



A study of the extended model of the theory of planned behavior using the perceived support model

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ABSTRACT

There is a greater interest in understanding entrepreneurship intentions among youngsters and researchers frequently use the theory of planned behavior (TPB) for this purpose. However, factors influencing the TPB components are little explored. Keeping in view the research gap, in the present study, the TPB model is extended based on the Perceived Support Model. Thus, the objective is to test the effects of the three dimensions (educational, relational, and structural) of the perceived support model on the components of the TPB. The study is based on a cross-sectional survey method of data collection and the sample consists of Omani youngsters in the age range of 18 to 30 years (n=662). The analysis includes Confirmatory Factor Analysis for establishing the reliability and validity; and path analysis for testing the hypotheses. The results show an insignificant influence of perceived educational support on all of the dimensions of the TPB; while a positive and significant influence of perceived relational support on all the dimensions of the TPB. Furthermore, the result shows a positive and significant influence of perceived structural support on subjective norms and perceived behavioral control. Finally, attitude, subjective norms, and perceived behavioral control have positive and significant effects on entrepreneurship intention. Overall, our result shows that the perceived support model can be used to understand entrepreneurial intentions as well as the components of TPB. A number of recommendations are made based on the findings of the study.

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1. Introduction

Entrepreneurship is a popular phenomenon and countries around the world are striving to develop entrepreneurship among youngsters since it is considered an engine of economic growth, solves economic problems such as poverty and unemployment; and boosts the country's GDP (Meyer and de Jongh, 2018; Wu and Si, 2018). Recognizing the importance of entrepreneurship, most Gulf countries are promoting entrepreneurship among their citizens and the Sultanate of Oman is no exception. In Oman Vision 2040, the promotion of small businesses and entrepreneurship is one of the key themes. This theme can best be achieved when Oman's young population takes a greater interest in entrepreneurial activity. For the promotion of

entrepreneurship among youngsters, it is important that we understand the factors which promote or discourage youngsters from taking part in entrepreneurship activities. In the present study, the theory of planned behavior (TPB) and the perceived support model are used for understanding entrepreneurship intentions among youngsters.

The study is based on two theoretical gaps. The first gap is contextual as there are several studies about entrepreneurship intentions among youngsters or students of higher educational institutes from a different context, but such studies are limited to Gulf countries' contexts. In the Omani context, there is a scarcity of studies related to the topic of entrepreneurship among youngsters. The second gap is that many relevant studies only focused on the TPB and its dimensions but did not include other related factors which also influence an individual's entrepreneurship intention or the dimensions of the TPB. Based on these two gaps, in the present study, we utilize the Perceived Support Model to test its influence on the dimensions of the TPB. By combining the two models, we can better

understand the factors which shape the promotion of entrepreneurship among youngsters.

2. Literature and hypotheses development

2.1. Perceived support model and the dimensions of the theory of planned behavior

The perceived support model is proposed by [Turker and Selcuk \(2009\)](#) and is based on three factors namely perceived educational support, relational support, and structural support. Accordingly, educational support is about the support received by the individual in terms of entrepreneurship-related knowledge. Educational support is important since it can shape an individual entrepreneurship-related knowledge and motivation. Empirical evidence from various studies shows that educational support improves an individual's chances of being involved and successful in entrepreneurial activity ([Liu et al., 2019](#); [Mahendra et al., 2017](#)). More specifically, studies by [Lv et al. \(2021\)](#), [Iqbal et al. \(2018\)](#), [Fizza \(2017\)](#), and [Ambad and Damit \(2016\)](#) showed that perceived educational support influences entrepreneurship-related subjective norms, attitude, and behavioral control. Thus, it can be argued that suitable entrepreneurship education can alter an individual's attitude, subjective norms, and behavioral control towards entrepreneurship more favorably by enhancing their self-efficacy. Our specific hypotheses are as follows:

H1: Perceived educational support has significant effects on the attitude towards entrepreneurship of Omani youngsters.

