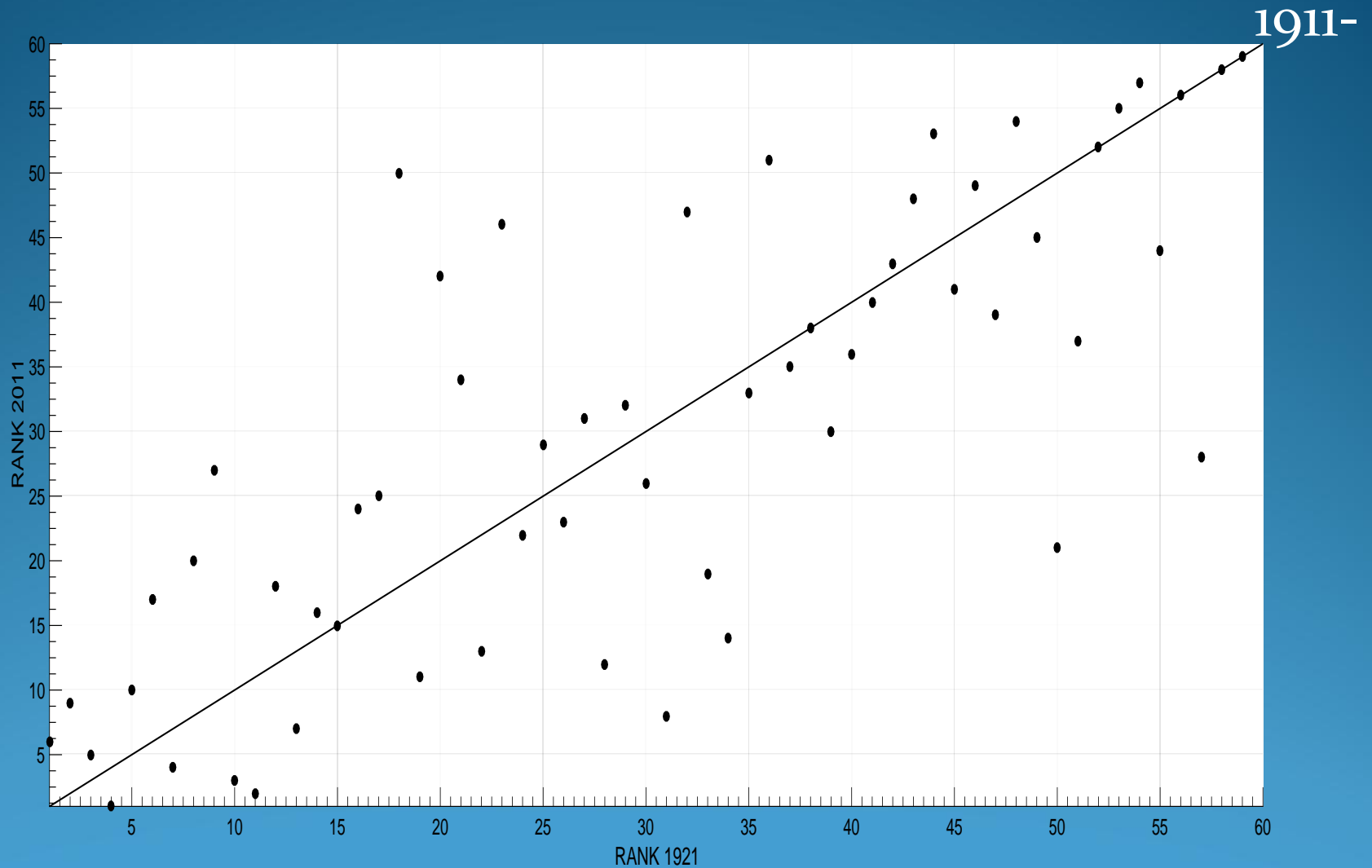
# Why League Tables?

