RAKE Final Report: "Entrepreneurship Scholars don't know about Entrepreneurship, Entrepreneurs Do"

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1. Executive Summary

Despite evidence that engaged entrepreneurship scholarship is valuable to firms (Rosli *et al.*, 2018; Dada and Fogg, 2016), engagement by the entrepreneurship community with enterprise and entrepreneurship scholars and their scholarship is limited (e.g. Frank and Landström, 2015; Zahra and Wright, 2011; Hamet and Maurer, 2017). Lack of engagement may be especially true of smaller firms (Mohnen and Hoareau, 2003; Laursen and Salter, 2004). This research project examined the motivations of microbusiness entrepreneurs to engage with entrepreneurship scholars/hip in efforts to better understand how this science-practice gap may be bridged.

Quantitative data from over 750 UK-based, small and microbusiness entrepreneur respondents was collected using a panel survey intermediary. Structural equation modelling analysis of the data indicates that two antecedents of the Theory of Planned Behaviour (Ajzen, 1991) – specifically attitudes and social norms – offer a partial explanation for the motivational drivers of entrepreneurs who engage with entrepreneurship scholars/hip. First, Attitude towards engagement with scholars is underpinned by perceptions of personality, service quality fully mediated by beliefs in gaining access to valuable knowledge and scholar image. Social Norms was a direct antecedent of motivation to engage with scholars/hip. Perceived Behavioural Control received no support. The model also indicates that small and microbusiness entrepreneurs directly engage at the level individual of an entrepreneurship scholar rather than engaging via an intermediary such as the 'Business School'.

In summary the results indicate that small and microbusiness entrepreneurs place particular importance on perceptions of knowledge gain (tangible value) and scholar image (intangible value). Additionally, they prefer to 'go direct' rather than engage with a 'Business School' at the institutional level in an intermediary capacity. Therefore, efforts to improve the visibility of individual scholars and their knowledge areas is required. This could be achieved through existing institutional 'bridging' services, promotion via social media and/or other online methods and encouraging individual scholars to engage directly with industry through networks, practitioner forums, and other forms of representation. In addition, small and microbusiness entrepreneurs are influenced by the opinions of others close to them with regards to their likelihood of engaging with an entrepreneurship scholar/ship. This study suggests that such influence may occur due to the cultural and social capital habitus attained and occupied by these entrepreneurs and amongst their family/peer groups. Consequently, support for alumni to access services from individual scholars is important and eminently feasible. However, such social and cultural capital does not apply to all small and microbusiness entrepreneurs. Consequently, many entrepreneurs may not know that they can, or

think that it is beneficial, to engage directly with scholars. Opportunities and benefits of engagement should be more widely promoted to and across communities and groups within the wider business community. Concurrently, individual scholars need to be facilitated and supported to engage directly with business community members either through training, recognition in promotion pathways, or in scholarly workloads.

The results point to the following **recommendations**:

1. Improve individual scholar **visibility**. Use of existing online and physical resources to highlight knowledge specialisms and the benefits of such to business
2. Provision of **support** to enable individual scholars to pursue direct engagement and relationship building with entrepreneurs and the wider business community. For example, addressing scholar workload allocations, offering training in networking and communication of knowledge value, support for placements and secondments to business
3. Make better use of **alumni** resource – tracking of engagement by alumni with the university specific to knowledge transfer and exchange
4. Engage with all sectors and levels of the business community to ensure **equality of access**. Prioritising large firms minimises resources directed across the business community including towards small and microbusiness entrepreneurs who may benefit equally if not more from access to knowledge resources

2. Abstract

The science-practice gap is a long-established area of tension between higher education institutions and the wider economy. The gap is also evident in the study and practice of entrepreneurship. This research examines the motivations of small and microbusiness entrepreneurs to engage with entrepreneurship scholars/hip. Using Theory of Planned Behaviour we measure the significance of Attitude, Social Norms, and Perceived Behavioural Control on intentions to engage with an entrepreneurship scholar/ship. Results indicate that the model offers a good fit for explaining the motivations of those who engage with entrepreneurship scholars. Of particular importance is that the entrepreneur's attitude is directed towards individual scholars rather than at an institutional level (e.g., Business School or University). Additionally, individual scholars must be perceived as trustworthy, and their knowledge valuable.

3. The background to the project (literature search)

There is increasing emphasis on the academic community to evidence the (measurable) value of academic knowledge to user communities (e.g., KEF). Previously, the case has been made that entrepreneurship research can solve 'real world' problems (e.g., Shepherd, 2015), such as how to support the growth and development of firms. Indeed, research finds that engaged entrepreneurship scholarship can contribute to potential improvements for the entrepreneur and their business (Rosli et al., 2018). Yet despite the growth in extant academic literature that considers relevance within the entrepreneurship field and 'how to do it', limited use of enterprise and entrepreneurship research beyond the academy persists (e.g. Frank and Landström, 2015; Zahra and Wright, 2011; Hamet and Maurer, 2017).

