Does membership of local Chambers of Commerce networks enhance rural SME performance?: An empirical analysis

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Does membership of local Chambers of Commerce networks enhance rural SME performance?: An empirical analysis

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Purpose: This paper aims to examine the relationship between being members of local Chambers of Commerce networks and rural SME performance by comparing business performance between rural SMEs that are members and non-members of local Chambers of Commerce networks. This paper also further explores difference in business growth plans between rural SMEs members and non-members.

Design/methodology/approach: The empirical analysis draws on cross-sectional data of 3,769 rural SMEs in England and Wales from the 2015 UK's Government Small Business Survey. Propensity Score Matching (PSM) is applied to control for selection bias and variations in business characteristics before comparing business performance, measured in terms of annual turnover, sale growth, and profitability, between rural SMEs that are members and non-members of local Chambers of Commerce networks.

Findings: Our results show that rural SME members of local Chambers of Commerce networks are more likely to grow their sales than non-members. However, they perform as good as non-members in terms of annual turnover and profitability. The results also emphasise that local Chambers of Commerce networks are crucial for rural SMEs to develop the skills of the workforce and leadership capability of managers, new product/service development, and new working practices. Therefore, to enhance rural SMEs' performance, tailoring the services of local Chambers of Commerce to support rural businesses' needs and encouraging rural SMEs to make use of business networks are recommended.

Originality/Value: This paper is the first study that explores the comparative analysis of business performance and growth plans between rural SMEs that are members and non-members of the local Chambers of Commerce networks. We provide an empirical evidence-based analysis to existing literature regarding the advantages of being local Chamber of Commerce memberships to enhance business performance in rural areas.

Keywords: Local Chamber of Commerce networks; Rural SMEs; Business performance; Business growth plans; Treatment Effect Analysis.

1. Introduction

A local Chamber of Commerce is a non-profit organisation, which offers to assist and support the needs of the members and provide relational benefits (Bennett, 1998). In countries such as UK, USA and several EU countries, the membership of Chambers of Commerce is voluntary basis and the Chambers of Commerce are situated around metropolitan areas where the largest clusters of business are located (Bennett, 2011). In the UK, there are 53 accredited Chambers of Commerce across the UK with a representative of over 70,000 businesses in all sectors, ranging from small start-ups to multinational companies (British Chamber of Commerce, 2021). Also, Heseltine (2012) reports that the majority of British Chamber members are small- and medium-size enterprises (SMEs) which are significant contributions to local economies. Typically, the Chambers of Commerce provide SMEs with business advice and the opportunity to meet with other local business owners and networks (Bennett and Robson, 1999; Bullough and Renko, 2013). They play a significant role in connecting local businesses and industries locally, nationally and internationally (Bennett *et al*., 2001, Sawang *et al*., 2016). Also, they are often seen as the voice and representative of local businesses as well as government lobbyist to help persuade businesses' needs (Bennett, 1999).

Rural SMEs often suffer disadvantages in agglomeration economies and spatial externalities (Malmberg *et al*., 2000) such as limited connections to potential customers and suppliers (Phillipson *et al*., 2019), difficulties to reach business support agencies (Smallbone *et al.,* 2003), and lower innovation stimulation (North and Smallbone, 2000) due to sparser population densities, geographical remoteness and the distance from urban centres where the business and commercial clusters are located (Phillipson *et al*., 2019). Also, rural areas are typically relevant to digital exclusion which can lead to difficulties in accessing business support/advice (Townsend *et al*., 2016). Therefore, to help rural businesses to overcome these disadvantages, they are encouraged to make use of external sources of support through business

support organisation such as the Federation of Small Businesses (FSB), trade and professional bodies, and so on (Pickernell *et al*., 2013; Mole *et al*., 2017). In particular, participating in the local Chambers of Commerce networks could potentially help to enhance business support/advice environments in rural areas, especially for those businesses who are looking at geographical based support organisations (Bennett *et al*., 2001), which then improve the business performance and local economy (Bennett and Ramsden, 2007). Although previous studies have shown that local Chambers of Commerce have created significant opportunities for economic development and local economy (Bennett and Ramsden, 2007; Smith *et al*., 2012; Newbery *et al*., 2015), to date, little attention has been paid to the effect of being local Chamber of Commerce membership on SME performance in rural areas, especially in the context of comparative analysis between rural SMEs who are members and non-members. Therefore, the research question we aim to answer is: "Does being members of local Chambers of Commerce networks enhance rural SMEs' performances?"

To answer this research question, we use cross-sectional data of 3,769 rural SMEs from the Longitudinal Small Business Survey (LSBS) for 2015 commissioned by the UK Department for Business, Energy and Industrial Strategy (BEIS). To compare business performance between rural SMEs with and without membership, Propensity Score Matching is applied to control for selection into being local Chamber of Commerce membership and for differences in business characteristics. This paper also further explores differences in business growth plans between SMEs in rural areas that are members and non-members. This allows to better understand how rural SMEs use these networks for their future plans in order to improve business performance.

