

## Does Liability of Newness Matter for Digital Startup on Early Stage of Organizational Life Cycle?

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### Abstract

This study aims to test and analyzes the relationship between organizational life cycle characteristics and survivability of a digital startup in the early stage. In establishing new startup and managing early stage, founders have been facing two-fold pages. On one side, the opportunities exploration and exploitation require freedom to acts. On the other side, newly organization faces liability of newness traps that consider organizational formalization and organizational capability. The relationship among aspects is formulated as two-paths mediating roles on the impact of liability of newness and startup survivability. Questionnaires were distributed to 415 respondents in Greater Jakarta City, Indonesia. The study considered Jakarta represented Indonesian digital startup ecosystem. This newly established and still developing startup ecosystem that characterizes the early stages of OLC is considered relevant to the study. The data was analyzed quantitatively using SEM method. The result shows the linkage between the two-paths of mediating role. Since the opportunities are central of mindset for survivability, external legitimacy becomes antecedents of external opportunities as well as reliability and accountability required from organizational formalization and capability. Founders need to understand and translate the impact of liability of newness to establish an appropriate and better organization formalization and organization capability for startup survivability. This study contributes to enrich the early stage of organizational life cycle theory as well as to enhance startup founders' managerial practices.

### Keywords

Entrepreneurship; organizational capability; organizational life cycle; startup; sustainability

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### Introduction

As an emerging country, Indonesia had 175 million internet users (64% penetration) and 338 million gadgets (124% penetration) by

2020 (Hootsuite, 2020). The country is projected to reach the digital economy of USD 133 million by 2025 (Dailysocial,

2020). This progress will significantly promote the growth of digital startups. Due to the growth of funding in the last five years, Indonesia has been ranked fifth in countries with the largest number of startups worldwide (Startupranking, 2020). However, the successful rate of startup development is considered low. Several studies have discussed startup failures globally (Krishna et al., 2016; Bednar et al., 2018; Cantamessa et al., 2018). Krishna et al. (2016) and Bednar et al. (2018) stated the failure of the startup business model, while Cantamessa et al. (2018) showed the pattern of startup failure.

The classical theory of Organizational Life Cycle (OLC) views that business organizations are born through the creative process of making products/services needed by customers (Greiner, 1972). In early stage of OLC, Greiner (1972) further stated that young organization faced problems of internal processes, internal capabilities, and the focus of founder as an entrepreneur. Further studies supported this statement and revealing some characteristics that were important in this OLC. In the organizational contingency model, the inception and early growth stages of OLC affect organizational effectiveness, entrepreneurship and strategy formulation in achieving growth targets (Gupta and Chin, 1994). The OLC stage shift affects the founder's response to the business environment and strategy, the importance of change and innovation (Lester et al., 2008), and the competencies required to response (Lichtenstein and Lydon, 2008). In addition to these characteristics, Stinchombe's liability of newness (LON) is one of important factors facing by newly born organization (Abatecolla, 2013; Nagy et al., 2014; Abatecolla and Ulli, 2016; Yang and Aldrich, 2017). As newly born organization under framework of entrepreneurial orientation (EO), digital startups have many limitations and face two unbeneficial conditions. On one hand, they experience learning curve that impact to inefficiency and need sufficient resources. Iterative processes occur once products are launched

and continuous feedbacks from the market are obtained in order to build the right business model (Love, 2016). On the other hand, they lack of external resource supports due to lack of external trust.

The above description shows that understanding the characteristics of startups in OLC is vital. Although many studies have discussed the success factors of startups, there is a need to examine the newness aspect of startups and the internal characteristics of OLC for startup survivability. Two elements of internal characteristic OLC include organizational formalization (OF) and organizational capability (OC). The purpose of this study is to fill this gap by analyzing the effect of a startup's liability of newness on OF and OC, then consequently on EO. It analyzes the mediating role of OF, OC and EO on the effect of liability of newness on startup survivability.

The first section of this paper is a literature review on the liability of newness, organizational formalization and capability, entrepreneurial orientation and startup survival, where a research framework and hypotheses are also developed. The second section is the methodology, followed by data analysis and findings. The third section is the discussion based on findings. The last section is the conclusion, implications, limitations, and future research.

## **Literature Review and Hypothesis Development**

Studies on Stinchombe's liability of newness revealed that new ventures encountered lack of trust and lack of internal routine experience (Abatecolla, 2013; Nagy et al. 2014; Abatecolla and Ulli, 2016). While Abatecolla (2013) revealed legitimacy as one of liability of newness factors, Nagy et al. (2014) added accountability, reliability, availability as other factors. Nagy et al. (2014) also added that organizational age, flexibility, and energy supported the previous ones. The existence of cognitive legitimacy based on

understanding the organizational characteristics strengthens stakeholders' consideration (Mallon, 2017). Additionally, the startup business ecosystem influences entrepreneurial orientation (Muldoon et al., 2018). Networking in the startup ecosystem at an early stage depends on founders' level of social network and their individual respect (Wang et al., 2019). Regarding the relationship between networking and innovation in newness conditions, Barwinski et al. (2020) established that early-stage ventures' position in co-location and collaborative workspaces offered rich opportunities for social interactions, information exchange, and collaboration. Therefore, external legitimacy, as source of external resources, is an antecedent factor to strengthen the reliability of internal routines. Consequently, internal accountability is needed for external trust.

