THE RELATIONSHIP BETWEEN PSYCHOLOGICAL CAPITAL AND ENTREPRENEURIAL TRAITS: A CASE STUDY OF MBA SBM ITB STUDENTS IN BANDUNG

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Abstract- *Psychological Capital or Psycap is a concept developed by Luthans and his colleagues in which theorized the role of one's positive psychological disposition could add competitive advantage to organizations and individuals alike, much like Social and Financial Capital could. The Psycap concept is composed of specifically the four positive psychological capacity of hope, self-efficacy, optimism, and resiliency. Given the lack of research regarding the relationship of Positive Psychological Capital with entrepreneurial traits, this research aims to find it. As a business school that emphasizes heavily on entrepreneurial vision for their students, the research uses MBA Students of School of Business and Management ITB as a sample of the study and uses descriptive statistics along with SEM analysis to analyze the hypothesized relationship of positivity and entrepreneurship.The result conclusively proves, that Psycap positively affects entrepreneurial traits of the students, with optimism and resiliency to be the state with the highest impact on entrepreneurship.*

Keywords:*Psychological Capital, Entrepreneurial Trait, Positivity,Entrepreneurship, Bandung*

Introduction

The topic of entrepreneurship, has always been able to summon a plethora of interests. Be it within the scope of economics or academics, numerous definitions and conceptions have stemmed – even as early as the 1700's Cantillon described entrepreneurs as those "who assumed the risk and provided the management of the firm". Gartner once wrote in his article titled ""Who is an Entrepreneur?" is the Wrong Question" which advocated strongly that entrepreneurship is solely about venture creation. But, Lachman (1980) suggested that a higher tendency to perform entrepreneurial acts is shown among those who possesses entrepreneurial characteristics, which means entrepreurship could be defined be traits.

It is so varied and broad in context, in fact in 1991, Cunningham and Lischeron published a paper that compiled and divided entrepreneurship into different schools of thought. One of which is in The Psychological Characteristics School of Entrepreneurship, in which conceptualize entrepreneurs are individuals who are shaped by the values, attitude, and beliefs system that encourage them to pursue entrepreneurship endeavors (Cunningham & Lischeron, 1991), this research will focus on such aspects of Entrepreneurship. Positivity has always been an underestimated variable in anybody's perception regarding what determines success and good results. But, it is apparent that positivity and a positive general outlook matters, with numerous researches advocating positive emotions leads to

better many aspects of life. (Kleinman, Asselin, & Henriques, 2014; Jeraj, 2014; Scheier et al., 1994). In the late 90's, Martin Seligman started the positive psychology movement, an alternative body of study that deviated from the negative oriented psychological studies that was the mainstream focus of the prior years. The positive psychology movement delved more into the strengthening and development capacity that positive psychology could engender (Norman, 2006). In the wake of the movement, several body of research has emerged. One of them is Positive Organizational Behaviror or POB, which had been developed as a construct known as Psychological Capital. Psychological Capital or Psycap is a concept in which theorized the role of one's positive psychological disposition could add competitive advantage to Organizations and Individuals alike, much like Social and Financial Capital could (Luthans, Luthans, &Luthans, 2004), previously there has been a research regarding the role of Psycap using entrepreneurs as the test subjects, but it lacks the inquiry of the role of Psycap in entrepreneurship (Jensen & Luthans, 2006).

Research Subject

Recently established, MBA program in School of Business and Management (SBM) ITB in Bandung consists of three programs, which are the: MBA in Creative and Cultural Entrepreneurship (MBACCE), Young Professional MBA (YPMBA), and Executive MBA (EMBA). MBACCE programs focused more on entrepreneurship, while both YPMBA and EMBA are more career oriented in their curriculum. Regardless, MBA SBM ITB vision, mission, and goals statements emphasize greatly on entrepreneurial spirit and leadership. This research hypothesizes that positivity has a role within the entrepreneurship – in an individual or micro scope.

Theoretical Foundation

Entrepreneurship

Entrepreneurship in its linguistic form has been found to be commonly used in everyday use. People often associate entrepreneurship with innovativeness, establishment of independent enterprise, and even leadership. In educational terms however, numerous definitions have been conceived by varied researchers throughout the century. Gartner (1985) defines entrepreneurs as those "who started a new business where there was none before". Schumpeter (1934) classified entrepreneurship into five visible behaviors"(a) introduction of new goods, (b) introduction of new methods of production, (c) opening new markets, (d) opening new sources of supply, and (v) industrial reorganization"(Da Silva, 2000), which put heavy emphasis on innovation. Kent (1992) provided a thorough definition ofthe entrepreneur, which is;

"those who; (a) deals with uncertainty and generates innovation; (b) has acquired, through birth, education, and/or experience, the decision-making skills to take advantage of his or her unique insight into new information generated in the system; (c) possesses a willingness to assume risk and work hard; and (d) has the confidence in his or her abilities to venture down new paths"(Barr, 2000,).

Cunningham and Lischeron once embedded in an article, entrepreneurship is classified into 6 different philosophy or schools of thought, which are:
* the "great person" school of entrepreneurship, which conceptualize entrepreneurs as individuals who were "born great" and possess the attributes that made them exceptional (e.g. intuition, energy, charisma, etc.)

- the psychological characteristics school of entrepreneurship, which conceptualize entrepreneurs are individuals who are shaped by the values, attitude, and beliefs system that encourage them to pursue entrepreneurship endeavors
- the classical school of entrepreneurship, which conceptualize entrepreneur as an entity/subject of innovation, creativity, and inventions
- the management school of entrepreneurship, which conceptualized entrepreneurs as organizers of development, through the undertaking of risks for the sake of profit or economic growth
- the leadership school of entrepreneurship, which conceptualized entrepreneurs as leaders with the ability to rally people to their cause through motivation, directing, and leading
- the intrapreneurship school of entrepreneurship, which conceptualize entrepreneurial skills to be utilized within the confinement of a complex organization. (1991)

In the same article, they also suggest that Entrepreneurship is a continual process of recognizing opportunities, acting and managing, reassessing need for change, and evaluating self. Each of the schools of thought is relevant to a certain process of entrepreneurship. For, example: the classical school of thought, which advocate entrepreneurs need for innovation, add insight within the recognizing opportunity and acting process of entrepreneurship; the managerial and leadership school of thought recognizes the need for planning and directing within the acting and managing process of entrepreneurship; and the psychological aspects of entrepreneurship contribute also to the entrepreneurial process – the self-evaluation process in its core require internal psychological aptitude of knowing own values and beliefs. In the light of the previous theory, knowledge of entrepreneurial psyche should be inquired for educational purposes and further development in the field of entrepreneurship.