To the best of our knowledge, this is the first paper that explores the comparative analysis of

business performance and growth plans between SMEs that are members and non-members of the local Chambers of Commerce networks in rural areas. Using the quantitative analysis and rich dataset, we provide an empirical evidence-based analysis to existing literature regarding the advantages of being local Chamber of Commerce memberships to enhance business performance and growth in rural areas. This empirical evidence should be beneficial to policymakers and business advice providers to help understand the needs of rural SMEs regarding the use of local Chambers of Commerce and to improve business support/advice environments in rural areas.

The remainder of the paper is organised as follows: Section 2 discusses the theoretical background. Section 3 reviews relevant literature. Section 4 briefly details secondary data and its descriptive statistics. Section 5 describes the econometric model used in this paper. Empirical results are reported in Section 6 and policy recommendations are discussed in Section 7. Section 8 concludes with further research directions.

2. Theoretical Background

Being a member of a local Chamber of Commerce provides SMEs with social and business connections and information and/or knowledge exchange among members (Brockmann and Lacho, 2015). The association with Chambers of Commerce can be seen as a way to increase social capital asset for the businesses (Schoonjans *et al.*, 2013). According to Bourdieu and Wacquant (1992, p. 119) "*social capital is the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition*". Social capital can be distinguished between personal relations among actors and the structural form of relations (Coleman, 1990). The structural view is widely adopted in the social capital study (Moran,

2005).

Chambers of Commerce provide structural relations among their members, to bridge the missing connection, which is called a structural hole (Burt, 1992, 2004). The structural hole theory can be applied to individuals, SMEs or other entities that engage social networks (Burt, 1992). This is not about the strength of the network but rather focuses on a lack of a direct contact between two or more entities. When there is a need or a plan to grow businesses or connect with relevant business clusters, SMEs may look for existing structural holes to fill in the current or potential social or knowledge gaps. Therefore, firms may join the Chambers of Commerce to recover from the lack of business exposure and grow revenues (Webster Bank, 2020). These missing gaps can be filled by the local Chambers of Commerce (Noel and Luckett, 2014). The chambers act as catalyst to help rural SMEs to enhance their businesses capabilities and resources accessibility which contribute to effective business solutions and collaborative problem solving through the network (Bennett, 1998; Tiwasing, 2021). Following the Resource-Based View (RBV) perspective, resources can be defined as "*bundles of tangible and intangible assets, including a firm's management skills, its organisational processes and routines, and the information and knowledge it controls that can be used by firms to help choose and implement strategies*" (Barney et al., 2011, p. 1300). Alternatively, firms may join the Chambers of Commerce as an opportunity (rather than necessity of business recovery) because they see accumulative benefits such as business exposure, knowledge exchange which may be useful (Webster Bank, 2020). Thus, through the association network, rural SMEs could potentially gain tangible and intangible resources through association with Chambers of Commerce.

Formal agencies such as Chambers of Commerce are considered as key enablers of innovation,

mutual learning and productivity change (Putnam, 2000). They can also help provide a variety of support services which aim at enhancing firms' knowledge capacities, resource controls, and marketing activities (Oparaocha, 2015). The formal agencies can help establishing relevant network, building and managing relationships beyond market transactions (Huggins *et al*., 2018). As well, they facilitate access to external knowledge, business support and finance, which are usually a key factor for the creation and growth of new businesses (Rajan and Zingales, 1998; Li and Zahra, 2012). The network of social interaction can also enhance network trust and encourage entrepreneurship and innovation activities, which lead to positive business performance (Anokhin and Schulze, 2009; Maioli *et al*., 2020). Thus, the association with Chambers of Commerce, which are formal agencies, can be seen as bridging network-members (Putnam and Goss, 2002), which may come from different geographical locations and business sectors. Then, being part of these formal agency networks could potentially address geographically uneven in the knowledge creation and help lower business uncertainty and improve business support environments in rural areas (Huggins and Thompson, 2014; Huggins *et al*., 2018).

In terms of locational perspectives, the British Chambers of Commerce have been long established with 53 local chambers across 11 regions. Mostly, these chambers are evolved around major cities or metropolitan areas, and some are in the rural areas. The business model for the Chambers of Commerce can be described as "*a business membership whose association with a chamber is to provide satisfactory service and assistance in the form of benefits and at a price they are willing to pay for membership*" (Noel and Luckett, 2014, p. 27). The interesting difference between metropolitan and rural Chambers of Commerce is on their mission-rural chambers which are more focus on creating a better community for a better business environment, rather than focusing on business performance (Brockmann and Lacho,

2015). However, little if any empirical research has been conducted to explore the perceived benefits among members in rural areas. In response to this gap of knowledge, this study therefore explores the comparative analysis of business performances between rural SMEs that access and do not access the local Chambers of Commerce networks. The findings of this study are important because the perception of firm benefits can retain the existing and promote new members of local business associations and help improve business associations' services too. Inversely, joining the local Chambers of Chamber networks can enhance rural firm survival and address the locality constraints in term of accessing resources.