Most frequently, theoretical and practice-orientated studies examine the science-practice debate from a downstream perspective, that is knowledge dissemination, transfer, or exchange from academic/institution → organisation/firm. For example, the moral imperative for social science to engage in relevant and meaningful research beyond the 'ivory tower' (Alvesson *et al.*, 2017; Tourish, 2019) and recommendations for *how* institutions and scholars can deliver societal value (Lindgreen *et al.*, 2020). In the specific case of motivations for university-industry collaboration, downstream research has also extensively explored the motivations *of scholars* to engage in knowledge translation, dissemination, and transfer with multiple and varied recommendations for improvements offered (e.g., Steffens *et al.*, 2014; Robey *et al.*, 2018; de Wit-de Vries *et al.*, 2019). For example, Hughes *et al.* (2011) propose that individual academics can be categorised according to their attitude towards engaging with practitioners: willing and able, 2) willing but underexposed, 3) theoreticians.

However, such a focus on downstream efforts – scholars and their motives – results in the motives of entrepreneurs to engage with entrepreneurship scholarship – upstream efforts – being overlooked (Hughes *et al.*, 2011, offers an exception to this). This is despite recent research on university-industry collaboration examining partner selection has found this factor to be critical to successful collaboration outcomes (Johnston and Huggins, 2018). In particular, academic partners need to appear credible to the small firm (Hovland *et al.*, 1953) and the source of information (e.g., scholar or other) affects the credibility of the information received (Dholakia and Sternthal, 1977; Harmon and Coney, 1982). Part of the gap in understanding partner selection, however, is an understanding of the *motivations* of business owners that drive partner selection, as firms generally seek knowledge of commercial value whereas academics seek to develop (theoretical) research (Johnston and Huggins, 2018). Thus, a gap in research exists regarding the motivations of entrepreneurs to engage with (scholarly) partners, and the associated antecedents that would inform such motivations for working with scholars, especially in the context of small firms and using a quantitative methodology (Johnston and Huggins, 2018).

The Theory of Planned Behaviour (TPB) originated in social psychology and theorises that action arises from an agents "dispositional approach" to behavioural action (Ajzen, 1991, p.180). TPB comprises of three antecedents: attitude, social norms, and perceived behavioural control. *Attitude* (ATT) is related to beliefs about the desired action or behaviour. *Social norms* (SN) refers to what others important to the agent think about the action or behaviour the agent may pursue. *Perceived behavioural control* (PBC) is related to the amount of control an agent thinks they may have over performing the action or behaviour. TPB has been extensively used in empirical studies investigating (business creation) intentions (e.g. Krueger and Carsrud, 1993; Kolvereid and Isaksen, 2006; Yang, 2013). In this study, TPB antecedents have incorporated specific beliefs about scholars. Thus, ATT refers to the perceived quality of the scholar, their brand personality, scholar brand image, and beliefs about knowledge gain. SN refers to what family members or other business community members would think about engaging with an entrepreneurship scholar/ship. PBC refers to the control that an entrepreneur may believe they have over accessing an entrepreneurship scholar/ship. These are represented in the theoretical model show in Figure 1.