Entrepreneurial traits

"Entrepreneurial traits are distinguishing, enduring characteristics of an individual that cause him/her to respond in a certain manner in all entrepreneurial circumstances (Kirlinger, 1986)" (Barr, 2000). Coincided with the study field of entrepreneurship, entrepreneurial traits topic also has numerous literature backing its inquiry. To date there have been no definitive and fixed consensual list of traits compiled into one research.

Rotter's internal locus of control has been a prominently mentioned trait within entrepreneurship literatures. Locus of control is the degree of which an individual perceive life outcomes and events is within his/her control (internal) or not (external). Numerous researches identified a strong internal locus of control within entrepreneurs (Barr, 2000) and internal locus of control has also been proven to be a contributing factor the success of an entrepreneur. Cox and Summer (2008), in their research assessing the underlying factors of a business's success based on the perception of 187 entrepreneurs, has found entrepreneurs who succeeded was those who believed that their fate is within their own control. Propensity to take risks has also been a prominent addition to entrepreneurial traits. Mills (1984) suggested that the distinguishing factor betwee entrepreneurs with common managers are their willingness to take risks (Koh, 1996, p. 15). It must be noted that the risks specified in this study is within the context of calculated decision making, not within other context; such as careless gambling. Decision makers and other people in leadership roles at some point must face risks, in order to develop or promote growth. As it suggested in a

study by Miner et.al (1989),"moderate risk taking is positively related with firm growth" (Da Silva, 2000, p. 6).

Psychological Capital

Psychological Capital or Psycap in its core is about what positivity of each Individual could add to his/her work performance, resulting in competitive advantage. It goes deeper than Traditional or Financial, Social, and even human capital – adding competitive advantage on a psychological level (Luthans, Avey, Avolio, Norman, & Combs, 2006)– tackling issues related with "who you are", going beyond "what you have", "who you know" and "what you know". The concept and construct of Psycap is developed from Luthans et. al work of Positive Organizational Behavior or POB, which includes the Hope, Self-efficacy, Resiliency, and Optimism. Differing from other organizational behavior theory or constructs, PsyCap components is determined through several criteria. (Luthans, Avey, Avolio, Norman, & Combs, 2006). One of the criteria is it must be open to development, that what makes Psycap unique. So, theoretically anyone could learn to improve it within themselves or organizations develop it within their employees to gain competitive advantage.

There has been numerous studies and research that backed up the validity of the states of Psycap in the scope of its role in shaping work-related performance (Luthans, Luthans, & Luthans, 2004; Luthans F. , Avolio, Walumbwa, & Li, 2005; Luthans, Avey, Avolio, Norman, & Combs, 2006; Norman, 2006; Luthans, Youssef, & Avolio, 2007; Luthans F. , Avolio, Avey, & Norman, 2007). Each of the state is interdependent with one another, which means each state contribute to and is affected by the other. For example, "the more efficacious (*self-efficacy*) the individual: (1) the more likely they will be to make the choice to engage into the task and welcome related challenges (*optimism*); (2) the more likely it is that the individual will extend more effort and will be more highly motivated by the task(*hope*); and (3) the more resilient and persistent the individual will be when obstacles are encountered (*resilience*)" (Norman, 2006). Respectively, the Psycap as a whole is greater than sum of its part – the independent scale of each state. (Luthans F. et al., 2007,). Nevertheless, the impact of each of the state regarding work-related performance is still of significance.

Hope

Snyder and his colleagues defined hope as the "positive motivational state of that is based on interactively derived sense of success agency (goal directed energy) and pathways (planning to meet goals)" (Norman, 2006), meaning that hope is ones capability to find the path and the means that is needed to achieve a certain goal and more importantly to endure that path with great will and motivation. By inferring Snyder's definition, there are three interdependent components of which built hope, those are "agency", "pathways", and "goals". The "agency" component is the cognitive or psychological drive individuals need to have *(what)* in order to achieve goals and tasks(i.e.: willpower and motivation). The "pathways" component of hope is the individual's ability to find the means or "pathways" (*how*) to achieve his/her goals. Together, "pathways" and "agency" pave the way to the goal (*where*). Subsequently, each of the components individually can't establish the "hope state" without the other, you need both the will and the way to achieve goals.

Self-Efficacy

Efficacy as a psycap is the adaptation of Albert Bandura's *self-efficacy*, within his work of "social cognitive theory", applied at the workplace. In the everyday language, efficacy is closest to meaning with confidence. Self-efficacy is the conviction, or simply confidence, of an individual concerning his/her ability to successfully pursue goals by operating his/her motivation and other psychological resources through a projected course of action..

Bandura once wrote in one of his works, "Comparative studies show that domain-linked measures of perceived efficacy are good predictors of motivation and action" (Luthans F. et al., 2007).

Resiliency

In its origins, the POB state of resiliency is drawn from the clinical psychology works of Ann. S. Masteen and Marie-Gabrielle J. Reed in Resilience, in which states resilience as the "positive coping and adaptation in the face of significant adversity or risk" (Norman, 2006). Taken into the workplace, resiliency is the "positive psychological capacity to rebound, to 'bounce back' from adversity, uncertainty, conflict, failure, or even positive change, progress and increased responsibility" as defined by Luthans and his colleagues. Conclusively, the context of resiliency is not limited only to the individual's ability to deal with undesirable circumstances. But also, his/her ability to deal with extremely positive circumstances that ensue negative reactionary psychological impact, such as stress and pressure.

