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Firms, Governance and Development in Industrial Districts

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March 2017

Abstract

This paper explores the link between local governance structures and the ability of local firms to influence the strategic direction (and future development) of their industrial district. In doing so we utilise unique survey data from two British industrial districts to first examine the extent to which local firms shape local industrial development strategies, and secondly the institutional conduits through which their influence is exercised. The empirical results suggest a role for (local) business associations, the building of reciprocal networks among firms, social capital, and more heterarchical governance structures to enhance firm engagement in local initiatives and industrial development.

1. Introduction

There is on-going interest in the notion of resilience and the ability of (old) industrial districts to revitalise themselves (Bailey and Turok, 2016). Yet within this and indeed the wider literature on local economic development, a critical but in recent times somewhat neglected issue is the concept of governance in local production systems. Where governance is addressed in relation to local economic development it has tended to focus on territorial governance by government and government agencies (Pike *at al*. 2016; Bailey and Berkeley, 2014).

It has been claimed a wider conceptualisation of local governance is enhanced by promoting what Cooke and Morgan (1998) once termed 'associational economies', where local institutions, social capital, and strong (local) business networks play a prominent role and make a significant contribution to development (Aragón *et al.*, 2014). Whilst such claims are partly based upon research into the experiences of Italian industrial districts, there is a paucity of (wider) quantitative work exploring the extent to which these claims have merit, both in general terms, and also if distinct facets of governance are of particular importance. For instance, De Propris and Wei (2007) highlight the ability of (local) firms to shape the strategic direction of their industry, which makes them a potentially crucial aspect of a local governance system that has yet to be explored. Firms are at the core of local economic activity and have an inherent interest in local industry development issues, especially: the development of local infrastructure; (locally based) publicly funded business support services (including public R&D facilities and technology); the use of urban space; marketing and (industrial) tourism; and in specific industrial districts, co-ordinating industry wide strategy. Resolution of these issues are matters of local governance, and crucially, shape a locality's industrial development path.

The contribution of this paper is two-fold. First, the paper makes a theoretical contribution by explicitly exploring the link between local governance and the ability of local firms to influence the strategic direction (and future development) of their industrial district. We then present a novel, formal model which captures the various institutional conduits through which this influence is exercised. Secondly, this model is then estimated by an ordinal regression technique using unique survey data from an administered survey of firms in two traditional Marshallian industrial districts based in the British 'Midlands': the North Staffordshire Ceramics industry, in Stoke-on-Trent; and the Birmingham Jewellery Quarter in Hockley,

Birmingham[1]. In doing so, we also highlight the extent to which local firms in these districts shape local industrial development strategies. Industrial districts are interesting candidates for analysing local governance processes, since the interests of industry and the wider region are often entwined regarding socio-economic development. Our study not only provides a new quantitative insight, but the distinctive British context also offers an original (and different) perspective from earlier (qualitative) narratives on local governance structures which have a largely Italian focus (e.g Beccattini, 1990). Moreover, both of our chosen industrial districts have until recently, struggled to meet the challenges posed by globalisation, with 'weak' local governance structures - characterised by low levels of engagement by (local) firms in district wide initiatives and in the broader strategic direction of the districts - previously having being identified as a hindrance to future development (De Propris and Wei, 2007; Hervas-Oliver *et al.*, 2011).

The UK context is also timely since in recent years the UK government have sought to promote a 'localism' agenda, with a greater emphasis being placed upon private sector actors engaging in local governance and managing local economic development (Bentley and Pugalis, 2013). UK business communities have been encouraged to become more active in this regard as it has been noted that historically – compared to their European counterparts - a degree of apathy existed among (local) UK business towards local governance (Heseltine, 2012; Raco, 2003). This agenda is often juxtaposed within the wider context of rebalancing the UK economy, especially in relation to revitalising lagging manufacturing regions where decentralisation is now seen as part of the solution (Bailey et.al, 2016). Yet, it remains unclear as to the extent to which local UK firms actively influence and shape local development initiatives.

The remainder of this paper is set out as follows. Section 2 reviews the literature, exploring the links between local governance structures and local development, and the spheres of firm influence; namely business associations, local networks and social capital. Section 3 introduces both case studies. Section 4 describes the data and methodological approach. Section 5 presents and discusses the results, while Section 6 concludes.

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[1] Both districts were identified by Marshall (1919) as exhibiting the properties of a traditional industrial district, namely being largely propagated by a population of small and medium sized firms, (relatively) high levels of vertical and horizontal specialisation of skills and the existence of an 'industrial atmosphere' (De Propris and Lazzeretti, 2007; Tomlinson and Jackson, 2013). The governance of industrial districts was taken up much later by scholars in the Italian tradition (Brusco, 1982; Beccattini, 1990).

2. Conceptual Issues

2.1 Governance, 'Associational Economies' and Organic Leadership

In exploring the ability of firms to shape local development strategies, it is first helpful to clarify the concept of (local) governance. Le Gales and Voelzkow (2001, pp. 6–8) provide a broad perspective, defining governance in terms of the '*institutions which coordinate or regulate action or transactions among subjects within a system*', before identifying institutions such as markets, firms, business associations, networks, trade unions, the state, and the wider community as being the main components of a typical 'governance system'. It is the inter-play between these various constituents which shape local development.

Considering broad conceptualisations of governance has long been integral to explorations of European industrial districts, particularly in the oft celebrated districts in Baden-Württemberg and Emilia-Romagna (Brusco, 1990; Beccattini, 1990). Cooke and Morgan (1998) labelled these 'associational economies' due to the high degree of embeddedness among (local) actors, exemplified in close network ties with strong social capital among actors[2] and recognised institutions (including laws, regulations, and social norms). While these characteristics typically bind a locality together, in local production systems (such as industrial districts) it is the agglomeration of firms and appropriate institutional supports which can provide the basis for what Bailey et.al (2010) describe as organic forms of 'place-renewing leadership'. This organic leadership arises through the emergence of joint actions, closer collaboration, and engagement between local actors on local and industry issues (and initiatives) such as industry regulations, training and skills, access to finance, district marketing, new technologies, and production operations. Such collective actions in turn enable local firms (and other stakeholders) to jointly identify (and address) new challenges and issues of mutual concern, and thus participate in strategic-decisions which affect the district's future trajectory. Thus, the foundation of the historical success of some Italian districts in moving into higher value added markets, new domains, and onto new trajectories, was a relatively pluralistic (local) governance in which no one firm was dominant. This ensued both social and economic development moved together in an integrated and inclusive process (Dei Ottati, 2003; Beccattini, 1990).

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[2] Social capital is a collective social resource, arising from (and shaped by) networked actors, creating value for network members e.g. through knowledge sharing and collaboration (Payne *et al.*, 2011).

