Effects of the nature of board involvement, the keys to talent selection and recruitment projects on the student recruitment performance of Taiwanese vocational colleges

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ABSTRACT: This study considers the nature of board involvement, the keys to talent selection and recruitment projects, and how they affect the student recruitment performance of private vocational colleges across Taiwan. The teaching staffs of schools were interviewed according to Simple Random Sampling, and Structural Equation Modelling (SEM) was firstly established and, then, goodness-of-fit of the overall, structural and measurement models, etc, were tested and verified. Findings are: 1) the nature of board involvement in private Taiwanese vocational colleges has a negative effect on student recruitment performance, although it is insignificant; 2) the keys to talent selection have a significantly positive effect on the student recruitment performance; and 3) recruitment projects have a significantly positive effect on the student recruitment performance. These results imply that board involvement, the keys to talent selection, and recruitment projects are three important factors for a school's improved performance in student recruitment.

INTRODUCTION

From the viewpoint of ownership structure, Agrawal and Knoeber suggested that agency problems between managers and shareholders can be solved by policies concerning the percentage of shares held by insiders and/or institutional investors, or the management of labour markets [1]. The structural characteristics of the board of directors, such as the percentage of shares held by directors/supervisors, the percentage of external directors sitting on the board, and the selection of internal directors (e.g. the chairman) in terms of expertise and decision-making ability, tend to affect a company's operating performance and its share price [2]. As these theoretical statements were derived from profit-seeking businesses, do the board's involvement and shareholding percentages at non-profit schools affect the student recruitment performance the same way they affect business entities? That is an important issue worth studying.

Schools implementing diversity-oriented student recruitment projects should ask themselves whether they have recruited appropriate students for optimal use of education resources, and if they have drawn up teaching strategies suitable for instructing students to learn well, to reach their full potential, and to develop an excellent character. Meanwhile, members of the student recruitment committee should understand fully the keys to talent selection, while exploring the qualities of students that will meet the school's expectations. They should also examine the heterogeneity, if any, among different approaches to student recruitment, including the coping measures for such heterogeneity, so that all students can enjoy equal access to appropriate education and achieve growth, either academically or personally [3][4].

In recent years, the Taiwan government's deregulation-oriented education policies have resulted in a diversified and liberal approach to education, and the declining birth rates have caused the supply of education (i.e. total number of students to be recruited) to exceed the demand (i.e. options of college majors available for freshmen-to-be), which in turn has led to intensified competition between Taiwanese universities/colleges.

Students and their parents are expecting more and more from college education, making the quality of curricula one of the main concerns for school selection. A well-conceived recruitment project and teaching strategies are, therefore, the prerequisites for a school's success in student recruitment and survival, because they provide incentives to attract students. Because offering education with emphasis on the quality is the only way for a school to improve the student recruitment performance, as well as the best guarantee for sustainable operations [5], this study has three main purposes:

1. To see whether the nature of board involvement has a significant effect on the student recruitment performance of private Taiwanese vocational and technological colleges/universities.

2. To see whether the keys to talent selection have a significant effect on the student recruitment performance of private Taiwanese vocational and technological colleges/universities.
3. To see whether recruitment projects have a significant effect on the student recruitment performance of private Taiwanese vocational and technological colleges/universities.

LITERATURE REVIEW

Literature regarding how the main perspectives of this study (i.e. ownership structure, the nature of board involvement, and related-party transactions) affect a company's operating performance is discussed within several groupings.

The Nature of Board Involvement

Donaldson and Davis found in their study that it is easier and more efficient for a company's CEO who doubles as the chairman (i.e. CEO duality) to carry out corporate strategies [6]. Because a CEO is responsible for corporate performance and is well aware of, or grasps, the company's internal information, he/she will make every effort to keep the company running while contributing to the supervision mechanism, enterprise value (EV) and shareholders' wealth. Sridharan and Marsinko scrutinised randomly selected companies from 1988 to 1992 and linked CEO duality to better operating profits and greater production efficiency of company assets, as reflected in the increased EV and market-assessment results [7].

However, Core, Holthausen and Larker are opposed to that concept and found that the less efficient the corporate governance system, the more money a CEO earns [8]. They also mentioned a significantly negative correlation between a company's ownership structure and the ensuing operating performance and share price return. Therefore, they asserted that the weaker a company's corporate governance system, the greater the agency problems, and that a CEO's salary (which increase in the case of CEO duality) grows along with the board size, the percentage of external directors (especially those appointed by the CEO), and the age of external directors. That is, a company with a weak corporate governance system tends to suffer from greater agency problems and poorer operating performance.

