Some Indicators of Likely Entrepreneurship in Wales' 22 Local Authorities

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At the heart of regional differences in economic welfare are capacity for entrepreneurship and new firm formation. As long ago as 1971 the Bolton Report (CMND 4811) noted that *"There can be no substitute for the dynamic influence of new firms in the prevention of ossification"* and in more recent times, Porter (1990) argued strongly that *"invention and entrepreneurship are at the heart of national (and regional) advantage…"* requiring favourable environments. He then observed *"what looks like chance is actually differences in national environments."*

Storey (1982) developed an index of regional entrepreneurship in the UK which ranked regions' potential for new firm formation. Storey began with a review of empirical studies on new firm formation and from these identified the environmental factors associated with both high and low levels of entrepreneurship. For each of the factors between one and three proxies were identified from amongst published statistics and applied to the eleven regions of the UK. A regional entrepreneurship score was constructed by taking an unweighted average of all the factors, and then scoring and ranking each region.

When the criterion was positively associated with entrepreneurship the region with the highest score was awarded eleven points, with ten points awarded to the next highest scoring region, and so on. When the criterion was negatively associated the region with the lowest score was awarded eleven points. Each region's score was then averaged across the eleven criteria and those regions with the highest average were regarded as the most favourable for entrepreneurship The conclusion drawn from the index was that the more prosperous regions of the UK were those most endowed with the factors that encourage entrepreneurship, while the converse was true of the poorest regions. Wales and the north east of England were at the bottom.

Storey's approach is adapted here to measure the likelihood of entrepreneurship *within* Wales' twenty two local authorities based on their respective economic and business environments. Entrepreneurship is fundamental to economic growth and well being (Ball 2006a), yet little clear effort has been made to evaluate its potential within Wales, even though important differences in potential are implicit in the designation of EU Objective One status. Policy responses need to be properly informed, and while it is accepted that walls do not divide the local authorities, and people move freely from one area to work in another, local policy solutions are likely to be delivered (and their effectiveness monitored) within these boundaries.

For this research 21 proxies were used as indicators of entrepreneurship potential, constrained by the availability of appropriate useable data, and recognizing its limitations. Following Storey's methodology, when a criterion is positively associated with entrepreneurship, a score of 22 is awarded to the local authority with the highest score. When a criterion is negatively associated the local authority with the lowest score is awarded 22, and so on. An unweighted average of the scores is then calculated to produce an index of entrepreneurship.

The New Firm Founder

The availability of start up funds is fundamental to entrepreneurship; those who establish new firms invariably use their own funds (Storey 2002). In the absence of data on savings or individual wealth, four proxies are used to reflect funding potential; house price as an indicator of access to funds, gross income per head overall and separately for male and female. It is assumed that in most households there will be more than one bread winner; indeed in many parts of Wales female economic contributions are growing (Gavron et al 1998). These data are all regarded as positive and are presented in Columns 1 to 4 in Table 1.

High levels of educational attainment characterise founders together with management experience (Storey 1982, 2002). Here four proxies are used (Columns 5-8); the percentage of the working population who have NVQ4 qualifications or above (a positive factor) and those with no qualifications (a negative factor). Management experience is proxied by the percentage of the working population in Social Group 1 - 3 (a positive factor) and those in Social Group 9, a negative factor.

The size of the organisation for which the founder worked immediately prior to setting up the new firm (the incubator) is an important determinant (Barclays Bank 2000, Bridge et al 2003). There is a positive link between the number of small firms in an area and the likelihood of successful founding. No adequate data exists on the size distribution of businesses within Wales, and in the absence of disaggregated data by size and sector three proxies are used. Manufacturing employment is used as a proxy for size since it is known that, despite recent losses, many manufacturing plants in Wales are large. In addition, many skills employed in manufacturing are product specific. Then this variable is regarded here as having a negative association with entrepreneurship (Column 9).

The percentage of employment in distribution, hotels and restaurants and tourism is included on an assumption that employment in these categories is likely to be in small size establishments. These count as positive and are presented in Columns 10 and 11. Not surprisingly, the traditional tourist areas of the north and west score heavily.

In addition to having access to start up funds, education, managerial experience and the size of the incubator, experience in growth sectors of the economy is important. Knowledge based industries, notably financial services, are seen as drivers of the modern economy (Armstrong and Taylor 2003) and the percentage of the population working in banking, finance and insurance is used as a positive proxy. This is shown in Column 12.

It is argued here that high shares of employment in the public sector will not favour entrepreneurialism. Employment in public administration is used a negative proxy, shown in Column 13.