Other study on Stinchombe's liability of newness by Yang and Aldric (2017) revealed that social mechanisms of organizational construction involved in investing resources, developing routines, and maintaining boundaries. This required founder to continue keeping the venture alive by raising more resources, enacting routines, and gaining increased recognition from externals. Founder needs to develop these internal routines of the newly born organization including setting organizational formalization and organizational capability. Furthermore, Abatecolla and Ulli (2016) concluded that legitimacy depended on founder's role in team establishment for internal executions. Considering the mortality factors on newly born organization, Albuquerque et al. (2016) stated that founder as owner-manager plays important role managing internal business factors as well as responding environment throughout businesses life cycle stages. Filho et al. (2017) added that small business owner-manager payed full attention on internal operational activities and managerial roles through dedication, discipline and abilities of internal exercising will in turn decrease failure.

Therefore, the following hypotheses are formulated:

H1: Liability of newness has a positive impact on internal formalization

H2: Liability of newness has a positive impact on organizational capability

Some studies stated that organizational characteristics in its life cycle are important for founder considerations. Organizational characteristics affect the success of growth in terms of economic and human resource growth (Groenewegen and Langen, 2012). Study by Nielsen et al. (2019) revealed that organic organizational structure, decentralization and low formalization have a positive influence on employees' entrepreneurial intentions. Wasowska et al. (2018) suggested that formalization of company's decision-making positively contributes to the level of entrepreneurial orientation (EO). Moreover, he added that this positive effect is stronger in young and fast-growing industries and weaker in mature industries. In contrast, through international business literature review, Cowden et al. (2016) stated that firm's administrative heritage moderates the long-term effects on EO.

Organizational structure, as one of organizational characteristics, describes the bureaucracy and level of strategic roles. It is designed dynamically as formal organization based on OLC theme and driven by company's strategy. Regarding collaboration with external parties, as part of strategy choice to enter into inter-organizational relationships to explore opportunities, Lehene and Borza (2016) revealed the relationship between organizational life cycle (OLC), industry life cycle (ILC) and the alliance structure choice. They stated that type of collaborative strategy depended on the internal changes that affect the organizational needs. However, environmental uncertainty in the OLC stage affects the opportunities from the environment (entrepreneurial opportunities) to be created and exploited

(Gilliard, 2018). Other response to external environment, particularly to customers, study by Petru et al. (2019) revealed a correlation between the level of strategic management and the quality of internal communications processes, as well as between the capacities of management to drive communications strategy and the relationships with customers. On innovation aspect, Dyduch (2019) stated that firms strategically support the process of idea generation with the help of organizational design stimulating innovations based on diligent venture planning.

Therefore, the following hypotheses are formulated:

H3: Organizational formalization has a positive impact on entrepreneurial orientation

H4: Organizational formalization has a positive impact on survivability

Organizational capability is other part of organizational characteristic in OLC. Study by Wang and Ke (2016) stated that organizational capabilities such as slack resources and competitive intensity are critical elements to improve innovative performance. Bature et al. (2018) added that organizational capability is a crucial mechanism through which proactiveness and innovativeness indirectly influence small business performance. In a study on sustainability, Pankov et al. (2019) stated that the development of organizational capabilities enhanced sustainable activities as well as behavioural rules adaptation. Other study on relationship between organizational culture, entrepreneurial orientation and organizational capabilities by Bhatti et al. (2020) revealed that organizational capabilities significantly mediate between organizational culture, entrepreneurial orientation, and organizational performance. Related to dynamic capabilities, Hanchi and Kerzazi (2020) stated that organizational capabilities including innovation capabilities and dynamic capabilities are foundation of entrepreneurial capabilities.

Further to organization capabilities, some studies elaborated learning and absorptive capacity as its important elements. Study on strategic learning, Siren et al. (2012) stated that strategic learning mediated the relationship between exploration, exploitation, and performance. Furthermore, the process of strategic learning including dissemination, interpretation, and implementation of strategic knowledge, may capitalize its benefits. Pett et al. (2019) stated that learning and entrepreneurial orientation directly influence performance. Regarding study on learning practice, Baltrunaite and Sekliuckiene (2020) stated that since adopted an error-learning approach, startup mostly use behaviour learning than cognitive in startup growth stages as dynamic processes method. In business model innovation adopted by startup, Khan et al. (2020b) revealed that organizational learning capabilities (OLC) mediated relationship between social capital (SC) and business model innovation (BMI) but moderated by entrepreneurial orientation (EO).