Pei-chien Li [2] indicated the following variables of the nature of board involvement:

1. The board size: as a board of directors grows larger, it becomes less capable of supervision.
2. The percentage of independent external directors: the percentage of external directors and supervisors sitting on the board, except members in the administrative departments or employees.
3. The chairman, who also serves as the CEO (i.e. CEO duality).
4. The percentage of shares held by directors and supervisors: the shares controlled by directors and supervisors, divided by the total number of shares outstanding at the end of the year.
5. The percentage of shares pledged by directors and supervisors: the shares pledged by directors and supervisors at the end of the year, divided by the shares they hold at the same time.

Kuan-chu Chiu indicated several variables relevant to the nature of board involvement: 1) the board size: the total number of a company's board members at the end of the year; 2) the percentage of independent directors: the number of a company's independent directors, divided by the total number of board members at the end of the year; 3) the percentage of institutional investors sitting on the board: the percentage of external directors sitting on the board, representing listed or unlisted entities; and 4) CEO duality: a company's chairman also serves as the CEO at the end of the year [9].

This study is focused on non-profit organisations, where the variables of board characteristics applicable are slightly different to those defined for profit-seeking firms (as mentioned above). In this study, the school board's involvement is addressed from two perspectives; namely, the extent to which the board is involved in school affairs and the shareholding ratio of directors and supervisors in Taiwan's existing vocational and technological colleges/universities.

The Keys to Talent Selection

Little literature is available about the keys to a school's success in talent selection. However, Taiwanese researchers have undertaken studies in this area.

Talent selection and recruitment are two sides of the same coin. According to Milkovich and Boudreau, recruitment is a process of identifying and attracting applicants, from which a company chooses those worthy of employment [10].

Cheng-yu Hsu said in *An Analysis of Recruiting Strategies and Student Profiles Using Analytic Hierarchy Process* that schools should fully understand their keys to talent selection before choosing among recruitment projects on the basis of their weight values from four perspectives: academic intelligence, aptitudes and interests, learning attitudes and

recognition of concepts [3]. These four perspectives have been explored in detail and adopted in this study as part of the research variables.

In her study entitled *Establishing and Diagnosing of Information Management Knowledge Structure*, Hsien-mei Chen defined the expertise required of all information management majors and proposed 18 pre-requisite abilities [11]. These are: reading comprehension skills for English-language technical information; a good understanding of business administration; basic programming ability; basic ability of network management/applications; the ability of designing, establishing and applying a database; the ability of maintaining information systems; the ability of analysing/designing corporate procedures; the ability of analysing, concluding and integrating problems; team spirit; the ability of logical reasoning and analysis; the ability of actively acquiring new knowledge/technologies; the commitment of managing emotions and work-related stress; a good ability of interpersonal interactions, communications and negotiations; an active, positive, serious and responsible attitude toward work, the ability of project scheduling and resource controlling; the ability of giving team members instructions with regard to the division of labour, cooperation and integrating achievements; the ability of finishing missions independently; and work ethics and morality. The 18 components of expertise were derived from a research project on information management majors in Taiwan.

In *The Exploratory Investigation on the Process of Recruitment and Talent Selection in High-Tech Industries*, Ming-le Kuo argued that the establishment of a complete mechanism for internal job transfers is helpful for a company's talent selection efforts [12]. Such a well-defined and confidential mechanism ensures all employees are in the right place as they are allowed to actively apply for jobs that interest them. This mechanism is designed for the high-tech industry and requires further research to verify whether it is applicable to school's talent recruitment schemes, with the students' interests taken into consideration.

In his study entitled *Applying Balanced Scorecard to Explore Performance Measurement of Personnel Training - A Case Study of Ministry of Education Leadership Training Program*, Ming-wen Hsu proposed the balanced scorecard as a method to identify factors that affect the performance of training programmes. He also discussed the difference in such performance caused by environmental or personal variables [13]. After exploring the causes of such differences, Hsu presented a summary of advice for the measurement of personnel training performance, providing references for future implementation of, or improvement in, talent development/training projects.

Li-mei Wang collected information concerning expertise required of information management workers from on-line manpower banks, and analysed it in the two dimensions of *management and decision making* and *systems and services*, which include eight sub-dimensions: 1) The type of OS platform used; 2) The ability to process office documents; 3) The type of database used; 4) Programming language; 5) Web site development techniques (including graphic design software); 6) Professional certification; 7) Chinese- and English-language proficiencies; and 8) Other related skills [14].

Gao-liang Wang [5] conceptually defined the keys to talent selection as *the standard of selecting applying students from the school's standpoint* and measured them for vocational and technological colleges/universities using the perspectives proposed by Cheng-yu Hsu [3], namely academic intelligence, aptitudes and interests, learning attitudes, and recognition of concepts.

