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Neo-endogenous facilitation: is the local business association a significant site for processes of local development?

Rural economic development theories highlight that rural geographies are differentiated and as such rural development must be bottom-up in order to fit the needs of the local community (Slee 1994, Lowe 1995, Terluin 2003). However, purely endogenous development is limited by 'lock-in' effects (Uzzi 1996, Atterton 2007), undermined by local apathy and dominated by minorities (Lowe *et al.* 1998, Ward and McNicolas 1998, Shortall and Shucksmith 1998).

As such, neo-endogenous approaches have been valorised as 'endogenous-based development in which extra-local factors are recognised and regarded as essential but which retains belief in the potential of local areas to shape their future' (Ray, 2001:4). Key to this approach are the concepts of the neo-endogenous facilitator and of the site(s) where this facilitation takes place. This paper investigates whether the rural business association, a volunteer led institution of civil society, acts as a site for neo-endogenous facilitation.

Certain demographic groups have been depicted as having a role as facilitators. In-migrants have, for example been linked with entrepreneurial processes (Kalantaridis and Bika, 2006), being brokers of information and knowledge between the local and extra-local (Atterton 2007, Bosworth 2008). Rural business associations may provide them with an opportunity to embed (Jack and Anderson 2002) and become members of the local social milieu whilst reinvigorating and refreshing existing culture.

Despite existing research (Rosenfeld 1996, Bennett 1996, 2007, Phillipson *et al.* et 2001, Ring *et al.* 2009) there is no empirical examination as to the differences between members and non members of these associations. Comparing their characteristics would provide an understanding as to whether business associations can be seen as significant sites for neo-endogenous facilitation by indicating whether they provide concentrations of neo-endogenous facilitators.

Using personal and business based predictors, multi-nominal logistic regression models are used to assess differences between members and non members. Two data-sets are combined along key structural variables to create a composite source to understand how members are likely to be different from non members. Findings indicate little difference between members of non local associations and non members. There are however significant differences between members of local associations and non members. Local business associations appear significant sites for neo-endogenous facilitation.

Introduction

Rural economic development theories highlight that rural geographies are differentiated and rural development must be bottom-up in order to fit the needs of the local community (Slee 1994, Lowe *et al.* 1995, Terluin 2003). However, purely endogenous development is limited by 'lock-in' effects (Uzzi 1996, Atterton 2007), undermined by local apathy and dominated by minorities (Lowe *et al.* 1998, Ward and McNicolas 1998, Shortall and Shucksmith 1998).

As such, neo-endogenous approaches have been valorised as 'endogenous-based development in which extra-local factors are recognised and regarded as essential but which retains belief in the potential of local areas to shape their future' (Ray, 2001:4). Key to this approach is the neo-endogenous facilitator and of the site where this facilitation takes place. Arguing that the site of facilitation is a neglected area of research, this paper investigates whether the rural business association, a volunteer led institution of civil society, acts as a site for neo-endogenous facilitation.

Neo-endogenous facilitation

Research into facilitation has taken the approach of focusing upon individual agents of facilitation, such as the broker (Huggins 2000, Chaston 1995) and upon groups of individuals that enact developmental processes (Stockdale 2006, Kalantaridis and Bika 2006, Bosworth 2008). Individual agents, or brokers have been depicted as key to network success, with their '*clear goals*' sustaining ongoing projects (Rosenfeld 1996:251). Huggins describes them as '*instrumental in generating valid interaction and exchange between participants*' in early stage networks and in '*maintaining an equal distribution of power and dependency*' in sustained networks (2000:130).

Similar approaches appear to be present in the groups of individuals that enact developmental processes, such as economic in-migrants and home based businesses. The economic in-migrant has been described as an individual that is more likely to be entrepreneuring (Kalantaridis and Bika, 2006), have social capital to spare (Cowie *et al.* 2010) and seek to become embedded within the local milieu (Atterton 2007). As such they are a key focus of rural economic regeneration (Stockdale, 2006).

The Home Based Business (HBB) is increasingly reported as important to the rural economy with Mason (2008) reporting that they account for 50% of rural businesses compared to 2% in urban areas. Commentators have called for this growing importance to be acknowledged and brought 'above the radar' (Dwelly *et al.* 2005). Whilst some link HBBs to knowledge intensive business services (Abdy *et al.* 2007, Taylor 2008) and others as a collection of differentiated sub-sectors (Newbery and Bosworth 2010), their actual role in the enactment of developmental processes is unknown. However, there seems to be agreement that they are an important phenomenon that may influence future rural development.

Sites for neo-endogenous facilitation

Whether the focus of facilitation is on the individual agent or on socio-economic groups, they do not operate in a vacuum and context is crucial. Context is not just the juxtaposition of local and extra-local as facilitation happens in a specific time and place. The site of facilitation may have a particular influence upon the facilitator and the developmental outcomes.

Murdoch suggests that networks are a key focus for rural development and that they 'hold the promise of a more complex appreciation of "development" than has traditionally been evident' (2000:408). Key here is that a focus on a network allows one frame of reference to be held that encapsulates both the "inside" and "outside" (*ibid* 2000:417). A network approach allows examination of the interaction of facilitator, endogenous actors and developmental processes in a way that an agent based focus cannot.

