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Governance of agents in the recruitment of international students: A typology of contractual management approaches in higher education

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Abstract

There is an increasing reliance on international education agents for student recruitment in Higher Education (HE), but the governance of education agents is under-researched. This study explores contractual governance approaches adopted by HE institutions for managing international education agents in the United States, United Kingdom and Australia. Fuzzy set qualitative comparative analysis of survey data from HE managers was undertaken involving contractual specificity, coordination, within-contract monitoring, relational contractual governance, market power and number of agents used. It produces a typology of four archetypes: *strategic hybrids*, *pragmatic operators*, *flexible friends* and *laissez faire operators*. The study reveals that, while the laissez faire approach is a path to failure regardless of the number of agents used and market power, there is no 'one-size fits all' linear contractual governance solution to agency problems and the achievement of results. The findings enable HE managers to better understand their agent management choices and associated outcomes.

Keywords: contractual governance, education agent, fuzzy-set qualitative comparative analysis (fsQCA), international higher education, typology

Introduction

Internationally mobile students have not only played a key role in the global knowledge economy (Scott 2015) but also in the financing model of higher education institutions (HEIs) (Ross 2020). This has become clear during the Covid19 pandemic and consequent restrictions on international travel (Hillman 2020), especially in the top destination countries of the USA, UK and Australia. With financial pressures and global competition (Lomer, Papatsiba and Naidoo 2018), increasing numbers of HEIs have outsourced international recruitment to agents (Robinson-Pant and Magyar 2018). Estimates for the worldwide number of agents are around 20,000 agents (OBHE 2014; Nikula and Kivistö 2018). With the expansion of the industry, there comes some limited form of industry self-regulation (e.g. ICEF's certification) (Komljenovic 2017) or third-party regulation (e.g. British Council's code of practice).

Beyond Australia and New Zealand, there is little direct government regulation over the ways agents are used to recruit students (Brabner and Galbraith 2013; Ramia 2017). The main regulatory mechanism remains the private contract, which, through explicit and implied terms, provides a form of private regulatory oversight (Huang, Raimo and Humfrey 2016).

The use of contracts by HEIs to control agents is under researched. Building on a small number of studies of agency management in higher education (Brabner and Galbraith 2013; Huang, Raimo and Humfrey 2016) as well as an established academic literature on contractual governance (Cao and Lumineau 2015) and agency theory (Jensen and Meckling 1976), this study addresses this gap through an analysis of data gathered from senior managers in the higher education (HE) sector in the US, UK and Australia. The study aims to explore how different approaches to contractual governance interact with institutional context, in particular, market power and number of agents used, and how those factors are associated with agency performance, as perceived by HE managers. A typology of four archetypes mapped from fuzzy-set qualitative comparative analysis (fsQCA) configurations contributes to a more nuanced understanding of contractual governance approaches within institutional context in regulating inter-firm agency relationship. It provides an easy-to-use

management tool for HE managers to self-assess their own agency contractual governance approach.

The paper starts by considering the use of recruitment agents by HEIs, and the agency issues this presents. It then looks at the literature on contractual governance and potential approaches to contractual governance within the context of differential market power and agency use. The methods section explains the sample, data collection process and measurement of variables, followed by data analysis with fsQCA. The discussion and results are focused around the typology of four archetypes. Finally, a conclusion and managerial implications are presented.

HEIs and international education agents

An international education agent in this study refers to a business entity or agency that has one or more agents acting as intermediaries between overseas students and education providers for the purpose of enrolling students in education institutions (Australian Government 2009; Nikula and Kivistö 2018). The exchange between education providers and education agents is a typical inter-firm principal-agent relationship, where the agent acts on behalf of the principal (HEI) (Nikula and Kivistö 2018; Huang, Raimo and Humfrey 2016). The agent is normally paid on results or through a retainer (Komljenovic 2017). HEIs use agents because agents are assumed to have greater knowledge and access to local markets and to be able to operate at lower costs (OBHE 2014). Agents have been used by HEIs in different ways, from simply encouraging student applications to supporting applicants through to enrolment (OBHE 2014; Raimo, Humfrey and Huang 2014). Also, agents will typically have dealings with several HEIs, and likewise HEIs may use several agents.

Agency theory, which examines how efficiency can be achieved in any agency relationship when one entity (the agent) is employed to undertake some action for another (the principal), posits that the use of agents has problems (Jensen and Meckling 1976;). Indeed, research has identified some of the problems and issues that can occur when HEIs work with agents (see Huang Raimo and Humfrey 2016; OBHE 2014; Brabner and Galbraith

2013). Problems include agents not meeting recruitment targets, students being misinformed (e.g. promising more than what can be offered) or overcharged, and applications being submitted with fraudulent qualifications (Nikula and Kivistö 2019).

Agency theory suggests there are two main causes of principle-agent problems, both of which are linked to moral hazard (Ennew, Ünüsan, and Wright 1993). These problems are goal incongruence and information asymmetry (Jensen and Meckling 1979). Ideally, the goals of the principal and the agent will be perfectly matched (goal congruence). But goal incongruence can occur in principal-agent relationships (Bosse and Phillips 2016). HEIs might for example place an emphasis on efficiency and on having good conversion rates between referrals to enrolment (AUIDF 2015). To maintain standards and reputation, HEIs also consider entry requirements and admission policies to ensure that sufficient numbers of appropriately qualified students are enrolled. Agents might place most emphasis on the numbers of successful student referrals (Huang, Raimo and Humfrey 2016), which is typically the basis for commission. There is also information asymmetry when agents selectively disclose information or disclose inaccurate information to students or education providers (Ramia 2017). Students may be accepted on false test results (false positives) or they may be put off an institution by the agent seeking higher fees (false negatives) (Nikula and Kivistö 2019). Such problems can cause reputational damage or higher operational costs to the HEI or principal (Raimo, Humfrey and Huang 2014).

For inter-firm agency relationship, formal written contracts have been used widely to mitigate the agency issues in professional services (Homburg and Stebel 2009). In the education sector, the Australian government's Education Services for Overseas Students (ESOS) Act 2000 (Australian Government 2019) stipulates that education providers should sign a written agreement with education recruitment agents. Similar guidelines have also been produced in the UK and the USA, although, unlike in Australia, they are not legally mandated. Agency theory distinguishes outcome-based contracts (for goal congruence) and behaviour-based contracts (to mitigate information asymmetry) (Bergen, Dutta, and Walker 1992; Whipple and Roh 2010). However, in reality, behaviour-based contracts have rarely

been used for engaging with education recruitment agents (Huang, Raimo and Humfrey 2016) due to the high costs of such contracts and the challenges of monitoring agents' behaviour across multiple locations and jurisdictions. Huang, Raimo and Humfrey's (2016) study found that HEIs in the UK invariably adopted outcome-based contracts with a spectrum of emphasis on either result (i.e. number of students enrolled from agents) or conduct (i.e. code of ethics).

Contractual governance

Contractual governance in this study refers to the contractual mechanism that governs inter-firm (principal-agent) exchanges. It provides a framework to promote cooperation between the two exchange parties and to tackle the issues of opportunistic behaviour and self-interest inherent in situations with information asymmetry in agency relationships. Previous studies have shown the value of a multi-dimensional approach for contractual design and governance (Cao and Lumineau 2015) which includes: *contractual functions*, *contractual specificity* and *relational contractual governance*. They are particularly relevant to the context of principal-agent contractual relationship as it is through their combined use that the underlying issues of goal-incongruence and information asymmetry are likely to be addressed.