Judging from the literature reviewed above, one knows that the keys to, or standards of, talent selection vary among industries or even among sectors within the same industry. For the confirmatory factor analysis (CFA) in this study, the conceptual definition of *the keys to talent selection* was based on the definitions and perspectives proposed by Cheng-yu Hsu [3] and Gao-liang Wang [5].

Projects of Student Recruitment

In *A Study of Recruiting Strategies and Student Profiles Using Data Warehouse and Data Mining*, Hsiu-yuan Yang divided a student recruitment project into four perspectives according to the students' statuses that cause a school to accept them; namely, the admission by recommendation and screening, application, skill-oriented screening and joint entrance examinations [4]. The four perspectives were derived from an exploratory research project and require further examination to decide whether they are suitable for CFA.

In his study entitled *A Study of Recruiting Strategies Choose Using Analytic Hierarchy Process of Estimate: Subject: High School Students in Tainan City and County*, Rung-lao Chen indicated that a school's student recruitment project comprises three different approaches; namely, admission by application, recommendation and screening, and joint assignation/placement [15]. As the students' characteristics vary among the approaches, the selection of recruitment projects deeply affects the students' competencies/aptitudes and the quality of education offered by a school. Schools are, therefore, advised to take proactive control measures and ensure the recruitment projects bring them students as expected. Since improper recruitment is a waste of education resources, recruitment projects have an absolute influence upon the students' aptitudes.

In their study entitled *Marketing Strategies for Vocational Colleges and Universities*, S.H. Hsu, T.M. Chou and G.H. Shen mentioned student-recruiting strategies of colleges in Taiwan and beyond [16]. For example, educationally advanced countries like Britain and the US frequently hold education fairs in Taiwan to attract students who wish to study abroad. Local schools also launch marketing events in the forms of *university exposition* and *exposition of vocational and technological colleges and universities*, where outstanding students are offered preferential treatments such as a *no-miscellaneous-fees* policy, generous scholarships, subsidies toward studying abroad, and are guaranteed employment after graduation.

In *A Study on the Measurement of Senior-High Schools*, Yueh-hsun Chiang divided the student recruitment market for local universities of technology into three segments: orientation in the school's public image, living environment and learning/employment performance, respectively [17]. The recruitment strategies are implemented in somewhat different ways, depending on the sub-markets involved.

Gao-liang Wang [5] conceptually defined the recruitment project as *the design of approaches to student admissions from a school's standpoint* and measured the recruitment projects of vocational and technological colleges/universities using the four perspectives categorised by Hsiu-yuan Yang [4]; namely, the admission by recommendation and screening, application, skill-oriented screening and joint admission.

For the CFA in this study, the conceptual definition and measurement perspectives of *recruiting projects* are based on the definitions and perspectives proposed by Hsiu-yuan Yang [4] and Gao-liang Wang [5].

The Student Recruitment Performance

Dess and Robinson said researchers of recruitment performance in the broader managerial context usually confront such problems as inconsistent standards for performance comparisons and inaccessible financial information [18]. They consequently suggested that a set of *subjective standards of performance* be adopted as a substitute indicator of measuring tools [19].

In *Action Research on the Strategies of Recruiting Students of Private School - Take Kuochi Senior Vocational High School of Commerce and Technology for Example*, Fang-chia Tsai argued that, in addition to *reviews* or *assessments* by external, independent organisations, the performance of student recruitment should also be determined from the viewpoints of a school organisation's members or stakeholders [20]. However, Tsai's finding resulted from a survey of the Kuochi Senior Vocational High School of Commerce and Technology, and consequently requires further CFA efforts to ensure it is applicable to tourism and hospitality majors.

In her study entitled *The Relationship between School Marketing and Enrollment Performance - Evidence from Senior High Schools in Central Taiwan*, Shu-hui Lin [21] adopted reference indicators in a subjective measurement method, as suggested by Dess and Robinson [18], to measure the student recruitment performance of senior-high schools, including vocational ones. She began her study by reviewing the performance-related literature and exploring the multiple recruiting approaches of senior high schools. After consulting experts/scholars in related fields and experienced school marketers, she made repetitive corrections accordingly and determined the perspectives for the measurement of senior high schools' student recruiting performances. Based on student recruiting statistics provided by schools in her case study, she analysed the recruitment performances through interviews with such school's organisation members and stakeholders.

In *The Study of HRPM in Personnel Recruitment and Training and the Development of the Information System*, Cheng-min Chao proposed several indicators of a company's performance in employee selection; namely, the variables of *the source of, and approach to, recruitment, recruiting cost, recruiting time, achievement rate of personnel selection and admission*, and *turnover rate of new employees* [22]. These variables are indicators of a company's talent selection performance and require further CFA efforts to decide whether they are suitable for measuring a school's student recruitment performance.

