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Are accreditation signals being recognised? Business professionals' awareness and views on accredited university business programmes

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ABSTRACT

In an increasingly global educational environment, business school accreditations are used by institutions as a signal of quality, credibility, and reliability. While academics' perspectives on accreditation are well documented, the perspective of the external stakeholder group, 'business professional', is scarce. This research addresses this gap by empirically exploring business professionals' perspectives regarding international and professional discipline-based accreditation of university business schools. A structured online survey attracted 110 valid responses from business professionals. A Bayesian Network (BN) model (implemented in Netica software) was developed for statistical analysis of the dataset, permitting the nuanced characterisation of complex interrelationships between the variables of interest. The findings indicate a low level of awareness of international accreditation among the survey participants. This questions the effectiveness of these accreditations as quality signals. Nevertheless, both international and professional accreditation were perceived as beneficial for employment and career prospects, and membership of professional bodies was seen as advantageous for networking and professional development. The practical implications suggest that information on accreditation, including quality indicators and benefits, could be more consistently and iteratively communicated to stakeholders. Furthermore, professional bodies and business schools could explore additional opportunities to enhance awareness about the value and career-related benefits of professional body memberships.

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Accreditation; AACSB; employment; business school; higher education; Bayesian Network

Introduction

Australian universities (and their international counterparts) often face criticism for producing business graduates who lack essential employability skills required to manage change, innovation, and adaptation in today's complex and disrupted operating environment (Hall, Agarwal, and Green 2013). Such criticisms engender debates on the value and worth of higher education (Jackson 2021) as employers prioritise professional skills such as teamwork, critical thinking, analytical reasoning, complex problem solving, communication, conflict resolution, and adaptability over more technical knowledge (Bridgstock 2009; Hall, Agarwal, and Green 2013; Jackson and

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Chapman 2012). Graduates are also competing for jobs in a global employment market. Educational institutions have responded to these criticisms and demands by aligning their programmes more closely to professional industry and global accreditation standards, thus 'signalling' the employability, credibility, and brand value of their programmes via accreditations and rankings (Alajoutsijärvi, Kettunen, and Sohlo 2018; Attree et al. 2022; Miles et al. 2015; Zhao and Ferran 2016). These signalling arguments suggest that the improved assurance of learning that comes with accreditation provides greater alignment between university and workplace needs thus enhancing graduate employability (Al Motairy 2016; Miles et al. 2015). Given the significant financial and human resources required to meet accreditation requirements (Avolio and Benzaquen 2020) and the multiple accreditations universities pursue, the question arises, 'are these signals being observed'?

Analysis of the literature on accreditation (both international and professional) reveals that most studies examine the issue from an institutional perspective. Research investigating student, alumni or other external stakeholder perspectives of accreditation is scarce (MacKenzie et al. 2019). In particular, business professionals are an understudied group. We deem this group to be especially relevant to accreditation decisions as they (1) are working in a professional capacity; (2) have an understanding of the skills and capabilities required to operate effectively in the workplace; (3) comprehend the differing functions of business; (4) are likely to have enrolled in, completed, or be considering further tertiary education; and (5) may be involved in the recruitment and selection of university graduates. Hence, 'signals' regarding the value of accreditation should be particularly pertinent for this group.

This research, therefore, sought to address this gap in the literature by examining the awareness of and perception toward both international and professional accreditation from the viewpoint of this stakeholder group. The study further aimed to understand the value that business professionals place on accreditation as a marker of quality or graduate employability, as well as the additional benefits they may associate with accreditations. The findings from this research make the following contributions. Firstly, we extend the accreditation literature by adding an external 'business professional' perspective. Secondly, we reveal that accreditation bodies are not well recognised by business professionals. Thirdly, we argue that quality indicators and benefits of accreditation should be communicated consistently and iteratively to stakeholders. Fourthly, we recommend that professional bodies and business schools explore opportunities to increase awareness regarding the value and career-related advantages of professional body memberships. Lastly, we suggest that our findings, supported by the quantification of evidence via a Bayesian Network (BN) model, may help guide decision-making processes on business programme accreditation in higher education.

The paper continues with an overview of extant international and professional accreditation research, the methodology used for data collection and analysis, a discussion of findings and implications, followed by limitations and further research directions.

Literature review

Signalling theory has been linked with higher education since the 1970s when economist Michael Spence proposed it as a method by which job applicants can signal their value or higher potential productivity to prospective employers (Spence 2002). At its core, signalling theory is based on information asymmetry – the idea that insiders possess valuable knowledge that outsiders could benefit from. When the information is positive, insiders (signallers) take action to communicate this knowledge through credible or trusted signals. For signalling to be effective, the signal must be both observed and understood, enabling receivers to make informed decisions based on the signal (Connelly et al. 2011). Additionally, the individual or organisation must be able to weigh and bear the cost of producing the signal. As highlighted earlier, international and professional accreditations are used by higher education institutions as signals of quality and credibility to prospective students and their employers in an increasingly competitive global education market (e.g. Miles et al. 2015).

Outside of the accreditation standards set by national governments, the two main types of accreditation university business schools pursue as signals of quality and credibility for their programmes of study are (1) international business accreditation and (2) professional accreditation issued by discipline-based industry bodies. While professional accreditation of some business disciplines is required (e.g. accounting), for other fields it is discretionary (e.g. human resource management, finance, marketing, management), as is the decision to seek international accreditation. An explanation of each type of accreditation is provided below, along with a synthesis of the extant literature.

International accreditation

For university business schools considering international accreditation, there are three main international accrediting bodies to choose from:

(1) AACSB International (formerly the Association to Advance Collegiate Schools of Business), a US-based body;
(2) The Association of MBAs (AMBA), a UK-based body; and
(3) EQUIS, the European-based quality review process managed by EFMD Global (EFMD).[1]

In Australia, AACSB International accreditation is the most pursued, with 22 out of the 40 universities (55%) obtaining accreditation for their domestic business school programmes (AACSB International 2023). By comparison, only four Australian universities (10%) have gained AMBA accreditation for their MBA programmes (Association of MBAs 2024), and just twelve institutions (30%) have obtained EQUIS accreditation (EFMD Global 2023). AACSB[2] and EQUIS have an advantage over AMBA in that accreditations are applied across all programmes (both undergraduate and postgraduate) in the business school or faculty. AMBA only accredits programmes at the Master of Business Administration (MBA) or Doctor of Business Administration level. Globally, more institutions have obtained AACSB accreditation than AMBA or EQUIS (AACSB International 2023). Over 1000 institutions across more than 60 countries have achieved AACSB accreditation (AACSB International 2024). Correspondingly, most of the literature on international accreditation focuses on AACSB with an emphasis on the process of becoming accredited (MacKenzie et al. 2019) or reporting the advantages of accreditation from the perspective of already accredited institutions (Alajoutsijärvi, Kettunen, and Sohlo 2018).

A significant driver for university business schools seeking international accreditation is the need to offset decreased public funding by attracting students from the increasingly competitive international education environment (Miles et al. 2015; Zhao and Ferran 2016). Various authors suggest that international accreditations are viewed as symbols of prestige, used to enhance institutional reputation, and signal quality and rigorous academic standards to prospective students and their employers (Bitter 2014; Elliott 2013; Kundu and Majumdar 2020; MacKenzie et al. 2019), thereby adding to the 'legitimacy of the program … especially if targeting international students' (Zhao and Ferran 2016, 58, 64), and thus positively impacting student recruitment and enrolment and graduate outcomes.

