

研究方法與結果節錄

創業的個人價值觀環形理論

擷取相關分析、信效度分析與結構方程式分析的統計結果分析

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本文實際使用四類指定統計方法

統計方法	文章位置	分析角色	對應圖表
相關分析	pp. 670, 672–673	變數關係與重測效度	Table I
信效度檢定	pp. 670–674	α 、CR、AVE 與 CFA	Table II
迴歸 / 路徑分析	pp. 672–675	SEM 標準化路徑係數	Figure 2
中介效果	pp. 669, 675–676	Sobel、Bootstrap、模型比較	Table III

Yang, K.-P., Hsiung, H.-H., & Chiu, Y.-J. (2015). The comfort zone of the value circumplex for entrepreneurship: A structural analysis. *Career Development International*, 20(6), 663–683. <https://doi.org/10.1108/CDI-07-2014-0087>

272 份兩波配對問卷以結構方程模式檢驗路徑

1

1 | 研究對象

台灣五所大學之 MBA 學生

2

2 | 資料蒐集

兩波問卷相隔約三週；272 份可用配對樣本

3

3 | 分析策略

CFA 評估測量模式；對稱式 SEM 路徑模型檢驗假設

正向價值模型與負向價值模型分別估計，並檢驗創業態度的間接效果。

相關矩陣呈現價值環形中相對價值的負向關係

原文節錄 | Validity assessment

“The correlation matrix in Table I coincides almost perfectly with the relational structure depicted by Schwartz’s taxonomy. The three largest negative correlations for one of the paired values were found between three pairs of the most far-apart value types: power and universalism ($\gamma = -0.40, p < 0.01$), self-direction and security ($\gamma = -0.31, p < 0.01$), and stimulation and conformity ($\gamma = -0.29, p < 0.01$).”

Power ×
universalism

$$\gamma = -0.40 \mid p < 0.01$$

Self-direction ×
security

$$\gamma = -0.31 \mid p < 0.01$$

Stimulation ×
conformity

$$\gamma = -0.29 \mid p < 0.01$$

Table I reports means, standard deviations, correlations, and reliability indicators (n = 272).

