114學年度 元智大學 工業工程與管理學系 畢業專題

Acceptance and satisfaction of students toward typhoon class suspension policies in Taiwan

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Background & Motivation

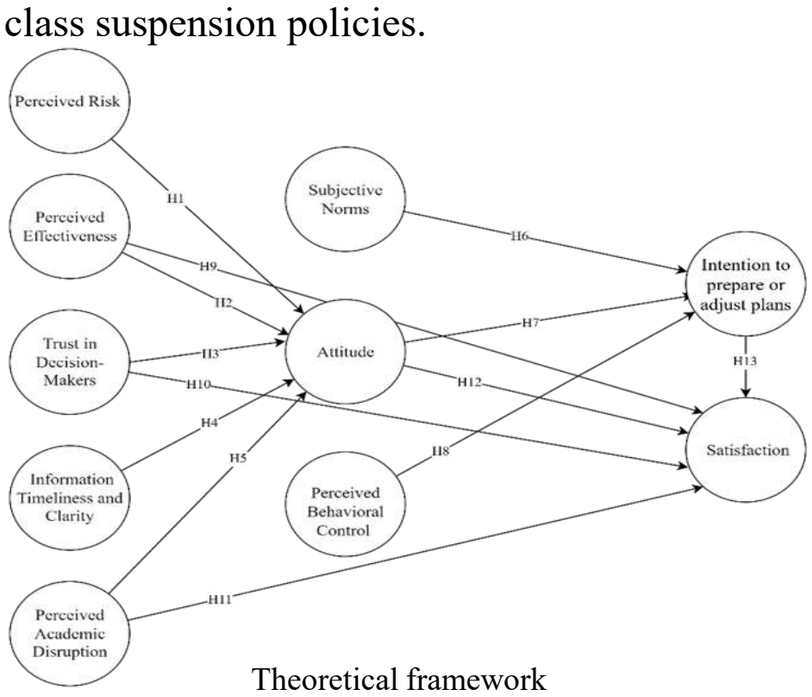
Typhoons frequently disrupt daily life in Taiwan, where three to four major events occur annually. While class suspensions aim to safeguard students, they also interrupt academic activities and raise concerns about fairness, timeliness, and communication quality. Despite the prevalence of typhoon-related class suspensions, little research has examined how university students perceive and evaluate these policies.

Scope & Objective

This study aims to identify the key factors influencing university students' acceptance and satisfaction with typhoon class suspension policies in Taiwan. Using an extended Theory of Planned Behavior and PLS-SEM analysis, the research examines how perceived effectiveness, communication quality, trust in decision-makers, subjective norms, and perceived behavioral control shape students' attitudes, intentions, and overall evaluations of suspension decisions.

Methodology

- Extends the TPB by incorporating perceived effectiveness, communication quality, trust in decision-makers, and academic disruption to explain attitudes, intentions, and satisfaction with typhoon class suspension policies.

