Inside the intention to join extracurricular activities: Integrating the theory of planned behavior and signaling theory

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Abstract: Although researchers have previously discussed the consequences of extracurricular activity (ECA) participation, the question of which factors affect the intention to participate in ECAs has been less addressed. By incorporating the theory of planned behavior (TPB) and signaling theory, this study investigates the role of the components of the TPB and signal quality in the intention to join ECAs. In addition, the contingent effects of students’ demographic profiles, such as their gender, their year in school, and whether they have a part-time job, are examined. A sample of 386 students at various universities in Ho Chi Minh, Vietnam, was used to test a model that incorporates the relationships between TPB components and signal quality by means of the partial least squares (PLS) technique. The results of this study indicate that the three components of the TPB have positive impacts on the intention to join ECAs. In addition, signal quality affects both attitude and intention. Finally, students’ demographic profiles, such as their gender, their year in school, and whether they have a part-time job, have moderating roles in the relationship from attitude and subjective norms to intention. This study adopted a cross-sectional design and was conducted in Vietnam only. Future research should consider longitudinal studies and make comparisons between countries with diverse cultures. As another limitation, this study investigated only university students. Future research, therefore, is needed to consider other subjects and different sectors, such as high school pupils. The results of this study suggest that ECA

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PUBLIC INTEREST STATEMENT
This study provides insights into the field of extracurricular activities (ECAs) by identifying the factors impacting the intention to ECAs joining. Based on data obtained from interviews with 386 students in various universities in Ho Chi Minh City (Vietnam), the results provide evidence to ECAs organizers regarding the significant role of Attitudes toward extra-curricular, Subjective norm, Perceived behavior control, and Quality signal on the Intention to take part in extracurricular activities. The study recommends several ways to attract students joining in ECAs. Besides the encouragement from influencers (such as teachers, parents, peers), the ECAs organizers need to modify the ECAs program to be more suitable for student condition. Also, the information signal transferring to students should be well-informed, exact, and consistent.
organizers should send clear, consistent, and credible signals to potential members. Additionally, parents, teachers and other influencers should talk to and encourage students to join ECAs. As a major contribution of this study, it incorporates the TPB and signaling theory to examine the antecedents of ECA participation.

**Subjects:** Educational Research; School Psychology; Behavioural Management

**Keywords:** extracurricular; theory of planned behavior; signaling theory; education; Vietnam

1. Introduction

Youth, especially current students, are the next generation of employees for almost all countries worldwide. Due to globalization, the increasing number of international organizations has resulted in a number of international jobs (Tharenou, 2005). Entering the international labor market offers students many opportunities, but it also places great pressure on them. In today’s environment, achieving good academic performance is hardly enough to find a good job after graduation (Chi & Gursoy, 2009). Some researchers have suggested that operational issues such as a working knowledge of products/services are important for success in industry (Kay & Russette, 2000), while others have suggested that managerial and behavioral issues such as interpersonal relations and managerial skills are more necessary (Okeiyi et al., 1994). Thus, international jobs require employees to have not only knowledge but also extensive skills (Chi & Gursoy, 2009). However, many graduates lack certain skills to deal with problems in the real work environment, especially communication and teamwork skills, in developing countries, especially Vietnam (Tran, 2013). For instance, Yamashita, the brand general director of Bank of Tokyo-Mitsubishi in Ho Chi Minh City, Vietnam, stated, “It is undeniable that students have knowledge after 4 years at university, but how to transfer this knowledge from theory to practice is their weakness. Whenever there is a problem, these new employees cannot solve it, and they are afraid to talk with their boss, etc.”. These issues show that students might not obtain valuable skills through their university life unless they take part in extracurricular activities (Thuy Vinh, 2012).

It can be argued that the time spent on ECAs results in a decrease in the time available for school work, thus leading to a decrease in school grades. The previous literature, however, has found that ECAs can support students in developing self-esteem, can build social ties among students, teachers, and parents, and can result in low rates of involvement in risky behaviors (Broh, 2002; Carns et al., 1995; Dole, 2000). According to Pajares (1997), participating in ECAs not only has a positive effect on students’ academic performance but also provides them with opportunities to practice and improve the skills that are necessary for their future jobs, such as presentation, communication, and teamwork skills. Despite the significant benefits of ECAs, the antecedents of ECA participation are still unclear. Most studies in this field have examined the consequences of ECA participation (Darling et al., 2005; Eccles et al., 2003; Forb & Matjasosk, 2012), but the question of which factors affect the intention to participate in ECAs seems to be neglected.