Table I | Descriptive statistics and correlations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Gender	0.53	0.50	–																		
2. Number of siblings	3.08	1.34	0.01	–																	
3. Sequence of siblings	2.10	1.26	0.03	0.70**	–																
4. Job experience	3.29	0.88	0.06	0.35**	0.21**	–															
5. Entrepreneurial experience	0.56	0.50	–0.02	0.17**	0.11	0.16*	–														
6. Self-efficacy	3.68	0.58	0.14*	0.23**	0.14*	0.22**	0.09	(0.69)													
7. Subjective norm	3.35	0.75	0.05	0.16**	0.04	0.07	0.34**	0.34**	(0.73)												
8. Power	3.77	0.63	–0.02	–0.03	–0.05	0.04	0.01	0.01	–0.00	(0.92)											
9. Achievement	3.73	0.64	0.09	0.04	0.01	–0.03	0.08	0.03	0.11	–0.15*	(0.87)										
10. Hedonism	4.14	0.67	–0.02	–0.00	0.00	–0.01	–0.04	–0.07	–0.03	0.05	–0.04	(0.84)									
11. Stimulation	3.83	0.80	0.10	–0.05	–0.08	–0.03	0.06	0.13*	0.16**	0.06	–0.16**	0.05	(0.88)								
12. Self-direction	4.18	0.61	0.05	–0.01	0.01	0.14*	0.04	0.18**	0.15*	–0.03	–0.05	0.02	0.22**	(0.88)							
13. Universalism	3.97	0.62	–0.08	0.11	0.12	0.05	0.06	–0.15*	–0.07	–0.40**	–0.01	–0.12*	–0.24**	–0.19**	(0.90)						
14. Benevolence	4.16	0.61	–0.10	–0.05	0.02	–0.12*	–0.06	–0.09	–0.07	–0.29**	–0.13*	–0.18**	–0.24**	–0.25**	–0.01	(0.91)					
15. Tradition	4.17	0.58	0.04	–0.13*	–0.13*	–0.00	–0.06	0.04	–0.07	0.14*	–0.22**	0.04	0.12*	–0.04	–0.36**	–0.19**	(0.92)				
16. Conformity	4.03	0.62	0.00	0.02	0.01	–0.07	–0.06	0.06	–0.00	–0.12	–0.01	–0.26**	–0.29**	–0.22**	–0.16**	0.19**	–0.18**	(0.91)			
17. Security	4.12	0.66	–0.03	0.02	0.03	–0.01	–0.07	–0.07	–0.14*	–0.18**	–0.27**	–0.17**	–0.35**	–0.31**	–0.05	0.09	–0.03	0.15*	(0.89)		
18. Entrepreneurial attitude	3.89	0.64	0.19**	0.08	0.01	0.03	0.12	0.47**	0.31**	–0.11	0.13*	–0.10	0.20**	0.26**	0.14*	–0.19**	–0.14*	–0.10	–0.17**	(0.72)	
19. Entrepreneurial intention	2.85	0.95	0.12	0.11	0.02	0.11	0.20**	0.35**	0.47**	–0.08	0.14*	–0.09	0.17**	0.16**	0.01	–0.08	–0.15*	–0.01	–0.10	0.34**	(0.87)
Number of items			1	1	1	1	1	6	4	4	4	2	3	5	8	5	4	4	5	5	3
Cronbach's α			–	–	–	–	–	0.79	0.79	0.74	0.73	0.73	0.86	0.86	0.88	0.86	0.77	0.82	0.87	0.81	0.91
Composite reliability			–	–	–	–	–	0.85	0.82	0.92	0.86	0.83	0.87	0.91	0.94	0.93	0.92	0.90	0.92	0.81	0.90
Notes: $n = 272$. Gender is a dummy variable for which 1 is equal to “male”; entrepreneurial experience is a dummy variable for which 1 is equal to “experienced”. Numbers in parentheses on the diagonal represent the square root of the average variance extracted. Off-diagonal elements are correlations between constructs. ** $p < 0.01$; * $p < 0.05$																					

Table I 截圖自附件 PDF 第 673 頁。

α 、複合信度、AVE 與 CFA 共同評估測量品質

原文節錄 | Reliability and validity

"All of the Cronbach's α values for the multi-item constructs are well above the normally suggested threshold of 0.70, indicating high degrees of internal consistency for each construct."

"Following Fornell and Larcker (1981), all of the standardized factor loadings exhibited statistical significance at $p < 0.01$, and, along with appropriate composite reliability values (ranging from 0.81 to 0.94) and AVE values, indicated good convergent validity."

Cronbach's α

all above 0.70

Composite
reliability

0.81–0.94

CFA model 1

CFI=0.96 | RMSEA=0.05

"The results demonstrate a satisfactory goodness of fit for the measurement model of values."

Table II | Confirmatory factor analysis for measurement model

Model (constructs included)	χ^2	df	$\Delta\chi^2$	AGFI	CFI	NFI	SRMR	RMSEA
<i>CFA for value types</i>								
1. Hypothesized model (10 values)	398.38	230	—	0.90	0.96	0.91	0.04	0.05
2. Five-factor model 1 (5 closely located values)	1,184.20	265	785.82**	0.61	0.71	0.67	0.15	0.13
3. Five-factor model 2 (5 far-apart values)	1,540.48	265	1,142.10**	0.57	0.68	0.64	0.15	0.13
4. Four-factor model (4 higher order constructs)	1,315.17	269	916.79**	0.62	0.74	0.69	0.09	0.12
5. Two-factor model (positive and negative values)	1,512.09	274	1,113.71**	0.59	0.69	0.65	0.10	0.13
6. One-factor model (10 values as one factor)	1,785.01	275	1,386.63**	0.52	0.62	0.58	0.10	0.14
<i>CFA for TPB and EI</i>								
7. Hypothesized model (4 constructs: TPB and EI)	274.00	129	—	0.87	0.93	0.88	0.05	0.06
8. Two-factor model (TPB as one factor and EI)	775.16	134	501.16**	0.64	0.69	0.66	0.11	0.13
9. One-factor model (combining TPB and EI)	1,128.70	135	854.70**	0.53	0.53	0.50	0.12	0.17
Notes: The changes in $\Delta\chi^2$ and Δdf for models 2, 3, 4, 5, and 6 are relative to model 1. The changes in $\Delta\chi^2$ and Δdf for models 8 and 9 are relative to model 7. ** $p < 0.01$								