Taking an organisational theory approach; at a micro level facilitators can be seen as agents that leverage their extra-local resources for positive development. However at the meso level (Provan *et al.* 2007) the network itself becomes the facilitator within the wider rural context. If particular socio-economic groups that have been identified as having a micro level facilitation role are concentrated within a network, then the aggregate effect may be a network that is a particularly dynamic actor within rural development.

Local business associations

Given a proposition that local business networks are important sites for the facilitation of neo-endogenous development from an individual and organisational perspective, this paper investigates rural business associations. These volunteer led institutions of civil society may be a significant site for the processes of rural development.

Business associations tend, in the UK, to have voluntary membership and operate under a regime of private law (Bennett, 1996). They tend to be fragmented and small due to the dynamics of their financing. They are however, clearly important to business, with micro businesses belonging to an average of 1.3 associations (with under 10 employees), rising with employee size to 5.3 for those SMEs with under 100 (Bennett, 1996).

In a large scale survey, Bennett (1996) found that 76% of all chambers of commerce had less than 100 members, with most providing no more than a newsletter, occasional event and lobbying. They tended to be small, highly localised, with low subscription fees and next to no specific benefits. Collective benefits were representation, peer and social support (1996). They were small, unaffiliated to national bodies and limited by geography. However they had a high membership

density and depended upon '*unique local factors*' and '*local collective commitment*' (1997:513).

Looking specifically at rural business associations, Phillipson *et al.* (2006) found that their membership was drawn from a narrow range of sectors with participation often issue based, such as fighting for parking spaces in retail areas. They highlighted the that maintaining a critical mass of motivated individuals was often difficult given competition for the involvement of these individuals by other community groups (2002). This suggests that local business associations are sites where rural development processes occur, with the involvement of individuals that may be from the facilitating groups.

However, despite research within these rural business associations and emerging research into the community level conditions that may predetermine their effectiveness (Ring *et al.* 2010), there is no empirical comparison of the differences between members and non members of these associations. Comparing their characteristics would provide an understanding as to whether they provide concentrations of neo-endogenous facilitators and whether factors associated with positive development processes are present and in any way magnified.

Methodology

This paper aims to examine and highlight the differences between members and non members. In order to evidence the differences, various indicator variables were selected for comparison. The next section will describe what these are and why they were selected. Next, logistic regression models are used to explore the differences between members and non members and in order to highlight the importance of the local dimension. In order to provide a nuanced comparison than simply local members compared to non members, non local memberships and *all* memberships are also modelled. Having presented the models, the results are then discussed and conclusions reached in the final section.

2 survey data-sets were used for this analysis, both taking place during 2009 within the geography of the rural north east of England: the rural business survey and the business association survey.

The rural business survey

The question: 'Are you a member of a local business association or network?' was inserted within a rural business survey conducted in the North of England in 2009. Where respondents answered in the affirmative they were also asked the name of the association, allowing for a post-coded test of locality. Local here denotes a geography equivalent to, or smaller than, an English Local Authority district (NUBSIII). The survey was conducted by the Centre for Rural Economy, Newcastle University. Out of 830 respondents that gave usable answers to the membership question, 10% were members of local business associations.

The business association survey

A separate survey was conducted to examine aspects of the membership of local business associations. To allow a comparison of results between surveys, certain questions were harmonised between the rural business survey and business association survey. 15 local business associations participated in the survey with sizes ranging from 16 to 159 members and providing 306 usable returns.

Combining the data-sets

The rural business survey provided a fairly even split between members and non members (46.5% *cf.* 53.5%) and between non local members and non members (31.9% *cf.* 68.1%), however there was a large skew and small sample for local members and non members (10% *cf.* 90%). Within multivariate regression techniques the smaller a sample is, the lower the effect size that can be identified. Field (2005) identifies that with a sample of around 100 only large effects can be isolated. The picture for logistic regression is more complex (Demidenko 2007), but ensuring that each half of the dependent variable is above the minimum criteria for

the effect size heuristic is a robust approach to ensuring adequate sensitivity (Hsieh *et al.* 1998).

Table 1 Comparability of populations – statistical associations between key structural variables

| Key structural variable (non interval data) | Chi-square test¹ |
|--|---|
| Business sector | .000*** |
| Business profit | .010** |
| Respondent previous employ | .012* |
| Respondent gender | .264 |
| Density of rural area (sparse / less sparse) | .000*** |
| Key structural variable (interval data) | Analysis of variance² |
| Business year established | .485 |
| Business total employment | .295 |
| Respondent age | .316 |
| Respondent formal education | .172 |

p < .05, ** p < .01, *** p < .001

¹ For Chi-Square testing a statistically significant association at the 95% level is sought between populations

² For ANOVA testing the absence of a statistically significant relationship between means is sought

Using common variables, a new combined dataset was constructed from the members (83) and non members (830) of the rural business survey with the addition of the members (306) of the business association survey, providing a sample large enough to identify large, medium and small effect sizes. The combined data-set consisted of 389 members of local business associations and 830 non members, a total data set of 1219.

