

# The Role of Entrepreneurial Opportunity Recognition on Relationship among Entrepreneurship Education and Entrepreneurial Career Option

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## Abstract

The study aimed at examining the impact of the mediating role of entrepreneurial opportunity recognition on the relationship between entrepreneurship education and entrepreneurial career option among businesses students at Palestinian universities. Smart-PLS (3.0) was used to analysis the data obtained from a sample of 291 students at six universities in Palestine. The study found a significant positive relationship between social capital, entrepreneurial motivations and entrepreneurial career option. Furthermore, the study found that entrepreneurial opportunity recognition significantly mediates the relationship among social capital, entrepreneurial motivations and entrepreneurial career option. The study concluded with recommendations and suggestions for future research.

**Keywords:** Entrepreneurial career option, Entrepreneurship Education, Know-why, Know-who, Entrepreneurial opportunity recognition.

## 1. Introduction

Entrepreneurship education is a concept that has become crucial to both economic and social phenomenon and as a research field. It has also been acknowledged in the fields of academic and teaching (Fayolle & Gailly, 2008). Additionally, programs dedicated to entrepreneurship education have been rapidly increasing in the past 2 decades (Bank, 2013) and their advantages have garnered the attention of several countries to adopt them, owing to its assistance in developing a business mind-set and providing the required knowledge and skills for the promotion of an entrepreneurial culture (Commission, 2012). It is also considered as a policy tool that ensures the awareness of entrepreneurial career as an alternative option by the graduates (Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011). Wen-Long et al., (2014) also found that an entrepreneurial education course that has an effective design and establishment significantly impacts the skills to recognize opportunities (Wen-Long, Liu, & Chiang, 2014). Such opportunity recognition abilities can also assist in career management (Sardeshmukh & Smith- Nelson, 2011). Similarly, Elfving, Brännback and Carsrud (2009) that indicated intentions towards entrepreneurial career can be carefully examined through a theoretical framework that integrates opportunity identification coupled with other variables (Elfving, Brännback, & Carsrud, 2009). Besides to this, opportunity recognition ability could result in a motivating impact on the intention of individuals towards business start-ups as entrepreneurial career option (Van Gelderen et al., 2008). Thus, the main objective of this research is to empirically test the mediating role of entrepreneurial opportunity recognition on the relationship between entrepreneurship education in terms of (know-why and know-who), and entrepreneurial career option among university students. The study also generates statistical inference in the direct relationships among the latent variables and makes suggestions for future research.

## 2. Literature Review

Entrepreneurial career option (ECO) refers to culture and an economic phenomenon (Grozđanić, 2008), while in other studies, the concept is described as an economic growth driver (Arend, 2014; Bosma N., Wennekers, & Amorós, 2012; Ethugala, 2011). Moreover, according to Dyer Jr. (1994), Lent, Brown & Hackett (1994) and Schein (1993), entrepreneurial career development entails several stages, one of which is the decision to take up an entrepreneurial career goal, known as an entrepreneurial career choice (Dyer Jr, 1994; Lent, Brown, & Hackett, 1994; Schein, 1993). Accordingly, entrepreneurial career choice definition is adopted from Moriano et al. (2011) who defined it as a conscious and precise decision made to prefer entrepreneurship as a career (Moriano et al., 2011). Added to the above studies, the decision of an individual to be an entrepreneur is frequently pre-determined by various factors including but limited to the dynamic career world, the personal attributes of the person, the characteristic of his career option, financial factors, education factors, family background and the individuals he admires (role models) (Douglas & Fitzsimmons, 2008; Liñán & Chen, 2009; Liñán, Rodríguez-Cohard, et al., 2011; Zhang et al., 2014).