Contractual functions have been framed largely along the lines of cooperation and prevention to moderate the actions of the parties in each other's interest (Weber and Mayer 2011). Cooperation provision has been commonly labelled *contractual coordination* whilst prevention provision takes the forms of *contractual control* and *within-contract monitoring* (Schilke and Lumineau 2016; Johnson and Sohi 2016). *Contractual coordination* functions address expectations between transacting parties (Schilke and Lumineau 2016), and this includes terms that specify communication and reporting norms, role definitions, responsibilities and rewards. It serves to promote cooperation between the exchanging parties to achieve desired outcomes (Mooi and Ghosh 2010), and can therefore address aspects of goal congruence or the alignment of incentives (Schilke and Lumineau 2016) in agency exchanges. *Contractual control* clauses, on the other hand, are designed to mitigate the

potential of moral hazards and deter deviant behaviour by placing conditions and constraints on what the other party can or cannot do (Lumineau and Quélin 2011). Another function is *within-contract monitoring* to address risks caused by information asymmetry. Agency theory suggests that risk mitigation can be achieved by employing a contractual monitoring mechanism (Jensen and Meckling 1976; Bosse and Phillips 2016). However, Cao and Lumineau's review (2015) suggests little monitoring is undertaken in contractual relationships whatever is specified in formal contracts. Principals tend to rely on the enforcement potential inherent in contracts to address opportunism (Kashyap, Antia and Frazier 2012). Such potential may be strengthened through the inclusion of within-contract monitoring clauses (Johnson and Sohi 2016), specifying the activities and procedures for monitoring (i.e., what will be monitored and how) in the contracts even though actual monitoring rarely occurs (Cao and Lumineau 2015).

Contractual specificity refers to levels of explicitness, specification and precision (Furlotti 2007; Mooi and Ghosh 2010) of the contractual terms. This has been operationalized differently in empirical studies, for example in the form of completeness (de Jong and Woolthuis 2009) and extensiveness (Ding, Dekker and Groot 2013), which are often indicated by the number of terms in contracts (Ding, Dekker and Groot 2013). Following Furlotti (2007), this study focuses on contractual specificity which implicates how specific and detailed the contractual terms are (Luo 2002). The level of contractual specificity is the principal's choice, depending on the perceived level of hazard, which is often associated with size and importance of the transactions or transaction scope (Ding, Dekker and Groot 2013).

Relational contractual governance emerges from the norms and values embedded in social and commercial relationships (Macneil 2000) and has been seen as a particular form of contractual arrangement (Poppo and Zenger 2002). This involves trust, information exchange, mutuality and joint consent in the contracting process (Rai *et al.* 2012), thus giving contracting parties space to clarify mutual expectations and interact productively (Ding, Dekker and Groot 2013).

Studies that examine the impact of contractual governance on performance within inter-firm exchanges have produced mixed results. Specific and/or extensive contracts have been positively linked to exchange partners' satisfaction with performance (Poppo and Zenger 2002; Rai *et al.* 2012), on lowering *ex post* costs (Mooi and Ghosh 2010), and on controlling subsequent agency problems, as perceived by the principal (Bosse and Phillips 2016). On the other hand, formal contracts high in contractual control have been found to be detrimental for cooperation, undermining trust and flexibility (Faems *et al.* 2008). Schilke and Lumineau (2016) found that formal contractual control increases levels of conflict, hence negatively influences alliance performance, but coordination provisions in formal contracts reduces conflict and therefore positively influences performance. Relational contractual governance is credited with the capacity to surmount transaction hazards that can arise from agent opportunism (Husted 2007; Cao and Lumineau 2015), and offset the deficiencies of formal contracts by establishing mutual expectations and consent (Rai *et al.* 2012; Johnson and Sohi 2015). This suggests the structure and design of contractual governance may impact on performance differently, depending on the relational context.

Contractual approaches and efficacy in context

Schilke and Lumineau (2016) suggested that it is necessary to examine contractual options in context. Two interrelated contextual factors most relevant to the HEI-agent relationship are: HEI's market power and numbers of agents with which HEIs form contractual relationships (Huang, Raimo and Humfrey 2016). In this study, market power refers to the influence a firm has on the decisions of its competitors and customers (Shervani, Frazier and Challagalla 2007). Market power in the HE sector is often linked to the league table rankings of HEIs (Yen, Yang and Cappellini 2012), but entry requirements, directly linked to market demand, can also be seen as a proxy for market power (Huang, Raimo and Humfrey 2016). An elite university with high market power is likely to provide a different context within which contracts work to, say, a local community college with much less power. Likewise, international recruitment agencies have emerged into a substantial industry with a big array

of sizes and power, ranging from one-person agents (price-takers) to transnational corporations such as ICEF from Germany (Komljenovic 2017) and IDP from Australia who can often dictate contractual terms (Huang, Raimo and Humfrey 2016). It is suggested that institutions with very high power tend to work with smaller numbers of agents (i.e. one exclusive agent for each market) for resource efficiency and mutual benefit. Institutions with low market power may also have few agents because they are less attractive to agents; if they could, they would work with more (Yen, Yang and Cappellini 2012; Huang, Raimo and Humfrey 2016). Institutions with medium to high power tend to have more agents (often more than 100) as this ensures the primary effectiveness objective (recruitment targets) are achieved. But using more agents can increase negative efficiency risks and increase costs through administrative burden.

It could be argued that institutions with very high power might specify an extensive list of clauses, assuming that the presence of a clause alone will be effective at promoting cooperation and deterring breaches (Huang, Raimo and Humfrey 2016). They might feel no need for relational contractual governance, believing the agent would accept contractual terms through fear of losing business (Ding, Dekker and Groot 2013; Cao and Lumineau 2015). Alternatively, those with very high market power may be so powerful that they use formal contractual governance in a limited way with little specificity present, as they may be in a better position to use relational contracting more effectively depending on the desire of the agent to carry on being a supplier (Yen, Yang and Cappellini 2012). Those with low power who tend to use few agents may choose not to have an extensive list of clauses as they are unable to provide credible or implementable actions and threats (Huang, Raimo and Humfrey 2016), or they may be concerned that control and within-contract monitoring clauses may be detrimental to the agency relationship, relying on relational contractual governance to establish mutual consent. Institutions with medium market power and often working with many agents are likely to know that monitoring of numerous overseas agents is unrealistic (Nikula and Kivistö 2019), and therefore choose to use an extensive list of clauses

and within-contract monitoring. In addition, institutions working with many agents may not have sufficient staff resources to engage in relational contracting.

The literature thus shows several potential logical configurations and routes to performance of agency relationship perceived by HEIs (i.e. principals). However, to the best knowledge of the authors, no empirical studies of this association and configuration have been conducted in the context of managing international education agents in HE. This study, therefore, seeks to address the following questions:

What contractual governance approaches are adopted by HEIs with different market power and working with different number of agents, and how are the different contractual approaches associated with the achievement and non-achievement of agent performance as perceived by the HE managers?

Research methods

To explore the contractual governance approaches used by HEIs in different institutional context and their association with perceived agency performance, a configurational approach was taken using fuzzy-set qualitative comparative analysis (fsQCA) (Ragin 2008). The explanatory pluralism of the fsQCA approach has increasingly attracted management researchers (Misangyi *et al.* 2017). Three key principles underpinning fsQCA are: conjunction (multiple causes), equifinality (multiple causal pathways), and causal asymmetry (outcome from presence or absence of causal conditions), which are particularly suitable for answering questions such as “what configurations of attributes and conditions are associated with an outcome of interest?” (Greckhamer *et al.* 2018, p.484). However, it is worth noting that causality in fsQCA does not show statistical significance and net effects of particular causes as in conventional correlation-based statistical models (Vis 2012; Greckhamer *et al.* 2018). The analysis does not assume that conditions are linear and additive. Another related feature is causal asymmetry, which means conditions for positive outcomes may be different from conditions for negated outcomes. Readers are therefore reminded that all discussions of causal pathways in this study are considered from the fsQCA perspective. We aim to identify

different combinations of conditions in relation to perceived outcomes. This study has also taken one step beyond the normal fsQCA configurations by grouping the pathways (solutions) to each outcome into an easy-to-understand typology as detailed in the results section.