Beyond student recruitment, international accreditation offers internal benefits such as enhanced assurance of teaching and learning, improved leadership, increased research productivity, heightened creativity, strengthened ability to recruit and retain quality academic staff, and better alignment of processes and practices with school strategy and mission (Bitter 2014; Bryant 2013; Elliott 2013; Zhao and Ferran 2016). Perceived benefits to students include enhanced teaching quality and closer alignment between discipline knowledge, curriculum learning outcomes and employability skills, such as critical thinking, social responsibility, ethics, diversity, IT skills, digital literacy, and teamwork (Al Motairy 2016), leading to better employment and career prospects. For employers, international accreditations are believed to provide more meaningful indicators of quality, content, capability, and skill development (Miles et al. 2015).

The decision to pursue international accreditation faces challenges and criticisms. Hunt, Taylor, and Oberman (2017) found mixed support for claims that AACSB positively impacted student recruitment, graduate employment, faculty recruitment, and quality teaching. The high signal cost requires business schools to invest significant financial and human resources to gain international accreditation for their programmes (Avolio and Benzaquen 2020) and substantial time and effort to align the curriculum to accreditation standards (Ito 2022). Initial financial costs for AACSB accreditation can reach US$102,000, and recurring costs up to US$170,000 (Zhao and Ferran 2016). The cost of accreditation with AMBA or EQUIS is similar. Zhao and Ferran (2016) suggest that as more and more schools seek and gain accreditation, it becomes 'a basic requirement for a school to be considered credible' (58). They describe accreditation as 'a pass or fail process' that offers 'no distinction between those that are excellent and passed the tests with flying colours and those that barely made the minimum requirements' (56). Friedman and Kass (2016) claim that these accreditation systems can see Ivy League institutions listed alongside institutions named publicly as among 'America's worst colleges' (4). Indeed, Alajoutsijärvi, Kettunen, and Sohlo (2018) argue that accreditation is motivated 'first by competition, and only second by quality improvement' (204). Other criticisms include global standardisation, loss of national and cultural nuances, reduced flexibility that limits an institution's ability to respond to regional differences in skill requirements or changing market conditions (Al Motairy 2016; Bryant 2013; Hou et al. 2015; Woodside 2020), and the stressful impacts of institutional pressure on academic staff to improve research outputs (Prasad, Segarra, and Villanueva 2019).

Deciding to pursue accreditation results in a significant change process, with staff resistance inevitable (Ito 2022; Kadir, Arshad, and Johari 2016). Success requires top leadership commitment; a considerable investment of time; the involvement of all staff; quality management, continuous improvement systems; assurance of learning evaluation mechanisms; and innovations in teaching and learning (Avolio and Benzaquen 2020; Ito 2022). Without leadership support for these significant financial and non-financial signal costs, institutions are likely to fail in their accreditation efforts (Zhao and Ferran 2016).

Professional accreditation

The professional accreditation of tertiary programmes is underpinned by the need to ensure students gain the professional skills and knowledge required by employers to work as practising professionals in their discipline. In Australia, accreditation of accounting programmes by the two professional accounting bodies – Chartered Professional Accountants (CPA) Australia and Chartered Accountants Australia New Zealand (CAANZ) – is a standard requirement for any institution offering an accounting programme. Accordingly, all 40 Australian universities have obtained CPA/CAANZ accreditation. Accreditation of other business disciplines (e.g. human resource management (HRM), finance, marketing, and management) is optional.

Unsurprisingly, most articles examining the professional accreditation of business programmes focus on accounting with limited studies on other disciplines, such as finance, HRM or marketing (Attree and Neher 2023). Similar arguments exist for professional accreditation to those supporting international accreditation, that is, a heightened focus on continuous improvement, enhanced quality and assurance of learning, improved curriculum, and credibility signals and reputational benefits leading to higher student demand (Akimov, Bianchi, and Drew 2013; O'Connell et al. 2015; Zarzycka, Krasodomska, and Biernacki 2018). Perceived benefits for both students and universities distinct to professional accreditation include access to networking events, guest lecturers, sponsorships, prizes, and access to curriculum resources, including practical 'real world' case studies (Akimov, Bianchi, and Drew 2013; O'Connell et al. 2015; Zarzycka, Krasodomska, and Biernacki 2018). Another benefit is the opportunities for collaborative research that advances both academic needs and those of the profession (Akimov, Bianchi, and Drew 2013).

Criticism of professional accreditation suggests that compliance with discipline (or industry) standards may lead to programme design approaches that promote compliance at the expense of

holistic, transformative, student-centred, and authentic design. Programmes thus become increasingly similar across institutions with a strong focus on developing technical competence over in-demand skills such as teamwork, communication, decision-making, and the ability to make judgements or deal with uncertainty (Apostolou and Gammie 2014; O'Connell et al. 2015; Zarzycka, Krasodomska, and Biernacki 2018). Indeed, in their analysis of 57 professionally accredited accounting programmes in Australia, Bayerlein and Timpson (2017) revealed gaps in programmes meeting the profession's minimum educational expectations (MEE), such as judgement, knowledge, application, communication, teamwork, and self-management. Only two of the higher institutions included in their study covered all six MEE criteria in their accounting programme, and only seven institutions covered five MEE criteria. The authors conclude that undergraduate accounting programmes in Australia retain an 'outdated focus on technical skills' and are not adequately meeting the contemporary accounting practice requirements (313).

Literature gap

In reviewing the extant literature on international accreditation, most papers report the views of academic participants involved in the accreditation process. Studies examining the signalling value of international accreditation from the perspective of stakeholders such as students, graduates, employers or business professionals are rare. For example, in their systematic review of the literature on AACSB accreditation, MacKenzie et al. (2019) found that none of the 91 studies reviewed included employers or participants from the business community, and few included students.

Likewise, contemporary studies examining stakeholder perspectives of professional accreditation are rare, with a few notable exceptions focused on students. For example, Zarzycka, Krasodomska, and Biernacki (2018) found that Polish students perceived ACCA (a UK-based professional accounting body) accredited programmes to have a higher quality of education and enhanced labour market outcomes due to increased subject coverage. In particular, older students with professional experience were inclined to evaluate the associated quality of education more highly likely due to their greater appreciation of the value of an internationally accredited qualification. Similarly, Chen and Chen (2005) found that Taiwanese finance students viewed CFA accreditation and professional body membership as desirable and beneficial for their careers. In the Australian context, Ferns, Dawson, and Howitt (2021) explored staff, student, graduate, and professional body perceptions of accreditation. Students reported minimal knowledge of, or engagement with, professional bodies during their degree and expressed a desire for greater information, connection and networking opportunities, perceiving these as beneficial for employment.

In conclusion, the scarce extant literature suggests that institutions use international and professional accreditation to signal the quality, credibility, and career relevance of their programmes of study in an increasingly globalised education market. However, the business community – defined as 'business professionals' in this study – a key stakeholder for this signalling, is largely underrepresented in the accreditation literature. Therefore, this research examined business professionals' awareness of and perceptions, that is, their observation of the signals, from two forms of accreditation:

- International accreditation (e.g. AACSB, AMBA, EQUIS) and
- Professional accreditation based on discipline (e.g. accounting, marketing, HRM, management).

Further, the research sought to understand the value business professionals place on accreditation as a marker of quality and graduate employability and any additional benefits they may associate with accreditation. Such information is valuable in guiding decision-making processes about the efficacy of business programme accreditation as signals for higher education institutions.

The following section discusses the methodological approach used to gather and analyse data to achieve these research aims.

Methodology

Drawing on the literature analysis, professional experience of programme accreditation, and following extensive consultation with peers, the authors developed a structured online questionnaire to gather cross-sectional information. The survey comprised both closed ($n = 31$) and open ($n = 5$) questions to collect the data, using the Qualtrics platform. The questionnaire consisted of four sections: demographics, attitude toward education, awareness of and views toward international and professional accreditation, and membership of professional bodies. The survey was pilot tested by business contacts and academic peers to assess clarity, terminology, flow, logic, and completion time. Subsequently, feedback was addressed, and refinements were made. The survey was estimated to take 15 minutes to complete.