According to school statistics, Shu-hui Lin in her case study interviewed experts, scholars and experienced school marketers with regard to the multiple student recruitment approaches of senior high schools, and talked to the schools' organisation members [21]. She concluded that a school's student-recruitment performance should be measured in three perspectives: the acceptance rate, registration rate and enrolment rate. The three perspectives have been explored in detail and adopted in this study among the research variables.

Gao-liang Wang [5] conceptually defined student recruiting performance as *a school's minimum score for student acceptance and the rate of registration* and measured the student recruitment performance of vocational and technological colleges/universities using the two indicators proposed by Shu-hui Lin [21]; namely, the minimum score of acceptance and the rate of registration.

Based on the literature reviewed above, the conceptual definition and measuring perspectives of *student-recruiting performance* in this study's CFA perspective are based on the definitions and perspectives proposed by Shu-hui Lin [21] and Gao-liang Wang [5].

Literature Related to the Nature of Board Involvement and Schools' Student Recruitment Performance

According to Li-ling Jan, the larger the board of directors and the higher the percentage of shares pledged by directors/supervisors, the worse the company's operating performance [23].

Hui-ping Lin noted the relatively lacklustre operating performance and corporate governance of companies with a higher percentage of shares held by directors/supervisors and CEO duality [24]. Lin went on to suggest that company managers should reduce the shareholding percentage of directors/supervisors, make improvements concerning CEO duality, enhance corporate governance and provide investors with more information, so they can make correct investment decisions.

Tzu-tung Huang noted a significantly negative correlation between board size and a company's operating performance [25]. As the board grows in scale, the cost of dealing with losses and integration will surpass the profit it brings: the larger the board, the poorer the performance.

As for the nature of board involvement in profit-seeking industries, Chin-wen Wang mentioned that the number of independent directors sitting on the board have a positive influence upon the operating performance of a company that provides financial derivatives [26].

Although the above-mentioned literature addressed the nature of board involvement in profit-seeking companies rather than non-profit entities such as schools, in this study, the author derived from it the following hypothesis:

H1: The nature of board involvement in private Taiwanese vocational and technological colleges/universities has an effect upon the student recruitment performance.

Literature Related to the Keys to Talent Selection and Student Recruitment Performance

Gao-liang Wang believes the keys to talent selection have a significantly positive effect on a school's student recruitment performance [5]. Judging from the statements in an earlier section, the keys to talent selection and student recruitment performance are both important issues worth studying, which prompted this study's author to propose the following hypothesis, despite the scan literature in this regard:

H2: The keys to talent selection have a significantly positive effect on the student recruitment performance of private Taiwanese vocational and technological colleges/universities.

Literature Related to Schools' Projects of, and Performance in, Student Recruitment

According to Cheng-yu Hsu, the student-recruiting strategy and teaching strategy influence the aptitudes of new students and the graduates' learning achievements, respectively [3]. When the two strategies are implemented on a recurring basis, they will enhance the substantial learning achievements of students, as well as a college's public image, which will in turn encourage outstanding students (i.e. students with extraordinary potentials or performances) to enter the school. Hsu added that student-recruiting strategy influences the aptitudes of freshmen, curricular guidelines, and the targets of a school's recruitment advertisements, among other promotional efforts.

In *A Study of Marketing Strategies on Recruitment Effectiveness among Private Senior High Schools in Taichung City and County*, Hsueh-su Chen indicated how implementing school-marketing strategies bolstered the recruitment effectiveness [27].

In *The Study of the Relationship between the Keys of Talent Selection, Recruiting Projects, and the Performance of Student Recruitment - Take Department of Tourism and Hospitality in Vocational and Technological Colleges and Universities in Taiwan as Example*, Gao-liang Wang mentioned the significantly positive effects of student-recruitment projects on a school's student recruitment performance [5].

Based on the literature above, which discussed different topics from a somewhat similar viewpoint, for this study, the author proposed the following hypothesis:

H3: Student recruitment projects have a significantly positive influence upon the student recruitment performance of private Taiwanese vocational and technological colleges/universities.

