SIMS SOCIETY IN MEDIA SPACE

PRE-RESEARCH

SIGNIFICANT PREDICTORS OF INTENTION TO USE SOCIAL MEDIA IN THE CONTEXT OF THE UTAUT 2 MODEL

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INTRODUCTION

The aim of the pre-research is to find out how the UTAUT2 (Unified Theory of Acceptance and Use of Technology) model explains the intention to use social media platforms by Generation Z.

THEORETICAL FRAMEWORK OF THE PRE-RESEARCH

The UTAUT model is a comprehensive theory of technology acceptance and use. It was developed in 2003 (Venkatesh, 2003) by bringing together eight dominant models of technology acceptance to provide a more comprehensive view of the process.

The UTAUT model originally focused on the utilitarian value (extrinsic motivation) of technology use in an organizational context, but was later extended to include hedonistic value, the value of price, and habit (intrinsic motivation) for individual users. A new model was developed in 2012 (Venkatesh, 2012) was given the label UTAUT 2. It was designed to extend and adapt the original model for personal technology.

EXPLANATORY POWER OF THE UTAUT 2 MODEL

The UTAUT2 model explains 74% of the variance in behavioral intention to use technology (BI) and 52% of the variance in actual technology use (UB). This represents a significant improvement compared to the original UTAUT model, which explained 56% of the variance in BI and 40% in UB.

The results of UTAUT 2 are comparable to the findings of Venkatesh et al. (2003) regarding the UTAUT model in an organizational context, which reported 70% for BI and 48% for UB.

KEY CONSTRUCTS OF THE UTAUT2 MODEL

Performance Expectancy (PE)

The extent to which an individual believes that using technology will help them perform better at work or study.

Effort Expectancy (EE)

The extent to which an individual perceives the use of technology as easy and uncomplicated.

Social Influence (SI)

The degree to which an individual perceives that people they care about (e.g., colleagues, supervisors, friends) think they should use the technology.

KEY CONSTRUCTS OF THE UTAUT2 MODEL

Facilitating Conditions (FC)

The extent to which an individual believes that they have sufficient support (technical, organisational, knowledge) to use the technology effectively.

Hedonic Motivation (HM)

The degree to which an individual perceives the use of technology as fun and enjoyable.

KEY CONSTRUCTS OF THE UTAUT2 MODEL

Price Value (PV)

PV is defined as the cognitive exchange between the perceived benefits of an application and the monetary cost of using it. In other words, it is about how consumers perceive whether the price they pay for a technology or service is adequate in relation to its benefits.

Habit (HT)