The survey could be accessed via a secure and anonymous link using various IT platforms, including laptops, tablets, or smartphones, allowing completion across multiple sittings. Participation was entirely voluntary, and participants could quit at any time. None of the information was identifiable by the researchers, and the data were analysed in an aggregated fashion. This research project was approved by the Charles Sturt University Human Research Ethics Committee (approval protocol number: H21484), and participants were informed about the ethical process before participating.

Initial promotion of the survey via LinkedIn to the professional networks of the key researchers yielded minimal responses ($N = 44$). Additional survey responses ($N = 80$) were acquired via Qualtrics' collection service covering our target group, 'business professionals'. We acknowledge potential sample bias by attracting LinkedIn users who are digitally literate and interested in the topic, hence excluding parts of the population not using LinkedIn. Similarly, using Qualtrics panels, the general population may not be fully represented because Qualtrics respondents may be frequent survey-takers motivated by compensation. However, given our focus on business professionals, LinkedIn is a relevant platform, being the largest professional social network with over 690 million users and considered the most effective social network for job seekers and recruiters (Fernandez et al. 2021). Correspondingly, Qualtrics offers tailored and targeted searches from a large pool of potential respondents, allowing for diverse samples (Mullen et al. 2021). For our sample, the panel's selection criteria (e.g. a minimum of three years of employment as a business professional in areas such as administration, finance, product and project management, legal, etc.) were carefully designed to attract appropriate respondents.

Data were collected between February and June 2022. A soft launch ($n = 10$) helped to increase the quality of responses through the Qualtrics platform, as data could be checked for any last issues before acquiring the bulk of the responses. Additionally, the median time to completion could be measured so that responses that did not appear to be thoughtfully provided could be eliminated, for example, if the completion time was too short (named as 'speeders' by Smith et al. 2016). The collected raw data were downloaded from the Qualtrics platform and cleaned for subsequent analysis. Erroneous entries and out-of-the-range values were removed, and cases with excessive missing values were excluded. As a result, out of 124 responses obtained, 110 were identified as valid responses for the analysis. Thus, the resulting ready-for-analysis quantitative data set contains 110 cases, each defined/characterised by 63 variables.

A Bayesian Network (BN) model was developed using Netica for the data analysis (Norsys Software Corp 2021). Originally developed as a modelling tool from artificial intelligence in the late 1980s, a BN has become an established quantitative analysis method in research across many disciplines, including industries and government organisations (Darwiche 2009; Manyweathers et al. 2021; Pearl 1988). The BN model is categorically different from a conventional dimension reduction approach and, therefore, cannot be compared with models such as the SEM (structural equation modelling). The following insights justify the use of the BN for our study.

The Bayesian Network is so named because it can be considered a mechanism for automatically applying Bayes' theorem to complex problems. The Bayes Theorem (or Bayes Rule) is a mathematical statement that expresses the interrelationships between the conditional, marginal, and joint

probability distributions of random variables as defined in the following formula (Upton and Cook 2006):

$$\Pr(B|A) = \frac{\Pr(A|B)\Pr(B)}{\Pr(A)} = \frac{\Pr(A\ ,\ B)}{\Pr(A)}, \tag{1}$$

where A and B are two random variables/events; $\Pr(A)$ and $\Pr(B)$ are the marginal probability distributions of A and B, respectively; $\Pr(B|A)$ is the conditional probability distribution of B given A; $\Pr(A|B)$ is the conditional probability distribution of A given B; and $\Pr(A, B)$ is the joint probability distribution of A and B. In a complex model that involves many variables, through the Bayes Theorem, a BN model quantifies the local dependency relationships between a variable (node) and its parent variables (nodes) and then all local dependency relationships are integrated based on the probability chain rule so that the joint distribution of the global (i.e. overall) interrelationships among all variables can be determined/characterised (Kjærulff and Madsen 2013; Norsys Software Corp 2021). Hence, the BN model was the most suitable method for our research.

Aligned with this discussion, the BN model was built based on the survey data in this study. Therefore, the development of the BN model has followed the sampling-subject-oriented approach with the participant's ID as the target variable for the specification of the model structure (Xie, Wang, and Manyweathers 2023). As argued in Xie, Wang, and Manyweathers (2023), the resulting BN model best represents the information contained in the survey data in the sense that the model's in-sample prediction results have a minimal error rate assessed by Netica's 'Test With Cases' function (Norsys Software Corp 2021; Xie, Wang, and Manyweathers 2023).

While the traditional regression analyses allow us to examine how an outcome/dependent variable is associated with one or more predictor/independent variables under a conditional probability distribution framework, a BN model enables a researcher to investigate the associations between any subset of variables and the remaining variables in the model (Casella and Berger 2002; Darwiche 2009; Kjærulff and Madsen 2013). More specifically, a BN model enables inferential 'scenario analysis' by fixing the values of selected variables and predicting the values of the remaining variables. That is, any variable(s) (the basis for defining a scenario) can be selected to analyse the remaining variables in the model. Hence, the interactive BN model allows for various inferential analyses to be performed by assuming different scenarios in terms of the 'findings' of other variables. Appendix 2 illustrates the scenario analysis (including sensitivities) using an example.

By referring to a target variable, a BN model also allows us to perform the so-called 'sensitivity to findings' analysis to quantify the strength of the association between the selected variable and all other variables in the model. Thus, the percentage values from such sensitivity analyses for a given variable are broadly analogous to the adjusted R^2, the goodness-of-fit measure from a regression analysis that provides an indication of the explanatory strength of one variable for another (Norsys Software Corp 2021). One further advantage of the BN model is that it provides a better way to overcome the curse of dimensionality (namely, a statistical model with too many variables will be more likely to technically break down). In this study, as graphically shown in Figure 1, there are (most categorical and a few numerical) 63 variables/nodes included in the model, and the information contained in these variables is all relevant and interrelated for answering our research questions. Thus, Figure 1 can be considered a static picture of all quantitative information in responses provided by the survey participants as presented in the form of a BN model. More importantly, we are able to obtain various statistical inferential analysis results that address our research questions. As shown in Figure 1, each variable in the BN model is represented by a node. The link between two nodes represents the dependency relationship between two variables. The middle column of each node is a percentage totalling 100%, representing the analysis outcomes of each level within a node. The last column is a graphical representation of the percentage values for each level, which are shown as distribution bars. The vertical dotted lines are markers, which are equally spaced to aid in visualising the comparative heights of the distribution bars.

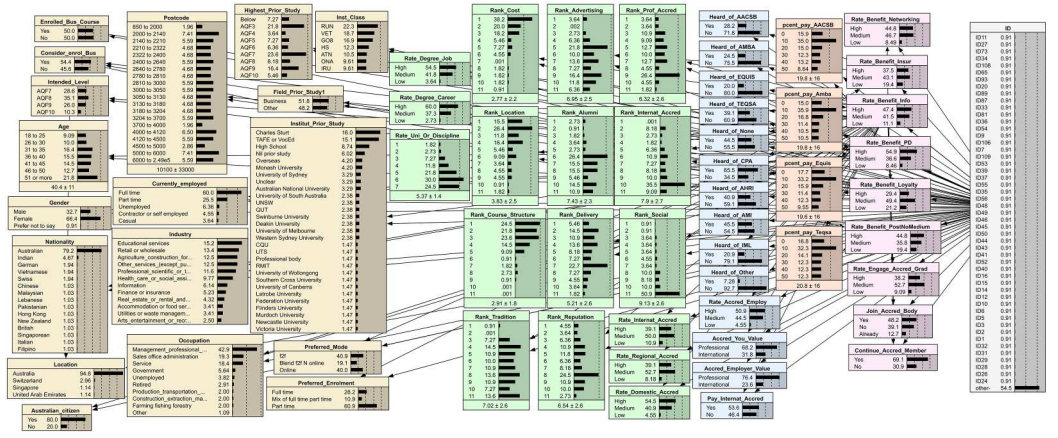

Figure 1. Visualisation of our Bayesian Network on business accreditation.