To ensure comparability between these populations, key structural variables were tested for statistical association between business association members in the rural business survey (n=83) and the members in the business association survey (n=306). Table 1 shows that these populations are statistically comparable, with the exception of gender, where comparison shows that 26.4% of the time there is no significant association between the two populations. This discrepancy can be explained by the higher representation of accommodation businesses (which have a relatively even gender balance) and lower representation of sectors such as agriculture, manufacturing, finance and professional (which are heavily biased towards male respondents) within the business association survey. To balance any resulting bias gender is controlled for within the models.

Selection of indicator variables

Indicators were selected as predictors for the membership of business associations. These indicators were chosen for relevancy according to existing research and for availability within both the rural business survey and the business association survey. Financial variables were selected for their clear relevance to business, whilst other variables were selected due to their saliency within local integration and embeddedness theories. Business sector, rural geography, age and gender were selected as controls. Table 2 indicates the expected relationship variables will have with membership.

Within the rural business survey, 53.5% of respondents were not members of any kind of business association. Of the 46.5% that were members of business associations, 68.1% were members of extra-local associations but not local associations, 31.9% were members of local associations.

Table 2 The expected associations of factors with membership

| Factor | Expected relationship with membership |
|---------------------------|--|
| Direction of profit | Optimising and accessibility benefits are associated with increases in profit |
| Turnover | Lower turnover taken with higher profit are associated with operational efficiency |
| Year established | A new business is more likely to seek access to new resources |
| Employees | Smaller firms, being less able to self supply services or represent themselves, are more likely to be members |
| Social mobility | In-migrants are expected to seek integration within the local business community – no effect is expected for membership of non local associations |
| Propensity to seek advice | Those that have sought advice show a willingness to use external resources |
| Educational attainment | Higher levels of education are associated with the generation of social capital |
| Local purchases | As a measure of local integration an association is expected with membership – no effect is expected for the membership of non local associations |
| Home based business | Home based businesses are portrayed as isolated and this may be overcome by membership and should therefore be positively associated with membership |
| Population density | Businesses in sparsely populated areas have lower access to resources and may have a greater need for network related benefits |

The following sections use logistic regression and the discussed indicator variables to first predict the differences between members and non members of *all* business associations, both local and non local. This is followed by membership models of non local business associations and finally by membership models of local business associations.

Modelling business association membership

Logistic regression models were applied to the rural business survey to test the likelihood of membership of business associations as a function of various independent predictor variables believed to have a relationship with membership. This is membership of *any* business association, both non local and local business association membership will be modelled in subsequent sections.

To analyse whether these variables can predict differences between members and non members after controlling for the effects of cross correlation, 3 logistic

regression models were used to predict the log odds of being a member of a business association. Table 3 provides the results of these models, including the log odds and standard errors.

Missing data within cases posed an overall concern for modelling. Given an available sample of 830, missing data (primarily at the respondent and business level) resulted in 151 missing cases, a 18% reduction in sample size. However, this provided sufficient power to perform the analysis.

Model 1 introduces the business and respondent level variables, which according to Nagelkerke's R^2 , a measure of variance adjusted for sample size explained by the model, explains only 12.6% of variance. Model 2 introduces the sector control variables, explaining 13.3% of variance and finally model 3 introduces rural population density, explaining 13.7% of variance.

Clearly other predictor variables exist which have not been captured in these models. Neither are these models particularly good predictors of membership, with 72.1% of non members and 55.1% of members being correctly classified within the sample. Nevertheless, the Hosmer and Lemeshow test of significance indicates (at .522) that the factors presented below can be accepted as valid.

At the business level, direction of profits over the last 5 years showed no statistical significance across the models. Both turnover and employment were significant and with stable effects across the 3 models which suggests a relationship between business size and membership. Members had 1.14 higher odds of having a higher turnover and 1.27 higher odds of having higher employment compared to non members¹. None of the other business level variables (business age, being a home based business and making a local purchase) held any significance for membership.

¹ Note that log odds are read as > 1 having a positive effect and < 1 having a negative effect