Table II 截圖自附件 PDF 第 674 頁。

標準化路徑係數檢驗價值對創業態度的影響

原文節錄 | Structural analyses results

"The causal model and the testing results are reported in the format of standardized regression coefficients, as shown in Figure 2. The path coefficients from self-direction ($\gamma = 0.22, p < 0.05$), stimulation ($\gamma = 0.12, p < 0.05$), and achievement ($\gamma = 0.15, p < 0.05$) to entrepreneurial attitude are all positive and significant. Thus, H1, H2, and H3 are supported."

Self-direction

$$\gamma = 0.22 \mid p < 0.05$$

Stimulation

$$\gamma = 0.12 \mid p < 0.05$$

Achievement

$$\gamma = 0.15 \mid p < 0.05$$

"The relationship between entrepreneurial attitude and entrepreneurial intention is found to be consistently positive in the both the positive-value model ($\beta = 0.25, p < 0.05$) and the negative-value model ($\beta = 0.26, p < 0.05$)."

Figure 2 | Path estimates for the positive-value model

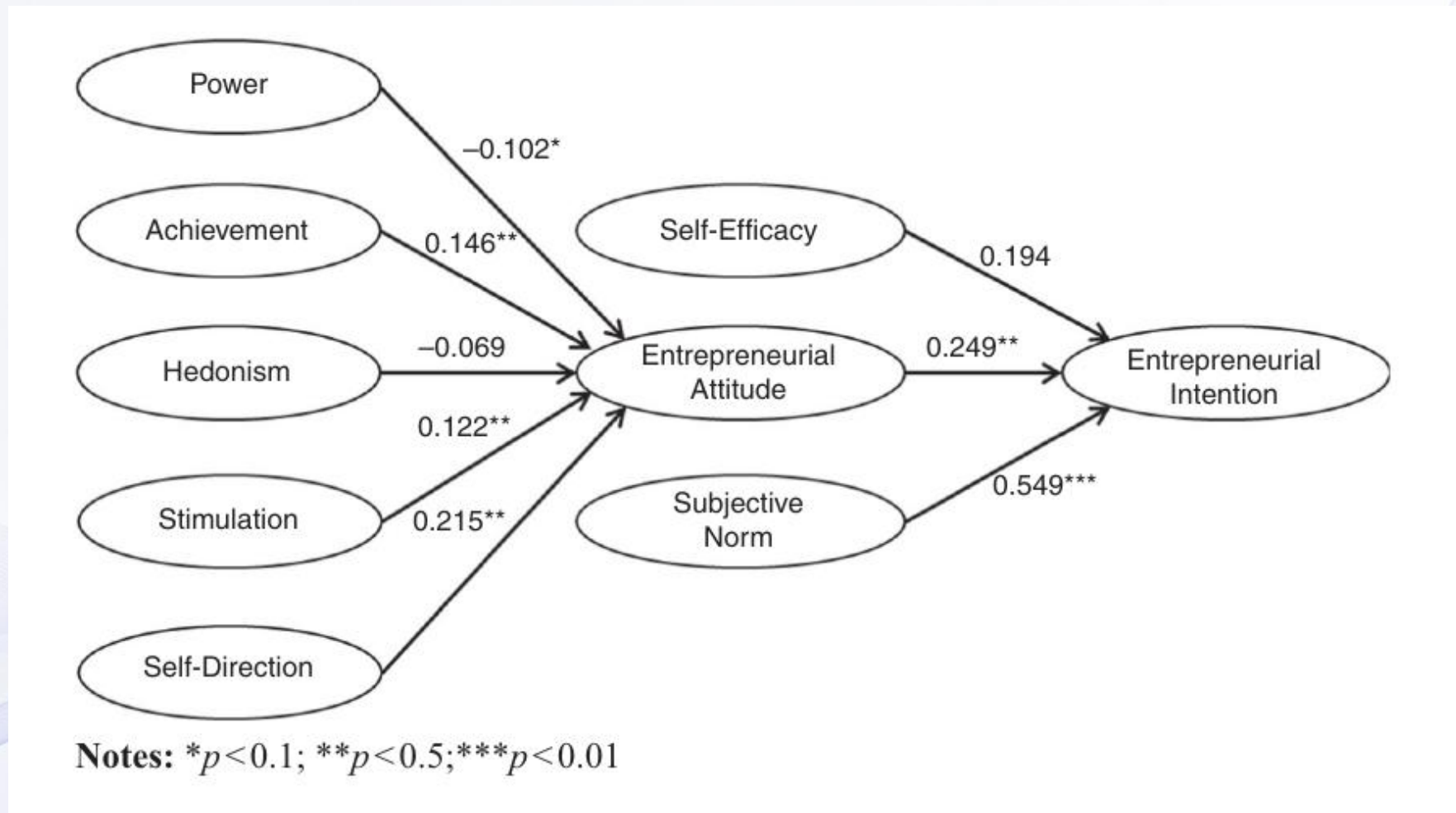


Figure 2 截圖自附件 PDF 第 674 頁。

Sobel 與 Bootstrap 直接檢驗創業態度的間接效果

原文節錄 | Indirect effects

“To examine the indirect effects of personal values on entrepreneurial intention via entrepreneurial attitude, we used a Sobel (1982) test and a bootstrapping estimation. The Sobel test results showed that the pro-attitude values (for self-direction, $z = 2.09$, $p < 0.05$; stimulation, $z = 1.95$, $p < 0.10$; and achievement, $z = 1.85$, $p < 0.10$) had a positive and indirect effect on entrepreneurial intention.”

Self-direction

$z = 2.09 \mid p < 0.05$

Benevolence

$z = -2.28 \mid p < 0.05$

Bootstrap 95% CI

zero was not included