Note: Nodes in light yellow represent demographics or basic information variables; nodes in green represent attitude toward education variables; nodes in blue represent awareness of and views toward international and professional accreditation; orange nodes measure willingness to pay higher fees for accredited courses; and pink nodes rank the benefits of and interest in joining professional bodies.

Although the theoretical foundation and computational algorithms underlying BNs are highly involved with subjects such as computer science, applied mathematics and statistics, the application of the theoretically rigorous BN models is conceptually intuitive and operationally straightforward, thanks to the availability of many well-tested BN application software packages (Kjærulff and Madsen 2013; Korb and Nicholson 2011). This study uses the most widely used and scholarly accepted commercial BN software package, Netica (version 6.09), to build the BN model and investigate external stakeholders' awareness of and perspectives toward international and professional discipline-based accreditation of business school programmes. There are 12.5% missing values (864 out of a total of 6,930 data values) in the survey responses, and the Netica built-in Expectation-Maximisation algorithm (EM algorithm) was applied for the missing value imputation calculation. Hence, any analysis of the BN model in this study was based on this assumption condition (Darwiche 2009; Norsys Software Corp 2021). Please refer to Appendix 1 for the technical details of how the BN model was built.

Findings

Since the BN model best represents the information contained in the survey data and is a joint probability distribution model, we are able to obtain the analysis outcomes both for describing what the survey data are telling us and predicting what-if scenarios from the BN model. The findings follow.

Demographics

Our target group was business professionals. Survey demographics revealed that, as shown by the 'Currently employed' node in Figure 1, most participants were employed full-time (60%) or part-time (25.5%), with 6.4% not currently employed and the remainder (8.1%) being self-employed or employed as contractors or casuals. The 'Industry' node in Figure 1 indicates that employment industries were relatively evenly spread, with educational services (15.2%), retail or wholesale (13.4%), agriculture, construction, or forestry (12.5%), professional services (11.6%), and health care (9.8%). The top four occupations ('Occupation' node in Figure 1) are: management and professional level (42.9%), office administration (19.3%), service professionals (18.4%) and government officers (5.6%).

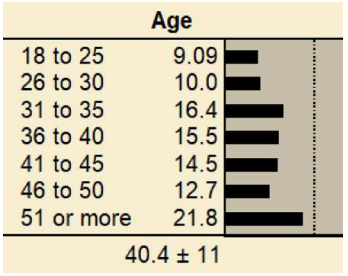

Figure 2. Age range distribution of participants.

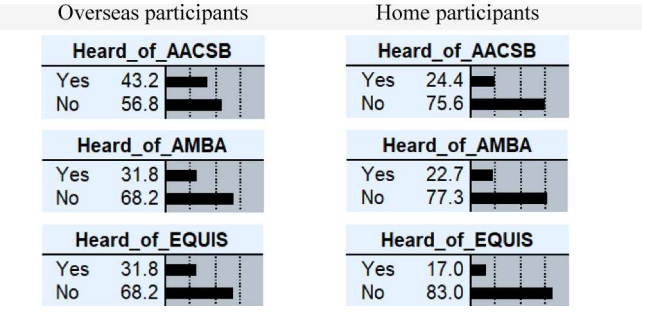

Figure 3. Differences in familiarity with international accreditations between overseas participants and home participants.

Figure 2 ('Age' node from Figure 1) illustrates that about 50% of the respondents were over 40. Only 19.1% were below 30, with the remaining 32% aged between 31 and 40. We suggest that this skew towards an older age profile (median age = 38; mean age ± standard deviation = 40.4 ± 11) reflects the expected age range of the 'business professional' target category.

Because international accreditation is often viewed as an important signal of quality and credibility for international student recruitment (e.g. Miles et al. 2015; Zhao and Ferran 2016), it was important to include nationality in the survey. The respondents predominantly identified as Australian (79.2%), and the majority were based in Australia (as indicated by their postcode). Other nationalities were spread across Asia and Europe. Scenario analysis (see Figure 3) showed that overseas participants are more likely to have heard of international accreditations.

Awareness of accreditation

Our research aimed to examine business professionals' awareness of the various types of accreditations pursued by business schools. Accordingly, participants were asked to indicate whether they had heard of any of the three main international business accreditation bodies: AACSB, AMBA, and EQUIS. The results indicate low awareness of these bodies (see Figure 4). AACSB was the most recognised, with only 31 people (28.2% of respondents) confirming they had heard of this accreditation, followed by AMBA (27 people, 24.5% of respondents) and then EQUIS (22 people, 20% of respondents).

Awareness of professional bodies was higher, with only 18 people indicating that they had not heard of any of the major Australian professional bodies, that is, CPA, Australian Human Resource Institute (AHRI), Australian Marketing Institute (AMI), or Institute of Managers and Leaders (IML). Among these, awareness of the CPA was highest, with 65.5% of respondents having heard of this body, followed by the AMI (45.5%), AHRI (40.9%), and IML (20.9%) (see Figure 4).

Given our assumption that business professionals are likely to have enrolled, completed or considered tertiary education, we surveyed participants' study history and intentions. Half were enrolled

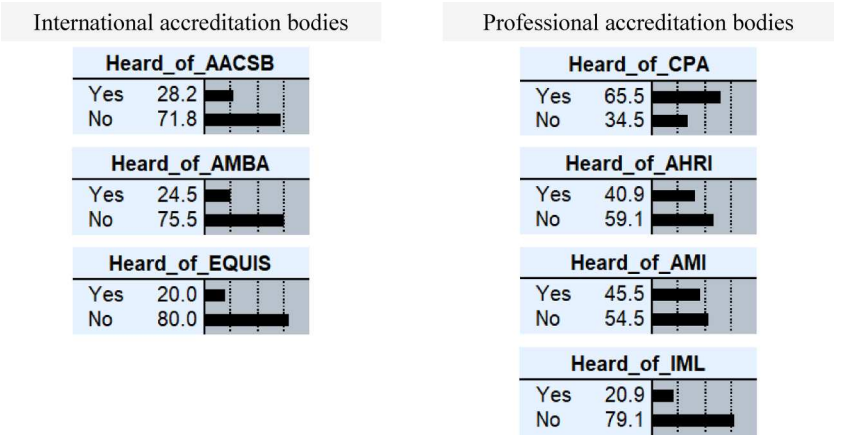

Figure 4. Awareness of international and professional accreditation bodies.

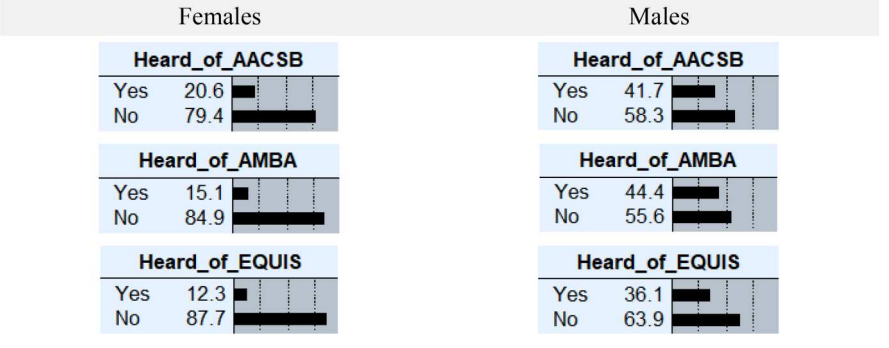

Figure 5. Comparison of awareness of international accreditation between females and males.

in a business-related programme at an Australian university, with 54.4% of the other half considering enrolling in business studies, mostly at the graduate level; that is, from a graduate certificate through to a PhD, reflecting participants' more mature age range. Of those who had previously studied, 50% went to a university with at least one international accreditation.