Table 3 Logistic regression predicting membership of a business association

| | Model 1 | | Model 2 | | Model 3 | |
|--|-----------------------|----------------|-----------------------|----------------|-----------------------|----------------|
| | Log odds | Standard error | Log odds | Standard error | Log odds | Standard error |
| Business level | | | | | | |
| <i>Profit stayed the same over last 5 years</i> | | | | | | |
| Profits increased over last 5 years | .958 | .203 | .945 | .204 | .955 | .205 |
| Profits decreased over last 5 years | .943 | .215 | .908 | .217 | .933 | .218 |
| Turnover (continuous) | 1.156*** | .058 | 1.142** | .059 | 1.144** | .060 |
| Year established (continuous) | 1.055 | .069 | 1.068 | .071 | 1.059 | .071 |
| Log Full-time equivalent employees (continuous) | 1.236* | .120 | 1.254* | .121 | 1.270** | .122 |
| <i>Not home based business</i> | | | | | | |
| Home based business | .970 | .181 | 1.005 | .186 | .980 | .187 |
| <i>No local purchases made</i> | | | | | | |
| Local purchases made | 1.339 | .192 | 1.326 | .200 | 1.376 | .202 |
| Respondent level | | | | | | |
| <i>Local or returnee to the area</i> | | | | | | |
| In-migrant to the area | .948 | .176 | .934 | .181 | .895 | .183 |
| <i>Male</i> | | | | | | |
| Female (control) | 1.457** | .194 | 1.392* | .200 | 1.370 | .201 |
| Age (continuous) | | | 1.049 | .075 | 1.047 | .076 |
| <i>Have not sought business advice</i> | | | | | | |
| Have sought business advice | 2.067**** | .199 | 2.088**** | .202 | 2.040**** | .203 |
| <i>Other education level</i> | | | | | | |
| Post graduate qualifications | 2.291** | .358 | 2.291** | .363 | 2.227** | .364 |
| Degree qualifications | 1.707 | .347 | 1.661 | .349 | 1.617 | .350 |
| A Level qualifications | 1.627 | .387 | 1.513 | .391 | 1.486 | .392 |
| O Level qualifications | 1.121 | .363 | 1.028 | .368 | 1.013 | .368 |
| No qualifications | 1.840 | .418 | 1.736 | .421 | 1.724 | .421 |
| Sector controls | | | | | | |
| <i>Agriculture, Manufacturing, Construction</i> | | | | | | |
| Retail and Transport | - | - | 1.404 | .253 | 1.398 | .253 |
| Accommodation | - | - | 1.551 | .337 | 1.484 | .339 |
| Information, Finance and Real estate | - | - | .903 | .329 | .943 | .331 |
| Professional | - | - | 1.010 | .283 | 1.080 | .287 |
| Administration, Public, Education, health, Sports and Arts | - | - | 1.020 | .267 | 1.080 | .270 |
| Geographic | | | | | | |
| <i>Densely populated rural area</i> | | | | | | |
| Sparsely populated rural area | - | - | - | - | 1.340 | .114 |
| Constant | | | | | | |
| | .056**** | .627 | .055**** | .653 | .052**** | .656 |
| Nagelkerke R ² | R ² = .126 | | R ² = .133 | | R ² = .137 | |
| -2 Log-likelihood | 870.384 | | 866.237 | | 863.731 | |
| Sample size N = 684 | | | | | | |

- Italics highlight the reference category for ordinal data
- *p < .1, **p < .05, *** p < .01, **** p < .001

At the respondent level, statistically significant predictors were whether the respondent had sought business advice (2.040 higher odds) and having a postgraduate level qualification (2.227 higher odds).

None of the sector controls themselves were significant in predicting membership, although they modified the practical significance of other statistically significant variables in a minor way. The introduction of population density slightly increased the effect of size of turnover and employment, with the effect for business advice and postgraduate qualifications being reduced somewhat.

In summary, rural members of *all* business associations (e.g. local and non local associations) do not show any significant difference in the direction of profit experienced over the past 5 years, but they do have a greater likelihood of being bigger in terms of turnover or employment. Year established, being home based and making a local purchase had no effect on membership. At a respondent level, members were more likely to have sought business advice and more likely to hold a postgraduate qualification. However, the other factors: age and social mobility, had no effect on membership. Finally, population density had no discernable difference between members and non members. The next section applies the same variables to the membership of *non local* business associations.

Modelling non *local* business association membership

Logistic regression models were applied to the rural business survey to test the likelihood of membership of non local business associations as a function of various independent predictor variables believed to have a relationship with membership. To analyse whether these variables can predict differences between members and non members after controlling for the effects of cross correlation, 3 logistic regression models were used to predict the log odds of being a member of a non

local business association. Table 4 provides the results of these models, including the log odds and standard errors.

Missing data within cases posed an overall concern for modelling. Given an available sample of 830, missing data (primarily at the respondent and business level) resulted in 208 missing cases, a 25% reduction in sample size. However, this was still sufficient to perform the analysis.

Model 1 introduces the business and respondent level variables, which according to Nagelkerke's R^2 explains only 14% of variance. Model 2 introduces the sector control variables, explaining 14.3% of variance and finally model 3 introduces rural population density, explaining 14.5% of variance. Clearly other predictor variables exist which have not been captured in these models. Neither are these models particularly good predictors of membership, with 82.2% of non members but only 40.3% of members being correctly classified within the sample. Nevertheless, the Hosmer and Lemeshow test of significance indicates (at .243) that the factors presented in table 4 can be accepted as valid.

At the business level, direction of profits over the last 5 years showed no statistical significance across the models. Both turnover and employment were significant and with stable effects across the 3 models which suggests a relationship between business size and membership.

With the inclusion of turnover and employment neither business age nor being home based had a statistical significance. Members had 1.99 higher odds of having a higher turnover and 1.301 higher odds of having higher employment compared to non members.