2.2 Business Associations, collective action, and local development

Given our focus on the role and influence of firms in shaping local development, one of the main fulcrums of the governance of 'associational economies' and conduits for firms to exert policy influence - over (local) industry issues - are a locality's set of business associations (and the networks inherent to them) (Bennett, 1998). In industrial districts these include not only local Chambers of Commerce, but also industry trade associations, district R&D centres and, in a looser sense, informal industry forums. These local associations provide member firms exclusive access to a set of collective services including public R&D facilities, legal and financial advice, marketing, and all typically at a lower cost due to staff expertise, economies of scale, and lower transaction costs than alternative market providers (Bennett, 2011). This exclusivity of services - which Bennett (1998) refers to as *the logic of services* - generally subsidises the representative function (*the logic of influence*), thus allowing (local) associations' to represent (local) industry interests on policy-related issues affecting (local) industrial development.

Indeed, the representative function provides industrial localities with credibility and socio-political legitimacy in the public domain. Such legitimacy enhances industry/locality lobbying with state (and other) interlocutors and may allow (local) business associations to inform and shape legislation (and regulation) at local, national, and supra-national levels (Bennett, 1998). For example, and relevant to one of the case studies considered herein (see Section 3), the British Ceramics Confederation (BCC) - based in Stoke-on-Trent - recently worked closely with local firms, Parliamentarians, and others to successfully lobby the British government to exclude the ceramics industry from the Climate Change Levy (a business tax on energy use). This has been a significant factor in improving the competitiveness of the ceramics district (Tomlinson and Branston, 2014).

Given the role of local business associations in district governance, key questions arise as to how such organisations are able to deal with their inherent collective action problems such as whose interests are represented, and which member firms are involved in (and influence) socio-political processes. At the local level, member firms themselves are either passive or active participants in a business association's (socio-political) activities, with a firm's decision to participate reflecting the balance between gaining influence (and prestige) within industry circles against the time, staffing, and financial commitments they are prepared to offer in support of collective action and the associated temptation to free-ride. In this regard, and with

their greater resources and wider public visibility, larger district firms may take the active lead in (local) business associations and assume collective responsibility for representing local industry interests. On issues of mutual concern and where there is already wide consensus, resource-constrained smaller firms may reap the spill-over benefits of such representation (Tomlinson, 2012)[3].

Firm participation also very much depends upon the nature of governance within (local) business associations and their effectiveness in achieving positive outcomes for the industry. Contradictory tensions may arise where (local) business associations seek to be inclusive and representative of a broad and diverse membership base (*'the logic of membership'*) while also trying to formulate a clear and coherent position on matters of negotiation with policymakers. If governance structures adhere too closely to the *'logic of membership'*, business associations may become less effective in wider policy circles as the association's ability to articulate a consistent collective voice (among disparate actors) is compromised. In such cases, some firms may withdraw/becoming less active and less influential in local business association activities (Bennett, 1998). On the other hand, within 'associational economies' an open and inclusive format may be attractive to firms, thus raising the level of active membership of business associations.

H1: *District firms which are active members (vis-à-vis passive or non-members) of local business associations are more likely to influence local industry issues and initiatives*

2.3 Network Governance and local development

Business Associations are, of course, only part of the much wider network of actors in industrial districts. Indeed, local 'network governance', specifically the extent and nature of (local) relationships among co-ordinated networks of firms - engaged in interdependent production (and distribution) activities - is now regarded as especially important in shaping local development (Dei Ottati, 2003; Aragón *et al.*, 2014). For instance, in the Italian districts, local networks were typically regarded as exhibiting largely heterarchical (i.e. 'flat' or 'diffuse') governance as they were based upon a series of ongoing (mainly horizontal) socio-economic relations among relatively equal participants who exhibited mutual interdependencies in production, co-operation, and embodied by shared resources, trust, and reciprocity. With

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[3] Where business associations become overly dependent upon the resources of larger firms, the latter will shape the agenda to pursue largely their own interests. If small firms' interests are not represented or severely compromised, they may refrain from participating in locally led initiatives, as occurred in South East Turkey (Bayirbag, 2011).

economic power relatively diffuse, a wide set of actors were able to participate and deliberate over local industry development processes. In contrast, more hierarchical (local) networks are dominated by a few core actors, who are able to exert their own economic strength to gear local development paths to suit their own strategic aims, often with little wider consultation (Sacchetti and Sugden, 2003)[4].

Thus the degree to which (local) firms shape local development is embedded within the nature of (local) dyads (i.e. relationships between (industry) participants). In this regard, highly networked (local) firms are more likely to hold greater sway over (local) industry issues, since they are more proactive and prominent across industry networks. This allows them to exercise their voice across a wider set of industry forums (and issues) and hence play a leading role in co-ordinating initiatives.

H2: *Highly networked district firms are more likely to influence local industry issues and initiatives*

Related to this is recognition that wider (local) networking facilitates greater participation, engagement and interaction among firms in local production processes. As noted, within more heterarchical local governance structures there is possibly more scope for concertation, deliberation and mediation among networked firms on issues of mutual concern. These issues include not only the ongoing management of shared resources and social assets, but also in dealing with industry crises (such as dealing with external shocks) and formulating long term objectives for the district's development (Dei Ottati, 2003). Indeed, wide deliberation among district firms may (or may not) lead to consensus around a collective strategy and the emergence of a 'shared vision' or identity for the industrial locality. Where firms exercise their own voice in formulating district strategy, they are more likely to exert influence (Bianchi and Labory, 2011).

H3: *The more district firms 'share a vision' or believe in collective goals in the locality, the more likely they are to influence local industry issues and initiatives.*

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4 In some cases, the locality's trajectory may become 'locked in' to serving the technological requirements of monopolistic firms, increasing the locality's vulnerability to external shocks (Bailey et.al, 2015).

2.4 Firm engagement in local initiatives

The general proposition is within industrial districts and specifically those districts with the characteristics of 'associational economies', there are greater opportunities for firms and other stakeholders to play a role in shaping local trajectories (Cooke and Morgan, 1998; Beccattini, 1990). Nevertheless, for firms to exert their wider influence over local development, they are also most likely to be active in local policy circles and initiatives. As De Propris and Wei (2007) note, only if actors (such as firms) are willing and able to participate in local issues and initiatives, can their interests be reflected in the collective decision-making processes and hence shape the direction of the development of the locality.