Insert Table 1 here

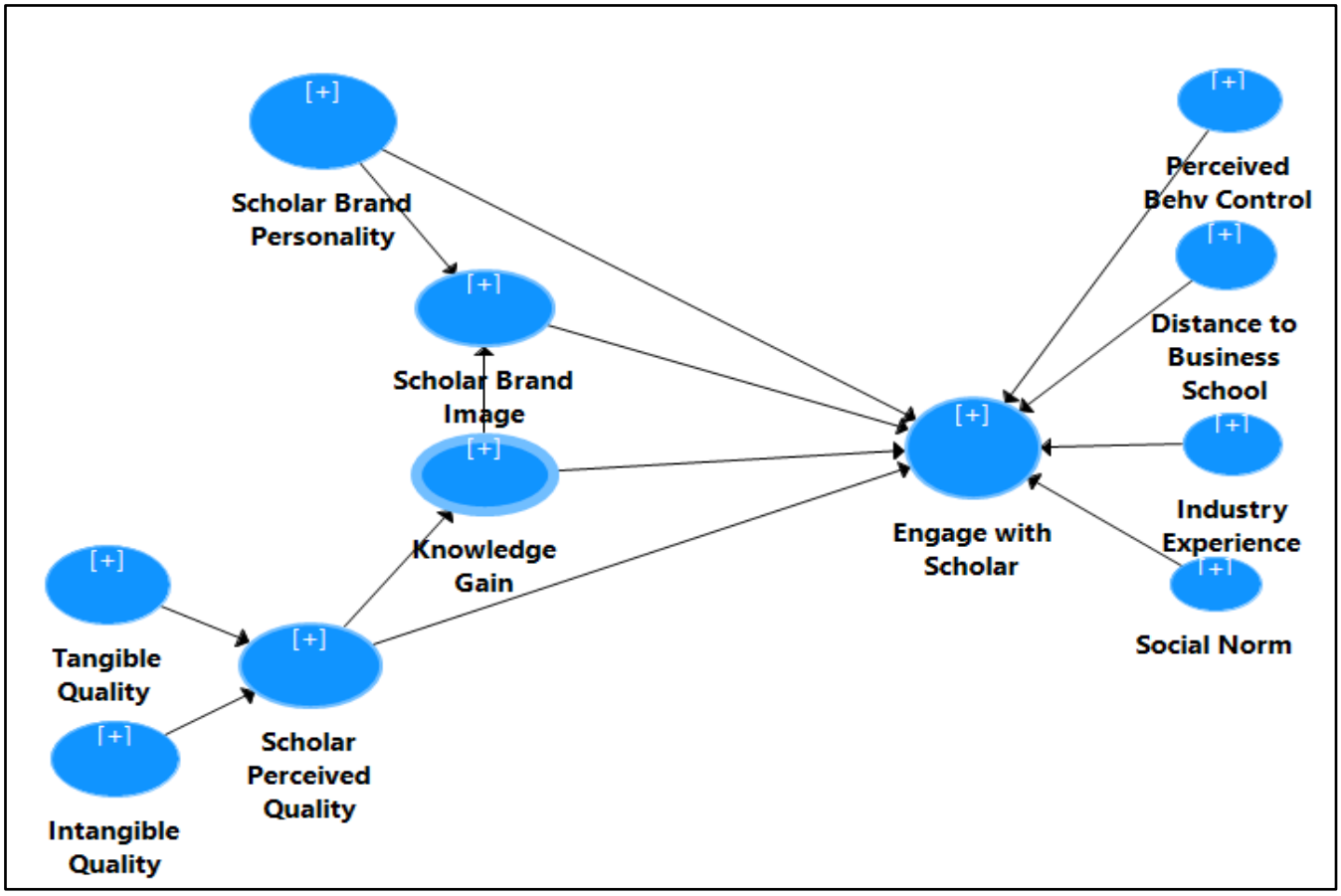

Figure 1. Theoretical model - motivations for engaging with entrepreneurship scholar

Based on review of literature and informed by TPB and additional underpinning beliefs, we develop the following 11 hypotheses to be tested in this study shown in Table 1.

Hypotheses summary:
Hypotheses - Direct effects
H1a: Scholar Personality -> Scholar Image
H1b: Scholar Total Quality -> Scholar Image
H2: Scholar Total Quality -> Knowledge Gain
H3: Knowledge Gain -> Scholar Image
H4a: Scholar Personality -> Engagement Intention
H4b: Scholar Total Quality -> Engagement Intention
H4c: Scholar Image -> Engagement Intention
H5: Knowledge Gain -> Engagement Intention
H6: PCB -> Engagement Intention
H7: Social Norm -> Engagement Intention
Hypotheses- Indirect Effect
H8a Scholar Personality -> Scholar Image -> Engagement Intention
H8b Scholar Total Quality -> Scholar Image -> Engagement Intention
H8c Scholar Total Quality -> Knowledge Gain -> Engagement Intention
H9 Knowledge Gain -> Scholar Image -> Engagement Intention
Hypotheses - Moderator
H10 Prior - Experience
H11 Business School distance

Table 1. Research hypotheses

In summary, in the case of university-industry collaboration, small and micro firms may be less likely to engage with universities (Mohnen and Hoareau, 2003; Laursen and Salter, 2004) but may extract greater benefit than larger firms due to their lack of internal resources (Johnston and Huggins, 2018). Oftentimes, however, studies do not engage with the small and microbusiness categories informed by the view that the size of the organisation with affect their 'absorptive capacity' for knowledge transfer types of activity (e.g., Fontana *et al.*, 2006b). This study seeks to resolve this gap and contribute to improved understanding of the *motives of small and microbusiness entrepreneurs* to engage with entrepreneurship scholars/hip and to offer suggestion for how to reduce the science-practice gap.

4. The methodology employed to pursue the aims and objective

NOTE: *The original research proposal was designed before the Covid-19 pandemic occurred. Initially, we proposed a longitudinal qualitative study with entrepreneurs to explore attitudes towards entrepreneurship scholars using in-depth interviews and reflective journal entries. However, due to the significant change in personal and professional, national, and international circumstances generated by the Covid-19 pandemic, a change the methodological approach was necessary. Therefore, the research design for this project became a quantitative study of entrepreneur perceptions and experiences of engaging (or not) with entrepreneurship scholars, scholarship, and institutions (i.e., universities).*

There have been several calls for quantitative research to examine the perceptions and attitudes of entrepreneurs regarding working with scholars and institutions (e.g., Hughes *et al.*, 2011; Johnston and Huggins, 2018). Given that within the UK, amongst other developed economies, nearly 99 percent of firms occupy the small and microbusiness category (Hutton and Ward, 2021), these firms represent a significant proportion of those that entrepreneurship scholars conduct research about (and ideally for). To answer the call for larger scale research studies on engagement between entrepreneurs, scholars, and scholarly institutions, we conducted a large-scale survey of entrepreneurs running small and microbusiness firms understood as a firm employing fifty or fewer employees and which has an annual turnover below 10 million Euros (Microbusiness Research Portal, 2017). Thus, we used survey design to assess motivations for engaging with entrepreneurship scholars, scholarship, and institutions. This method enables researchers to investigate relationships amongst a variety of factors and allows a more comprehensive use of advanced statistical techniques (e.g., inferential statistics), allowing reasons for relationships to be ascertained and understood (Hakim, 2000; Malhotra *et al.*, 2017).

