Ilkogretim Online - Elementary Education Online, 2021; 20 (3): pp. 878-892
http://ilkogretim-online.org
doi: 10.17051/ilkonline.2021.03.94

The Influence of Self-determination Motivation and Prior Knowledge on Hybrid Start-up Intention in the Model of Goal-directed Behavior

***Kyung-Ho Yun,** *Ph.D.student, Department of Knowledge Service and Consulting, Hansung University, Seoul, Korea, kodit03767@gmail.com*
Yen-Yoo You, *Professor, Division of Smart Management Engineering, Hansung University, Seoul, Korea, threey0818@hansung.ac.kr*
In-Chae Park, *Professor, Division of Smart Management Engineering, Hansung University, Seoul, Korea, ipark@hansung.ac.kr*
Hyun-Sung Park, *Professor, Department of Knowledge Service and Consulting, Hansung University, Seoul, Korea, hyunsung.park@hansung.ac.kr*
*Corresponding Author

Abstract. **Background/Objectives:** In order to expand the prior research on start-up founders with the hybrid type (concurrent in one's position as a salaried and businessman) through the Model of Goal-directed Behavior (MGB), this study analyzed the various effects of new factors such as self-determination motivation and prior knowledge. **Methods/Statistical analysis:** In the MGB related to hybrid start-ups, a research model and various hypotheses have been set up on how the self-determination motivation (intrinsic motivation and extrinsic motivation) affects the start-up attitude and subjective norm, and how the prior knowledge affects the desire and behavior intention related to hybrid start-ups. The statistical analysis was performed by using PLS-SEM as a statistical program called SmartPLS 3.0 through 126 valid samples collected by the method of judgment sampling. **Findings:** The empirical analysis showed that the intrinsic motivation had significant positive impacts in statistical significance verification on both the start-up attitude and subjective norm, but the extrinsic motivation didn't have significant positive impacts on them. And, the prior knowledge had significant positive impacts in statistical significance verification on both the desire and behavior intention related to hybrid start-ups. In addition, on the desire that showed the high predictive power of the behavior intention, the start-up attitude had the greatest significant positive impacts in statistical significance verification, while the subjective norm had no statistically significant impact. The important results found in this study are that if employees increase their internal motivation to express their will to realize their goals in order to increase their start-up business intention, their attitude toward start-up business will change positively and their desire related to hybrid start-ups will increase, which will boost their start-up business intention. Providing employees who are not preparing to open a hybrid business with various prior knowledge about the hybrid start-up will positively increase their desire and willingness to start a business. **Improvements/Applications:** For the practical application of various consulting factors on hybrid start-ups, various studies of consulting factor variables on hybrid start-ups will be needed in many applications, including the connection between the workplace and the hybrid start-up sector, and the success and failure of the type of hybrid start-up.

Keywords: hybrid start-up, behavior model, self-determination motivation, prior knowledge, start-up consulting, start-up behavior intention

Received: 09.12.2020 Accepted: 14.01.2021 Published: 01.02.2021

INTRODUCTION

Entering the 21st century, the worldwide unemployment caused by layoffs due to the rapid economic downturn caused by the 2008 financial crisis and the COVID-19 in 2020, and the fourth industrial revolution will lead to the disappearance of some out-of-date jobs and the creation of new innovative ones, which will destabilize the employment of office workers. Jobs will also increase part-time jobs, such as flexible working hours, rather than full-time jobs, which will lead to some monetary difference between the rich and the poor among office workers and maintain a low income for part-time workers.

The hybrid start-ups, which are the ways in which office workers start a business while working at a company, are increasing [1,2]. In addition, the number of one-person hybrid start-ups using online space

and shared offices, as well as YouTubers and VJs that start with low capital, is expected to increase gradually to reduce the risk of start-up failures.

What this research is trying to pursue is to understand the consulting direction for hybrid start-ups by analyzing the effects of self-determination motivation (intrinsic motivation and extrinsic motivation) and prior knowledge on the start-up intention in order to expand and study the MGB related to hybrid start-ups.

1. Research Materials and Analysis Methods

1.1. Theoretical Background

1.1.1. Behavioral Models

As all social activities are generated by human behavior, behavioral models have been created by various scholars to study human behavior, with typical behavioral models being the Theory of Reasoned Action (TRA), the more advanced Theory of Planned Behavior (TPB), and the Model of Goal-directed Behavior (MGB) that is widely applied in recent studies [3-5]. The TRA is a prediction of behavior related to the individual's willful factors, and two factors, attitude and subjective norm, are said to be key prerequisites for behavior intention that affect actual behavior [3]. The TPB has increased the explanatory power of behavior by additionally presenting the factors of perceived behavioral control, which is an unconscionable factor in the TRA [4]. The MGB is to compensate for the problem that the TPB focuses on the human cognitive aspects, which overlooks the human emotional aspects, and adds emotional variables presented as positive or negative anticipated emotions, desire as variables prior to behavior intention, and the frequency and recency of past behavior which mean the influence of past behavior [5].

So far, many researchers have used the above-mentioned extended behavioral model, the MGB, to study behavior related to various areas of human behavior. Intention to start a business was one's own will, which was studied by many scholars through the MGB, to predict the intention of start-up in various industries [6]. In particular, there are various cases in which the influence of the MGB on the start-up intention of hybrid type was studied to introduce consulting methods on the hybrid start-up for salaried workers, and this study was an expansion model using additional independent variables in the MGB for the hybrid start-up [7].

1.1.2. Hybrid Start-ups

Start-ups with the hybrid type are very common in Northern Europe countries, and as of 2006, 32 percent of Swedish workers were in the state of hybrid entrepreneurs, and this rate increased to 47 percent as of 2010 [8, 9]. It is said that their transition to full-time start-ups is smoother due to their experience gained through hybrid entrepreneurship in research on self-employment by hybrid entrepreneurs [10]. In the case of South Korea, office workers have been subject to a 52-hour workweek since 2018. According to the study result conducted by the Korea Institute of Startup & Entrepreneurship Development in 2018, start-ups that enter the hybrid start-up standard account for about 32 percent of all start-ups in South Korea [11].

With less overtime at work and more free time on weekends, office workers are investing in hobbies and self-improvement in their spare time. However, due to the repeated economic crisis around the world or in each country and the widespread use of artificial intelligence, the number of laid-off workers is increasing and new jobs are being created. Office workers can lose their jobs at any time and need to spend extra time on start-ups due to reduced work to prepare for a reduction in household income. In particular, in order to reduce the financial and economic risks of failure to start a business, office workers tend to start a hybrid business while working. Hybrid start-ups are also diversifying into online start-ups, non-store start-ups and one-person start-ups that can be done with low capital.