H4: *District firms which express interest and participate in local initiatives are more likely to influence local industrial development.*

3. Contextual Background

Our research is set in the context of two mature UK industrial districts. The first is the North Staffordshire Ceramics industrial district based in and around the city of Stoke-on-Trent. The district is the centre of the UK ceramics industry, including the production of various types of ceramics products, and related material and equipment suppliers. Crucially given the focus on (local) governance, the district is also home to the industry's main trade associations (British Ceramic Confederation (BCC), British Ceramic Plant and Machinery Manufacturer Association (BCPMMA), International Clay Technology Association (ICTa)), ceramic research centres (Lucid-eon, Ceramic Skills Academy) and the industry's trade union (Unity). During the late twentieth century, the district entered a 'long decline' (1979-2008) as firms struggled to adapt to the challenges posed by globalisation and other exogenous shocks. The result was the closure of several high profile factories (and firms) and moves by some manufacturers to 'outsource' production and/or set up production facilities in the Far East to take advantage of lower labour costs. Hervas-Oliver *et al.*, (2011) attribute many of these difficulties to period of weak local governance, with the long decline coinciding with the strategic decisions of larger firms (on factors such as investment, employment and output which affect the whole district) being increasingly taken by external (and hierarchical) corporate and institutional shareholders, who notably adopted a more short-term focus. Since 2008, there have been signs of a potential renaissance in the fortunes of the district, in part due to improvements in district governance driven by better collective action by firms and wider

fora for (smaller) firms to participate in industry development issues (Tomlinson and Branston, 2014).

The second district is the Birmingham Jewellery Quarter (BJQ), a cluster of jewellery firms and allied trades in the Hockley area of Birmingham. As in Stoke-on-Trent, the BJQ has been established for several hundred years but has faced a decline in recent decades, again due to globalisation and competition from cheap imports. More recently, the BJQ has faced pressures over the use of urban space, with more housing development and increasing demands from developers to transform rented workshops into residential use. Underlying these challenges is the BJQ has also been blighted by weak governance. De Propris and Wei (2007), for instance, examined the history of the district and explored its (then) current governance, concluding '*that firms rarely have an input in important decisions about the BJQ*' and that '*very few collective actions are observed now*' (p.2483). The implication is there was a lack of district wide collective decision-making. Nevertheless, the BJQ still includes a large number of jewellery related firms and importantly for the study herein, is also home to various industry bodies, including the main union (The British Jewellers' Association), the Birmingham School for Jewellery, the Birmingham Assay office, the Jewellery Quarter Association (JQA), and the BJQ Development Trust (JQDT) (see De Propris and Lazzeretti (2009)).

Despite previous studies highlighting weak governance structures in both districts, preliminary discussions with representatives from both the main institutions (the BCC in Stoke-on-Trent and the JQDT in Birmingham) and several (randomly selected) firms in each district outlined the various activities which district firms could participate in and hence influence local industrial development. These are documented in Table (1) and include the (collective) development of skills/training, technology, marketing, and wider industry issues.

INSERT TABLE (1) HERE

4. Methodology

4.1 Sampling Frame and Survey Design

The data for the study data is collated from a survey of firms in both districts. The survey was administered by post – with an option to complete online – during a four month period in 2013/14. Questionnaires addressed to the Managing Director of each firm and were sent to all 282 ceramics firms in the Stoke-on-Trent district and all 138 jewellery firms registered in the Birmingham jewellery quarter (BJQ) as at 1st May. Questions related to the previous five years of business trading and explored local governance structures, firms' participation in development initiatives, firms' networking activities and social capital, along with acquiring background information on each firm. In both districts, we took advice from industry representatives on the framing of particular questions to suit local nuances.

In Stoke-on-Trent, a total of 121 responses (42.9% response rate) were received, with 112 (39.7%) providing complete information, while in the BJQ there were 68 (49.3%) responses, with 63 (45.6%) firms providing complete information for the current study. These are highly respectable response rates for survey research (Hair, et al., 2007). Tests for non-response bias were based upon comparing the mean responses of the variables under consideration of the early and late respondents, with ANOVA analysis revealing no significant differences (Armstrong and Overton, 1977).

4.2 Model, Variable Construction and Descriptive Statistics

Following the discussion in Section 2, we seek to explore a firm's degree of influence on local development processes and the factors determining this influence. More formally,

$$\text{Degree of Influence} = \beta_0 + \beta_1 \, Age + \beta_2 \, Size + \beta_3 \, District + \beta_4 \sum_{i=1}^{n} X_{i...k} + \varepsilon_i \qquad (1).$$

where X_i is a vector of independent variables and considered as having a positive impact upon a firm's degree of influence in the district's decision-making processes. Firm Age, size and a dummy variable capturing district affiliation act as control variables. The primary variables of interest are briefly described below (full details in Appendix A).

4.2.1 Dependent Variable

Degree of Influence: Firms were asked the extent to which they had influenced the district's strategic direction with respect to district wide policy initiatives (as indicated by the issues set out in Table 1) over the previous five years. The measure is discrete, utilising a 7 point Likert scale, where 1 equates to 'no influence/non-involvement' and 7 'a very high level of influence in district initiatives'.

It is worth deliberating further on the distribution of responses in relation to the dependent variable, which is captured in Figure (1) for the overall sample and each district.[5] Both distributions largely mirror one another, with the majority of firms perceiving they have had no or little influence on district wide decision-making. Indeed, few firms appear to believe they hold significant sway in district wide issues with only 8% of all firms in the sample in the top two categories (6 and 7), while 57.1% are in the bottom two categories (1 and 2). In respect to the latter, both categories cover those firms that had no involvement with the difference being those in the first category report no interest in such activities, whilst those in the second category report no involvement due to not being approached (in some way). Therefore, the 20% of firms in the first category can be considered to be a raw measure of the degree of apathy (over local development) within each district given they have reported no interest.

This result is perhaps not too surprising given historical attitudes of apathy (by local firms) towards governance in both districts. De Propris and Wei's (2007) study found low participation in local (residential and commercial) policy issues, and suggested this was due to firms' holding perceptions their involvement was not important and/or unlikely to have any influence. This (local) apathy was reinforced by industry wide-policy issues (e.g. regulation) largely being made at European Union level, while many area decisions were taken by property developers and the City Council with little (perceived) local consultation. As noted, in Stoke-on-Trent, similar issues have also long been observed with regards to participating in district governance (Hervas-Oliver *et al.*, 2011).[6]

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[5] Appendix B shows the level of survey responses as distributed by size for both the dependent variable and the categorical independent variables. Smaller firms were generally more active business association members and participated more in development initiatives suggesting business association membership in some way compensates for firm size.

[6] The extent of apathy is also unsurprising given the majority of (surveyed) firms – in both districts - are relatively small (see Appendix B), and participating in district wide policy forums is very costly in terms of both time and resources.

INSERT FIGURE (1) HERE

4.2.2 Independent Variables.

Business Association Membership: This is a categorical variable (1-3), distinguishing between firms identifying themselves as active members of a local business association (e.g a trade association and/or the Chamber of Commerce), those who identified as merely being members, and a base category for those who identified as non-members. Across both districts, the survey data revealed 37.1% were active members of at least one business association, a further 40% were registered members (of at least one association) while the remaining 22.9% held no association memberships.

Support from Business Institutions: This is a construct variable capturing the extent to which district firms indicated receiving support and advice from (and utilising the facilities of) local business institutions. The rationale is firms accessing such support are more likely to become involved in and/or influence in local initiatives.