H2: Perceived educational support has significant effects on subjective norms related to the entrepreneurship of Omani youngsters.

H3: Perceived educational support has significant effects on perceived behavioral control towards entrepreneurship of Omani youngsters.

The second type of support in the model is relational support which is about the support an individual is receiving from his/her close family and relatives ([Turker and Selcuk, 2009](#)). If an individual receives more support, he/she is likely to gain confidence and involves in entrepreneurial activity. On the other hand, a low level of support is associated with less intention to involve in entrepreneurial activity ([Moussa and Kerkeni, 2021](#)). Previous studies indicate that relational support such as from family and friends is an important factor in promoting entrepreneurship among individuals ([Abebe et al., 2014](#); [Fizza \(2017\)](#); [Khayru et al., 2021](#)). The relationship between relational support and the TPB is such that such support can shape an individual entrepreneurship-related attitude, make an individual feel entrepreneurship is a norm, and enable a higher perceived behavioral control. Thus, we propose the following hypotheses:

H4: Perceived relational support has significant effects on the attitude towards entrepreneurship of Omani youngsters.

H5: Perceived relational support has significant effects on subjective norms related to the entrepreneurship of Omani youngsters.

H6: Perceived relational support has significant effects on perceived behavioral control towards entrepreneurship of Omani youngsters.

The third type of support in the model is structural support which is about support from the various institutions received by an individual for involvement in entrepreneurial activity ([Schwarz et al., 2009](#)). The type of support can include the availability of finance, intellectual and copyright, and regulatory business environment. Favorable support from the government and other institutions such as banks is also related and can promote entrepreneurship ([Nguyen, 2020](#); [Turker and Selcuk, 2009](#); [Chowdhury et al., 2019](#)). Previous studies such as [Iqbal et al. \(2018\)](#), [Kaya \(2019\)](#), and [Nakku et al. \(2020\)](#) also showed support for a positive influence of perceived structural support on entrepreneurial intention. Structural support can make attitude and behavioral control more favorable towards entrepreneurship. Thus, based on previous studies, and the Perceived Support Model, we make the following hypotheses:

H7: Perceived structural support has significant effects on the attitude towards entrepreneurship of Omani youngsters.

H8: Perceived structural support has significant effects on subjective norms related to the entrepreneurship of Omani youngsters.

H9: Perceived structural support has significant effects on perceived behavioral control towards entrepreneurship of Omani youngsters.

2.2. Theory of planned behavior and entrepreneurship intentions

Previous studies show that dimensions of the TPB including attitude, subjective norms, and perceived behavioral control can predict an individual's entrepreneurship intentions. There are numerous studies conducted in a variety of contexts that establish support for the theory. For example, a study conducted by [Hassan et al. \(2022\)](#) investigated entrepreneurial intentions among Malaysian youngsters and found that attitude, subjective norms, and perceived behavioral control are significantly correlated to entrepreneurial intentions. Other studies also reported similar results including [Echchabi et al. \(2020\)](#), [Fragoso et al. \(2020\)](#), [Martínez-González et al. \(2019\)](#), [Miralles et al. \(2016\)](#), and [Shah and Soomro \(2017\)](#). Based on the results of the previous studies, we propose the following hypotheses:

H10: Attitude has significant effects on the entrepreneurship intentions of Omani youngsters.

H11: Perceived subjective norms have significant effects on the entrepreneurship intentions of Omani youngsters.

H12: Perceived behavioral control has significant effects on the entrepreneurship intentions of Omani youngsters.

3. Research methodology

3.1. Research design

The design of the current study is cross-sectional and explanatory. It is cross-sectional since we collected data from the participants at one-time intervals. The study is also explanatory since it explains the relationship between independent and dependent variables.

