



Crafting business model innovation as the anchor strategy to sustain green start-up firm performance: A study on Indonesia start-up firms

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Abstract

This study is aiming at investigating the most suitable Business Model Innovation (BMI) for start-up firms during unpredictable market. The start-up firms are served as research population and sampling with various scope activities (trading, commerce, private sectors as well as limited) with employee size 10 until 40. 380 questionnaires were valid for further analysis gained from Google forms as well as questionnaires-based email. Structural Equation Modeling with AMOS 20 is used to analysis data. Current study proposed 10 hypotheses, 4 variables as the antecedents of BMI, and 2 mediating variables and green start-up performance (GSP) as the dependent variable. The Innovated Co-Creation Value (ICV) played a significant role as the key factor to increase the GSP. This is to mention that when a firm select and rely on the innovation and co-creation value during its operation, While the innovation to re-capture value during dynamic market, start-up firm experience high performance. To Support BMI, start-up firm is strongly suggested to build relationship with business partner and government. Business Relationship-Based (BRB) show a positive and significant impact on ICV & IRV. Aligned with Government Relationship-Based, it showed a significant impact on ICV & IRV. The finding also proved the significant impacts of Social Relationship-Based (SSB) on ICV & IRV. The three types of strategies proposed as the determinant factor of BMI is significantly accepted. For unusual finding, the networking capability which is designed and proposed as the key factor to enhance BMI is insignificant to both ICV & IRV.

Keywords

Government Relationship-Based, Social Relationship-Based, Networking Capability, Business Relationship-Based, Innovated Co-creation Value, Innovated, Re-captured Value

INTRODUCTION

It is generally believed that all over the world, the private sector played very crucial factors as the antecedent's economic development, this evidence are also strengthening by Indonesia Central Bureau of Statistics. It showed that more than 80% small medium enterprises contributed 40% into state budget and creates works opportunities. Startup offered new job opportunities and new firm (WB, 1985). Thus, the stats-up is the very beginning step to set, develop and become outstanding firms. Statistical center stated that the rate to

sustain business performance within 3,5 years contributed 20,8%, though this has been steady increased from 12,7% at the year of 2016, the increased level is still considered low.

Some reasons for the stars-up firm failed during the first period are due to some inappropriate strategies, lack of legal knowledge, capital and administration procedure challenges. Though the stars-up firm gained some priorities from supporting policy of government development, society needs and all related supported factors, the reality, many of starts-up encountered hardness to access resources and information.

Meanwhile, the information provided by state institution is incomplete and tend to insufficient. In accordance with Indonesia Chambers of Commerce and Industry, internal relationship with firms and government official played crucial roles to access any information needed as well as legal documents within business practices and activities. (Trimi S & J., 2012) had investigated the Business Model Innovation (BMI) regarding on start-up business. This new topic has been attracted scholar's attention in the development of scientific theories. Every firm in specific industries own their own different models, it was constructed in accordance with available resources. Having unique model will lead the competitor to unable imitate and apply those models in their organization as resource based view perspectives.

During the first step, when the starts-up firm lack of resources, it is strongly suggested to adopt the Business Model Innovation with market changes and increase operation performance and requires external supporting resources. During this period starts-up also needs support as well as government attention. Thus, research question is how to access information and resources of private company or organizational to support start-up.

Current research had tried to combine and collaborate three theories to meet the research findings, they are, Innovation Theory (IT), Social Network Theory (SNT) and Institutional theory (IT). Introduce and propose the determinant factors of BMI such as Governmental Relationship Based (GRB), Social Relationship Based (SRB), Networking Capability (NC) as the predictors or exogenous variables of Innovated Co-Creation Value (ICV) and Innovated Re-Captured Value (IRV) served as mediating variables and green start-up performance (served as endogenous). It is expected that those models innovation could seize and capture opportunities from inconducive market, and fluctuate economics to become firm's competitive advantages as well leverage higher business performance.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Institutional Theory

It defined the institution as social rule of play which is a rule and a border made to

guide and regulate all the practices allowed and against in many specific cases and areas. This could be considered as a regulation frame for people interactions. (RW, 1995) also defined the institution included the challenges and actions such as cognitive, norms and law to create stability and social behavior meaning.

The perspective of institutional theory in economics and sociology claimed that every business which applied institutional limits would be accepted by society (Legitimizing). When accepted, the possibility to sustain is higher. When society accepted this business, it would be a key concept in institutional theory. (Aldrich HE & AB., 1997) showed two acceptance types. Consciousness of acceptance: the entity of consciousness (Business and industries) or practices (System, management policy) which is distributable. Secondly is social-politics acceptance: how far the society (stakeholder, public and authority) considered the entities/practices consistent with social standard and law.