Participation in Development Initiatives: This is a categorical variable (1-3), capturing the extent to which firms indicated being encouraged (by for example, trade associations, local government or other firms) to participate in local development initiatives. Firms more actively engaged in such initiatives are more likely to have an influence on district strategy.

Interest in District Development Initiatives: This is a categorical variable (1-3), capturing the extent to which firms expressed an interest in district development initiatives.

District Ties: This is a categorical variable (1-3) capturing the extent to which firms identified as being networked within the district. In 'associational economies', highly networked firms (within the district) are more likely to influence district strategy.

Shared Values: This is a construct variable capturing the 'shared values' within the district. Where firms hold similar values they are more likely to form consensus and exert greater influence over district strategy.

4.3 Operationalisation of Variables and data validation

For the construct variables Cronbach's alpha (α) was calculated to test for *convergent validity*, which exceeded the accepted minimum of 0.7 in all cases, thereby satisfying the criteria for internal consistency and reliability. In addition, the variance-extracted estimates for these constructs were compared with the square of their respective correlation coefficient thus satisfying *discriminant validity*. *Face validity* was satisfied by utilising previously used multi-scale items (Hair *et al.*, 2007).

Despite following well-established methodological precedents in dealing with survey data, such data may suffer from an over-reliance upon managerial retrospective recall, sense-making, and common methods bias. To militate against this, we followed Rong and Wilkinson (2011) by testing for the *validity* of *subjective assessments* of single responses to the survey questions. This involved gathering similar independent data on the key variables from a randomly selected sample of 40 senior managers from surveyed firms across both districts. These responses were gathered by telephone, and this additional control was run for the dependent and key independent variables. We found no evidence of bias in the data and conclude the *validity of subjective assessments* was acceptable. In addition, we also reversed several items in the survey, while also placing questions relating to the dependent and independent variables into separate sections of the survey to mitigate the possibility of respondents linking the categories (Podsakoff et al., 2003). All respondents were assured anonymity to elicit truthful responses. As a final test, a Harman single-factor test was conducted in which all measures (in the study) were loaded into an exploratory factor analysis, with the result the largest factor accounted for only 28.6 % of the variance, which is within the bounds of acceptability (Hair.*et al.*, 2007). It is thus unlikely common methods bias is a problem in the data.

5.0 Estimation and Results

Since the dependent variable is discrete and scaler with the higher values clearly indicating firms have greater influence over district strategy, Equation (1) is an Ordered Probit model (Wooldridge, 2010). The model is estimated in Stata v14 using Maximum Likelihood techniques, first by including the control variables and then sequentially, the independent variables. The results are reported in Tables 2 and 3, with the estimated β values reflecting the relative importance of each variable in each estimation.

Overall, the models perform well. Both the pseudo R squared measures – the Nagelkerke, and Cox and Snell statistics – improve with the inclusion of additional explanatory variables. In terms of the control variables, the estimated results (Table 2) indicate no significant differences in a firm's degree of influence between the two districts, while firm age is insignificant. Firm size is significant indicating larger firms appear to have a greater influence over district decision-making (Table 2, Col 1). However, this effect diminishes (becoming insignificant) as other explanatory variables are added to the model, suggesting other factors may compensate for firm size.

We now turn to the primary variables of interest included in estimations (2) to (4) in Table (2). First, it appears that while membership of a local business association provides a channel for firms to influence decision-making (Column 2), this effect becomes insignificant in the later estimations. However, there is significant evidence (across all estimations) to suggest those firms which are active members of such organisations (i.e. those members which take a prominent role in committees, meetings and association initiatives) are more likely to exert a degree of influence over district wide-policy initiatives (Columns 2-4). Thus H1 is supported. Moreover, firms which receive support, advice, and use the services of local business institutions are also significantly more likely to have a greater degree of influence (Column 3).

Both measures directly capturing social capital are significant, suggesting support for both H2 and H3. Across both districts, where firms are highly networked (H2) they are more prominent within (local) industry circles and are able to shape opinion and influence decision-making. Similarly, district firms which are more active in deliberating with others over industry wide issues exert more influence in formulating local (industry) consensus (H3). Finally, district firms which express a frequent (and even occasional) interest in/engage with and actively participate in district wide initiatives are also significantly more likely to influence local development (H4 supported; see Columns 3 and 4).

Table (3) reports the results exploring the importance of actual participation in specific district wide initiatives. Again, the estimations confirm the significance of active business association membership and social capital (shared values). The results infer that firms which have medium

or high level participation in district wide collective marketing (Columns 1 and 2), tourism initiatives (Column 3), and local infrastructure (Column 4) are also significantly more likely to exert an influential voice in local decision-making. In addition, this inference is also true for those firms with a high degree of participation in district wide development and operation of R&D facilities and training (Column 2). For completeness, the marginal effects are reported for both sets of results in Appendix C.

5.1 Wider Discussion

Overall, where firms seek to influence the strategic direction of their industrial district, the results confirm the importance of networking and active participation in the associational aspects of the local economy. For instance, whereas membership of a local business association provides an opportunity to engage with other actors, it is active members of such organisations - those members which take a prominent role in committees and meetings - which are able to exert a significant influence over district wide-policy initiatives. This is also the case where firms are actively engaged in local business networks, reciprocal relationships, and participate in district initiatives. Indeed, our estimations imply these activities may compensate for firm size (which becomes insignificant as other variables are added; see Table (1)), and act as conduits through which smaller firms can exert greater influence in strategic decision-making over local (industry) development. Through engagement in such activities, firms may form a consensus and/or a shared vision for the district, which in turn, is also more likely to influence district strategy.

As noted in Section (2.1), these traits have long been a purported feature of governance processes in the Italian districts, where local firms and other stakeholders often work in conjunction with municipalities over regional development. This type of local democratic engagement has generally been less prevalent in the UK, although the recent trend towards devolution has begun to emphasise it is local actors, especially firms, which are in a better position to shape local socio-economic trajectories (Heseltine, 2012; Bailey *et al.,* 2016). In the context of reviving older industrial districts, this is particularly relevant where (through collective actions) organic 'place renewing' leadership can emerge to help shape, renew and transform manufacturing activities, thus enabling districts to avoid the risks of technological 'lock-ins' and assist (local) industry in meeting the challenges posed by globalisation (see Section 2.1; Bailey et.al 2010).

Returning to our cases and in North Staffordshire, new forms of organic 'place renewing' leadership and governance have begun to emerge via groups such as the Ceramic Development Group (CDC) established in 2010. This is a collective body of stakeholders from the local institutions (the BCC, the NSCC and Lucid-eon), and district ceramic manufacturers (both large and small), which meets regularly and acts as the focal point for discussing district issues and co-ordinating responses to industry challenges (including EU and government policy directives). It has also become a forum for co-ordinating and managing collaborative bids for district wide funding relating to skills development, energy efficiency, and marketing. Across the industry's sub-sectors, local actors have also sought to lead the district onto a new higher growth trajectory. Thus in Table and Giftware, leading district firms – supported by local institutions (including the NCC and BCC) – are positioning the sector into more niche, higher-value added markets, which are less prone to low-cost competition. In technical ceramics, both Lucid-eon and a number of district firms have led on building cross-sectoral linkages at regional, national, and international levels, whereby specialist ceramics technologies are now being utilised in sectors ranging from biomaterials, medical appliances, communications to automotive (Tomlinson and Branston, 2014).