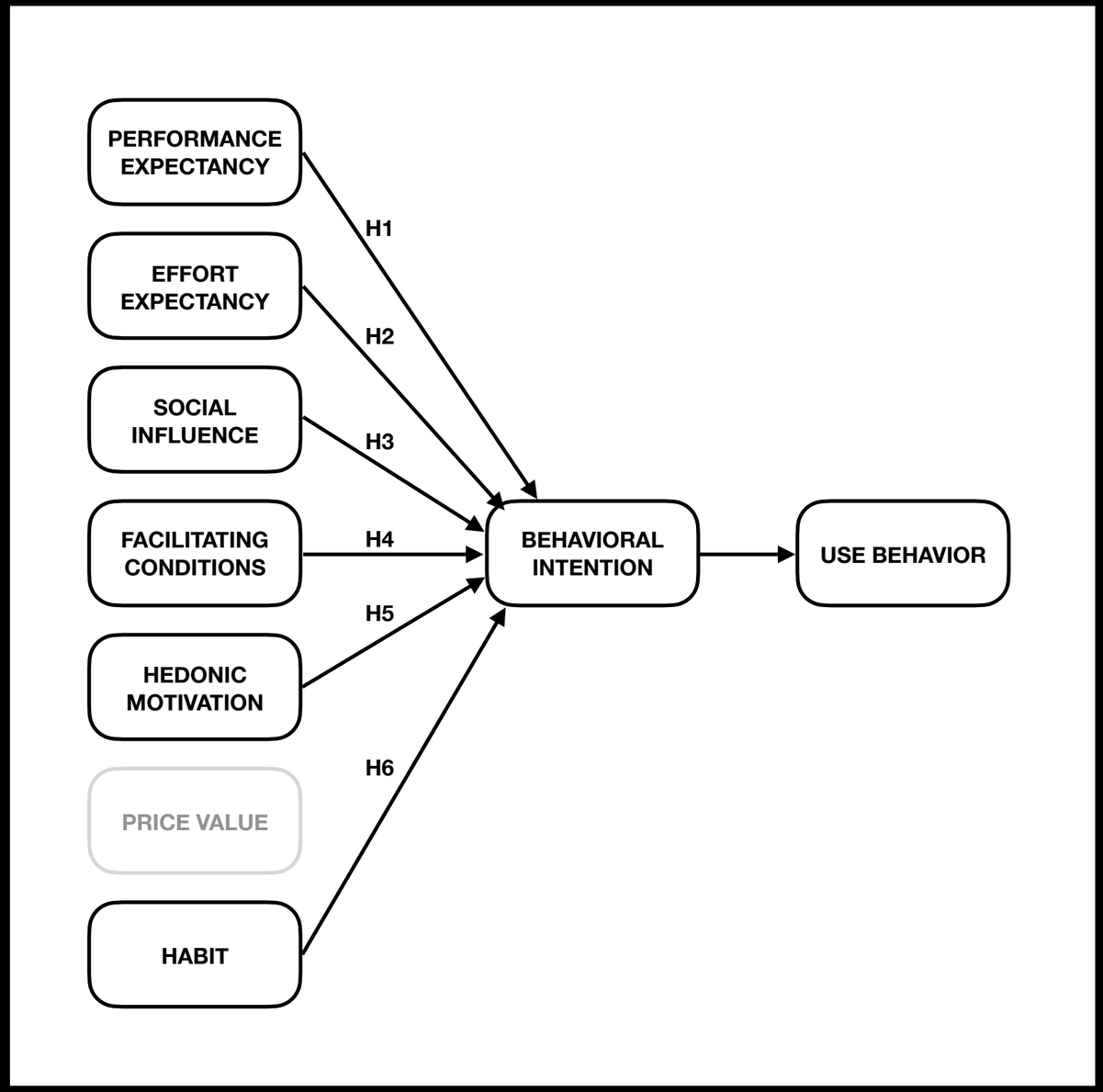
The degree to which people tend to perform behaviors automatically as a result of learning. It is a repetitive behaviour that becomes routine and requires minimal conscious effort.

KEY CONSTRUCTS OF THE UTAUT2 MODEL

These 7 components influence the Behavioral Intention (BI) to use technology, which serves as a mediator between them and the actual Use Behavior (UB) of the technology.

For the purposes of the pre-survey, we did not use the Price Value (PV) construct because the use of social media is free. We can consider the only financial cost as the ownership of the technology (smartphone, computer).

KEY CONSTRUCTS OF THE UTAUT2 MODEL



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RESEARCH HYPOTHESES

H1: Performance Expectancy (PE) will have a significant influence on the Behavioral Intention (BI) when using social media.

H2: Effort Expectancy (EE) will have a significant influence on the Behavioral Intention (BI) when using social media.

H3: Social Influence (SI) will have a significant influence on the Behavioral Intention (BI) when using social media.

H4: Facilitating Conditions (FC) will have a significant influence on the Behavioral Intention (BI) when using social media.

RESEARCH HYPOTHESES

H5: Hedonic Motivation (HM) will have a significant influence on the Behavioral Intention (BI) when using social media.

H6: Habit (HT) will have a significant influence on the Behavioral Intention (BI) when using social media.

RESEARCH METHOD

To evaluate the UTAUT2 model, we used Structural Equation Modeling (SEM) with the Partial Least Squares Method (PLS-SEM).

The analysis was conducted using the software SmartPLS 4.1.0.9, following the guidelines outlined in the publication by Hair, J. F. (2021).

RESEARCH SAMPLE

The total number of respondents in the pre-research was N = 98, with an age range of 18 to 43 years.