Samples

The sample frame was drawn from HEIs in Australia, the UK and USA. The three countries were chosen because, together, they host over one-third of internationally mobile students (UIS 2018). They also vary in their maturity of agent use, with Australia being most advanced, the US being at an early stage, and the UK in between (Bridge Education Group 2016). The data were collected via an online questionnaire, with password-protected links being emailed to key informants (i.e. staff with strategic responsibility for international recruitment, such as Pro Vice-Chancellors). The questionnaire was piloted with the target respondents in all three countries. Research ethics approval were obtained from the first author's institution prior to the survey. The emails were sent out via organizations in each country which held mail lists of international directors or officers of HEIs. To maximize the reach, and where possible, multiple organizations were used. The organizations were National Association for College Admission Counselling (NACAC, USA), Association of International Education Administrators (AIEA, USA) and International Consultants for Education and Fairs (ICEF, USA); Australian Universities International Directors Forum (AUIDF, Australia); Universities UK International Unit (UUKi UK) and British Universities' International Liaison Association (BUILA, UK). In total, 109 responses were obtained from 99 HEIs, of which 13 were discarded because of incompleteness. The 96 usable responses , were from 86 HEIs. Two institutions submitted multiple responses (i.e. 12 in total), in which case, the mean score for each institution was used in the final analysis. Table 1 presents the profile of the responding institutions and positions of the respondents in their own institution.

INSERT TABLE 1 HERE

As shown in Table 1, it is clear that compared to the samples for Australia and the UK, US HEIs were under-represented. This may reflect sensitivity about the transparent disclosure of international student recruitment agent utilization in the US¹. This study excluded for-profit HEIs². The sample covers a good range of locations, entry standards and the number of full-time equivalent staff dedicated to international recruitment and admission. In terms of the attributes of the respondents, the majority were operational managers in international recruitment including international directors, head of international recruitment and international officers. Typically, survey respondents had worked in international recruitment for over 9 years. This indicates that the respondents had front-line knowledge about agency management.

Scales and Measures

The instruments used to measure the key variables were adapted from previous studies (Cao and Lumineau 2005; Huang, Raimo and Humfrey 2016). Items to measure contractual governance approaches (Appendix 1) were highly contextualized for the HEIs. They were developed through content analysis of 38 agency contracts collected in 2015 from HEIs across the three countries during the preliminary research of this study. The 38 contracts comprised of 17 from the UK, 16 from the USA and 5 from Australia as a result of requests sent via NACAC in the USA, BUILA and UUKi in the UK and individual requests in Australia. All contracts received were agreements between HEIs and their international

¹ HEIs which participate in the US federal financial aid program are legally prohibited from engaging in incentive compensation-based recruitment of students who are eligible for this aid. A “foreign student carve-out”, as it is colloquially known, allows the practice with respect to international students, but it remains a subject of some controversy and confusion.

² We did not distinguish between public and private HEIs in the U.S. because the far greater distinction, in terms of student recruitment activity, is that between public and private not-for-profit U.S. HEIs on the one hand, and for-profit HEIs on the other. The latter were not the subject of this study, although these distinctions would likely be fertile ground for future research.

education agency relationships, and thus valid for this study. Thematic content analysis were conducted with reference to three national guidelines: 1) British Council's Recruitment Agents: A Legal Overview (Chang 2003), 2) Australia's National Code of Practice for Registration Authorities and Providers of Education and Training to Overseas Students (DEEWR 2007), and 3) the International Student Recruitment Agencies - A Guide for Schools, Colleges and Universities, produced by NACAC of the USA (West and Addington 2014). The contractual coding details are presented by country in Appendix 1. Variables and scales for survey data analysis are provided in Table 2 and explained in the following sections.

INSERT TABLE 2 HERE

Perceived performance of contractual governance

Performance of contractual governance refers to the efficiency and effectiveness of the exchange between HEIs and agents. Effectiveness, the results of using agents as perceived by HE managers, was assessed using four measures (Appendix 2). Three indicators used are: perceived level of control over how agents conduct their business (opportunism) (variable O1), level of satisfaction with agents' behaviour (variable O2), and level of satisfaction with recruitment via agents (variable O3) (5-point scales). In the context of international student recruitment, efficiency is normally linked to converting applications to student registration, one of the standard measures of efficiency of recruitment agents used by the sector. It was measured by the average conversion rate of applications from agents used by the institution (variable O4).

Contractual governance approaches

Relational contractual governance (variable R). In this study, the items for relational contractual governance were borrowed from the broader context of relational governance (Poppo and Zenger 2002; Cao and Lumineau 2015). We used the summated score of four reflective items (Poppo and Zenger 2002; Cao and Lumineau 2015) that comprised:

information exchange (2 items); joint consent (1 item), and trust in agents' contract adherence (1 item) (5-point scales) (Appendix 2). All those items were designed to reflect the institutional agent management approach and were not, therefore, relationship-specific. Data showed a Cronbach's Alpha score of 0.762, indicating a good internal consistency³.

Formal contractual governance focused on task-specific clauses to cover the range of contractual functions for education agency engagement (Appendix 1). The measurement of contractual specificity (variable C1), coordination (variable C2), control (variable C3) and within-contract monitoring (variable C4) followed the three-step approach adopted by previous studies (Kashyap, Antia and Frazier 2012). This involved:

- 1) a list of commonly used contractual items tailored to the context of university-agent contract was created (see Appendix) through analysis of 38 education agency contracts as explained earlier;
- 2) respondents were asked to indicate which were specified in their contracts;
- 3) unweighted sum of the items applicable to respondent's own institution and specified in their agency contract.

Contractual specificity (C1) refers to the extent to which roles, obligations, responsibilities, conditions and restrictions are specified or well-detailed in formal agreements (Furlotti 2007). It is therefore closely linked with the contractual functions of coordination and control terms (explained in the next paragraph). Specificity was calculated by matching the item detailed in the contract against the response for whether the item was required or prohibited. This produced a score of specificity for each item, ranging from 1 to -1 (i.e. 'required or prohibited' and 'specified in the contract' scored 1, 'not required or prohibited' and 'not specified in the contract' scored 0 and 'required or prohibited' but 'not specified in the contract' scored -1). Finally, a mean score was used for overall contractual specificity.

³ Further CFA on SPSS AMOS was performed which showed a good measurement model fit (Sig.= 0.328, CMIN/df = 1.116, GFI = 0.989, CFI= 0.998, AGFI = 0.944, RMSEA = 0.035, PClose = 0.410).

Contractual coordination (C2) and Control (C3) refers to the extent of coordination and control functions specified in the contract. Contractual coordination included 23 items detailing roles and responsibilities, financial arrangements and procedural coordination (Appendix). Contractual control included another 23 items detailing safeguarding, conditions and restrictions (Appendix).

Within-contract monitoring (C4) in this study refers to the extent of monitoring activities specified in the contract (Ding, Dekker and Groot 2013). This study only measured the specificity of *what* to monitor and *how* to monitor in contracts, rather than actual monitoring. Items were generated from previous studies and guidelines (West and Addington 2014; Huang, Raimo and Humfrey 2016). These included: a) number of items considered to be a major breach of contract (eleven items identified as potential major breaches to represent “what to monitor”), and b) number of monitoring activities (representing “how to monitor”) specified in the contract (Appendix 1).