The BJQ has also established new governance structures through the *Jewellery Quarter Development Trust (JQDT),* a community interest company created in 2011, and – like the CDC – it brings together representatives from a number of district stakeholders, including the Jewellery Quarter Association (JQA), the Jewellery Quarter Neighbourhood Forum (JQNF), the Jewellery Quarter Marketing Initiative (JQMI), the Birmingham Assay Office, the School of Jewellery, and Birmingham City Council (BCC). The JQDT is managed by a Board of (unpaid) Directors from these stakeholder groups, and carries out "*a range of activities* for the benefit of all *who live, work, learn within, invest in and visit the area*", providing a vehicle for leadership and governance within the district[7]. The JDQT's main initiatives has been – following a (positive) local referendum of district firms - to attain (for the BJQ) Business Improvement District (BID) status in 2012[8]. This has allowed the BJQ to impose a 2% levy on all district firms, so as to fund a number of projects to renew the district's appeal, to make it more attractive for new investment and to encourage greater footfall for the district's retail and

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[7] See http://www.jewelleryquarter.net/jqdt/
[8] See https://www.gov.uk/guidance/business-improvement-districts

leisure attractions[9]. Compared to North Staffordshire, many of the issues in the BJQ have been quintessentially 'local'. A long standing and salient issue has been the use of urban space especially with regards to whether the BJQ should continue preserve the (remains) of the industry or to allow vacant buildings to be utilised for residential development (De Propris and Wei, 2007). As (post-industrial) cities and districts seek to re-draw their urban spaces, there is often a delicate balance between matching the interests of industry, residents and tourism, and as important stakeholders, district firms themselves have an inherent interest in shaping such matters. In this regard, the JQDT has begun to facilitate wider engagement and deliberation in shaping district wide strategy and the future development of the BJQ[10].

Despite these initiatives, there remains much apathy in both districts with regards to policy and the ability to shape district trajectories (see Figure (1)). Apathy reduces democratic engagement in the local governance process, which - more broadly – could hamper attempts to encourage local determination. If firms are to play a greater role in local development, then it is clear (local) business associations remain the main channels of influence. Historically, in the UK, these associations have been regarded as the preserve of large(r) firms, with the 'voices' of smaller firms not always being heard (Raco, 2003). Nevertheless, the results above suggest they can be a vehicle for facilitating new dyads between (local) actors, enhancing social capital, encouraging participation in local initiatives, and promoting wider deliberation (and coalition building) over local strategies, which may militate against the impact of (large) firm size (over district wide strategies). This scenario may require business associations to 'reach out' to wider voices by moving towards more 'inclusive' and 'heterarchical' structures to enhance participation. In existing 'hierarchical' structures, there may be some scope for UK business associations to do so by seeking to incorporate wider (disparate) interests, although in building new coalitions, some caution will no doubt be exercised so as not to dilute the associations' overall efficacy in influencing state interlocutors and policy.

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[9] Examples include securing new investment in public facilities such as redeveloping Caroline Street, improved street lighting, cleaning and revamping derelict buildings, promoting public artwork (in the BJQ) and other measures to enhance the BJQ's aesthetic appeal (for further details, see http://jewelleryquarter.net/jqbid/).
10 The BJQ is increasingly a residential locality as reflected in the composition of the JQDT which includes those who live and/or invest in the locality alongside more traditional actors. Discussions with industry representatives revealed these changes in the urban environment had generated inevitable tensions reflecting different priorities among a range of actors over a variety of issues (e.g. parking, traffic flows, availability of business premises, desirability of tourism). Nevertheless, inclusive governance structures facilitate discourse over points of tension, thereby facilitating acceptable compromises, while also contributing to the advancement of points of common interest (e.g. district renovation, road improvements, district vibrancy).

6. Conclusion

In this paper, we have sought to develop the conceptual links between local governance systems and the ability of local firms to shape local development in the context of the industrial district. These links were then explored empirically utilising a unique primary dataset of 175 firms from two traditional British industrial districts; specifically, we examined the extent to which local firms exert influence over local industry initiatives and also the factors which determine the degree of influence. While both districts exhibited a degree of apathy in relation to local development issues, we nevertheless found the traditional characteristics of the 'associational economy' such as social capital and local networking, as being particularly important for facilitating local democratic engagement, with local business associations being principal spheres of influence. Such associations are conduits for local engagement, with active members often able to exert influence over district wide-policy initiatives. Given both British districts have previously been hindered by weak local governance structures, widening and encouraging access to these conduits (and associated networks) would offer all district firms more opportunities to shape local industrial development paths.

These conclusions will hold resonance with scholars of industrial districts and local production systems, especially those in the Italian tradition. However, the British narrative presented in this paper is not only novel but also pertinent in the current UK policy climate and the revitalisation of regionally based industries. Indeed, in the dialogue emerging there now appears to be a focus on the private sector's role in devolution, local governance processes and local socio-economic determination (see Bailey *et al.*, 2016). Local governance structures which facilitate a wide engagement of key stakeholders and collective actions can allow an organic and democratic form of 'place-renewing leadership' to emerge. Such leadership puts regions in a stronger position to identify future challenges relevant to local industries, and thus plan and prioritise resources to meet these challenges accordingly. There is evidence of this emerging in both our cases where through joint actions, firms are collectively shaping, renewing and transforming manufacturing activities within their districts. More broadly, such activities and local governance processes are relevant in the wider context of the UK's government's recent desire to pursue 'place-based' industrial strategies to rebalance the economy; local actors will be key in delivering this agenda and ensuring any policy support is tailored to (local) industry challenges (HMG, 2017).

Finally, we should note some limitations of the study, which provide some tentative suggestions for future research. First, the results relate to a relatively short time interval (5 years), with a specific focus on the dependent variable; the degree of influence exerted over (local) policy initiatives. It can, of course, take years to formulate, deliberate upon, shape, and implement policy. The analysis captures a fixed 'snapshot' of local firm influence in this process. It is highly likely the dynamics of relationships and the degree of influence (over policy) will change over time, especially as new firms enter/exit the sectors and new (industry) issues become in vogue (which may impact upon firms (and sub-sectors) differently). Further work might therefore seek to capture more of the dynamics in local policy determination processes, possibly through a longitudinal study. Secondly, the empirical analysis is drawn from the perspective of the firms in the study and, in addition to the aforementioned limitation in terms of reliance on managerial recall and sense-making, it would be useful in future work to align such data with insights from other stakeholders such as local policy-makers and trade unions in the process. This lends itself to a more qualitative approach. Finally, it is important to remember the results are specific to the two cases. Both are traditional Marshallian industrial districts, which have faced significant challenges in recent years, and where much apathy towards new re-generation initiatives remains. The results should be seen in this context, and a degree of care should be taken in drawing generic conclusions.