The respondents included:
N(SK) = 52 from Slovakia
N(HU) = 23 from Hungary
N(CZ) = 13 from the Czech Republic
N(PL) = 10 from Poland.

RESEARCH SAMPLE

For the main study, we propose calculating the required sample size using the inverse square root method. Assuming a significance level of 5% and a minimum path coefficient of 0.2, the minimum sample size is calculated as:

$$n_{\min} > \left(\frac{2.486}{0.2}\right)^2 = 154.505$$

If the minimum path coefficient were, for instance, 0.1, the required sample size would be:

$$n_{\min} > \left(\frac{2.486}{0.1}\right)^2 = 618.019$$

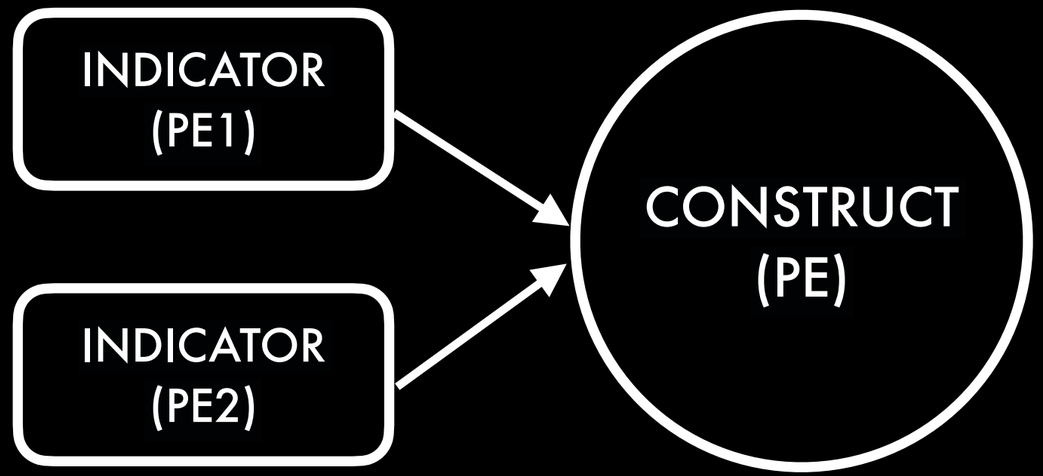
RESULTS

Using the SmartPLS software, we first examined the Measurement model to assess its reliability and validity before proceeding to test the Structural model.

RESULTS/ THE MEASUREMENT MODEL

The measurement model, also referred to as the Outer model in the context of PLS-SEM (Partial Least Squares Structural Equation Modeling), describes the relationships between latent variables (constructs) and their measurements (indicators).

In other words, it specifies how latent variables are measured through their respective indicators. The primary goal of the measurement model is to determine how effectively the indicators represent the corresponding construct.



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RESULTS/ THE MEASUREMENT MODEL

INDICATOR RELIABILITY

Specifically, we used the Formative Measurement Model. This model assumes that indicators form a construct. Arrows point from the indicators to the construct. Formative measures are assumed to be error-free.

In the first step, we assessed Indicator Reliability, which is calculated by squaring the indicator loading (the bivariate correlation between the indicator and the construct).

We report the results in Table 1.

RESULTS/ THE MEASUREMENT MODEL

INDICATOR RELIABILITY

Tab. 1 Indicator Reliability

	BI	EE	FC	HM	HT	PE	SI
BI1	0.934						
BI2	0.953						
BI3	0.958						
EE1		0.861					
EE2		0.797					
EE3		0.854					
EE4		0.581					
FC1			0.563				
FC2			0.659				
FC3			0.781				
FC4			0.841				
HM1				0.863			
HM2				0.946			
HM3				0.865			
HT1					0.844		
HT2					0.894		
HT3					0.883		
PE1						0.807	
PE2						0.878	
PE3						0.884	
PE4						0.852	
SI1							0.836
SI2							0.864
SI3							0.784

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RESULTS/ THE MEASUREMENT MODEL

INDICATOR RELIABILITY

All indicators, except for three, are reliable as they exceed the recommended threshold (> 0.708). The three indicators EE4, FC1, and FC2 have values higher than 0.40, which is the critical threshold for removing an indicator.