Therefore, the current study aims to integrate the theory of planned behavior (TPB), which concerns motivation and capability factors, and signaling theory, which concerns the information quality of ECAs, to shed light on this neglected mechanism. We further investigate this mechanism under the contingencies of students’ demographic profiles, such as their gender, their year in school, and whether they have a part-time job, which have been proven to have an impact on people’s behavior (Hawkins et al., 2017; Maggin et al., 2017). The current article, therefore, incorporates these variables as moderators to capture and clarify a holistic picture.

Our research makes several contributions to the literature. First, we advance research in the education field by proposing a holistic model of intention to participate in an ECA program rooted in motivation and capability factors and the quality of the information provided. Thus, our study is
among the first to investigate and advance knowledge of the antecedents of ECA participation. Second, drawing on TPB and signaling theory, we contribute to the scant literature by developing a theory-driven framework. Our framework deepens the theoretical understanding of how students behave toward ECA programs. Third, we also contribute to the education literature by examining the contingent roles of students’ gender, year in school, and academic major.

2. Theoretical background

2.1. Extracurricular activities

Although ECAs play a critical role in the educational experience (Cole et al., 2007), there is an apparent lack of a generally accepted ECA definition (Bartkus et al., 2012). This concept has commonly been treated as self-explanatory (Rubin et al., 2002) or in the form of examples (Barnett, 2007). Birzėa et al. (2004) describe ECAs as part of a nonformal curriculum that includes a wide range, from voluntary work to student clubs/organizations and projects outside of school. They may take place both after and during school programs and both in and out of school buildings. Moreover, some researchers describe ECAs using synonyms, such as nonacademic endeavors (Chia, 2005) or out-of-class experiences (Nelson et al., 2002). In this study, ECAs are defined as activities involving academic clubs, athletic clubs, and social activities.

2.2. Theory of planned behavior (TPB)

Based on the assumption made by the theory of reasoned action (TRA) that intentions are affected by motivation factors, including attitudes toward behaviors and subjective norms, the TPB extends the TRA by considering nonmotivation factors, such as the availability of necessary opportunities and resources (for example, time, money, skills, the cooperation of others). These components represent people's actual control over their behavior (Ajzen, 1991). The TPB thus postulates three conceptually independent determinants of an intention to perform a behavior—attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude toward the behavior refers to the individual’s evaluation and judgment of the behavior. Subjective norms are the individual’s perception of social pressure to perform the behavior and the extent to which performing it is acceptable to others. Perceived behavioral control concerns the perceived ease or difficulty of performing the behavior. This well-known theory has been applied in multidisciplinary studies in fields such as education (Cheon et al., 2012; Lee et al., 2010), personality/psychology (Beck & Ajzen, 1991; Chang, 1998), and health behavior (Conner et al., 2002; Godin & Kok, 1996; Record, 2017).

2.3. Signaling theory

Signaling theory was initially developed based on the knowledge gaps observed between organizations and prospective employees. In the business field, marketing signals are defined as a marketing activity that provides information beyond the activity itself and reveals insights into the unobservable (Herbig & Milewicz, 1996). In other words, they convey information about goods/services to consumers, such as prices, service attributes, and warranties (e.g., Boulding & Kirmani, 1993; Herbig & Milewicz, 1994; Özsomer & Altaras, 2008). By investigating the transmission of information from one individual (a sender) to another (a receiver), signaling theory is fundamentally concerned with reducing the information asymmetry between two parties (Spence, 2002). Therefore, signaling theory plays an essential part in a variety of management studies, such as works in entrepreneurship, strategic management, and human resource management (Connelly et al., 2011). While biologists, ecologists, and evolutionary psychologists use an evolutionary framework to explain signaling theory, economists and marketers apply signaling theory to patterns within commerce and business (Dunham, 2011). For example, more signals increase signaling effectiveness (Chung & Kalnins, 2001), more visible signals are more effective (Zhang & Wiersema, 2009), and multiple signals (increasing frequency) improve the likelihood of accurate interpretation (Filatotchev & Bishop, 2002). According to Janney and Foltz (2006), good signals should be observable, irreversible, governed, and credible. In general, the quality of a signal can be
characterized by three important properties, i.e., clarity, credibility, and consistency (Erdem & Swait, 1998).