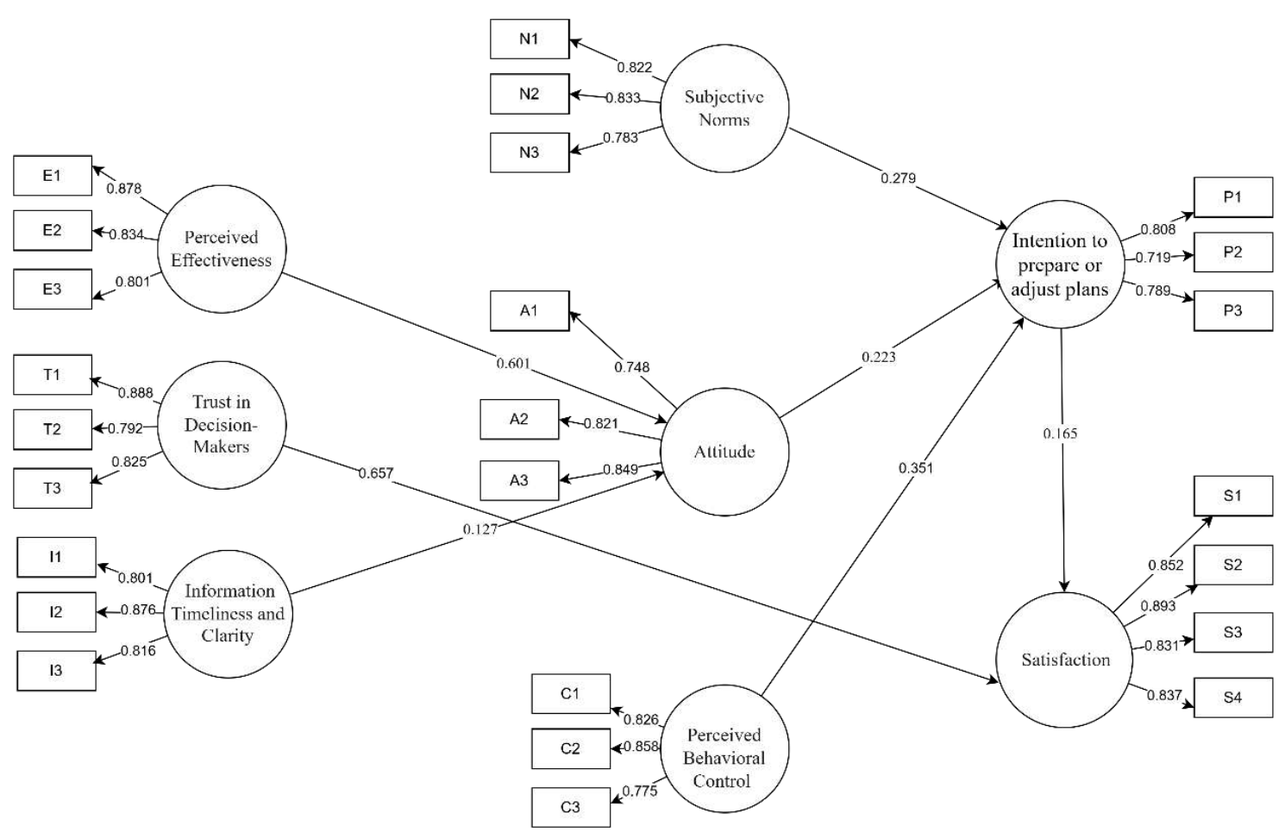


Theoretical framework

- A quantitative research design was employed for a descriptive and correlational approach to determine and investigate the factors influencing perception and acceptance of students toward typhoon class suspension in Taiwan.
- Data were collected through an online questionnaire distributed via social media platforms, yielding 350 valid responses from students across Taiwanese universities.
- The survey employed a 5-point Likert scale to measure latent constructs including perceived risk, perceived effectiveness, trust in decision-makers, information timeliness and clarity, perceived academic disruption, attitude, subjective norms, perceived behavioral control, intention, and satisfaction.
- Data screening, coding, and descriptive analysis were conducted using Microsoft Excel to ensure accuracy and completeness. Structural Equation Modeling was performed using Partial Least Squares (PLS-SEM) in SmartPLS to assess measurement reliability, validity, and the structural relationships among constructs.
- Due to time constraints, the Artificial Neural Network (ANN) model was implemented only at an exploratory level, and results were included as a preliminary reference rather than fully optimized outcomes.

Results

- Perceived effectiveness had the strongest effect on attitude (β = 0.601).
- Intention was driven primarily by perceived behavioral control (β = 0.351), followed by subjective norms (β = 0.279) and attitude (β = 0.223).
- Satisfaction was most strongly predicted by trust in decision-makers (β = 0.657).
- The model showed acceptable explanatory power with R^2 values of 0.416 for attitude, 0.527 for intention, and 0.547 for satisfaction.

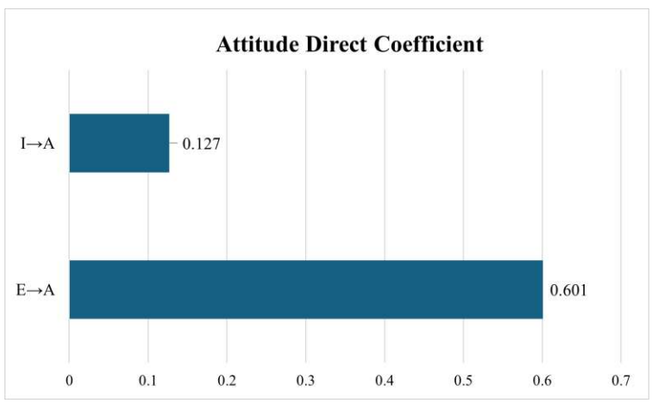


Final Model

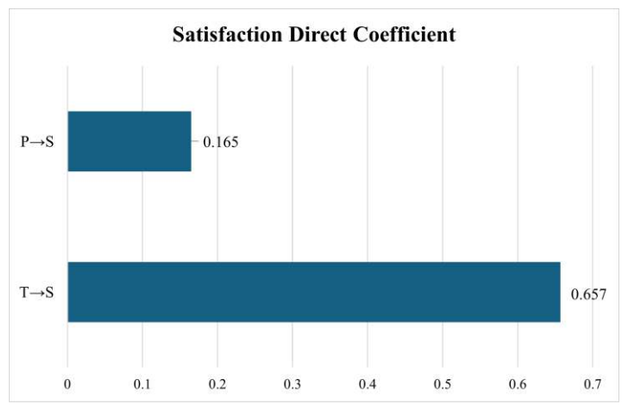
H		Initial Model		Modified Model	
No.	Path	Effect (β)	p-value	Effect (β)	p-value
1	R→A	0.039	0.626	-	-
2	E→A	0.551	0.000	0.601	0.000
3	T→A	-0.013	0.788	-	-
4	I→A	0.140	0.012	0.127	0.013
5	D→A	-0.101	0.022	-	-
6	N→P	0.279	0.000	0.279	0.000
7	A→P	0.223	0.001	0.223	0.002
8	C→P	0.351	0.000	0.351	0.000
9	E→S	-0.082	0.131	-	-
10	T→S	0.657	0.000	0.657	0.000
11	D→S	0.021	0.614	-	-
12	A→S	0.045	0.418	-	-
13	P→S	0.182	0.002	0.165	0.000

No	Variable	Total Effect
1	E→A	0.601
2	E→P	0.134
3	E→S	0.022
4	I→A	0.127
5	D→P	-0.023
6	N→P	0.279
7	N→S	0.046
8	A→P	0.223
9	A→S	0.037
10	C→P	0.351
11	C→S	0.058
12	T→S	0.657
13	P→S	0.165

Relationship between hypothesis



Direct Effects on Attitude



Direct Effects on Satisfaction

The extended TPB model demonstrated strong predictive power, identifying E, C, and T as the primary drivers of acceptance and satisfaction.

Conclusion & Future Works

➢ Conclusion

- ✓ Perceived effectiveness is the strongest determinant of students' attitudes toward typhoon class suspension policies.
- ✓ Trust in decision-makers is the most significant factor influencing satisfaction with typhoon class suspension measures, highlighting the importance of trust in enhancing satisfaction during typhoon-related decisions.

➢ Future Works

- ✓ Employ longitudinal data collection before, during, and after typhoon suspensions to track changes in attitudes, intentions, and satisfaction over time.
- ✓ ANN can be applied to future studies.