3.2. Population and sampling

The focus of the study is Omani youngsters who make up the population of the study. The population is large and consists of 219552 individuals based on NCSI (2020). We selected the sampling frame of the age group of 20 to 30 years Omani nationals only; and used convenience non-random sampling due to the resources constraints. We used Krejcie and Morgan's (1970) formula for calculating the sample size and the details are as follows;

The sample size (n) is calculated according to the following equation:

$$n = [z^2 p (1 - p) / e^2] / [1 + ((z^2 p (1 - p)) / (e^2 N))]$$

where, z=.576 for a confidence level (α) of 99%, p=proportion (expressed as a decimal), N=population size, e=margin of error.

$$\begin{aligned} z &= 2.576; p = 0.5; N = 219522; e = 0.05; n \\ &= [2.5762 \times 0.5 (1 - 0.5) / 0.052] \\ &/ [1 + ((2.5762 \times 0.5 (1 - 0.5)) / (0.052 \times 219522))] \\ n &= 663.5776 / 1.003 = 661.578 \\ n &\approx 662. \end{aligned}$$

3.3. Data collection

The data is collected using the survey method and by employing data collection assistants. The questionnaire is translated into Arabic using a professional language translation service and later pretested for its reliability and understanding. The data is collected by distributing online surveys

3.4. Measurement of variables

For measuring the perceived support in terms of educational, relational, and structural, a measure is adapted from Turker and Selcuk (2009). The measure consists of 3 items for perceived educational support; 2 items for perceived relational support; and 4 items for perceived structural support. For measuring the dimensions of the TPB and entrepreneurship intentions, the measure is

adapted from Liñán and Chen (2009) and Liñán et al. (2011). In this measure, attitude is measured by 5 items, subjective norms are measured by 3 items, perceived behavioral control is measured by 6 items, and entrepreneurial intentions are measured by 6 items.

3.5. Data analysis

Data is analyzed using the SPSS version 20 and CB SEM Analysis using the AMOS. The analysis consists of two stages including Confirmatory Factor Analysis for testing the reliability and validity; and path analysis for testing the hypotheses.

4. Results

4.1. Demographic details

The demographic information of the survey respondents is provided in Table 1.

Table 1: Demographic details

	Frequency	Percentage
Gender		
Male	426	64.4
Female	236	35.6
Age Group		
20 to 21 Years	123	18.6
21 to 22 Years	203	30.7
22 to 23 Years	168	25.4
23 to 24 Years	99	15.0
24 to 30 Years	69	10.4
Qualification		
Diploma	208	31.4
Advanced Diploma	188	28.4
Bachelor	120	18.1
Others	146	22.1

A total of 662 students participated in the survey. Out of the total, 426 were male (64.4%); and 236 were female (35.6%). In terms of age, 123 participants belonged to the 20 to 21 years age category (18.6%); 203 participants belonged to the 21 to 22 years age category (30.7%); 168 participants belonged to the 22 to 23 years age category (25.4%); 99 participants belonged to 23 to 24 years age category (15%); and 69 participants belonged to the 24 to 30 years age category (10.4%). In terms of qualification level, 208 participants were students of Diploma level (31.4%); 188 were Advanced Diploma students (28.4%); 120 were Bachelor students (18.1%); and 146 belonged to the others category (22.1%).

4.2. Confirmatory factor analysis

The first step in the analysis was performing the Confirmatory Factor Analysis using the AMOS. The CFA is performed to establish the reliability and validity of the constructs involved. The result of the revised model is provided in Table 2.

Table 2 provides CFA results for the model. The initial model did not achieve the required model fit; therefore, we deleted items with low factor loadings (<5). The deleted items include AT1, AT4, PBC3,

PBC5, EI3, EI6, PSS3, and PSS4. Modification indices are also performed and only error terms of the same variable are co-varied to ensure consistency and not

a violation of the theory. Finally, satisfactory model fitness is achieved and results are provided in [Table 2](#) (RMR=0.076, GFI=.910, CFI=.915, RMSEA.080).