Optimism

Optimism, defined by Seligman, is the individual's judgment to attribute positive events (such as achievements and success) with circumstances that are within the control of the individual, internal capabilities, and other stable or pervasive factors, while attributing negative events (such as failure and setbacks) with external factors that are uncontrollable by the individual, temporary, and unstable in nature. (Luthans F. , Avolio, Avey, & Norman, 2007) To fit the POB construct however, optimism must be **realistic** – positive attribution of optimism must be associated with realistic assessment of the situation presented – and **flexible** – optimism must be applied within the appropriate circumstances (Luthans & Youssef, 2004)

Psycap and Entrepreneurship

Previously, there has been a research that assessed the PsyCap of entrepreneurs and its relationship with "authentic leadership" – which is a leading approach "that create conditions for higher trust, which helps people to build on their strengths and be more positive, to broaden their thinking, to add value and a sense of what is right to their decisions, and to improve the overall performance of their organization over time" (Jensen & Luthans, 2006). The research had found a positive relationship between each of the entrepreneur's state of optimism, resiliency, hope, and also their overall Psycap (excluding efficacy) with their authentic leadership (Jensen & Luthans, 2006). What the research lacking though, is the study of Psycap's role as a factor that influence entrepreneurship.

Cunningham and Lishceron stated that the topic of entrepreneurship has been classified into various school of thought. Not only that, but they also proposed entrepreneurship as a continuous cyclical process that encompass all of the school of thought (Cunningham & Lischeron, 1991). Psycap could be a great addition within the *psychological characteristic school of entrepreneurship*, consequently also being a part of the entrepreneurial process – probably within the self-evaluation process. Although, there has been no research establishing the fact of the previous statement to date.

In a recent article in 2014 with Slovenian and USA entrepreneurs as research samples, optimism has been found to be linked positively with pre-entrepreneurial curiousity which consequently positively affect entrepreneurial curiousity. The articles concludes that both pre-entrepreneurial curiousity and optimism is important to entrepreneurs, with a note that optimism might also negatively affect entrepreneurs due to over-confidence and unrealistic optimism (Jeraj, 2014)

In another recent research conducted by Zbierowski and Bratnicky, a relationship of positivity within the organization level to the organization's entrepreneurial orientation and organizational performance is hypothesized. The result find little relation between organization level positivity with the respective organizational entrepreneurial orientation, and also the organizational entrepreneurial orientation with organizational performance. However, the research found that a significant relationship exist between the organizational positivity and organizational performance. (Zbierowski & Bratnicky, 2014). This research reflect upon the model proposed by Zbierowski and Bratnicky (Figure) , and adapt it to the individual level. Using students as a subject, a constraint of measuring performance is faced with this research. Furthermore, the objective of the study has less to do with academic performance focus. So this study will not take into account performance into the adapted model of the research. **(Figure 1)**
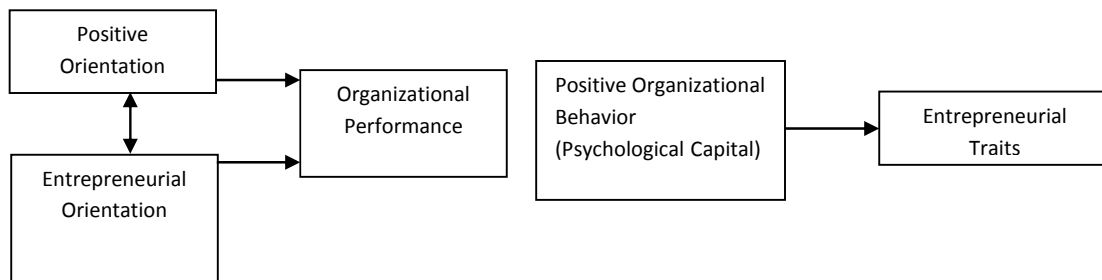

Figure 1. Model Influence

Methodology

The method used in this research is a quantitative data analysis of sample through statistics method. There are two statistics method used in this research, which are descriptive and inferential statistics. The data represented in this research are obtained through the distribution of questionnaire in which measures the latent variable through a 33 set item of manifest variables. Based on the research questions, there are five hypotheses that needed to be proven:

Hypothesis 1: Psycap state of hope affects Entrepreneurial Potential
Hypothesis 2: Psycap state of self-efficacy affects Entrepreneurial Potential
Hypothesis 3: Psycap state of resiliency affects Entrepreneurial Potential
*Hypothesis 4: Psycap state of optimism affects Entrepreneurial Potential. *
Hypothesis 5: Psycap as a whole affects Entrepreneurial Potential.

The descriptive data will be applied to give a description of the respondents, while inferential data analysis will be then conducted to test Hypothesis 1, 2, 3, 4, and 5 the structural model of study is proposed in **Figure 3.2** using the Structural Equation Model (SEM). Using Maximum Likelihood (ML) estimates SEM is widely used in behavioural, psychological, and social science studies, so the use of the method in this research is appropriate.
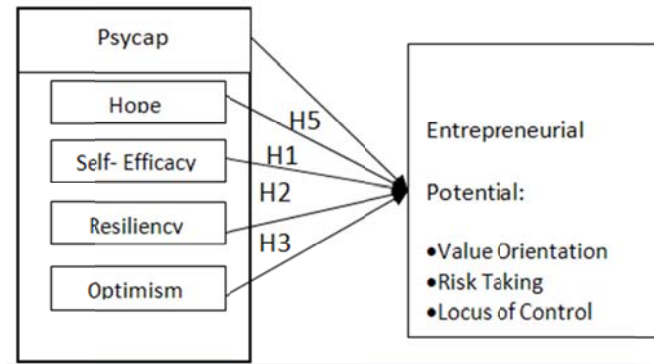
Figure 2. Proposed Model

Variables and Questionnaire Design

The hypothesized model of psycap roles in entrepreneurial decision is proposed in within the Figure 3.2. As such, the independent variables of the research design are each of the Individual Psycap of 1) hope, 2) self-efficacy, 3) resiliency, and 4) optimism