Compare relative position when everything rises

Compare over time as much is held constant:

- The s/e question in the Census
- The spatial areas
- The controls
- Politicians are interested in “relatives”

# RANK CHANGES BETWEEN 1921 AND 2011: REFERENCE GEOGRAPHY 1971 CENSUS COUNTIES



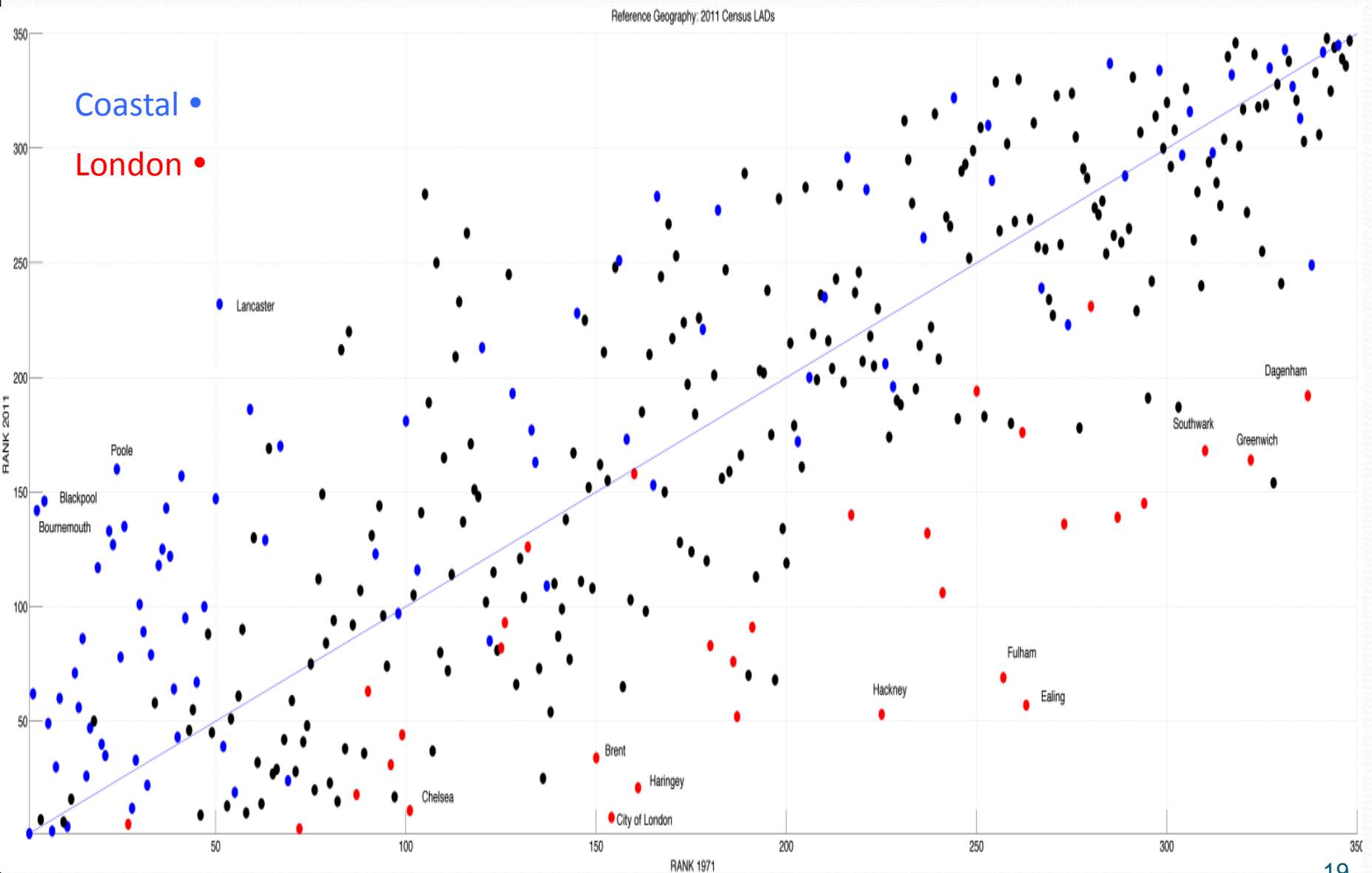


# The Medium Term

1971 -2011

Smaller spatial units 346 LADs

# The case for change: rank changes between 1971 and 2011: 2011 Census LADs (348 obs.)



# Placing Wales in the picture

The Entrepreneurial Action Plan 1996



# The issue

- Can a government make a country more “enterprising”?
- The case of Wales : population 3 million [England 53 million]

# Wales Entrepreneurship Action Plan (EAP) 1996

- **AIM: “Our vision for Wales is to establish itself, within a generation, as