Entrepreneurship education (EE) is viewed as an education process that inculcates entrepreneurial attitudes and skills (Fayolle et al., 2006a). Moreover, Lo, (2011, p.36) defined entrepreneurship as the process that entails the transmission of entrepreneurial knowledge and skills to students to assist in their exploitation of business

opportunities (Lo, 2011), while Chang et al., (2013) stated that major objective of an entrepreneurship education program is to affect the individual's future behavior and achieve successful businesses (Chang, Liu, & Huang, 2013). The main objective of EE is highlighted to improve students' mind-sets, their behaviors, skills, capabilities in being entrepreneurs that could generate future pool of entrepreneurs (J. Chang & Rieple, 2013). Added to this, EE plays a key role in developing the entrepreneurial capabilities of the individual (Hannon, 2005; Lewrick, Omar, Raeside, & Sailer, 2011; H. Matlay, 2009; O'Connor, 2013). The introduction of EE was geared towards improving the ability of the students to identify business opportunities in the area that could enable their self-employment and self-reliance while improving their skills of employment (Ramsey, Smith, Martin, Draycott, & Rae, 2011). Furthermore, it promotes entrepreneurial career and generates entrepreneurial mind-sets through EE was acknowledged in the study conducted by (Lourenço & Jayawarna, 2011; Block, Hoogerheide, & Thurik, 2011; Douglas & Shepherd, 2002; Nabi & Liñán, 2013; St-Jean & Mathieu, 2015; Taatila, 2010). Many of the previous studies found a positive and significant relationship between EE and ECO includes Abdulai (2015); Molaei, Zali, Mobaraki and Farsi (2014); Rae and Woodier-Harris (2013).

More specifically, Johannison (1991) classified entrepreneurial learning into certain divisions and they are, know-what representing entrepreneurial knowledge, know-why representing values and motives, know-who representing social interaction, know-how representing entrepreneurial skills and abilities and know-when representing institution and the right for business start-ups (Johannison, 1991). In this study, the dimensions are adopted (know-who and know-why) as reflecting the entrepreneurship learning components, and both the dimensions also match the present study's objectives as to the way specific education components affect entrepreneurial career. Furthermore, know-why refers to the motivations, sense of purpose, the personal meaning as well as the identification with the work that is carried out (DeFillippi & Arthur, 1994), while, know-who reflects the social interaction. Based on the study conducted by Lundvall (1998), this dimension entails the social capability towards cooperating and communicating with various people and experts.

Furthermore, Entrepreneurial opportunities recognition (EOR) is defined by Shane and Venkataraman (2000) as the situations wherein novel goods, services, raw materials, markets and methods of organization can be launched and sold at a price that is higher compared to their production cost (Shane & Venkataraman, 2000). Along a similar line of definition, Lumpkin and Lichtenstein (2005) described EOR as the ability to determine a good idea and change it into an entrepreneurial concept or to enhance an existing venture that contributes to customer/societal value and produces entrepreneurial revenues (Lumpkin & Lichtenstein, 2005). Meanwhile, according Saemundsson and Holmen (2011) explained that an opportunity is discovered when a conjecture is developed concerning the distinction between the current and future resource value (Saemundsson & Holmén, 2011). Several studies in literature made an attempt to confirm the relationship between EOR and ECO includes Herath (2014); Ardichvili et al., (2003); Sambasivan, Abdul, & Yusop, (2009); Shepherd & DeTienne, (2005); Wasdani & Mathew, (2014). Thus, this research investigates the mediating role of entrepreneurial opportunity recognition on the relationship between entrepreneurship education and entrepreneurial career option among the final year university students. Consequently, the research developed the following hypotheses:

Hypothesis 1: There is a significant relationship between know-why and entrepreneurial career option.

Hypothesis 2: There is a significant relationship between know-who and entrepreneurial career option.

Hypothesis 3: There is a significant relationship between know-why and entrepreneurial opportunity recognition.

Hypothesis 4: There is a significant relationship between know-who and entrepreneurial opportunity recognition.

Hypothesis 5: There is a significant relationship between entrepreneurial opportunity recognition and entrepreneurial career option.

Hypothesis 6: Entrepreneurial opportunity recognition mediates the relationship between know-why and entrepreneurial career option.