Research Framework of This Study

A research framework was derived from the above-mentioned research purposes, hypotheses and literature review (refer to Figure 1):
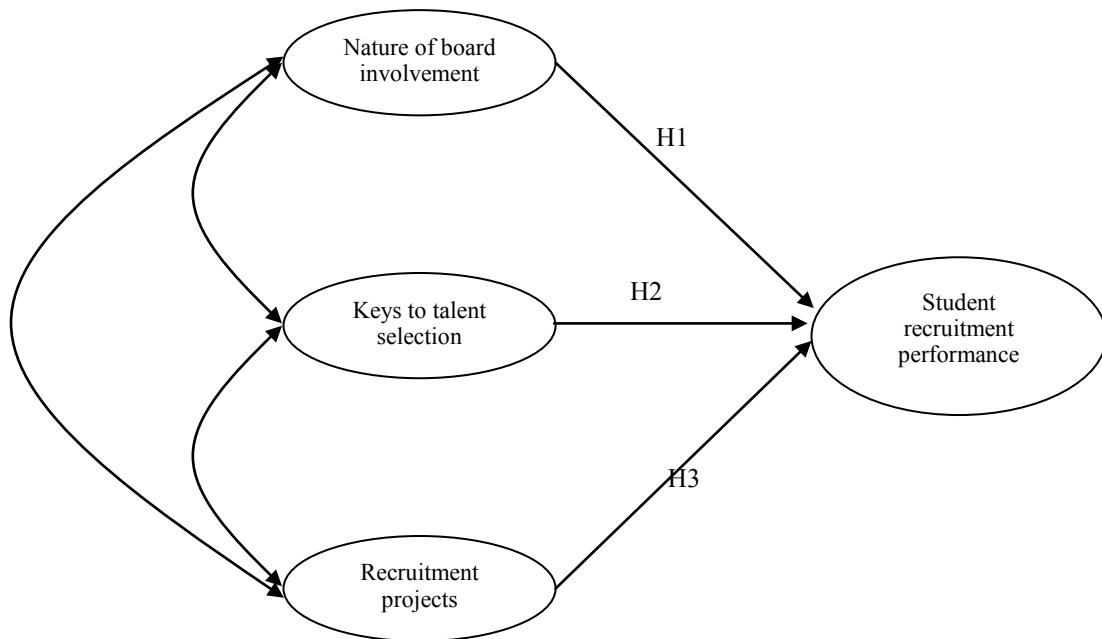

Figure 1: The research framework.

RESEARCH METHODS

Targets of Research and the Design of Questionnaire

In this study, simple random sampling was adopted for questionnaire survey. For enhanced content validity and reliability, the questionnaire was first designed for an expert questionnaire, following by a pilot test and, then, an attempt to revise/eliminate inappropriate questions for a post-test was made. Questionnaires were sent to 500 potential respondents who were directors of academic affairs, student affairs and general affairs divisions, and student recruitment committee members at private Taiwanese vocational and technological colleges/universities. The 151 valid completed questionnaires resulted in a return rate of 30.2%.

The questionnaire structure, including the number of questions based on variables on the main perspectives (or conceptual perspectives) and sub-perspectives (or operational measuring perspectives), is shown in Table 1. The design of the questionnaire was based on each observable perspective and multi-dimensional measurement. The 7-point Likert Scale was used to measure questionnaire responses, with the numbers ranging from 7 to 1 representing varying extent of agreement (i.e. 7 indicates *Strongly Agree*, while 1 indicates *Strongly Disagree*). A stronger degree of agreement is indicated by a higher score and *vice versa*.

The questionnaire for *the nature of school board involvement* was designed in accordance with the viewpoints of Pei-chien Li [2] and Kuan-chu Chiu [9] regarding board involvement, and modified according to the author's knowledge as a long-term member of faculty and school boards. The questionnaire contained eight questions in total, based on the two perspectives of *the extent of the school board involvement* and *the shareholding percentage of directors and supervisors*.

The questionnaire design for *the keys to talent selection* was based on the viewpoints of Cheng-yu Hsu [3] and Gao-liang Wang [5]. Based on four perspectives of *academic intelligence*, *aptitudes and interests*, *learning attitudes* and *recognition of concepts*, the author designed this questionnaire with 16 questions.

The questionnaire design for *recruitment projects* was based on the literature put forth by Hsiu-yuan Yang [4] and Gao-liang Wang [5]. This study's author designed this questionnaire with 16 questions.

The measuring indicators of *student recruitment performance* include the minimum score for admission and the rate of registration. Based on the viewpoints of Shu-hui Lin [21] and Gao-liang Wang [5], the author designed this questionnaire with eight questions.

Questionnaire Data Processing and the Measuring System

To verify this study's research framework, structure equation modelling (SEM) was adopted for a CFA of the modelling structure. In this study, the questionnaire is divided into four sections, each presenting one of the four latent variables (i.e. the nature of board involvement, the keys to talent selection, recruitment projects, and student recruitment performance). Each latent variable comprises several observable/explicit variables (as listed below), each containing several questions for the survey.