one of the most entrepreneurial nations in Europe....where entrepreneurship is valued, celebrated and exercised throughout society in the widest range of economic circumstances”**
- **COST £245 million ..£80 per person**



# Four Tests

**TEST 1: A 50% increase in registered businesses by 2006**

This was achieved but then falls so by 2010 it is less than 1996.

**TEST 2: Improve compared with England and Scotland**

Within 15 years Wales was, relative to England, in a considerably worse position than before the Plan. Scotland, which had dropped its policy several years previously, broadly retained its position relative to England.

# Tests II

## **Test 3: Attitudes to Entrepreneurship: GEM TEA rates**

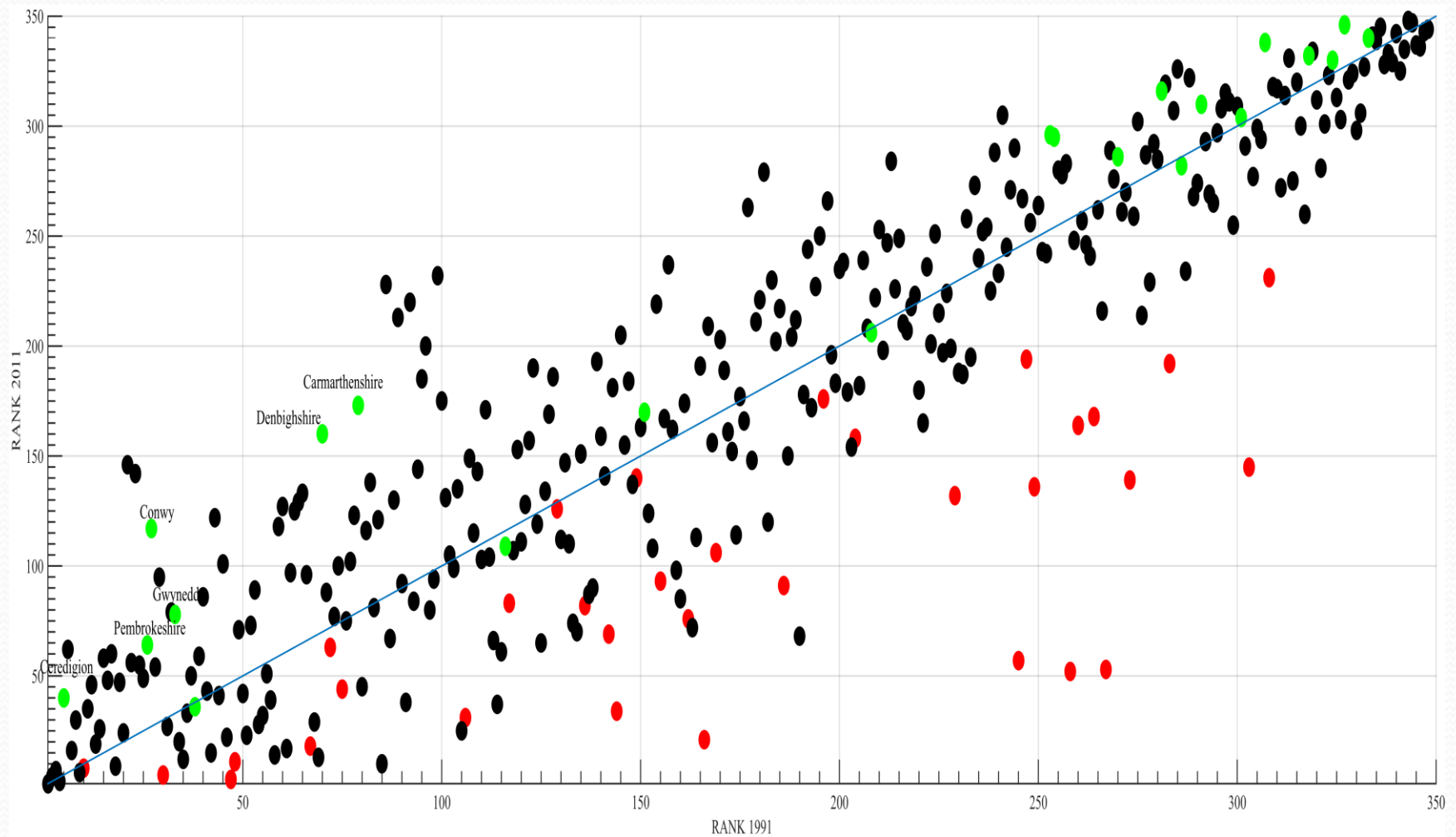
In 2011 attitudes were bullish; by 2013 they fell