3. Literature Review and Hypothesis Development

Chambers of Commerce are an important non-profit organisation for SMEs' community, yet very handful research has been on them. There are two main themes studying on chambers of commerce: (a) the study is around the role or volunteer Chambers of Commerce board members (Dawley et al., 2005) and (b) the role of Chambers of Commerce in helping with the survival of SMEs (Lacho et al., 2006), the current focal study focal is the role of chambers. The Chambers of Commerce are typically considered as formal business networks since they are mainly linked to business organisation and business support agencies (Fuller-Love, 2009). Considering such forms of the formal business networks, the local Chambers of Commerce networks are made up of local-business people to provide networking opportunities and advice for SMEs and help improve local economy (Smith et al., 2012).

Previous researchers have emphasised the importance of Chambers of Commerce and local business associations for business networking, including level of membership and the role of association services, and economic development (Keeble et al., 1999; Phillipson et al., 2002; Phillipson et al., 2006; Smith et al., 2012; Newbery et al., 2013). However, only a few studies

have showed the benefits of using the services of the local Chambers of Commerce networks to improve business performance and growth. Using data of British SMEs, Bennett and Ramsden (2007) report that SMEs mainly use advice from local business clubs and Chambers of Commerce to increase business performance in terms of turnover and profitability. Also, Lacho and Brockman (2015) reveal than small businesses that are members of local Chambers of Commerce in the US benefit from the association's services and events and hence improved performance and increased a chance of business success. Likewise, Tiwasing *et al*. (2020) also found the positive impact of being members of local Chambers of Commerce networks on business performance and productivity for service businesses in England. Although the Chambers of Commerce are seen as a key player of local business networks and communities, their ability to develop and support such networks is highly variable in practice due to types of businesses and geographical location (Phillipson *et al*., 2006; Newbery *et al*., 2013).

In a rural context, Bosworth (2012) emphasises that rural business owners traditionally demonstrate high levels of commitment to their local community and local association networks compared to those in urban areas. However, Smallbone *et al*. (2003) report that the dispersed geography of business in rural areas presents difficulties to reach business support agencies and their services. Newbery *et al*. (2013) also point out that rural businesses are not willing to join the rural-based associations, including the Chambers of Commerce since they may find it difficult to define common purposes and shared interests from the associations because of a wider range of sectors. Subsequently, this suggests that rural SMEs may be distanced from the services of local Chambers of Commerce and potentially possess lower performance than those who use the services. To add an evidence-based analysis to debates regarding the advantages of being local Chamber of Commerce memberships for rural SMEs,

focusing on the actual business performance (annual turnover and profitability), our hypotheses are:

Hypothesis 1: Rural SMEs that are members of local Chambers of Commerce networks are more likely to have higher level of annual turnover than to non-members.

Hypothesis 2: Rural SMEs that are members of local Chambers of Commerce networks are more likely to generate more profit than non-members.

The literature on the concept of business performance is extensive (Perreault *et al*., 2007). However, the aim of this study is to extract the key concept of business performance to differentiate rural SMEs who have a membership versus no membership with a local Chamber of Commerce network. Previous studies mainly assess the impact of Chambers of Commerce on the actual performances such as turnover, profitability and sales growth (Bennett *et al*., 2001; Bennett and Ramsden, 2007; Maioli *et al*., 2020). As mentioned prior in the theoretical background section, through an association with local Chambers of Commerce, rural SMEs can enhance social assets, both tangible and intangible. Therefore, as well as focusing on the actual business performance, we also consider the perceived performance, which is defined as small business growth planning and growth expectation (Bennett and Ramsden, 2007). For example, Trau (1996) points out that improving business growth is significantly associated with owners/managers' management behaviour and expectation to maximise sales revenue. Using data from Swedish small businesses, Delmar and Wiklund (2008) reveal that managers' growth motivation has a positive impact on firm performance measured in terms of sales and employment growth. Also, following the strategic management perspectives of small business

growth, Dobbs and Hamilton (2007) identify that the key business plans determining firm growth are staff recruitment and development, new product/service/market development, and capital investment. Therefore, participating in local Chambers of Commerce networks can be linked with growth expectations of businesses and their business plans as reasons why firms grow. Our next hypotheses are set as:

Hypothesis 3: Rural SMEs that are members of local Chambers of Commerce networks are more likely to aim to grow sales than non-members.

Hypothesis 4: Rural SMEs that are members of local Chambers of Commerce networks are more likely to have business growth plans compared to non-members.

4. Secondary Data and Descriptive Statistics

In this paper, we use data from the Longitudinal Small Business Survey (LSBS) for 2015, which is a large-scale telephone survey of small business owners and managers across the UK. Although the LSBS is longitudinal data, the information on the local Chamber of Commerce network was only collected in the year 2015 and was only collected from responses in England and Wales. Also, the rural-urban classifications of Scotland and Northern Ireland are different from England and Wales. Therefore, in this analysis we only use the LSBS-2015 data to examine the effects of local business association networks on rural SME performance in England and Wales. In 2015, 15,501 SMEs were collected across the UK, of which 89.7% (13,876) were in England and Wales. Using the information on postcode, approximately 27% (3,769) are located in rural areas and only 16.4% of rural SMEs answered that they are members of local Chambers of Commerce networks.