Indicators with loadings between 0.40 and 0.708 should only be considered for removal if their elimination improves internal consistency reliability or convergent validity. In our case, both internal reliability and convergent validity are satisfactory, as will be detailed below; therefore, these indicators were not removed.

RESULTS/ THE MEASUREMENT MODEL

INTERNAL CONSISTENCY RELIABILITY/ CONVERGENT VALIDITY

In the second step, we assessed Internal Consistency Reliability (ICR) and Convergent Validity (CV).

To evaluate Internal Consistency Reliability, we used the following metrics: Jöreskog's Composite Reliability (rhoC), Cronbach's Alpha, and Reliability rhoA.

For assessing Convergent Validity, we utilized the Average Variance Extracted (AVE).

We report the results in Table 2.

RESULTS/ THE MEASUREMENT MODEL

INTERNAL CONSISTENCY RELIABILITY/ CONVERGENT VALIDITY

Tab. 2 Internal Consistency Reliability and Convergent Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
BI	0.944	0.945	0.964	0.899
EE	0.802	0.874	0.860	0.611
FC	0.707	0.753	0.807	0.517
HM	0.871	0.878	0.921	0.796
HT	0.847	0.854	0.907	0.764
PE	0.878	0.882	0.916	0.732
SI	0.771	0.775	0.868	0.687

RESULTS/ THE MEASUREMENT MODEL

DISCRIMINANT VALIDITY

Finally, we assessed Discriminant Validity. This examines whether a given construct is empirically distinct from the other constructs in the model.

We used the Heterotrait-Monotrait (HTMT) method of ratio correlations.

We report the results in Table 3.

RESULTS/ THE MEASUREMENT MODEL

DISCRIMINANT VALIDITY

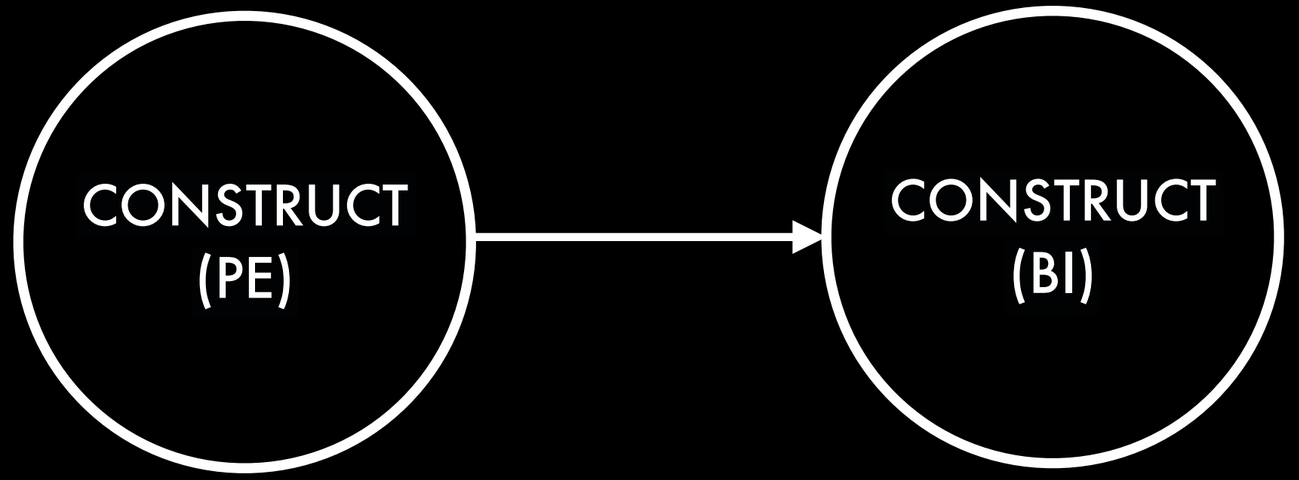
Tab. 3 Discriminant Validity (HTMT)

	BI	EE	FC	HM	HT	PE	SI
BI							
EE	0.358						
FC	0.665	0.796					
HM	0.641	0.651	0.717				
HT	0.723	0.413	0.544	0.603			
PE	0.529	0.695	0.809	0.626	0.503		
SI	0.647	0.530	0.617	0.630	0.619	0.555	

RESULTS/ STRUCTURAL MODEL

A Structural Model, also called an internal model in the context of PLS-SEM (Partial Least Squares Structural Equation Modeling), describes the relationships between latent variables (constructs) with each other.