## **Test 4: League Table position**

If placed in a league –table, with the areas of high self-employment at the top, do areas of Wales rise up or fall following the EAP compared with areas of England?



## 1991- 2011 Rank Changes Wales; England [coastal, London and else]



# Summary

- Self-employment rates double 1921-71 and double again 1971-2011.
- Yet areas with high/low rates in 1921 and 1971 have high rates in 2011. Hence time persistence of spatial differences is the norm.
- There is more change 1971-2011
- Coastal areas decline and London rises.
- Despite spending £245m Wales changes little and may even have declined
- Key influences to changes in regional relative entrepreneurship standing over time are immigration, sectoral shifts, and local wage rates.

# Conclusions

- No evidence that policy changes league table of s/e positions in England and Wales
- Where change occurs, post 1971, it looks to be linked to wage change and possibly labour market discrimination
- The debate on whether entrepreneurship is a cause of, or a response to, economic prosperity remains very much open







# What influences Rank change?

# Explanatory variables

Independent Variable	Description	Expected sign	Source
<b>HUMANCAP</b>	% of those in employment with a degree or higher qualification.	+	Census
<b>IMMIGR</b>	% of non U.K. born over resident population..	+	Census
<b>HOMEOWN</b>	Regional home ownership rate	+	Census
<b>SMFP</b>	Local small firm presence, the latter being measures as the ratio of employers and managers in small establishments over the corresponding figure for large establishments.	+	Census
<b>AGES 55-64; AGES 35-55</b>	Regional population shares of 55-64 and 35-55 age groups	+/-,+/-	Census
<b>UNEMPLR</b>	Regional unemployment rate	+/-	
<b>EXPSELF</b>	Expected regional self-employment rate based on a region's sectoral structure	+	Census
<b>POPDEN</b>	Population Density (population/square kilometre)	+	Census
<b>MAN. SERV, PUB</b>	Regional employment share in Manufacturing, Services and Public sectors	-,+,-	Census
<b>CRR</b>	Coefficient of regional restructuring	+	Census
<b>MEANPAY</b>	Average gross annual pay	+/-	Annual Survey of Hours and Earnings
<b>PAYINEQ</b>	Is the ratio of the 75% over the 25 <sup>th</sup> percentile of the annual gross pay per LAD.	-	Annual Survey of Hours and Earnings