4.1 Sampling and data collection procedure

Data was collected using an online survey platform (https://www.smartsurvey.co.uk/survey - software). Imperative recruitment criteria for respondents were that they must be: (i) an entrepreneur (including start-up companies with a minimum of three months trading); and (ii) operate a business defined as small or micro as per European Union categories (European Commission, 2020). In addition, they could come from any industry sector within UK, and we sought to include businesses operating across Britain, covering all four regions.

The study's respondents met one of the following streaming criteria:

1. Experience with dealing and getting advice from entrepreneurship scholars and intend to engage with more scholars for business advice in future (labelled as **Experience Group respondents**);
2. Inexperience with entrepreneurship scholars at the stage of data collection but have intention to engage with an entrepreneurship scholar(s) in the future (labelled as **Perception Group**);
3. Inexperience with entrepreneurship scholars and had no intention to engage in future (labelled as **Rejection Group**)

We worked closely with the online survey provider to ensure a robust and representative sampling process which was accurate and captured appropriate sample as per the requirements of the research. Data collection was monitored from the beginning of pilot test until the end of main data collection period. Data was collected between April 2021-June 2021. Respondents were screened at the entry point of the survey to ensure that they met the sampling criteria of the study. Although 'entrepreneur' does not conform to a universal definition, we align with the definition of a small or microbusiness as per Microbusiness Research Portal (2017) and pertaining to new venture creation and/or business owner-managers as per (Academy of Management, 2021).

4.2 The survey measures

There are seven main constructs under study which align with TPB: (1) Scholar Personality, (2) Scholar Image, (3) Scholar Total Quality, (4) Knowledge Gain; and (5) Intention to Engage with Scholar (labelled as Engagement Intention), (6) Perceived Behaviour Control and 7) Social Norm. Entrepreneurship and Marketing literature was extensively consulted to understand and generate the items and measurement scales for this study's constructs as highlighted in Table 1. Table 1 below presents the constructs, their operationalisation, scaling techniques, reliability, and validity results.

The survey was designed to collect data according to the experience level of engagement with entrepreneurship scholars/hip and this resulted in three streams: experienced, positive perceptions but unexperienced, negative perceptions and rejection of engagement. The survey underwent several rounds of development. First, we undertook two rounds of pre-test. For pre-test 1, the survey was qualitatively assessed for question coherence and flow with three expert entrepreneurs already familiar with working with scholars and universities. For pre-test 2, the survey was pre-tested online with a sample of 74 panel entrepreneurs. Based upon response rates and initial statistical analysis, the survey was adjusted to further develop the flow and question format. Survey adjustments included, reworking question wording to improve clarity, reordering the flow of questions, reducing the number of questions but still retaining construct validity levels, and adding the inclusion of visual aids (videos which explained what an entrepreneurship scholar/ship is and what they do). Second, the survey was piloted with a further 76 panel entrepreneurs and associated statistical tests were completed revealing that the survey was valid, reliable, and robust. Third, the final version of the was made available to the panel sample set and a further 808 responses were collected. Of the full sample, 272 selected that they met the experienced criteria of working with a scholar and thus were suitable for the further questions to address their motivations for such engagement in this version of the study. Refer to Table 1 for the summary of survey items and loadings.

Insert Table 1 here

Table 1: Final survey items summary and findings (outer loadings and weights)

Constructs/Source	Dimensions and Items	Loadings	weights
Total Scholar Quality			
Tangible Quality Zeithaml et al., 1996 & Alwi & Kitchen (2014)	The entrepreneurship academic provided accessible expert business / entrepreneurship advice	0.716	**0.459**
	The entrepreneurship academic had a variety of business / entrepreneurship information and resources available	0.713	
	The entrepreneurship academic knew which topics are relevant for becoming an entrepreneur / business owner	0.75	
	The entrepreneurship academic knew which topics are relevant for running a successful business	0.775	
	The information and resources on business / entrepreneurship available from the entrepreneurship academic was credible	0.783	
Intangible Quality Alwi & Kitchen (2014)	Entrepreneurship lecturers have Innovative methods of sharing enterprise / entrepreneurship knowledge	0.723	**0.604**
	The entrepreneurship academic tried to understand my specific needs as a business owner	0.774	
	The entrepreneurship academic delivered on their promise	0.778	
	I am confident that the entrepreneurship academic had a positive impact on the performance of my business	0.789	
	The entrepreneurship academic gave me what I expected	0.781	
Scholar Personality Alwi & Kitchen (2014); Davies et al. (2004)	Trustworthy	0.762	
	Innovative	0.72	
	Achievement Oriented	0.698	
	Hardworking	0.711	
	Supportive	0.764	
	Reliable	0.785	
Scholar Image LeBlanc & Nguyen (2001); Alwi & Kitchen (2014)	I admired the entrepreneurship academic Image	0.775	
	I was happy to work with the entrepreneurship academic	0.767	
	I had a good impression of the entrepreneurship academic	0.742	
	The entrepreneurship academic made access to business / entrepreneurship information easy	0.724	