Hypothesis 7: Entrepreneurial opportunity recognition mediates the relationship between know-who and entrepreneurial career option.

### **3. Methodology**

#### *3.1 Participants and procedures*

The research used a sample of 291 final student's business studies including management, accounting, finance and economic. The survey sample was drawn based on a cluster random sampling technique from six universities in Palestine. The questionnaire forms were personally administered by the researchers with the help of research assistants at various Palestinian universities, who guaranteed efficiency of the data collection. Tables (1), presents the characteristics of the respondents.

#### *3.2 Measures of Variables*

Entrepreneurial career option was measured by fourteen items with a five-points Likert-scale (1-strongly disagree, to 5-strongly agree). Describing the extent to which students perceive entrepreneurship as a career option. The fourteen items were adopted from the work of Jane et al., (2003), Theng & Boon (1996).

Entrepreneurship education was measured by ten items, where they were categorized into two categories with a five-points Likert-scale (1-strongly disagree, to 5-strongly agree) based on the work of Lo, (2011). Data was gathered by asking the participants to the survey to provide their feedback on the entrepreneurship course they tool in the Palestinian higher education institutions.

Entrepreneurial opportunity recognition was measured by five items, with a five-points Likert-scale (1-strongly disagree, to 5-strongly agree) adopted from Baron & Ozgen (2007). The items ask respondents to what extent could recognize the opportunity.

### 3.2 Method of Data Analysis

Smart-PLS version 3.0 was used to run multivariate data analysis in order to assess the model and test the hypotheses formulated for the research. The PLS-SEM method was employed in the research owing to the ability to assess the measurement model as a whole and analyze the relationship between the latent variables and their measures (Hair et al., 2010). The research employed PLS-SEM method to assess the measurement model via PLS-SEM algorithm and then evaluated the structural model via Bootstrapping and stated the results as such.

## 4. Results

### 4.1 Measurement Model

In this research, the assessment of measurement model confirms the individual item reliability and validity of the construct measures using PLS-SEM Algorithm (Figure 1). Accordingly, Hair, Hult, Ringle, and Sarstedt, (2013) propose that the reliability and validity are the two main criteria used in PLS-SEM analysis to evaluate the goodness measurement model. The composite reliability ranged from 0.86 to 0.93 for the first order constructs (Table 3), herewith satisfied the threshold of 0.70 and above (Hair et al., 2014). Furthermore, the finding demonstrated that the average variance extracted (AVE) in this study ranges between 0.61 to 0.80 for all the constructs, these exceed the threshold values of 0.50, so therefore, it is satisfying the convergent validity (Hair, et al., 2013).

The AVEs are presented in the diagonal side in bold and the squared inter-construct correlations are off the diagonal side of the table (Table 4). The result confirmed that all the values of AVEs are higher than the squared inter-constructs correlations; this also shows the non-existence of discriminant validity problem. Furthermore, the discriminant validity in the research could be evaluated by examining the indicator's cross loadings. The result demonstrated that all indicators loadings were higher than the threshold value of 0.5 (Table 4). Hence, the research established that no problem of discriminant validity among the latent variables (Hair et al., 2014).

### 4.2 Structural Model

The appraisal of the structural model started using path coefficient and R2 value (Hair, Sarstedt, Ringle, & Mena, 2012). PLS bootstrapping technique was carried out using 5000 subsamples to determine the significance of the path coefficients in the research (Figure 2). Table 5 and 6 present the findings of the path coefficients, hypotheses test, t-values and p-values.