Table 1 List of Independent Variables

LATENT VARIABLE	DEFINITION	MANIFEST VARIABLE
HOPE STATE	Individual's capability to find the path and the means that is needed to achieve a certain goal	Jika saya terjebak dalam kemacetan lalu lintas, saya dapat menemukan cara keluar dari kemacetan tersebut
		Saat ini saya sedang berusaha keras tanpa lelah mengejar tujuan dan cita-cita saya
		Ada beberapa alternatif pemecahan dari masalah yang sedang saya hadapi sekarang
		Saat ini saya merasa bahwa saya adalah orang yang sukses
		Saya dapat memikirkan berbagai jalan untuk mencapai target hidup saya
		Saat ini, saya sudah mencapai sasaran yang saya tetapkan sendiri.
SELF-EFFICACY STATE	Individual's conviction or confidence of an individual concerning his/her ability to successfully pursue goals	Saya menyiapkan langkah-langkah untuk mencapai target prestasi lima tahun mendatang
		Saya mampu menilai kemampuan diri dengan tepat
		Saya mencari tahu trend ketenagakerjaan yang terkait dengan keahlian saya
		Saya mencari tahu nilai gaji yang dapat saya peroleh dari pekerjaan
		Saya akan pindah kerja jika tidak puas dengan pekerjaan

		Saya mencari tahu kedaaan institusi yang berkaitan dengan kemungkinan karir saya
RESILIENCY STATE	Individual's capacity to reboundfrom negative (adversity, uncertainty, failure, etc) and positive change (increased responsibilities)	Saya mampu cepat sadar dan pulih dari keterkejutan
		Saya dapat menikmati suasana yang baru dan tidak biasa
		Saya dikenal sebagai orang yang energik
		Saya senang untuk mencoba jalur-jalur baru di tempat yang saya kenal
		Saya senang untuk melakukan hal-hal yang baru dan sulit
		Saya cenderung untuk menggambarkan diri saya sebagai seseorang dengan karakter yang kuat
OPTIMISM STATE	Individual's realistic and flexible attribution of positive events to internal factors, and negative events to external factors.	Dalam suasana ketidakpastian, biasanya saya mengharapkan hasil yang terbaik
		Mudah bagi saya untuk menjadi rileks
		Jika nasib menentukan bahwa hal yang jelek akan menimpa saya, maka saya dapat menerimanya
		Saya selalu optimis akan masa depan saya
		Saya sering merasa sulit untuk mendapatkan berbagai hal selaras dengan harapan saya (R)*
		Saya jarang mensyukuri berbagai hal baik yang terjadi dalam hidup saya (R)*

The PsyCap Questionnaire used in this study uses the self-assessed method. The Questionnaire is constructed from an adaptation of Luthan's PsyCap questionnaire by Hary Febriansyah, Jann Hidajat, and colleagues. The questionnaire is previously used to measure the Psychological Capital of SBM ITB undergraduate students within the period of 2007-2009, and its relationship with their academic performance. The adapted items that measures the Psycap are translated to Indonesian, to better suit the sample. For this study however, the SBM psycap questionnaire distributed among the students are re-adapted to match the research sample of the study. Thusly, this research used 24 out of the 40 items of PsyCap. A full list of the questionnaire is included within the appendix. Each of the items within the Psycap questionnaire is measured in a 6 point likert scale, with each of them representing their tendency and opinion regarding the item – 1: strongly disagree, 2: disagree, 3: somewhat disagree, 4:somewhat agree, 5: agree, and 6: strongly agree (except for some questions that are reversed in scale).

The dependent variables are the overall entrepreneurial potential, measured from the combined level of 1) Locus of control, 2) Risk taking, and 3) Value Orientation. The entrepreneurial potential questionnaire is drawn from the questionnaire items of *Behavioral Assessment SBM ITB* (Bangun, Y, et al 2015) previously used on SBM students that measure their Emotional Quotient. The Entrepreneurial potential items are also included within the appendix

Table 2 List of Dependent Variables

LATENT VARIABLE		DEFINITION	MANIFEST VARIABLE
Entrepreneuri al Potential	**RISK TAKIN G**	Individual's risk bearing capability in the face of opportunities	Saya termasuk berani mengambil keputusan yang beresiko
			Beberapa teman saya sering mengatakan saya termasuk nekat dan berani
			Saya adalah orang yang berani menanggung konsekuensi atas keputusan saya
	LOCUS OF CONTR OL	Individual's conviction of self control regarding life's outcomes	Saya adalah orang yang yakin sekali dengan masa depan saya
			Saya adalah orang yang yakin sekali bahwa saya akan berhasil
			Dalam menghadapi kegagalan, saya tidak akan menyalahkan orang lain
	VALUE ORIEN TATIO N	Individual's recognition of the value of money and aptitude is using it as a resource	Saya orang yang sudah memikirkan berapa penghasilan saya pada 10 tahun mendatang
			Saya tau saja dimana bisa diperoleh barang dengan harga termurah
			Saya termasuk orang yang memanfaatkan setiap peluang

The entrepreneurial potential questionnaire is drawn from the questionnaire items of *Behavioral Assessment SBM ITB* (Bangun, Y, et al 2015) previously used on SBM students that measure their Emotional Quotient. The Entrepreneurial potential items are also included within the appendix. Each items are measured in a 6 point likert scale, with each of them representing their tendency and opinion regarding the item – 1: strongly disagree, 2: disagree, 3: somewhat disagree, 4: somewhat agree, 5: agree, and 6: strongly agree. Resiliency in the entrepreneurial potential measurement isn't included, as it is already represented by the resiliency state within Psycap.

The population of the research is the students of MBA programs in SBM ITB. The sample used for the research students in three types of MBA programs available in Bandung, which are the MBACCE, YPMBA, and EMBA. The sampling technique used is a judgement sampling method, it provides a quick and resource-efficient data gathering. Inferential statistics analysis are used to find the relationship of student's Psycap level with their

Entrepeneurial Potential. MBACCE, EMBA, and YPMBA provided an informative study sample, in which they provide similar sample with one major difference. That is, MBACCE requires the student to submit a business plan in order to be accepted within the program. While the YPMBA and EMBA students are assumed to pursue career advancement. Because the analysis uses SEM, the research projected the need of approximately 200-300 samples of SBM MBA students. Because each MBA class consist of approximately 30 to 50 students, the questionnaire will be distributed to two classes of each SBM MBA Programs in Bandung