Table 4 Logistic regression predicting membership of an non local business association

| | Model 1 | | Model 2 | | Model 3 | |
|--|-----------------------|----------------|-----------------------|----------------|-----------------------|----------------|
| | Log odds | Standard error | Log odds | Standard error | Log odds | Standard error |
| Business level | | | | | | |
| <i>Profit stayed the same over last 5 years</i> | | | | | | |
| Profits increased over last 5 years | .956 | .217 | .944 | .218 | .954 | .219 |
| Profits decreased over last 5 years | .895 | .230 | .871 | .232 | .894 | .234 |
| Turnover (continuous) | 1.208*** | .062 | 1.197*** | .063 | 1.199*** | .064 |
| Year established (continuous) | 1.054 | .074 | 1.059 | .075 | 1.052 | .075 |
| Log Full-time equivalent employees (continuous) | 1.285*** | .128 | 1.293** | .128 | 1.301** | .129 |
| <i>Not home based business</i> | | | | | | |
| Home based business | 1.148 | .194 | 1.177 | .199 | 1.151 | .201 |
| <i>No local purchases made</i> | | | | | | |
| Local purchases made | 1.429* | .209 | 1.415 | .216 | 1.450* | .218 |
| Respondent level | | | | | | |
| <i>Local or returnee to the area</i> | | | | | | |
| In-migrant to the area | .857 | .190 | .851 | .194 | .832 | .196 |
| <i>Male</i> | | | | | | |
| Female (control) | 1.447* | .209 | 1.416 | .216 | 1.396 | .217 |
| Age (continuous) | 1.079 | .079 | 1.075 | .079 | 1.072 | .080 |
| <i>Have not sought business advice</i> | | | | | | |
| Have sought business advice | 1.808*** | .211 | 1.812*** | .213 | 1.783*** | .214 |
| <i>Other education level</i> | | | | | | |
| Post graduate qualifications | 1.772 | .372 | 1.780 | .377 | 1.746 | .378 |
| Degree qualifications | 1.310 | .360 | 1.298 | .362 | 1.276 | .362 |
| A Level qualifications | 1.391 | .401 | 1.349 | .404 | 1.339 | .405 |
| O Level qualifications | .905 | .376 | .866 | .380 | .859 | .381 |
| No qualifications | 1.507 | .431 | 1.450 | .434 | 1.447 | .434 |
| Sector controls | | | | | | |
| <i>Agriculture, Manufacturing, Construction</i> | | | | | | |
| Retail and Transport | - | - | 1.203 | .265 | 1.206 | .266 |
| Accommodation | - | - | 1.279 | .362 | 1.228 | .364 |
| Information, Finance and Real estate | - | - | .841 | .354 | .865 | .355 |
| Professional | - | - | .999 | .302 | 1.041 | .305 |
| Administration, Public, Education, health, Sports and Arts | - | - | .983 | .286 | 1.025 | .289 |
| Geographic | | | | | | |
| <i>Densely populated rural area</i> | | | | | | |
| Sparsely populated rural area | - | - | - | - | 1.231 | .199 |
| Constant | .040**** | .663 | .041**** | .689 | .040**** | .691 |
| Nagelkerke R ² | R ² = .140 | | R ² = .143 | | R ² = .145 | |
| -2 Log-likelihood | 786.486 | | 766.943 | | 765.855 | |
| Sample size N = 622 | | | | | | |

- Italics highlight the reference category for ordinal data
- *p < .1, **p < .05, *** p < .01, **** p < .001

Members were more likely to have made a purchase locally within the past 12 months than non members. This was however less robust, losing statistical significance when sector controls were introduced and then reappearing with the introduction of population density at the 10% level of significance. Nevertheless, members had 1.450 higher odds of having made a local purchase in the past year.

At the respondent level, the only statistically significant predictor was where the respondent had sought business advice. This was significant at the 99% level and reduced slightly with the introduction of sector controls and population density, with 1.785 higher odds of having sought business advice compared to not having sought advice.

None of the sector controls themselves were significant in predicting membership, although they modified the practical significance of other statistically significant variables in a minor way. The introduction of population density slightly increased the effect of size of turnover, employment and the likelihood of making a local purchase, with the effect for business advice reducing somewhat.

In summary, rural members of non local business associations do not show any significant difference in the direction of profit experienced over the past 5 years, but they do have a greater likelihood of being bigger in terms of turnover or employment. They also appear more likely to have made a local purchase in the last 12 months. At a respondent level, members were more likely to have sought business advice in the past. However, the other factors: age, educational level and social mobility, had no effect on membership. Finally, population density had no discernable difference between members and non members. The next section applies the same variables to membership of local business associations.

Modelling *local* business association membership

Logistic regression models were applied to the combined surveys to test the likelihood of membership of a local business association as a function of the same independent indicator variables modelled in the previous section. To analyse whether these variables can predict differences between members and non members after controlling for the effects of cross correlation, 3 logistic regression models were used to predict the log odds of being a member of a local business association. Table 5 provides the results of these models, including the log odds and standard errors.

As discussed earlier, given a low proportion of local business members in the rural business survey, it suffered from low power in identifying effects. As such a combined data-set was constructed from the rural business survey and the local business association survey². Missing data remained an issue with an available sample of 1219, missing data resulted in 380 missing cases, a 31% reduction. However this provided sufficient power to perform the analysis.

Model 1 introduces the respondent and respondent level variables, which according to Nagelkerke's R^2 , explains only 15.4% of variability. Model 2 introduces sector control variables, explaining 26.2% variance and model 3 introduces the population density variable, explaining 31.5% of variance.