1.1.3. Self-determination Motivation

Human beings are instinctively curious and in order to implement them, individuals make certain psychological decisions, which they describe as self-determination theory (SDT) [12]. Individuals with a strong desire to achieve their goals, even if risks exist, and such an important psychological factor in making decisions based on their own pure will is called the intrinsic motivation in the SDT, and they intend to start a business in recognition of the increased accessibility to tax benefits, rewards, opportunities, information or resources supported in connection with the start-up, which external environmental factors in the process of obtaining results for a particular act are the extrinsic motivation in the SDT [13].

1.1.4. Prior Knowledge

Memories of different kinds of knowledge systems, including features of goods, associations between products, specific brands, useful experiences, or strategies, were defined as prior knowledge [14]. Prior knowledge can generally be divided into those obtained from external information and those obtained from experience, and when consumers have a high level of prior knowledge, the classification criteria for products tend to be subdivided to improve their ability to evaluate product purchases. It is said that various studies have been conducted regarding prior knowledge, including the impact of prior knowledge on information retrieval activities, on the product evaluation, and on the consumer decision-making process [15].

1.2. Research Model

We established the research model by using 10 latent variables as shown in Figure 1. Intrinsic motivation (IM), extrinsic motivation (EM) and prior knowledge (PK) were added to the prior study, which was studied by modifying the start-up attitude (SA), subjective norm (SN), positive anticipated emotion (PAE), negative anticipated emotion (NAE), perceived behavioral control (PBC), hybrid start-up desire (HSD), and hybrid start-up intention (HSI), which are components of the MGB commonly used in predicting entrepreneurship, to suit the hybrid start-up [9, 11].

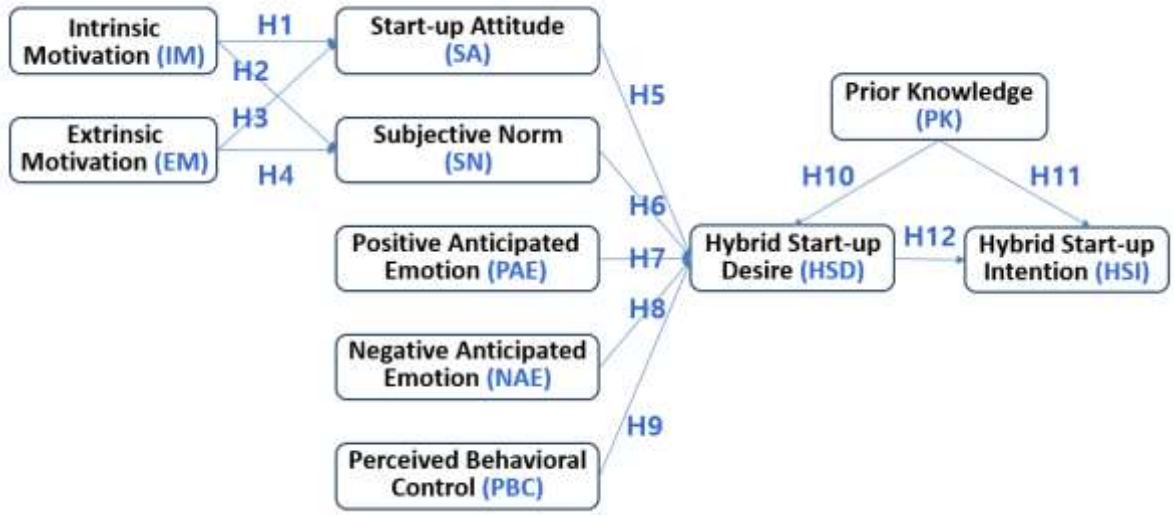

Figure 1. Research Model consisting of 10 latent variables and 12 hypotheses

1.3. Research Hypothesis

In Figure 1, 12 research hypotheses (H) between the 10 latent variables were established as follows through the influence relationship referring to prior studies.

H1 : Intrinsic motivation (IM) will have a positive impact on start-up attitude (SA) / H2 : Intrinsic motivation (IM) will have a positive impact on subjective norm (SN) / H3 : Extrinsic motivation (EM) will have a positive impact on start-up attitude (SA) / H4 : Extrinsic motivation (EM) will have a positive impact on subjective norm (SN) / H5 : Start-up attitude (SA) will have a positive impact on hybrid start-up desire (HSD) / H6 : Subjective norm (SN) will have a positive impact on hybrid start-up desire (HSD) / H7 : Positive anticipated emotion (PAE) will have a positive impact on hybrid start-up desire (HSD) / H8 : Negative anticipated emotion (NAE) will have a positive impact on hybrid start-up desire (HSD) / H9 : Perceived behavioral control (PBC) will have a positive impact on hybrid start-up desire (HSD) / H10 : Prior knowledge (PK) will have a positive impact on hybrid start-up desire (HSD) / H11 : Prior knowledge (PK) will have a positive impact on hybrid start-up intention (HSI) / H12 : Hybrid start-up desire (HSD) will have a positive impact on hybrid start-up intention (HSI).

1.4. Research and Analysis Methods

1.4.1. Measurable Definition of Variables

Based on preceding studies on the hybrid start-up and the MGB, the self-determination motivation, and the prior knowledge, the latent variables and measurement variables used in this study were summarized as follows.

Intrinsic motivation (IM) was measured by intrinsic motivators including life vitality, work fulfillment, and business ability verification, and extrinsic motivation (EM) was measured by extrinsic motivators including recognition from people around him, prospects for hybrid start-ups, and expectations for an increase in household income. Start-up attitude (SA) was measured by the usefulness, wisdom, and necessity of the start-up, while subjective norm (SN) was measured by the approval, understanding, and recommendation of family members, friends, colleagues, and others. Positive anticipated emotion (PAE) was measured by positive expectations such as happiness, pride, and full confidence in the hybrid start-up, and negative anticipated emotion (NAE) was measured by negative expectations such as anger, shame, and sorrow due to not starting a hybrid business. Perceived behavioral control (PBC) was measured by the starting point control, free time, and difficulty of the hybrid start-up. Prior knowledge (PK) was measured by having sufficient knowledge, diverse knowledge, and knowledge of specific procedures and systems in starting a hybrid business. Hybrid start-up desire (HSD) was measured by the desire to start a business, the expectation of success, and the willingness to start a new business in the foreseeable future, and hybrid start-up intention (HSI) measured by the business start-up intention in the near future or before retirement, and the will to recommend the business of the hybrid type to my acquaintances around me.