Unlike the Measurement Model, which focuses on the relationships between constructs and their indicators, the Structural Model specifies how constructs are interacting with each other.



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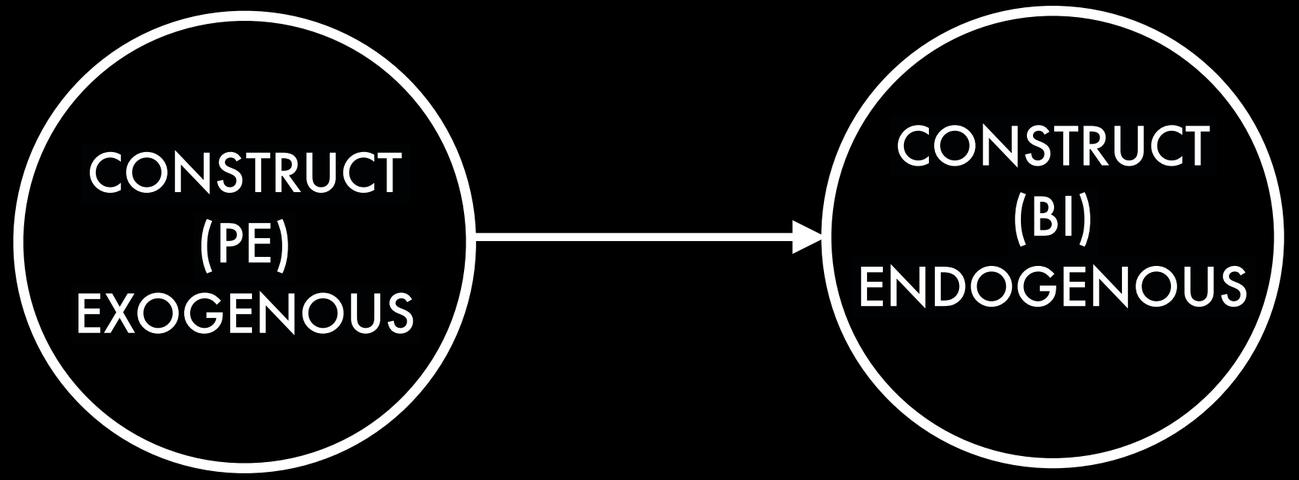
RESULTS/ STRUCTURAL MODEL

The PLS-SEM method includes two types of latent variables: exogenous and endogenous.

Exogenous latent variables are those that influence other constructs in the model. They do not have an associated error term.

Endogenous latent variables are those explained by other constructs in the model. They have an associated error term.



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RESULTS/ STRUCTURAL MODEL

COLLINEARITY OF THE VARIABLES

In the first step, we assessed the collinearity of the variables. Before actually evaluating the relationships, it is important to verify that multicollinearity is not present among the predictor (exogenous) variables.

Collinearity can bias the estimates of path coefficients in the model. The Variance Inflation Factor (VIF) is used to assess collinearity.

We report the results in Table 4.

RESULTS/ STRUCTURAL MODEL

COLLINEARITY OF THE VARIABLES

Tab. 4 Variance Inflation Factor (VIF)

	VIF
EE -> BI	2.068
FC -> BI	2.573
HM -> BI	2.163
HT -> BI	1.598
PE -> BI	2.139
SI -> BI	1.591

RESULTS/ STRUCTURAL MODEL

SIGNIFICANCE AND RELEVANCE OF RELATIONSHIPS

Next, we assessed the Significance and Relevance of the Relationships in the model to answer our research hypotheses. The significance and strength of each relationship (path coefficients) is assessed among the latent variables in the structural model.