Social Network Price

Start-up relationship networking covered the formal and informal relationship. Particularly, the formal relationship is the legal relationship with banks, government, and lawyers, while informal relationship is the relationship with families, friends and colleague. During the first operational step, start-up firms is more interested in informal relationship instead of formal relationship (Peng, 2000).

As having discussed previously, SNT had proposed three types of networking central measurements to identify beneficial position which was used to be in the position of opinion leader, the level, interconnectivity as well as the closeness. The level of centralization measured the link to and from the individual within networking. The high level of individual would tend to become the opinion leader due to the more social bounding which is having more opportunities to receive and distribute the information. The centralization between frequency measurement of individual node lied at shortest path which connect the others note in the networking. The higher individual within networking will be having the function as the connectors in defined networking to connect the disconnected cluster networking.

Theory of Innovation

This theory is not alone rooted on one science discipline or thought of school. But in another hand, the set of conceptual was taken from various backgrounds of sciences and researches. Starting from 1930s, early theoretical perspective visioned the innovation process as one simple direction journey from fundamental research into applied research until the development and technology diffusion. What is called linear model has been showing the advance knowledge to decide the level and innovation direction and the most optimal method to increase the new technology output by putting more recourses on R&D (P, Ana Celia C., & Petula Ponciano N., 2003).

This is a technology process or supply-push. Alternative perspective, demand push, has gained its popularity since 1950s, with the reason that demand on products and services were more important to stimulate inventive activity instead of advance in knowledge. Both perspective of technology-push and demand-pull were considered too simple, new theoretical approach finally accepted these strategies.

The Impact Of Governance Relationship-Based On Innovated Co-Creation Value And Innovated Captured Value.

In accordance with the previous findings, the relationship with government official will simplify the procedures of government institutional as well as the banking (Peng, 2000). Start-up firms with strong relationship with government will gain many donation programs, aids and government support. The firms would be supported with trainings to increase their capabilities (knowledge/skill, capacity to meet environmental change, dynamic market), develop and increase technology. Start-up firm would also be introduced into business partners, investors, supported financial to investigate, product sampling production, and aligned process change. Thus, the strong relationship of start-up firm with government-based relationship will affect the Business Model Innovation such as innovated co-creation value and innovated captured value (Gao Y, Shu C, Jiang X, & Gao S, 2017). Based the previous research findings, hence, propose the following hypotheses:

H1: When start-up firm have a strong relationship with government, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

H1a: When start-up firm have a strong relationship with government, start-up firm would have opportunity to experience agile BMI with innovative captured value

The Impact Of Social-Based Relationship (SBR) On Innovated Co-Creation Value And Innovative Captured Value.

Many small firms with limited resources, it business performance really depend on its capability to explore and gain the external resources (Partanen J, Chetty SK, & A., 2011). Some previous studies had already confirmed that a strong connection could increase the significant return (Aldrich HE & AB., 1997), firms development (E.Shaw, 2006), sales growth (Tuli, 2006). (Birley, 1985) stated that at the first period of business development, the informal connection with business partners, the family member and colleagues will would prepare workforces' resources as well as material facilities for business, start-up club to share business opportunities, cross selling among clubs and guarantee the enormous order (developed new income model).

H2: When start-up firm have a strong social-based relationship, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

H2a: When start-up firm have a strong relationship with government, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

The Impact Of Networking Capability On Innovated Co-Creation Value And Innovative Captured Value.

It has been knowing that the network capability as conceptualized was not referring to business network its self, and concept could not be used in learning temporary character of the business networking (Halinen & Tornroos, 2005). This concept was not covered the definition of business networking, included all direct and indirect relationship as proposed by (D. Ford, et al. , 2003) within the model of networking management, network capability neither business interaction as a key concept proposed by (D. Ford, 2008).

This networking capability could be considered as existed theoretical business networking (D. Ford, et al. , 2003). Networking capability could be a construction which connected with management and refers to the efforts of firm to focus on the effective recording with business interaction and others relationship and this cannot be handled by the business themselves. Current research conceptualized network capability as an action that should be learned and implemented in the level of firms. Networking capability is designed to complete networking description, networking action and networking output as a crucial construction into holistic understanding on existed business networking.

It is proposed the networking capability as element that complete the model of network handling which proposed by (D. Ford & Havila, 2003). This element is expected to contribute on the understanding on how manager to coordinate various networking into organization and reach the consistency on decision and action by firm within networking. This is to propose, the following hypotheses:

H3: When start-up firm have a strong networking capability, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

H3a: When start-up firm have a strong networking capability, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

The Impact Of Business-Based Relationship On Innovated Co-Creation Value And Innovative Captured Value.