Contextual variables refer to the institutional context, which include the number of agents the used (A), and market power (P) of the HEI. League table rankings have been linked to market power (Yen, Yang and Cappellini 2012) but they can be inconsistent (Williams and Rassenfosse 2016) due to different weightings and indicators. This makes it difficult to apply one universal scoring for all participating HEIs. As elaborated in the literature review, market power implicates the influence a firm has on the decisions of its competitors and customers. In the international recruitment setting, entry requirements relative to competitors (i.e. other HEIs within the country) reflects how the HEIs assess the market demand for their courses, hence a proxy for their market power (Huang, Raimo and Humfrey 2016). The question asked was: ‘What is the entry standard compared to other HEIs in the country’ on a 5-point scale from ‘very low’ to ‘very high’).

Data analysis and results

We used fsQCA 3.0 (Ragin and Davey 2016) for data analysis. Values of all multiple-scale variables were transformed to continuous fuzzy set scores (which range from 0 to 1)

according to Ragin (2008). The anchor points for full membership, crossover point and full non-membership were determined with consideration of external criteria when possible (Greckhamer *et al.* 2018). Greckhamer *et al.* (2018) acknowledged that when external criteria and theoretical knowledge to guide calibration are lacking, it is acceptable to “use properties of the study’s sample (e.g. its cumulative distribution or its frequency or density distribution) to determine thresholds that capture differences in kind and in degree among cases” (p. 488). A sample median was used when external criteria were lacking or inconsistent.

When calibrating the conversion rate (enrolment/applications ratio) through agents, we considered both external criteria and sample properties. This is because the external criteria were inconsistent and incomplete. OBHE’s study (2014) reported that the conversion rate for the US (24%) was much higher than that for Australia (14%) and the UK (13%). However, AUIDF’s (2015) benchmarking studies for Australia and the UK in academic year 2015/16 reported much higher rates (20-30% for both Australia and UK) but no ratio figure was available for the US in the same year. The sample median of this study for Australia and the UK was 23% and 20% respectively, in 2015 corroborated by AUIDF. The sample median of the US conversion rate of 48% was deemed appropriate as it showed a similar ratio between the three countries as reported by OBHE (2014). Hence the sample median of conversion rate for each of the three countries was used as the respective crossover (mid) point.

No benchmarking figures were available for the number of agents used by each university across the countries, although it is widely reported that the average number of agents used by Australian universities was the highest, and the US the lowest (Bridge Education Group 2016). We therefore used the sample median of each country as the crossover point for the number of agents (25 for the US, 80 for the UK, and 201 for Australia). For market power, three levels of market power were created: ‘very high’, ‘medium to high’ and ‘low market power’. Out of the 5-point scale, “3” and “4” were used as crossover points to indicate ‘medium to high market power’ and ‘very high market power’

respectively. ‘Low market power’ is represented by the ‘absence of medium to high market power’.

For all other variables, no context-specific benchmarking criteria were available and the data showed no significant differences across the three countries. Therefore, a direct method of calibration was performed within fsQCA3.0 using the full sample median of each variable as the crossover point. In addition, Ragin (2008) suggests that “it is good practice to avoid using the 0.5 membership score (which signals maximum ambiguity)” (Ragin 2008, p.131). Fiss (2011) suggests that a constant of 0.001 can be added to or deducted from the 0.5 membership score. Table 1 shows the measures and their respective calibration anchor points used in this study.

After calibration, a test for necessity was performed using both presence and absence of the variables. No positive condition passed the consistency threshold of .9 for necessities for positive outcome. The cut-off frequency in all configurations in this study was 2, the raw consistency was at least 0.80 (Ragin 2008) and the PRI (proportional reduction in inconsistency) score threshold was 0.5, acceptable according to Greckhamer *et al.* (2018).

A key feature of fsQCA is its ability to explore causal asymmetry (Ragin 2008; Fiss 2011), which means that causes for positive outcomes may be different from causes leading to negated outcomes. It is important to analyze the casual conditions for both presence and negation of the outcomes. This is the approach taken to identify configurations of conditions for the high and low level of each of the four agency performance outcomes (i.e., O1, O2, O3, O4, ~O1, ~O2, ~O3, and ~O4). However, the solution consistency for outcomes of high level of satisfaction with recruitment via agents (O3) and high level of conversion rate via agents (O4) was below the acceptable level of 0.8, hence not reported below.

The results of fsQCA of causal pathways leading to the presence (high level) or absence (low level) of perceived performance of agency contractual relationships with solution consistency above 0.8 are presented in Figure 1. Low level of outcomes is prefixed with “~” (e.g. ~O1). Following Fiss (2011), the causal conditions in configurations are identified as core conditions (from parsimonious solutions, i.e. simple solutions without

logical remainders added, indicated by “⊙” or “⊗”) or peripheral conditions (with logical remainders added, indicated by “●” or “⊗”). “Positive or Presence” indicated by “⊙” or “●” should be interpreted as “high or above average level” whilst “Absence or negated” indicated by “⊗” or “⊗” should be interpreted as “low or below average in that condition”. Blank space means “don’t care” where the condition may be positive or negated.

INSERT FIGURE 1 HERE

To provide a full picture of what contractual governance approaches have been adopted by what type of HEIs and how the configurations are associated with desired outcomes as perceived by HEI managers, we pooled together all configurations using two dimensions: relational contractual governance (R) and contractual specificity (C1) (Figure 2). This process generated four distinct archetypes which we labelled “Strategic Hybrids” (Q1, high R and high C1), “Pragmatic Operators” (Q2, Low R and High C1), “Flexible Friends” (Q3, high R and low C1) and “Laissez Faire Operators” (Q4, low R and low C1). Indicators of market power of the HEIs were used to show the institutional context within each archetype.

INSERT FIGURE 2 HERE

Strategic Hybrids (Q1, high R and high C1) are HEIs which used both high contractual specificity (C1) and high relational contractual governance (R), largely working with small number of agents. This approach was reported by HEIs with medium to very high market power, but not those with low market power. This hybrid approach, when combined with low number of agents used, high within-contract monitoring and high contractual coordination, seemed to be associated with positive outcomes in terms of perceived agent control (O1) and satisfaction with agents’ behaviour (O2) (Recipe 2 and 5 for very high market power; Recipe 1b, 2 and 7 for those with medium to high market power). On the other hand, negated outcomes were reported by those who reported high contractual coordination but low within-contract monitoring. In particular, HEIs with very high market

power seemed to be more concerned with lack of perceived control over agents' behavior (recipe ~1) and reported a below average conversion rate (recipe ~11), possibly reflecting their elite status in perceived potential reputation damage being and being more selective for student admissions and. For HEIs with mP, lower level of perceived control was associated with a core condition of low within-contract monitoring (C4 being ⊗ as in Recipe ~2), whilst low level of satisfaction with agents' behavior was associated with high level of specificity of contractual coordination (C2 being ⊙ as in Recipe ~6a).