Table I reports the descriptive statistics of the key variables used in the analysis. Rural SMEs are divided into two groups: members and non-members of local Chambers of Commerce networks. We use the Chi-square test to consider the differences in descriptive statistics of each variables between members and non-members. If $p<0.05$, there is significant difference between two groups. For instance, more rural SMEs that are members of local Chambers of Commerce networks than non-members operate their businesses in transport, wholesale and retail, accommodation and food service sectors with 31.6% compared to 21.6%, respectively. Also, older SMEs in rural areas are more likely to be members than non-members of local Chambers of Commerce networks with 64.9% compared to 58.6%, respectively.

Table I about here

4.1 Independent Variables

In Table I, in this analysis we focus on two types of the independent variables that are business characteristics and business capabilities. For business characteristics, we include business sectors in the models since rural SMEs that are members and non-member can operate their businesses in different sectors. Following Phillipson *et al*. (2019), we group business sectors into four broad government sectors due to the balancing test. Since rural SMEs can be located in different locations, we also control for the effect of regions in the model (Maioli *et al*., 2020; Tiwasing *et al*., 2020). In addition, business size can influence the decision to be members of local Chambers of Commerce networks and business performance. Thus, to control for differences in business characteristics, we include this variable in the model by dividing into micro, small and medium businesses (Phillipson *et al*., 2019; Maioli, *et al*., 2020; Tiwasing *et al*., 2020). Additionally, Carter *et al*. (2013) and Maioli *et al*. (2020) report that women-led businesses are often found to register lower SME performance than men-led businesses.

Therefore, we include this variable to control for the effect of gender on business performance and being local business association membership. Moreover, family businesses are controlled for business types in the analysis since they are mainly located in rural areas (Phillipson *et al*., 2002; Tiwasing, 2021). Using the information from the UK legal register, we also include sole proprietorship to control for business types in the model (Tiwasing *et al*., 2020). Also, age of business is used to control for business characteristic since this variable is significantly relevant to skills and business development (Tiwasing, 2021).

For business behaviour/capability, since the information on the interaction between members within the local Chambers of Commerce networks is not available in the dataset, we include the information on use of e-commerce, using Internet to access government services, and seeking external information or advice to improve their businesses, and having strong capability to innovate to help identify the behaviour of rural businesses that are members of these local association networks. We include these variables since SMEs that are ambitious are more likely to participate in local Chamber of Commerce networks (Noel and Luckett, 2014; Webster Bank, 2020). These variables are significantly associated with the decisions to join the business networks (Tiwasing, 2021) and business performance and growth (Maioli *et al*., 2020; Tiwasing *et al*., 2020).

4.2 Dependent Variables

We only consider three dimensions of business performance which are related to local Chambers of Commerce: annual turnover, profitability and sales growth (Bennett and Ramsden, 2007; Maioli *et al*, 2020). In the LSBS 2015, the information on the annual turnover in the past 12 months was reported for rural SMEs across England and Wales. Also, they were asked whether or not they generated a profit or surplus when taking into account all sources of

income in the last financial year. In terms of sales growth expectation, SMEs were asked whether they aim to grow their sales in the next three years or not. Although this variable was not recorded as an actual business performance, it can capture the measure of business ambition, which is significantly associated with business growth (Bennett and Ramsden, 2007; Delmar and Wiklund, 2008; Maioli *et al.*, 2020; Tiwasing, 2021).

In Table I, differences in business performance are reported for both rural SME members and non-members of local Chambers of Commerce networks. For annual turnover, we use Welch's t-test since this variable is continuous and has unequal sample size. Rural SMEs with membership tend to report a higher mean of annual turnover than those without membership with £2,997,628 compared to £1,666,695, respectively. Also, using Chi-square test, rural SMEs with the local association network membership are more likely to have reported that they aim to grow sales than non-membership. However, there is no statistically significant difference in profitability between rural SMEs with and without the local association network membership. Yet, to produce a robust analysis for the comparison of SME performance between rural SMEs that are members and non-members, we therefore need to control for differences in businesses' characteristics in the analysis too. For this, we apply Propensity Score Matching (PSM) which is explained in the following section.

5. Propensity Score Matching (PSM)

This study aims to understand how membership of local Chambers of Commerce networks can improve SME performance in rural areas. To understand this, we look at the difference between the outcomes of two events, being members and non-members, for the same firm and time period. In fact, both events cannot simultaneously occur within the same firm. Rural SMEs that are members of local Chambers of Commerce networks are likely to have different

characteristics to groups of businesses that are non-members. Therefore, direct comparisons between the two groups may suffer from selection bias. To control for this issue, we apply Propensity Score Matching to produce the exact matched-pair comparisons by identifying a control group of businesses with the same characteristics that match the event group (Foreman-Peck, 2013; Phillipson *et al*., 2019).

PSM is widely used to estimate causal effects in observational studies and minimise selection bias by matching cases to controls based on a set of baseline covariates. (Rosenbaum and Rubin, 1983). Typically, it is used when we would like to compare the outcomes between a group of subjects receive a treatment and a control group (that did not receive the treatment). This technique allows us to compare the outcome of two identical sets of firms that have similar characteristics on the observables. Then, we can evaluate the effect of this treatment event on the outcome. In our case, we utilise rural firms with local Chamber of Commerce network membership as the treated group and those without membership as the control group.