Study on absorptive capacity, Chuang et al. (2016) revealed that collective learning and absorptive capacity mediated the relationship between social capital and competitive advantage. Using absorptive capacity and contingency perspectives, Adomako et al. (2016) stated that in a dynamic environment, extra-organizational advice amplifies the relationship between EO and firm performance. Related to absorptive capacity in multiple knowledge networks, Hardja et al. (2020) stated supply chain collaboration were positively related to innovative behaviour but hampered by lack of exchanging knowledge and information culture. Added in culture aspect, study by Bayraktar (2016) stated that relationship between innovative cultures and entrepreneurship faced barrier traps such as trap of control, trap of similarity, trap of preservation, and trap of individual identity. Study emphasizing on culture type and leadership style, Khan and

Ahmed (2019) revealed that adhocracy culture and clan culture significantly affected the entrepreneurial orientation when entrepreneurial leadership style showed innovative solution development.

Therefore, the following hypotheses are formulated:

H5: Organizational capability has a positive impact on entrepreneurial orientation

H6: Organizational capability has a positive impact on survivability

Since entrepreneurship is a process of opportunity seeking and translating into product, entrepreneurial orientation of startup positively affects its long-term sustainability (Renko et al., 2015). Impact of some success factors of startups' survival such as human capital, social capital and financial capital are mediated by innovation (Omri et al., 2015). Other study by Kim et al. (2018) stated that innovation on idea commercialization positively affects startups' success. Danarahmanto et al. (2020) added that business model was influenced by entrepreneurship orientation, innovation, and customer participation, while the sustainable performance was influenced by the business model.

Some studies investigated relation between entrepreneurial team and firm performance. In study on team diversity, Kollmann et al. (2017) revealed that innovation diversity facilitated team performance, although diversity in proactiveness and risk-taking impaired their performance. Based on study on team profile, Eliakis et al. (2020) stated that profile of entrepreneurial team, affect firm survival in all evolution stages of OLC. Related to absorptive capacity, study by Khan et al. (2020a) stated that entrepreneurial orientation (EO) has positive effect on project success mediated

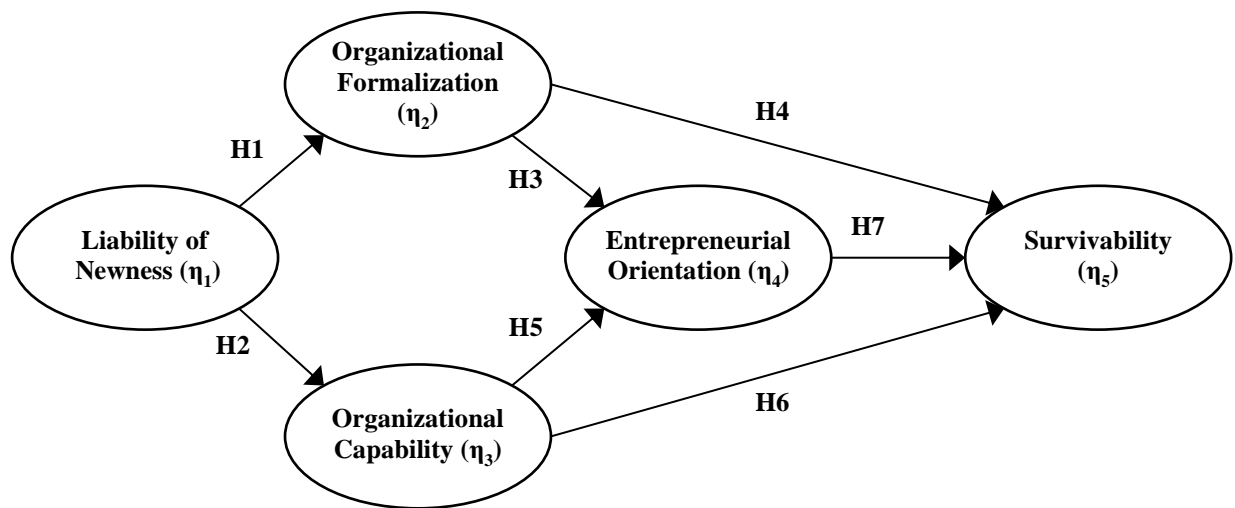
partially by absorptive capacity. In addition to external environmental aspects as control variables, study by Shirokova et al. (2015) showed that entrepreneurial orientation directly and positively affected firm performance.

Therefore, the following hypothesis is formulated:

H7: Entrepreneurship orientation has a positive impact on survivability

Following global startups in general, Indonesian startups are often considered as highly dynamic organizations. The need for high iteration on the startup work cycle method that causes a high degree of flexibility and agility, particularly in product development, tends to ignore governance at an early stage. On one hand, startup survivability is hypothetically impacted by LON conditions that require internal OLC governance. On the other hand, creativity and innovation within the framework of entrepreneurship orientation demands flexibility and agility. As a new organization that was born and developed hypothetically following the characteristics of OLC, these two conditions became the main challenges for Indonesian startup founders. Therefore, it is important to answer the question to consider LON in formulating and executing appropriate OF and OC as elements of internal characteristics of OLC for startup survivability.

