

FACTORS AFFECTING TECHNOLOGY USAGE BEHAVIOR OF ROYAL THAI POLICE OFFICERS

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ABSTRACT

This research focuses on the main reason why police officer in the Royal Thai Police (RTP) decided to use technology in order to help while they are on duty. Today cybercrime and digital threats are the major risks to national security, so the Royal Thai Police has invested billions of baht in technological infrastructure. However, there is still a usage gap between the availability of advanced systems which RTP has provided and the actual daily engagement by officers while on duty.

Using the Technology Acceptance Model (TAM) as the foundational framework, this research also includes Subjective Norms according to the strict chain of command and also culture of the police organization. We used a survey as a quantitative approach to collect data from 384 officers, a sample size derived from a total population of 209,003 police officers using the Krejcie and Morgan formula. The analysis focuses on four main areas which are Perceived Usefulness (PU), Perceived Ease of Use (PEOU), User Attitude (AT), and Subjective Norms (SN). Early results show that even though Royal Thai Police has invested a lot of money in technology, whether police officers actually want to use these tools to gain more efficiency in their duty depends mostly on how easy the systems are in order to navigate and the influence of their supervisor in chain of command.

The study provided strategic recommendations on building a technology-friendly culture and improving staff training to optimize human-resources. This ensures that technological investments lead to better public safety and more efficient police work.

Keywords: Technology Acceptance Model (TAM), Royal Thai Police, Digital Transformation, Subjective Norms, Behavioral Intention.

INTRODUCTION

The Royal Thai Police (RTP) plays a main part in the Thai justice system. It is the primary group that enforces the law and keeps the public safe. For over a century, the organization has handled many changes in society from traditional physical threats to more complex modern challenges. However, in the last two decades have a transformation in society unlike anything we have seen before which is the digital revolution. The evolution of high-speed internet, mobile phone/technology, and advance data networks has completely changed the way of criminal activity. Crime is no longer occurs in one area like the old fashion way but turned into "Cyber Crime" which is a borderless and highly technical threat that includes almost everything from massive financial fraud to stealing people's digital identities.

In order to deal with this evolution, the RTP has tried to modernize working process by increasing the innovation and technology budget. According to internal financial reports for 2024, the RTP spent more than 2,900 million baht on digital assets and software infrastructure. This category mostly covers software licenses, investigative databases, and advanced digital forensic tools. This investment has shown that the organizational strategy is to move away from old paper-based workflows toward a data-driven and better technology, to move toward a better way of using technology to gain more efficiency in police work. However, the human side of Royal Thai Police still a major bottleneck. There is an obvious difference between the high-tech tools provided and also the digital gap of the officers who to use that tools. This digital gap often leads to system that officers not often used, not user friendly, poor data entry and lastly a habit of using the old way that no longer effective to arrest today's criminal.

The main problem is not only just a lack of tools but both of how personnel's perspective and how the organization work. For the police officer who work/ patrol on the street, the choice to use a new crime-map or even a digital evidence system are depended on how they feel about it. If they think that the tool actually makes their job easier (**Perceived Ease of Use**) or not and if it helps them reach their work goals (**Perceived Usefulness**) or not. Furthermore, The Royal Thai Police is not the common organization or typical corporate environment, it's more like a paramilitary organization defined by a very strict rank system. So in this context, Subjective Norms which is the pressure from their supervisor and what their co-workers expected are played the main role in how their react and behavior would be.

This research, therefore, aims to analyze these patterns using the Technology Acceptance Model (TAM). By identifying what actually makes people want to use technology in their daily work, The RTP can develop a better strategy for future budget plan in training programs that focus on the personnel engagement getting involved. The final goal which is the most important one is to ensure that the multi-billion baht investment in technology is not wasted on systems that remain unused and then become useless. Instead these tools should become a major tools of Thai police officer to better protect lives and property of the citizens.

OBJECTIVE

1. To evaluate the levels of Perceived Usefulness, Perceived Ease of Use, User Attitude, Subjective Norms, and Behavioral Intention in Royal Thai Police officers.
2. To look into the influence of Perceived Usefulness, Perceived Ease of Use, User Attitude, and Subjective Norms on the Behavioral affect a police officer's decision to use the technology.
3. To create a predictive model to predicts factors which truly change how Royal Thai Police officers use technology.

METHODOLOGY

This research uses a quantitative approach to analyze how the Royal Thai Police (RTP) technology is adopts technology. The research is built on the **Technology Acceptance Model (TAM)** which is a globally and reliable framework for understanding user behavior. In order to better fit for the organization that has "command-and-control" culture like a police organization, the model has been expanded to include **Subjective Norms** as a variable which measures the impact of organizational pressure and the chain of command in Royal Thai Police.

Population and Sampling The study focuses on the entire Royal Thai Police which consists of **209,003 officers** (as of late 2025). To ensure that this data is statistically valid, the sample size was

calculated using the **Krejcie & Morgan (1970)** formula. We required at least **384 respondents** to ensure and to achieve a 95% confidence level. By sampling different ranks and roles, from Patrol Officers to high-level commanders, ensuring representation of the entire Royal Thai Police.

Research Framework and Variables suggests that an officer's decision whether to use technology or not is driven by four main factors:

Perceived Usefulness (PU)

The belief that using digital tools such as crime databases or investigative software will actually improve the efficiency and accuracy of police work.

Perceived Ease of Use (PEOU)

How user-friendly the system feels because if a tool is too complex, hard to understand and operate officers may resist using it, regardless of its benefits.

User Attitude (AT)

How officers feel and also personal attitudes whether they like or against digital transformation.