The survey data was processed to set up a database for the original questionnaire. In order to establish a measuring system for the research model, this study's author designed the questionnaire by way of multi-dimensional measurement but used the double measurement method for convenient data-processing by computer software [28]. The number of questions and references about each implicit and explicit variable are summarised in Table 1.

Table 1: The structure of the questionnaire and the numbers of questions by perspective.

Main perspectives (implicit variables)	Observable perspectives (or measuring indicators)	Number of questions	References
The nature of board involvement	The extent of board involvement	4	Pei-chien Li [2] and Kuan-chu Chiu [9]
	Shareholding percentage of directors and supervisors	4	
Keys to talent selection	Aptitudes and interests	4	Cheng-yu Hsu [3] and Gao-liang Wang [5]
	Academic intelligence	4	
	Recognition of concepts	4	
	Learning attitudes	4	
Recruitment projects	Admission by joint admission	4	Hsiu-yuan Yang [4] and Gao-liang Wang [5]
	Admission by application	4	
	Admission by recommendation and screening	4	
	Admission by skill-based screening	4	
Student recruitment performance	Rate of registration	4	Shu-hui Lin [21] and Gao-liang Wang [5]
	Minimum score for admission	4	

Structural Equation Modelling

CFA is an analysis approach in contrast to Exploratory Factor Analysis (EFA). This study's author conducted a CFA by pairing each two of the four main perspectives (i.e. the nature of board involvement, the keys to talent selection, recruitment projects and student recruitment performance). The SEM comprises a structural model and a measurement model to solve the cause-effect relationship between implicit variables in an effective way. In addition, this study attempts to confirm the models in three ways: 1) verifying whether the overall model conforms to the goodness-of-fit indices; 2) testing the goodness-of-fit of the measurement model; and 3) testing the goodness-of-fit of the structural model [29].

ANALYSIS AND RESEARCH RESULTS

Goodness-of-Fit Test for the Overall Model

After conducting the literature review and a factor analysis of samples collected, this study's author constructed the overall research model, the goodness-of-fit of which was measured in three categories (i.e. the measures of absolute fit, incremental fit measures, and parsimonious fit measures) as suggested by Hair, Anderson, Tatham and Black [30]. The goodness-of-fit test results for the overall model are shown in Table 2 [31].

Table 2: The goodness-of-fit test of the overall model.

Fit indices		Standards of evaluation	Results
Absolute fit	GFI	>0.9	0.93
	AGFI	>0.8	0.91
	RMR	<0.05	0.03
Incremental fit	NFI	>0.9	0.91
	CFI	>0.9	0.90
Parsimonious fit	PNFI	>0.5	0.74
	PGFI	>0.5	0.71

The Measurement Model

The factor loading of various items under latent/implicit variables (or main perspectives) and manifest/explicit variables (or sub-perspectives) mainly measures the intensity of linear correlation between each item of explicit variables and latent/implicit variables. The closer the factor loading is to 1.0, the greater likelihood that the measurement variable (or the variables of sub-perspectives) measures the main perspectives. Factor loadings of all sub-perspectives in this study are larger than 0.7, which means they have good reliability and, therefore, all the *sub-perspectives* (i.e. all explicit variables) in this study's measurement *model* properly measure the *main perspectives* (i.e. all implicit variables). In addition, the Average Variance Extracted (AVE) is the explanatory power of an implicit variable regarding a measurement variable. A higher VE means the particular implicit variable has better reliability and convergent validity. As a rule, the VE value must exceed 0.5 to suggest that the explainable variance of a specific perspective is beyond the measurement error [32][33]. The AVE values in this study invariably exceed 0.5, which means all the latent/implicit variables have good reliability and convergent validity. (Refer to Table 3 and Figure 2).

Table 3: Judgment indices in the measurement model.

Main perspectives	Indices of double measurement	Factor loading	Cronbach's α	Average Variance Extracted
The nature of board involvement (B)	B1	0.83	0.83	0.66
	B2	0.82	0.83	0.68
Keys to talent selection (S)	S1	0.82	0.81	0.62
	S2	0.85	0.84	0.63
Recruitment projects (R)	R1	0.86	0.86	0.65
	R2	0.87	0.85	0.64
Student recruitment performance (P)	P1	0.86	0.87	0.84
	P2	0.88	0.86	0.85

Coefficient of Determination

The so-called *coefficient of determination* is also named Squared Multiple Correlation (SMC), which is the explaining ability of all *implicit independent variables* on the *implicit dependent variables*. In other words, the R^2 value shown in Table 4 indicates that the implicit independent variable has adequate explaining ability on the implicit dependent variable respectively.

Table 4: Coefficients of path determination.