Anwar M, Rehman AU, and SZA. (2018) shared the opinions regarding on good communication with partners would lead to have a good new ideas, new business opportunities, capturing customers needs and wants, knowledge and new technologies. New business is established with good relationship with outstanding firms' managers and would be easily to access new information, resources and new knowledge (Li H, de Zubielqui GC, & A., 2015) ,which will also affect the business innovation (Breuer H & F., 2007).

DePropriisL (2002) also claimed that process innovation is closely related with producent cooperation. The leveraged customer relationship would also have a positive impact on products innovation

activities (Gerdoçi B, Bortoluzzi G, & S., 2017). During connection with partners and other business, the start-up firms experienced the advantages in cost reduction. Senior managers relationship would promote the Business Model Innovation activities(Guo H, Zhao J, & J., 2013). The new design of model insisted business to have more information on customers, suppliers as well as competitors (Timmers, 1998) and should know how to develop, share as well as resources configuration. The following hypotheses are proposed:

H4: When start-up firm have a strong business-based relationship, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

H4a: When start-up firm have a strong business-based relationship, start-up firm would have opportunity to experience agile BMI with innovated co-creation value

The Impact Of Innovated Co-Creation Value On Green Start-Up Performance.

Business Model Innovation enhance business to regain its position and profits in current markets (Johnson MW, Christensen CM, & H., 2018). The new business models have a strong impact on performance compared with the old ones (Nunes & Breene, 2011). Besides to secure current profits in markets, the BMI also offers business to extend their reach with new market penetration. The new business component focused on targeted customer who have not gotten services (Aspara J, Hietanen J, & H., 2010) and create new markets (Zott C, 2007).

Utilizing the new opportunities could help business to sustain the performance (Velu C & P., 2013). Firms renew income model to create long term income and free from existed income. During the first steps, start-up firms prepared the expenditures in fix investment and other activities. Cost structure which determined business performance. Extending cost structure will also determine operational cost type which related with lower business level.

Foss NJ and T. (2016) stated that the BMI will reduce cost. It also offers the productivity, profits over income, market value (Andreini D & BettinelliC., 2016) and financial performance for business (Pedersen ERG, Gwozdz W, & KK., 2016). BMI would also contribute significantly on financial

performance during developing economics (Gerdoçi B et al., 2017). The business model is a crucial factor to increase business performance (Dunford R, Palmer I, & J. 2010).

H5: the higher rate of innovated co-creation value, start-up firm would have higher green performance.

The Impact Of Innovated Captured Value On Green Start-Up Performance.

In a dynamic market, the implementation of BMI is required to substitute the existed business model (McGrath., 2010) to provide a solution over the threat on current business model, create the interface in the new environment. (Giessen et al., 2010) and pursuit the solid existence (Hamel G & L., 2003).

Thus, in dynamic environment, BMI has a stronger business performance compared with less dynamic environment. Because, in the dynamic environment, business encountered more threats on existed business model (Heij CV, Volberda HW, & FAJ., 2014). So, in the dynamic environment, the implementation of BMI is expected has strong impact on business performance on less dynamic environment. Hence, current article proposed the following hypothesis:

H6: the higher rate of innovated capture value, start-up firm would have higher green performance

To summarize, table 1 presented the research variable, indicators, definition and sources.

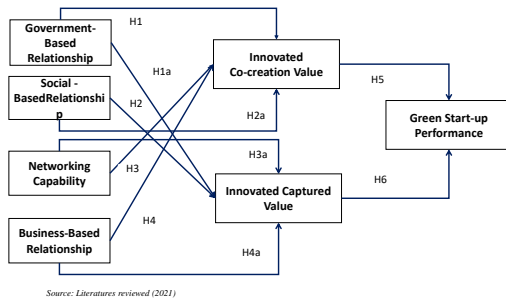
Table 1. Research Variable, Indicators and Definition

VARIABLE	INDICATORS	DEFINITION	SOURCES
GOVERNANCE RELATIONSHIP BASED	AN EFFECTIVE GOVERNANCE RELATION STRATEGY STRUCTURING A GRASSROOTS ADVOCACY PROGRAM LEGISLATIVE TRACKING LESS BURDENSOME AS MODERN TOOLS MORE STRATEGICALLY GOVERNMENT OFFICIAL RELATION EFFECTIVELY MAINTAIN TO PERSUADE POLICY GLOBALLY	GOVERNANCE RELATIONSHIP BASED COULD BE DEFINED AS EFFECTIVE RELATIONSHIP STRATEGY THAT STRUCTURES A GRASS ADVOCACY PROGRAM, A MODERN TOOL TO TRACK LESS BURDENSOME, STRATEGICALLY GOVERNMENT OFFICIAL RELATION WHICH EFFECTIVELY MAINTAIN TO PERSUADE POLICY GLOBALLY	(LI, 2000);

