

SUSTAINABILITY ORIENTATION AND SUSTAINABLE ENTREPRENEURSHIP INTENTION: THE MEDIATING ROLE OF ENTREPRENEURIAL OPPORTUNITY RECOGNITION

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ABSTRACT

The purpose of this research is twofold. First, to examine the influence of four dimensions of sustainability orientation which are sustainability knowledge, sustainability culture, sustainability practices and commitment to environmental sustainability on the sustainable entrepreneurship intention of business schools' students in Malaysia; and the second is to explore the mediating role of entrepreneurial opportunity recognition among these variables. The data for this study were collected from business school students in Malaysia through a standard self-administered online structured questionnaire. The data were analyzed through the PLS-SEM approach. The findings have revealed the direct effect of commitment to environmental sustainability on sustainable entrepreneurship intention. However, sustainability culture, sustainability knowledge and sustainability practices have been found to have no significant direct effect on sustainable entrepreneurship intention. Entrepreneurial opportunity recognition has successfully mediated the relationship between sustainability culture and commitment to environmental sustainability with sustainable entrepreneurship intention. Nonetheless, it has failed to mediate the relationship between sustainability knowledge and sustainability practices with sustainable entrepreneurship intention. The existence of the mediation of entrepreneurial opportunity recognition between sustainability culture and commitment to environmental sustainability with sustainable entrepreneurship intention has contributed knowledge to the sustainable entrepreneurship and sustainability orientation literature.

Keywords: Entrepreneurial Opportunity Recognition, Sustainability Orientation, Sustainable Entrepreneurship Intention, Business Schools' Students

INTRODUCTION

The world has witnessed many changes ranging from globalization to climate change that has shifted the way businesses operate. The government has therefore introduced entrepreneurship to help in terms of employment creation and standard of living (Bozhikin et al., 2019). However, after years of benefiting from entrepreneurship, it was discovered that human activities are damaging the ecosystem (Todeschini et al., 2017), due to high levels of carbon emission and overuse of natural resources. These issues have attracted the attention of the United Nations in 2015 which has eventually implemented the 17 Sustainable Development Goals (SDGs) that have encouraged 190 countries including Malaysia to operate more sustainably. Hence, they have

included sustainability practices in the socio-economic activities to protect people and “plants” (D’Amato et al., 2017).

Moreover, many countries including Malaysia have implemented Sustainable Entrepreneurship (SE) programmes to benefit continuously from entrepreneurial activities by protecting the environment and community life. SE can be defined as the process of discovering, creating and exploiting opportunities that allow to create future goods and services that help sustain the natural and/or communal environment and provide development gain for a larger group of people (Khairuddin et al., 2021). Furthermore, the Malaysian government commitment to sustainability can be seen through the Eleventh Malaysia Plan (11MP) for 2016-2020, and the RM 3.78 billion budget for renewable energy, where people and “green” growth are at the center of developmental efforts, that is, focusing on Triple Bottom Line (TBL) (Nor-Aishah et al., 2020).

Furthermore, SE programme is helping students to learn about sustainability, to practice sustainable action and to be committed to sustainability as they are growing in the Sustainability Culture (SC) that the university is nurturing (Lourenço et al., 2013). Moreover, another important issue with SE is the opportunity recognition process. This means that students need to find an opportunity that will help a third party first (environment and community) before looking at their economic well-being (Schaltegger et al., 2016). Nonetheless, sustainability orientation and entrepreneurship literature are limited, especially in studying the sustainability orientation of entrepreneurship students. For instance, many scholars have focused on studying the impact of sustainability in businesses (Morioka & De Carvalho, 2016). This is mainly where the concept of the triple bottom line has taken birth. The triple bottom line researchers suggest that when doing business, the people, planet and profit need to be taken into consideration. Moreover, sustainability research has been applied to the corporate level, agriculture and even many societal issues. This has led to an increasing body of knowledge on social enterprise where businesses have started to care about the people/community (Haider & Kayani, 2021).

However, with the increased impact of entrepreneurship in many economies the government and other relevant bodies have considered the implementation of sustainability in the entrepreneurship process. Thus, much research has focused on studying the sustainable entrepreneurship intention. Therefore, it has been found that many enterprises that have been set up are focusing mostly on societal issues and thus they are called social entrepreneurship. As a consequence, a gap in literature was found as little focus was being laid on the environment and social wellbeing in one single enterprise, that is, the creation of sustainable entrepreneurship. Therefore, this study is addressing this lack of focus on sustainable entrepreneurship. Additionally, many researchers have examined the importance of entrepreneurial training and knowledge and its relationship in increasing the intention to create entrepreneurship. Studies have revealed that indeed entrepreneurial training and knowledge have a positive impact on entrepreneurial intentions. However, little studies have focused on sustainability education as a way to increase the intention of students to build sustainable ventures.

Hence, this research is addressing the importance of Sustainability Education (SE) and how this type of education can increase the Sustainability Orientation (SO) of students who can eventually become entrepreneurs (Fatoki, 2019). Hence, since there is little literature on SEdu to explain the positive effect on the intention to create Sustainable Ventures (SV), this paper will try to bridge this gap. Moreover, literature is greatly focusing on social entrepreneurs who enhance quality of life but are neglecting the environment (Gupta et al., 2020). Hence, this research is also focusing on Commitment to Environmental Sustainability (CES). Consequently, this study tries to address the problems that arise with a double bottom line and is contributing to Triple Bottom Line (TBL) literature.

Nonetheless, it can be understood that an entrepreneurship process involves having an idea and taking the risk of making this idea a reality. Furthermore, many entrepreneurs discover

opportunities that they can exploit through their network, previous works or even through creativity. Hence, for the idea to exist entrepreneurs have to discover an opportunity. This is the reason why much research has included entrepreneurial opportunity recognition as a main construct to positively affect entrepreneurial intention. However, it can be understood that not everyone looks at a problem in the same way and hence to be able to look at a problem as an opportunity, someone needs prior competencies or knowledge and afterwards he/she will be able to create a venture. This means that Entrepreneurial Opportunity Recognition (EOR) can have a positive mediation impact between both entrepreneur's prior knowledge and their intention to create an enterprise. Nonetheless, the mediating role of EOR has been under studied in entrepreneurial literature even though it helps facilitate the entrepreneurship process.

As a result, after discovering the possible mediating role of EOR, this research is focusing on studying how EOR can mediate the relationship between sustainability orientation and sustainable entrepreneurship intention. This is mainly because most of the past studies in SE literature are treating EOR as a main construct and are undermining its mediating role. Furthermore, this research is addressing the gap that exists in the EOR literature as it mainly focuses on entrepreneurial opportunities that will benefit the entrepreneurs themselves in terms of economic gains instead of communal or environmental benefit (Chang & Chen, 2020). Therefore, this research is focusing on the EOR for the benefit of a third party. Moreover, self-determination theory (SDT) has been underused in the entrepreneurship field (Al-Jubari et al., 2019). As a result, this research will focus on deepening the application of this theory in SE. To address the identified problems in the literature, this study will focus on these research questions:

RQ1: Does entrepreneurial opportunity recognition mediate the relationship between sustainability orientation and sustainable entrepreneurship among business university students in Malaysia?

RQ2: What is the impact of sustainability orientation Sustainability Culture (SC), Sustainability Practices (SP), Sustainability Knowledge (SK), Commitment to sustainability (CES) on entrepreneurial opportunity recognition and sustainable entrepreneurship?