Bootstrapping is used to assess significance, which generates standard errors and confidence intervals for the path coefficient estimates. If the confidence interval does not contain zero or if the t-value is greater than 1.96, the relationship is considered statistically significant.

The strength of the relationship is judged by the absolute value of the path coefficient, with the higher the value, the stronger the relationship. The results are presented in Table 5 and Graph 1.

RESULTS/ STRUCTURAL MODEL

SIGNIFICANCE AND RELEVANCE OF RELATIONSHIPS

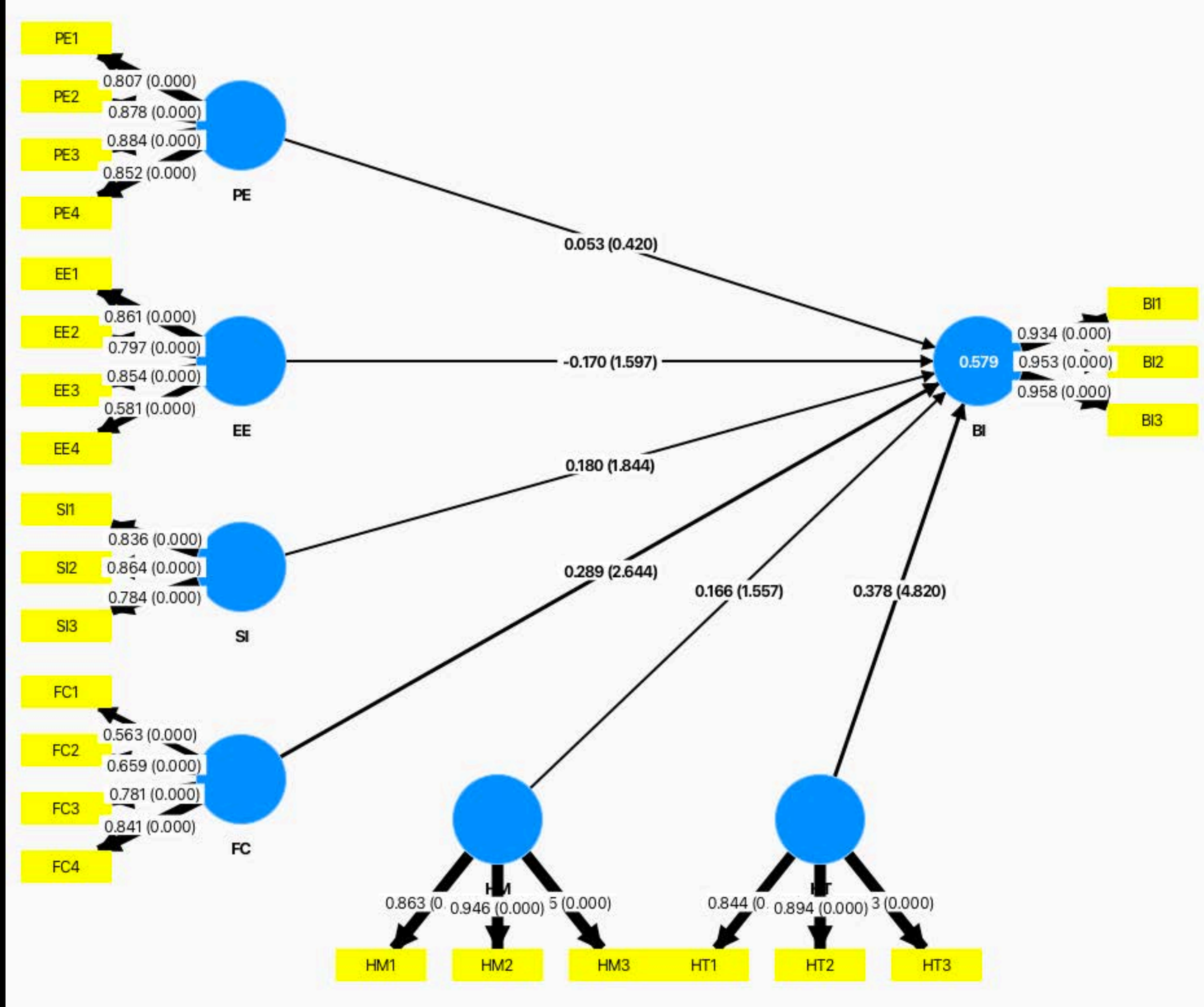
Tab. 5 The Structural Model - significance and relevance of relationships