# Econometric Analyses of Rank Mobility: 1991-2001 & 2001-2011

Econometric Analyses of Rank Changes in Regional Self-Employment Rates: 2011 Census LADs Geography								
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	RMI9101	RMI0111	RMI9101	RMI0111	RMI0111	RMI0111	RMI0111	RMI0111
WALES	-0.0094 (0.0136)	-0.0250** (0.0104)	-0.0134 (0.0141)	-0.0180 (0.0121)	-0.0272** (0.0127)	-0.0275** (0.0125)	-0.0176 (0.0127)	-0.0269** (0.0129)
SELFRR_base year	-0.2648** (0.1317)	-0.3605*** (0.1116)			-0.0518 (0.1546)			
LONDON	0.1069*** (0.0189)	0.1234*** (0.0236)	0.0660*** (0.0235)	0.0827*** (0.0189)		0.0763*** (0.0200)		
COASTAL	-0.0522*** (0.0107)	-0.0259*** (0.0071)	-0.0350*** (0.0106)	-0.0248*** (0.0084)			-0.0246*** (0.0085)	
ΔHUMANCAP			1.0087*** (0.2234)	0.8970*** (0.2912)	0.8207** (0.3621)	0.8996*** (0.3112)	0.7448** (0.3337)	0.7964** (0.3370)
ΔIMMIGR			-0.7995 (0.5187)	0.6921** (0.2842)	1.1463*** (0.3389)	0.7808** (0.3090)	1.0745*** (0.3421)	1.1492*** (0.3348)
ΔHOMEOWN			0.6880*** (0.1914)	0.2738 (0.1818)	0.3867* (0.2049)	0.3613* (0.1916)	0.3169 (0.2002)	0.38987** (0.2047)
ΔSMFP			-0.0032 (0.0022)	0.0250** (0.0124)	0.0264** (0.0132)	0.0257** (0.0124)	0.0263* (0.0140)	0.0269** (0.1331)
ΔAGES_55-64			0.1061 (0.2173)	0.6852* (0.3914)	0.9115** (0.4520)	0.7408* (0.4137)	0.9360** (0.4238)	0.8838** (0.4266)
MEANPAY					0.0024* (0.0013)	0.0008 (0.0012)	0.0019* (0.0011)	0.0023* (0.0012)
PAYINEQ					-0.0430 (0.0273)	-0.0271 (0.0239)	-0.0398 (0.0261)	-0.0426 (0.0273)
CONSTANT	0.0332**	0.0407***	-0.0461***	-0.1467***	-0.1253**	-0.1218*	-0.1181	-0.1287**

# APPENDIX

- Data problems
- Analysis problems

# Testing : Using League Tables

- Units are ranked using consistent criteria
- **Premier League Example of Objective Criteria**

Each team plays 38 games;

home and away;

90+ minutes

Team with most goals wins and gets 3 points; equal goals gets one point; loss gives zero points

- Consistency over time
- Hold many things constant



## EPL 2011

Manchester United

Manchester City

Arsenal

Tottenham

Newcastle United

Chelsea

Everton

Liverpool

Fulham

West Bromwich Albion

Swansea City

Norwich City

Sunderland

Stoke City

Wigan Ath.

Aston Villa

Queens Park Rangers

Bolton Wanderers

Blackburn Rovers

Wolves



EPL 2011	DIVISION 1 1921
Manchester United	YES
Manchester City	YES
Arsenal	YES
Tottenham	YES
Newcastle United	YES
Chelsea	YES
Everton	YES
Liverpool	YES
Fulham	
West Bromwich Albion	YES
Swansea City	
Norwich City	
Sunderland	YES
Stoke City	
Wigan Ath.	
Aston Villa	YES
Queens Park Rangers	
Bolton Wanderers	YES
Blackburn Rovers	YES
Wolves	YES

EPL 2011	DIVISION 1 1921	DIVISION 1 1971
Manchester United	YES	YES
Manchester City	YES	YES
Arsenal	YES	YES
Tottenham	YES	YES
Newcastle United	YES	YES
Chelsea	YES	YES
Everton	YES	YES
Liverpool	YES	YES
Fulham		
West Bromwich Albion	YES	YES
Swansea City		
Norwich City		
Sunderland	YES	
Stoke City		YES
Wigan Ath.		
Aston Villa	YES	
Queens Park Rangers		
Bolton Wanderers	YES	
Blackburn Rovers	YES	
Wolves	YES	YES



# Theory of Change: implications

- These see entrepreneurship [S/e rates] as a response to [exogenous] changes in demand.
- S/e is a constrained choice of labour market “states”.
- The policy implication is that you work on the “root cause” and not on the symptom.