The survey consisted of a total of 30 measurement variables, 3 measurement variables per latent variable was measured on the Likert scale method (7-point), and details were shown in below Table 1.

Table 1. Measurable definition of variables

Latent variables	Detailed measurement variables		Preceding studies
Intrinsic Motivation (IM)	IM1	I want to open a start-up business of the hybrid type because I want to revitalize my life	[7, 12-18]
	IM2	I want to open a start-up business of the hybrid type because I want to feel a sense of accomplishment about what I do	
	IM3	I want to open a start-up business of the hybrid type because I want to check my business ability	
Extrinsic Motivation (EM)	EM1	I want to open a start-up business of the hybrid type because I don't want my acquaintances to think I'm insignificant	
	EM2	I want to open a start-up business of the hybrid type because the future of hybrid start-up is promising	
	EM3	I want to open a start-up business of the hybrid type because my family income increases	
Start-up Attitude (SA)	SA1	It is useful to open a start-up business of the hybrid type	
	SA2	It is wise to open a start-up business of the hybrid type	
	SA3	It is necessary to open a start-up business of the hybrid type	
Subjective Norm (SN)	SN1	My acquaintances will approve of my opening a start-up business of the hybrid type	
	SN2	My acquaintances will understand my opening a start-up business of the hybrid type	
	SN3	My acquaintances will recommend my opening a start-up business of the hybrid type	
Positive Anticipated Emotion (PAE)	PAE1	I will be happy if I open a start-up business of the hybrid type	
	PAE2	I will be proud if I open a start-up business of the hybrid type	
	PAE3	I will be full of confidence if I open a start-up business of the hybrid type	
Negative Anticipated Emotion (NAE)	NAE1	I will be worried if I can't open a start-up business of the hybrid type	
	NAE2	I will be ashamed if I can't open a start-up business of the hybrid type	
	NAE3	I will be sad if I can't open a start-up business of the hybrid	

		type	
Perceived Behavioral Control (PBC)	PBC1	I can open a start-up business of the hybrid type whenever I want	
	PBC2	I have ample time to open a start-up business of the hybrid type	
	PBC3	It is not hard to open a start-up business of the hybrid type	
Prior Knowledge (PK)	PK1	I have enough knowledge to open a start-up business of the hybrid type	
	PK2	I have a general knowledge of hybrid business	
	PK3	I know the specific process (system) of hybrid business	
Hybrid Start-up Desire (HSD)	HSD1	I hope to open a start-up business of the hybrid type in the near future	
	HSD2	I want to succeed through a start-up business of the hybrid type	
	HSD3	My willingness to open a start-up business of the hybrid type is passionate	
Hybrid Start-up Intention (HSI)	HSI1	I will open a start-up business of the hybrid type if I have a good opportunity in the future	
	HSI2	I will try to open a start-up business of the hybrid type before I retire	
	HSI3	I will strongly recommend a start-up business of the hybrid type to my acquaintances	

1.4.2. Sampling and Statistical Analysis Method

Samples needed for this study were collected based on the judgment sampling method for those in their 20s to 50s who work in South Korea. About 130 questionnaires were collected in a survey for about two months in 2020, and 126 samples were confirmed, except for four that were not applicable to office workers.

Under some condition of the G*Power program, the minimum number of sample size was calculated to be 92, and the number of our samples exceeded the minimum number by 126, so the samples used in this study are suitable for statistical analysis [19].

We used the statistical analysis programs called SmartPLS 3.0, which evaluated the measurement model and the structural model.

2. Results of Research and Analysis

2.1. Demographic Characteristics

Table 2 shows the demographic characteristics. Men and women accounted for 74.6% and 25.4%, respectively, and those in their 40s accounted for about 71.4% of the survey participants. About 54.7% of the working period is more than 10 years and less than 19 years. About 80.2% of survey participants said they were not preparing to open a start-up business of the hybrid type, and about 44.4% of survey participants said they were willing to take some consulting about opening a start-up business of the hybrid type.

Table 2. Demographic characteristics

Characteristics		**Frequency**	**%**
Sex	Male	94	74.6
	Female	32	25.4
	Total	126	100.0
Age (years old)	20~39	22	17.5
	40~49	90	71.4
	50~59	14	11.1
	Total	126	100.0
Working period (years)	Less than 5	6	4.8
	More than 5~ less than 10	13	10.3
	More than 10~ less than 19	69	54.7
	More than 20~ less than 29	33	26.2
	More than 30	5	4.0

	Total	126	100.0
Ready to start a hybrid start-up	Yes	25	19.8
	No	101	80.2
	Total	126	100.0
Willingness to receive consulting for a hybrid start-up	Yes	56	44.4
	No	70	55.6
	Total	126	100.0

2.2. Reliability and Validity in the Measurement Model

2.2.1. Internal Consistency Reliability

In Table 3, the internal consistency reliability in this study is presented. As the Cronbach's α, Dijkstra-Henseler's rho_A (ρA) and Composite Reliability (CR) values are all above the acceptable standard (0.7) and thus the internal consistency reliability has been secured.

Table 3. Internal consistency reliability

Latent variables	Measured variables	Cronbach's α (> 0.70)	rho_A (ρA) (> 0.70)	CR (> 0.70)
IM	IM1 IM2 IM3	0.936	0.949	0.959
EM	EM1 EM2 EM3	0.722	0.742	0.844
SA	SA1 SA2 SA3	0.928	0.929	0.954
SN	SN1 SN2 SN3	0.929	0.934	0.955
PAE	PAE1 PAE2 PAE3	0.907	0.907	0.942
NAE	NAE1 NAE2 NAE3	0.875	0.903	0.921
PBC	PBC1 PBC2 PBC3	0.816	0.838	0.889
PK	PK1 PK2 PK3	0.976	0.977	0.984
HSD	HSD1 HSD2 HSD3	0.913	0.914	0.945
HSI	HSI1 HSI2 HSI3	0.894	0.897	0.934

2.2.2. Convergent and Discriminant Validity

The convergent validity can be presented in Table 4. All outer loading values of the measured variables are above 0.7, and both the indicator reliability and the Average Variance Extracted (AVE) values of the measured variables are above 0.5, so the convergent validity of the measured variables is secured.