Knowledge Gain Nicolai and Seidl (2010); Augier and March (2007); Berglund et al (2019)	The knowledge I gained about business / entrepreneurship from an entrepreneurship academic was useful for forecasting future trends or predictions	0.745
	The knowledge I gained about business / entrepreneurship from an entrepreneurship academic helped me to earn more	0.792
	The knowledge I gained about business / entrepreneurship from an entrepreneurship academic increased my sense of control over my business	0.73
	The knowledge I gained about business / entrepreneurship from an entrepreneurship academic helped me to achieve my business goals	0.742
	The knowledge I gained about business / entrepreneurship from an entrepreneurship academic legitimised my decision making to others	0.741
	The knowledge I gained about business / entrepreneurship from an entrepreneurship academic enhanced my credibility in carrying out my role effectively	0.773
Perceived Behavioural Control (PCB) **Zapkau et al (2015)**	Difficult|Easy Lecturer	0.791
	Beyond my control|Within my control Lecturer	0.816
	Slow to access|Quick to access Lecturer	0.716
	The entrepreneurship academic had a good reputation for working with business owners	0.805
Social Norm **Zapkau et al (2015)**	My friends and family think highly of entrepreneurship academics and would expect me to work with them	0.744
	My business contacts and clients think highly of entrepreneurship academics and would expect me to work with them	0.824
Engagement intention with Scholar Zeithaml et al. (1996) Zapkau et al (2015)	I will say positive things about entrepreneurship academics to other people	0.797
	I will recommend entrepreneurship academics to someone who seeks my business advice	0.804
	I will encourage my contacts to connect with entrepreneurship academics	0.791
	I will engage with entrepreneurship academics again in future	0.794

5. The contributors/respondents to the research (Sample)

The research was undertaken in the UK which has a high number of firms that comprise the small and microbusiness category (i.e., 99% of all UK businesses) (Rhodes, 2017). In recognition of the challenges of accessing small/microbusiness firms who do not often engage with the academic research community (Fontana *et al.*, 2006a), we opted to work with a specialist survey company to access the target sample. The sampling frame comprised a commercial vendor's online panel of business owners. Respondents were recruited by the vendor using online methods. The demographic profile of the respondents is comparable with the general business small and microbusiness population of the UK (Table 2a & 2b). A total of 808 sample responses were collected. The sample profile included three route options – experienced (n=272), positive perceptions (n=316), and rejection (n=166). Thus, the sample for this part of the study was 272 (Study 1).

Insert Table 3a & b here: (Demographic/Background of Respondents)

Table 2a: Demographic/Background of Respondents

Gender		Age	N	Education	N	Ethnic	N
Male	145	18-24 years	67	High School	46	English / Welsh / Scottish / Northern Irish / British	177
Female	119	25-29 years	76	Further Education	32	Irish	5
Non-binary	4	30-34 years	50	Higher Education (Undergraduate)	84	Gypsy or Irish Traveller	8
Prefer not to say	0	35-39 years	36	Higher Education (Postgraduate)	89	Any other White Background	15
		40-44 years	19	PhD	13	White and Black Caribbean	6
		45-49 years	8	No formal Education	8	White and Black African	8
		50-54 years	8			White and Asian	9
		55-59 years	7			Any other Mixed / Multiple ethnic background	8
		60-64 years	1			Indian	4
						Pakistani	4
						Bangladeshi	5
						Chinese	1
						Any other Asian background	4
						African	8
						Caribbean	4
						Any other Black / African / Caribbean background	1
						Arab	2
						Any other ethnic group	3

Table 2b: Company background characteristics

Location	%	Location	%	Industry	%	Staff	%	Experience		Trading Years	%	Legal	%
Aberdeen	1	Oxford	1	Agriculture, Forestry & Fishing	6	<9	25	<1 yr	11	< 3 yr	10	Sole Trader	51
Armagh	3	Peterborough	1	Mining and Quarrying	6	Oct-19	24	1 - 3 yr	32	3-5 yr	40	Partnership	21
Bangor	1	Plymouth	1	Manufacturing	17	20-29	15	3-5 yr	29	> 5 yr	50	Limited Co.	23
Bath	7	Portsmouth	1	Electricity, gas, steam and air conditioning supply	1	30-39	8	> 5 yr	27			CIC	3
Belfast	1	Salisbury	3	Water supply, sewerage, remediation activities	5	40-50	15						1
Birmingham	4	Sheffield	1	Construction	10	>51	14						
Bradford	1	Southampton	3	Wholesale and retail trade	9								
Brighton	6	Winchester		Transportation and storage	2								
Bristol	6	Wolverhampton		Accommodation and food	3								
Cambridge	3	Worcester		Information & communication	3								
Canterbury	3	Manchester	6	Financial & insurance activities	10								
Cardiff	3	Norwich	1	Real estate activities	3								
City of London	15	Nottingham	1	Professional	6								
Edinburgh	1	Liverpool	1	Administrative	1								
Exeter	1	London	4	Public administration	1								
Glasgow	3			Education	3								
Hereford	1			Human health	1								
Leeds	1			Arts, entertainment recreation	5								
Leicester	3			Others	2								

In summary, the total sample across the whole study was 808 (including pilot test 74 and non-usable of 54 which were excluded from the main analysis). For this report, we have analysed the experience route respondents (n=272) only and report such findings here.