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Figure 1

Firms' Degree of Influence in District Strategy
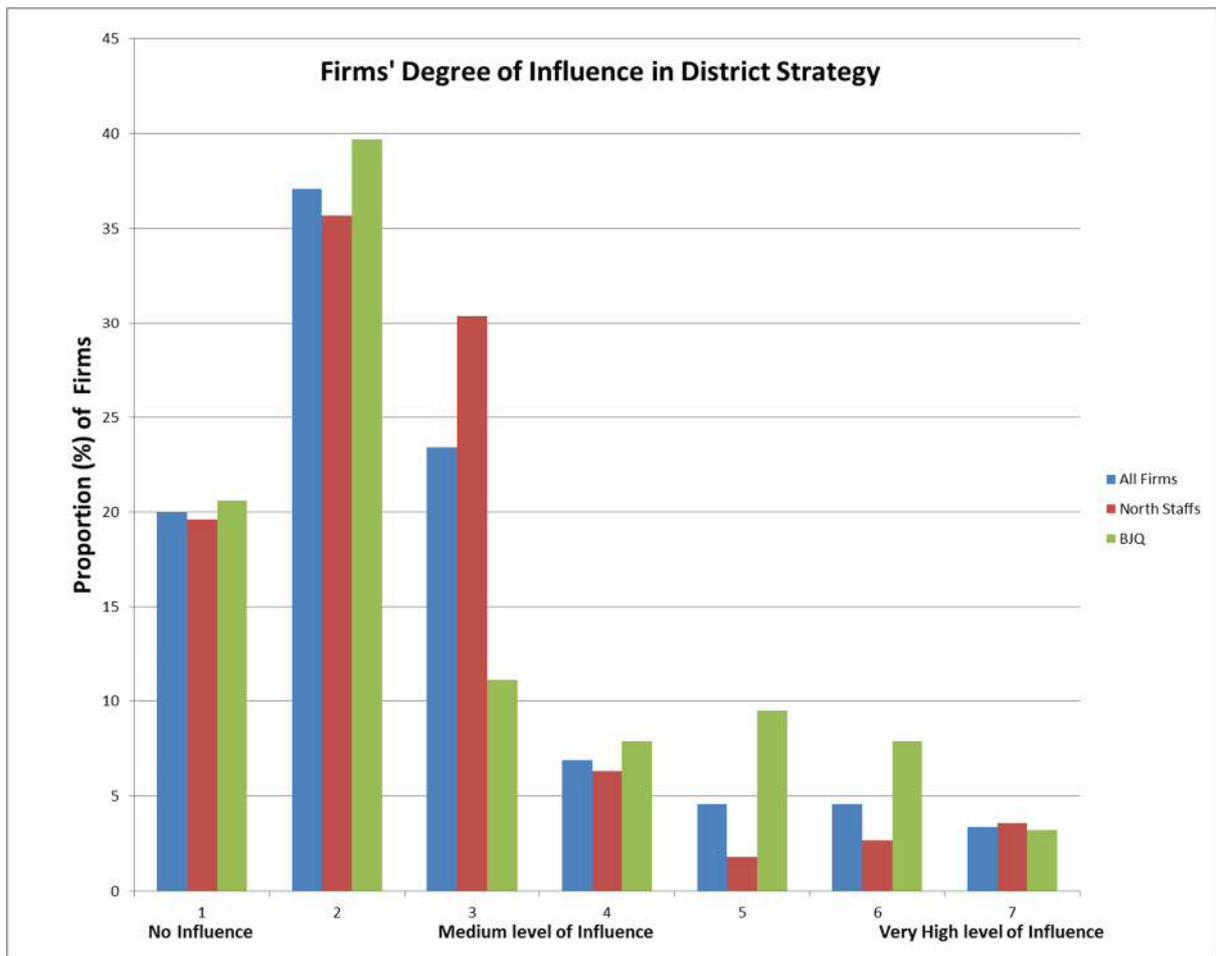
Table 1: Firm Influence in Industrial District Issues

Issues	Norther Staffordshire Ceramics	Birmingham Jewellery Quarter
Development of Skill training provision	Ceramics skills academy New training and skills courses at educational establishments	Jewellery Skills Apprenticeship Programme Industry peer mentoring schemes
Technological Development	Lucideon investments in new kiln technologies Longton 'Hothouse' project Application for an Applied Materials Research and Innovation Centre under a city deal.	Technology strategy board, including knowledge transfer networks Initiatives to develop 3D printing processes facilitated by the School of Jewellery
Industry and/or Locality Marketing	Development and protection of 'Made in England' back stamps. British Ceramics Biennial	Initiatives to market the Jewellery Quarter as a destination Made in Britain drive and associated assaye mark
Locality Development	Development of Enterprise centres Local presence on industry bodies such as the British Ceramics Confederation. Ceramic Development Group Involvement in the EU-funded project: The Urban Network for Innovation in Ceramic Cities	Jewellery Quarter Development Trust Business Improvement District Local presence on relevant industry bodies like British Jewellers Association

Table 2: Ordered Probit: *Dependent Variable – Degree of Influence in District Strategy*

Variable	(1)	(2)	(3)	(4)
Firm Age	0.002 (0.002)	0.001 (0.002)	0.001 (0.002)	0.002 (0.002)
Firm Size				
100 + employees (Cat 3)	0.873 (0.308)***	0.391 (0.332)	0.503 (0.336)	0.487 (0.342)
10-99 employees (Cat 2)	0.382 (0.202)*	0.022 (0.218)	0.088 (0.220)	0.131 (0.222)
North Staffs District	0.267 (0.167)	0.292 (0.171)	0.263 (0.176)	0.270 (0.179)
Business Associations				
Business Association Active Member (Cat 3)		0.880 (0.247)***	0.546 (0.259)**	0.707 (0.264)***
Business Association Member (Cat 2)		0.417 (0.193)**	0.179 (0.202)	0.235 (0.205)
Support from Business Institutions		0.206 (0.1)**	0.192 (0.103)**	0.124 (0.106)
Participation in Development Initiatives				
Approached and Encouraged (Cat 3)			0.462 (0.209)**	0.445 (0.212)**
Approached (Cat 2)			-0.136 (0.216)	-0.092 (0.219)
Interest in District development initiatives				
Frequent interest (Cat 3)			0.829 (0.219)***	0.782 (0.221)***
Occasional Interest (Cat 2)			0.410 (0.219)**	0.495 (0.221)**
Shared Values				0.203 (0.100)**
District Ties				
High and regular local engagement (Cat 3)				0.738 (0.380)**
Medium and occasional local engagement (Cat 2)				0.173 (0.403)
Threshold (Cut-off) points	-0.504 (0.152)***	-0.342(0.192)*	-0.053(0.224)	0.612 (0.430)
	0.591(0.152)***	0.809(0.197)***	1.181(0.235)***	1.912 (0.445)***
	1.328 (0.169)***	1.604 (0.214)***	2.045 (0.258)***	2.816 (0.464)***
	1.625 (0.181)***	1.935 (0.226)***	2.419 (0.272)***	3.215 (0.474)***
	1.895 (0.191)***	2.240(0.241)***	2.773 (0.289)***	3.589 (0.487)***
	2.354 (0.236)***	2.757 (0.283)***	3.358 (0.334)***	4.218 (0.520)***
Nagelkerke	0.121	0.225	0.345	0.409
Cox and Snell	0.116	0.216	0.331	0.393
- 2 log likelihood (Intercept Only)	517.376	560.353	562.550	563.936
- 2 log likelihood (Final)	495.743	517.724	492.261	476.671
Chi-square χ^2	21.632 (4.df)***	42.629 (7 df)***	70.289*** (11 df)	87.266***(14 df)