Table 4. Convergent validity

Latent variables	Measured variables	Outer loading (> 0.70)	Indicator reliability (> 0.50)	AVE (> 0.50)
IM	IM1	0.962	0.925	0.887
	IM2	0.974	0.949	
	IM3	0.887	0.787	
EM	EM1	0.718	0.516	0.644
	EM2	0.887	0.787	
	EM3	0.794	0.630	
SA	SA1	0.934	0.872	0.874
	SA2	0.935	0.874	
	SA3	0.936	0.876	
SN	SN1	0.938	0.880	0.875
	SN2	0.936	0.876	
	SN3	0.932	0.869	
PAE	PAE1	0.895	0.801	0.843
	PAE2	0.923	0.852	
	PAE3	0.936	0.876	
NAE	NAE1	0.874	0.764	0.796
	NAE2	0.885	0.783	
	NAE3	0.918	0.843	
PBC	PBC1	0.824	0.679	0.728
	PBC2	0.870	0.757	
	PBC3	0.865	0.748	
PK	PK1	0.981	0.962	0.954
	PK2	0.981	0.962	
	PK3	0.968	0.937	
HSD	HSD1	0.919	0.845	0.851
	HSD2	0.913	0.834	
	HSD3	0.935	0.874	
HSI	HSI1	0.889	0.790	0.825
	HSI2	0.923	0.852	
	HSI3	0.913	0.834	

The discriminant validity evaluated by Fornell-Larcker criterion and Heterotrait-Monotrait ratio (HTMT) can be presented in Table 5 and Table 6. In table 5, the AVE square root values of each latent variables are greater than the highest correlation values between two latent variables. In table 6, all HTMT values are less than 0.90 except 0.938 between HSI and HSD, but all values from 2.5% to 97.5% of the 95% confidence interval for HTMT values do not contain 1. In the cross-loadings analysis, all the outer loading values in Table 4 are much larger than the cross loading values (IM: 0.424~0.766, EM: 0.146~0.654, SA: 0.258~0.712, SN: 0.329~0.641, PAE: 0.200~0.697, NAE: 0.123~0.492, PBC: 0.235~0.551, PK: 0.265~0.566, HSD: 0.322~0.837, HSI: 0.329~0.813 ; the cross loading values table is not presented here). So the discriminant validity of the latent variables is obtained.

Table 5. Fornell-Larcker criterion

	EM	HSD	HSI	IM	NAE	PAE	PBC	PK	SA	SN
EM	**0.803**									
HSD	0.665	**0.923**								
HSI	0.596	0.850	**0.908**							
IM	0.682	0.776	0.743	**0.942**						
NAE	0.494	0.464	0.417	0.474	**0.892**					
PAE	0.507	0.692	0.645	0.621	0.276	**0.918**				
PBC	0.360	0.487	0.450	0.468	0.420	0.439	**0.853**			
PK	0.430	0.464	0.478	0.494	0.422	0.288	0.565	**0.977**		
SA	0.492	0.745	0.694	0.607	0.355	0.742	0458	0.320	**0.935**	
SN	0.461	0.574	0.588	0.564	0.422	0.552	0.499	0.382	0.609	**0.935**

Table 6. HTMT criterion

Path	HTMT value	Mean	Bias	Confidence interval (95%)	
				2.5%	97.5%
HSD → EM	0.816	0.818	0.002	0.692	0.918
HSI → EM	0.732	0.732	0.000	0.561	0.858
HSI → HSD	0.938	0.938	0.001	0.875	0.987
IM → EM	0.833	0.835	0.002	0.681	0.947
IM → HSD	0.837	0.837	0.001	0.758	0.900
IM → HSI	0.809	0.810	0.000	0.711	0.880
NAE → EM	0.637	0.643	0.006	0.465	0.776
NAE → HSD	0.501	0.500	-0.001	0.328	0.634
NAE → HSI	0.452	0.452	0.000	0.282	0.596
NAE → IM	0.511	0.512	0.001	0.329	0.653
PAE → EM	0.621	0.623	0.001	0.455	0.761
PAE → HSD	0.761	0.763	0.002	0.645	0.847
PAE → HSI	0.716	0.717	0.001	0.577	0.820
PAE → IM	0.671	0.672	0.001	0.524	0.786
PAE → NAE	0.289	0.293	0.004	0.143	0.436
PBC → EM	0.464	0.471	0.008	0.279	0.644
PBC → HSD	0.551	0.552	0.002	0.346	0.704
PBC → HSI	0.510	0.510	0.000	0.319	0.673
PBC → IM	0.526	0.526	0.000	0.339	0.673
PBC → NAE	0.474	0.474	0.000	0.285	0.639
PBC → PAE	0.504	0.503	-0.001	0.329	0.649
PK → EM	0.518	0.519	0.001	0.331	0.675
PK → HSD	0.491	0.489	-0.002	0.325	0.628
PK → HSI	0.510	0.508	-0.003	0.346	0.635
PK → IM	0.522	0.522	0.000	0.373	0.646
PK → NAE	0.454	0.454	0.001	0.299	0.587
PK → PAE	0.305	0.305	0.001	0.133	0.469
PK → PBC	0.632	0.631	-0.001	0.484	0.753
SA → EM	0.596	0.595	-0.001	0.436	0.733
SA → HSD	0.808	0.808	0.000	0.728	0.874
SA → HSI	0.762	0.762	0.000	0.638	0.853
SA → IM	0.647	0.647	0.000	0.507	0.770
SA → NAE	0.376	0.376	0.000	0.213	0.523
SA → PAE	0.809	0.808	0.000	0.725	0.877
SA → PBC	0.514	0.515	0.000	0.323	0.661
SA → PK	0.336	0.335	-0.002	0.157	0.500
SN → EM	0.555	0.556	0.002	0.362	0.715
SN → HSD	0.621	0.620	-0.001	0.477	0.742
SN → HSI	0.644	0.642	-0.002	0.501	0.762
SN → IM	0.599	0.599	-0.001	0.461	0.722
SN → NAE	0.467	0.465	-0.002	0.298	0.603
SN → PAE	0.601	0.600	0.000	0.458	0.716
SN → PBC	0.554	0.552	-0.002	0.378	0.695
SN → PK	0.400	0.398	-0.002	0.223	0.552
SN → SA	0.655	0.654	-0.001	0.501	0.777

2.3. Hypothesis Testing in the Structural Model

The hypothesis testing is performed through the significance and suitability of path coefficients. Once this model is identified as a suitable model, hypothesis testing can be performed.

2.3.1. Structural Model Evaluation

The structural model evaluation by SmartPLS is based on the separate evaluation criteria, such as multicollinearity, determination coefficient (R^2), effect size (f^2), predictive relevance (Q^2), and significance

and suitability of path coefficients, on how well the exogenous latent variables of the structural model predict the endogenous latent variables. To evaluate a structural model, an algorithm and bootstrapping for SmartPLS is required, which are presented in Figure 2 and Figure 3. The number shown in the arrow line between the latent variables in Figure 2 is the path coefficient, the number shown in the arrow line between the measurement variables and the latent variables is outer loading value, and the number shown in the arrow line in Figure 3 means t value. In Figures 2 and 3, the number in some circles is an adjusted R^2 value.