LITERATURE REVIEW

Sustainable Entrepreneurship Intention

Sustainable entrepreneurship is focused on balancing the triple bottom line compared to the traditional enterprise. This means that sustainable entrepreneurship takes into consideration the economic, social and ecological goals (Schaltegger & Wagner, 2011; Thompson et al., 2011). Even though sustainable entrepreneurship has received increasing attention in the literature there is only a small portion of empirical research that studies its determinants, and intention (Hall et al., 2010). Furthermore, there is also numerous researches on entrepreneurship intention in general and little has focused on sustainable entrepreneurship intention. Hence, since sustainable entrepreneurship is among the novel entrepreneurship schemes together with social and environmental entrepreneurship and they all focus on the value creation for the environment and society first before creating economic value for themselves, the intention to form such ventures need to be studied. Sustainable entrepreneurship intention can hence be explained as the intention for someone to create a business and incorporate the social, economic and ecological factors. This means that individuals create a business that will minimize environmental footprint while benefiting the larger community (Tehseen & Haider, 2021). However, the sustainability orientation constructs have not yet been tested in the context of sustainable entrepreneurship intention. This means that apart from entrepreneurial competencies and other characteristics, this research is trying to analyses whether the sustainability orientation of business school students increase their intention to create

sustainable enterprise. Hence, sustainability culture, sustainability knowledge, sustainability practices and commitment to environmental sustainability will be tested as determinants of sustainable entrepreneurship intention.

Sustainability Orientation

Sustainability orientation can be defined as the proactive move by an organization or a person to integrate the environmental and societal concerns when shaping their strategy, in their operations and tactics (Roxas & Coetzer, 2012). Sustainability orientations have values and beliefs that are deeply rooted and hence help provide behavioural norms to encourage a firm to adopt sustainable practices (Varadarajan, 2017). Furthermore, research from Claudy, et al., (2016) has found that sustainability orientation is a good driver of innovation. Hence, this has encouraged many firms to integrate sustainability orientation in their product designing, development, manufacturing and supply chain (Adams et al., 2016). Furthermore, this means that having a sustainability-oriented business school can encourage them to be innovative and create products and businesses that are sustainable. Hence, this means that sustainability orientation can be used to explore the determinants of sustainable entrepreneurship intention. Therefore, while some research has focused on studying sustainability orientation at firms' level with corporate social responsibility, there are some studies that have focused on the individual level and hence focus on the influence of social responsibility and personal traits on social and environmental issues (Sung & Park, 2018). Hence, the research by Claudy, et al., (2016) has revealed that sustainability orientation positively affects innovation and hence, encourages individuals to create sustainable products. Furthermore, Cerchoine, et al., (2018) have found that sustainability orientation positively affects SMEs performance. Hence, since SMEs play an important role in the economy, it is important to analyze the sustainability orientation of would-be entrepreneurs and understand the relationship of sustainability orientation with sustainable entrepreneurship intention.

Theoretical Background

The Self-Determination Theory (SDT) is applied in this study and is defined as the autonomous motivation driving individuals to engage in activities which do not include only self-interest, valuation and volition (Ryan & Deci, 2017). This theory stemmed from the work of Ryan & Deci (2000) who believed that SDT is the study of individuals' growth tendencies and psychological needs which power their self-motivation and personality integration that contribute to creating positive conditions. The three psychological needs are relatedness, autonomy and competence. Moreover, SDT reported that there are two types of motivation which are intrinsic (enjoyment) and extrinsic (external reward) that drive human behaviour (Ryan & Deci, 2020). Therefore, since SDT classified motivation more in terms of quality rather than only quantity, it has been applied in areas that required quality motivation to achieve goals. Consequently, it is applied in healthcare, work, education, and sports (Haider et al., 2021).

Furthermore, it is the only theory that has explicitly identified autonomy as a human need that, when properly supported, more autonomous forms of behavioural regulations are facilitated. Moreover, SDT also highlights those motivations that come from external contingencies and internal pressures are unhealthy as it creates stress, reduces energy level and decreases self-control. This means that SDT supports altruistic type of behaviour which is powered by the three needs of relatedness, competence and autonomy (Ryan & Deci, 2017). This theory further acknowledges that the social context of an individual that can help satisfy the three basic psychological needs will help to ensure autonomy, persistence, effectiveness in performance and wellness (Slemp et al., 2018). Therefore, this theory embraces the contextual influence on motivation level and actions. This

means that the environment can be supportive or not supportive in finding and exploiting opportunities to achieve positive outcomes. Since SDT is focusing on the autonomous motivation and behaviour regulations that stimulate involvement in activities that produce a positive outcome, a growing body of literature is focusing on its application in business. The papers are focusing on how the SDT of employees are facilitating the creation of products or strategies that are not only focused on self-interest but also on the well-being of other factors like society and the environment. Therefore, to satisfy the optimal functioning and health, entrepreneurs tend to invest in the well-being of others (Ryan & Deci, 2000).

However, SDT has not been largely applied in entrepreneurship literature to explain the motivation for entrepreneurship (Al-Jubari et al., 2019). Moreover, SDT has been underapplied in the sustainability field to match how entrepreneurs' psychological needs are motivating them to progress for societal goods. This means that psychological capital has been given little interest in this underlying field (Newman et al., 2014). However, existing studies have proven that psychological capital is an extension of "economic capital" and is a primary determinant of success (Baluku et al., 2016). Meaning that mental strength and innate psychological needs of would-be SE are important. Consequently, SDT is the appropriate theory to explain the proposed research framework which tries to speculate the motivation behind the intention to create SE.

DEVELOPMENT OF HYPOTHESES

Effect of Sustainability Culture on Sustainable Entrepreneurship & Entrepreneurial Opportunity Recognition

Sustainability Culture (SC) is the integration of sustainability values and norms in the organizational contexts and communities. It is also the firm's recognition of its impact on the communities and environment and the needs to minimize these footprints (Claudy et al., 2016; Adams et al., 2018). Moreover, based on the SDT, relatedness need is defined as the need to feel mutually connected with other people, that is, be a member of a group and share common values (Ryan & Deci, 2000). Therefore, the organization in which people are working or studying has a great influence on how they view and react to SC (Schneider & Barbera, 2014). Hence, based on the transformatory model of Adams, et al., (2018) the adoption of sustainability in organizations are done in three systematic stages that allow the behaviours of people in the organization to become increasingly aligned. This consequently means that the SC in an organization encourages its members to become sustainability oriented. It is suggested that the organizational culture has a positive impact on the behaviour of its stakeholders that is the sustainability values to respect the environment, community life and making profit to continue sustainable development are being highly adopted and encourage the stakeholders to perpetuate this behaviour to maintain the relatedness with the group which is satisfying their relatedness needs (Jacobs et al., 2013). Moreover, having sustainability-oriented values and norms encourages members to discover opportunities for future development to enhance the values of the group (Gray et al., 2014).

Consistent with the above explanation, it can be understood that the SC that many universities are adopting in their curriculums and syllabuses is instilling sustainability values and norms in students and other stakeholders (Shiel et al., 2016). Universities have integrated institutional guidelines and frameworks to make sustainability a way of living on campus (Marans et al., 2015). These green initiatives and practices instilled in the culture of universities around the world are increasing the SO of students who are potential future entrepreneurs (Yafi et al., 2021). For example, green competition is organized by allowing students to use technology to develop smart buildings, recycling programmes and campaigns to promote energy-saving practices (McGibbon et al., 2015). Furthermore, the syllabus in business schools in Malaysia have included

Business ethics and community projects as subjects to positively armed the students with the appropriate mindset to work for communal and environmental goods and at the same time making a profit (Anderson et al., 2016). Furthermore, since Malaysia is a collectivist country and people prefer life in community and identity, the culture of the business school can positively affect their behaviour to form SV to satisfy a third person needs which is the opportunity in the community instead of operating at their expense (Joan & Ting, 2017). Therefore, the syllabus, the green campus, the values that students learn in their collectivist society positively encourage them to find and exploit opportunities that will lead to the creation of a sustainable enterprise. Hence the hypotheses can be written as follows:

H1a: Sustainability culture has a positive effect on sustainable entrepreneurship.