Table 3: Ordered Probit: *Dependent Variable – Degree of Influence in District Strategy*

Variable	(1)	(2)	(3)	(4)
Firm Age	0.002 (0.002)	0.003 (0.002)	0.003 (0.002)	0.003 (0.002)
Firm Size				
100 + employees (Cat 3)	0.137 (0.339)	-0.012 (0.344)	-0.092 (0.348)	-0.228 (0.351)
10-99 employees (Cat 2)	-0.50 (0.223)	-0.083 (0.225)	-0.083 (0.225)	-0.104 (0.226)
North Staffs District	0.111 (0.18)	0.045 (0.182)	0.047 (0.185)	0.137 (0.188)
Business Associations				
Business Association Active Member (Cat 3)	1.166 (0.249)***	1.086 (0.252)***	1.127 (0.258)***	0.985 (0.264)***
Business Association Member (Cat 2)	0.503 (0.199)**	0.500 (0.204)**	0.531 (0.205)**	0.546 (0.206)**
Shared Values	0.272 (0.098) ***	0.212 (0.100)**	0.203 (0.100)**	0.169 (0.101)*
District Ties				
High and regular local engagement (Cat 3)	0.480 (0.379)	0.567 (0.381)	0.552 (0.381)	0.419 (0.384)
Medium and occasional local engagement (Cat 2)	0.026 (0.401)	0.057 (0.402)	0.071 (0.404)	-0.070 (0.407)
Participation in Specific District Initiatives				
Collective marketing and Trade Fairs				
High participation (Cat 3)	0.789 (0.267)***	0.474 (0.287)*	0.422 (0.295)	0.392 (0.297)
Medium participation (Cat 2)	0.741 (0.201)***	0.484 (0.238)**	0.376 (0.247)	0.260 (0.253)
District wide R&D facilities and Training				
High participation (Cat 3)		0.909 (0.274)***	0.813 (0.282)***	0.691 (0.286)**
Medium participation (Cat 2)		0.394 (0.250)	0.103 (0.292)	0.122 (0.294)
District Tourism				
High participation (Cat 3)			0.424 (0.253)*	0.197 (0.272)
Medium participation (Cat 2)			0.623 (0.368)*	0.103 (0.452)
Local Infrastructure				
High participation (Cat 3)				1.296 (0.390)***
Medium participation (Cat 2)				0.690 (0.314) **
Threshold (Cut-off) points	0.272 (0.401)	0.368 (0.401)	0.378 (0.402)	0.300 (0.403)
	1.570 (0.413)***	1.706 (0.414)***	1.736 (0.415)***	1.701 (0.417)***
	2.465 (0.429)***	2.647 (0.434)***	2.695 (0.436)***	2.716 (0.441)***
	2.825 (0.438)***	3.030(0.445)***	3.078 (0.447)***	3.132 (0.453)***
	3.163 (0.449)***	3.389 (0.457)***	3.438 (0.460)***	3.516 (0.467)***
	3.743 (0.480)***	3.986 (0.490)***	4.047 (0.493)***	4.149 (0.500)***

Nagelkerke	0.375	0.415	0.431	0.473
Cox and Snell	0.360	0.399	0.414	0.455
- 2 log likelihood (Intercept Only)	563.936	563.936	563.936	563.936
- 2 log likelihood (Final)	485.951	474.894	470.531	457.842
Chi-square χ^2	77.986***(11 df)	89.043***(13 df)	93.406*** (15 df)	106.10*** (17 df)

All Regressions include standard errors that are bootstrapped and clustered by firm. * indicates significance level (p-value) below 0.109, ** below 0.05 and **** below 0. 01

Variables	Appendix A: Survey Items and Variable Construction
Degree of Influence in District Strategic Issues	Categorical 7 point Likert scale ranging from 1 = No influence (we have no interest) to 7 = very high level of influence in the decision-making process.
Firm Age	Firm Age in Years
Firm Size	Category 3; Firms with 100+ employees Category 2: Firms with 10-99 employees Category 1 (Base); Firms with less than 10 employees
District Affiliation	Value = 1, if a firm is located within North Staffs district, 0 if located within BJQ
Business Association Membership	Category 3; Firms which are active members of at least one business association Category 2; Firms which are members of at least one business association Category 1 (Base); Firms which are not members of any business association
Support from Business Institutions	Construct variable using the following survey items: i). Accessed and Received Industry Information ii). Accessed Business and Legal Advice iii). Accessed support in relation to collective marketing initiatives (trade fairs etc) iv). Accessed public R&D and training facilities v). Accessed Technical Advice vi). Accessed trade journals and industry newsletters Mean Score (across all 6 items): 2.67, s.d = 1.31 Cronbach's alpha (α) = 0.93 *(Survey items based upon Tomlinson (2012) and utilising a 7 point Likert Scale, with 1 = no benefit and 7 = high benefit)*
Participation in Development Initiatives	Category 3; Firms which have been approached and encouraged to participate in local development initiatives Category 2; Firms which have been approached to participate in local development initiatives Category 1 (Base); Firms which have not been approached to participate in local development initiatives *(Based upon Sacchetti and Sugden. 2003)*
Interest in District development initiatives	Category 3; Firms which have frequently expressed an interest in local development initiatives (at industry event or meeting) Category 2; Firms which have occasionally expressed an interest in local development initiatives (at industry event or meeting) Category 1 (Base); Firms which have never expressed an interest in local development initiatives (at industry event or meeting) *(Based upon Sachetti and Sugden, 2003)*
District Ties	Category 3; Firms which have high and regular engagement with other actors within the district Category 2; Firms which have occasional engagement with other actors within the district Category 1 (Base); Firms which have little engagement with other actors within the district
Shared Values	Construct variable using the following survey items: i). You and the people in your firm share the same ambitions and vision as other firms in the district ii). You consider your firm's future is related to that of other firms in the district iiii). There is some kind of shared strategy or plan for the district] iv). People in your firm are encouraged and motivated to pursue the shared goals and strategy of the district Mean Score (across all 4 items): 3.95, s.d. = 1.21 Cronbach's alpha (α) = 0.79 *(Survey items based upon Tsai and Ghoshal (1998) and utilising a 7 point Likert Scale, with 1 = no benefit and 7 = high benefit)*