Pragmatic Operators (Q2, low R and high C1) are HEIs adopting low relational contractual governance (R) and high contractual specificity (C1), working with high number of agents (except those with low market power as in recipe ~9a). This approach was reported by HEIs with either low market power (Recipe ~9a) or medium to high market power (Recipe 4, 8b, ~4, ~6b, ~9b and ~15), but not those with very high market power. For this group, positive perceived control over agents' behaviour (O1 in Recipe 4) and satisfaction with agent behaviour (O2 in recipe 8b) were associated with a core condition of high level of within-contract monitoring (C4 being ⊙). Again, they also reported negated outcomes. Recipes ~4, ~6b, ~9a, ~9b and ~15 suggest different associations between conditions and negated outcomes (~O1, ~O2, ~O3, and ~O4). Working with high number of agents was associated with low level of perceived control (Recipe ~4). Lack of very high market power combined with high specificity of contractual coordination were associated with low level of satisfaction with agents' behavior (Recipe ~6b). Low level of satisfaction with recruitment by agents was associated with a core condition of being lack of very high market power (hP being ⊗, as in recipe ~9a, ~9b). Finally, low conversion rate was associated with a negated core condition of relational contractual governance (R being ⊗, as in recipe ~15).

Flexible Friends (Q3, high R and low C1) are HEIs adopting high relational contractual governance and low contractual specificity. They may or may not use high number of agents. This approach was reported also by HEIs with medium to high or very high market power, but not those with low market power. HEIs with very high market power in this group who reported high level of satisfaction with agents' behavior (recipe 6), but low

level of perceived control (recipe ~3) and low conversion rate via agents (recipe ~13) seemed to have a shared core condition of low level of within-contract monitoring (C4 being ⊗). For HEIs with medium to high market power, high level of perceived control over agents' behavior was associated with a core condition of either working with low number of agents (A being ⊗ as in recipe 1a) or having highly specified within-contract monitoring if working with high number of agents (C4 and A being ● as in recipe 3 and 8a). Low level of contractual specificity combined with low level of within-contract monitoring was associated with low level of perceived control (recipe ~3). Low satisfaction with recruitment by agents seemed to be associated with lack of very high market power (recipe ~10a and ~10b) regardless of number of agents used. Recipe ~13 shows that low level of contractual coordination (C2 being ⊗) and low within-contract monitoring C4 being ⊗) were associated with low conversion rate.

Laissez Faire Operators (Q4, low R and low C1) are HEIs adopting low level of both relational contractual governance and contractual specificity. This group includes HEIs across the full spectrum of market power and may or may not use high number of education agents. Invariably, this group all reported negated outcomes. Those with very high market power in this group mainly reported dissatisfaction with agent recruitment and low conversion rates (recipe ~8 and ~12). Negated outcomes for all four performance indicators were reported by both HEIs with medium to high market power (recipe ~5a, ~5b, ~6c, ~10c, ~10d, ~12, and ~14) and those with low market power (recipe ~5b, ~7, ~10d and ~14).

Discussion and Conclusion

Studies on agency problems tend to look at contracts through the lens of outcome-based vs behaviour-based approaches (Whipple and Roh 2010), which contrasts with the identified need for a more nuanced approach when investigating contractual governance of agents in HE (Huang, Raimo and Humfrey 2016). In particular, contextual factors needed to be considered and accounted for (Yen, Yang and Cappellini 2012). Accordingly, the analysis explored the configuration of contextual factors and contractual governance approaches

adopted by HEIs to address agent behavior, and in so doing, improve agent performance, i.e. improve the effectiveness and efficiency of international student recruitment. This involved looking at the interactions between relational contractual governance, four indicators of formal contractual governance, two contextual factors and four outcomes of agency performance as perceived by HE managers.

Whilst methodological concerns were carefully considered in the study design, several limitations should be noted when considering conclusions drawn here. As with most surveys, the results presented were based on key informants' perceptions rather than actual observations. The measurements used in this study were based on an institutional approach, rather than on specific dyadic relationships. Thus, relational contractual governance was measured from the principal's perspective of principal-agent contractual exchanges. Future research is recommended to look through the agents' lens of the dyadic contractual relationship. Future research may also consider other stakeholders' (e.g., students) perspectives and lived experience when assessing agents' contractual compliance. There is also a need to study the principal-agent contractual relationship between students and agents where students would be the principal.

The causal pathways identified through fsQCA should not be interpreted in a linear way as one might do with a conventional regression approach. Instead, they should be treated as set relations (Ragin 2008) and the archetypes as subset configurations (Misangyi *et al.* 2017). This means the presence of a fit between high perceived outcomes and high relational contractual governance, high contractual specificity and high market power does not imply that all HEIs with high perceived outcomes have exhibited all those high positive attributes. The finding that high power HEIs were present in three of the four archetypes (except pragmatic operator) demonstrates the strengths of the set-theoretic approach of fsQCA in uncovering the complexity of organisational behavior. It is recommended that configurational analysis be adopted more widely in organizational studies.

The contextual conditions examined were limited to market power (proxied by relative entry requirement only) and number of agents. There are, of course, other contextual

factors that could be considered, including institutional resources, financial incentives, and locations which might have been important levers for the contractual governance approaches adopted and agents' behavior and recruitment performance. For example, HEIs with low market power have invariably reported a low use of relational contractual governance and low levels for all outcomes. However, it is unknown whether the lack of desired outcomes, particularly low satisfaction with recruitment, was caused by the incompetence/inaction of agents, or the incompetence/inaction of the universities marketing and student recruitment teams and/or the lack of market appeal of the university itself - which the agents could not overcome. Building market presence from a low power base is a common problem and the dynamics of low power in this market mean that agents may not be concerned about building relationships with these HEIs, or with losing their business (Yen, Yang and Cappellini 2012). Likewise, in that context, formal contracts seem unable to provide any lever. Future research using a wider construct of relational governance and power dynamics between the exchange parties may unpick the situation further. We would also encourage further studies to explore the role of external market devices such as reputation and certification (Komljenovic 2017) as well as standards and legislation (Nikula 2020) in enhancing the efficacy of the principal-agent contractual governance, particularly for low-power HEIs.

Notwithstanding the limitations, the study does provide rich and practical empirical insights into contractual governance approaches used by the principals (HEIs) to manage international education agents. The study has identified a typology of four archetypes of HEIs which shows that there is no 'one-size fits all' linear contractual governance solution to agency problems and the achievement of results. Of the four archetypes, one clear finding is that the laissez faire approach, which combines low levels of formal and relational contractual governance, is a path to failure regardless of the number of agents used and market power of the HEI. The other three archetypes have shown different pathways to outcomes. These are broadly summarized in Table 3 and discussed below.

INSERT TABLE 3 HERE

First, strategic hybrids invariably adopted high relational contractual governance and contractual specificity. What distinguishes those who reported positive outcomes, i.e. a high level of perceived control over and satisfaction with agents' behaviour from those with negated outcomes were the number of agents used and high within-contract monitoring. If they used a low number of agents and/or combined with a high level of within-contract monitoring, they were more likely to report positive outcomes. If those two conditions were ambiguous or if there was a clear low level of within-contract monitoring in particular, negated outcomes were reported.

Second, for pragmatic operators who used high level of contractual specificity and low relational contractual governance, The distinguishing condition was the presence or absence of high within-contract monitoring with presence associated with positive outcomes and the absence with negated outcomes. For flexible friends who adopted high relational contractual governance and low contractual specificity, no clear-cut conditions existed to distinguish positive and negated outcomes although a high level of within-contract monitoring as a core condition was only associated with positive outcomes.

What transpired is the role of the presence or absence of high level of within-contract monitoring played in the perception of agency performance by HEI managers, particularly when a high number of agents were used and high level of relational governance and actual monitoring would be impossible to practice. This suggests that within-contract monitoring may indeed be a proxy for ex-post monitoring (Johnson and Sohi 2016). In addition, contractual coordination (C2) seems to complement contractual specificity in all solutions for positive outcomes of perceived control over and satisfaction with agents' behavior. But for negated outcomes, a high level of contractual coordination was associated with a low satisfaction with agents' behaviour; and a low level of contractual coordination is associated with a low conversion rate. These findings challenge the taking of a broad-brush approach to constructs, and corroborates the findings of Lumineau and colleagues that contractual clauses may function individually and synergistically (Lumineau and Quélin 2012; Schilke and Lumineau 2018).