H1b: Sustainability culture has a positive effect on entrepreneurial opportunity recognition.

Effect of Sustainability Practices on Sustainable Entrepreneurship & Entrepreneurial Opportunity Recognition

Sustainability Practices (SP) are the activities that organisations or people do to contribute to the economic, social and environmental aspects of sustainability by satisfying the needs of the stakeholders in the present and not compromising the requirements of future generations (Carroll & Buchholtz, 2014; Miska et al., 2018). It is unsurprising that organisations which are sustainability-oriented are involved in green practices to help the environment and at the same time improve the quality of life of its employees and larger communities. Furthermore, the SDT autonomy needs can be linked to the willingness to participate in sustainability activities and create SV. According to Ryan, et al., (2017), people need to have a set of options to have autonomy but with the declining environmental and communal conditions, options are declining. Therefore, with the threat of losing autonomy people might be encouraged to adopt SP to help the environment and communities (Steinhorst & Klöckner, 2018). Therefore, by carrying out sustainable practices people are motivated intrinsically and extrinsically to build ventures for the well-being of the environment and people but at the same time in trying to satisfy their needs they identify threats which are sustainable opportunities that they can exploit to enhance a long-term viable well-being.

Similarly, this research uses SP to explain the SO of BS students. Many educational institutions are encouraging SP, like recycling in Malaysia (Sani, 2019). This SP is having a positive impact on the orientation of students (Adams et al., 2018). Hence, they must comply with these guidelines as they want the extrinsic rewards of acceptance from other stakeholders in the universities (Darner, 2012). Furthermore, these SP educate the students about the socio-ecological threats that are affecting Malaysia (Baxter & Pelletier, 2020). Thus, through environmental campaigns students are exposed to these threats and understand that future generations' wellbeing relies on the development of sustainable businesses (Baxter & Pelletier, 2020). Thus, though, for example, environmental campaigns and programmes, students are exposed to these threats and understand that to allow the future generations to live in well-being there is a need to develop businesses, products and services that will help the environment and communities to sustain (Baxter & Pelletier, 2020). Hence, since in Malaysia social acceptance is an important reward as it is a collectivist society and students have the strong innate psychological needs to have the autonomy which means having "options" for their wellbeing, the SP and the rewards associated with them can positively affect the EOR process and the intention to create an SV (Bosworth et a., 2016). Consequently, the hypotheses can be written as follows:

H2a: Sustainability practices have a positive effect on sustainable entrepreneurship.

H2b: Sustainability practices have a positive effect on entrepreneurial opportunity recognition.

Effect of Sustainability Knowledge on Sustainable Entrepreneurship & Entrepreneurial Opportunity Recognition

Sustainability Knowledge (SK) is the knowledge on the protection of the environment and enhancement of community life with an environmentally focused mindset and a strategic organisational resource and important societal resources (Ip-Soo-Ching & Zyngier, 2014). Moreover, to be sustainably literate someone has to integrate and practice knowledge from the TBL viewpoint (Zwickle et al., 2014). Therefore, the knowledge that people are gathering from their previous experiences have a direct impact on their intention to build a venture (Gumusay & Bohne, 2018). Having previous knowledge about a particular field can be an added advantage for would-be entrepreneurs to find opportunities to exploit and build SV (Stuetzer et al., 2018). Consequently, gathering SK from the community, the workplace or even at school might positively allow potential entrepreneurs to discover sustainable opportunities to exploit and build SV.

Eventually, it can be argued that SK is arming would-be entrepreneurs with enough know-how on the different problems that are occurring in the socio-ecological era (Demirel et al., 2019). SK that business students are getting from the “green” curriculum can help them to identify threats in their community (Shepherd & Patzelt, 2017). Furthermore, sustainable literacy in Malaysia is made easier with the increasing consumption of technology and internet where students easily access information about pollution index mainly during the period where Malaysia is constantly affected by the Haze (APIMS, 2020). Thus, air pollution can generate enough information that can be exploited to create SV (Neira et al., 2018). Additionally, by applying the SDT needs, SK is satisfying the competence needs. This means that when learning about the TBL issues, students are intrinsically satisfied as they feel competent enough to sustain the ecosystem (Home et al., 2014; Saxby et al., 2018). However, to further satisfy these needs in the societal context and be extrinsically rewarded the SK might encourage them to identify sustainable opportunities to exploit and build a venture that will help sustain the natural and communal setting for others (Triste et al., 2018). Thus, since the SK is motivating students to act for the wellbeing of others the hypotheses can be written as follows:

H3a: Sustainability knowledge has a positive effect on sustainable entrepreneurship.

H3b: Sustainability knowledge has a positive effect on entrepreneurial opportunity recognition.

Effect of Commitment to Environmental Sustainability on Sustainable Entrepreneurship & Entrepreneurial Opportunity Recognition

Commitment to Environmental Sustainability (CES) is the process whereby firms and individuals demonstrate how their daily operations and behaviours have underlying sustainability guidelines to protect the socio-ecological system (Danso et al., 2019). An organization’s CES is being assessed by analyzing its different processes and procedures (Jansson et al., 2017). Therefore, as organizations educate their members and promote sustainability in its practices, the members are compelled to follow and adopt a sustainability-oriented behaviour to maintain the membership with the group to satisfy their SDT relatedness needs (Hossain et al., 2021). Hence, a member of an organization will show CES and be intrinsically rewarded with the enjoyment of being accepted (Zhang et al., 2019). Simultaneously, sharing sustainability norms and values allow them to recognize the threat that declining environmental and communal domains can make it difficult to have social bonds as members of the groups might see each other as selfish in their consumption. Consequently, to better satisfy their relatedness needs and avoid threats they use the CES to identify the overarching activities that are damaging the ecosystem and try to find entrepreneurial solutions

for them (Yousaf et al., 2018). As a result, they are motivated to develop SV to maintain their relatedness needs that help propagate the CES as acceptable and desirable values.

Accordingly, CES can encourage students to build SV as it is a way to perpetuate these sustainability values and thus maintain membership in the community (Conway et al., 2015). This is supported mainly in Malaysia which has a very effective informal social regulation system that determines acceptable behaviour being a collectivist society (Hofstede, 2011). Hence, since the relatedness needs is higher among Malaysian the students from Business schools will be willing to address the threat to the environment and community that might make it difficult for them to form social ties as without CES the community might turn to chaos as each other will identify them as selfish which is against the values of a collectivist society which aims to make good impression (Hofstede, 2011). Therefore, sustainable entrepreneurs are more desirable in this type of society as they exploit opportunities for communal or environmental goods and not self-interest. They put the needs of the larger community before theirs (Padzlet & Sheppard, 2010). Consequently, students in Malaysia through CES are preventing overfishing, deforestation, and other activities that are leading to ozone layer depletion where they are allowing communities that are depending on the forest and fishing to sustain (Ling et al., 2017). Therefore, through these sustainability-oriented actions, they tend to identify loop-holes (EOR) that exist and might threaten community life and thereby perpetuate their commitment by creating SE. As a result, the hypotheses can be written as follows:

H4a: Commitment to sustainability has a positive effect on sustainable entrepreneurship.

H4b: Commitment to sustainability has a positive effect on entrepreneurial opportunity recognition.