3. Research model and hypotheses

3.1. The impact of TPB components on ECA participation

The first TPB component is attitude toward the behavior, which refers to the evaluation of an object, concept, or behavior along a dimension of favoring or disfavoring, being good or being bad, and liking or disliking (Ajzen & Fishbein, 2000). In this vein, attitude toward ECA participation illustrates the student's assessment regarding the benefits of joining an ECA. Some beneficial gains that students may be concerned with before deciding to participate in an ECA include more relationships, knowledge, skills, and so on. The second component is subjective norms, which can be viewed as the perceived social pressure to perform the behavior or not (Okun et al., 2002). In other words, this factor expresses a person's feelings concerning whether the people who are important to him/her support his/her behavior. The influencers of students probably include their parents, teachers, classmates, and so on. The last component of the TPB is perceived behavioral control, which refers to a person's capability to perform an action. Students' decisions to take part in an ECA will be made based on their current abilities and resources. They may be concerned with whether they possess the skills that are necessary to join a particular ECA or whether they have enough resources such as spare time, transportation, and money to devote to the ECA.

According to the TPB, students are likely to participate in ECAs if such activities result in some desirable benefits. In addition, people tend to act in ways that generally fit with their social norms. Individuals use their perceptions of peer norms as a standard to judge their own behaviors (Schultz et al., 2007). Students, therefore, may consult their close influencers, such as their parents, teachers, and friends and other important people, before joining an ECA. Moreover, it is undeniable that people generally tend to do things that are safe for them or that they can easily perform. Applying this idea to this study, we believe that students will decide to take part in an ECA after they consider whether they have sufficient resources, suitable knowledge and skills, and so on. Hence, we propose the following:

Hypothesis 1: There is a positive relationship between the attitudes toward extracurricular activities and the intention to take part in extracurricular activities.

Hypothesis 2: There is a positive relationship between subjective norms in regard to extracurricular activities and the intention to take part in extracurricular activities.

Hypothesis 3: There is a positive relationship between perceived behavioral control and the intention to take part in extracurricular activities.

3.2. Signal quality of ECAs

Information affects decision-making processes at every unit level, from individuals in households to businesses and governments. Individuals normally make decisions based on two types of information resources: public information and private information. While public information is easily and freely accessible to people, for some groups of people, private information has limited availability (Connelly et al., 2011). However, the information that the receiver has is not always similar to the information that the sender has. Nguyen (2009) explained that information asymmetries occur when different people know different things. Under the condition of asymmetric information, a service customer is generally confronted with the problem of distinguishing between high- and low-quality service providers.

A signal is not part of a product or service itself; rather, it is a piece of information about the product or service. Signals help customers make inferences about the quality and value of
a product or service (Herbig & Milewicz, 1994), and the quality of a signal plays an important role in the inferences that customers make about the signal (Nguyen, 2009). Janney and Folta (2006) pointed out that good signals should be observable, irreversible, governed, and credible. According to Erdem and Swait (1998), signal quality consists of three properties: (1) clarity, (2) credibility, and (3) consistency. Signal clarity refers to the absence of ambiguity in the information conveyed by the brand’s past and present marketing mix strategies and associated activities. Signal consistency is the degree to which each marketing mix component or decision reflects the intended whole, and signal credibility underlies consumers’ confidence in the claims that a firm makes about its product (Erdem & Swait, 1998).