Table 2: Reliability and convergent validity

Variable ID	Standardized factor loading	Cronbach alpha	Composite reliability	Average variance extracted
Attitude				
AT1	Deleted			
AT2	.809	.746	.808	.857
AT3	.832			
AT4	Deleted			
AT5	.645			
Subjective norms				
SN1	.852	.880	.881	.713
SN2	.778			
SN3	.900			
Perceived behavioral control				
PBC1	.890	.840	.844	.579
PBC2	.731			
PBC3	Deleted			
PBC4	.783			
PBC5	Deleted			
PBC6	.615			
Entrepreneurship intentions				
EI1	.863	.867	.871	.629
EI2	.822			
EI3	Deleted			
EI4	.773			
EI5	.707			
EI6	Deleted			
Perceived educational support				
PES1	.848	.897	.897	.744
PES2	.875			
PES3	.866			
Perceived relational support				
PRS1	.862	.837	.837	.720
PRS2	.836			
Perceived structural support				
PSS1	.827	.834	.835	.717
PSS2	.867			
PSS3	Deleted			
PSS4	Deleted			

The results of the revised model show that all standardized factors loadings are above 0.60 and the Average Variance Extracted is above 0.50 so it is an indication that our constructs have satisfactory convergent validity. The reliability is also established based on Cronbach Alpha and Composite Reliability which is above 0.70 for all the constructs. Thus, we can say that we established convergent validity and reliability. The next step is establishing discriminant validity and details are provided in [Table 3](#).

Table 3: Discriminant validity

	Att	SN	PBC	PES	PRS	PSS	EI
Att	.766						
SN	.747	.844					
PBC	.708	.635	.761				
PES	.423	.436	.606	.863			
PRS	.657	.671	.679	.602	.849		
PSS	.363	.322	.600	.838	.500	.847	
EI	.657	.706	.598	.469	.752	.430	.793

For discriminant validity, we used [Fornell and Larcker \(1981\)](#). The requirement is that all diagonal bold values which are the square root of AVE should be other values in their respective columns and rows which are inter-variable correlations. The requirement is met as clear from [Table 3](#) and shows that our variables had satisfactory discriminant validity.

4.3. Path analysis

The next step is performing path analysis for hypotheses testing purposes. The results are calculated by imputing the Factor Score of CFA using the AMOS software. The results are provided in [Fig 1](#) and [Table 4](#).

Table 4: Hypotheses testing

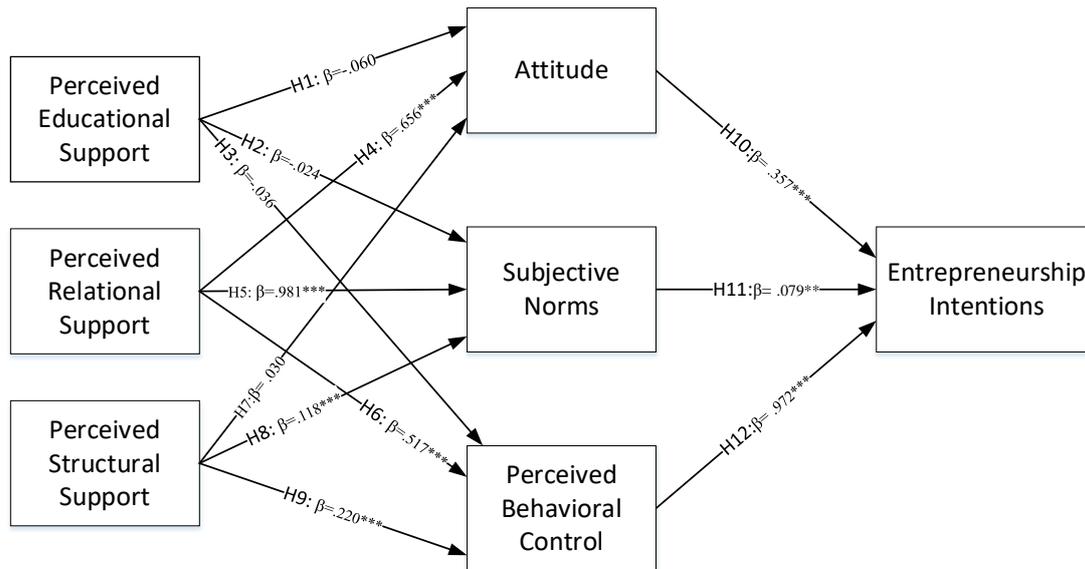
	Path	Estimate	S.E.	C.R.	P
H1	PES>Att	-.060	.035	-1.700	.089
H2	PES>SN	-.024	.031	-.763	.446
H3	PES>PBC	-.036	.030	-1.216	.224
H4	PRS>Att	.656	.026	24.816	***
H5	PRS>SN	.981	.024	41.342	***
H6	PRS>PBC	.517	.022	23.215	***
H7	PSS>Att	.030	.034	.878	.380
H8	PSS>SN	.118	.030	3.890	***
H9	PSS>PBC	.220	.028	7.754	***
H10	ATT>EI	.357	.029	12.433	***
H11	SN>EI	.079	.032	2.460	.014
H12	PBC>EI	.972	.034	28.549	***