Some contextual patterns also stood out in this typology. HEIs with very high market power were present in three of the four archetypes (none were Pragmatic Operators). HEIs with medium to high market power were present in all four archetypes. Low power HEIs did not exhibit high relational contracting, being present only in the Laissez Faire or Pragmatic Operator segments. Shervani, Frazier and Ghallgalla (2007) suggested market power would act as a moderator. Our study suggests a more direct role for power. It indicates that low market power disallowed access to the relational form of contractual governance. Consistent with Huang, Raimo and Humfrey's (2016) finding, this study found that HEIs with medium to high market power are more likely to take a pragmatic approach, working with large number of agents and relying largely on formal contractual control.

The Covid19 situation has highlighted the increasing reliance of HEIs on in-country based agents. It is clear that the use of international agents to drive growth in international student enrolments is set to continue to rise and it is vital therefore that HEIs acknowledge the key role that agents play in helping them achieve their objectives. It is also vital that they make conscious choices about how they contract with agents. To do otherwise risks damage to university reputations, wastes resources, and fails to maximise the potential for student recruitment through the agency pathway.

Therefore, HEIs should have clearly articulated agent strategies. Moreover, these need to be understood internally and by the agents with which they work. In particular, the research findings suggest the importance of contractual specificity and the potential of within-contract monitoring as well as a proactive approach to agent engagement in contract design. The common practice of universities using a single standard contract for all agents, irrespective of territory or objectives, is more likely to lead to confusion about the status of the relationship and what is expected of the parties. The study has also provided evidence on the ineffectiveness of too loose or non-specific contracts, low levels of relational contracting and within-contract monitoring, little or too much contractual coordination. Specific advice would focus on contracts being very clear on contentious issues such as subcontracting and the charging of fees. HEIs also need to be cautious in what and how much they delegate to

agents. Thus, the 60-item measurement of contractual functions developed in this study can be used as a tool for front-line international managers. Although the study did not find sure-fire solutions that ensure satisfactory recruitment performance by agents, it is clear that governance approaches with strong relational contracting, high formal contractual specificity and high within-contract monitoring either separately or in combination are more likely to lead to better outcomes.

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INSERT Appendix 1 here

INSERT Appendix 2 here

Table 1. Profile of the responding institutions and positions of the respondents

	UK	US	Australia	Total	% of Total
Sample frame (number of HEIs excluding FE)	159	669*	38**		
Valid sample size of this study (number of HEIs)	41	33***	12	86	
Location of main campus					
Large city (Population > 1,000,000)	10	5	8	23	27%
Medium city (Population 500,000 – 1,000,000)	6	8	1	15	17%
Small city (Population 300-500,000)	5	4	1	10	12%
Smaller city or larger town (Population 100,000 - 300,000)	14	6	1	21	24%
Medium town (Population 15,000 - 100,000)	6	3	0	9	10%
Small town (Population 2,000 - 15,000)	0	5	0	5	6%
Rural area (Population < 2,000)	0	2	0	2	2%
Missing	0	0	1		0%
Total	41	33	12	86	100%
Entry standard compared to other higher education institutions in the country					
very high	4	0	3	7	8%
high	13	5	2	20	23%
medium	20	23	6	49	57%
low	4	4	1	9	10%
very low	0	1	0	1	1%
Total	41	33	12	86	100%
FTE staff dedicated to international recruitment and admission					
					Missing
Mean	12.54	3.33	31.91	11.28	
N	38	32	10	80	6
Std. Deviation	7.739	2.770	27.203	13.986	
Minimum	1	1	6	1	
Maximum	30	10	90	90	
Number of years worked in the institution					
					Missing
Mean	6.9	8.4	8.3	7.7	
N	40	33	11	84	2
Std. Deviation	5.19	8.22	9.14	7.02	
Minimum	<1	1	1	<1	
Maximum	20	37	30	37	
Number of years worked in international recruitment					
					Missing
Mean	11.6	7.7	9.6	9.8	
N	41	33	11	85	1
Std. Deviation	6.77	8.12	4.8	7.29	
Minimum	<1	<1	4	<1	
Maximum	35	35	16	35	
Respondent's position in the institution					
Pro Vice-Chancellor/Provost/Deputy President	0	1	0	1	1%
International director (or Deputy)	9	6	3	18	21%
Head of international recruitment	14	7	1	22	26%
International officer or Senior IO	7	12	5	24	28%
Regional manager	2	0	1	3	3%
Other	9	7	2	18	21%
Total	41	33	12	86	100%

* The number for US HEIs using agents was only an estimation based on data provided by NACAC (2015). The rate of four-year HEIs using agents was reported to range from 25% (Bridge Education Group, 2016) to 37% (NACAC, 2015).

** There were 43 universities in Australia, but the invitation to participate was only sent to the 38 AUIDF members which means all 12 Australian respondents were AUIDF members.

*** 46 responses were received, but 13 were discarded due to some key information being missing. (6% of response rate calculated from 46)

Table 2. Variables, measures and calibration

	Variable	Indicator	Measures	N	Range	Mean/Median	SD	Threshold for full membership	Crossover point	Threshold for full non-membership
O1	Perceived control	Level of control over the way agents provide services	5-point scale	86	2-5	3.19/3	.68	5	4	3
O2	Satisfaction1	Satisfaction with agents' behavior	5-point scale	86	2-5	3.83/4	.67	5	4	3
O3	Satisfaction2	Satisfaction with agents' recruitment performance	5-point scale	86	1-5	3.25/3	.79	5	4	3
O4	Conversion performance	Conversion rates of applications from agents	Continuous (%)	86	1-100 (UK 7-90) (AUS 15-70) (US 1-100)	34.5/24 (23/20) (25/23) (51/48)	24	45 32 89	20 23 48	10 15 11
R	Relational contractual governance	Four items	Summated (5-point scale)	86	7-20	13.93/14	3.074	19	14*	8
C1	Contract specificity	46 items (23 for coordination and 23 for control)	Calculated mean	86	.01 - .89	.469/.458	.177	.683	.458	.218
C2	Contractual coordination	Coordination (23 items)	Summated	86	3-17	10.116/10	3.302	14	10	5
C3	Contractual control	Control (23 items)	Summated	86	0-16	8.663/9	3.123	12	9	5
C4	Within-contract Monitoring	Extensiveness of monitoring specified in contract (14 items)	Summated (binary)	86	0-13	7.6/8	3.078	11	8	3
P	Market power	Relative entry standard in own country	5-point scale	86	1-5	3.27/3	.803	5(4)	4(3)	3(2)
A	Agent number	Number of agents used by the university	Continuous scale	86	1- 619 (UK 13-291) (Aus 71-619**) (US 1-160)	86/62 (93/80) (206/201) (35/25)	85 (67) (181) (40)	.95 (212) (337) (119)	.73 (80) (201) (25)	.50 (19) (72) (2)

* 0.001 added to .500 to UK mean only. **one extreme outlier excluded in the mean calculation.