As mentioned above, ECAs are related to voluntary work, student clubs/organizations, or projects outside of school. To a certain extent, extracurricular organizations operate as nonprofit businesses. Such organizations need to show themselves and consider some marketing tactics to attract members. Therefore, they also need to send signals regarding their operating programs to potential customers. Such signals will also allow students to avoid the opportunity costs incurred by making the wrong choices in regard to ECAs. A clear signal enables students to quickly understand and interpret it, preventing any reaction delays, while consistent and credible signals help students judge ECA programs. In his research, Nguyen (2009) found that signal quality can serve as a source of knowledge about the program and directly impact the perceived quality of educational programs. Thus, the signal quality of an ECA is expected to impact students’ attitude and intention.

**Hypothesis 4:** There is a positive relationship between the signal quality of extracurricular activities and the attitude toward extracurricular activities.

**Hypothesis 5:** There is a positive relationship between the signal quality of the extracurricular activities and the intention to take part in extracurricular activities.

### 3.3. Moderating variables

Many studies have shown the differences between men and women, such as in biology (Glynn et al., 2005), psychology (Wright et al., 2008), and business (Kum-Lung & Teck-Chai, 2010). In addition, Schwartz (2005) points out that females focus on benevolence and universality, while males focus on power and achievement.

Educational experiences enhance intellectual openness and flexibility, and they give people a breadth of perspective (Kohn & Schooler, 1983). Therefore, people will behave differently based on various levels of education. Additionally, education has a positive relationship with achievement values (Schwartz, 2005). Hence, students in different years at university may have different responses to ECAs.

Generally, part-time jobs are part of student life. Some common jobs include tutor, waiter/waitress, and salesperson. Students not only obtain a salary but also accumulate real experiences and skills from such part-time jobs. However, those students who have to work after school are usually not available for other activities. In addition, such students may have different attitudes and intentions compared to those who have a great deal of free time. Because of these differences, we propose the following.

**H6a,b,c:** (a) Students’ gender, (b) students’ year in school, and (c) whether students have a part-time job moderate the relationship from attitude toward ECAs to intention to participate in ECAs.

**H7a,b,c:** (a) Students’ gender, (b) students’ year in school, and (c) whether students have a part-time job moderate the relationship from subjective norms to intention to participate in ECAs.

**H8a,b,c:** (a) Students’ gender, (b) students’ year in school, and (c) whether students have a part-time job moderate the relationship from perceived behavioral control to intention to participate in ECAs.
4. Methodology

4.1. Research process

This study combined both qualitative and quantitative research methods. The qualitative method involved conducting in-depth interviews and one focus group discussion. In particular, three in-depth interviews were conducted with ECA organizers to discover the attitudes of signalers (ECA organizers) in August 2019 in the meeting room of University of Economics Ho Chi Minh City. Prior to interviews, respondents' positions as ECA organizers of University were confirmed, as was their availability for the interviews. We conducted one focus group discussion with 8 students to collect their perceptions of ECAs and ECA signals in September 2019 in the meeting room of University of Economics Ho Chi Minh City. The original scales were collected from English literature and translated into Vietnamese by a bilingual expert. Then, the participants were requested to discuss the suitability and readability of this set of research items in the Vietnam context. Based on the discussions, 28 items were identified to measure the research concepts in the quantitative steps. Regarding quantitative research methods, a convenience sample of 400 students enrolled at various universities in Ho Chi Minh City was surveyed to test the research model. These universities included the University of Economics Ho Chi Minh City, Ho Chi Minh City Open University, and the Ho Chi Minh City University of Technology. Face-to-face interviews were conducted by six trained interviewers. In addition, two university lecturers were approached for general supervision. Data were collected over 2 months from 11/2019 to 12/2019. After eliminating invalid surveys, 386 completed questionnaires were ultimately collected for further analysis.

4.2. Measurement

The questionnaire in this study included two main sections. The first section included demographic variables (e.g., gender, year in school, working, permanent residence), and the second section included 28 items to measure the main constructs. Each item was measured on five-point Likert-type scales with 1 representing “strongly disagree” and 5 representing “strongly agree”. With the TPB scale, we applied and modified the scales of Shih and Fang (2004) and Jalilvand and Samiei (2012). The second-order construct, signal quality, which included signal clarity, credibility, and consistency, was based mainly on the items developed by Erdem and Swait (1998) and Nguyen (2009), with some modifications based on the qualitative results. The measurement scales are shown in the Appendix A.