Coefficients of Determination	R^2
The nature of board involvement (B) → Student recruitment performance (P)	0.78
Keys to talent selection (S) → Student recruitment performance (P)	0.76
Recruitment projects (R) → Student recruitment performance (P)	0.79

Path Coefficients Between Implicit Variables in the Model

After the model passed the internal goodness-of-fit test, the standardised coefficient estimates between each pair of latent/implicit variables along with the CR value are listed in Table 5. Figure 2 shows the path analysis results.

Table 5: The parameter estimates of implicit variables.

	Estimate	SE	CR value	P value
The nature of board involvement (B) Student recruitment performance (P)	-0.12	0.09	-1.33	
Keys to talent selection (S) Student recruitment performance (P)	0.46	0.06	7.77	**
Recruitment project (R) Student recruitment performance (P)	0.49	0.08	6.13	**

Note: ** means a statistically significant CR value (α=0.01)
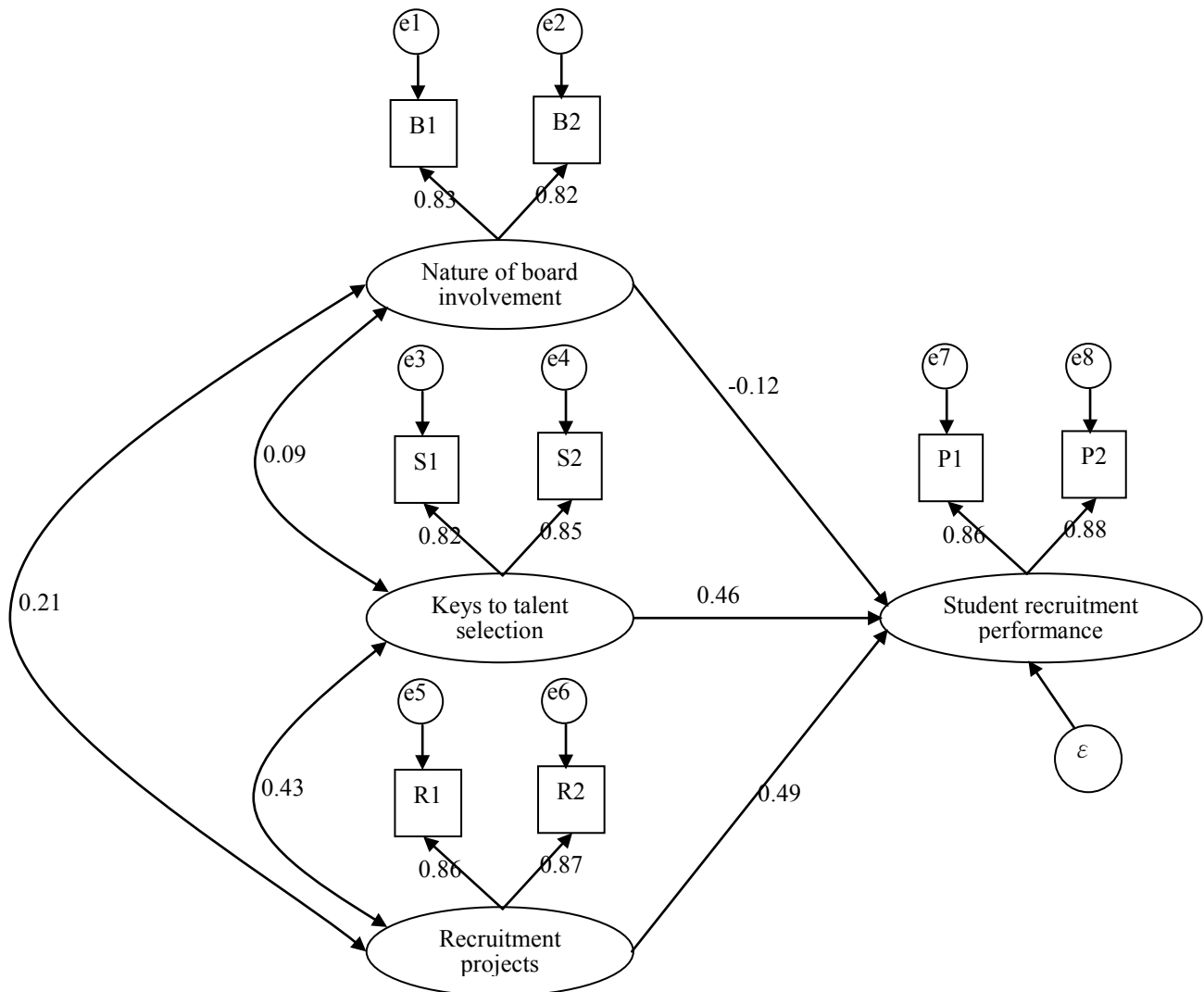

Figure 2: Results of the standardised SEM analysis.