SOCIAL RELATIONSHIP BASED	SOCIAL ADVANTAGES CONNECTION ADVANTAGES OF RECURRING INTERACTION ADVANTAGES OF PERCEIVED RELATIONSHIP ADVANTAGE OF PERCEIVED COOPERATION OF SOCIAL STRUCTURE RELATIONSHIP CAPABILITY TO BUILD NETWORKING CAPABILITY TO SUSTAIN RELATIONSHIP CAPABILITY TO CAPTURE BENEFITS FROM PARTNERS	DEFINED AS THE ADVANTAGES SUCH AS CONNECTION, RECURRING INTERACTION, PERCEIVED RELATIONSHIP, PERCEIVED COOPERATION, SOCIAL STRUCTURE GAINED FROM SOCIAL RELATIONSHIP BASED.	(INGRAM, RICHARD.; SMITH, & MARK, 2018)
	ADVANTAGES GAINED FROM ENTITIES ADVANTAGES GAINED FROM DISCRETIONARY RELATIONSHIP ADVANTAGES GAINED FROM EXTENDED HORIZON OF BUSINESS ADVANTAGES GAINED FROM BUILDING TRUST WITH PARTNERS CUSTOMIZATION BASED WANTS & NEED RISK TAKING CULTURE EMPOWERMENT ALL RESOURCES AGILE DECISION MAKING	THE CAPABILITIES OWNED BY FIRMS SUCH AS CAPABILITY TO BUILD NETWORK, SUSTAIN RELATIONSHIP AS WELL AS CAPTURE THE BENEFITS FROM PARTNERS BUSINESS RELATIONSHIP BASED DEFINED AS SOME ADVANTAGES GAINED FROM ENTITIES, DISCRETIONARY RELATIONSHIP, EXTENDED HORIZON OF BUSINESS, BUILDING TRUST WITH PARTNERS	(MITREGA & RAMOS, 2011)
	RETAINING PERCENTAGE OF THE VALUE MAXIMIZING BETTER QUALITY PRICING APPROPRIATELY AND ADDED VALUE INCREASE CONVENIENCE CHANGING OLD METHOD	INNOVATION CO-CREATION VALUE IS DEFINED AS THE INNOVATION ON SERVICE PROVIDED BY A FIRM TO CUSTOMIZE WHAT CUSTOMERS WANTS AND NEEDS, DARE TO RAKE RISK, EMPOWER ALL RESOURCES AND AGILE DECISION MAKING.	(LIU, 2018)
BUSINESS RELATIONSHIP BASED	ADVANTAGES GAINED FROM ENTITIES ADVANTAGES GAINED FROM DISCRETIONARY RELATIONSHIP ADVANTAGES GAINED FROM EXTENDED HORIZON OF BUSINESS ADVANTAGES GAINED FROM BUILDING TRUST WITH PARTNERS CUSTOMIZATION BASED WANTS & NEED RISK TAKING CULTURE EMPOWERMENT ALL RESOURCES AGILE DECISION MAKING	INNOVATION CO-CREATION VALUE IS DEFINED AS THE INNOVATION ON SERVICE PROVIDED BY A FIRM TO CUSTOMIZE WHAT CUSTOMERS WANTS AND NEEDS, DARE TO RAKE RISK, EMPOWER ALL RESOURCES AND AGILE DECISION MAKING.	(ANWAR & SHAH, 2018)
	RETAINING PERCENTAGE OF THE VALUE MAXIMIZING BETTER QUALITY PRICING APPROPRIATELY AND ADDED VALUE INCREASE CONVENIENCE CHANGING OLD METHOD	THE INNOVATION PROVIDED BY A FIRM FROM CAPTURING VALUE, BETTER QUALITY, APPROPRIATE PRICE, ADDED VALUE, THE INCREASED CONVENIENCE AS WELL AS ABILITY TO CHANGE OLD METHOD	(BREUER & LUDEKE-FREUND, 2017); (RITALA, AGOURIDAS, & ASSIMAKOPOULOS, 2013)
CO-CREATION VALUE	EMPOWERMENT ALL RESOURCES AGILE DECISION MAKING	ON SERVICE PROVIDED BY A FIRM TO CUSTOMIZE WHAT CUSTOMERS WANTS AND NEEDS, DARE TO RAKE RISK, EMPOWER ALL RESOURCES AND AGILE DECISION MAKING.	
	RETAINING PERCENTAGE OF THE VALUE MAXIMIZING BETTER QUALITY PRICING APPROPRIATELY AND ADDED VALUE INCREASE CONVENIENCE CHANGING OLD METHOD	THE INNOVATION PROVIDED BY A FIRM FROM CAPTURING VALUE, BETTER QUALITY, APPROPRIATE PRICE, ADDED VALUE, THE INCREASED CONVENIENCE AS WELL AS ABILITY TO CHANGE OLD METHOD	
INNOVATED RE-CAPTURED VALUE	EMPOWERMENT ALL RESOURCES AGILE DECISION MAKING	ON SERVICE PROVIDED BY A FIRM TO CUSTOMIZE WHAT CUSTOMERS WANTS AND NEEDS, DARE TO RAKE RISK, EMPOWER ALL RESOURCES AND AGILE DECISION MAKING.	
	RETAINING PERCENTAGE OF THE VALUE MAXIMIZING BETTER QUALITY PRICING APPROPRIATELY AND ADDED VALUE INCREASE CONVENIENCE CHANGING OLD METHOD	THE INNOVATION PROVIDED BY A FIRM FROM CAPTURING VALUE, BETTER QUALITY, APPROPRIATE PRICE, ADDED VALUE, THE INCREASED CONVENIENCE AS WELL AS ABILITY TO CHANGE OLD METHOD	
INNOVATED VALUE	EMPOWERMENT ALL RESOURCES AGILE DECISION MAKING	ON SERVICE PROVIDED BY A FIRM TO CUSTOMIZE WHAT CUSTOMERS WANTS AND NEEDS, DARE TO RAKE RISK, EMPOWER ALL RESOURCES AND AGILE DECISION MAKING.	
	RETAINING PERCENTAGE OF THE VALUE MAXIMIZING BETTER QUALITY PRICING APPROPRIATELY AND ADDED VALUE INCREASE CONVENIENCE CHANGING OLD METHOD	THE INNOVATION PROVIDED BY A FIRM FROM CAPTURING VALUE, BETTER QUALITY, APPROPRIATE PRICE, ADDED VALUE, THE INCREASED CONVENIENCE AS WELL AS ABILITY TO CHANGE OLD METHOD	
GREEN START-UP PERFORMANCE	OPPORTUNITIES WINNING COMPETITION OVERCOMING ENVIRONMENTAL DYNAMICS INFERIOR THE COMPETITORS	GREEN START-UP PERFORMANCE DEFINED AS FIRM'S EXPERIENCES TO GAIN OPPORTUNITIES, TO WIN COMPETITION, OVERCOME THE ENVIRONMENTAL DYNAMICS AND ABILITY TO INFERIOR COMPETITORS.	(MITREGA & RAMOS, 2011)