The study refers to a conceptual framework as shown in Figure 1. The framework consists of five latent variables (liability of newness, organizational formalization, organizational capability, entrepreneurial orientation, and survivability) and seven hypotheses.



**Figure 1. Conceptual Framework**

## Research Method

### Data collection

A questionnaire-based survey was conducted from January to July 2020 to obtain data for model testing. The purposive sampling method was used to determine sample size. Since Jakarta had more than 50% of Indonesian digital startups (MIKTI, 2018), the study considered Jakarta represented Indonesian digital startup ecosystem. This newly established and still developing startup ecosystem characterizes the early stages of OLC. Other criteria of sampling unit in the study were taken such as minimum one year of startup age and more than five employees of organization size. Taken 50% of Jakarta startup population, a total of 277 startups were considered as sample unit. From that sample unit, founder group (one founder and one co-founder) was determined as respondents in this study.

As many as 257 startups delivered valid questionnaires. As many 43% of startups operated in e-Commerce, 17% in fintech, 7% in games, and 33% in content, media, platform, and logistics. A total of 63% of the startups had operated for at least 5 years, 28% for 3-4 years, and 9% for less than 2 years. Since 69% of startups had already received funding, so that investors had already granted trust to them. Most startups

in the study are relatively small firms because 61% of them had up to 50 employees, while other startups were 19% had 51-100, and 18% had 100-500. This study has 75% response rate (415 of 553 questionnaires distributed were valid from 257 startups). Male founder still dominate digital startups since respondents consisted of 80% male. The education level of founder includes 88% bachelor. As many 29% respondents were up to 30 years old, 61% aged 31-40 years, and 10% were above 40.

### Variables Utilized

Based on literature reviews, the liability of newness (LON) consists of experience and trust elements related to new roles assignment in the organization and routine internal learning process (Abatecola, 2013; Abatecolla and Ulli, 2016). Trust consists of internal social relationships and external legitimacy. The internal perspective is indicated by employees' common understanding and cohesiveness, while the external perspective relates to legitimacy from customers, suppliers, and investors. Choi (2001) and Nagy et al. (2014) formulated a more systematic liability of newness elements, specifically legitimacy, reliability, and accountability. Reliability is the ability to produce products/services that meet expected standards attributed to experienced internal routine processes.

Accountability includes clarity and systematics of the internal process of resource usage to produce products/services. Legitimacy is recognition, reputation, and institutional support from influential external parties, such as customers, suppliers, and investors. Hence, LON factor consists of legitimacy (LEG), reliability (REL), and accountability (ACC) indicators.

On the organizational formalization (OF), the thoughts of Greiner (1972), Gupta and Chin (1994), Lester et al. (2008) and Lichtenstein and Lyons (2008) state that in general the internal aspects of the organization consist of the level of structural formalization, policy, procedure and communication. The formalization of the structure includes clarity of duties and responsibilities (role clarity), functionalization or departmentalization, and the hierarchy of structures that make up the bureaucracy (bureaucracy of line and command). Communication formalization includes vertical communication (top-to-down and vice versa) and lateral communication within the same level of position (peer-to-peer).

Organizational capabilities (OC) are required for ability to scan external environment and discovering opportunities. The volatile and turbulent external environment shall be anticipated for opportunities (Gilliard, 2018) and provide product-market-fit solutions (Groenewegen and Langen, 2012). The process of critical thinking within strategic learning (Siren et al., 2012) and collective learning (Chuang et al., 2016) requires absorptive capacity (Lee et al., 2014; Chuang et al., 2016). Appropriate-control and fast decision making in organizations (Smolova et al., 2018) is important in internal executions. In addition, interdisciplinary fields in organizational capabilities require cooperation and behavioural rules adaptation (Pankov et al., 2019) occupied within established culture (Khan and Ahmed, 2019). Thus, organizational capability is indicated by collective

knowledge and absorptive capacity (knowledge management), delegation of decision-making processes and their control, and organizational culture (heterogeneity and person-fitness).

In this study, the measurement of entrepreneurial orientation is based on an entrepreneurial process approach that focuses on opportunities with creativity, innovation, and risk-bearing (Schaper et al., 2014; Blundel et al., 2018). Entrepreneurial creativity is the process of opportunities discovery, the process of exploration to produce new ideas, and ability to create new business, and an insight and challenging frame in creating important factors (Gupta et al., 2004; Schaper et al., 2014; Ranjan, 2018). Entrepreneurial innovation is the implementation of ideas through evaluation and exploitation. It is generated from creativity for it to be economically valuable and tangible in the market. The exploitations of opportunities and the use of various resources to generate economic value have risks attributed to environmental uncertainty. Therefore, risk-bearing is an important factor related to the process of discovery and exploitation of opportunities to absorb uncertainty and tolerance for affordable lost tolerance in an unfavorable external environment (Gupta et al., 2004; Schaper et al., 2014; Blundel et al., 2018; Ranjan, 2018). Therefore, the entrepreneurial orientation (EO) factor consists of creativity (CRE), innovation (INN), and risk-bearing (RKB) indicators.