Effect of Entrepreneurial Opportunity Recognition on Sustainable Entrepreneurship

Entrepreneurial opportunity recognition can be defined as the process through which a would-be entrepreneur goes through which includes the thinking, creation of ideas and finding solutions to problems in the market to start a business (Shane & Nicolaou, 2015). This means that this is a cognitive process where entrepreneurs use their mind and creativity to find opportunities to start their business. Moreover, research into entrepreneurship has found that more people are interested in discovering and creating new opportunities to start their business. Furthermore, some research has discovered that there is a positive relationship between people who express interest to be an entrepreneur and meaningful entrepreneurial opportunities (Cantner et al., 2020). Therefore, this means that when engaging in the entrepreneurial opportunity recognition process this might increase the intention of forming an enterprise. Similarly, research from Ploum, et al., (2018) has explained the sustainable opportunity recognition process. They entail that the Sustainable Development Goals (SDGs) have created opportunities that many entrepreneurs are willing to exploit by creating sustainable ventures, especially SDGs 7,9,11,12,13 (Dean & McMullen, 2007). In particular SDG 9 and 12 is providing a wide range of entrepreneurial actions that can be undertaken.

Similarly, with Business school students who have a curriculum that takes into consideration the SDGs might help these students undergo a sustainable opportunity recognition process and consequently, increase their intention to create sustainable entrepreneurship (Ploum et al., 2018). Moreover, research has found that entrepreneurial education that teaches moral competencies can help in the process of opportunity recognition and sustainable entrepreneurship creation (Renouard & Ezvan, 2018). Therefore, as entrepreneurship education, sustainability education will help discover sustainable entrepreneurial actions that need to be taken and create sustainable entrepreneurship. As a result, the direct relationship led to the hypothesis being written as follows:

H5: Entrepreneurial opportunity recognition has a positive impact on sustainable entrepreneurship.

The Mediating Effect of Entrepreneurial Opportunity Recognition

In this model the mediator is entrepreneurial opportunity recognition as the literature has found that there is a positive impact between sustainability culture & entrepreneurial opportunity recognition, sustainability practices & entrepreneurial opportunity recognition, Sustainability knowledge & entrepreneurial opportunity recognition and commitment to environmental sustainability & entrepreneurial opportunity recognition (Bosworth et al., 2016; Joan & Ting, 2017; Ling et al., 2017; Triste et al., 2018). In the research by Dahalan, et al., (2015) it was found that entrepreneurial opportunity recognition has successfully mediated the relationship between attitude towards start-up and entrepreneurial intention. Furthermore, in the research by schmitt, et al., (2018) it was found that entrepreneurial opportunity recognition helps in finding business opportunity and hence leads to venture creation. This opportunity recognition is mainly seen when there is environmental uncertainty. This indicates that opportunity recognition can help increase intention to create sustainable enterprises. This means that entrepreneurial opportunity recognition can act as a mediator in the relationship between independent variables (Sustainability culture, Sustainability knowledge, Sustainability practices and commitment to environmental Sustainability) and dependent variable (Sustainable entrepreneurship intention) as some past research have already discovered the positive relationship between entrepreneurial opportunity recognition and Sustainable entrepreneurship intention (Cantner et al., 2020). Thus, the hypotheses for the mediation can be written as follows:

H1c: Entrepreneurial opportunity recognition mediates the impact of sustainability culture on sustainable entrepreneurship.

H2c: Entrepreneurial opportunity recognition mediates the positive effect of sustainability practices on sustainable entrepreneurship.

H3c: Entrepreneurial opportunity recognition mediates the positive effect of sustainability knowledge on sustainable entrepreneurship.

H4c: Entrepreneurial opportunity recognition mediates the positive effect of commitment to sustainability on sustainable entrepreneurship.

The proposed research framework for this study is shown in Figure 1. Based on the framework, the sustainability culture, sustainability practices, sustainability knowledge and commitment to environmental sustainability have been treated as independent variables and sustainable entrepreneurship intention is treated as the dependent variable. This framework also underlines the mediating role of entrepreneurial opportunity recognition in the relationship between sustainability orientation variables (SC, SP, SK, CES) and sustainable entrepreneurship intention. Since in the research by Bao, et al., (2017) it is supported that for the creation of an enterprise there is a need to go through entrepreneurial opportunity recognition which can hence be exploited to build the venture. Hence, this study intends to examine the usefulness of entrepreneurial opportunity recognition in the context of sustainable entrepreneurship intention. Consequently, in this research entrepreneurial opportunity recognition is drawn as a facilitator in the relationship between the independent and dependent variables.

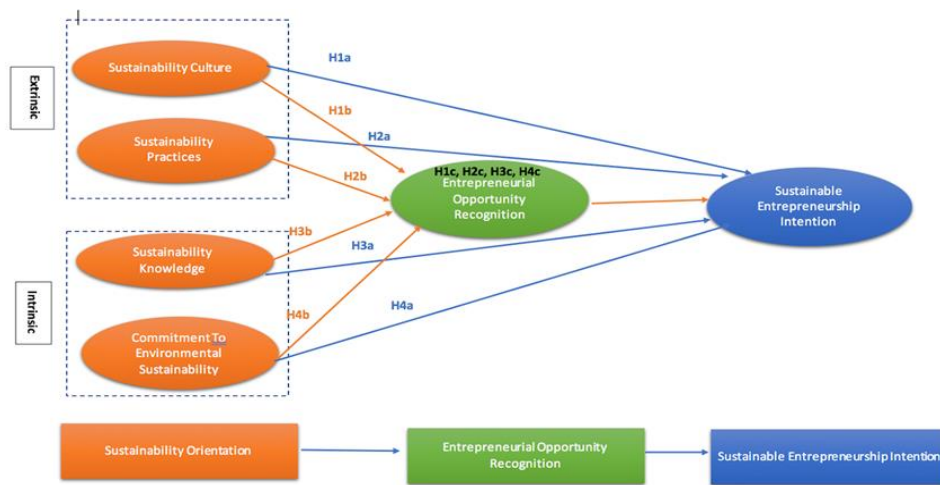


FIGURE 1
CONCEPTUAL MODEL

METHODOLOGY

Data and Sample

This paper focused on a sampling frame composed of university students in business undergraduate programmes in Malaysia. The reason for choosing this particular sample in Malaysia is because of the growing number of business operations and business universities with various business and sustainability programmes. Furthermore, after reviewing the sustainability literature, most research is concentrated in the USA and European countries (Sun et al., 2020). Hence, since many universities are emphasizing SEdu and greening the campus in Malaysia, it can be argued that this sample has not yet been properly exploited and a large amount of data might be available. For instance, in Malaysia many business schools are engaging in sustainability practices that are in line with the Sustainable Development Goals (SDGs). Therefore, this research is including the data collected from 140 Business Schools (BS) students in Malaysia which is a collectivist society and hence sustainability education could positively help to discover entrepreneurial opportunities that will help the society and environment as students still live-in family groups compared to the western world.

Surveys have been shared online, through social media applications, emails, and online lecture rooms. Respondents were from different age groups and included both sexes. All these attributes required from respondents for this paper necessitated the application of a purposive sampling method, which is a process where respondents are picked based on specific attributes which have given reliable data for the study (Valerio et al., 2016). The data collection was carried out in the most ethical manner possible. This means that during the research, meticulous initiatives have been taken to lessen disturbance while collecting data. For instance, while data has been collected during lectures, vigilance and thoughtfulness has been prioritized to avoid disturbing the lecture. This was done by seeking permission with lecturers at the beginning of classes to share the questionnaire with students once a break is given during lecture time. Furthermore, respondents' identity has been kept confidential and anonymous, as the list of attendees for the lecture has remained unrevealed and a mystery to the researcher.