PSM is a two-stage approach. The first stage is to compute a valid propensity score for each unit of observation. This process involves balancing a large number of observed characteristics (covariates) between the treated and control groups by compressing the variables into a single score (propensity score). Then, the second stage is to compare the outcome indicators (business performance) of individual firms with similar (matched) propensity scores across the treated and control groups. In practice, the propensity score is estimated using a logit model which takes the form:

$$PS(X_i) = Pr(D_i = 1|\mathbf{X_i}) = \beta_0 + \beta_1\mathbf{X_i} \qquad (1)$$

where PS(X_i) is propensity score of ith firm, Pr(D_i=1) is the probability of ith firm that accesses local Chamber of Commerce (treated group): D=1 when SMEs participate in these local networks, i is the number of individuals; i=1,…, n; X is a set of explanatory variables that need to be controlled for before comparing the outcomes such as age of business, business sectors, women-led business, business behaviour, and so on (see Table I).

On the basis of the propensity score, the matching process can be conducted using different approaches such as nearest-neighbour matching and caliper matching (Caliendo and Kopeinig 2008), and we apply different approaches to check for robustness since we have both continuous and binary outcomes. In assessing matching quality, a balancing test should be satisfied to ensure that there are no significant differences on covariate means between the treatment and control (Dehejia and Wahba 2002). If balancing tests are passed, the average treatment effect for the treated (ATET) on business performance between members (treated group) and non-members (control group) is then calculated:

$$ATET = E[Y_{1i} - Y_{0i} \mid D_i = 1]$$

$$= E\{E[Y_{1i} - Y_{0i} \mid D_i = 1, Pr(\mathbf{X}_i)]\} \qquad (2)$$

where Y_{1i} and Y_{0i} represent business performance for i^{th} rural SMEs that are members and non-members of local Chambers of Commerce networks, respectively. Here, business performance is measured in terms of annual turnover, profitability, and sales growth. For business growth plans, we use Crosstab analysis to identify the association between being members and non-members of the local networks and growth plans. This allows to capture differences in business plans between members and non-members.

In this context, PSM is preferred to conventional a binary (probit or logit) regression models since evidence indicates that PSM is more robust and precise and has greater power than logistic regression when comparing between two observable groups (Cepeda *et al*., 2003). Also, PSM is an effective technique to reduce selection bias (Phillipson *et al*., 2019). Additionally, PSM is a two-step approach which allows us to control for variations in observations' characteristics and to identify key characteristics of rural SMEs that participate in these local association networks before comparing the outcomes.

6. Empirical Results

Table II details the results of logistic model concerning the probability of rural SMEs that are members of local Chambers of Commerce networks (Model I). Model I appears to perform reasonably well, and the likelihood ratio (LR) is significant, indicating that there is no relationship between the log of odds of being local Chamber of Commerce membership and the set of independent variables. We also perform the Wald test, which is statistically significant. This identifies that the estimated parameters of the chosen covariates in the propensity score model are suitable. Also, we found that the highest correlation of Model I is 0.40, which is the correlation between AGE05 and AGE20. Therefore, multicollinearity is not an issue for this analysis.

Table II about here

For Model I, the results reveal that rural SMEs operate their businesses in business service sector (SERVICE) and transport, retail and food service sectors (TRANST) tend to be members of local Chambers of Commerce networks. Also, all types of business size in rural areas

(MICRO, SMALL, and MEDIUM) are more likely to participate in local Chamber of Commerce networks. Likewise, older firms (aged 20 years and over) tend to be members of local Chambers of Commerce networks. This suggests that local Chamber of Commerce is often used as a business support provider by more traditional (older established) businesses (Bennett, 1999; Bennett *et al*., 2001). The result also shows that rural SMEs that use Internet to access government services (GOVT) are more likely to participate in local Chambers of Commerce networks. Since the government and non-government services have largely moved to online platforms, Internet connectivity and digital infrastructure are, therefore, important for businesses in rural areas in accessing these services (Townsend *et al*., 2016). Also, rural SMEs who use e-commerce (ECOMM) tend to be part of local Chambers of Commerce networks. Markley *et al*. (2007) found that Chambers of Commerce can play a vital role in helping rural SMEs in the US to develop their web represent and e-commerce strategies.

Considering the business performance (Table III), there are no significant differences in variance ratio for Model II, III and IV, indicating that the balancing test is acceptable. The analysis also estimates ATET using three matching techniques to check for robustness, which they are similar between three techniques. For Model II, the results show that rural SMEs that are members of local Chambers of Commerce networks tend to have higher level of sales growth (SALE) than non-members. However, for Model III and IV, there are no significant differences in annual turnover (TURN) and profitability (PROFIT) between the members and non-members. This indicates that rural SMEs with membership are just as likely to have similar turnover and level of profit as their counterparts. This suggests that as well as encouraging rural SMEs to expand their sales, local Chambers of Commerce should focus on how to help businesses in shaping and developing their long-term business performance (e.g., turnover, profitability etc.). Otherwise, the failures of business performance development are likely to

turn rural SMEs away from the services of local business associations and their networking activities (Newbery *et al*., 2016). Additionally, Brockmann and Lacho (2015) also point out that rural businesses may not particularly use the local Chamber of Commerce services for business performance improvements since their results show that rural SMEs use these services to boost social value and community benefits.