5. Empirical results

The partial least squares (PLS) technique was applied in this study. To obtain and assess the key reliability and validity indices as well as the direct and moderating effects, partial least squares (PLS) was employed using SmartPLS 3 software (Ringle et al., 2015)

5.1. Demographic profiles of the respondents

A descriptive overview of the collected sample reveals that almost three-fourths of the sample were female (72.02%), and males represented 27.98%. In terms of whether the respondents had a part-time job, the majority of respondents had a part-time job (69.95%), and 30.05% did not work (Table 1). The freshmen (31.61%) and sophomores (39.38%) represented the highest shares in the sample. Additionally, the majority of the respondents resided in rural areas (68.13%) and studied at private universities (52.33%).

5.2. Analysis of scale accuracy

The accuracy statistics of the research scales are presented in Tables 2 and Tables 3. The alpha coefficient (α), composite reliability (CR), and average variance extracted (AVE) indices, which had cut-off values of 0.7, 0.7, and 0.5, respectively, were employed to test scale reliability. The results showed adequate scale reliability since all α, CR, and AVE estimates were above their respective thresholds.
Convergent validity was assessed by the factor loadings of the scale items on their corresponding constructs, using the threshold of 0.5. Additionally, the heterotrait-monotrait (HTMT) ratios were applied to test the discriminant validity of the research scales. The HTMT ratios for all constructs were less than the threshold value of 0.85 (Henseler et al., 2015). Moreover, all of the square roots of the AVE values were higher than the values of the correlations of the constructs with all other constructs. Altogether, the results provided evidence for convergent and discriminant validity.

5.3. Common method bias

Common method bias (CMB) might result in bias between the observed and true relationships by either inflating or deflating the estimate (Karimi & Meyer, 2019). Thus, several procedural remedies were taken into account during the survey design and data collection to ensure that CMB does not affect the interpretation of the results. The questionnaire was designed with caution. For example, the measures of the dependent constructs followed, rather than preceded, those of the independent constructs. Additionally, we protected respondent anonymity, reduced evaluation apprehension, used verbal midpoints for measures, and reversed coded questions (Podsakoff et al., 2003). Furthermore, Harman’s single-factor test was applied to check for CMB. The first unrotated factor captured only 24.34% of the variance in the data (i.e., it did not capture most of the variance); thus, no single factor emerged. Altogether, these results suggest that CMB is not an issue in this study.

5.4. Proposed structural model and direct and moderating effect testing

We modeled and analyzed the direct and moderating effects in an integrated framework. We employed the $R^2$ of the exogenous constructs and the t-test results to evaluate the model fit and the significance of the studied relationships, respectively. The results are shown in Figure 1. The main dependent variable had high $R^2$ values (0.659), implying a satisfactory and substantial model. While the $R^2$ values (0.021) for attitude toward ECAs were low, the link from ECA signal quality was significant at a 99% confidence level. The bootstrap analysis (500 samples) results indicated that all the coefficients of all five direct effects were statistically significant and in the proposed direction (see Figure 1), supporting H1-H5.

In terms of moderating effects, three contingent variables investigated, including students’ gender, students’ year at university, and whether students had a part-time job, showed a moderating role in the links from attitude toward ECAs and subjective norms to intention, while the relationship between perceived behavioral control was not affected. In particular, the

| Measure                  | Items               | Frequency | %   |
|-------------------------|---------------------|-----------|-----|
| Gender                  | Male                | 108       | 27.98% |
|                         | Female              | 278       | 72.02% |
| Part-time Job           | Working students    | 270       | 69.95% |
|                         | Non-working Students| 116       | 30.05% |
| University              | Private             | 202       | 52.33% |
|                         | Public              | 184       | 47.67% |
| Year in school          | Freshman            | 122       | 31.61% |
|                         | Sophomore           | 152       | 39.38% |
|                         | Junior              | 57        | 14.76% |
|                         | Senior              | 55        | 14.25% |
| Permanent residence     | Urban areas         | 123       | 31.87% |
|                         | Rural areas         | 263       | 68.13% |
Table 2. Scale accuracy analysis