***: Statistical significance at .001

[Table 4](#) shows that the perceived educational support which is the first dimension of the perceived support model insignificantly predicts attitude ($\beta=-.060, P>.05$); subjective norms ($\beta=-.024, P>.05$); and perceived behavioral control ($\beta=-.036, P>.05$). The perceived relational support which is the second main dimension of the perceived support model is

significantly predicting all three dimensions of the TPB including attitude ($\beta=.656$, $P<.05$); subjective

norms ($\beta=.981$, $P<.05$); and perceived behavioral control ($\beta=.517$, $P<.05$).



***: Statistical significance at .001; **: Statistical significance at .01

Fig. 1: Path analysis

The perceived structural support which is the third main dimension of the perceived support model is insignificantly effecting attitude ($\beta=.030$, $P>.05$); and significantly and positively effecting subjective norms ($\beta=.118$, $P<.05$) and perceived behavioral control ($\beta=.220$, $P<.05$). Finally, the attitude ($\beta=.357$, $P<.05$), subjective norms ($\beta=.079$, $P<.05$), and perceived behavioral control ($\beta=.972$, $P<.05$) is found to be positively predicting the entrepreneurship intention. Based on these results, we accept H4, H5, H6, H8, H9, H10, and H11 while rejecting the H1, H2, H3, and H7.

Overall, these results show that in the support model, the most important factor is perceived relational support and the perceived support model influences the dimensions of the TPB. Furthermore, the result also shows that all three dimensions of the TPB are important contributors to entrepreneurial intentions.

4.4. Discussion

The objective of the study was to test a model based on the perceived support model and the TPB and their influence on the entrepreneurial intentions of Omani youngsters. The first key result of the study was that perceived educational support has insignificant effects on attitude, subjective norms, and perceived behavioral control. These results are inconsistent with the literature because mostly perceived educational support is reported to have a positive influence on entrepreneurship intention as well as the TPB (Ambad and Damit, 2016; Liu et al., 2019; Mahlaole and Malebana, 2021). Entrepreneurship education is important since it enhances individual knowledge about entrepreneurship leading to increased self-efficacy for entrepreneurship (Mahendra et al., 2017). A comparison of the result with the study by Osorio et

al. (2017) indicates that their study also reported an insignificant influence of educational support on entrepreneurial intention with mediating role of perceived desirability and feasibility. One explanation for our insignificant results can be a perceived ineffective entrepreneurship course at higher education which may make respondents believe that entrepreneurship education is unsuitable for promoting entrepreneurship-related knowledge and relevant interest among youngsters.