6. The analysis and findings

6.1 Step 1: Assessment of the measurement model

To test all hypotheses (H1a – H11), this study utilises Partial Least Squares-Structural Equation Modelling (SmartPLS-SEM) version 3.3.3 (Ringle *et al.*, 2015) for three specific reasons that are related to the current study's model. The technique allows: (1) Exploration of theory extensions within a conceptual model based on established theories; (2) Complex model with several constructs, indicators, and interrelationships to be performed with less issues. For example, due to the exploration objective, the study's model can become relatively complex with several paths consisting exogenous to predict endogenous; (3) Testing a complex model with small sample relatively well (Sarstedt *et al.*, 2011, p.213). Although this study has a relatively small sample with 272 companies, this is a common number particularly in business-to-business sector (Hair Jr *et al.*, 2017). Efforts were taken to ensure the study's population were representative through close monitoring during the data collection period. Accordingly, a two-stage process were performed (Becker *et al.*, 2012) to ensure that step one achieved measurement model reliability and validity, and secondly, that nomological validity of all hypotheses were tested in step two. The following details the study's findings.

As depicted in Table 1, all loadings are well above the expected level >0.70. Our formative loadings are also acceptable (second order) with both intangible and tangible quality both formed Scholar Total Quality (Alwi and Kitchen, 2014) are 0.6 and 0.4556 respectively. In summary, Table 3 exhibits the Composite Reliability, Cronbach Alpha, and rho. All scored above the recommended level and Table 3 exhibits discriminant validity is confirmed with AVE>0.50. A further test to ensure adequate discriminant validity was performed by square root of each construct's AVE following Fornell and Larcker's (1981) criterion and as shown in Table 5, all loadings [0.5-0.8] were greater than the bivariate correlation. Thus, the assessment results supported the adequacy of the discriminant, convergent validity, and reliability of the measurement model. Finally, VIF checks confirmed our data are not violated and suffered from multicollinearity as both at measurement model and formative level VIF loadings all >3.3 (Kock, 2015, p.17) (Table 3 summarises these results). The study then proceeds to Step 2, assessing the nomological validity of all our hypothesized relationships (direct, indirect effects and moderating effects).

Insert Table 3 here

Table 3: Validity Results - Construct Reliabilities (CA, rho & CR), VIF, Fornell-Larcker's criterion and AVE

Constructs								**VIF**	**CA**	**rho_A**	**CR**	**AVE**
Engagement intention	0.80							2.73	0.81	0.81	0.87	0.64
Knowledge Gain	0.74	0.75						1.64	0.85	0.85	0.89	0.57
PCB	0.47	0.50	0.78					2.96	0.67	0.68	0.82	0.60
Scholar Image	0.69	0.71	0.52	0.75				2.91	0.74	0.75	0.84	0.57
Scholar Personality	0.64	0.70	0.58	0.72	0.74			2.76	0.84	0.84	0.88	0.55
Scholar Total Quality	0.65	0.66	0.57	0.74	0.70			2.28		1.00		
Social Norm	0.67	0.69	0.48	0.63	0.66	0.63	0.79		0.70	0.71	0.83	0.63

6.2 Assessment of the structural model

After establishing both satisfactory measurement and structural model, the study examines effects of all hypotheses (H1a to H11) as hypothesized earlier. Results indicate that our initial model was generally supported (Figure 2), with some exclusions of items. Thus, the final model with significance of the relationships is noted in Figure 2. To establish the significance of our hypothesized relationships, assessment is made based on three main considerations: (1) Path significance at three levels: [T-Statistics>2.58, p<0.01; 1.96; p<0.05 and/or >1.65; p<0.10], (2) βeta coefficients (β) and (3) Confidence Intervals Bias Corrected (CBa) where 0 should not lie within the lower and upper bound (Hayes and Scharkow, 2013). Based on result below (Figure 2 and Table 4), three direct effect hypotheses were rejected due to insignificants results. The mediation hypotheses (H8a, H8b, H8c & H9) for the current study taken the following into consideration when deciding whether a mediator plays an important a role in determine the effect. In particular, we consider the following: (1) Specific indirect effect must be significant; (2) Once specific indirect effect is significant, we then consider the bias corrected bootstrap confidence intervals (CBa) where 0 is not within two levels (upper and lower CIs) (Hayes and Scharkow, 2013). Decision will be made based on three considerations: (1) 'Indirect only' [known as full mediation]; or (2) Complementary (or partial mediation) effect where both paths are positive and significant) (Zhao *et al.*, 2010). The current study has tested four mediator constructs and two moderators as proposed by priori See Figure 2 for a graphical representation of our PLS-SEM model with loadings of R2, βeta (β) and significant paths (p-value) and we summarise the main findings in discussion. All mediators are indeed highly significant with three (full mediation) and one being partial. Table 4 summarises our final results.