In table 5, hypothesis one projected that there is a significant relationship between know-why and entrepreneurial career option, notwithstanding, the finding demonstrates, there is a significant and a positive relationship between know-why and ECO ( $\beta = 0.561$ ,  $t = 12.514$ ,  $p < 0.00$ ). Therefore, the H1 is supported. The finding also predicts a significant relationship between know-who and ECO ( $\beta = 0.102$ ,  $t = 2.44$ ,  $p < 0.01$ ); hence, H<sub>2</sub> is supported. The finding also demonstrates that a significant relationship exists between know-why and entrepreneurial opportunity recognition ( $\beta = 0.536$ ,  $t = 14.897$ ,  $p < 0.00$ ), therefore, H<sub>3</sub> is supported. In the same line, the finding indicates that the relationship between know-who and EOR is significant ( $\beta = 0.156$ ,  $t = 2.656$ ,  $p < 0.00$ ); henceforth supporting the H<sub>4</sub>. Furthermore, the finding predicts that there is a significant relationship between EOR and ECO ( $\beta = 0.155$ ,  $t = 2.719$ ,  $p < 0.00$ ); thus, based on this empirical finding, the H5 is hereby supported.

In addition, table 6 presents the findings of indirect relationship as proposed in hypothesis 6 and hypothesis 7 of the research. The sixth hypothesis supposed EOR mediates the relationship between know-why and ECO, in this regard, the finding demonstrates the t-value of 2.65 ( $\beta = 0.083$ ,  $p < 0.00$ ) which is higher than threshold value of 1.96 and above at 0.05 level of significance (Hair et al., 2010); therefore, the hypothesis H<sub>6</sub> is supported. In contrary, the finding in the table (7) reveal t-value of 1.882 ( $\beta = 0.024$ ,  $p < 0.06$ ) on relationship between know-who, EOR and ECO. This indicates that t-value was less than the threshold value of 1.96 at 0.05 level of significance (Hair et al., 2010), hence, the seventh hypothesis is not supported. The research also evaluated the R<sup>2</sup> of the two endogenous variables know-why and know-who (Figure 2). The findings demonstrate moderate R<sup>2</sup> values which indicate meaningfulness of the findings for interpretation.

## 5. Discussion

The aim of this research is to empirically test the mediating role of EOR on the relationship between know-why,

ECO, know-who and ECO among the final university students. The findings of the current research presented that most of the respondents were at the age bracket between 18 to 29 years (88.7%), while 10.7% representing 31 respondents were between 30- 39 as well 0.7% between 40-49. As to the gender, male respondents represented 53.3 % of the total respondents while their female counterpart accounted for 46.7 %. In this research, most of the respondents representing 44.7% are studying business management, 35.1% accounting, 10.7% finance and 9.6% economic. Furthermore, 42.3% of the respondents have their parents self-employed and 57.7% were not self-employed. Similarly, with regard to, close-relative self-employed, 63.9% of the respondents have close-relative self-employed while 36.1% of the total responses were have not closed relative self-employed.

The findings for hypotheses tested using PLS bootstrapping technique between the latent variables are shown in (Tables 5 and 6). The analysis shed light on the direct relationships among the latent variables ( $H_1$  to  $H_5$ ) were empirically tested using two tailed tests; the findings display that the relationships are statistically significant ( $p < 0.001$ ). Therefore, the findings of the research show that hypotheses  $H_1$  to  $H_5$  are supported. In line with the findings of other previous studies such as Jones et al. (2011); Solesvik (2013); Malebana (2016); Sharma (2014); Nikraftar et. al. (2016); Yitshaki and Kropp (2016); Gielnik et. al., (2015), know-why, know-who and EOR play important roles in ECO.

Similarly, the findings of mediation test as shown in (Table 6), demonstrate that EOR can mediate the relationship between know-why and ECO; hence  $H_6$  is accepted. In contrary, the findings of this research reveal no support for the hypothesized mediation role of EOR in the relationship between know-who and ECO; therefore,  $H_7$  was not supported. The result may be explained by a number facts that are responsible for the result. One of the facts is that social interactions in Palestine among students and referents of entrepreneurship are very weak. Furthermore, the instructions of the course did not give a good entrepreneurial connection in order to convince the guest speakers to provide courses programs. Finally, there is a lack of interaction with various individuals to obtain information and resources.