Data Analysis
The data is collected via hardcopy questionnaires distributed in two classes of each MBA-SBM ITB in Bandung. The total respondent received is 208, with 205 usable response due to unengaged responses (same response for every question, missing items in questionnaire). It's significantly less than the projected sample size of approximately 240's, but still within the minimum of sample size required for a SEM analysis based on the research model. As we can see in the graph, the total respondents of 205, wew 59 EMBA students, 91 EMBA students, and 55 MBACCE students. With 125 respondents were male, while 80 were female.
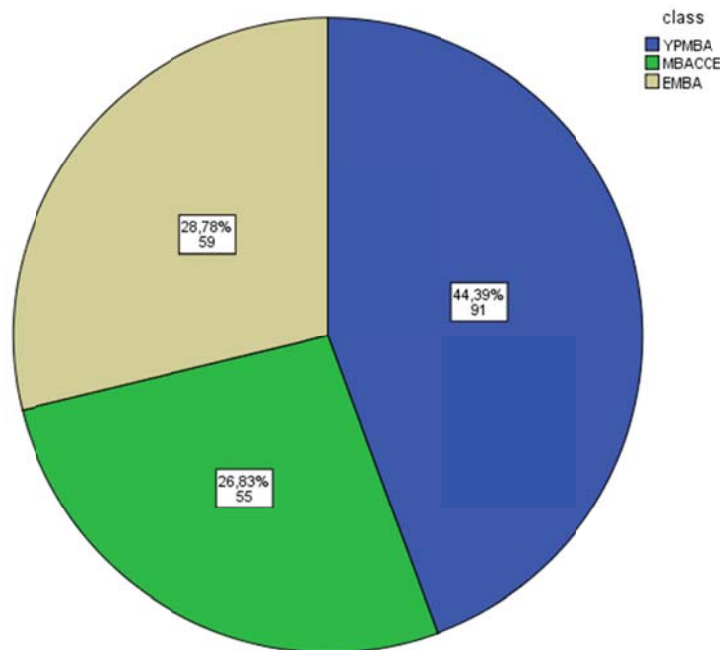

Figure 3. Respondent Distribution among Classes
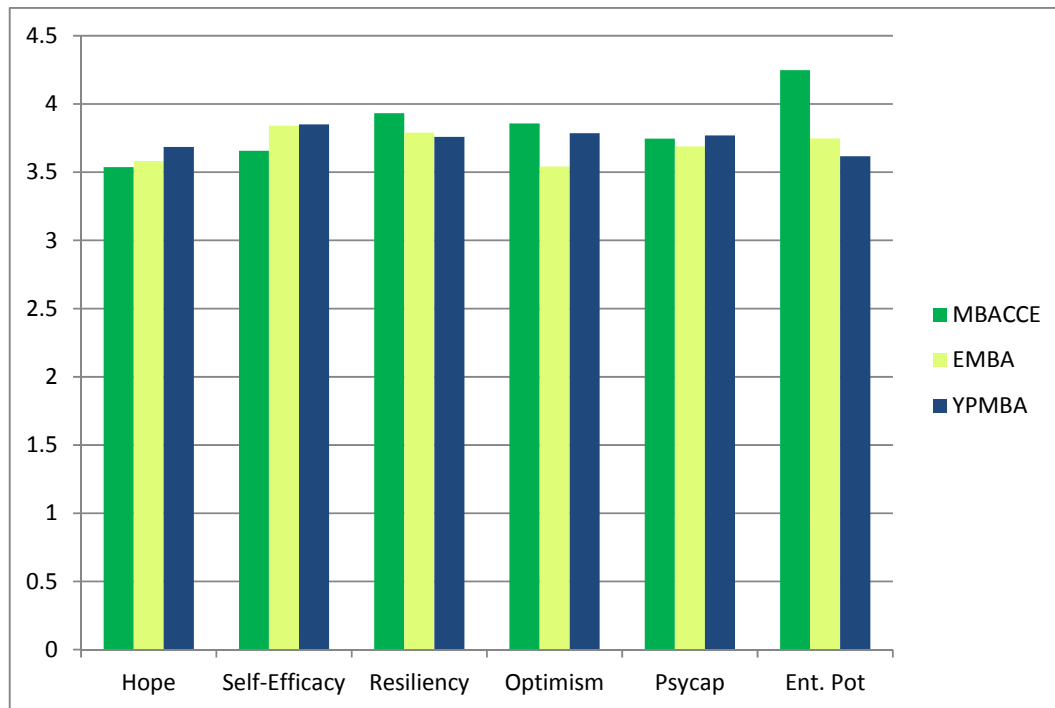
Descriptive analysis

Figure 4. Mean Differences among Programs

On average, there are no significant difference between the average score of Psychological Capital Items among the MBA Program students (pvalue>0,05 thus insignificant), though on average the MBACCE students scored slightly higher in resiliency and optimism compared to the other programs. However, a significant difference exist between the average score of Entrepreneurial Potential Items, between YPMBA with MBACCE and EMBA with MBACCE (pvalue of 0, 002 and 0,03 respectively)(**Table 3)**. With MBACCE students on average score higher in Entrepreneurial Potential than both EMBA and YPMBA students – the MBACCE students score an average of 4,25, compared to EMBA=3,7 and YPMBA=3,6.

Table 3 Two Tailed t-Test mean comparison for Entrepreneurial Potential

	YPMBA	*MBACCE*	*EMBA*	*MBACCE*	*EMBA*	*EMBA*
Mean	3,617827	4,248485	3,747646	4,248485	3,747646	3,617827
Variance	1,608562	1,281648	1,765786	1,281648	1,765786	1,608562
N	91	55	59	55	59	91
Hypothesized Mean Difference	0		0		0	
df	124		111		120	
t Stat	-3,11539		-2,17077		0,594994	
P(T<=t) two-tail	0,002283		0,032078		0,552968	
t Critical two-tail	1,97928		1,981567		1,97993	