Respondents Demographic Data

Most of the respondents were between the age of 18 to 24 years (70%), followed by the range of 25 to 34 years (15.7%), come after those who found themselves in the range 0 to 17 (9.3%) and finally those who are 35 years old and more (5%). From there, it can be understood that the younger generations are more actively engaged in sustainable orientations to later being pushed towards sustainable entrepreneurship intentions. Interestingly, data collection was carried mainly among university business students studying in Malaysia, and the ratio between men and women respondents was quite balanced with a percentage of 40% female and 60% male. A big majority of the respondents were students undertaking a bachelor's degree consisting of 56% of total respondents followed by the high school students at 13.6% and some attending colleges at 12.1% of total respondents. Furthermore, in terms of the ethnicity of the respondents, the predominant group was "others ethnicity group" at a rate of 37.9% of all respondents, this can be explained by the fact that there are a significant number of foreign students attending university in Malaysia. Interestingly, the sequence was followed by Indian consisting of 35.7% other ethnicity groups at a rate of 37.9%, Chinese at a rate of 22.1% and Malay at a rate of 4.3% of all respondents. Respondents' family background was dominantly from the middle class at a rate of 87.9%, followed by the upper class with a 6.4% response rate and the lower class at a 3.6% rate. Additionally, due to the fact that the target sample of respondents were university students, only 9.2% of all respondents had working experiences of more than 6 years, the majority of them had 0 to 2 years of working experiences which accounts for only 65% of total respondents, followed by a rate of 25.7% for those with 3 to 5 years in the working industry. Last but not least, the religious background of the respondents starting from the majority to the minority were Hinduism (37.9%), Christianity (30%), Islam (16.4%), Buddhism (12.1) and others (3.6%).

DATA ANALYSIS

Measurement

The four independent variables of sustainability orientation which include sustainability practices, sustainability culture, sustainability knowledge and commitment to environmental sustainability were examined among the targeted sample of business schools' students through the use of the standard questionnaire. The "sustainability practices" were measured by seven items adapted from Roxas, et al., (2017) and its Cronbach alpha was found to be 0.90. The "sustainability culture" was measured by five items adapted from Claudy, et al., (2016) and has a Cronbach alpha of 0.91. The "sustainability knowledge" was measured by five items adapted from Roxas, et al., (2017) and has a Cronbach alpha of 0.92. "Commitment to environmental sustainability" was measured with four items adapted from Roxas, et al., (2017) and has a Cronbach alpha of 0.88. Three items were used to measure the "Entrepreneurial opportunity recognition" adapted from Wang, et al., (2013) with a Cronbach alpha of 0.80. Sustainable entrepreneurship intention was measured with nine items adapted from Adekiya & Ibrahim (2016) and has a Cronbach alpha of 0.911. A five-point Likert scale was used to rate the level of agreement or disagreement from 1 which means strongly disagree to 5 which means strongly agree. This Likert scale was used to assess the behaviours of business school students towards the above-mentioned variables. The items used to measure the variables can be seen in Table 1.

To test the relationships among the main constructs through the adoption of the Partial Least Squares (PLS) technique, SmartPLS 3.2.4 has been used for the assessment of the measurement and structural model. PLS analysis was the choice in this study as it allows the assessment of all paths concurrently and there is no need for a large sample size. The other main reason for using PLS-

SEM is that it is suitable for non-normal data, newly developed relationships and appropriate for predicting research (Hair et al., 2017). Furthermore, the use of the G* Power for the determination of sample size is suggested when using PLS (Hair et al., 2017). Therefore, the sample size was calculated using G*Power 3.1.9.2 software (Faul et al., 2007). Since, the proposed framework was tested with 5 predictors with a bottom sample size of 92 to have a power of 0.80 so as the model medium effect size is f^2 0.15 (Hair et al., 2014; Hair et al., 2017). Consequently, 138 respondents were required to obtain a high statistical power of 0.95. Table 1 indicates that the outer loadings of all the items are above the minimum value of 0.4 to 0.8. The convergent validity of the different variables is also above the required value of 0.5. Likewise, the composite is more than 0.6 for the individual constructs.

Table 1
RESULTS OF MEASUREMENT MODELS

| Variable/Statements | FL | α | rho_A | CR | AVE | Source |
|---|-------|----------|-------|-------|-------|--------------------------|
| Commitment to Environmental Sustainability (CES) | | 0.753 | 0.754 | 0.843 | 0.574 | Roxas, et al.,(2017) |
| CES1: Environmental protection is part of business | 0.797 | | | | | |
| CES2: Practices are good for my business | 0.768 | | | | | |
| CES3: Gain more customers | 0.739 | | | | | |
| CES4: Proud to do business in local community | 0.726 | | | | | |
| Entrepreneurial Opportunity Recognition (EOR) | | 0.822 | 0.837 | 0.894 | 0.738 | Wang, et al., (2013) |
| EOR1: While going about routine day-to-day activities, I see potential new venture ideas all around me | 0.814 | | | | | |
| EOR2: I have a special “alertness” or sensitivity toward new venture opportunities | 0.862 | | | | | |
| EOR3: “Seeing” potential new venture opportunities does come very naturally to me. | 0.869 | | | | | |
| Sustainability Culture (SC) | | 0.833 | 0.862 | 0.88 | 0.597 | Claudy, et al., (2016) |
| SC1: Environmental sustainability | 0.717 | | | | | |
| SC2: Social sustainability | 0.650 | | | | | |
| SC3: Sustainability criteria for new product development | 0.838 | | | | | |
| SC4: Measuring new product progress on sustainability | 0.825 | | | | | |
| SC5: Future importance of sustainability-type criteria | 0.816 | | | | | |
| Sustainability Knowledge (SK) | | 0.897 | 0.933 | 0.923 | 0.708 | Roxas, et al., (2017) |
| SK1: Knowledge about climate change | 0.756 | | | | | |
| SK2: Waste management issues in the city | 0.893 | | | | | |
| SK3: Issues about sources of drinking water | 0.877 | | | | | |
| SK4: Issues concerning source of electricity | 0.876 | | | | | |
| SK5: Environmental protection programs | 0.796 | | | | | |
| Sustainability Practices (SP) | | 0.879 | 0.901 | 0.898 | 0.527 | Roxas, et al., (2017) |
| SP1: Practice recycling of wastes | 0.662 | | | | | |
| SP2: Water and electricity conservation | 0.570 | | | | | |
| SP3: Training on environmental awareness | 0.763 | | | | | |
| SP4: Participation in environmental programs | 0.723 | | | | | |
| SP5: Low impact manufacturing technology | 0.686 | | | | | |
| SP6: Communicate with customers/buyers | 0.730 | | | | | |
| SP7: Deal with environment-friendly suppliers | 0.838 | | | | | |
| SP8: Sustainability is an integral part of our business plans and operations | 0.802 | | | | | |
| Sustainable Entrepreneurship Intentions (SEI) | | 0.942 | 0.945 | 0.952 | 0.688 | Adekiya & Ibrahim (2016) |
| SEI1 : I am ready to make any form of sacrifice to become an entrepreneur | 0.734 | | | | | |
| SEI2 : It is in my plan to start my own business within five years after graduating from the university | 0.762 | | | | | |
| SEI3 : My professional goal is to become an entrepreneur | 0.892 | | | | | |

| | | | | | | |
|--|-------|--|--|--|--|--|
| SEI4 : I will make every effort to start and run my own firm | 0.870 | | | | | |
| SEI5 : I am determined to create a firm in the future | 0.849 | | | | | |
| SEI6 : I have very seriously thought of starting a firm | 0.859 | | | | | |
| SEI7 : I have the firm intention to start a firm some day | 0.866 | | | | | |
| SEI8 : If I had the opportunity and resources, I'd like to start a firm | 0.731 | | | | | |
| SEI9 : Among various options, I would rather be an entrepreneur | 0.880 | | | | | |
| Abbreviations: Average Variance Extracted (AVE); Composite Reliability (CR); Cronbach's Alpha (α); factor Loadings (FL) | | | | | | |