Source : Reviewed for this research , 2021.

Having discussed all the variables and indicators, current research proposed the following grand theoretical model.



METHODS

Research Approach, Procedures and Sampling

Current research conducted in to two stages, a qualitative approach is needed for research introduction. Finding out the research purposes, synthesize relevant and robust theories (research background, research concept and previous studies). Based on literatures reviewed, grand theoretical model, hypotheses as well as research variable (Endogenous and exogenous) are proposed.

A pilot study and quantitative approach, a pilot study is required to find out the respondents share a holistic understanding on the questionnaires designed. Once the convergent output gained and showed the high reliability and validity, then the second survey is run on by sending the questionnaires through Google form and through email survey. 500 start-up firms were purposively send questionnaires with 380 are used for further analysis. Structural Equation Modeling with AMOS is used to data analysis.

Research Measurement

Current research samples are mostly based on the operational types. Start-up firms mostly in a private-sectors and limited. The scopes of activity are services start-up firms, trading and commerce. Workforce measurements, the total of start-up firms' employee categorized in to two sizes, less than 10 people and 10 to 40.

Measuring the endogen (X) and exogenous variable (Y), present study deployed a ten (10) Liker's scale, where 1

served as strongly disagrees and 10 strongly agree.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

Where;

β_0 - Constant

Y- Dependent variable (green start-up Performance)

X1= Independent variable (governance relationship based)

X2= Independent variable (social relationship based)

X3= Independent variable (networking capability)

X4= Independent variable (business relationship based)

X5= Mediating variable (Innovated co-creation value)

X6= Mediating variable (Innovated re-capture value)

$\beta_1 - \beta_6$ = Regression coefficient for each exogenous

The analysis of coefficient reliability of Cronbach's Alpha scale, Type of Relationship (the governance relationship based, social relationship based, networking capability and business relationship based), and proposed BMI (Innovated co-creation value and Innovated re-capture value). Based on the statistical output findings showing all scale is reliable with coefficient Cronbach's Alpha > 0, 6 and total correlation coefficient > 0, 3.