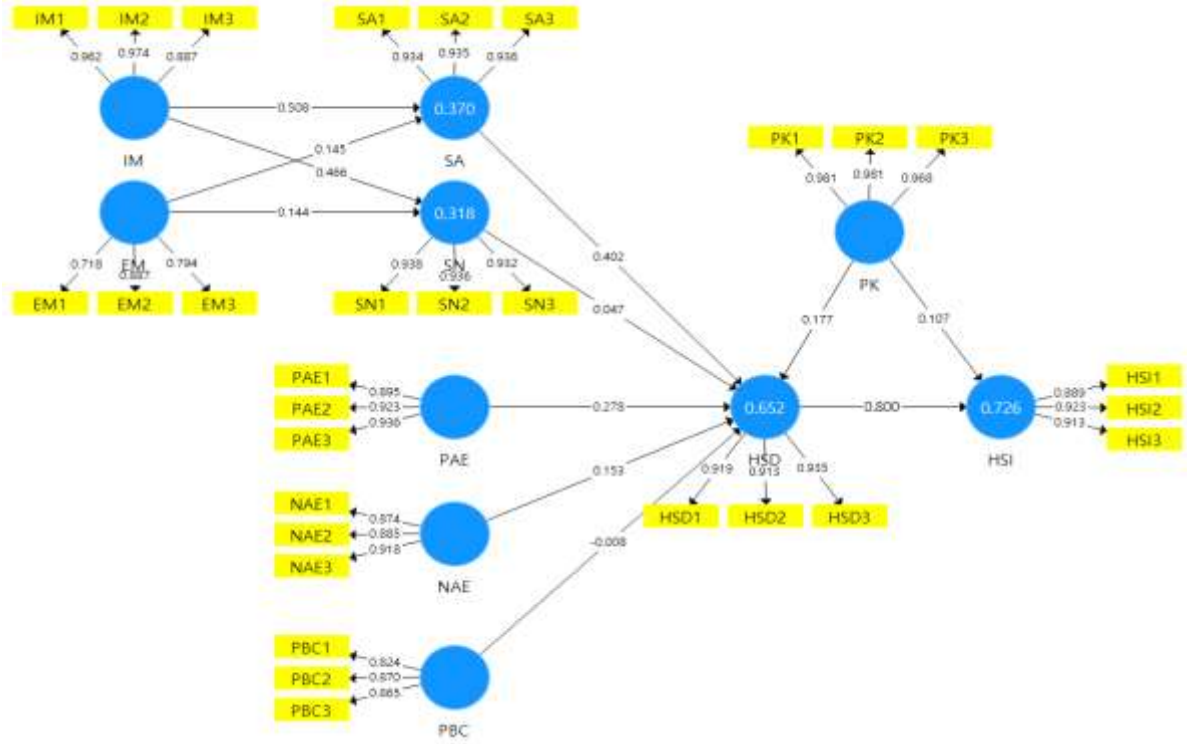

Figure 2. Algorithm Results by SmartPLS

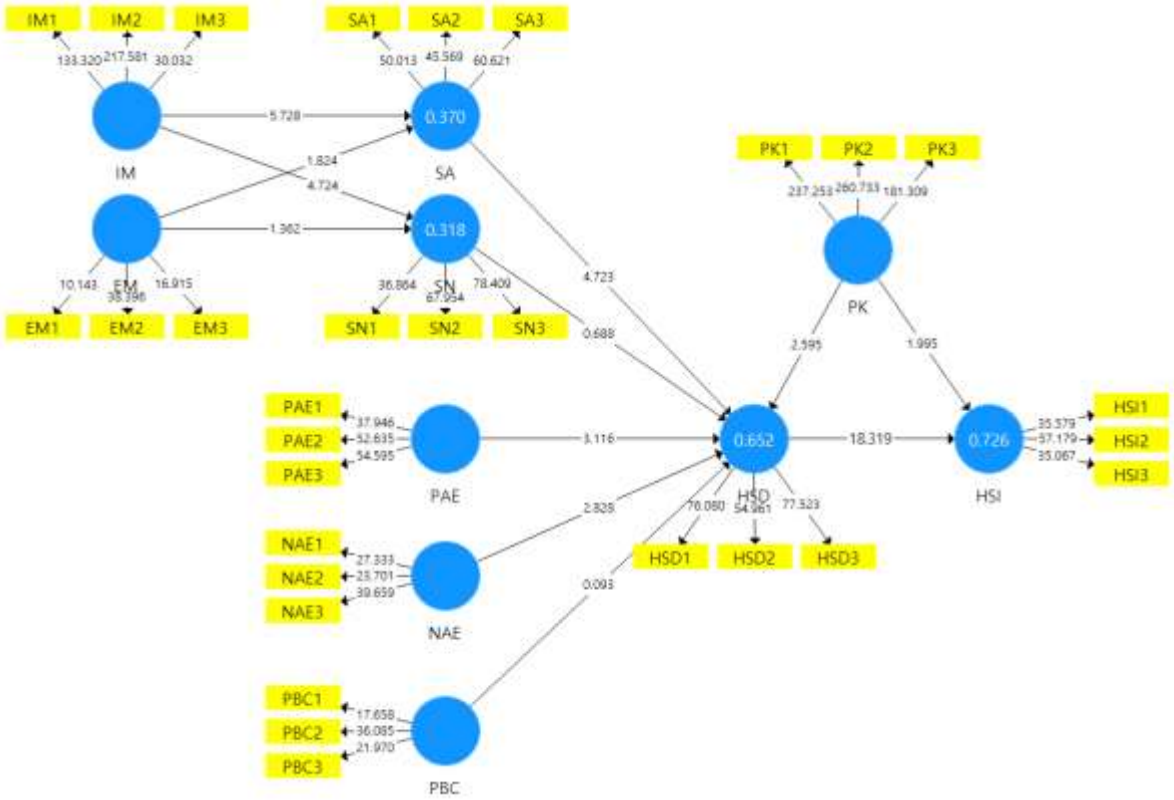

Figure 3. Bootstrapping Results by SmartPLS

In Table 7, the collinearity assessment for latent variables are presented. The inner VIF values were all less than 5, indicating that there was no multicollinearity.