| Research Constructs | Distribution | Standard Deviation | Mean value* | α test/rho-A/CR value/AVE | Highest HTMT ratios | Factor loading |
|---------------------|--------------|--------------------|-------------|---------------------------|---------------------|---------------|
| **Attitude**        |              |                    |             |                           |                     |               |
| ATT1                | −0.14        | 0.102              | 0.73        | 2.909                     | 0.855/0.86/0.896/0.633 | 0.461         | 0.810         |
| ATT2                | 0.024        | −0.257             | 0.697       | 2.826                     | 0.786               |               |
| ATT3                | 0.334        | −0.102             | 0.683       | 2.855                     | 0.791               |               |
| ATT4                | −0.265       | 0.011              | 0.731       | 2.868                     | 0.827               |               |
| ATT5                | 0.015        | −0.074             | 0.728       | 2.821                     | 0.763               |               |
| **Perceived behavior control** | | | | | | |
| PBC1                | −0.208       | 0.079              | 0.7          | 3.329                     | 0.835/0.836/0.89/0.67 | 0.465         | 0.819         |
| PBC2                | −0.121       | −0.107             | 0.704       | 3.345                     | 0.813               |               |
| PBC3                | −0.101       | 0.013              | 0.717       | 3.321                     | 0.805               |               |
| PBC4                | −0.075       | 0.198              | 0.697       | 3.303                     | 0.837               |               |
| **Subjective norm** |              |                    |             |                           |                     |               |
| SBN1                | −0.171       | −0.071             | 0.771       | 3.332                     | 0.854/0.86/0.901/0.694 | 0.512         | 0.850         |
| SBN2                | −0.077       | −0.002             | 0.722       | 3.37                      | 0.820               |               |
| SBN3                | 0.035        | −0.009             | 0.738       | 3.321                     | 0.811               |               |
| SBN4                | −0.028       | 0.018              | 0.706       | 3.376                     | 0.851               |               |
| **Clarity**         |              |                    |             |                           |                     |               |
| CLA1                | −0.358       | 0.069              | 0.798       | 3.306                     | 0.847/0.847/0.897/0.68 | 0.537         | 0.832         |
| CLA2                | −0.386       | −0.011             | 0.732       | 3.313                     | 0.833               |               |
| CLA3                | 0.006        | −0.021             | 0.741       | 3.321                     | 0.823               |               |
| CLA4                | −0.134       | 0.007              | 0.739       | 3.36                      | 0.821               |               |
| **Consistency**     |              |                    |             |                           |                     |               |
| CST1                | 0.175        | −0.149             | 0.74        | 2.699                     | 0.836/0.837/0.891/0.67 | 0.591         | 0.835         |
| CST2                | −0.108       | −0.105             | 0.748       | 2.679                     | 0.819               |               |
| CST3                | 0.033        | 0.069              | 0.774       | 2.746                     | 0.802               |               |
| CST4                | −0.089       | 0.044              | 0.747       | 2.71                      | 0.82                |               |

(Continued)
| Research Constructs | Distribution | Standard Deviation | Mean value* | α test/rho-A/CR value/AVE | Highest HTMT ratios | Factor loading |
|---------------------|--------------|--------------------|-------------|---------------------------|---------------------|----------------|
| Credibility         |              |                    |             |                           |                     |                |
| CRE1                | −0.264       | −0.047             | 0.742       | 3.298                     | 0.847/0.85/0.897/0.686 | 0.591          | 0.826          |
| CRE1                | −0.142       | −0.06              | 0.788       | 3.293                     |                     | 0.870          |
| CRE1                | −0.154       | 0.069              | 0.758       | 3.365                     |                     | 0.816          |
| CRE1                | −0.046       | 0.074              | 0.73        | 3.365                     |                     | 0.799          |
| Intention           |              |                    |             |                           |                     |                |
| INT1                | −0.155       | 0.091              | 0.759       | 3.339                     | 0.811/0.812/0.888/0.73 | 0.461          | 0.838          |
| INT2                | −0.324       | 0.063              | 0.797       | 3.347                     |                     | 0.850          |
| INT3                | −0.141       | 0.084              | 0.79        | 3.311                     |                     | 0.867          |