The Economic Environment

Cooper (1973) noted over thirty years ago the importance of the economic environment and the way in which it can influence entrepreneurship. Nine proxies are employed in this exercise to reflect the economic environment. A wealthy

Table 1 Unitary Authority Rankings by Entrepreneurship Proxy Variables

	1	2	3	4	5	6	7	8	9	10	11
Unitary Authority	**Average House price (Q206) (+)**	**Gross Weekly Pay (All) (+)**	**Gross Weekly Pay (Male) (+)**	**Gross Weekly Pay (Female) (+)**	**NVQ4 (+)**	**No Quals (-)**	**Social Group 3 (+)**	**Social Group 9 (-)**	**% Emp in Manuf (-)**	**% Emp in Hotels/ Distn. (+)**	**% Emp in Tourism (+)**
Blaenau Gwent	1	2	4	1	1	1	1	1	2	6	2
Bridgend	8	21	18	13	9	4	16	7	9	12	7
Caerphilly	5	11	11	7	3	3	3	3	3	9	5
Cardiff	19	17	14	20	22	18	22	21	20	4	12
Carmarthenshire	15	4	7	16	8	22	6	10	16	10	4
Ceredigion	20	7	10	5	19	20	10	20	21	16	14
Conwy	14	9	6	17	11	15	12	16	22	22	22
Denbighshire	7	8	5	3	17	9	17	14=	15	17	20
Flintshire	16	20	19	12	10	17	14	8=	1	11	11
Gwynedd	12	3	2	14	14	16	15	14=	18	20	21
Isle of Anglesey	17	15	9	10	16	13	18	17	10	14	17
Merthyr Tydfil	2	5	8	8	2	2	2	2	8	3	6
Monmouthshire	22	22	22	21	21	21	21	18	14	19	9
Neath Port Talbot	4	13	15	4	4	5	4	8=	5=	8	13
Newport	10	18	13	19	12	11	13	11	11	5	3
Pembrokeshire	13	1	1	-	15	19	8	12	17	21	16
Powys	21	10	7	6	13	10	7	13	12	15	18
Rhondda Cynon Taff	3	6	3	15	5	7	5	5	5=	2	8
Swansea	9	12	12	9	18	14	19	19	19	13	15
Torfaen	6	16	16	18	6	6	9	4	7	1	1
Vale of Glamorgan	18	19	20	11	20	22	20	22	13	18	19
Wrexham	11	4	17	12	7	8	11	6	4	7	10

Table 1 contd. Entrepreneurship Proxy Variables

	12	13	14	15	16	17	18	19	20	21
Unitary Authority	**% Emp in Banking/ Finance (+)**	**% Public Sector (-)**	**Economic Activity (+)**	**Unemployment (-)**	**Economic Inactivity (-)**	**Self-Employment ALL (+)**	**Self-employment Male (+)**	**Self-Employment Female (+)**	**%VAT Reg. (+)**	**% VAT Dereg. (-)**
Blaenau Gwent	1	18	2	1	2	4	4	4	21	8=
Bridgend	13	12	8	7	10	3	3	2	11=	12
Caerphilly	17	21	4	4	5	5	5	5=	15=	5
Cardiff	22	15	9	5	11	10	10	12	17	2=
Carmarthenshire	12	4	10	20	7	17	16	18	5	20
Ceredigion	9	1	5	15	4	21	21	20	2	22
Conwy	11	10=	17	16	16	18	19	19	6	16=
Denbighshire	2	2	19	17=	18	16	15	16=	10	8=
Flintshire	8	22	20	22	19	12	12	14	14	16=
Gwynedd	10	5	14	19	13	19	18	21	3	9
Isle of Anglesey	16	20	12	11=	12	14	17	13	7	15
Merthyr Tydfil	3	3	1	2	1	1	1	1	22	6
Monmouthshire	18	10=	22	17=	22	15	14	16	8	18
Neath Port Talbot	5	17	3	3	3	2	2	3	11=	8=
Newport	21	16	16	10	17	9	9	11	20	1
Pembrokeshire	4	6=	13	7=	14	20	20	17	4	14
Powys	19	13	21	21	21	22	22	22	1	21
Rhondda Cynon Taff	6	9	7	6	8	7	7	8	18	7
Swansea	20	6=	11	14	9	6	6	5=	13	2
Torfaen	14	8	6	7=	6	8	8	9	15	4
Vale of Glamorgan	15	14	15	11=	15	13	13	10	19	12
Wrexham	7	19	18	13	20	11	11	5=	9	8=