Table 7. Collinearity assessment (Inner VIF values)

	EM	HSD	HSI	IM	NAE	PAE	PBC	PK	SA	SN
EM									1.869	1.869
HSD			1.275							
HSI										
IM									1.869	1.869
NAE		1.390								
PAE		2.347								
PBC		1.825								
PK		1.574	1.275							
SA		2.608								
SN		1.889								

Table 8 shows that among the endogenous latent variables, the adjusted R^2 of HSD and HSI is a predictive power of 0.652 and 0.726 respectively, and the adjusted R^2 of SA and SN is calculated at 0.370 and 0.318 respectively.

Table 8. Determination coefficient

Endogenous latent variable	R^2	Adjusted R^2
HSD	0.669	0.652
HSI	0.731	0.726
SA	0.380	0.370
SN	0.329	0.318

Table 9 shows the results of the effect size (f^2). The effect size value of SA, which contributes to R^2 of the endogenous latent variable HSD, is 0.187, contributing more than 0.15 (moderate value), and the effect size values of NAE and PAE are contributing more than 0.02 (small value) with 0.051, 0.099

respectively. However, it was assessed that the effect size value of SN is 0.004, which is very small in contributing to R^2 of HSD, and the effect size value of PBC is 0.000, which does not contribute to R^2 of HSD at all.

Table 9. Effect size

	EM	HSD	HSI	IM	NAE	PAE	PBC	PK	SA	SN
EM									0.018	0.016
HSD			1.866							
HSI										
IM									0.223	0.173
NAE		0.051								
PAE		0.099								
PBC		0.000								
PK		0.060	0.033							
SA		0.187								
SN		0.004								

Table 10 shows that all the Q^2 values of the endogenous latent variables (HSD, HSI, SA, SN) are positive numbers, so the structural model of this study can be evaluated as suitable for hypothesis verification.

Table 10. Predictive relevance

Endogenous latent variable	Q^2
HSD	0.557
HSI	0.591
SA	0.320
SN	0.273

2.3.2. Hypothesis Verification

The significance and suitability of the path coefficients are presented in Table 11. H3, H4, H6, and H9 were rejected because the t-values and p-values of the path coefficients associated with them were not significant. But, them of the remaining hypotheses were shown to be significant, so all the other hypotheses were accepted.

In particular, it was shown that the intrinsic motivation (IM) had significant positive impacts in statistical significance verification on both the start-up attitude (SA) and the subjective norm (SN) in the MGB, but the extrinsic motivation (EM) didn't have significant positive impacts in statistical significance verification on both the start-up attitude (SA) and the subjective norm (SN). It was also shown that prior knowledge (PK) had positive impacts in statistical significance verification on both the hybrid start-up desire (HSD) and hybrid start-up intention (HSI).

Table 11. Hypothesis verification

Path of Hypothesis		Path coefficient	t-value	p-value	Confidence interval (95%)	Significance (p<0.05)
H1	IM → SA	0.508	5.728	0.000	[0.322, 0.673]	Yes
H2	IM → SN	0.466	4.724	0.000	[0.270, 0.656]	Yes
H3	EM → SA	0.145	1.824	0.068	[-0.031, 0.289]	No
H4	EM → SN	0.144	1.362	0.173	[-0.069, 0.339]	No
H5	SA → HSD	0.402	4.723	0.000	[0.231, 0.564]	Yes
H6	SN → HSD	0.047	0.688	0.492	[-0.085, 0.186]	No
H7	PAE → HSD	0.278	3.116	0.002	[0.084, 0.442]	Yes
H8	NAE → HSD	0.153	2.828	0.005	[0.044, 0.255]	Yes
H9	PBC → HSD	-0.008	0.093	0.926	[-0.179, 0.146]	No
H10	PK → HSD	0.177	2.595	0.009	[0.053, 0.320]	Yes
H11	PK → HSI	0.107	1.995	0.046	[0.008, 0.213]	Yes
H12	HSD → HSI	0.800	18.319	0.000	[0.701, 0.874]	Yes

The results of the verification of the 12 hypotheses presented in this study are presented in Table 12. 8 hypotheses (H1, H2, H5, H7, H8, H10~H12) were accepted and 4 hypotheses (H3, H4, H6, H9) were rejected.

Table 12. Results of hypothesis verification

Hypothesis	Hypothesis content	Results
H1	Intrinsic motivation (IM) will have a positive impact on start-up attitude (SA)	Accept
H2	Intrinsic motivation (IM) will have a positive impact on subjective norm (SN)	Accept
H3	Extrinsic motivation (EM) will have a positive impact on start-up attitude (SA)	Reject
H4	Extrinsic motivation (EM) will have a positive impact on subjective norm (SN)	Reject
H5	Start-up attitude (SA) will have a positive impact on hybrid start-up desire (HSD)	Accept
H6	Subjective norm (SN) will have a positive impact on hybrid start-up desire (HSD)	Reject
H7	Positive anticipated emotion (PAE) will have a positive impact on hybrid start-up desire (HSD)	Accept
H8	Negative anticipated emotion (NAE) will have a positive impact on hybrid start-up desire (HSD)	Accept
H9	Perceived behavioral control (PBC) will have a positive impact on hybrid start-up desire (HSD)	Reject
H10	Prior knowledge (PK) will have a positive impact on hybrid start-up desire (HSD)	Accept
H11	Prior knowledge (PK) will have a positive impact on hybrid start-up intention (HSI)	Accept
H12	Hybrid start-up desire (HSD) will have a positive impact on hybrid start-up intention (HSI)	Accept

In Figure 4, the full line arrows from the exogenous latent variables to the endogenous latent variables show statistically significant effects, and the dotted line arrows show statistically insignificant effects. In addition, the thickness of full line among them indicates the magnitude of impact.