Insert Figure 2 here

Insert Table 4 here

Figure 2: Step 2 Result: Structural Model and Hypotheses Results

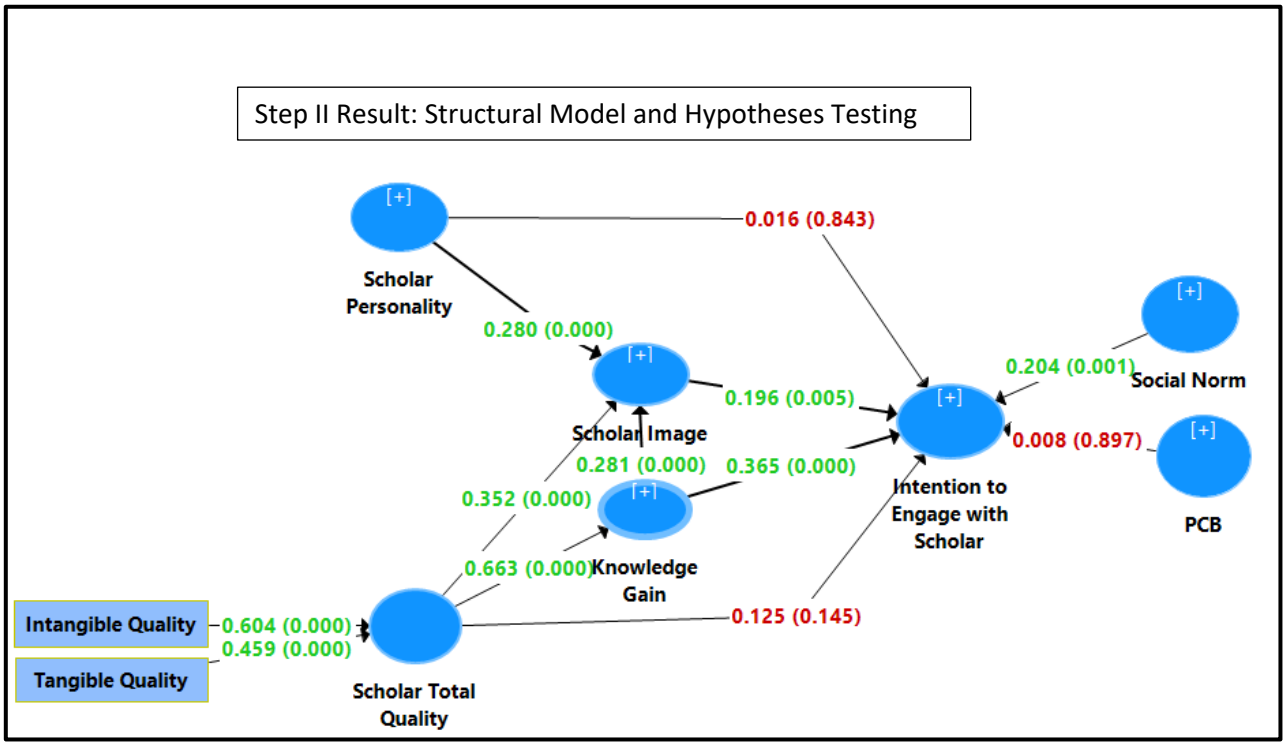

Table 4: Summary of Hypotheses Results

	Hypotheses - Direct Effect	Mean	SD	T Statistics	P Values	Decision
H1a	Scholar Personality -> Scholar Image	0.28	0.07	4.27	0.00	Accept
H1b	Scholar Total Quality -> Scholar Image	0.35	0.06	6.06	0.00	Accept
H2	Scholar Total Quality -> Knowledge Gain	0.66	0.05	14.06	0.00	Accept
H3	Knowledge Gain -> Scholar Image	0.28	0.07	4.05	0.00	Accept
H4a	Scholar Personality -> Engagement Intention	0.02	0.08	0.20	0.84	Reject
H4b	Scholar Total Quality -> Engagement Intention	0.13	0.09	1.46	0.15	Reject
H4c	Scholar Image -> Engagement Intention	0.20	0.07	2.81	0.01	Accept
H5	Knowledge Gain -> Engagement Intention	0.37	0.08	4.57	0.00	Accept
H6	PCB -> Engagement Intention	0.01	0.06	0.13	0.90	Reject
H7	Social Norm -> Engagement Intention	0.20	0.06	3.26	0.00	Accept
	Hypotheses - Indirect Effect					
H8a	Scholar Personality -> Scholar Image -> Engagement Intention	0.055	0.026	2.108	0.035	Full mediation
H8b	Scholar Total Quality -> Scholar Image -> Engagement Intention	0.069	0.027	2.579	0.010	Full mediation
H8c	Scholar Total Quality -> Knowledge Gain -> Engagement Intention	0.242	0.057	4.219	0.000	Full mediation
H9	Knowledge Gain -> Scholar Image -> Engagement Intention	0.055	0.024	2.323	0.021	Partial mediation
	Hypotheses - Moderator					
H10	Prior - Experience	-0.038	0.035	1.105	0.270	Reject
H11	Business School distance	0.047	0.032	1.472	0.142	Reject