(*) Based on a 5-point Likert scale

CR: Composite reliability; AVE: average variance explained; HTMT: Heterotrait-Monotrait
Table 3. Correlation matrix for model variables

|     | ATT  | PBC  | SUB  | CLA  | CON  | CRE  | INT  |
|-----|------|------|------|------|------|------|------|
| ATT | 0.796|      |      |      |      |      |      |
| PBC |      | 0.210|      |      |      |      |      |
| SUB | 0.195| 0.163| 0.833|      |      |      |      |
| CLA | 0.089| 0.226| 0.164| 0.827|      |      |      |
| CON | 0.146| 0.222| 0.146| 0.453| 0.819|      |      |
| CRE | 0.113| 0.155| 0.061| 0.431| 0.499| 0.828|      |
| INT | 0.387| 0.384| 0.430| 0.286| 0.307| 0.253| 0.852|

ATT: attitude; PBC: perceived behavior control; SUB: subjective norm; CLA: clarity; CON: consistency; CRE: credibility; INT: intention

Inter-construct correlations are presented in the lower matrix triangle; AVE square roots are depicted in bold on the diagonal.

Figure 1. Research model.
magnitude of the relationship with attitude derived from attitude was higher for male students, juniors and seniors, and students with no part-time job. Inversely, the link from subjective norms to intention was stronger for male students, freshmen, and sophomore and students who have a part-time. Thus, H6 and H7 are accepted, while H8 is not.

6. Discussion and implications
Although researchers have previously discussed the consequences of ECA participation (Darling et al., 2005; Farb & Matjasko, 2012), the question of which factors affect the intention to join ECAs has been less addressed. Drawing on the TPB and signaling theory, the current study aimed to provide a holistic picture in the field of behavioral intention by proposing and testing the antecedents of ECA participation using Vietnamese students as the research sample. To that end, we verified the impact of attitude toward extracurricular activities, subjective norms, perceived behavioral control, and signal quality on the intention of students to join ECAs.

H1-H3 posit that the three components of the TPB, i.e., attitude, subjective norms, and perceived behavioral control, are significantly related to intention, while H4 and H5 propose that signal quality leads to attitude and intention, respectively. H6, H7, and H8 propose that (a) students’ gender, (b) students’ year in school, and (c) whether students have a part-time job play moderating roles in the link between the TPB components and intention.

6.1. Theoretical implications
Although an increasing number of empirical studies have examined the theoretical and practical implications of ECA outcomes, potential gaps regarding the antecedents of participation in such activities still exist. How and under which conditions students are willing to join ECAs remain unclear. This study is among the first to address such gaps in the literature by combining the three TPB components with signal quality to predict intention. In addition, three contingent variables are employed to demonstrate the fluctuating link from the TPB components to intention. Therefore, our study contributes to the scant literature on intentional behavior by developing a theory-driven framework based on combining the TPB and signaling theory. That is, to indicate the intention of students, this framework uses the TPB to address motivation and nonmotivation factors and signaling theory to address signal quality.

6.2. Managerial implications
In line with previous studies (Anderson et al., 2017; Wallhead et al., 2010), our findings confirmed the relationships from TPB to intention in ECAs field. The results indicated that subjective norms ($\beta = 0.364$) obtain the highest result in regard to their effect on intention. Vietnamese people are still impacted by the five principles of Confucianism, which emphasize ren (benevolence), yi (righteousness), li (propriety), zhi (wisdom), and xin (trustworthiness). Children are normally raised to be respectful. All parents want their children to be kind, polite and respectful to everyone they interact with. Clearly, such characteristics support children in knowing how to act in a civilized society. With regard to respectfulness, students probably listen to those who are important to them. Hence, teachers, parents, peers, or other influencers should talk about, explain, and encourage students to join ECAs.