Participation in Specific District Initiatives	
a). Collective marketing and Trade Fairs	Category 3; Firms which have high level of participation in collective marketing initiatives Category 2; Firms which have a medium level of participation in in collective marketing initiatives Category 1 (Base); Firms which do not participate in in collective marketing initiatives
b). District wide R&D facilities and Training	Category 3; Firms which have high level of participation in R&D facilities and Training initiatives Category 2; Firms which have a medium level of participation in R&D facilities and Training initiatives Category 1 (Base); Firms which do not participate in in R&D facilities and Training initiatives
c). District Tourism	Category 3; Firms which have high level of participation in District tourism initiatives Category 2; Firms which have a medium level of participation in District tourism initiatives Category 1 (Base); Firms which do not participate in in District tourism initiatives
d). Local Infrastructure	Category 3; Firms which have high level of participation in local infrastructure initiatives Category 2; Firms which have a medium level of in local infrastructure initiatives Category 1 (Base); Firms which do not participate in local infrastructure initiatives

Appendix B: Survey responses as distributed by firm size

Firm Level of Influence	Firm Size (<10 employees)	Firm Size (10-99 employees)	Firm Size (100+ employees)
1 (None)	27	6	2
2	50	12	3
3	18	17	6
4	4	6	2
5	5	1	2
6	5	1	2
7 (High)	1	2	3
Business Association Membership			
Cat 1: Non-members	11	18	10
Cat 2: Members	45	19	6
Cat 3: Active Members	54	8	4
Participation in Development Initiatives			
Cat 1: Not Approached	32	17	7
Cat 2: Approached	24	11	5
Cat 3: Approached & Encouraged	54	17	8
Interest in Development Initiatives			
Cat 1: Firms which have never expressed an interest in local development	31	20	11
Cat 2: Firms which have occasionally expressed an interest in local development	42	10	3
Cat 3: Firms which have frequently expressed an interest	37	15	6
District Ties			
Cat 1: Firms which have little engagement with other actors within the district	81	30	14
Cat 2: Firms which have occasional engagement with other actors within the district	22	14	4
Cat 3: Firms which have high and regular	7	1	2

engagement with other actors within the district			

Marginal Effects (Model 1)

Variable	Pr(Y=1) dy/dx	Pr(Y=2) dy/dx	Pr(Y=3) dy/dx	Pr(Y=4) dy/dx	Pr(Y=5) dy/dx	Pr(Y=6) dy/dx	Pr(Y=7) dy/dx
Firm Age	-0.001	-0.0004	.0004	.0002	.0001	.0001	.00004
Firm Size							
100 + employees (Cat 3)	-0.085*	-0.107	0.065**	0.045	0.035	0.034	0.014
10-99 employees (Cat 2)	-0.026	-0.024	0.022	0.012	0.008	0.007	0.003
North Staffs District	-0.058	-0.048	0.046	0.024	0.0166	0.014	0.005
Business Associations							
Business Association Active Member (Cat 3)	-0.124***	-0.152**	0.091***	0.064**	0.051*	0.050*	0.021
Business Association Member (Cat 2)	-0.050	-0.042	0.0397	0.021	0.015	0.013	0.004
Support from Business Institutions	-0.027	-.0216	0.0216	0.011	0.008	0.006	0.002
Participation in Development Initiatives							
Approached and Encouraged (Cat 3)	-0.089**	-0.086*	0.0696**	0.0401*	0.029*	0.026	0.001
Approached (Cat 2)	0.021	0.015	-0.016	-0.008	-0.005	-0.005	-0.002
Interest in District development initiatives							
Frequent interest (Cat 3)	-0.151***	-0.152***	0.112***	0.069**	0.052**	0.049**	0.020
Occasional Interest (Cat 2)	-0.097**	-0.097**	0.076**	0.045**	0.033*	0.029	0.011
Shared Values	-0.044**	-0.035*	0.035*	0.0178*	0.0123*	0.010*	0.004
District Ties							
High and regular local engagement (Cat 3)	-0.188*	-0.083***	0.136*	0.058**	0.037*	0.030**	0.010
Medium and occasional local engagement (Cat 2)	-0.036	-0.032	0.029	0.0156	0.011	0.010	0.003

Marginal Effects (Model 2)

Variable	Pr(Y=1) dy/dx	Pr(Y=2) dy/dx	Pr(Y=3) dy/dx	Pr(Y=4) dy/dx	Pr(Y=5) dy/dx	Pr(Y=6) dy/dx	Pr(Y=7) dy/dx
Firm Age	-.0005	-.0006	.00060	.0003	.0002	.0001	.00003
Firm Size 100 + employees (Cat 3) 10-99 employees (Cat 2)	0.049 0.021	0.038 0.020	-0.048 -0.021	-0.018 -0.009	-0.011 -0.005	-0.008 -0.004	-0.002 -0.001
North Staffs District	-0.027	-0.027	0.0274	0.012	0.007	0.006	0.002
Business Associations Business Association Active Member (Cat 3) Business Association Member (Cat 2)	-0.140*** -0.010***	-0.237*** -0.113**	0.128*** 0.101**	0.090*** 0.048**	0.068** 0.031**	0.065** 0.025*	0.027 0.008
Shared Values	-0.033*	-0.033	0.034*	0.014	0.009	0.007	0.002
District Ties High and regular local engagement (Cat 3) Medium and occasional local engagement (Cat 2)	-0.0910 0.014	-0.069 0.0133	0.088 -0.014	0.033 -0.006	0.020 -0.004	0.015 -0.003	0.004 -0.001
Participation in Specific District Initiatives Collective marketing and Trade Fairs High participation (Cat 3) Medium participation (Cat 2)	-0.064 -0.048	-0.090 -0.054	0.068 0.050	0.036 0.023	0.024 0.015	0.02 0.011	0.007 0.004
District wide R&D facilities and Training High participation (Cat 3) Medium participation (Cat 2)	-0.102*** -0.023	-0.168** -0.025	0.102*** 0.024	0.064** 0.011	0.047* 0.007	0.042 0.005	0.016 0.002
District Tourism High participation (Cat 3) Medium participation (Cat 2)	-0.036 -0.020	-0.042 -0.021	0.037 0.020	0.018 0.009	0.011 0.006	0.009 0.005	0.003 0.001
Local Infrastructure High participation (Cat 3) Medium participation (Cat 2)	-0.122*** -0.109**	-0.332*** -0.161**	0.051 0.110***	0.107*** 0.063*	0.102** 0.044*	0.122** 0.038	0.074 0.014