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/ STDEV|)	P values
EE -> BI	-0.170	-0.138	0.107	1.591	0.112
FC -> BI	0.289	0.294	0.110	2.636	0.008*
HM -> BI	0.166	0.152	0.108	1.540	0.124
HT -> BI	0.378	0.375	0.079	4.760	0.000**
PE -> BI	0.053	0.053	0.127	0.417	0.677
SI -> BI	0.180	0.169	0.098	1.837	0.066

* p-value: 0,05, ** p-value: 0,001

RESULTS/ STRUCTURAL MODEL

SIGNIFICANCE AND RELEVANCE OF RELATIONSHIPS



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RESULTS/ STRUCTURAL MODEL

SIGNIFICANCE AND RELEVANCE OF RELATIONSHIPS

The strongest relationship was observed between the constructs Habit (HT) and Behavioral Intention (BI), with a path coefficient of 0.378 (t-value: 4.760, p-value: 0.000). The second strongest relationship was between Facilitating Conditions (FC) and Behavioral Intention (BI), with a path coefficient of 0.289 (t-value: 2.636, p-value: 0.008).

The other constructs do not have sufficient strength of relationship, although the SI -> BI relationship is close to the cut-off values (t-value: 1.837, p-value: 0.066). Based on these result, we can answer the research hypotheses.

RESULTS/ STRUCTURAL MODEL HYPOTHESES

H1: Performance Expectancy (PE) will have a significant influence on Behavioral Intention (BI) when using social media.

We reject hypothesis H1 because the relationship is weak: 0.053 (t-value: 0.417, p-value: 0.677).

H2: Effort Expectancy (EE) will have a significant influence on Behavioral Intention (BI) when using social media.

We reject hypothesis H2 because the relationship is weak: -0.170 (t-value: 1.591, p-value: 0.112).

RESULTS/ STRUCTURAL MODEL HYPOTHESES

H3: Social Influence (SI) will have a significant influence on Behavioral Intention (BI) when using social media.

We reject hypothesis H3 because the relationship is weak: 0.180 (t-value: 1.837, p-value: 0.066).

H4: Facilitating Conditions (FC) will have a significant influence on Behavioral Intention (BI) when using social media.

Hypothesis H4 was confirmed because the relationship has a significant strength: 0.289 (t-value: 2.636, p-value: 0.008).

RESULTS/ STRUCTURAL MODEL HYPOTHESES

H5: Hedonic Motivation (HM) will have a significant influence on Behavioral Intention (BI) when using social media

We reject hypothesis H5 because the relationship is weak: 0.166 (t-value: 1.540, p-value: 0.124).

H6: Habit (HT) will have a significant influence on Behavioral Intention (BI) when using social media.

Hypothesis H6 was confirmed because the relationship has a significant strength: 0.378 (t-value: 4.760, p-value: 0.000).

RESULTS/ STRUCTURAL MODEL

EXPLANATORY POWER OF THE MODEL

In the next step, we assessed the Explanatory Power of the Model. The explanatory power (R^2) of the endogenous variables is examined. The coefficient of determination (R^2) indicates what percentage of the variance of a given endogenous variable is explained by its predictors in the model.

In general, the higher the value of R^2, the better the model explains a given endogenous variable. However, the value of R^2 is interpreted in the context of the research domain and the expected level of explained variance.

R^2 values of 0.75, 0.50 and 0.25 are considered significant, moderate and weak in many social sciences (Hair, 2011). We report the results in Table 6.

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RESULTS/ STRUCTURAL MODEL

EXPLANATORY POWER OF THE MODEL

Behaviorlal Intetion	**Pre-Research**	**Herrero (2017)**	**Venkatesh (2012)**
R^2	**0,579**	0,77	0,44
Adjusted R^2	0,551	n/a	0,44

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THANK YOU FOR YOUR ATTENTION.