“The role of entrepreneurial attitude as a mediator linking personal values to entrepreneurial intentions is thus corroborated.”

Table III | Full mediation fits better than alternative models

Model	χ^2	df	$\Delta\chi^2$	AGFI	CFI	NFI	SRMR	RMSEA
<i>For the positive-value models</i>								
1. Full mediated (hypothesized) model (positive values→attitude→intention)	11.39	10	–	0.94	0.99	0.98	0.02	0.02
2. Control variables only (control variables→intention)	115.72	17	104.33**	0.70	0.81	0.81	0.07	0.15
3. Non-mediated model (positive values→intention)	109.99	12	98.60**	0.60	0.81	0.82	0.07	0.17
4. Partially mediated model (positive values→intention and positive values→attitude→intention)	61.96	7	50.57**	0.56	0.89	0.88	0.04	0.17
<i>For the negative-value models</i>								
5. Full mediated (hypothesized) model (negative values→attitude→intention)	17.37	10	–	0.91	0.99	0.97	0.02	0.05
6. Control variables only (control variables→intention)	131.74	17	114.37**	0.68	0.81	0.81	0.07	0.15
7. Non-mediated model (negative values→intention)	126.91	12	109.54**	0.56	0.81	0.81	0.07	0.19
8. Partially mediated model (negative values→intention and negative values→attitude→intention)	94.73	7	77.36**	0.38	0.85	0.86	0.05	0.22
Notes: The changes in $\Delta\chi^2$ and Δdf for models 2, 3, and 4 are relative to model 1; the changes for models 6, 7, and 8 are relative to model 5. ** $p < 0.01$								

Table III 截圖自附件 PDF 第 676 頁。

四類方法串起測量品質、變數關係與作用機制

1

1 | 測量與關聯

α 、CR、AVE 與 CFA 評估測量品質；相關矩陣呈現構念關係

2

2 | 結構路徑

SEM 以標準化迴歸係數檢驗個人價值、態度與意圖之路徑

3

3 | 中介效果

Sobel、Bootstrap 信賴區間與模型比較共同驗證間接效果