Table 3. Summary of four archetypes of education agency contractual governance approaches in higher education

	Strategic Hybrids		Pragmatic Operators		Flexible Friends		Laissez Faire Operators	
Relational contractual governance (R)	High		Low		High		Low	
Contractual specificity (C1)	High		High		Low		Low	
Outcomes	Positive	Negated	Positive	Negated	Positive	Negated	Positive	Negated
Contractual coordination (C2)	High	High*	High	High*	Low			Low or High*
Within-contract monitoring (C4)	High*	Low*	High*	Low	Low or High	Low*		Low
Number of agents used (A)	Low*	Low or High	High	Low or High	Low or High	Low or High		Low or High
Market power- Low (mP being ⊗/⊗)				√				√
Market power- Medium to high (mP)	√	√	√	√	√	√		√
Market power- Very high (hP)	√	√			√	√		√

*May be a core condition

Outcome		O1	O1	O1	O1	O1	O2	O2	O2	O2	O2	~O1	~O1	~O1	~O1	~O1	~O1	~O2	~O2	~O2	~O2
Recipe number		1a	1b	2	3	4	5	6	7	8a	8b	~1	~2	~3	~4	~5a	~5b	~6a	~6b	~6c	~7
Relational contractual governance	R	⊙	⊙	⊙	⊙	⊗	●	⊙	⊙	●	⊗	●	●	●	⊗	⊗	⊗	●		⊗	⊗
Contractual specificity	C1	⊗	●	●	⊗	●	⊙	⊗	⊙	⊗	●	●	●	⊗	●	⊗	⊗	●	●	⊗	⊗
Contractual coordination	C2	⊗	●	●	⊗	●	●	⊗	●	⊗	●	●	●	⊗	●		⊗	⊙	⊙	⊙	⊗
Contractual control	C3	⊗	●	●	⊗	●	●	⊗	●	⊗	●	●	●	⊗	●	⊗	⊗	●	●	⊗	⊗
Within-contract monitoring	C4			⊙	⊙	⊙	●	⊗	⊗	⊙	⊙	●	⊗	⊗		⊗	⊗			⊗	⊗
Number of agents used	A	⊗	⊗	⊗		●	⊗		⊗	⊙	⊙				⊙	⊙			●	●	
Medium/high market power	<i>mP</i>	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	⊗
Very high market power	<i>hP</i>	⊗	⊗		⊗	⊗	⊙	⊙	⊗	⊗	⊗	⊙	⊗		⊗	⊗	⊗	⊗	⊗	⊗	⊗
		0.234	0.357	0.329	0.256	0.227	0.162	0.182	0.287	0.272	0.276	0.109	0.213	0.196	0.191	0.207	0.239	0.345	0.28	0.181	0.271
		0.034	0.046	0.028	0.055	0.061	0.04	0.044	0.104	0.094	0.087	0.030	0.064	0.006	0.042	0.053	0.049	0.104	0.04	0.017	0.111
		0.866	0.947	0.939	0.841	0.860	0.928	0.864	0.827	0.858	0.842	1	0.981	0.996	0.999	0.99	0.998	0.957	0.927	0.934	0.907
		Solution coverage: 0.626					Solution coverage: 0.618					Solution coverage: 0.494					Solution coverage: 0.555				
		Solution consistency: 0.867					Solution consistency: 0.837					Solution consistency: 0.962					Solution consistency: 0.927				

Notations

Outcomes

O1: high level of perceived control over agents' behavior

O2: high level of satisfaction with agents' behavior

~O1: low level of control over agents' behavior

~O2: low level of satisfaction with agents' behavior

~O3: low level of satisfaction with recruitment via agents

~O4: low level of conversion rate by agents

Symbols of presence of conditions

⊙ Core positive (high level)

⊗ Core negated (low level)

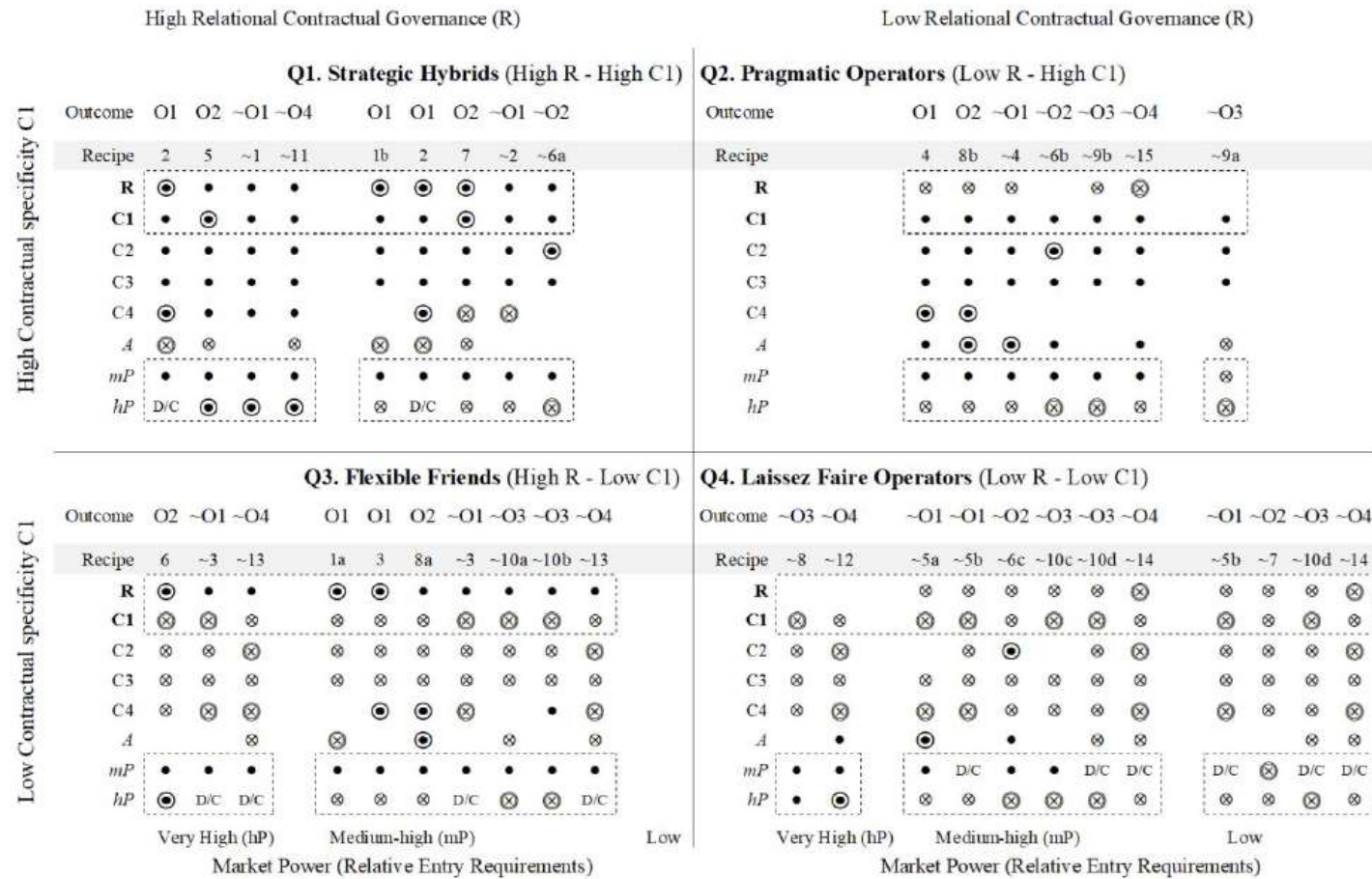
● Peripheral positive (high level)

⊗ Peripheral negated (low level)