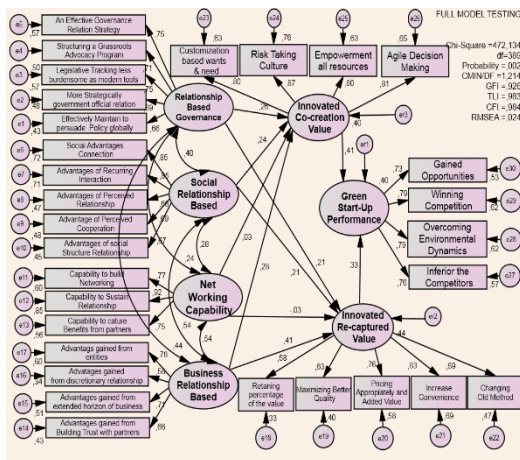
RESULTS AND DISCUSSION

Evaluation of Full Model Testing

Figure 1 presented a full and estimation model testing. Full model results estimated the simultaneous path analysis of the types of relationship (governance relationship based, social relationship based, networking capability and business relationship base) designed as the antecedent of business model innovation (as mediating variable) on the output (green start-up performance).

The confirmatory factor analysis of the measurement model, both the exogenous construct measurement model and the endogenous construct measurement model resulted in a full structural model of this study. The full structural model of the confirmatory measurement model consists of 7 latent variables. Latent variables are

governance relationship based (5 indicators), social relationship based (5 indicators), networking capability (3 indicators) and business relationship based (4 indicators), Innovated co-creation value (4 indicators), Innovated re-captured value (5 indicators) and green start-up performance (5 indicators). After going through the data quality testing phase including the assumption of sample adequacy, normality and outlier assumptions, multicollinearity, then the full structural model that has passed confirmatory factor analysis is processed with AMOS v.18, the results are presented in Figure 1.



Source : Output of SEM with AMOS, 2021
Fig 1: Full and Estimation Model Testing

To identify the goodness fit of index of a model is usually measured from it absolute, incremental and parsimony of the proposed model. Having estimated the standardized model output, the absolute of fit measures showed the acceptable indicators. It is found that the CMIN/DF 1, 12(<2), RMSE (0,024), GFI (0,926) and Probability (0,002). Meanwhile, the Incremental Fit Measures, presented by AGFI (0,911), TLI (o, 963), NFI (0,918) and CFI (0,984). The last measurement is parsimony, PNFI (0,982) and PGFI (0,974). In accordance of the all measurement indexes scored met the rule of thumb; this is to claim that model proposed is good since all the indicators score is fit.

The following table (table 2) presented the information of the holistic model fitness (absolute, incremental, and parsimony).

Table 2. Evaluation of Measurement Model (Absolute, Incremental and Parsimony)

ABSOLUTE OF FIT MEASURES (AFM)		OUTPUT AMOS	F/M
CMIN/DF (THE MINIMUM SAMPLE DISCREPANCY FUNCTION /WITH DEGREE OF FREEDOM)	< 2 (BYRNE, 1998); < 5 (WHEATON, 1977)	1,124	
RMSEA (ROOT MEAN SQUARE ERROR APPROXIMATION)	< 0,08 (BROWNE AND CURDECK, 1993)	0,024	FIT
GFI (GOODNESS OF FIT INDEX)	> 0,90	0,926	FIT
CHI-SQUARED (χ^2) P(PROBABILITY)	EXPECTED LOW	472,134 0,002	
INCREMENTAL FIT MEASURES (IFM)			
AGFI (ADJUSTED GOODNESS OF FIT INDEX)	> 0,90 (HAIR, 1995 AND HULLAND, 1996)	0,911	FIT
TLI (TUCKER LEWIS INDEX)	> 0,90 (ARBUCKLE, 1997) > 0,95 (HAIR ET AL., 1995).	0,963	FIT
NFI	> 0,90 (BENTLER & BONETT, 1980)	0,918	FIT
CFI (COMPARATIVE FIT INDEX)	> 0,95 (BENTLER, 1990)	0,984	FIT
PARSIMONY FIT MEASURES (PFM)			
PNFI (PARSIMONIOUS NORMAL FIT INDEX)	THE HIGHER IS BETTER	0,982	FIT
PGFI (PARSIMONIOUS GOODNESS-OF FIT INDEX)	THE HIGHER IS BETTER	0,974	FIT
HELTER	>200	282	FIT

Evaluation Of The Measurement Model

Statistical outputs presented at table 3 highlighted that the loading factor of GRB which reflected by five indicators confirmed that governance relationship as a base to conduct relationship has the highest loading factor, similar with legislative tracking less burdensome as modern tools (0,75). This is to claim that more than 50 percent respondent, strongly agree to apply these strategies to have great opportunities. Meanwhile the rest of respondent agreed with structure of grassroots (0, 71), More Strategically government official relation (0, 69) and Effectively Maintain to persuade Policy globally 0, 66).