As a new venture iteratively seeking its business model (Ries, 2011; Blank, 2013), digital startup survival is influenced by certain characteristics of the development stage cycle until it is ready to be escalated to reach "harvesting" level (Love, 2016). The product-market-fitness criteria illustrate how meaningful the products/services exist in society and breakthrough problem-solution-fitness in the social-environmental (Galpin and Hebard, 2015; Overall and Wise, 2015). Product-market-fitness is realized through products/services uniqueness for problem

solutions in society (Krishna and Subrahmanya, 2015; Overall and Wise, 2015). Apart from product-market-fitness, product-value-scalability is another measure based on the ratio of customer lifetime value compared to acquisition costs (Galpin and Hebard, 2015), repeatability and attractiveness/traction (Krishna and Subrahmanya, 2015; Overall and Wise,

2015; Ruggieri et al., 2019), and profitability and efficiency (Groenewegen and Langen, 2012; Overall and Wise, 2015). Therefore, startup survivability (SURV) consists of product-market-fitness (PMF) and product-value-scalability (PVS) indicators. Table 1 shows the summary of factors and indicators.

**Table 1. Factors and Indicators**

Factors	Indicators	Sources
Liability of newness (LON)	Legitimacy (LEG), Reliability (REL), Accountability (ACC)	Choi (2001); Abatecola et al. (2012); Abatecola (2013); Nagy et al. (2014); Abatecolla and Ulli (2016)
Organizational Formalization (OF)	Organization structure (OF1), Organization bureaucracy (OF2), Policies and procedures (OF3), Vertical communication (OF4), Horizontal communication (OF5)	Greiner (1972); Gupta and Chin (1994); Lester et al. (2008); Lichtenstein and Lyons (2008)
Organizational Capability (OC)	Delegation on Decision making (OC1), Control on decision making (OC2), Collective knowledge (OC3), Absorptive capacity (OC4), Culture synergy (OC5)	Siren et al. (2012); Lee et al. (2014); Chuang et al. (2016); Smolova et al. (2018); Khan and Ahmed (2019); Pankov et al. (2019)
Entrepreneurial orientation (EO)	Creativity (CRE), Innovation (INN), Risk bearing (RKB)	Gupta et al. (2004); Schaper et al. (2014); Blundel et al. (2018); Ranjan (2018)
Survivability (SURV)	Product-market-fitness (PMF), Product-value-scalability (PVS)	Groenewegen and Langen (2012); Galpin and Hebard (2015); Krishna and Subrahmanya (2015); Overall and Wise (2015); Love (2016); Ruggieri et al. (2019)

*Source: Own research*

### Statistical Techniques and Tools

This study applied the structural equation modeling (SEM) technique that consisted of two steps: measurement model and structural model analysis (Schumacker and Lomax, 2004; Hair et al., 2014). The first one involves confirmatory factor analysis (CFA) supported by construct validity and reliability analysis. The second one involves hypothesis testing and path analysis. Lisrel version 8.8 was used to process data.

### Results

#### Measurement Construct Validity and Reliability

Table 2 shows the results of measurement model analysis. Since all standardized loading factor (SLF) ranging from 0.54-0.98 or >0.5, then all indicators are valid (Schumacker and Lomax, 2004; Hair et al., 2014). Composite reliability (CR) are ranging from 0.85-0.96 and meet criteria (>0.7), then they are considered reliable and indicate internal consistency. Average variance extract (AVE) from 0.58-0.88 of



all factors and meet criteria ( $>0.5$ ), then they are also considered fulfill convergent validity. In general, the convergent validity describes the strength of indicators'

closeness as expected in construct on each respective factor.

**Table 2. Validity and Reliability of Factors and Indicators**

Factor	Indicator	SLF*	ER	CR*	AVE*
LON	LEG	0.94	0.12	0.87	0.69
	REL	0.79	0.37		
	ACC	0.74	0.45		
OF	OF1	0.91	0.17	0.95	0.78
	OF2	0.89	0.21		
	OF3	0.93	0.13		
	OF4	0.84	0.30		
	OF5	0.83	0.31		
OC	OC1	0.82	0.33	0.85	0.58
	OC2	0.81	0.34		
	OC4	0.54	0.70		
	OC5	0.84	0.29		
EO	CRE	0.91	0.18	0.96	0.88
	INN	0.98	0.02		
	RKB	0.91	0.17		
SURV	PMF	0.84	0.29	0.89	0.81
	PVS	0.95	0.09		

Note: SLF=Standardized loading factor; ER=Std. error; CR=Composite reliability; AVE=Average variance extract; \* $p<0.05$

Source: Own research

Despite the convergence on indicators of factors, discriminant validity is required. In general, discriminant validity describes how separate each factor differs from one another compared to their respective indicators. This study applies the heterotrait-monotrait ratio (HTMT) approach in calculating discriminant validity. This HTMT approach is a method that can be more accurate (Henseler et al., 2014). The method involves comparing correlation scores of average heterotrait-heteromethod with that of monotrait-heteromethod on the correlation

matrix. Discriminant validity issues occur when the HTMT score is more than 0.9 for moderate criteria or more than 0.85 for strict criteria (Henseler et al., 2014). Table 3 shows that all HTMT values are  $<0.9$ , except for SURV-EO factors' scores. In order to maintain testing of theoretical constructs, this study keeps these two factors and considers a measurement model that meets discriminant validity. Therefore, there are no discriminant validity issues.