Table III about here

We also explore the differences in growth plans in the next three years between members and non-members of local Chambers of Commerce networks among rural SMEs. In Table IV, rural SMEs with local Chamber of Commerce network membership (62.2%) are more likely to increase the skills of the workforce than those that do not participate in these networks (43.9%) ($\chi^2_{1, 3,698}$ = 42.53: p<0.05). Also, more rural SMEs that are members of the local Chambers of Commerce networks than non-members plan to increase leadership capability of managers with 35.5% compared to 21.5%, respectively ($\chi^2_{1, 3,698}$ = 34.93: p<0.05). In addition, rural SMEs with the network membership are more likely to have planned to develop and launch new products/services ($\chi^2_{1, 3,698}$ = 15.32: p<0.05) and introduce new working practices than their counterparts ($\chi^2_{1, 3,698}$ = 39.84: p<0.05). However, the result reveal that capital investment (premises, machinery etc.) is not statistically associated with being members of these local networks ($\chi^2_{1, 3,698}$=1.809: p>0.05). Therefore, the results suggest that rural SMEs mainly use the services of local Chambers of Commerce for developing the skills of the workforce, improving leadership capability, and enhancing innovation (both products and processes) capability.

Table IV about here

7. Discussion and Implications

In this section, we discuss key policy recommendations and implications related to our key results. First, the result confirms that being local Chamber of Commerce network membership is correlated with sales growth. Our result also reveals that rural SMEs that have strong innovation capability are more likely to choose local Chambers of Commerce as one of their business networks. Thomas *et al*. (2004) report that SMEs in South Wales recognise that local Chambers of Commerce are the key actor to drive the local innovation support network by providing basic consultancy and knowledge to business growth. Our study provides the inferential statistics between being member of local Chambers of Commerce and business growth and looks at this relationship at a single point in time. To untangle the relationship between local Chamber of Commerce participation and business performances, longitudinal data could be employed to capture performance before and after joining the local Chambers of Commerce. Nonetheless, rural SMEs should be encouraged to participate in these local business association networks to gain essential knowledge for expanding sales and strengthen business linkages and networks in rural areas. However, we found the insignificant impact of being membership on turnover and profitability. Thus, local Chambers of Commerce may need to support rural firms with wider range of business goals and provide their support beyond considerations of sales expansion to include stability and long-term business development (Bennett *et al*., 2001; Phillipson *et al*., 2002).

In addition, rural SMEs mainly consider the local Chambers of Commerce as key actors to help improve social benefits in their communities (Newbery *et al*., 2015). Such firms may not focus on business performance improvements and they do not know how to level up their performance (Phillipson *et al*., 2002). Thus, firms may not be keen to participate in the local

Chambers of Commerce networks. They may then lack a direct contact or tie with these business associations, leading to knowledge gaps or structural holes. However, structural holes can be seen as an opportunity for entrepreneurial individuals or firms to broker new connections (Burt, 2004). Therefore, when the social tie is developed between firms and local business associations, the local Chambers of Commerce can act as key mechanisms for stimulating inter-firm cooperation to help enhance economic development and business survival in rural areas.

Next, the results show that the sectors matter for the participation in local Chambers of Commerce networks in rural areas. Rural SMEs operating in the business service, wholesale/retail, transport and storage, and food service and accommodation sectors tend to be part of local Chambers of Commerce networks. Therefore, the Chambers of Commerce may need to engage with these businesses at their own level, to demonstrate the clear benefits of support to tailor their services to fit in with businesses' needs and future opportunities as well as locational constraints. More significantly, the analysis shows the insignificant results of the primary sectors, which is the highly embedded sector in rural areas. This indicates that rural SMEs in these sectors may not be interested in participating in these local networks due to lack of growth potential (Phillipson *et al*., 2002) and lack of specific business support needs (Newbery *et al*., 2015). Though, the local business associations cannot ignore these businesses as they significantly contribute to the economic and social cohesion of a rural locality. Therefore, rather than focusing on businesses that are already familiar with, business support should be opened up to a wider spectrum of rural SMEs' needs including both growth and non-growth oriented firms.

Finally, the results highlight the importance of Internet and digital infrastructure in rural areas. Therefore, improving digital infrastructure and broadband connectivity can help rural SMEs to better reach business support, especially online services (Townsend *et al*., 2016), and hence improved business performance (Tiwasing, 2021). This could also help rural SMEs, especially businesses located in "hard-to-reach" areas to overcome the rural-urban digital divide and geographical remoteness. However, infrastructure improvements alone are insufficient since rural SMEs tend to be older firms and have limited skills and knowledge regarding digital technology (Phillipson *et al*., 2002; Townsend *et al*., 2016). This draws attention to both digital investment and skills development. Thus, local Chambers of Commerce should provide business support programmes or services for rural SMEs to incorporate practical advice on how best to use digital infrastructure to obtain essential information, identify potential source of market intelligence and opportunities, and stimulate business collaboration. The support should also include e-commerce activities to help SMEs in rural areas to better understand the opportunities and challenges of online retail activities in the digital era and during the COVID crisis (Tiwasing, 2021).