The second factor affecting the intention to join ECAs is perceived behavioral control ($\beta = 0.263$). This means that students are willing to join ECAs if they possess the appropriate skills and have sufficient resources such as time and money. Thus, ECA organizers should design programs that are suitable for their potential members. They should have knowledge of these members, such as which activities they like, how long those activities should last, and which skills/materials they need for those activities. In addition, needs vary among groups of students; thus, organizers should consider suitable programs for each group. For example, for students who do not own a vehicle, activities that take place near universities or that do not require frequent travel are the best choice for them. In contrast, activities that happen in the short term are suitable for students who do not have much time.
The results also confirmed the impact of attitude toward extracurricular activities (β = 0.184) on the intention to join ECAs. If students believe that there will be benefits from participating in ECAs, they will join ECAs. Hence, to encourage students, ECA organizers should create visible and evident benefits for their participants; for example, they can explicitly inform people about the skills and knowledge that can be obtained from ECA participation, issue certificates of participation, and cooperate with the university to promote ECAs. Moreover, students should be educated about the advantages of extracurricular activities, and schools should take this responsibility. In line with Filieri et al. (2018) and Zha et al. (2015), a quality signal can impact both the attitude toward (β = 0.146) and the intention to participate in ECAs (β = 0.168). Therefore, the information that ECAs convey to students should be well formed, specific, and consistent.

The research results show that students’ gender, students’ year in school, and whether students have a part-time job play moderating roles in the correlation from attitude and subjective norms in regard to ECAs to the intention to join ECAs. Hence, there are differences between males and females, between new students and veteran students, and between working students and non-working students in their attitude toward ECAs. Therefore, ECA organizers need to understand each group, provide help and instruct them when necessary.

6.3. Limitations and future research

This study adopted a cross-sectional design and was conducted in Vietnam only, thus limiting the generalizability of the findings. However, to fully capture complicated behavior, time is needed for observation and analysis. Accordingly, future research should consider longitudinal studies and comparisons between countries with diverse cultures.

As another limitation, this study relied on self-reported measures of perceptions and behaviors, which may restrict the conclusions that can be drawn from the findings. Therefore, to gain more reliable data, other data collection methods should be employed, such as observation or functional magnetic resonance imaging (fMRI). Moreover, the variables of this study (i.e., signal quality and student perceptions) have been explored in previous studies. We suggest that future studies in this field could extend such work by examining different variables, such as the government’s role in promoting ECAs.

The scope of this study is also limited by its sole focus on university students. Therefore, future research is needed to consider other subjects and different sectors, such as high school pupils. Additionally, this study had a small sample size, which was suitably overcome in the study through the use of PLS-SEM, but future studies can test the model with a more comprehensive sample (Parihar et al., 2019).

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Appendix A. The scale items

Signal clarity
(1) This organizer provides clear information about its extra-curricular program to students.
(2) This organizer always provides sufficient information about its extra-curricular program to students.
(3) This organizer always provides timely information about its extra-curricular program to students.
(4) I have no trouble figuring out what this organizer is trying to provide for students.

Signal consistency
(1) What this organizer provides to students is very consistent.
(2) The information about the extra-curricular program of this organizer is very consistent.
(3) What I have received from the extra-curricular program of this organizer is very consistent.
(4) In summary, the extra-curricular program of this organizer is inconsistent. (*)

Signal credibility
(1) This organizer delivers to students what it promises.
(2) This organizer pretends to be something it isn't. (*)
(3) What I have received from the extra-curricular program of this organizer is fully believable.
(4) Summary, the extra-curricular program of this organizer can be trusted.

Attitudes toward extra-curricular
(1) I believe that I can get good bonus marks when I take part in extra-curricular.
(2) I believe that I can learn many valuable skills when I take part in extra-curricular.
(3) I believe that I can get many benefits when I take part in extra-curricular.
(4) I believe that I can expand my social network when I take part in extra-curricular
(5) I feel interesting when I take part in extra-curricular.

Subjective norm toward extra-curricular
(1) My parents would think that I should take part in extra-curricular.
(2) My teachers would think that I should take part in extra-curricular.
(3) My classmates would think that I should take part in extra-curricular.
(4) My best friends would think that I should take part in extra-curricular.
Perceived behavioral control

(1) I don't believe that I can perform extra-curricular well. (*)

(2) I have the capability to take part in extra-curricular.

(3) I have enough resources to take part in extra-curricular

(4) I believe that I have enough skills to perform extra-curricular easily

Intention to participate in extra-curricular

(1) I intend to take part in the extra-curricular

(2) I will take part in the extra-curricular in next time

(3) I will take part in extra-curricular in near future

(*) reversed items