**Table 3. Discriminant Validity**

	HTMT				
	LON	OF	OC	EO	SURV
LON					
OF	0.78				
OC	0.82	-			
EO	-	0.84	0.89		
SURV	0.76	0.88	0.89	0.97*	

Note: HTMT=heterotrait-monotrait; \*HTMT>0.9 (Henseler et al., 2014)

Source: Own research

### Structural Model Goodness of Fit

The overall model fitness is tested with absolute, incremental, and parsimonious measures goodness of fit (Schumacker and Lomax, 2004; Hair et al., 2014). Absolute fit measures are used to test the model as a whole, while incremental fit measures compare it with the standards. Parsimonious fit measures are used to reduce the influence of sample size by adding degrees of freedom. As shown in Table 4, the test results for absolute fit measures (GFI=0.91; RMSR=0.032; RMSEA=0.07) indicates that the model is considered a good fit and marginal good fit. At df=103, Chi-square (=355.48) is larger

and exceeds reference value (=127.689;  $p < 0.05$ ). It is considered not fit due to sensitivity to large sample size ( $n=415$ ), hence  $CMIN/df=3.45$  is used. The result meets parsimony criteria  $< 5$  (Schumacker and Lomax, 2004). Incremental fit measures' test (AGFI=0.86; NFI=0.99; TLI=0.99; CFI=0.99; IFI=0.99; RFI=0.99) indicates that the model is considered marginal fit and good fit. The parsimonious fit measures' test (PNFI=0.75; PGFI=0.61) shows that the model is considered a good and marginal fit. From these three tests, the overall model meets the goodness of fit test.

**Table 4. Goodness of Fit**

Test	Statistic	Standard *	Conclusion	
Absolute fit measures	Chi2	355.48	$\geq 127.689$ (table)	Not fit
	CMIN/df	3.45	$< 3^{**}$	Appropriate
	GFI	0.910	$\geq 0.9$ ; $\geq 0.8$	Good fit
	Std. RMR	0.032	$\leq 0.05$	Good fit
	RMSEA	0.077	$< 0.05$ ; $< 0.08$	Marginal fit
Incremental fit measures	AGFI	0.860	$\geq 0.9$ ; $\geq 0.8$	Good fit
	NFI	0.990	$\geq 0.9$ ; $\geq 0.8$	Good fit
	NNFI/TLI	0.990	$\geq 0.9$ ; $\geq 0.8$	Good fit
	CFI	0.990	$\geq 0.9$ ; $\geq 0.8$	Good fit
	IFI	0.990	$\geq 0.9$ ; $\geq 0.8$	Good fit
	RFI	0.980	$\geq 0.9$ ; $\geq 0.8$	Good fit
Parsimonious fit measures	PNFI	0.750	good fit $\geq 0.5$ ;	
	PGFI	0.610	marginal $< 0.5$	

Note: \*significant  $p < 0.05$  (Hair et al., 2014); \*\* $< 5$  (Schumacker and Lomax, 2004)

Source: Own research

### Hypothesis Testing

The study used t-value for hypothesis testing on the significance level of the

relationship coefficient between factors. At a 95% confidence level ( $\alpha=0.05$ ), hypothesis is accepted when t-value  $> 1.96$  (Schumacker and Lomax, 2004). Table 5

shows that H1 (LON→OF;  $\beta=0.93$ ;  $t=9.36$ ;  $p<0.01$ ) supports the hypothesis that the liability of newness positively affects the organizational formalization. H2 (LON→OC;  $\beta=0.95$ ;  $t=6.69$ ;  $p<0.01$ ) supports the hypothesis that the liability of newness positively affects the organizational capability. H3 (OF→EO;  $\beta=0.23$ ;  $t=0.86$ ;  $p>0.05$ ) does not supports the hypothesis that the organizational formalization positively affects the entrepreneurial orientation. H4 (OF→SURV;  $\beta=0.82$ ;  $t=2.06$ ;  $p<0.05$ ) supports the hypothesis that the

organizational formalization positively influences the survivability. H5 (OC→EO;  $\beta=0.67$ ;  $t=2.29$ ;  $p<0.05$ ) supports the hypothesis that the organizational capability positively affects the entrepreneurial orientation. H6 (OC→SURV;  $\beta=-0.67$ ;  $t=-1.45$ ;  $p>0.05$ ) does not supports the hypothesis that the organizational capability positively affects the startup survivability. H7 (EO→SURV;  $\beta=0.68$ ;  $t=5.29$ ;  $p<0.01$ ) supports the hypothesis that the entrepreneurial orientation positively affects the startup survivability.