Furthermore, SRB with five indicators, it showed loading factors >0, 5, with Social Advantages Connection and Advantages of Recurring Interaction (o, 85). Networking Capability, the indicator of Capability to Sustain Relationship has the highest score among all (0, 92). Business Relationship Based is represented by the indicator of Advantages gained from entities (0, 78). Innovated Co-Creation Value showed the highest scores that claimed all respondent shared the same opinion regarding on innovation co-created value with loading factors above 0,80. Meanwhile the indicator of increase the convenience represented the innovated re-captured value (0, 83). For the

last one, all the indicators of green start-up performance are above 0, 70 which is considered highly convergent.

Research findings also provided the information on research construct reliability (CR) > 0,7, while the lowest CR 0,78 (business relationship based), while the highest CR scored belong to governance relationship based and green start-up performance.

The Average Variance Extract (AVE) scale > 0, 5 with GRB as the highest score (086), while the lowest AVE could be seen from the innovated co-creation value (0, 72). To summarize the more details description, see table 3.

Table 3. Measurement Scales, Confirmatory Factor Analysis (λ), Average Variance Extracted (AVE), Alpha (α), and Construct Reliability (CR)

VARIABLE	CONSTRUCTS AND MEASUREMENT ITEMS	STANDARDIZED LOADING (λ)	AVE	ALPHA (A)	GREEN START-UP PERFORMANCE	INNOVATED CO-CREATION VALUE	INNOVATED RE-CAPTURED VALUE	INNOVATED CO-CREATION VALUE	INNOVATED RE-CAPTURED VALUE
GOVERNANCE RELATIONSHIP BASED	• AN EFFECTIVE GOVERNANCE RELATION STRATEGY.	0, 75							
	• STRUCTURING A GRASSROOTS ADVOCACY PROGRAM	0, 71							
	• LEGISLATIVE TRACKING LESS BURDENSOME AS MODERN TOOLS	0, 75	0,86	0,87	0,83				
	• MORE STRATEGICALLY GOVERNMENT OFFICIAL RELATION	0,69							
	• EFFECTIVELY MAINTAIN TO PERSUADE POLICY GLOBALLY	0,66							
SOCIAL RELATIONSHIP BASED	• SOCIAL ADVANTAGES CONNECTION	0, 85							
	• ADVANTAGES OF RECURRING INTERACTION	0, 85							
	• ADVANTAGES OF PERCEIVED RELATIONSHIP	0, 66	0,77	0,80	0,81				
	• ADVANTAGE OF PERCEIVED COOPERATION	0, 69							
NETWORK CAP	• ADVANTAGES OF SOCIAL STRUCTURE RELATIONSHIP	0, 67							
	• CAPABILITY TO BUILD NETWORKING	0, 77							
BUSINESS RELATIONS HIP BASED	• CAPABILITY TO SUSTAIN RELATIONSHIP	0, 92	0,78	0,77	0,79				
	• CAPABILITY TO CAPTURE BENEFITS FROM PARTNERS	0, 75							
	• ADVANTAGES GAINED FROM ENTITIES	0, 78							
	• ADVANTAGES GAINED FROM DISCRETIONARY RELATIONSHIP	0, 68	0,72	0,76	0,78				
	• ADVANTAGES GAINED FROM EXTENDED HORIZON OF BUSINESS					0, 77			
	• ADVANTAGES GAINED FROM BUILDING TRUST WITH PARTNERS					0, 66			
	• CUSTOMIZATION BASED WANTS & NEED					0,80			
	• RISK TAKING CULTURE					0,87	0,82	0,84	0,85
	• EMPOWERMENT ALL RESOURCES					0,80			
	• AGILE DECISION MAKING					0,81			
	• RETAINING PERCENTAGE OF THE VALUE					0,68			
	• MAXIMIZING BETTER QUALITY					0,63			
	• PRICING APPROPRIATELY AND ADDED VALUE					0,76	0,75	0,77	0,81
	• INCREASE CONVENIENCE					0,83			
	• CHANGING OLD METHOD					0,69			
	• GAINED OPPORTUNITIES					0, 73			
	• WINNING COMPETITION					0, 79			
	• OVERCOMING ENVIRONMENTA L DYNAMICS					0, 79	0,74	0,78	0,83
	• INFERIOR THE COMPETITORS					0, 76			

(TEN-POINT SCALE, ENCORED BY "STRONGLY DISAGREE AND "STRONGLY AGREE")

Source : Output of SEM with AMOS, 2021

Hypotheses Testing and Regression Weights

Current study proposed 10 hypotheses, 4 variables as the antecedents of BMI, and 2 mediating variables and green start-up performance (GSP) as the dependent variable. In a random position, The Innovated Co-Creation Value (ICV) played a significant role as the key factor to increase the GSP. This is to mention that when a firm select and rely on the innovation and co-creation value during its operation, it will experience the higher green performance as H5 is accepted (CR 6, 8 p ***). While the innovation to re-capture value during dynamic market, start-up firm experience high performance. As the H6 has the second highest CR (5,419 p ***). These two hypotheses empirically prove that when start-up firm want to win the competition, having appropriate pricing and added value, increase convenience, overcoming dynamic environmental and gain more opportunities to extend the market share, these BMI could be applied.