Column 1 Halifax. Columns 2-21 NOMIS.

economy with substantial levels of disposable income can drive the rate of new firm formation (Porter 1990, Carree et al 2002). Introducing further nuances to the individual income proxies shown in Columns 2-4 is a further hypothetical determinant; the proportion of the population in employment who will, by definition, have money to spend. This can be offset by the proportion of the population not in employment or economically inactive, who it can be assumed have less money to spend. Then Column 14 shows the percentage of the population defined as economically active (in employment) and therefore a positive criterion and two further datasets, those unemployed (Column 15) and others defined as economically inactive but not "unemployed" (Column 16) which both count as negative.

Founders of new firms often come from a family business and the model, stimulus and cultural picture they present can have a strong influence on the economic environment. To measure this, the percentage of the population described as self-employed is used and although this definition does not address all small, family type businesses, it is nonetheless a useful measure. Three categories, all self employed, and male and female self employed are shown in Columns 17 to 19. Recent research suggests that it is female entrepreneurship which is growing (Gavron et al 1998).

A further way of assessing the economic environment and its potential for enterprise is the rate at which new firms are emergent within the locality and indeed the rate at which firms are failing. The only measure available is the rate of VAT registration and de-registration and although there are dangers in using these data (Ball 1995, 2006b, 2006c) they are worthwhile including. However, the actual numbers are meaningless unless normalized in some way and for the purposes of this exercise registrations and de-registrations are expressed as a percentage of the existing stock of firms within the local authority. These are presented in Columns 20 and 21, with registration treated as positive and de-registrations as negative. These particular data may however be more of an indication of "churning" within the stock of firms than of new firms (Ball 2006b)

Conclusions

Table 2 presents the average of the 21 positive and negative variables for Wales' 22 local authorities in descending order. There is no claim to mathematical sophistication or statistical nicety. However, this straightforward exercise is able to demonstrate the *magnitude* of sub regional differences, which must be a matter for concern, requiring policy focus.

Table 2: An Index Of Likely Welsh Authority Entrepreneurship

	AVERAGE SCORE	POSITION
Monmouthshire	16.8	1
Vale of Glamorgan	15.4	2
Powys	14.3	3
Cardiff	13.7	4
Conwy	14.2	5
Flintshire	13.5	6
Gwynedd	13.2	7
Ceredigion	12.8	8
Isle of Anglesey	12.9	9
Newport	11.6	10
Denbighshire	11.6	11
Swansea	11.4	12
Pembrokeshire	11.5	13
Carmarthenshire	10.3	14
Wrexham	9.9	15
Bridgend	9.4	16
Torfaen	7.7	17
Rhondda CT	6.7	18=
Caerphilly	6.7	18=
Neath Port Talbot	6.4	20
Merthyr Tydfil	4.0	21
Blaenau Gwent	3.8	22

Source: Text

The relatively prosperous areas of Cardiff, the Vale and Monmouthshire achieve high scores in the index produced here, which suggests that they are endowed with enterprise potential. Rural authorities are also strong performers on this measure; reflecting in part a tradition of enterprise in the context of agricultural activity, and indeed care must be exercised in interpretation since potential in terms of absolute numbers of businesses will not be large. Surprisingly, Wales' second city, Swansea did not score as well as might be expected, while Newport appears to have marginally more enterprise potential, on these measures, perhaps as a consequence of its location between England and the Welsh capital.

However, what is striking about these data is the position of Wales' traditional industrial areas; the ones most in need of enterprise development are the least endowed with potential, with Blaenau Gwent and Merthyr in the poorest position, and with NeathPortTalbot scoring less than the other three valley former mining areas.

However, in the main the final scores do not present any great surprises, but rather they confirm persistent disparities within Wales, and especially between the Valley communities and the rest of Wales. Here, opportunities are limited, in turn constraining their economic contribution. These sub-regional disparities show no signs of narrowing despite Objective One status, the activities of the former WDA and the National Assembly.

In 1995 the author applied the same principles to develop an index of entrepreneurship for the former eight counties and a similar picture emerged. The rural counties scored well (notably Powys) as did the former county of South Glamorgan. The former industrial and mining areas of West and Mid Glamorgan were seventh and eighth respectively in their likelihood to encourage entrepreneurship. Why are these differences so intractable and acute? The answer has to relate to the inadequacies of past economic development policies. What these data clearly show is the need for a coherent, over arching policy emphasis on the former mining areas to build entrepreneurial strength and mitigate evident weaknesses.

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