## 6. Conclusion

This research work addresses the role of know-why, know-who on entrepreneurial opportunity recognition and entrepreneurial career option. The finding provides empirical evidences of the relationships between know-why and entrepreneurial career option; know-who and entrepreneurial career option; and entrepreneurial opportunity recognition and entrepreneurial career option among the university students in Palestine were statistically significant. Furthermore, entrepreneurial opportunity recognition was found to mediate the relationship between know-why and entrepreneurial career option. In contrary, the result reveals no significant mediating role of EOR. Henceforth, the work added valuable information to the field of entrepreneurship researchers and educators.

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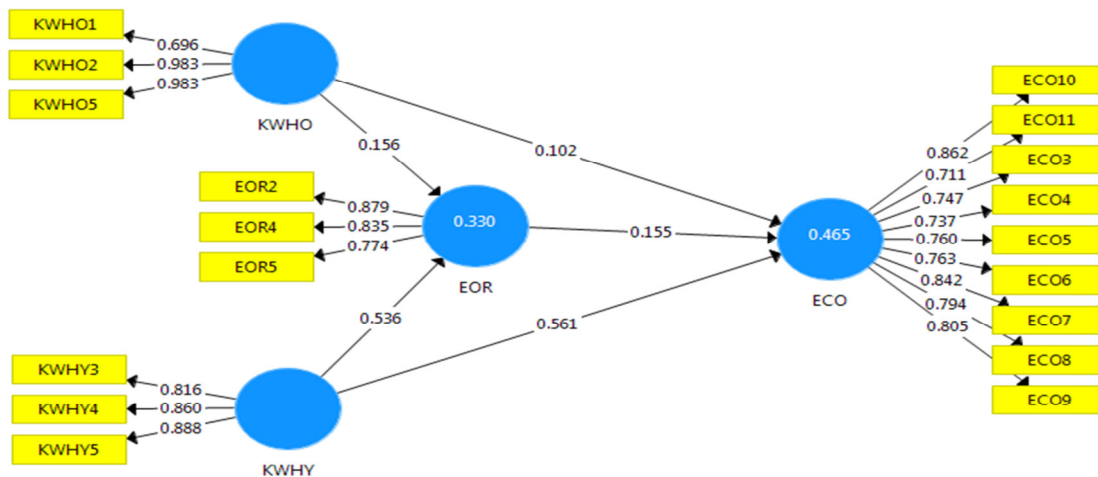


Figure 1. PLS-SEM Algorithm

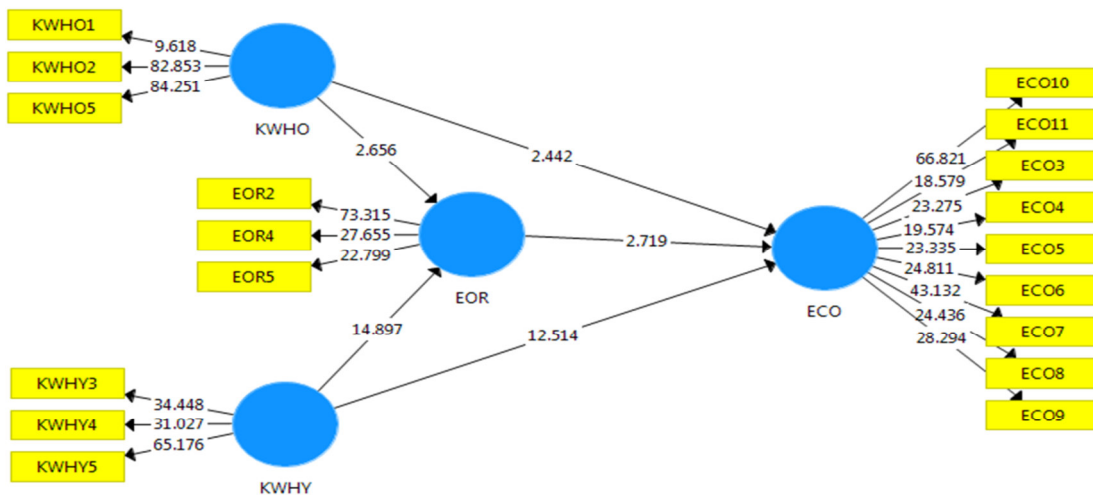


Figure 2. PLS-SEM Bootstrapping

Table 1. Demographic Profile of The Respondents (n= 291)