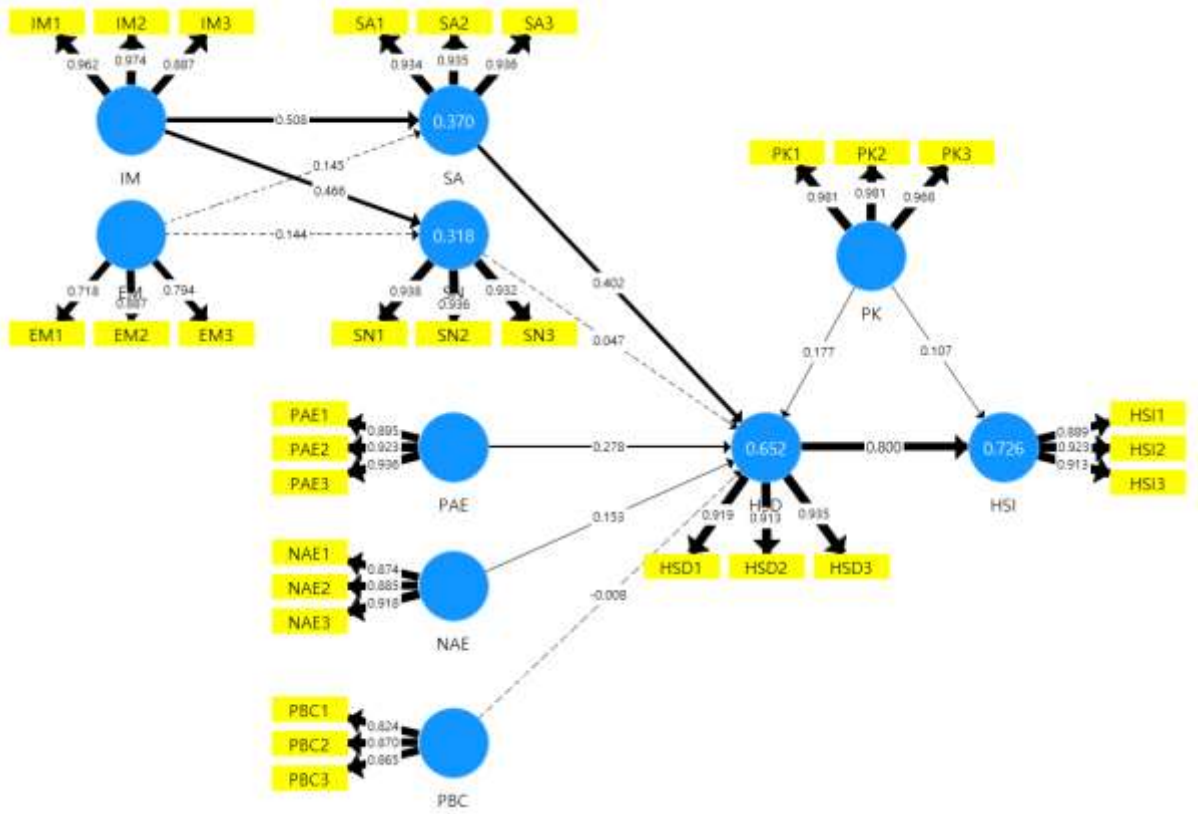

Figure 4. Path coefficient analysis (adjusted R^2)

2.3.3. Mediation effect Verification

Table 13 shows whether there are any mediation effects in this research model through specific indirect effects. 6 paths (IM→SA→HSD, NAE→HSD→HSI, PAE→HSD→HSI, PK→HSD→HSI, SA→HSD→HSI, IM→SA→HSD→HSI) were found to have some mediation effects. In particular, the intrinsic motivation (IM) had a significant impact on the hybrid start-up intention (HSI) through the mediation of the start-up attitude (SA) and hybrid start-up desire (HSD), and the prior knowledge (PK) had a significant impact on the hybrid start-up intention (HIS) through the mediation of the hybrid start-up desire (HSD).

Table 13. Mediation effect verification

Path of Hypothesis	Path coefficient	Standard deviation	t-value	p-value	Significance (p<0.05)
EM → SA → HSD	0.058	0.036	1.633	0.103	No
IM → SA → HSD	0.204	0.057	3.579	0.000	Yes
EM → SN → HSD	0.007	0.013	0.509	0.611	No
IM → SN → HSD	0.022	0.034	0.649	0.516	No
NAE → HSD → HSI	0.122	0.044	2.803	0.005	Yes
PAE → HSD → HSI	0.222	0.072	3.101	0.002	Yes
PBC → HSD → HSI	-0.006	0.066	0.092	0.926	No
PK → HSD → HSI	0.142	0.055	2.56	0.011	Yes
EM → SA → HSD → HSI	0.047	0.029	1.62	0.105	No
SA → HSD → HSI	0.322	0.073	4.389	0.000	Yes
IM → SA → HSD → HSI	0.164	0.049	3.367	0.001	Yes
EM → SN → HSD → HSI	0.005	0.011	0.504	0.614	No
SN → HSD → HSI	0.038	0.055	0.682	0.495	No
IM → SN → HSD → HSI	0.018	0.027	0.644	0.519	No

3. Research Conclusion

3.1. Research Summary and Implications

This research is an extension of the research on start-up founders with the hybrid type using the MGB previously studied. While attitudes in previous studies had the highest significant positive impacts in statistical significance verification on the hybrid start-up intention, subjective norm did not have a significant positive impact in statistical significance verification on the hybrid start-up intention. In this study, the intrinsic motivation and extrinsic motivation presented in the self-determination theory were added as leading variables to further strengthen the hybrid start-up attitude and to help subjective norm have a significant positive impact in statistical significance verification on the hybrid start-up intention. In addition, prior knowledge was added as it was expected that the people's desire to open a start-up business of the hybrid type and the intention to open a start-up business of the hybrid type would be further enhanced if they had prior knowledge as salaried workers. The important results of this research are as follows.

First, this research, as with previous research results, gave a statistically positive significant impact on the hybrid start-up desire, positive and negative anticipated emotion in the MGB, while subjective norm and perceived behavioral control had no significant positive impact in statistical significance verification on the hybrid start-up desire. Second, it was shown that intrinsic motivation had a significant positive impact in statistical significance verification on the hybrid start-up attitude and subjective norm. It is useful, wise, necessary, and more likely for office workers to start hybrid enterprises if their willingness to realize their goals increases, and people around them are expected to agree positively to it. And, since the start-up with the hybrid type carries high risks, intrinsic motivations of office workers to take risks to achieve the goal of starting a business of the hybrid type are important in terms of its impact on the hybrid start-up attitude [20]. Third, extrinsic motivation did not have a significant positive impact in statistical significance verification on the hybrid start-up attitude and subjective norm. It means that there is no need for the impact of external environmental factors such as compensation given by opening a start-up business of the hybrid type and any status from the start-up. This is because income has already been generated through work life and has some status in the workplace. Finally, the prior knowledge had a statistically positive significant impact on the desire to start a hybrid enterprise and the hybrid start-up intention. Office workers lack a way to acquire knowledge of start-ups through company work, and if they

give them prior knowledge of start-ups, the hybrid start-up could be activated.

In conclusion, the hybrid start-up attitude has the greatest influence on the hybrid start-up business desire, which has a large direct impact on the hybrid start-up business intention. Since regular income has been secured as an office worker, it is important to start a business as an office worker, but it is not necessary to consider the unintentional factors such as money, time, and opportunity, as well as subjective norm on whether to support or oppose one's actions. In particular, starting a business as an office worker depends on the inherent desire to realize the goals set by them. In addition, it is expected that the hybrid start-up will be activated if various knowledge such as hybrid start-up type (e.g., one-person creative enterprise, shared office utilization project, YouTuber, VJ, information provider, etc.), and hybrid start-up procedure are provided in advance while working as an office worker.