Discriminant Validity

Additionally, through the assessment of the correlations' Heterotrait-Monotrait Ratio (HTMT) proposed by Henseler, et al., (2015) the discriminant validity can be determined. This approach shows the estimation of the true correlation between 2 variables. To determine the discriminant validity through the HTMT, the standard of 0.90 value for HTMT has been proposed (Henseler et al., 2015). Table 2 indicates that for the pls model the HTMT criterion has been met. Hence, based on the above results, the measurement model analysis has been satisfied as it has shown sufficient reliability, convergent and discriminant validity. The second stage of assessment includes the structural model analysis and hypotheses testing.

| Constructs | CES | EOR | SC | SK | SP |
|--|-------|-------|-------|-------|-------|
| CES | | | | | |
| EOR | 0.5 | | | | |
| SC | 0.638 | 0.483 | | | |
| SK | 0.465 | 0.224 | 0.391 | | |
| SP | 0.626 | 0.302 | 0.821 | 0.647 | |
| SEI | 0.573 | 0.805 | 0.486 | 0.261 | 0.326 |
| Abbreviations: Commitment to environmental sustainability (CES); Entrepreneurial Opportunity Recognition (EOR); Sustainability Culture (SC); Sustainability Knowledge (SK); Sustainability Practices (SP); Sustainable Entrepreneurship Intentions (SEI) | | | | | |

Path Analysis

The coefficient of determination (R^2) was 0.239 for EOR and 0.567 for SEI. Based on the suggestion of Cohen (1988) the R^2 values of 0.02, 0.13 and 0.26 need to be considered as weak, moderate and substantial accordingly. In this study the R^2 for the 2 endogenous variables were found to be substantial as they were more than 0.26, which indicates a substantial PLS model. To summaries the findings, it can be said that SK, SC, SP, CES and EOR explain 56.7% of the variance in SEI. This means that 43.3% of the variance in SEI was explained by the unknown factors that were not included in the study. Hair, et al., (2017) has suggested that the predictive relevance needs to be assessed using Q^2 values. Hence, the blindfolding procedure has been used to get the values of Q^2 . In this research the Q^2 values of EOR and SEI were reported as 0.145 and 0.351 as shown in Table 3. This indicates a medium predictive relevance for the PLS model (Cohen, 1988).

| Constructs | R ² | R ² Adjusted | Q ² |
|---|----------------|-------------------------|----------------|
| Entrepreneurial Opportunity Recognition | 0.239 | 0.235 | 0.145 |
| Sustainable Entrepreneurship Intentions | 0.567 | 0.563 | 0.351 |

Table 4 and Figure 2 show the direct path coefficient for sustainability culture construct and shows a non-significant relationship with SEI ($\beta=0.105$, $t=1.082$). Furthermore, the outcomes explain that since t-value is significant, H1b has been supported ($\beta=0.407$, $t=3.546$). H2a has not been supported since t-value is not significant ($\beta=-0.046$, $t=0.429$). The outcomes explain that H2b has failed to be supported since t-value is not significant ($\beta=-0.195$, $t=1.572$). H3a has failed to be supported since t-value is insignificant ($\beta=0.045$, $t=0.583$). H3b has also failed to be supported since t-value is not significant ($\beta=0.076$, $t=0.645$). H4a has been successfully supported because of the significance of t-value ($\beta=0.203$, $t=2.202$). The results explain that H4b has been successfully supported because of the significance of t-value ($\beta=0.271$, $t=3.229$). As per the figures, H5 has successfully been supported because of the significance of t-value ($\beta=0.597$, $t=8.238$). Moreover, through the bootstrapping results established that the indirect impacts, $\beta=0.243$ and $\beta=0.162$ showed significance together with the t-values of 3.312 and 3.114. H2c and H3c test outcome shows non-significant t-values where β is -0.116 and 0.045 each. As a result, it is understood that mediation impacts are significant based on statistics.

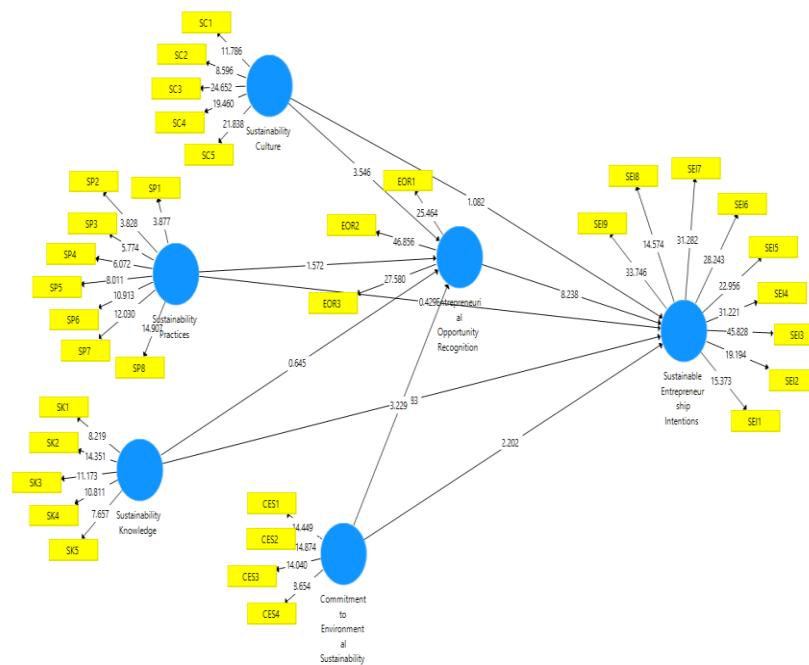


FIGURE 2
BOOTSTRAPPING OUTCOMES (STRUCTURAL MODEL ANALYSIS)

Furthermore, the effect size (f^2) was analyzed. Based on Cohen’s (1988) criterion, the f^2 effect size was considered, small, medium, and large effect when they have the values, 0.02, 0.15 and 0.35 respectively. Hence, based on the guidelines by Cohen (1988) it can be understood that CES has a small effect on both EOR and SEI and SC has a medium effect on EOR while SK, SP has no effect on both EOR and SEI. SC also has no effect on SEI as shown in Table 4.

Table 4
HYPOTHESES TESTING- STRUCTURAL MODEL

| Relationships between constructs | β | S.D. | T Values | F ² Values | P Values | Remarks |
|----------------------------------|---------|-------|----------|-----------------------|----------|---------------|
| H1a: SC -> SEI | 0.105 | 0.097 | 1.082 | 0.011 | 0.140 | Not Supported |
| H1b: SC ->EOR | 0.407 | 0.115 | ***3.546 | 0.1 | 0.000 | Supported |
| H1c: SC -> EOR -> SEI | 0.243 | 0.073 | ***3.312 | | 0.000 | Supported |
| H2a: SP -> SEI | -0.046 | 0.108 | 0.429 | 0.002 | 0.334 | Not Supported |
| H2b: SP ->EOR | -0.195 | 0.124 | 1.572 | 0.017 | 0.058 | Not Supported |
| H2c: SP -> EOR ->SEI | -0.116 | 0.075 | 1.549 | | 0.061 | Not Supported |
| H3a: SK -> SEI | 0.045 | 0.077 | 0.583 | 0.003 | 0.28 | Not Supported |
| H3b: SK -> EOR | 0.076 | 0.118 | 0.645 | 0.005 | 0.259 | Not Supported |
| H3c: SK -> EOR -> SEI | 0.045 | 0.072 | 0.629 | | 0.265 | Not Supported |
| H4a: CES -> SEI | 0.203 | 0.092 | **2.202 | 0.058 | 0.014 | Supported |
| H4b: CES -> EOR | 0.271 | 0.084 | ***3.229 | 0.063 | 0.001 | Supported |
| H4c: CES -> EOR -> SEI | 0.162 | 0.052 | ***3.114 | | 0.001 | Supported |
| H5: EOR -> SEI | 0.597 | 0.072 | ***8.238 | 0.626 | 0.000 | Supported |