# What wrong with testing SE Theory?

- Small samples
- New Ventures are not new
- Survey data doesn't pick up volatility – personality is fixed/ constant yet performance is volatile
- Self-report data
- Performance metrics are tricky to interpret
- Endogeneity: we assume reported personality influences performance but it is the other way round
- The explanatory powers of these models are rarely set out and if they are, rarely exceed 0.15
- The perils of backcasting
- Independent variables are collapsed into difficult to interpret “factors”

# Division 1 1920-21

- Liverpool, Tottenham,, Aston Villa Bolton Wanderers, Newcastle United, Chelsea, Burnley, Bradford City, Middlesbrough, Sheffield United, Huddersfield Town. Preston North End, Oldham Athletic, Manchester City, Sunderland, West Bromwich Albion, Wolves, Blackburn Rovers, Arsenal, Birmingham City, Everton, Manchester United.
- 22 Teams

# Persistence in the effect of key RHS variables

Regression Analysis of self-employment rates in 2011: lagged explanatory (right hand side, RHS) variables								
	R.H.S lagged 10 years		R.H.S lagged 20 years		R.H.S lagged 30 years		R.H.S lagged 40 years	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
HOMEOWN	0.1785*** (0.0134)	0.1810*** (0.0134)	0.1013*** (0.0195)	0.0981*** (0.0202)	0.0555*** (0.0092)	0.0504*** (0.0096)	0.0004*** (0.0001)	0.0003** (0.0001)
HUMANCAP	0.2468*** (0.0233)	0.2456*** (0.0233)	0.3046*** (0.0350)	0.3143*** (0.0407)	0.3363*** (0.0347)	0.3695*** (0.0407)	0.3529*** (0.0496)	0.3317*** (0.0626)
SMFP	0.0101*** (0.0011)	0.0112*** (0.0015)	0.0209*** (0.0030)	0.0228*** (0.0030)	0.0262*** (0.0023)	0.0300*** (0.0021)	0.0087*** (0.0020)	0.0110*** (0.0027)
IMMIGR	0.0845*** (0.0216)	0.0623** (0.0244)	0.1159*** (0.0246)	0.1057*** (0.0269)	0.0717*** (0.0225)	0.0571** (0.0244)	0.1157*** (0.0186)	0.0550** (0.0217)
MAN	-0.1549*** (0.0243)		-0.1135*** (0.0196)		-0.0904*** (0.0133)		-0.1271*** (0.0156)	
PUB	-0.1637*** (0.0524)						-0.1129*** (0.0265)	
SERV		0.1533*** (0.0315)		0.0701** (0.0219)		0.0474*** (0.0177)		0.1301*** (0.0248)
CONSTANT	-0.0314* (0.0140)	-0.1344*** (0.0146)	-0.0085 (0.0136)	-0.0749*** (0.0157)	0.0355*** (0.0092)	-0.0218* (0.0093)	0.1104*** (0.0120)	0.0168* (0.0073)
N	348	348	348	348	348	348	348	348
R <sup>2</sup>	0.6996	0.6954	0.6274	0.6069	0.6683	0.6399	0.6227	0.5747
F	134.2791***	149.1138***	124.5153***	102.1658***	144.6233***	123.6704***	87.0116***	74.6001***

Heteroskedasticity robust standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



# Local Embeddedness and self-reinforcing mechanisms

**Non-spatially transferable social capital** (community based social networks and memberships).

**Industry-specific human capital:** the factors that attract an entrepreneur's previous employers to an area are the same as those that keep the spin-out entrepreneurs.