BN scenario analysis was also undertaken to investigate whether age, gender, or current or prior enrolment in business studies increased the likelihood of awareness of either international or professional bodies. No apparent pattern emerged from the data except for males, who were substantially more aware of international accreditation than females (Figure 5).

Attitudes and perceptions toward education and accreditation

Participants were asked about their attitudes to education before moving to specific questions regarding their perceptions toward accreditation. The overwhelming majority felt that obtaining a degree to get a job was essential, with 54.5% rating it as 'highly important' and 41.8% as 'somewhat important'. Similarly, the participants believed getting a degree is 'highly relevant' (60.0%) or 'reasonably relevant' (37.3%) for their careers. This clear view on the importance of education and getting a degree is corroborated by the fact that about 71% of the respondents had at least a qualification at AQF[3] level 4 (Certificate IV) and almost 54% at level 7 (Bachelor degree).

Table 1. Criteria for choosing a university (ranked, with 1 being most important).

1	Cost
2	Programme structure; content
3	Location
4	Delivery (online/on campus)
5	Accreditation by a professional body
6	Reputation or ranking of the university
7	Promotion/advertising of the institution
8	Tradition/opinion of family & friends
9	Alumni experience
10	Accreditation by an international body
11	Social elements (e.g. networking)

Since accreditation is viewed by institutions as a signal to the market of quality and posited to impact choice when selecting a programme of study (Bitter 2014; Elliott 2013; Kundu and Majumdar 2020; Miles et al. 2015), participants were asked to rank criteria for choosing a university. Cost and programme structure were ranked highest, followed by location and delivery mode (on campus or online). Accreditation by a professional body was ranked fifth, followed by reputation, university advertising, influence of family or friends, and alumni experience. Accreditation by an international body was placed second last, before social elements (see Table 1 below).

Although the ranking of accreditation is lower in importance than other factors when asked about the relevance of the accreditation of a degree for employability, respondents rated the importance as 'high' (50.9%) and 'relatively high' (44.5%), with a notable pattern between high rated responses and increasing age, as shown in the BN model. Moreover, 66% of the respondents in management-related jobs rated accreditation relevance as high and thus scored the highest (in percentage) across all occupations. Qualitative responses suggested that stakeholders associated accreditation with quality, credibility, and employability.

Further insights revealed (Figure 6) that professional accreditation bodies are valued higher than international ones, with more than two-thirds of the respondents preferring professional (68.2%) over international (31.8%) accreditation. When asked what they believed employers value, the result is even more significant, with 76.4% indicating they believed employers value professional accreditation more highly than international (23.6%). In both instances, BN analysis revealed that high ratings increased with age. Given the respondents' origin and location, the preference for professional accreditation bodies predominantly mirrors the Australian perspective.

Finally, participants were asked whether they would be interested in becoming a member of a professional body; 48% responded 'yes' or indicated they were 'already members' (13%). Of the 61% answering yes or who were already members, the majority stated that they would maintain (or had maintained) membership post degree, citing networking, industry updates, and professional development opportunities as the most important benefits. This corresponds to the recent findings by CAANZ that members value networking, advice, updates, professional development, mentoring, coaching and support (Dale 2016).

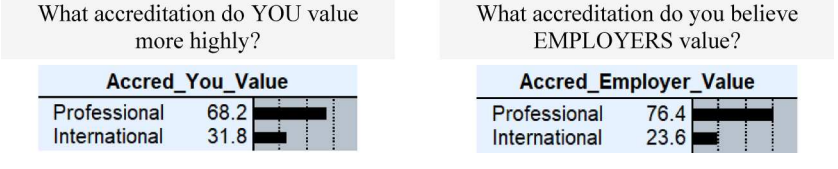

Figure 6. Awareness of international and professional accreditation bodies.

Discussion

Focus on international accreditation

This research examined business professionals' awareness of and perspectives toward accreditation of university business school programmes. Various authors have suggested that international accreditation (i.e. by AACSB, AMBA or EQUIS) provides a signal of quality, credibility, and employability to prospective students, employers, and other stakeholders (Bitter 2014; Elliott 2013; Kundu and Majumdar 2020; Miles et al. 2015). Our research found a low level of awareness of these accrediting bodies among surveyed business professionals. Further, when asked to rank their criteria for choosing a university, international accreditation was ranked tenth out of 11 criteria (Table 1). These results imply that such 'signalling' is not effectively observed or well understood in the Australian marketplace by external stakeholders.

Such findings may not be of significant concern to Australian business schools since the literature indicates that institutions pursue international accreditation primarily to be more competitive in a global education market (Alajoutsijärvi, Kettunen, and Sohlo 2018; Hall, Agarwal, and Green 2013; Zhao and Ferran 2016). Indeed, the fact that one Australian university has obtained AACSB accreditation for its international campus in Singapore but not for its domestic programmes arguably supports the view that stakeholders outside of Australia observe and place a higher value on international accreditation as a signal of quality and credibility than domestic stakeholders. In Australia, the Tertiary Education Quality and Standards Agency (TEQSA) ensures the quality of all degree-granting institutions through a comprehensive regulatory framework, hence Australian stakeholders may not feel the need to check the credibility of the institution, and this may also account for the middle level rating of 'reputation or ranking' as a criterion for university selection.

Given the significant signal costs in terms of time and financial and human resources involved in obtaining accreditation, we suggest that institutions would be wise to weigh the signal advantages and costs before pursuing accreditation. Universities may find it more advantageous to use their limited resources to pursue other less costly signals or initiatives that have greater resonance with the business community. Institutions that have already gained accreditation, could benefit from engaging in greater efforts to raise awareness of its value among domestic business professionals, employers, graduates and students, highlighting it as a signal of quality and enhanced employability. In the Japanese context, Ito (2022) reported experiencing increased enrolments from domestic Japanese graduate students following the attainment of international accreditation, suggesting that these professionals, 'especially those who work for global companies', were more likely to consider such accreditations favourably (1387).

Focus on professional accreditation

Overall awareness of professional accreditations was higher than that for international accreditation. CPA was the most highly recognised professional body, while professional bodies for other disciplines, such as HRM, marketing, and management, were less well known. Younger respondents were less likely to have heard of professional bodies, aligning with findings by Ferns, Dawson, and Howitt (2021) that students [we infer younger individuals] reported minimal knowledge or engagement with professional bodies during their studies and argued that information on these bodies should 'be embedded into their degrees' (65). Thus, we suggest that in addition to raising awareness of their international accreditation(s) as quality and credibility signals, opportunities also exist for business schools to signal the professional accreditation of their courses more emphatically to their stakeholders, particularly younger students.

An additional aim of the research was to understand the value business professionals place on accreditation as a marker of quality or graduate employability and to explore any benefits they may associate with accreditations. Qualitative responses provided frequent references to

quality, recognition, credibility, security, legitimacy, career benefits, and employability prospects. This suggests that Australian business professionals expect accreditations to operate as signals of quality assurance and industry relevance. This finding contributes to the arguments in the literature that accreditation (international and professional) can act as a signal of educational quality and credibility (e.g. Apostolou and Gammie 2014; Bitter 2014; Elliott 2013; O'Connell et al. 2015; Zhao and Ferran 2016), and enhanced employability (e.g. Al Motairy 2016; Miles et al. 2015).

Professional accreditation was valued more highly than international accreditation as a criterion for selecting a university. Survey participants perceived these accreditations as more relevant for career and employability prospects and expected employers to value them more highly. This aligns with findings by Zarzycka, Krasodomska, and Biernacki (2018) and Chen and Chen (2005), who found that professionally accredited programmes are perceived to offer higher labour market and career benefits in the fields of accounting and finance. Calhoun and Karreman (2017) also revealed that IT certification had a greater impact on the hiring and earning potential for US-based IT graduates than AACSB accreditation.