7. An analytical discussion of the implications of the findings – theoretical

The findings of this study make several contributions to theory. The first theoretical finding is that the TPB as a model for understanding the motivations of entrepreneurs to engage with entrepreneurship scholars/hip was validated. To the best of our knowledge, this is the first time that this model has been used to understand this 'upstream' side of a university-industry relationship. Second, we reveal that the items that inform an entrepreneur's attitude towards engaging with an entrepreneurship scholar/ship includes an entrepreneur's beliefs about scholar personality, scholar quality, scholar image, and the value of the knowledge gained from a scholar. Third, we found that entrepreneurs want to engage directly with individual scholars rather than at an institutional level supporting the findings of (Johnston and Huggins, 2018). Fourth, we found that social norms are not influenced by other antecedents, rather SN is a direct antecedent of intentions to engage with an individual entrepreneurship scholar. This suggests that those who engage with scholars are likely to have experience of attending university and/or are in social capital relationships with others who have attended university. This is important as it indicates that those who are not familiar with attending university and yet run a small or microbusiness may be at a disadvantage when developing or growing their firm. Fifth, we find that PBC is not an important antecedent. This is interesting as perceptions of positive control on whether an entrepreneur can achieve the behaviour or not, does not influence whether they subsequently engage in this particular behaviour. It may suggest that engaged entrepreneurs are not put off by the challenge of accessing knowledge they seek to gain.

8. Concluding comments regarding how the aims and objectives were met and limitations or challenges encountered

The aims and objectives of this study were to examine the science-practice gap between entrepreneurs and entrepreneurship scholars/hip, and we believe we have achieved this to a certain extent. Unfortunately, due to the Covid-19 pandemic, we were not able to collect the longitudinal, qualitative data as originally planned. This offers us an avenue for future research and the potential to collect data on this topic once we have emerged from the pandemic.

Specific to the quantitative, survey-orientated study that we were able to undertake, there were some challenges with explaining what entrepreneurship scholars do in their role (i.e., that teaching is only one component of a scholar's role). To overcome this knowledge gap for entrepreneurs who took part in our study, we embedded short explanatory videos which would help the entrepreneurs to understand that scholars create knowledge which they wish to share broadly, beyond the ivory tower

or the teaching classroom amongst other activities. Finally, small and microbusiness entrepreneurs can be a hard-to-reach sample for a study at such significant scale (initial data collection target was 750 respondents). Consequently, we worked with a panel data supplier to provide access to credible respondents. Unfortunately, the study was occasionally delayed as the strict quality criteria for respondents was often challenging to obtain. Nevertheless, we were able to persevere and collect good quality data, although it took slightly longer than was preferrable or planned.

9. Further research opportunities the study has highlighted

This study has highlighted that understanding entrepreneur motivations and the 'upstream' element of engagement with scholars/hip is a promising area for research. Specifically, we would recommend a follow-up study, as originally proposed, that uses a qualitative approach to access deeper understanding of power dynamics and psychological resistance/engagement to working with scholars by those in the entrepreneurship community. The question still lingers as to why some entrepreneurs perceive entrepreneurship scholars/hip to lack value to them and their business. Our areas of recommended future research include, examination of power dynamics between scholars and entrepreneurs, the absorptive capacity of single entrepreneurs and small firms, and how the credibility of entrepreneurship scholarship is or could be established amongst a population of 'rejection' entrepreneurs.

10. A discussion of any policy and practice implications

There are several practical implications of this research. First, universities could do more to support individual scholars to engage with entrepreneurs, and likely businesses more broadly, in a direct manner. Second, scholars should pay attention to how they craft a trustworthy, credible, and value-orientated image that is appealing to entrepreneurs. Third, scholars may need to go beyond the 'usual suspects' if they want to share their knowledge beyond those who have attained a university level of education or who work in large firms. All efforts should be made to support scholars to be able to engage as broadly as possible across different and varied backgrounds. Thus, universities should prioritise the training and enablement of scholars to be able to engage with external communities broadly defined and ensure equality of access. Policy implications could include requiring higher education institutions to offer some educational experiences or resources to those who have not previously accessed an HEI. How can local communities be more engaged with a University as a resource and source of local community development?

11. A final comment regarding how the research has engaged with or demonstrated knowledge exchange and transfer

This research has contributed to a more nuanced understanding of knowledge exchange and transfer by demonstrating that only some entrepreneurs are aware that they can engage directly with entrepreneurship scholars to gain access to valuable knowledge which may enhance their business activities, with the potential to generate individual and social wealth and job creation. Thus, it demonstrates that knowledge exchange and transfer are preferential activities which may happen to the exclusion of many of the entrepreneurs who are working around our universities and in our local communities. Thus, knowledge exchange and transfer mechanisms are required to broaden their scope and move away from the narrow classification of those it is 'worth' working with.

12. Specific outcomes including existing publications, work in progress and future dissemination plans.

There are several specific outputs and outcomes of this research, these include:

1. Development of a conference papers for submission to AOM meeting 2022 and ISBE conference 2022
2. Development of a paper for Entrepreneurship: Theory and Practice (ABS4*) for submission in Spring 2022
3. Practice & Impact SIG will host a dissemination event and panel discussion to consider how best we might engage low-motivation/rejection entrepreneurs. Specific consideration will be given to how ISBE could be the vehicle to achieve this.
4. Research findings will be presented to senior leadership teams at University of Leeds and Brunel University
5. Research findings will be presented to Impact networks at University of Leeds and Brunel University

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