Note: Critical t values **1.96 (significance level= 5%) & ***2.57 (significance level= 1%): Abbreviations: Standard Deviation (S.D.); Commitment to environmental sustainability (CES); Entrepreneurial Opportunity Recognition (EOR); Sustainability Culture (SC); Sustainability Knowledge (SK); Sustainability Practices (SP); Sustainable Entrepreneurship Intentions (SEI)

DISCUSSION OF FINDINGS

The study has found that H1a, H2a and H3a have not been supported. This means that there is no significant relationship between SC, SP and SK with SEI. This can be seen as their beta values are 0.105, -0.046, 0.045 respectively. Hence, for H2a the beta value shows that there is a negative relationship between SP and SEI. Furthermore, the t-values at 5% significance level were 1.082, 0.429 and 0.583 accordingly which is below the required t-value of 1.65. The results for H1a are similar to the findings of the study from (Ben et al., 2018) who stipulated that the sustainability culture varies from country to country and by doing sustainable action it can allow members to see opportunities, but it requires the risk-taking individual to create a sustainable venture. Another plausible reason to support the findings of this study is that, even though business school students are living in a collectivist society which is Malaysia they might have other priorities in life for example, starting a business that will help them to gain economic stability first instead of taking the risk for a third party and starting a sustainable venture. Additionally, the results for H2a are in line with the work of Adekiya & Ibrahim (2016) which suggests that perceived consistency which is similar to practices that are done repeatedly does not have a positive impact on entrepreneurial intentions. Another explanation for this is that the sustainability practices might not have any financial gain element in it which is required when taking an opportunity to start an enterprise. Thus, due to no financial motive students involved in sustainable practices might not have an increased intention to build a sustainable venture. Hence, instead of increasing SEI it is decreasing it as shown through the negative beta value.

H3a outcomes are in line with the study of Naturvetenskapliga (2018) which indicates that the sustainability knowledge that the students might gather through entrepreneurship education might not lead directly to increasing the sustainable entrepreneurship intention. They suggest that when mediated with a locus of control and need for achievement sustainability knowledge might lead to the creation of entrepreneurship intention. A plausible reason that this hypothesis has not been supported might be that different business schools have different curriculums and provide different levels of sustainability knowledge to the students. However, the findings of H4a shows that the hypothesis has been supported with a beta value of 0.203 and t-value of **2.202. This means that there is a significant positive relationship between CES and SEI. This finding can also

be supported by Yousaf, et al., (2018) who suggest that through commitment to sustainability individuals try to find ways to solve societal and ecological problems and form sustainable entrepreneurship. Moreover, another reason is that sustainable entrepreneurship, like many other entrepreneurs, starts with a passion and the commitment to this passion allows entrepreneurs to form their venture.

Moreover, the findings for H1b and H4b shows that the hypotheses have been supported. This means that SC and CES have a significant positive relationship with EOR. This can be seen through their beta value which is 0.407 and 0.271 respectively and the t-values are ***3.546 and ***3.229 accordingly. The H1b results are in line with the work of Gray, et al., (2014) which suggest that sustainability-oriented values and norms help to discover opportunities for the future. Additionally, the study from Farrukh, et al., (2019) suggests that external factors such as culture have a positive impact on entrepreneurial intentions. Another reason to explain the positive relationship is that without a culture that is continuously socialising and sharing values about sustainability the students might not have easy access to discover the new issues that are affecting some communities and environment. The findings for H4b can be supported by Ling, et al., (2017) who suggest that the commitment to sustainability can encourage individuals to identify loop-holes in the market that are threatening the socio-ecological system and thus use these problems as entrepreneurial opportunities. Similarly, another reason for this positive relationship is that the level of commitment might be higher in some business school students and as they are in a collectivist society where the group well-being is important the students might be very motivated to protect the environment for the future generation which pushes them to continuously look for entrepreneurial opportunities to exploit and provide solutions to socio-ecological problems.

However, the results for H2b ($\beta=-0.195$; $t=-1.572$) and H3b ($\beta= 0.076$; $t=0.645$) have not been supported. This means that there is no positive significant relationship between SP and SK with EOR. The H2b results are in line with the study of Sung & Park (2018) as it stipulates those sustainable practices are solutions that have been provided to the sustainability issues that have been discovered earlier. Another reason to support this is that students are doing sustainable practices so repeatedly that it has become a classical conditioning that prevents them from thinking beyond their action. Consequently, they do not think critically about the actions that they are doing which can act as a barrier for them to be able to discover any kind of entrepreneurial opportunity that might be present. The results for H3b can be supported by the study of Ceptureanu, et al., (2017) which has found that sustainability knowledge does not always lead to entrepreneurial opportunity recognition. This is because sometimes there is a lack of opportunity for financial gain or even the sustainability knowledge given information about issues that many are already working on. Similarly, another reason that this hypothesis has not been supported is that the sustainability knowledge that different business schools offer might be outdated and not future-oriented to allow students to use the different information to discover new opportunities that can be exploited on entrepreneurial grounds. Nonetheless, it can be seen that H5 ($\beta=0.567$; $t=***8.238$) has been supported. This means that there is a positive significant impact of EOR on SEI. The outcomes indicated that entrepreneurial opportunity recognition helps enhance the intention to create sustainable entrepreneurship intentions among business school students. The finding is in line with the research of Ryu & Kim (2020) who suggested that opportunity recognition positively affects entrepreneurial intention.

Although the direct impact of SC on SEI has not been supported, it can be seen that H1c, the indirect/mediation, has been supported ($\beta=0.243$; $t=***3.312$). This means that EOR has successfully mediated the relationship between SC and SEI. This mediation relationship is in line with the study of McGibbon, et al., (2015) who suggests that the sustainability culture in business school helps to identify entrepreneurial opportunities which eventually leads to increased intention to form sustainable entrepreneurship. Moreover, H4c has also been supported. This means that EOR

has successfully mediated the relationship between CES and SEI. This means that strong commitment to sustainability on behalf of business school students will lead to the entrepreneurship opportunity recognition process where the students will be able to discover ideas and ways to solve ecological problems and form sustainable entrepreneurship. Thus, it should be agreed that commitment to sustainability will be a good step that business schools can take to allow students to discover entrepreneurial opportunities and increase their intention to form sustainable ventures. Therefore, it is imperative that entrepreneurial opportunity recognition acts as a mediator between commitment to sustainability and sustainable entrepreneurship intentions.

However, H2c ($\beta=-0.116$; $t= 1.549$) and H3c ($\beta= 0.045$; $t=0.629$) have not been supported. This means that EOR has failed to mediate the relationship between SP and SEI and SK and SEI. Hence, the results for H2c means that entrepreneurial opportunity recognition does not have a positive mediation impact between sustainability practices and sustainable entrepreneurship intentions. As Wang, et al., (2013) suggested entrepreneurial opportunity recognition is the ability that someone has to discover market opportunities to exploit for financial gain. Therefore, this means that if students engage in sustainability practices this might not open their eyes to find new opportunities and consequently create sustainable entrepreneurship. This is because of the normalisation of sustainable practices by many business schools which create classical conditioning and prevent the students from thinking critically about their actions. Additionally, the results for H3c can be explained by the possibility that the different students in the different business schools have not received the same information to discover entrepreneurial opportunities. Hence the mediated effect of entrepreneurial opportunity recognition has failed.