Qualitative responses indicated that participants viewed these professional accreditations as 'aligned to industry standards, relevant to future workplace trends', and 'beneficial for career advancement'. Despite concerns that professionally accredited programmes favour technical competence over contemporary workplace skills (Bayerlein and Timpson 2017), our survey results suggest that business professionals still view professional accreditations as aligned with workplace needs and providing employability advantages. This aligns with signalling theory, where accreditations act as credible signals of quality and industry relevance.

In accordance with O'Connell et al. (2015), we suggest that there is opportunity for greater connection and improved dialogue between academia and professional bodies to ensure that skill and capability development is aligned with industry needs. Participants in our research cited networking, keeping up to date with professional trends, and professional development as important benefits of professional body membership. Therefore, there appears to be merit in business schools working more closely with professional bodies to raise awareness of the benefits of membership and integrate professional body resources and activities more effectively and explicitly into the curriculum. Calhoun and Karreman (2014) point out that membership of a professional accreditation body can improve the international recognition of qualifications and the global mobility of professional accountants. While global mobility has advantages for all students, we suggest that international students, in particular, could benefit from greater awareness of and interactions with professional bodies to expand their network and employment prospects.

Theoretical contributions and practical implications

This study contributes to the extant literature by addressing a significant gap in empirical research and investigating business professionals' perceptions of the accreditation of business programmes in higher education as signals of quality, credibility, and employability thus adding to the concept of signalling. Awareness of professional accreditation bodies was reasonably widespread, with 82% of participants indicating they had heard of at least one professional body. However, overall, the awareness of international accreditation bodies was substantially lower, with fewer than 30% of respondents (31 out of 110) noting that they had heard of AACSB, the highest-rated accreditation. Alajoutsijärvi, Kettunen, and Sohlo (2018) argue that universities pursue accreditation in part to 'climb up the status hierarchy' and gain legitimacy and reputation both domestically and internationally (p.219). While accreditation signals might be well observed by the international academic community, research on stakeholders such as employers, business professionals, graduates and students is insufficient to conclusively assure institutions that these signals influence graduate employment or student enrolment. In the Australian context, our results reveal that such signals are less well observed or understood by business professionals.

The findings have practical implications for business schools and professional accreditation bodies. Given the significant signal costs to institutions seeking and maintaining international and discipline-based professional accreditation, we suggest that institutions may wish to carefully consider the purpose, number, type, stakeholder perceptions, and benefits of accreditations before pursuing them. Once accredited, opportunities exist for business schools to raise awareness of their accredited programmes beyond simply advertising on websites and promotional materials. Information on both types of accreditations, including quality indicators and benefits, such as enhanced assurance of learning and industry alignment, should be conveyed to students as part of the curriculum delivery and communicated iteratively. Opportunities to brief business professionals, recruiters and other key industry stakeholders should also be identified and actively pursued. Additionally, professional bodies and business schools should investigate collaborative opportunities to increase awareness of the value and career-related benefits of professional body membership, such as mentoring programmes, networking, and professional development activities. According to signalling theory, these efforts can enhance the perceived quality and relevance of accredited programmes, thereby improving employability and career outcomes for graduates.

Limitations and further research

Although this study provides new insights into the perspective of accreditation from a business professional's point of view, it has some limitations. Methodologically, this cross-sectional dataset allowed the quantification of statistical relationships. However, it did not permit the drawing of causal relationships because statistical data alone does not contain sufficient information to determine causation (Pearl and MacKenzie 2018). More importantly, the validation of scientific research findings ultimately relies on the repetition of the same research study under various plausible conditions.

Further research may, therefore, collect a new dataset, investigating different variables. For example, it would be interesting to find out whether universities with more professional and international accreditations are more attractive to students, leading to higher enrolments in accredited programmes. Additionally, it would be intriguing to explore whether accreditation is only a signal for business schools with parent universities (e.g. in the Australian context, all AACSB-accredited business schools have parent universities) or whether it functions similarly in private business schools. As the dataset concentrates on Australia with its geographical nuances, a larger dataset covering regions such as Europe, North America, and Southeast Asia would allow more comprehensive perspectives, including permitting comparability. The quantitative analysis methodology adopted in this study, namely the BN approach, is a theoretically sound and logically consistent statistical inferential framework with which the analysis results may be updated based on the updated data set.

Although our study and other authors' works address both international and professional accreditation (e.g. Akimov, Bianchi, and Drew 2013; Apostolou and Gammie 2014; Ferns, Dawson, and Howitt 2021), more studies focusing specifically on various stakeholder views – such as students, employers, and individual business professionals – toward professional accreditation and particularly beyond accounting would be beneficial since the research in this area is limited. Qualitative investigations could be conducted to explore the reasons for low awareness of international accreditation further, as found in this study and to determine whether awareness of accreditations varies depending on an individual's business function. Specifically, studies examining awareness of accreditation amongst HR and recruitment professionals would be invaluable. Further, the influence of demographic factors such as age on criteria for selecting a university could be examined.

Despite limitations, our research substantially extends the literature by examining the underresearched perspectives of business professionals on the international and professional accreditation of university business schools. Additionally, the BN modelling enhances this scholarly discussion through a novel methodological approach. Lastly, specific implications for practice, including both accreditation bodies and business schools, have been outlined.

Notes

1. EFMD Global was formerly known as the European Foundation for Management Development. Similar to AACSB, this organisation now refers to itself by the acronym. EQUIS stands for the EFMD Quality Improvement System.
2. Additional AACSB accreditation is available specifically for accounting programmes.
3. Australian Qualification Framework (https://www.aqf.edu.au/framework/aqf-qualifications).

Disclosure statement

No potential conflict of interest was reported by the author(s).

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Appendix 1: Technical details of how the Bayesian Network model was built in this study

The BN model was developed based on the ready-for-analysis data set that contains 110 cases, and each case was defined/characterised by 63 variables. For example, each valid response case was assigned a unique ID label and then defined by 62 variables, among which there were 18 demographics or basic information variables, 17 variables related to attitude toward education, 14 variables related to awareness of and views toward international and professional accreditation, 4 variables measuring willingness to pay higher fees for accredited courses, and 9 variables related to ranking the benefits of and interest in joining professional bodies. Note that there are 12.5% missing values (864 out of a total of 6,930 data values) in the survey responses, and the Netica built-in Expectation-Maximisation algorithm (EM algorithm) was applied for the missing value imputation calculation. Hence, any analysis of the BN model in this study was based on this assumption condition.

The development of the BN model has followed the sampling-subject-oriented approach with the participant's ID as the target variable for the specification of the model structure (Xie, Wang, and Manyweathers 2023). As argued in Xie, Wang, and Manyweathers (2023), the resulting BN model best represents the information contained in the survey data in the sense that the model's in-sample prediction results have a minimal error rate assessed by Netica's 'Test With Cases' function.