Class-constrained **intergenerational transfer** of entrepreneurship and family business cannot easily be relocated.

1921 and 2011	In 1921 but not 2011	2011 but not 1921
Liverpool	Burnley	Fulham
Tottenham	Bradford City	Stoke City
Aston Villa	Middlesbrough	West Ham United
Bolton Wanderers	Sheffield United	Wigan Ath.
Newcastle United	Huddersfield Town	
Chelsea	Preston North End	
Manchester City	Oldham Athletic	
Sunderland	Cardiff City	
West Bromwich Albion		
Wolves		
Blackburn Rovers		
Arsenal		
Birmingham City		
Everton		
Manchester United		

# 1971

Derby County, Leeds Utd. Liverpool, Manchester City, Tottenham. Chelsea. Manchester United  
Wolverhampton Wanderers, Sheffield United, Leicester, Newcastle United, Ipswich Town, West Ham United, Everton, West Bromwich Albion, Stoke City, Coventry, Southampton, Crystal Palace, Nottingham Forest. Huddersfield



# Division 1 1920-21

- Liverpool, Tottenham,, Aston Villa Bolton Wanderers, Newcastle United, Chelsea, Burnley, Bradford City, Middlesbrough, Sheffield United, Huddersfield Town. Preston North End, Oldham Athletic, Manchester City, Sunderland, West Bromwich Albion, Wolves, Blackburn Rovers, Arsenal, Birmingham City, Everton, Manchester United, Cardiff City
- 22 Teams

	1921
<b>Liverpool</b>	yes
Tottenham	Yes
Aston Villa	Yes
Bolton Wanderers	Yes
Newcastle United	Yes
Norwich City	
Swansea City	
Queens Park Rangers	
Chelsea	Yes
Manchester City	Yes
Sunderland	Yes
West Bromwich Albion	Yes
Wolves	Yes
Blackburn Rovers	Yes
Arsenal	Yes
Everton	Yes
Manchester United	Yes
Stoke City	
Wigan Ath.	
Fulham	



	1921	1971
Liverpool	yes	Yes
Tottenham	Yes	Yes
Aston Villa	Yes	
Bolton Wanderers	Yes	
Newcastle United	Yes	Yes
Norwich City		
Swansea City		
Queens Park Rangers		
Chelsea	Yes	Yes
Manchester City	Yes	Yes
Sunderland	Yes	
West Bromwich Albion	Yes	Yes
Wolves	Yes	Yes
Blackburn Rovers	Yes	
Arsenal	Yes	Yes
Everton	Yes	Yes
Manchester United	Yes	Yes
Stoke City		Yes
Wigan Ath.		
Fulham		



<u><b>Crystal Palace</b></u>	current
<u><b>Southampton</b></u>	current
<u><b>Queens Park Rangers</b></u>	Champ
<u><b>Swindon Town</b></u>	D1
<u><b>Swansea Town</b></u>	current
<u><b>Watford</b></u>	current
<u><b>Millwall</b></u>	D1
<u><b>Merthyr Town</b></u>	exited
<u><b>Luton Town</b></u>	D2
<u><b>Bristol Rovers</b></u>	D2
<u><b>Plymouth Argyle</b></u>	D2
<u><b>Portsmouth</b></u>	D2
<u><b>Grimsby Town</b></u>	exit
<u><b>Northampton Town</b></u>	D2
<u><b>Newport County</b></u>	D2
<u><b>Norwich City</b></u>	Champ
<u><b>Southend United</b></u>	D2
<u><b>Brighton &amp; Hove Albion</b></u>	Champ
<u><b>Exeter City</b></u>	D2
<u><b>Reading</b></u>	Champ
<u><b>Brentford</b></u>	Champ
<u><b>Gillingham</b></u>	D1