A conclusion may be drawn that the MBACCE students are more entrepreneurially inclined than the other students. So, in a sense their entrepreneurial trait or potential might be higher than other students of different program. But, this does not conclusively prove that Entrepreneurial Potential is exclusively possessed by Entrepreneurs or Entrepreneurially inclined Individual. It however, confirms that entrepreneurially inclined individuals possess a higher tendency to taking risks, value-orient, and having an internal locus of control. Although the figure also shows us that the MBACCE scored lower in both hope and self efficacy, it is worth noting though that the differences of the Psycap states are not significant according to a *t-value* analysis (Other t-value mean comparisons are included in the **appendix**). To further examine the relationship of the Psycap states with entrepreneurial potential, the research continues with a SEM analysis,

Measurement Model
Construct Validity
The assessment of Construct of Validity is measured through the Convergent and Discriminant Validity of the model.
Convergent Validity
Before assessing the ***Second-order model*** of the study, measurement of the ***Individual Psycap model*** is assessed. H1, which is an indicator item of Hope, has a low factor loading of 0,092 and unsignificant (with a p-value of 0.21). And a scale realibility test shows us that the overall reliability of the Hope latent construct would increase, if H1 were removed (increasing from Cronbach alpha 0,835 to 0,910). For the sake of the overall reliability and convergent validity, it is acceptable to remove the H1 item from the model.

Table 4 Convergent Validity of *Individual Psycap Model*

Latent Variable	Indicator	Estimate	P	C.R	Cronbach Alpha	AVE
HOPE	H6	0,84	***	0,910	0,910	0,669
	H5	0,81	***			
	H4	0,811	***			
	H3	0,825	***			
	H2	0,804	***			
Self-Efficacy	E6	0,821	***	0,921	0,921	0,661
	E5	0,831	***			
	E4	0,778	***			
	E3	0,795	***			
	E2	0,839	***			
	E1	0,813	***			
Resiliency	R6	0,814	***	0,920	0,92	0,657
	R5	0,775	***			
	R4	0,823	***			
	R3	0,794	***			
	R2	0,822	***			
	R1	0,835	***			
	O6	0,832	***			
	O5	0,823	***			

Optimism	O4	0,797	***	0,924	0,924	0,671
	O3	0,829	***			
	O2	0,835	***			
	O1	0,798	***			
Entrepreneurial Potential	RT1	0,798	***	0,942	0,942	0,645
	RT2	0,773	***			
	RT3	0,842	***			
	L1	0,819	***			
	L2	0,791	***			
	L3	0,801	***			
	M1	0,808	***			
	M2	0,783	***			
	M3	0,81	***			

*** *significant at pvalue<0,001*

Aside from H1 of Hope, all the other indicators shows a significant (p-value significant at <0,001) and satifactory factor loadings – ranging from 0,7 to 0,9. The reliability measurement of the all the latent model is also satisfactory, with C.R and Cronbach Alpha all above 0.9. While, the AVE of all the latent variable all above 0,6 which means it's admissible. Overall, after removing the H1 indicator, the construct of the **Individual Psycap Model** is deemed to have good convergent validity.

Table 5 Convergent Validity of *Second-Order Psycap Model*

Latent Variable	Indicator	Estimate	P	C.R	Cronbach Alpha	AVE
Psycap	Hop	0,671	***	0,767	0,934	0,664
	Eff	0,659	***			
	Res	0,68	***			
	Opt	0,677	***			
Entrepreneurial Potential	RT1	0,798	***	0,942	0,942	0,644
	RT2	0,773	***			
	RT3	0,842	***			
	L1	0,819	***			
	L2	0,791	***			
	L3	0,801	***			
	M1	0,808	***			
	M2	0,782	***			
	M3	0,81	***			

*** *significant at pvalue<0,001*

Based on the convergent analysis of the **Individual Psycap Model, The Second-order Psycap Model** also eliminates H1 as an Indicator for Hope. Using overall Hope, Self-Efficacy, Resilience, and Optimism latent variable as an Indicator, we can see the factor loading of each states that converge into Psycap as a second order factor(table 5) While the AVE is still within the safe zone of above 0,6, the Composite Reliability and the factor loading dove down in numbers. The factor loading estimates are less ideal compared to those from the **Individual Psycap model,** but still high enough to be deemed acceptable (all above 0,6).

And the Composite Reliabilityfor this model is 0,767, still above the minimum threshold. Overall, the Convergent Validity of the **Second-Order Psycap** is acceptable.

Discriminant Validity

The assessment of the **Individual Psycap model** shown below in table 6 is deemed dicriminantly valid.

Table 6 Table of Discriminant Validity Analysis for *Individual Psycap Model*

	AVE	MSV	ASV	Opt	Ho	Eff	Res	Entre
Opt	0,671	0,366	0,246	**0,819**				
Ho	0,669	0,350	0,244	0,442	**0,818**			
Eff	0,661	0,341	0,236	0,491	0,422	**0,813**		
Res	0,657	0,371	0,247	0,424	0,501	0,430	**0,811**	
Entre	0,645	0,371	0,357	0,605	0,592	0,584	0,609	**0,803**

However, the **Second-order model** is faced with discriminant validity issues (table 7) With AVE of both Psycap and Entrepreneurial Potential below the MSV and ASV. And the square root of AVE of both Psycap and Entrepreneurial Potential below the inter-construct correlations of 0,89.

Table 7 Table of Discriminant Validity Analysis for *Second-order Psycap Model*

	AVE	MSV	ASV	Psycap	Entre
Psycap	0,451	0,7921	0,7921	0,672	
Entre	0,644	0,7921	0,7921	0,89	0,803

Model Fit

Table 8 Table of Model fit indices of *Individual Psycap CFA Model*

	NPAR	CMIN	DF	P	CMIN/DF	
	74	658,466	454	0	1,45	
RMR	SRMR	CFI	RMSEA	LO 90	HI 90	PCLOSE
0,092	0,0386	0,958	0,047	0,039	0,055	0,733

Looking at the table 8 the Overall fit for the **Individual Psycap Model** seems good. The CMIN/DF value is below 3 with a 1,45 value, The RMR below 0,1 (0,092), and Standardized RMR is way below the minimum threshold (0,0386). CFI value is just above the minimum fit requirement of 0,95 (0,958). The RMSEA value is 0,047, with a 90 % confidence interval of it laying somewhere between 0,039 and 0,055, which is good. The p close is 0,733, so we accept the null hypothesis that RMSEA is no greater than 0, 05.