To Support BMI, start-up firm is strongly suggested to build relationship with business

partner and government. Business Relationship-Based (BRB) show a positive and significant impact on ICV & IRV (CR (4,667 p ***; 3,428 p ***)) respectively as H4 & H4a is accepted (Anwar & Shah, 2018). Aligned with Government Relationship-Based, it showed a significant impact on ICV & IRV (CR 4,234 p ***; 3, 51 p ***) as H1 & H1a are accepted (Li, 2000). The significant impact of Social Relationship-Based (SSB) on ICV & IRV also proposed is accepted (CR 3,755 p ***; 3,201 p 001) as H2 & H2a are also accepted (Mitrega & Ramos, 2011). The three type of strategies proposed as the determinant factors of BMI are significantly accepted. This is to suggest that during wild completion, inconducive and dynamic market, start-up firms may rely on these relationships.

For unusual finding, the networking capability which is designed and proposed as the key factor to enhance BMI. Current research finding stated that NWC is insignificant to both ICV & IRV (CR 0,585 p 559; -, 051 p 662) as H3 & H3a are rejected. For more details, see table 4 below.

Table 4. Regression Weights

HYPOTHESES	ESTIMATE	S.E.	C.R.	P	LABEL
INNOVATED RE-CAPTURED VALUE <- RELATIONSHIP-BASED GOVERNANCE	,236	,067	3,511	***	PAR_24
INNOVATED CO-CREATION VALUE <- SOCIAL RELATIONSHIP-BASED	,251	,067	3,757	***	PAR_25
INNOVATED RE-CAPTURED VALUE <- SOCIAL RELATIONSHIP-BASED	,201	,063	3,201	,001	PAR_26
INNOVATED RE-CAPTURED VALUE <- BUSINESS RELATIONSHIP-BASED	,524	,112	4,669	***	PAR_27
INNOVATED CO-CREATION VALUE <- BUSINESS RELATIONSHIP-BASED	,387	,113	3,428	***	PAR_28
INNOVATED CO-CREATION VALUE <- RELATIONSHIP-BASED GOVERNANCE	,305	,072	4,234	***	PAR_30
INNOVATED CO-CREATION VALUE <- NETWORKING CAPABILITY	,033	,057	,585	,559	PAR_33
INNOVATED RE-CAPTURED VALUE <- NETWORKING CAPABILITY	-,023	,054	-,438	,662	PAR_34
GREEN START-UP PERFORMANCE <- INNOVATED RE-CAPTURED VALUE	,375	,069	5,419	***	PAR_31
GREEN START-UP PERFORMANCE <- INNOVATED CO-CREATION VALUE	,427	,063	6,800	***	PAR_32

Source: Output SEM with AMOS, 2021

Research Theoretical Contributions

The popularity of Institutional Theory has been world-wide accepted. This theory claimed that each firms applied this theory would be well accepted by society due to its legitimating aspect. Aligned with current study, the implementation of this theory could sustain green start-up performance mediated by innovated co-creation value and re-captured value. In accordance with Theory of Innovation, though it has been well-known since 1950s, the innovation keep increase on its track as current finding strengthen this facts, innovated co-creation value and innovated re-capture value has a significant impact in sustaining and maintaining green start-up performance. Unfortunately, during inconducive market environment, social networking theory is insignificant to be key factor of BMI.

Managerial Implication

In order to sustain competitive, win competition and survive during very tough competition as well dynamic market, current research findings could suggest the stakeholder and and top management to consider the type of relationship should be taken as well as the business model innovation.

Research Limitations and Future Research Directions

As a fundamental research, this study also has its limitation; future study is suggested to investigate the similar type of start-up firms. Current study mixed all together all firms type. This limitation leads to the author unable to generalize the finding to all types of start-up firm.

CONCLUSION

Current study has seven concepts which is contained with four type of relationship (Governance Relationship-Based, Business Relationship-Based, Networking Capability and Social Relationship-Based), proposed two types of BMI (Innovated Co-Creation Value and Innovated Re-Captured Value) and Green Start-up Performance. Research findings showed that theoretical model is consistent with market data. 10 hypotheses

proposed and 8 hypotheses are accepted have the important implication on its body of knowledge. Meanwhile the networking capability, during inconducive market, can be taken as a type of relationship in BMI.

The theoretical model of relationship networking, BMI and green start-up firms have been added in to theoretic frame work in the field of start-up. The author could refer on research theoretical and empirical model for another fundamental and empirical research. In the different area, crafting relationship network will be directing on innovation and operational performance with different method.

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