This paper also generates some key contributions to knowledge. Firstly, this paper is the first that examines the impact that membership of local Chamber of Commerce networks on rural business performance. The paper unpacks the relationships between being local Chamber of Commerce membership and business performance, offering lessons for rural SMEs to boost their business performance and growth through participating in local business association networks. Secondly, since empirical studies related to the importance of local Chamber of Commerce networks for rural SMEs are limited, we therefore use a large representative sample of the LSBS 2015 dataset to provide a comprehensive evidence-based analysis to existing literature. Finally, we introduce the PSM technique for the comparative analysis between rural

SMEs with and without the local Chamber of Commerce membership. This technique is effective in addressing selection bias in observational studies when comparing between two study groups. This enables a more nuanced understanding of how local association network membership may influence different implications for business performance improvement in rural areas.

8. Conclusion and Future Research Directions

This paper aims to provide the evidence-based analysis to contribute to debates regarding the benefits of being local business association memberships on business performance in rural areas. This current study contributes to the current knowledge by empirically examining the comparative analysis of rural SME performance, measured in terms of sales growth, annual turnover, and profitability between being members and non-members of local Chamber of Commerce networks. Using the PSM model, the key findings show that rural SMEs that are members of local Chamber of Commerce networks tend to have higher level of sales growth expectation than non-members, which support Hypothesis 1. The results also confirm that rural SMEs with membership are more likely to have planned for business growth than non-members, which support Hypothesis 4. Therefore, being a member of local Chamber of Comember networks can help growth-planning for SMEs in rural areas.

However, there are no statistically significant differences in annual turnover and profitability between members and non-members, which do not support Hypothesis 2 and Hypothesis 3. This indicates that rural SMEs with local Chamber of Commerce membership perform as good as non-members in terms of turnover and profit generation. Overall, the results partly support our hypotheses. Therefore, tailoring the services of the Chambers of Commerce to fit rural SMEs' needs and encouraging rural businesses to make use of external business support and

networks are recommended. In particular, since our results emphasise the importance of digital services and online retail activities, these services should also provide digital support and accessible resources for rural SMEs, especially during the COVID-19 pandemic where several public and private services have now moved to online platforms. This paper also provides implications for practice by unpacking the relationships between local Chamber of Commerce membership and business performance, offering lessons for rural SME owners to boost their business performance through the local business association networks.

This paper highlights some avenues for future research. Firstly, since this paper uses quantitative analysis, interviewing management-level personnel is recommended to gain deeper understandings of how rural SMEs participate in local business association networks, particularly local chambers of commerce to enhance their business performance in the real business setting. The relationship then could be examined that firms with strategic growth orientation may join a local business network more than firms without the growth orientation. Secondly, future research should explore the relationship of being members of specific local Chambers of Commerce and business performance in different locations (regions/sub-regions) to understand their activities, networks, strategic plans, and interactions with local businesses in different areas. Also, future research would benefit from considering the impact of geographically based accountancy firms as trusted local advisors. Next, future research should also consider the assessment of businesses' satisfaction and needs from different sectors regarding the services of a local Chamber of Commerce. Further, it would also be interesting for future research to explore the role of Chambers of Commerce during the COVID-19 pandemic and aftermath since the LSBS 2015 was collected before the COVID crisis. It would be worthwhile to examine whether the post pandemic may drive more rural SMEs to join the local Chambers of Commerce. It could be a case that firms may view joining this network is

a way for their business recovery.   Finally, the Chambers of Commerce are one of the significant networks for rural SMEs, the future research may further examine to role of different networks such as small business advisory, technology diffusion agencies, and trade and professional bodies to shed further light on the relationship between business network and rural SMEs' performance.

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Table I Definition of variables and Descriptive Statistics

Variable	Definition	Rural SMEs		Chi-Square (χ2): Value (df)
		Member	Non-member	
Dependent				
TURN	Annual turnover (continuous)	£2,997,628.6	£1,666,695.8	24.28(1)**[a]
SALE	1=if the firm aims to grow sales in the next three years; 0=otherwise	77.9%	61.5%	60.48(1)**
PROFIT	1=if the firm generated a profit or surplus in the last financial year; 0=otherwise	86.6%	85.2%	0.84(1)
Explanatory				
PRIM	1=if the firm operates in primary, production and construction sector; 0=otherwise	24.4%	31.5%	12.51(1)**
TRANST	1=if the firm operates in transport, wholesale/retail and food service sectors; 0=otherwise	31.7%	26.1%	8.26(1)**
SERVICE	1=if the firm operates in business service sector; 0=otherwise	28.1%	24.8%	2.90(1)
MICRO	1=if the firm has 1-10 employees; 0=otherwise	25.2%	30.2%	6.26(1)**
SMALL	1=if the firm has 11-49 employees; 0=otherwise	33.9%	22.0%	40.69(1)**
MEDIUM	1=the firm has 50-249 employees; 0=otherwise	27.1%	12.7%	84.87(1)**
AGE05	1=the firm ages between 0 - 5 years; 0=otherwise	8.4%	10.2%	1.85(1)**
AGE20	1=the firm ages 20 years and more; 0=otherwise	64.9%	58.6%	8.52(1)**
WOMEN	1=the firm is a women-led business; 0=otherwise	20.0%	20.5%	0.06(1)
FAMILY	1=the firm is a family owned business; 0=otherwise	70.2%	77.5%	15.32(1)**
SUPPORT	1=if the firm has used information or advice in the last 12 months; 0=otherwise	7.1%	19.1%	52.65(1)**
ECOMM	1=if the firm directly sales goods or services (i.e. bookings) through e-commerce; 0=otherwise	38.8%	28.2%	27.50(1)**
FINANCE	1=the firm has tried to obtain external finance in the last 12 months; 0=otherwise	23.7%	18.9%	7.02(1)**