The second key result of the study was that perceived relational support has positive and significant effects on attitude, subjective norms, and perceived behavioral control. Relational support is about the motivational support an individual receives from his/her surrounding such as friends, family, and others. If there is suitable support available to the individual, it has a positive influence on the individual because such support can shape one's attitude, self-efficacy, and behavioral control. The literature also supports the influence of relational support on entrepreneurship (Khayru et al., 2021; Moussa and Kerkeni, 2021). The results are consistent with the literature and highlight the role of perceived relational support (Osorio et al., 2017). Comparing our result with Osorio et al. (2017) showed that their study also reported a positive influence of family support which is part of relational support on entrepreneurial intentions with mediating role of perceived desirability and perceived feasibility. Thus, our result is consistent with the literature that relational support influences entrepreneurial intentions among youngsters.

The third key result of the study was that perceived structural support has positive and significant effects on subjective norms and perceived behavioral control while insignificant effects on attitude. Mostly, the literature supports the positive influence of structural support in promoting

entrepreneurship among individuals (Chowdhury et al., 2019; Nakku et al., 2020; Nguyen, 2020). In other words, if an individual perceives that there is suitable support from the government, banks, and other relevant institutions, it can have a positive influence on shaping entrepreneurship-related attitudes, subjective norms, and perceived behavioral control among the individuals. A comparison of our results with Osorio et al. (2017) shows that their study also found a positive and significant influence of perceived structural support on entrepreneurial intention. Thus, our findings mostly support the influence of the dimensions of the perceived support model on the dimensions of the TPB and entrepreneurship intentions and are consistent with the literature. The fourth key result is that dimensions of the TPB including attitude, subjective norms, and perceived behavioral control have a positive and significant influence on entrepreneurial intention as supported by the literature. Evidence from many studies conducted in varieties of contexts shows support for the theory and thus our findings are consistent with the literature of Echchabi et al. (2020), Fragoso et al. (2020), and Miralles et al. (2016).

5. Conclusion, recommendations, and limitations

5.1. Conclusion

The focus of the study was to test a model using the TPB and the perceived support model for understanding entrepreneurship intentions. For this purpose, the study collected data from youngsters from Oman using the survey method. Our key findings are that perceived educational support does not have a significant influence on attitude, subjective norms, and perceived behavioral control; while, perceived relational support is found to be significantly influencing attitude, subjective norms, and perceived behavioral control. Furthermore, perceived structural support is found to significantly influence subjective norms and perceived behavioral control. Our findings also show that the dimensions of the TPB significantly influence entrepreneurship intention among Omani youngsters. Based on the results, we can conclude that for entrepreneurship to be promoted among youngsters in Oman, support from relatives/friends, family, as well as government institutions, banks, and other relevant bodies is important. It can also be concluded that in promoting entrepreneurship among youngsters, attitude, subjective norms, and perceived behavioral control play an important role and shapes an individual entrepreneurship intention.

5.2. Recommendations

The first set of recommendations is for the Government in Oman that can promote entrepreneurship among individuals by providing support to individuals in the form of easier access to

loans, training programs, mentoring, and easier documentation for fresh startups. Ministry of Commerce & Industry as well as the Chamber of Commerce and Industry can also play important role in promoting entrepreneurship in the country. Tax breaks and other incentives such as subsidies on machinery can be provided for specific sectors to promote entrepreneurship.

The second set of recommendations is for higher educational institutions which can focus on availability and improving the quality of entrepreneurship education. Most programs at higher educational institutes require compulsory one or two courses related to entrepreneurship. The quality of such entrepreneurship programs can be improved in terms of content, assessment, and student-centered learning. Other support such as in the form of entrepreneurship weeks, competitions, lectures from imminent entrepreneurs, and business incubation centers can also be very helpful.

5.3. Limitations and directions for future researchers

A relatively small sample size belongs to a particular age group and only the selection of Omani nationals is a limitation of the study. Furthermore, all data is collected based on the participant's perception which is subject to memory loss as well as a misrepresentation; thus, it remains a limitation of the study. Other limitations of the study include a single method of data collection and a single method of data analysis.

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Compliance with ethical standards

Ethical consideration

For maintaining ethical integrity, no personal information is collected. The participants are clearly informed about the objective of the study and all participation is voluntary. The collected data is kept confidential and only used for this study.

Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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