Based on analysis results stated above, this study generated the following conclusions:

1. The nature of board involvement in private Taiwanese colleges/universities has a negative influence upon student recruitment performance, but the influence is insignificant; the standardised parameter estimate is -0.12, which means H1 is supported (partially tenable).
2. The keys to talent selection in private Taiwanese colleges/universities have a positive influence upon student recruitment performance; the standardised parameter estimate is 0.46, which means H2 is supported (tenable).
3. Recruitment projects in private Taiwanese colleges/universities have a positive influence upon the student recruitment performance; the standardised parameter estimate is 0.49, which means H3 is supported (tenable).

CONCLUSION AND SUGGESTIONS

The article presents this study's conclusion and contributions as per the above-mentioned analysis results, with the limitations in the research process and suggestions for future researches stated in the final passages.

Conclusion

As mentioned earlier, the author interviewed directors of academic affairs, student affairs, and general affairs divisions, and members of the student recruitment committee at private Taiwanese vocational and technological colleges/universities. SEM was adopted to verify the influence of the nature of board involvement, the keys to talent selection, and recruitment projects upon schools' student recruitment performance. A substantial explanation of the conclusion is offered below.

The Influence of the Nature of Board Involvement upon Student Recruitment Performance

Results of this study prove H1 partially tenable, which means *the nature of board involvement in private Taiwanese colleges/universities has a negative influence upon the student recruitment performance, but the influence is insignificant.* That means the involvement of a school board in the school's administrative affairs grows at the expense of the student recruitment performance.

This result is somewhat similar to the viewpoints of scholars cited in the literature review; namely, Li-ling Jan [23], Hui-ping Lin [24] and Tzu-tung Huang [25], despite some inconsistency due to the difference in industries and period of time empirically examined in these studies or the difference in analytical methods (e.g. the CFA is focused on the overall results of implicit variables).

The Influence of the Keys to Talent Selection upon Student Recruitment Performance

Results of this study prove H2 tenable, which means *the keys to talent selection in private Taiwanese colleges/universities have a positive influence upon the student recruitment performance*. This result agrees with the viewpoint of Gao-liang Wang [5], as stated in the literature review.

The Influence of Recruitment Projects upon Student Recruitment Performance

Results of this study prove H3 tenable, which means *recruitment projects in private Taiwanese colleges/universities have a positive influence upon the student recruitment performance*. This result agrees with the findings presented by Cheng-yu Hsu [3], Hsueh-su Chen [27], and Gao-liang Wang [5].

In a word, the three conclusions confirm the goodness-of-fit of the model established for this study.

Contributions of this Study

1. Results of this study implied the three research perspectives (i.e. the nature of board involvement, the keys to talent selection and recruitment projects) are part of an important factor for a school's enhanced performance in student recruitment. They also provide references for the school boards at private Taiwanese vocational and technological colleges/universities, reminding the directors (from the *separation of ownership from operations* viewpoint) to avoid *over-involvement* in school affairs, so that presidents of such colleges/universities can bring their potential into full play for the schools' sustainable development, as stated in their visions.
2. The perspectives and indices established and verified in this study are key factors for the sustainable competitiveness of private Taiwanese vocational and technological colleges/universities in the face of declining birth rates. They also serve as references for such schools' operations and administrative departments, when making important decisions.
3. This study focused on topics that were previously addressed mostly by way of EFA. This study's author integrated results of previous studies for modeling and tested the model for goodness-of-fit in order to examine whether it has appropriate fit-of-goodness effects. That proved the topics of this study are important and practical issues of CFA. The research results serve as references for future researchers to conduct further studies in related fields.

Limitations of the Present Study

Despite the limited resources, this study's author made every effort to accomplish each step of the research plan in the strictest way, but there were still the following limitations:

1. With limited resources for the research project, simple random sampling was adopted and caused the rate of valid returns to be relatively low. As a result, the samples may not fully represent the population, which is the greatest limitation for this study.
2. Little of the literature has explored this study's topics and perspectives, either domestically or globally. Few researchers have discussed the four perspectives this study was based on. Therefore, there was not enough statistical evidence to support this study's hypotheses.

Suggestions for Future Research

Correlative research concerning the connections between the nature of board involvement, the keys to talent selection, recruitment projects, and student recruitment performance is inevitable for private vocational and technological colleges/universities across Taiwan, considering the ever-declining birth rates. While this study's author interviewed directors of academic affairs, student affairs, and general affairs divisions, and members of the student recruitment committee at such schools, future researchers seeking an expanded database or innovative breakthroughs may conduct analyses and comparisons about perspectives other than the ones mentioned above.

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