Although an improvement over the non local membership model (at 31.5% *cf.* 14.5%), there are clearly other predictor variables which have not been specified in these models. Neither are these models particularly good predictors of membership, with 93.0% of non members but only 41.1% of members being correctly classified within the sample by the last model. Nevertheless, with the Hosmer and Lemeshow

² Using just the rural business survey identified 5 predictors and these predictors were included in those identified within the combined survey local business association models, validating the approach. These factors were: Advice sought, degree level education, not home based, retail and transport sector.

test indicating significance (at .865) the factors presented below can be accepted as valid for the purposes of this analysis.

At the business level, direction of profits over the last 5 years shows statistical significance across all 3 models. The introduction of sector marginally impacted statistical significance, moving from 99% to 95%, but practical significance remained robust.

Members of local business associations had a higher likelihood of having increased profits over the last 5 years compared to the reference category of profits staying the same.

Turnover was also significant across the 3 models, although in this case turnover was likely to be lower for members with odds of .866 compared to non members, which taken with increased profit may indicate higher levels of operational efficiency. Neither employment nor year established had significance across the models.

Members were less likely to be home based businesses with odds of .485, although the potential significance of this was reduced marginally by the introduction of sector controls and by population density. There were however higher odds that members purchased locally, with odds of 2.587 compared to making no local purchases, indicating that members were significantly more integrated with local supply chains.

Respondents were more likely to be in-migrants to the area, although both the practical and statistical significance of these odds were reduced by both the introduction of sector controls and population density. In model 3 there are 1.410 higher odds of being an in-migrant compared to being a local or returnee (at 10% significance). Gender is similarly affected by sector and density, though in model 3 there remain 1.478 higher odds of a member being female. Members are more likely to have at some time sought business advice, with 1.877 higher odds.

Table 5 Logistic regression predicting membership of a local business association

| | Model 1 | | Model 2 | | Model 3 | |
|--|----------------------|----------------|----------------------|----------------|----------------------|----------------|
| | Log odds | Standard error | Log odds | Standard error | Log odds | Standard error |
| Business level | | | | | | |
| <i>Profit stayed the same over last 5 years</i> | | | | | | |
| Profits increased over last 5 years | 1.599*** | .209 | 1.545** | .220 | 1.574** | .226 |
| Profits decreased over last 5 years | .932 | .240 | .865 | .255 | .994 | .262 |
| Turnover (continuous) | .889* | .063 | .861** | .067 | .866** | .070 |
| Year established (continuous) | .995 | .071 | 1.064 | .076 | 1.071 | .079 |
| Log Full-time equivalent employees (continuous) | 1.064 | .121 | 1.128 | .126 | 1.151 | .132 |
| <i>Not home based business</i> | | | | | | |
| Home based business | .539*** | .192 | .523*** | .209 | .485**** | .217 |
| <i>No local purchases made</i> | | | | | | |
| Local purchases made | 2.592**** | .237 | 2.267**** | .251 | 2.587**** | .259 |
| Respondent level | | | | | | |
| <i>Local or returnee to the area</i> | | | | | | |
| In-migrant to the area | 1.821**** | .182 | 1.565** | .194 | 1.410* | .200 |
| <i>Male</i> | | | | | | |
| Female (control) | 1.959**** | .187 | 1.601** | .203 | 1.478* | .209 |
| Age (continuous) | 1.043 | .594 | .991 | .082 | .972 | .085 |
| <i>Have not sought business advice</i> | | | | | | |
| Have sought business advice | 2.063*** | .236 | 2.020*** | .247 | 1.877*** | .252 |
| <i>Other education level</i> | | | | | | |
| Post graduate qualifications | 2.076* | .435 | 2.082 | .451 | 2.125 | .467 |
| Degree qualifications | 2.266** | .424 | 2.133* | .439 | 2.199* | .455 |
| A Level qualifications | 2.462** | .454 | 1.683 | .475 | 1.734 | .492 |
| O Level qualifications | 1.915 | .442 | 1.354 | .460 | 1.447 | .477 |
| No qualifications | 1.861 | .508 | 1.753 | .528 | 1.782 | .548 |
| Sector controls | | | | | | |
| <i>Agriculture, Manufacturing, Construction</i> | | | | | | |
| Retail and Transport | - | - | 4.876**** | .291 | 4.808**** | .299 |
| Accommodation | - | - | 7.572**** | .325 | 6.040**** | .331 |
| Information, Finance and Real estate | - | - | 1.786 | .399 | 2.014* | .412 |
| Professional | - | - | 1.745 | .349 | 2.235** | .362 |
| Administration, Public, Education, health, Sports and Arts | - | - | 1.323 | .340 | 1.626 | .350 |
| Geographic | | | | | | |
| <i>Densely populated rural area</i> | | | | | | |
| Sparsely populated rural area | - | - | - | - | 3.208**** | .193 |
| Constant | .036**** | .709 | .024**** | .775 | .014**** | .814 |
| Nagelkerke R ² | R ² =.154 | | R ² =.262 | | R ² =.315 | |
| -2 Log-likelihood | 856.300 | | 785.278 | | 748.044 | |
| Sample size N = 832 | | | | | | |

- *Italics highlight the reference category for ordinal data*
- *p < .1, **p < .05, *** p < .01, **** p < .001

However this appears less so with the introduction of population density, possibly suggesting that businesses in sparsely populated areas are less likely to seek advice. In terms of education, members appear more likely to have higher educational qualifications from 'A' levels upwards. However the addition of sector controls changes the situation somewhat and the only consistent predictor within education is the higher odds of having a degree at 2.199.