Every BN model has two components in its model specification – a qualitative and a quantitative component. The qualitative component specifies the network structure by connecting all the variables/nodes in the model. In contrast, the quantitative component determines the conditional probability tables (namely, evaluating the parameters – those values in the conditional probability tables (CPTs) of the BN model), quantifying the strength of dependence relationships using probability theory. By following the sampling-subject-oriented approach, the BN model was developed by determining the optimal model structure with respect to the ID variable through the TAN algorithm and then estimating the model parameters (i.e., the values of the CPTs associated with each variable/node in the model) through the EM algorithm in Netica. During Bayes net learning, Netica is trying to find the maximum likelihood of Bayes net, the net that is the most likely given the data (Darwiche 2009; Norsys Software Corp 2021). The model prediction performance of the resulting BN models (for the same data set) was checked/compared through Netica's 'Testing a Net Using Cases' function. In principle, the model structure of a BN model may be manually specified (rather than determined by the machine learning algorithm TAN) based on the researcher's domain knowledge. In our case, it is unlikely any researcher can reasonably provide a sensible model structure scheme in characterising the complex interrelationships among 62 variables (excluding the ID variable). On the other hand, treating the ID variable as the target variable for specification of the model structure through the TAN algorithm, the 62 substantive variables are considered as the indicator variables of the 110 response cases (i.e., the ID variable really plays the role of a latent variable that is characterised by those 62 indicator variables). Therefore, the sampling-subject-oriented approach has its plausibility ground that the model structure specified in this way can best represent the information contained in the data. Furthermore, the model fitting/in-sample prediction performance can be verified through Netica's 'Testing a Net Using Cases' function. Namely, the

sampling-subject-oriented approach achieves the lowest possible error rate in prediction performance with respect to the given sample. With the resulting BN model, there are 63 nodes/variables connected by 123 links/edges with 122,980 estimated parameters (i.e., the conditional probability table values). It would be unlikely that any researcher can possibly provide a model structure specification that achieves a similar prediction performance as the TAN specified model at this level of model complexity.

More specifically, the BN model was built using Netica as follows.

Step 1: The ready-for-analysis data set was saved as a .csv file.

Step 2: From the Netica toolbar, perform the operation: Cases → Learn → Add Case File Nodes … ; select the target ID variable.

Step 3: From the Netica toolbar, perform the operation: Cases → Learn → Learn TAN Structure to obtain the optimal model structure.

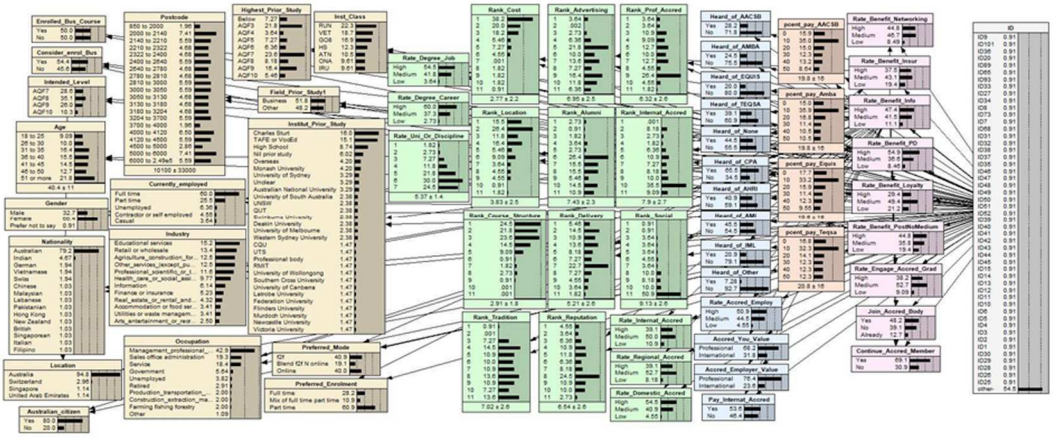
Step 4: From the Netica toolbar, perform the operation: Cases → Learn → Learning Using EM to get model parameters (those conditional probability table values) estimated.

Step 5: Select the colour scheme of the nodes and adjust the display position of the nodes so that the resulting models appear the same as those presented in Figure 1 of the manuscript.

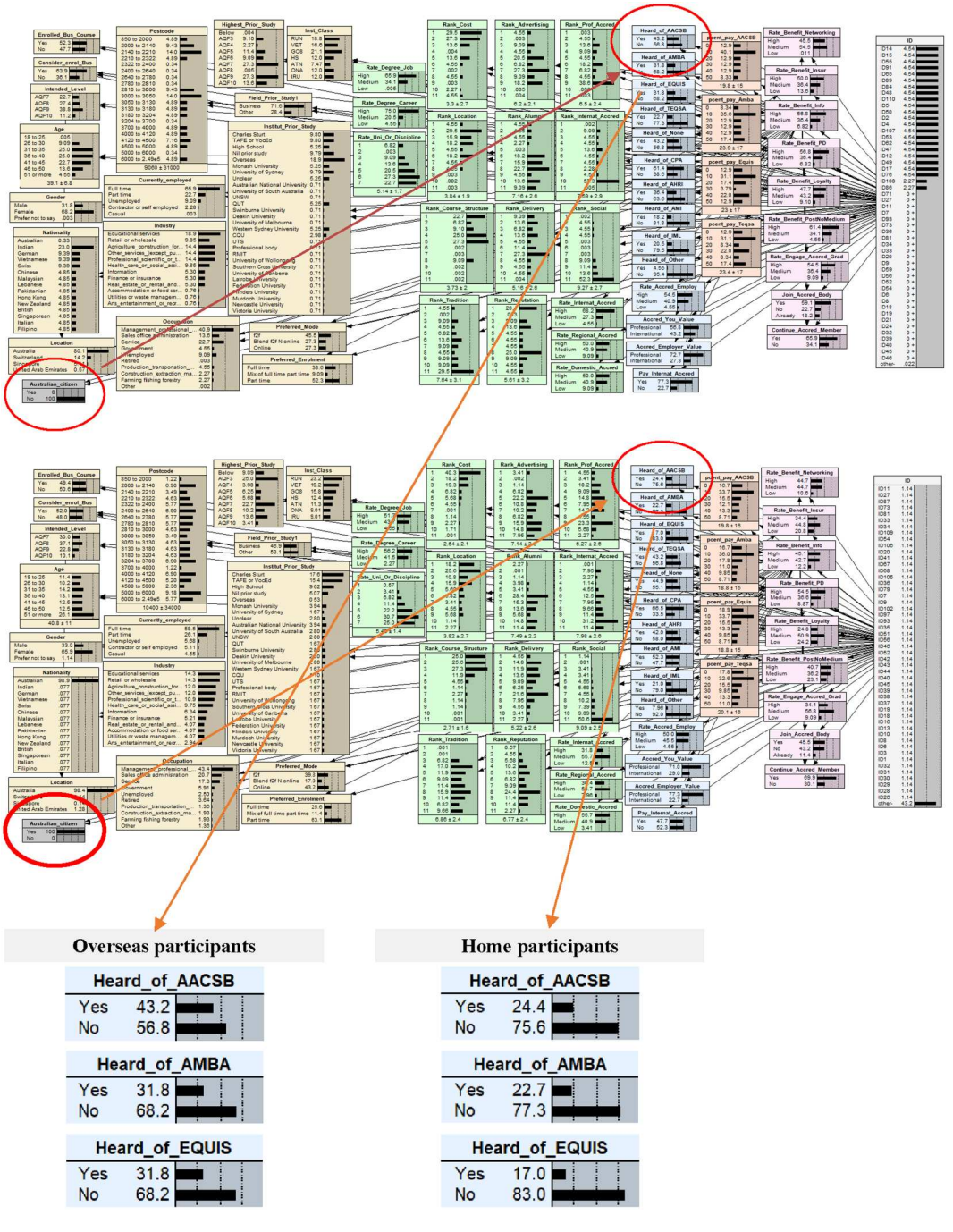
Together with the data file, a researcher should have enough information to rebuild our BN model and repeat all the analyses as presented in our paper using Netica.

Appendix 2: Illustration of the scenario analysis (including sensitivities), using Figure 3 as an example

Status quo: the BN model (Figure 1) represents the interrelationships of all variables as the current state.



Scenario analysis by assuming if (giving the evidence of) the responses were made by an overseas or a home participant then what would be the updated results of the focus variable Heard_of_AACSB.