**Table 5. Hypothesis Tests**

Hypothesis	$\beta$	t-value	p-value	Remark
H1: LON → OF	0.93	9.36*	<0.01*	Supported
H2: LON → OC	0.95	6.69*	<0.01*	Supported
H3: OF → EO	0.23	0.86	>0.05	Not supported
H4: OF → SURV	0.82	2.06**	<0.05**	Supported
H5: OC → EO	0.67	2.29**	<0.05**	Supported
H6: OC → SURV	-0.67	-1.45	>0.05	Not supported
H7: EO → SURV	0.68	5.29*	<0.01*	Supported

Note: \*t-value=2.58 ( $p<0.01$ ); \*\* t-value=1.96 ( $p<0.05$ );  $\beta$ =Standardized Loading Factor  
Source: Own research

Table 6 shows path analysis using construct coefficients of direct effects (DE), indirect effects (IE), and total effect (TE). There are two important paths. Path OF→SURV shows DE score (=0.82) greater than IE (=0.16). It shows a weak influence of EO mediation on the relationship between OF and SURV. Path OC→SURV shows that although no significant direct relationship ( $\beta=-0.67$ ;  $t=-1.45$ ;  $p>0.05$ ), the relationship on EO→SURV is significant ( $\beta=0.68$ ;  $t=5.29$ ;  $p<0.01$ ) resulting a significant IE (=0.46).

In addition, there are two mediating effect paths from LON to SURV. First path is LON→OF→EO→SURV resulting  $R^2=0.93 \times 0.23 \times 0.68=0.145$ . This describes SURV is represented 14.5% by integration of LON, OF, and EO. Second path is LON→OC→EO→SURV resulting  $R^2=0.95 \times 0.67 \times 0.68=0.433$ . This describes SURV is represented 43.3% by integration of LON, OC, and EO. Therefore, OC has a greater mediating role effect on the relationship between LON and SURV.

**Table 6. Path Analysis**

Path	DE	IE	TE	Remark	
1: LON→OF	0.93	-	0.93		
2: LON→OC	0.95	-	0.95		
3: OF→ENTRE	0.23	-	0.23		
4: OF→SURV	0.82	0.16	0.98		
5: OC→ENTRE	0.67	-	0.67		
6: OC→SURV	-0.67	0.46	-0.21		
7: ENTRE→SURV	0.68	-	0.68		
8: LON→SURV:	DE1	DE2	DE3	R <sup>2</sup>	
a: LON→OF→ENTRE→SURV	0.93	0.23	0.68	0.145	14.5%
b: LON→OC→ENTRE→SURV	0.95	0.67	0.68	0.433	43.3%

Note: DE=Direct Effect; IE=Indirect Effect; TE=Total Effect; DE1=DE; DE2=IE level 1; DE3=IE level 2

Source: Own research

## Discussion

This study shows that the liability of newness positively affects the organizational formalization (H1) and organizational capability (H2). This result supports Agha (2014) that in high liability of newness during business creation, it is critical to build structure and network foundation. Structure is one of elements to produce products and ensure consistent processes for reliable products. However, when some adjustments are required to accommodate market needs, flexible structures contradict to the reliability. Nagy et al. (2014) also added that organizational flexibility (such as structure and process) and organizational energy (such as team enthusiasm and motivation), supported the foundation. Nevertheless, this study proved that structure was impacted by the condition on new venture creation. Yang and Aldric (2017) emphasized that internal routines establishment was part of social mechanisms of organizational construction required by early stage of OLC. Startup mortality risk is higher under liability of newness due to internal processes are still unstable, not efficient and low in competence, even some other internal processes are not yet available. This result also supports Baldegger and Gast (2016) that as degree of liability of newness changes, the internal managerial role needs to be revisit accordingly. This study

considered synergy between founder and team as part of capabilities. During development from inception to early growth, since synergy among founding team is critical, it impacts to new teams recruitment. According to Li and Dutta (2018), the founding team's experience, as one of capabilities, was important in new businesses; hence building a founding team is critical. However, as their newness developing in the early stage, startup experience learning curve and accumulate shared knowledge to overcome lack of competencies as considered in this study. Baltrunaite and Sekliuckiene (2020) added that to enhance internal knowledge, a behavioural learning is conducted through trial-error-learning approach.

This study reveals that organizational formalization only affects to survivability (H4) but does not impact to entrepreneurial orientation (H3). The characteristics of the organization include the design of the organizational structure, the process of centralization/decentralization, and the level of formalization. This result contradicts the research by Lichtenstein and Lyon (2008) that there was a change in the need for entrepreneurial skills according to the OLC stage. Study by Wasowska et al. (2018) stated that the formalization of the decision-making process as part of organizational design had a positive contribution to the level of entrepreneurship

orientation. Dyduch (2019) added that strategic organizational design based on business planning and supporting a climate for creating ideas that encourage innovation are important dimensions of entrepreneurial strategy. In this study the impact might be indirectly through founder activities on managing startups strategically and operationally. Creative and innovative work environment is encouraged by founder's role on sort of flexible structure beyond the established structure and procedures. This in lines with Nielsen et al. (2019) that there was an influence of organizational characteristics on the founder's attention to the entrepreneurship aspect. Regarding impact on survivability, organizational formalization may ensure the consistency of processes and procedures on generating reliable products. Continuous production of reliable products will in turn ensure long term survivability.