Sector controls are particularly significant for retail and transport at 4.808 and accommodation at 6.040, although the addition of population density allows statistical significance for information, finance and real estate at 2.014 and professional at 2.235. Finally, the addition of the population density measure shows that members of local business associations are more likely to be based in sparsely populated rural areas.

In summary, rural members of local business associations are more likely to have had a higher profit over the last 5 years and a lower annual turnover. They were more likely to have purchased locally and less likely to be based at home. Respondent characteristics appear more important for local business associations, with members more likely to be in-migrants to the area, more likely to seek advice and more likely to have a degree.

Table 6 Summary of membership models

| | Local Association | | Non local Association | | All Associations | |
|--|-----------------------|----------------|-----------------------|----------------|-----------------------|----------------|
| | Log odds | Standard error | Log odds | Standard error | Log odds | Standard error |
| Business level | | | | | | |
| <i>Profit stayed the same over last 5 years</i> | | | | | | |
| Profits increased over last 5 years | 1.574** | .226 | .954 | .219 | .955 | .205 |
| Profits decreased over last 5 years | .994 | .262 | .894 | .234 | .933 | .218 |
| Turnover (continuous) | .866** | .070 | 1.199*** | .064 | 1.144** | .060 |
| Year established (continuous) | 1.071 | .079 | 1.052 | .075 | 1.059 | .071 |
| Log Full-time equivalent employees (continuous) | 1.151 | .132 | 1.301** | .129 | 1.270** | .122 |
| <i>Not home based business</i> | | | | | | |
| Home based business | .485**** | .217 | 1.151 | .201 | .980 | .187 |
| <i>No local purchases made</i> | | | | | | |
| Local purchases made | 2.587**** | .259 | 1.450* | .218 | 1.376 | .202 |
| Respondent level | | | | | | |
| <i>Local or returnee to the area</i> | | | | | | |
| In-migrant to the area | 1.410* | .200 | .832 | .196 | .895 | .183 |
| <i>Male</i> | | | | | | |
| Female (control) | 1.478* | .209 | 1.396 | .217 | 1.370 | .201 |
| Age (continuous) | .972 | .085 | 1.072 | .080 | 1.047 | .076 |
| <i>Have not sought business advice</i> | | | | | | |
| Have sought business advice | 1.877*** | .252 | 1.783*** | .214 | 2.040**** | .203 |
| <i>Other education level</i> | | | | | | |
| Post graduate qualifications | 2.125 | .467 | 1.746 | .378 | 2.227** | .364 |
| Degree qualifications | 2.199* | .455 | 1.276 | .362 | 1.617 | .350 |
| A Level qualifications | 1.734 | .492 | 1.339 | .405 | 1.486 | .392 |
| O Level qualifications | 1.447 | .477 | .859 | .381 | 1.013 | .368 |
| No qualifications | 1.782 | .548 | 1.447 | .434 | 1.724 | .421 |
| Sector controls | | | | | | |
| <i>Agriculture, Manufacturing, Construction</i> | | | | | | |
| Retail and Transport | 4.808**** | .299 | 1.206 | .266 | 1.398 | .253 |
| Accommodation | 6.040**** | .331 | 1.228 | .364 | 1.484 | .339 |
| Information, Finance and Real estate | 2.014* | .412 | .865 | .355 | .943 | .331 |
| Professional | 2.235** | .362 | 1.041 | .305 | 1.080 | .287 |
| Administration, Public, Education, health, Sports and Arts | 1.626 | .350 | 1.025 | .289 | 1.080 | .270 |
| Geographic | | | | | | |
| <i>Densely populated rural area</i> | | | | | | |
| Sparsely populated rural area | 3.208**** | .193 | 1.231 | .199 | 1.340 | .114 |
| Constant | | | | | | |
| | .014**** | .814 | .040**** | .691 | .052**** | .656 |
| Nagelkerke R ² | R ² = .315 | | R ² = .145 | | R ² = .137 | |
| -2 Log-likelihood | 748.044 | | 765.855 | | 863.731 | |
| Sample size N | 832 | | 622 | | 684 | |

- *Italics highlight the reference category for ordinal data*
- *p < .1, **p < .05, *** p < .01, **** p < .001

Discussion

Table 6 summarises the final models for membership of local, non-local and all associations.

Concentrations of facilitating groups

At the local level there is a higher likelihood that a member comes originally from outside the area. There is no significant likelihood of this increased membership in non local associations. These in-migrants with businesses may seek integration within the local business community. For the in-migrant, local business associations are potentially high visibility sites allowing access to local networks. It is likely that this is an iterative and two way process, with in-migrants introducing weak ties or extra-local linkages and locals providing the strong ties and a pathway to community belonging – balancing the strong-weak tie dynamic.