A Bayesian network is a joint probability distribution of all the variables included in the model, and it is a logically consistent reasoning framework that characterises the interrelationships of the variables. The BN model of this study was developed by following the sampling-subject-oriented approach, which has the minimum prediction error rate with respect to the given data. The scenario analysis based on a BN model provides us with the posterior distributions of those outcome variables, given the updated evidence of those variable(s) that define the scenario. For example, Figure 3 of the manuscript presented the scenario analysis results with Heard_of_AACSB in terms of the scenario

defined by variable Australian_citizen (Yes or No) as depicted in the figures above. Therefore, in scenario analysis of a BN model, no variable values need to be (or assumed to be) kept constant – all variables in the model interacted with each other according to what was defined by the BN model. This is categorically different from the interpretation of the impact of a predictor variable on the response variable in a conventional regression model, which is a conditional probability model.

We may further conduct a sensitivity analysis on Heard_of_AACSB (the selected target variable) by employing Netica's built-in 'Sensitivity to Findings' function. A part of the sensitivity analysis results (it is too long to be included because of 62 variables involved) is shown in Table 1 below. The BN sensitivity analysis quantifies the strength of the association between the selected variable and all other variables in the model. Thus, the percentage values from such sensitivity analyses for a given variable are broadly analogous to the adjusted R^2, the goodness-of-fit measure from a regression analysis that provides an indication of the explanatory strength of one variable for another. For example, Table 1 shows that variable Heard_of_EQUIS alone can explain away 39% of the uncertainty of Heard_of_AACSB, gender explains 5.92% of the uncertainty and Location 9.06%, etc. On the other hand, given the knowledge of the participant's citizenship (by obtaining the evidence information of variable Australian_citizen, the uncertainty level of Heard_of_AACSB only reduced by 2.2%. Note that the sensitivity results tell us how each variable impacts the target variable alone, assuming other variables are kept fixed. Certainly, one can perform sensitivity analysis with respect to a defined scenario as well. For example, we may perform the same sensitivity analysis for those Australian participants only. The results are shown in Table 2. Now we note that the variable Heard_of_EQUIS alone can explain away 43.1% (increased by 4.1%) of the uncertainty of Heard_of_AACSB. However, gender explains 7.78% (slight increase) of the uncertainty, and Location is now only 0.817% (an intense decrease).

Table A1. Sensitivity to finding results with Heard_of_AACSB as the target variable.

Sensitivity of 'Heard_of_AACSB' to a finding at another node:

Node	Mutual Info	Percent	Variance of Beliefs
Heard_of_AACSB	0.85796	100	0.2024093
ID	0.85693	99.9	0.2023427
Heard_of_EQUIS	0.33501	39	0.0983296
Heard_of_None	0.30298	35.3	0.0637754
Rank_Alumni	0.17028	19.8	0.0396875
Postcode	0.16687	19.5	0.0385915
Industry	0.16198	18.9	0.0409307
Heard_of_AMBA	0.15997	18.6	0.0481627
Institut_Prior_Study	0.13426	15.6	0.0380331
Nationality	0.13073	15.2	0.0377244
Highest_Prior_Study	0.10914	12.7	0.0283872
Rank_Internat_Accred	0.10157	11.8	0.0288622
Rank_Prof_Accred	0.09182	10.7	0.0220330
Join_Accred_Body	0.08436	9.83	0.0229902
Rank_Reputation	0.08301	9.68	0.0233736
Location	0.07772	9.06	0.0219948
Rank_Delivery	0.07161	8.35	0.0182454
Rank_Social	0.06786	7.91	0.0186543
Occupation	0.06344	7.39	0.0167694
Heard_of_TEQSA	0.05777	6.73	0.0164332
Rank_Course_Structure	0.05490	6.4	0.0144923
Gender	0.05080	5.92	0.0144936
Rank_Location	0.04606	5.37	0.0116074
Rank_Tradition	0.04179	4.87	0.0105859
Inst_Class	0.03852	4.49	0.0109748
Rank_Cost	0.03624	4.22	0.0103991
Rate_Uni_Or_Discipline	0.03481	4.06	0.0082871
Currently_employed	0.03130	3.65	0.0082157
Rate_Benefit_Info	0.03012	3.51	0.0081517
Rank_Advertising	0.02995	3.49	0.0067820
Rate_Internat_Accred	0.02709	3.16	0.0065833
Rate_Degree_Career	0.02382	2.78	0.0052005
Rate_Benefit_PostNoMediu	0.02045	2.38	0.0057270
Australian_citizen	0.01888	2.2	0.0056239
Heard_of_AMI	0.01813	2.11	0.0050920
Rate_Engage_Accred_Grad	0.01426	1.66	0.0040360
Age	0.01233	1.44	0.0033823
Intended_Level	0.01181	1.38	0.0034517
Rate_Degree_Job	0.01164	1.36	0.0032190
Rate_Benefit_Insur	0.01022	1.19	0.0028330
Accred_Employer_Value	0.00933	1.09	0.0024786

Table A2. Sensitivity to finding results with Heard_of_AACSB as the target variable for Australian citizens only.

Node	Mutual Info	Percent	Variance of Beliefs
Heard_of_AACSB	0.80219	100	0.1846406
ID	0.80148	99.9	0.1845930
Heard_of_EQUIS	0.34557	43.1	0.0975191
Heard_of_None	0.25577	31.9	0.0486021
Postcode	0.22098	27.5	0.0473385
Heard_of_AMBA	0.21480	26.8	0.0610548
Rank_Alumni	0.18328	22.8	0.0434363
Institut_Prior_Study	0.15715	19.6	0.0428702
Rank_Reputation	0.15634	19.5	0.0382680
Industry	0.14355	17.9	0.0357975
Rank_Prof_Accred	0.11485	14.3	0.0261119
Rank_Delivery	0.11283	14.1	0.0291423
Rank_Internat_Accred	0.10168	12.7	0.0270729
Highest_Prior_Study	0.09417	11.7	0.0190228
Heard_of_TEQSA	0.09405	11.7	0.0237320
Rank_Cost	0.09206	11.5	0.0204780
Rank_Course_Structure	0.09053	11.3	0.0238676
Inst_Class	0.07987	9.96	0.0222859
Occupation	0.07931	9.89	0.0193427
Rank_Social	0.07520	9.37	0.0210378
Rank_Location	0.07356	9.17	0.0156939
Rank_Tradition	0.07320	9.12	0.0144530
Rate_Uni_Or_Discipline	0.06549	8.16	0.0146889
Gender	0.06244	7.78	0.0167542
Rate_Internat_Accred	0.06217	7.75	0.0106312
Join_Accred_Body	0.05166	6.44	0.0125557
Currently_employed	0.04435	5.53	0.0119245
Rank_Advertising	0.04325	5.39	0.0098743
Rate_Regional_Accred	0.03848	4.8	0.0064866
Rate_Degree_Career	0.03773	4.7	0.0084917
Heard_of_AMI	0.02931	3.65	0.0073206
Rate_Benefit_PostNoMediu	0.02901	3.62	0.0071729
Rate_Benefit_Info	0.02475	3.09	0.0062365
pcent_pay_AACSB	0.02247	2.8	0.0058805
Rate_Benefit_Loyalty	0.01959	2.44	0.0052468
Age	0.01901	2.37	0.0045245
Rate_Benefit_PD	0.01640	2.04	0.0033449
pcent_pay_Teqsa	0.01640	2.04	0.0042316
Rate_Engage_Accred_Grad	0.01637	2.04	0.0042850
Intended_Level	0.01604	2	0.0043310
Rate_Domestic_Accred	0.01429	1.78	0.0021893
Accred_You_Value	0.01215	1.52	0.0032323
Pay_Internat_Accred	0.01015	1.26	0.0025934
Rate_Benefit_Insur	0.00969	1.21	0.0023944
Rate_Degree_Job	0.00775	0.966	0.0019596
Enrolled_Bus_Course	0.00709	0.884	0.0018102
Heard_of_CPA	0.00681	0.849	0.0016886
Location	0.00656	0.817	0.0018190
pcent_pay_Amba	0.00516	0.643	0.0013439