Study Contribution

This study has made main contributions to the literature through the development and testing of a new model that incorporates the mediation effect of EOR and in the relationship between SP, SK, SC and CES and SEI. The study has contributed to the literature by revealing a mediation effect between SP, SK, SC and CES and SEI of business school students. This study has provided further support to the studies that have established the significance of sustainability orientation in increasing the sustainable entrepreneurship intention through entrepreneurial opportunity recognition. Hence, since the formation of the enterprise depends on the skills and opportunities that the entrepreneur has discovered, having a sustainability-oriented entrepreneur can help increase the intention to create this venture. However, it can be seen that SC, SP and SK have been revealed to not have a significant relationship with SEI. Nonetheless, the research is contributing in proving the importance of sustainability orientation in increasing SEI among would-be entrepreneurs. However, the indirect effects have proved that sustainability orientation can positively influence SEI when entrepreneurs go through entrepreneurial opportunity recognition. Furthermore, EOR has also proved to have a direct effect on SEI, which can help other researchers explore it as an independent variable or even mediator.

Furthermore, this study has also used the self-determination theory which advocates the autonomous motivation that is driving the individuals to engage in actions that are free from self-interest. Additionally, this theory also includes three psychological needs that are discussed and they are relatedness, autonomy and competence. Hence, our findings are in line with the SDT as it shows that the sustainability orientation of the business school students which are in line with the need of relatedness, autonomy and competence encourage the student to look for entrepreneurial opportunities that will help either the environment or society before seeking for financial gain. Hence this research has extended the application of SDT in the sustainable entrepreneurship field that helps to understand how the determination which is not powered by self-interest is helping in building sustainable ventures. Moreover, this research helps to support the work of Shir, et al.,

(2019) who argues that SDT is central to the entrepreneurship development and the psychological needs proposed by SDT can be mapped on the characteristics of entrepreneurs proposed by Shane (2003) which are need for achievement, extraversion, risk-taking and desire for independence. Moreover, the application of SDT in this study shows that there is a need for psychological capital and not only economic capital when starting an enterprise which hence help support the work of Baluku, et al., (2016) who suggested that psychological capital can be the primary determinant of success. The research also contributes to the explanation that the sustainable entrepreneurship intention does not depend only on entrepreneurial competencies and sustainability orientations but also on entrepreneurial opportunity recognition. Hence, recognizing an opportunity that is sustainability oriented can increase the willingness of building sustainable ventures.

Finally, given the little knowledge available on the determinants of sustainable entrepreneurship intention among business school students, this research is contributing to the literature by addressing the knowledge gap that exists. Although there is much research explaining the entrepreneurship intention, competencies and characteristics of successful enterprise, the knowledge about sustainable entrepreneurship remains sparse. This is mainly true for the lack of theoretical understanding to explain the sustainable entrepreneurship intention. Furthermore, the literature on social enterprise or entrepreneurship in general is abundant but little has focused on studying sustainable enterprise in a less developed country such as Malaysia and among business school students. This contribution is important as business schools in Malaysia have started to focus on bringing a sustainability culture which can greatly affect the intention to build sustainable enterprise among the students. Furthermore, since enterprise in less developed countries operates in different economic and ecological environments, the opportunity might differ and due to financial constraints students might be more driven towards enterprise that is economically driven first. Hence, knowing the determinants of sustainable enterprise in this context can help business schools build a sustainability culture that would forge the intention of the student and hence find both sustainable and economic opportunities. Hence, the research has shown the different direct and indirect relationship that leads to sustainable entrepreneurship intention. Hence, discovering these determinants might be important for Malaysia to preserve its ecosystem and maintain economic stability.

This study also has some implications for the policy makers and business schools. This is because knowing the determinant of sustainable entrepreneurship is going to affect the economic development and the environment. Furthermore, by knowing the determinants, the policy makers can shape better policies that will encourage entrepreneurs to opt for a sustainable venture rather than one which is not. Furthermore, since this research is based on business school students and the employability of the students affects the universities reputation, this will help the business schools to better shape the syllabus to forge more sustainable would-be entrepreneurs. For example, business schools can build a curriculum that will encourage the students to increase their sustainability orientations by being more involved in sustainable actions and events during their university journey. This will help them to be more alert to entrepreneurial opportunities presented to them and turn those opportunities into sustainable entrepreneurship ideas which can give back to society. Furthermore, the government should consider investing in sustainable education or sustainable knowledge by giving grants and scholarships to students that enroll in entrepreneurship courses. This will provide them a window to further exploit their ability to perceive entrepreneurial opportunities to increase SEI. Moreover, the government can also implement the need for all business schools to include ethical and sustainability subjects in their curriculum. Besides, universities should indubitably set examples and standards by introducing and implementing sustainability modules and events to inculcate sustainability concerns in students. The students will then have higher sustainability orientations such as better SK, SC, SP and CES, and eventually they might pass this back to society by becoming future sustainable entrepreneurs. Hence, the country

and the world will benefit from those sustainable businesses which will care for the triple bottom line.

LIMITATIONS AND FUTURE RECOMMENDATIONS

The study has to be considered with some limitations. Firstly, the study context is focused in Malaysia only. Hence, this study might only be relevant to the Malaysian context. Applying this research to US, European countries or even African countries which are constantly more enthusiastic about sustainability issues might not be as relevant in their regards. Furthermore, due to the Covid-19 pandemic that hit the entire globe, needless to say that data collection was indubitably affected. This can be explained by the fact that since March 2020, Malaysia has implemented the Movement Control Order (MCO) that limits or even restricts mobility of people. Hence, data gathered from the sample size achieved was limited to a particular area and even bounded within online access through online platforms. In consequence, the sample size of this research slightly underrepresents the Sustainable Entrepreneurship Intentions (SEI) of business students in Malaysia.

An important limitation is the sampling approach adopted in this piece of work. Because the researcher's focal point was on business university students in Malaysia, the data gathered might be prone to demographic biases because of geographical limitations and limited time scale. As a result, generalization of outcomes might not properly represent the Malaysian citizen. Furthermore, it is important to underline the fact that not only business students might have Sustainable Entrepreneurship Intentions (SEI). Students studying science, architecture, arts and engineering might also aspire to be future sustainable entrepreneurs. Distinction between the Sustainable Entrepreneurship Intentions (SEI) and sustainability orientations of male and female were not considered in this research. Hence, the divergence between their choices and attitudes towards sustainability issues or even their willingness to become sustainable entrepreneurs might have been ignored.

CONCLUSION

In conclusion, this study has found that the sustainability culture has huge impact on entrepreneurial opportunity recognition and entrepreneurial opportunity recognition acts as a significant mediator for the impact of sustainability culture on sustainable entrepreneurship intention among university students. Likewise, commitment to environmental sustainability positively impacts on sustainable entrepreneurship intention as well as on entrepreneurial opportunity recognition. The entrepreneurial opportunity recognition also acts as the significant mediator for the impact of commitment to environmental sustainability on sustainable entrepreneurship intention among university students. Furthermore, entrepreneurial opportunity recognition has positive influence on sustainable entrepreneurship intention. On the other hand, sustainability practices and sustainability knowledge do not impact entrepreneurial opportunity recognition and sustainable entrepreneurship intention. Therefore, sustainability culture and commitment to environmental sustainability are found to be the most important factors among others that impact on sustainable entrepreneurship intention among Malaysian universities' students. However, universities should also strive to promote the sustainability practices and sustainability knowledge among students to enhance their sustainable entrepreneurship intention. This is because sustainability practices and sustainability knowledge are also essential to develop sustainable entrepreneurship intention among students.

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