Table 9 Table of Model fit indices of *Second-order Psycap CFA Model*

	NPAR	CMIN	DF	P	CMIN/DF	
	69	661,596	459	0	1,441	
RMR	SRMR	CFI	RMSEA	LO 90	HI 90	PCLOSE
0,098	0,041	0,959	0,047	0,038	0,054	0,765

The Overall fit of the **Second-order Psycap Model** is also good (table 9) The CMIN/DF is also way below 3 (1,441), The RMR and Standardized RMR is still below the threshold (0,098 and 0,041 respectively), and the CFI value is still above 0.95 (0,959). The RMSEA of value is also 0, 047, with a 90% confidenve interval of it laying somewhere between 0, 038 and 0,055. The PCLOSE is 0, 765, so it is deemed as having a good fit also.
Structural Model
Model Fit

Table 10 Table of Model fit Indices of *Individual Psycap Structural Model*

	NPAR	CMIN	DF	P	CMIN/DF	
	74	658,466	454	0	1,45	
RMR	SRMR	CFI	RMSEA	LO 90	HI 90	PCLOSE
0,092	0,0386	0,958	0,047	0,039	0,055	0,733

As shown in the table above (table 4.3.1.1), there is no difference between the structural and the measurement model of the Individual Psycap Model. So no modifications are needed regarding the model structure and it is permittable to draw a conclusion from the structural analysis from the study in order to prove the research hypotheses (H_1,H_2,H_3,and H_4)

Table 11 Table of Modification indices of *Second-order Psycap Model*

	NPAR	CMIN	DF	P	CMIN/DF	
	69	661,596	459	0	1,441	
RMR	SRMR	CFI	RMSEA	LO 90	HI 90	PCLOSE
0,098	0,041	0,959	0,047	0,038	0,054	0,765

Looking at the table above (table 11.), containing the Model Fit statistic of the Second-Order Psycap model, there is also no difference between the structural and the measurement model. Even though no problem of convergent validity and model fit is found, it is worth noting that the Second-Order Psycap faces a discriminant validity problem. So, the study has to admit to it's limitation regarding the model of the Second-Order Psycap's validity in the matter of it's ability to answer the research question and hypothesis (H_5)
Hypothesis Testing
Using the Structural Model of the Individual Psycap, we draw a conclusion based on the path analysis of the model. Shown in the table (12), is the data of the standardize regression weight of the structural model.

Table 12 Table of Regression weight of both Models

				β	S.E.	P
H1	Hop	→	Ent	0,237	0,06	***
H2	Eff	→	Ent	0,233	0,06	***
H3	Res	→	Ent	0,277	0,061	***
H4	Opt	→	Ent	0,268	0,061	***
H5	Psycap	→	Ent	0,89	0, 154	***

Hypothesis 1: Psycap state of hope affects Entrepreneurial Potential
Although there has been no previous research regarding the relationship of hope and entrepreneurial trait, Hope has a significant positive effect on Entreprenerial construct. It is shown in the table that Hope accounted 0,237 weight (β) on entrepreneurial potential, with a significant p-value <0,001. So it means that the more hopeful the person (SBM student in this case) is, the higher their level Entrepreneurial Potential will be. Thus, this proves that Hypothesis 1 is supported.

Hypothesis 2: Psycap state of self-efficacy affects Entrepreneurial Potential
Entrepreneurial self-efficacy has always been linked with entrepreneurial Orientation, but there has been no research of the relationship that the Psycap state of self-efficacy could impose on entrepreneurial traits of an Individual. The structural analysis shows us that the Self-Efficacy of Psycap also has a positive and significant relationship with Entrepreneurial Potential (β=0,233 and pvalue <0,001). This supports the hypothesis that the state of self-efficacy affects the Entrepreneurial Potential of the Individual.

Hypothesis 3: Psycap state of resiliency affects Entrepreneurial Potential
Resiliency has been frequently associated with entrepreneurship, so the result of the structural analysis here confirms the effect of personal resiliency on entrepreneurial potential. With a β=0,277 and a pvalue<0,001—highest regression weight among other psycap state – self-efficacy is found to be positively and significantly related to Entrepreneurial Potential. Thus, hypothesis 3 is supported by the result.

Hypothesis 4: Psycap state of optimism affects Entrepreneurial Potential.
On a previous research, Optimism has been linked with Entrepreneurial Curiousity, suggesting that optimism might lead to entrepreneurial pursuits. But, this research focuses on the effect of the Psycap Optimism state on the Entrepreneurial Trait of the individual, non-exclusive to entrepreneurs only. The Structural Model shows that the state optimism positively and significantly affect entrepreneurial potential. With a β of 0,268 and a pvalue <0,001, it is permittable to conclude that hypothesis 3 is also supported by the statistical Result.

Hypothesis 5: Psycap as a whole affects Entrepreneurial Potential.
Even though the structural analysis of the study shows that the overall Psycap state as a second Order positively and significantly affect Entrepreneurial Potential (β=0,89 and pvalue<0,001), the research has to take into account that the model used to test the relationship of Overall Psycap with Entrepreneurial Potentiial has discriminant validity issues. As such, a conclusion that Hypothesis 5 is supported might be inaccurate.

Conclusion
Previously, Psycap has mostly been used as a way to gain competitive advantage. But in the wake of this research, it has also been found to be a contributing factor of entrepreneurship

of individuals. The focus of this research in it's very core is to find a relationship between in Positivity and Entrepreneurship. By using Psychological Capital as a tool to measure a degreee of Positivity, the result of the study has shown a relationship of positivity with Entrepreneurship in a Trait level – at least among the SBM MBA students. Each state of Psycap has been found to positively and significantly affect Entepreneurial Trait **(Table 12)** – using Entrepreneurial Potential as a measure – supporting Hypotheses 1, 2, 3, and 4. Psycap as a second order factor has also shown to be affecting Entrepreneurial Potential, with a note that the Model used showing a Discriminant Validity issue. So concluding hypothesis 5 as proven is plausible.