In preparation for the new start-up environment, such as a decrease in the working population due to the recent increase in non-marriage, increased job insecurity due to the expansion of labor flexibility, and increased opportunity costs due to the failure of the start-up, a new type of start-up, the hybrid start-up is required to be activated in the future. Therefore, it is different that this research has increased the effectiveness of existing research by discovering the intrinsic motivation, one of the psychological factors that strengthens the start-up attitude, and checking the effectiveness of pre-start-up knowledge, which can increase the desire and the intention to open a start-up business of the hybrid type.

3.2. Research Limitation and Future Directions

By using the stereotyped model of behavior model, this research seeks to present the research directions for practical hybrid start-up consulting in the future by supplementing the following limitations.

First, it is questionable whether the change in the attitude of hybrid start-up through intrinsic motivation will make it realistically possible to revitalize the hybrid start-up. In particular, despite the external environment of the COVID-19, which caused the global economic recession from early 2020, there has been no research on areas (e.g., the delivery industry, online education business, etc.) where hybrid start-ups can be activated. Second, it is also necessary to study whether the hybrid start-up can be activated only when it is linked to the work that one works for as an salaried worker and the hybrid start-up field. Third, it is necessary to show the direction of successful hybrid start-up through research on success and failure cases of hybrid start-up. Fourth, it failed to suggest whether the prior knowledge needed to start hybrid enterprise is different from the existing general start-up. Finally, there is no unique methodology tool for hybrid start-up consulting and no business model differentiated from general start-up.

In the future, it is expected that the demand for consulting for office workers will increase in order to create various hybrid start-ups that can cope with the external environment in a timely manner, such as COVID-19, labor force decrease in the fourth industrial era rather than consulting companies such as large, mid-sized, and small and medium-sized enterprises.

Acknowledgements

This research was conducted by Hansung University with financial support.

References

[1] T. B. Folta, F. Delmar, and K. Wennberg. (2010) Hybrid entrepreneurship. *Management Science* 56(2), 253-269.
[2] J. Raffiee, and J. Feng. (2014) Should I quit my day job?: A hybrid path to entrepreneurship. *Academy of management journal* 57(4), 936-963.
[3] M. Fishbein, and I. Ajzen. (1975) *Belief, attitude, intention and behaviour : An introduction to theory and research*. Reading, MA: Addison-Wesley.
[4] I. Ajzen. (1991) The theory of planned behavior. *Organizational behavior and human decision processes* 50(2), 179-211.
[5] M. Perugini, and R. P. Bagozzi. (2001) The role of desires and anticipated emotions in goal-directed behaviours: Broadening and deepening the theory of planned behaviour. *British Journal of Social Psychology* 40(1), 79-98.
[6] N. F. Krueger Jr, M. D. Reilly, and A. L. Carsrud. (2000) Competing models of entrepreneurial intentions. *Journal of business venturing* 15(5-6), 411-432.

[7] K. H. Yun, J. W. Hong, and Y. Y. You. (2020) A Study on the Hybrid Start-up Intention by Using the Model of Goal-Directed Behavior (MGB). *Research in World Economy* 11(2), 22-35. doi.org/10.5430/rwe.v11n2p22.
[8] C. Nordström, C. A. Sirén, S. Thorgren, and J. Wincent. (2016) Passion in hybrid entrepreneurship: The impact of entrepreneurial teams and tenure. *Baltic Journal of Management* 11(2), 167-186. doi.org/10.1108/BJM-01-2015-0007.
[9] F. Delmar, T. Folta, and K. Wennberg. (2008) The dynamics of combining self-employment and employment. Institute for Evaluation of Labour Market and Education Policy, Working Paper No. 2008: 23, Uppsala, Sweden.
[10] M. Z. Solesvik. (2017) Hybrid entrepreneurship: how and why entrepreneurs combine employment with self-employment. *Technology Innovation Management Review* 7(3), 33-41.
[11] J. H. Kim, and D. W. Yang. (2018) A Study on the Influence of Job Satisfaction and Entrepreneurship on Hybrid Entrepreneurial Intention : Focusing on the Mediating Roles of Entrepreneurial Self-Efficacy. *The Korea Entrepreneurship Society Conferences* 2018(3), 1-22. Available from: http://www.riss.kr/link?id=A106336049.
[12] R. M. Ryan, and E. L. Deci. (2000) Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist* 55(1), 68-78.
[13] J. H. Kim, S. B. Lee, and S. W. Lee. (2019) Start-up Intention through the Integration of Self-determination and Goal-oriented Theory. *Journal of Foodservice Management* 22(6), 163-184. Available from: http://www.riss.kr/link?id=A106528682.
[14] J. R. Bettman, and C. W. Park. (1980) Effects of prior knowledge and experience and phase of the choice process on consumer decision processes: A protocol analysis. *Journal of Consumer Research* 7(3), 234-248.
[15] H. J. Song, and C. K. Lee. (2010) Predicting Behavioral Intentions for Visitors to Integrated Resort Casino Using Model of Goal-directed Behavior. *The Korea Academic Society Of Tourism And Leisure* 22(5), 341-360. Available from: http://www.riss.kr/link?id=A82416347.
[16] M. J. Zhang, S. S. Lee, and M. H. Ryu. (2017) A Study on Influencing Factors on Consumer Boycott intention by Applying Extended Model of Goal-Directed Behavior. *Family and Environment Research* 55(6), 675-687. doi.org/10.6115/fer.2017.049.
[17] J. Jung, and H. Han. (2015) Extending the model of goal-directed behavior to understand tourists' decision-making process for purchasing luxury goods. *Journal of Tourism Sciences* 39(6), 163-183. doi.org/10.17086/JTS.2015.39.5.163.183.
[18] C. V. Benitez. (2018) Understanding and Predicting Behavioral Intent of Food Concessionaires on Solid Waste Management in a University Campus. *International Journal of Emerging Multidisciplinary Research* 2(4), 1-7.
[19] J. F. Hair Jr, G. T. M, Hult, C. Ringle, and M. Sarstedt. (2017) A primer on partial least squares structural equation modeling (PLS-SEM). 2nd ed. Sage publications, Los Angeles, chapter 1.
[20] Y. Shim, and J. Seo. (2019) A Study on Entrepreneurial Orientation and Startup Performance: Mediating Effect of Strategic Orientation. *International Journal of Emerging Multidisciplinary Research* 3(4), 33-41. doi.org/10.22662/IJEMR.2019.3.4.033.