Blank space: the condition may be positive or negated

Outcome	~O3	~O3	~O3	~O3	~O3	~O3	~O3	~O4	~O4	~O4	~O4	~O4
Recipe number	~8	~9a	~9b	~10a	~10b	~10c	~10d	~11	~12	~13	~14	~15
R			⊗	●	●	⊗	⊗	●		●	⊗	⊗
C1	⊗	●	●	⊗	⊗	⊗	⊗	●	⊗	⊗	⊗	●
C2	⊗	●	●	⊗	⊗		⊗	●	⊗	⊗	⊗	●
C3	⊗	●	●	⊗	⊗	⊗	⊗	●	⊗	⊗	⊗	●
C4	⊗				●	⊗	⊗	●	⊗	⊗	⊗	
A		⊗		⊗			⊗	⊗	●	⊗	⊗	●
<i>mP</i>	●	⊗	●	●	●	●		●	●	●		●
<i>hP</i>	●	⊗	⊗	⊗	⊗	⊗	⊗	⊙	⊙		⊗	⊗
	0.144	0.241	0.255	0.171	0.184	0.229	0.186	0.101	0.109	0.162	0.179	0.194
	0.023	0.043	0.043	0.007	0.015	0.025	0.024	0.025	0.002	0.023	0.032	0.049
	0.985	0.966	0.966	0.953	0.961	0.982	0.977	0.98	0.989	0.936	0.944	0.941
	Solution coverage: 0.529							Solution coverage: 0.836				
	Solution consistency: 0.977							Solution consistency: 0.834				

Figure 1: Configurations for outcomes of contractual relationship with education agents as perceived by HE managers



Notations

- O1** high level of perceived control over agents' behavior
O2 high level of satisfaction with agents' behavior
~O1 low level of control over agents' behavior
~O2 low level of satisfaction with agents' behavior
~O3 low level of satisfaction with recruitment via agents
~O4 low level of conversion rate by agents

- R** Relational contractual governance
C1 Contractual specificity
C2 Contractual coordination
C3 Contractual control
C4 Within-contract monitoring
A High number of agents used
mP Medium/high market power
 (Low market power if mP is either ⊗ or ⊗)
hP Very high market power

- ⊙ Core positive
 ⊗ Core negated
 ● Peripheral positive
 ⊗ Peripheral negated
 Blank space "don't care" where the condition may be positive or negated.
 D/C Recipes with D/C on market power (hP or mP) were shown for both "positive" and "negated"

Figure 2: A typology of education agency contractual governance approaches and perceived outcomes in HE

Appendix 1. Items used to measure formal contractual governance approaches with sources of items development

	Contracts from			Other
	UK	US	AUS	sources
Total number of contracts received and analysed	17	16	5	
Contractual coordination (23 items)				
Roles and responsibilities required - <i>Please indicate whether each of the following services is required of your established agents to provide and whether you have specified the requirement in your contract.</i>				
Advice on admissions and applications	12	10	5	
Advice on studying at your institution	9	4	0	
Advice on visa application	11	7	1	
Arrange competence test	7	2	3	
Certify student's documents	2	0	1	
Collect deposit on behalf of the institution	3	3	0	
Collect tuition and application fees on behalf of the institution	2	2	4	
Provide pre-departure advice on travelling and living	10	9	1	
Screen application	10	6	1	
Financial arrangements - <i>Please indicate whether each of the following financial arrangements applies to your agency relationship and whether it is specified in your contract.</i>				
Annual cap of fees to be paid to agents	0	1	2	
Commission based on first year tuitions fees only	12	5	2	
Standard Commission rate for all agents				a
Performance related commission rate and bonus	7	2	0	
Procedural coordination - <i>Please indicate whether each of the following is applicable and included in your contract.</i>				
A designated member of staff responsible for overseeing the agency relationship	8	2	1	
Agents' establishment and implementation of a system to monitor their level of services to students	2	0	1	
Annual report and review of agents' activities	9	3	2	
Annual review of the number of applications and successful recruitments	6	0	2	
Communication expectations	14	3	5	
Explicit reference to own recruitment and admissions policies and procedures	16	8	5	
Individual employees of the agents undertake training provided by institution	13	1	2	
Range and levels of programmes students are recruited to	8	7	1	
Student recruitment targets	10	2	1	
Sub agents undertake training provided by institution	1	0	0	b
Contractual control (23 items)				
Conditions - <i>Please indicate whether each of the following conditions on agents is applicable and included in your contract.</i>				
Act in the best interest of the institution	14	2	4	
Act in the best interest of the students	14	12	5	
Compliance with all laws	17	6	5	
Disclosure of the agency financial relationship to students	8	2	1	

Appendix 1. Items used to measure formal contractual governance approaches with sources (continued)

	UK	US	AUS	Other sources
Fee charges disclosure	8	2	1	
Geographical territories agents allowed to recruit students from	16	4	4	
Observation of institution's rights	12	10	5	
Obtaining institutional approval to delegate to sub-agents	13	4	5	
Scope of the agency's authority to represent the institution	17	12	5	
Restrictions - Please indicate whether each of the following is prohibited of your established agents and whether you have specified the prohibition in your contract.				
Advice on studying at the institution	0	0	0	b
Advise students on visa applications	0	0	3	b
Arrange competence test	0	0	0	b
Certify students' documents	0	0	0	b
Charge students service fees (double dipping)	2	2	3	
Claim commission for a student who applied directly or via another agent	8	0	3	
Collect deposits on behalf of the institution	2	0	0	
Collect tuition fees on behalf of the institution	1	4	3	
Commit on behalf of institution	16	5	5	
Encourage students to apply to multiple institutions	3	0	2	
Encourage students to apply to multiple programmes in the institutions	2	0	1	
Submit applications from outside the specified territory with claim	3	2	0	
Use sub-agents	9	1	1	
Within-contract monitoring (14 items)				
What to monitor - <i>Is this seen as a serious breach of contract?</i>				
Encourage students to apply to multiple institutions	3	0	2	
Making false promises	6	4	5	
Mishandling of fees payable to institution	4	1	5	
Misrepresentation	10	4	5	
Not following application procedure	3	4	5	
Not meeting targets	2	0	0	a
Not refunding deposit to students as instructed by the institution	2	0	0	b
Providing poor service to students	1	3	1	
Submitting fraudulent applications	4	2	5	
Using sub-agents without prior authorisation by institution	11	4	5	
Using the institution's trademarks or logo without obtaining approval	13	10	3	
How to monitor - <i>Which of the following applies to your institution?</i>				
Collect feedback from students	2	0	0	b
Compliance checks	3	0	0	b
Site inspections	5	0	0	b

a. Huang et al., 2016

b. feedback from pilot respondents

Appendix 2: Items used to measure contractual outcomes and relational contractual governance with questions asked in the survey.

Variables	Measurement
O1. Level of perceived control over agents' behavior	Please use this scale where 1 means "no control at all" and 5 means "a great deal of control" to indicate how much control you feel you have over the way your agents provide their service.
O2. Satisfaction with agents' behaviour	On average, how satisfied are you with the professionalism of agents you have managed? (1 being "not at all" and 5 being "very satisfied")
O3. Satisfaction with recruitment by agents	On average, how satisfied are you with recruitment through agents you have managed? (1 being "not at all" and 5 being "very satisfied")
O4. Conversion rate	What is the average rate of conversion from applications from agents to enrolment for the last two academic years? (... percentage)
R. Relational contractual governance	Please indicate your level of agreement or disagreement with the following statements. (1 – strongly disagree; 3 – neutral; 5 – strongly agree) Agents read and understood all terms of the contract before signing it. Agents who signed contracts with us adhere to the terms in the contract. All terms and conditions in the contract were fully discussed with agents prior to signing. All terms and conditions in the contracts represent the will of both the Institution and the agents.