Home based businesses are less likely to be members of local business associations. Previous research has indicated that home based businesses are particularly high in rural areas (Mason 2009) and due to the nature of running a business from the home they are likely to be more isolated from peer and social support (Dwelly *et al.* 2005). This leads to the supposition that where local associations exist, then home based businesses will use them more frequently (Dwelly *et al.* 2005, Taylor 2008), thereby overcoming isolation and allowing integration and participation with the local business community. However, the results indicate quite the opposite effect, with no decreased likelihood of membership in non local associations. The possibility that this lower likelihood of membership is as a result of operational logistics is unlikely, sectoral differences and propensity to purchase locally have been controlled for. Given this, it seems more likely that the home based business is isolated by inclination, with a lack of business visibility linked to a lack of local community belonging.

Presence of positive development processes

At this stage we can only look for evidence of the outcomes of the processes of positive development and use the findings to direct future research. From this there appears evidence of optimising and integrating processes, which in turn may suggest entrepreneuring, embedding and learning processes.

Membership of a local business association gives higher odds of having made an increase in profits over the past 5 years and of having a lower annual turnover. Higher profit and lower turnover may indicate local members are more efficient. With sector controlled for, this would suggest that the optimising effects highlighted by the resources based view (Barney 1991, Gulati *et al.* 2000), transaction costs theory (Williamson 1985, North 1986, Park 1996) and the logic of exchange (Granovetter 1985) have an effect at this local level.

It cannot be stated that membership of a local business association caused an increase in profits. Members may simply be those businesses that are more outward looking than others. They may be more likely to recognise and exploit opportunities due to a willingness to look for them, resulting in higher profits and this same orientation would make it more likely that they would be a member of a business association. There is however *an effect* and this predictor may suggest a concentration of entrepreneurial processes.

Members of business associations were more likely to have previously sought advice than non members. However, members of local business associations are even more likely to seek advice than members of non local business associations (1.877 *cf.* 1.783) and it follows that they are more likely to look for opportunities.

Local level effects also appear significant and members of both non local and local business associations were more likely to have some involvement with the local supply chain, members of non local associations had odds of 1.450 (at the 90% significance level), whereas members of local associations had higher odds of 2.587

(at 99.9% significance level). This integration with the local supply chain may have an effect upon business operations, tying in with the industrial district literature, where operations are optimised by purchasing within a focused geography (Piore and Sabel 1984). Local members are also more likely to have higher levels of education than non members³ and according to Lin (2002), level of education has a strong relationship with the creation of social capital. Membership of local business associations is more likely in sparsely populated rural areas compared to more densely populated rural areas. It is likely that businesses in sparsely populated rural areas need to be more self and community reliant than in more densely populated rural areas, as they are less likely to be within the 'service-shadow' of higher order conurbations (CA 2002:92).

Conclusion

The empirical part of this paper set out to examine if local business associations are significant sites for rural development. For this we were looking for evidence of concentration of certain socio-economic groups that have been identified as having a facilitating role in development. We found that local business associations are likely to have higher concentrations than expected of in-migrants. They are significant sites for these mobile individuals that have been valorised as a catalyst for economic regeneration (Stockdale and Findlay 2004, Stockdale 2006, Bosworth 2008).

Conversely we found that local business associations were likely to have lower concentrations than expected of home based businesses. Given the linkage of these businesses with the development discourse surrounding knowledge and creative businesses (see Abdy *et al.* 2007, Taylor 2008), with its attendant spill-over effects and multipliers, then a lack of integration with a key local business organisation has negative implications for development.

³ For all members postgraduate qualifications are significant for non local members this higher education is not significant

We were also looking for evidence of the presence of positive development processes. We found that members of local business associations are more locally integrated, more open to advice, more likely to have seen an increase in profit over the last 5 years and are potentially more efficient (given higher profit and lower turnover). Positive development processes seem to be concentrated in local business associations.

Local business associations appear to be significant sites for neo-endogenous development. At a micro level this provides a clear context for research into broker level facilitation. At a meso level, this aggregate entity of concentrated activity is a facilitating agent for rural development.

Approaching facilitation in context as a component in the development nexus of agent, process and place, this paper makes the link explicit by exploring a specific site where these components of development are thought to operate: the local business association. They may provide an opportunity for facilitators and endogenous actors to enact the positive processes of development and for the association to embody them.

The non local membership model explained only 14.5% and the local model 31.5% of variance. Other predictor variables of membership will exist for the dependent variables that have not been modelled. Social variables such as local levels of social cohesion, relative deprivation and economic variables such as local levels of business “churn” and productivity would possibly improve the fit of these models.

This research has highlighted some of the differences between members and non members of local business associations in rural areas of the north east of England. Given evidence of processes of development, future research might aim to identify specific processes in more detail. For instance, we might describe positive developmental processes as: entrepreneuring, integration and learning. Research might seek to measure the presence and levels of these processes more directly through the use of constructed scales. These could be used to compare local

business associations with other potentially significant rural sites, such as development trusts, volunteer groups and school and church groups.

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