This study reveals that organizational capability positively affects to entrepreneurial orientation (H5). Main elements of organizational capability in this study include the decision making processes taken, the knowledge capacity enhanced, and the culture synergy established. Business model innovation (IBM) as adopted by startups requires fast decision executions, dynamic knowledge, and synergy among executing teams. When collective learning process empowered by high absorptive capacity, it enhances collective knowledge. Hereafter, dynamic capability strengthens the innovation capability needed to explore and exploit opportunities to produce creative innovation products. This study is in line with the studies by Erwin et al. (2020), Hanchi and Kerzazi (2020), and Khan et al. (2020) related to organizational capability and innovation. Erwin et al. (2020) stated the relationship between dynamic capabilities and entrepreneurial orientation. Hanchi and Kerzazi (2020) stated that innovation capability as an advanced level of dynamic capability for new opportunities. In relation to the innovation business model, the research of Khan et al.

(2020) stated that social capital as an input for organizational learning capability (OLC) has an effect on business model innovation (BMI) success.

This study found that organizational capability does not impact to survivability (H6). This study is not in line with the studies of Chuang et al. (2016), Bature et al. (2018) and Bhatti et al. (2020) related to the relationship between organizational capability and organizational performance. Chuang et al. (2016) stated that collective learning and absorptive capacity as elements of organizational capability fully mediate the relationship between social capital and competitive advantage. Bature et al. (2018) showed that organizational capability was an important mechanism on the effect of innovation on small-scale business performance. Bhatti et al. (2020) stated that organizational capability significantly mediates the relationship between organizational culture and organizational performance. Wang and Ke (2016) discuss the fact that organizational capabilities such as resource reserves and competitive intensity are important elements needed by companies to improve innovative performance. It is possible that the relationship between organizational capability and survivability is hidden. The fact that collective knowledge and team synergy energizes team innovation to produce various products needed. As the economic size growth in the OLC stage and affect the capital growth of investors, the startup survivability will increase. In this causal-effect, creativity and innovation becomes an intermediary of the relationship.

The study reveals that entrepreneurial orientation positively affects startup survivability (H7). In newly born organization, opportunities from reputation might be beneficial. Since opportunities exploration and exploitation is the central of entrepreneurship, the outcome of innovation products from those opportunities becomes fundamental of startup performance in early stage. In this

stage, the emergence of products and organization is critical within short term period. Identified factors such as creativity, innovation, and risk, support the effectiveness of entrepreneurial orientation through fulfilment of the product-market-fitness requirements. This is in line with studies on entrepreneurship elements for startup performance and success such as by Shirokova et al. (2015) on configurations of the external environment aspects; Colombelli et al. (2016) on product building and process innovations; and Hallam et al. (2017) on relation capital and social network factors. The determination of innovation business model adopted by startup requires the product-market-fitness and scalability as measures the early stage survivability. This study is also in line with Danarahmanto et al. (2020) that stated the determination of IBM's effect on startup success.

### Conclusions

This study concludes two sides point of view. Within framework of OLC, startups are characterized by liability of newness, organizational formalization and organizational capability. The elements of liability of newness including legitimacy, reliability, and accountability, are significant for determination the level of organizational formalization and organizational capability. Within innovation business model adopted by startup, the opportunities are central of mindset for survivability through product-market-fitness and scalability. External legitimacy becomes antecedent of opportunities from external as well as reliability and accountability required from organizational formalization and capability. These two linkages will in turn impact to startup survivability. Under these conditions, founders should understand and translate the impact of liability of newness into internal executions of the startup organization for survivability. Establishment of appropriate and better organization formalization and organization

capability becomes determinant factors of internal executions.

### Contribution to Theory and Practice

This study has two implications. Theoretically, it provides insight into the relationship between startup newness and organizational aspects of small ventures. Studies related to entrepreneurial orientation and its impact on startups' performance and sustainability, examine conceptual thinking of opportunities in innovative business models as the center of discussion. The discussions on antecedent of newness are still limited, particularly concerning in early stage of organizational life cycle theories. In managerial practice, startup newness is an important factor that founders need to consider on establishing organization for execution teams at an early stage. On one side, reliability requires consistent and accountable internal processes. On the other side, flexibility drives innovation work environment as value of startup. Therefore, this study enriches the existing conceptual framework of digital startups and provides a fundamental practice for further implementation.

### Limitations and Future Research

This study was conducted on the early stage of organizational life cycle (OLC) scope that in accordance with the startup cycle. Further research in later stages of OLC is necessary. This is to enhance proof points. The study also focused on digital startups in Indonesia without any boundary of business scopes. Therefore, further studies with specific segmentation on business fields including e-commerce, fintech, games, content, and platform are required to observe the differences characteristics.

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