Table 12 Table of Regression weight of both Models

				B	S.E.	P
H1	Hop	→	Ent	0,237	0,06	***
H2	Eff	→	Ent	0,233	0,06	***
H3	Res	→	Ent	0,277	0,061	***
H4	Opt	→	Ent	0,268	0,061	***
H5	Psycap	→	Ent	0,89	0, 154	***

Resiliency is used previously in the Entrepreneurial Potential items so it made sense that the state of resiliency would affect it significantly and positively. Resiliency, optimism, and self efficacy have been frequently associated with entrepreneurial behavior, so they would also presumably affect entrepreneurial potential – with optimism should be checked with reality and be used in certain context. Even though hope has rarely been associated with entrepreneurial, with no previous literature found so far, it surprisingly also have a positive and significant effect on Entrepreneurial Potential.

The strongest regression weight (β or Beta) of the states are the Psycap states of optimism and resiliency (0,268 and 0,277 respectively). This might also explain why MBACCE scored higher in both optimism and resiliency compare to other classes **(Figure 4)**, although insignificant based on a *t-value analysis* using the study's sample. So theoretically, developing optimism and resiliency of an individual consequently creates a stronger entrepreneurial traits. Although, not as strong in influence as optimism and resiliency, self-efficacy and hope are also found to have a positive and significant affect on entrepreneurial traits. So developing, both hope and self-efficacy might also prove beneficial regarding the development of entrepreneurial traits.
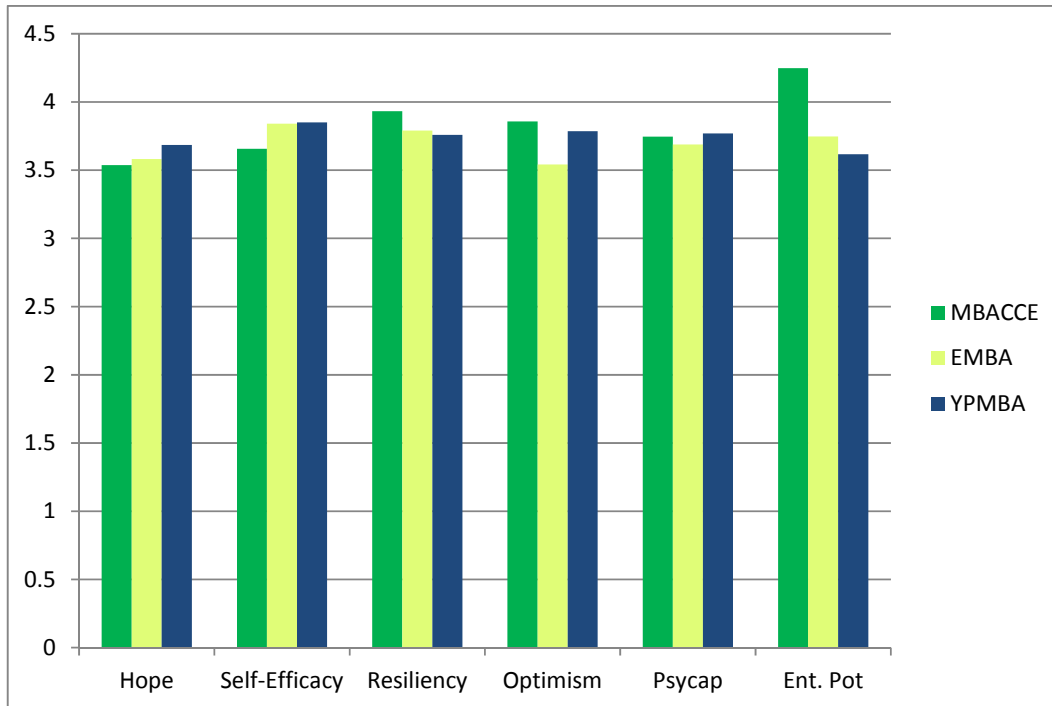
Figure 4 Mean Differences among Programs

Assessing the student's average score based on their respective programs gave the research an insight on their measurement of entrepreneurial potential and it's seemingly obvious relationship with their entrepreneurial intensions. The significant difference of entrepreneurial potential measures of MBACCE students, with students of other programs may be caused by the entrepreneurial focus the MBACCE students pursue compared the others. Take note that this research is within the specific scope of the MBA-SBM students as samples and uses a non-probability sampling, as such it is best not to generalized or extrapolate beyond the population of MBA-SBM ITB.

Recommendation
Psycap is state-like and Malleable, thusly it is open to development. A class or program to develop psycap might prove beneficial in order to gain competitive advantage. And based on the results, it could also prove to affect entrepreneurial potential as well. So, if MBACCE Program or any other MBA programs in SBM ITB (and maybe other business schools) aspired to further improve entrepreneurial spirit of their students, the development of Psycap states might prove beneficial. Especially, the Psycap state of optimism and resiliency. There are some strategies developing each of the states, written in **Table 5.3.**

Table 0.2 Strategies to Develop Psycap

Psycap States	Development Strategy	Reference
Hope	Developing agency through the practice of initiative, and delegation.	(Luthans & Youssef, 2004)
	Developing pathways through the practice of preparedness, and contingency plan.	

	Developing goals through "stepping" – breaking down big long-term goals into feasible small goals.	
Self-Efficacy	Previous experience of successful accomplishment or task mastery	(Luthans, et al.2006)
	Observatory learning by putting him/herself in other people's shoes – those who accomplishes a specific task – or vicarious learning	
	Positive feedback from both managers and peers regarding his/her ability on accomplishing a specific task	
	Physiological and Psychological arousal specific to the task	
Resiliency	Risk-focused strategies, strategies that focus on minimizing job risks and stressors ;	(Luthans, Youssef, & Avolio, 2007)
	Asset-focused strategies, strategies that focus on improving human and other assets ;	
	Process-focused strategies, strategies that emphasize the importance of process.	
Optimism	leniency for the past (forgive past mistakes);	(Luthans, Youssef, & Avolio, 2007)
	appreciation for the present (be thankful for the present situation);	
	opportunity seeking for the future (face the future with positive outlook).	

The study uses MBA SBM ITB students as sample, so a conclusion to be drawn into other population or other context is unadvised. Although a conclusion drawn to other business schools or entrepreneurial programs, might be applicable. In fact, further researches should focus on using samples outside Business schools, or maybe Business Schools other than SBM.

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