INNOV	1=the firm has strong capability for developing and introducing new products or services; 0=otherwise	66.8%	58.5%	14.15(1)**
GOVT	1=the firm use Internet to access Government services; 0=otherwise	87.6%	80.5%	16.74(1)**
EMID	1=the firm is located in East Midlands; 0=otherwise	11.0%	10.3%	0.23(1)
EASTE	1=the firm is located in East of England; 0=otherwise	15.3%	16.7%	0.68(1)
NEAST	1=the firm is located in North East; 0=otherwise	3.1%	2.9%	0.04(1)
NWEST	1=the firm is located in North West; 0=otherwise	7.3%	6.6%	0.41(1)
SEAST	1=the firm is located in South East; 0=otherwise	18.3%	20.6%	1.71(1)
SWEST	1=the firm is located in South West; 0=otherwise	21.8%	20.9%	0.23(1)
WMID	1=the firm is located in West Midlands; 0=otherwise	10.8%	8.3%	4.21(1)**
Y&H	1=the firm is located in Yorkshire and the Humber; 0=otherwise	6.6%	7.8%	1.08(1)
WALES	1=the firm is located in Wales; 0=otherwise	5.7%	5.7%	0.003(1)

Note: ** is significance at 5%, df is degree of freedom,

[a] Welch t test is applied to test differences in turnover since variances between the member and non-member groups are unequal.

Table II Results of Logit Model

Local Chamber of Commerce membership (treatment)	Model I
	Coefficient (S.E)
PRIM	0.058 (0.164)
TRANST	0.319** (0.158)
SERVICE	0.464*** (0.164)
MICRO	0.754*** (0.157)
SMALL	1.283*** (0.158)
MEDIUM	1.571*** (0.172)
AGE05	0.015 (0.209)
AGE20	0.204* (0.113)
FAMILY	-0.074 (0.112)
WOMEN	0.037 (0.127)
SUPPORT	0.068 (0.102)
ECOMM	0.338*** (0.075)
GOVT	0.275** (0.147)
FINANCE	0.073 (0.122)
INNOV	0.247** (0.103)
EMID	-0.045 (1.094)
EASTE	-0.173 (1.092)
NEAST	-0.063 (1.118)
NWEST	0.005 (1.101)
SEAST	-0.207 (1.090)
SWEST	-0.060 (1.089)
WMID	0.064 (1.095)
Y&H	-0.237 (1.099)
WALES	-0.127 (1.103)
Constant	-3.502*** (1.118)
Observation	**3,193**
Wald chi2(24)	**212.96**
Prob > chi2	**0.000**

Correctly classified (%)	82.34

Notes: *, **, *** denote significance at 10%, 5% and 1%, and SE is robust standard errors

Table III Results of Propensity Score Matching

Matching technique	Model II (SALE)	Model III (TURN)	Model IV (PROFIT)
	ATET (SE)	ATET (SE)	ATET (SE)
PSM (1-to1)	0.045** (0.025)	158,693.1 (413040)	-0.021 (0.020)
Nearest Neighbour (3)	0.054** (0.022)	314,433.3 (318983.6)	-0.018 (0.018)
Caliper(0.021)[a]	0.049** (0.024)	229,402.9 (403112.7)	-0.023 (0.017)
Observations			
Raw	**3,193**	**2,792**	**3,012**
Match	**1,122**	**1,034**	**1,068**
Variance ratio[b]	**No significant difference**	**No significant difference**	**No significant difference**

Notes: ** is significant at 5%.

SE is robust standard error, and ATET is average treatment effect on the treated.

[a]The width of Caliper equals to 0.2 of the standard deviation of the logit of the propensity score.

[b]The results of variance ratio are available upon request.

Table IV Growth plans for the next three years by rural SMEs

Plans over next three years	% of Family businesses		Chi-Square (χ2) Value (df)
	Member	Non-member	
Increasing the skills of the workforce	62.2%	43.9%	42.525(1)**
Increasing leadership capability of managers	35.5%	21.5%	34.934(1)**
Capital investment (premises, machinery etc.)	33.8%	30.3%	1.809(1)
Developing and launching new products/services	44.2%	33.7%	15.319(1)**
Introducing new working practices	47.2%	30.6%	39.839(1)**
None of these	25.7%	36.9%	17.319(1)**

Note: ** is significance at 5%, df is degree of freedom,

Weighted percentages are reported.

Weighting is applied to deal with the over-representation of larger SMEs in the sample and under-representation of micro-businesses.