Demographic variable	Category	Frequency	Percentage (%)
Age	18-29	258	88.7
	30-39	31	10.7
	40-49	2	0.7
	50 & above	0	-
Gender	Male	155	53.3
	Female	136	46.7
Area of study	Business Management	130	44.7
	Accounting	102	35.1
	Finance	31	10.7
	Economic	28	9.6
Parents self-employed	Yes	123	42.3
	No	168	57.7
Closed relative self-employed	Yes	186	63.9
	No	105	36.1
Occupational experience	Self-employed	42	14.4
	Civil servant	22	7.6
	Working for others	27	9.3
	Apprenticeship	74	25.4
	Unemployed	126	43.3

Table 2. Descriptive Statistics of Latent Variables

No	Latent variable	No. of items	Mean	SD
1.	Entrepreneurial career option	14	3.20	0.701
2.	Know-Why	5	3.44	0.783
3.	Know-Who	5	3.26	0.895
4.	Entrepreneurial Opportunity Recognition	5	2.60	0.940

Table 3. Indicator Loadings, Internal Consistency Reliability and average variance extracted

Latent constructs & Indicator	Standardized Loadings	Composite Reliability	AVE
Entrepreneurial career option (ECO)		<b>0.934</b>	<b>0.611</b>
ECO10	0.862		
ECO11	0.711		
ECO03	0.747		
ECO04	0.737		
ECO05	0.760		
ECO06	0.763		
ECO07	0.842		
ECO08	0.794		
ECO09			
Know-Why (KWHY)		<b>0.891</b>	<b>0.731</b>
KWHY03	0.816		
KWHY04	0.860		
KWHY05	0.888		
Know-Who (KWHO)		<b>0.924</b>	<b>0.805</b>
KWHO01	0.696		
KWHO02	0.983		
KWHO05	0.983		
Entrepreneurial Opportunity Recognition (EOR)		<b>0.869</b>	<b>0.690</b>
EOR02	0.879		
EOR04	0.835		
EOR05	0.774		

Table 4. Latent Variable Correlation and Square Roots of Average Variance Extracted

Latent variable	ECO	EOR	KWHY	KWHO
<b>ECO</b>	<b>0.782</b>			
<b>EOR</b>	0.487	<b>0.830</b>		
<b>KWHY</b>	0.658	0.553	<b>0.855</b>	
<b>KWHO</b>	0.198	0.216	0.112	<b>0.897</b>

Table 5. Path Coefficients and Hypotheses Testing (Direct Relationship)

Hypotheses	Path	Beta	Standard Error	T-value	P-value	Decision
H <sub>1</sub>	KWHY->ECO	0.561	0.045	12.514	0.00	Accepted
H <sub>2</sub>	KWHO->ECO	0.102	0.042	2.442	0.01	Accepted
H <sub>3</sub>	KWHY->EOR	0.536	0.036	14.897	0.00	Accepted
H <sub>4</sub>	KWHO->EOR	0.156	0.059	2.656	0.00	Accepted
H <sub>5</sub>	EOR->ECO	0.155	0.057	2.719	0.00	Accepted

Note: Significant at 0.01 (2-tailed)

Table 5. Path Coefficients and Hypotheses Testing (Indirect Relationship)

Hypotheses	Path	Beta	Standard Error	T-value	P-value	Decision
H <sub>6</sub>	KWHY->EOR->ECO	0.083	0.031	2.645	0.00	Accepted
H <sub>7</sub>	KWHO->EOR->ECO	0.024	0.013	1.882	0.06	Rejected

Note: Significant at 0.01