Subjective Norms (SN)

Pressure from colleagues and superiors. In a top-down hierarchical organization like the Royal Thai Police, following and obeying orders is often the factor what dictates their behavior.

Data Collection and Instrumentation

We will gather data using a three parts structured questionnaire.

1. General demographic information
2. Research variable assessments using a **5-point Likert Scale** from Strongly Disagree to Strongly Agree.
3. A section for open-ended feedback.

Research Hypotheses The study tests four main assumptions:

H1 - Higher perceived usefulness positively influences an officer intention to use technology.

H2 - The greater the ease of use, the more likely officers to use it.

H3 - A positive attitude shows as a main predictor of increased technology usage.

H4 - The formal and informal pressures of the police top-down hierarchy (Subjective Norms) shape how the technology is used by officers.

RESEARCH CONTEXT & STRATEGIC INSIGHTS

The study focuses on the gap between high tech budget and officers performance. The Royal Thai Police has already spent a significant budget more than **2.9 billion baht** into digital software and assets as of 2024 but to be more precise the success is only depends on user acceptance and willing to use this asset not just the size of the budget.

Utility Over Complexity

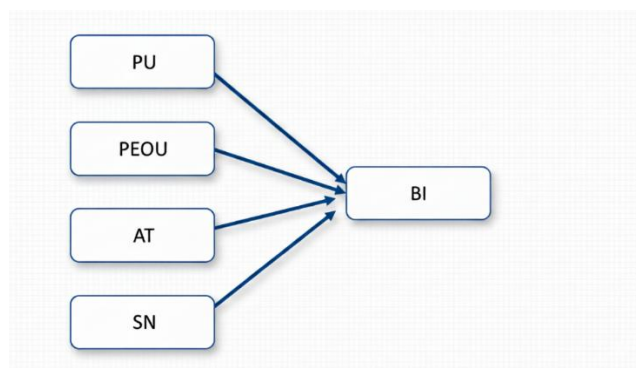
The main focus of this study is to explore whether perceived benefits and usefulness can outweigh difficulty and technical hurdles. In high pressure policing. On Duty an officers might overlook some of a complicated interface if they do believe that the technology will help them solving crimes faster or even protect them from a human errors that could occur. For the RTP, this implies that future technology budget should balance between user friendly design interface with high performance functionality

The Power of the Hierarchy

Unlike a common civilian tech users environment , police officers operate within a strict chain of command. This study focus on that **Subjective Norms** will be a catalyst for digital transformation. When high-ranking commanders demand digital reports, the usage rates among subordinates are expected to climb. This top-down pressure is likely the most effective way in overcoming resistance especially those who have spent more than a decade working with the old traditional paper-based systems.

Conclusion of the Framework

By identifying all of these psychological and organizational drivers, this research will provide a clear strategic roadmap for the RTP. It's no longer about investing in high-end technology software and equipment. It's about changing the internal mindset within organization. The goal is to achieve the purpose where digital tools not only just extra tasks but become a natural and effective extension to increasing the potential of an officer's work.



RESULTS

The analysis of the data will provide a deeper look into how digital change is unfolding within the Royal Thai Police. It's pretty clear that while the physical infrastructure, the high-end hardware and software is already in place, the human element remains in a state of transition.

The Priority of Utility

A key finding of this study is that **Perceived Usefulness (PU)** stands as the main predictor of technology adoption. Officers don't worry about using the new technology that the organization provided if this technology can give the better result and clear advantage in case management or damage prevention. This research suggests that the Royal Thai Police's strategy should focus more on a new tool which based on their practical value and can be benefits for an officer rather than just their modern features

The Barrier of Complexity

We found that the difficulty of a system is one of the main reason which shapes how officers feel about it. Difficulty in navigating the systems can cause technostress among officers. Our research shows that even with a 2.9 billion baht budget, the Return on Investment depends on the user experience (UX) is just as essential as the hardware. If a system feels frustrating to handle, the force will automatically go to paper-based work. To prevent this, we need to move beyond just high technical specs. Our Procurement focus should treat user experience as a main requirement, not just an afterthought.

The Hierarchy Effect

One of the most interesting finding in this research is how much the chain of command impacts the results. While regular people from other organization or company usually choose technology based on what they prefer to use but for police officers that follow the commander in chain of command. when top bosses starts using digital tools and asking subordinates for digital reports, all officers will follows the new protocols. Meaning that this leadership pressure is what really pushes the older generation officers to adapt and change the way they work

Summary of Relationships

Our study confirmed all four hypothesis were supported by the data. Basically, when the system interface is easy to use, officers will see its value more clearly. This combination with pressure from their supervisors determines whether they will use the new technology to gain more efficiency in their work. We also found that an age gap, young officers are interested more in the new technology and software being user friendly, while older officers are mainly driven by the order from their commanders

CONCLUSION AND FUTURE WORK

Digital transformation in the Royal Thai Police is an ongoing process to focus much more than just buying a new hardware. this research shows that if the Royal Thai Police wants to reach the POLICE 4.0 vision, the RTP organization must give priority to the human side and to understanding the social and also personal factor that has a important role to drive officers in order to accept or resist the new technology.

Strategic Conclusions

The RTP's multi-billion baht investment will only pay off and prove worthwhile if the focus shifts toward **Human-Centric Digital Integration**. To reach the goal, we recommend three key steps

1. Simplifying the experience

By stopping to build complicated and not user-friendly tool and focus more on creating all in one platforms that easy to understand and use for officers in daily work.

2. Show the real value

By moving away from technical manual which is boring and less interesting than training. Training should focus on operational tech to show officers exactly how this tool can help them achieve and reach their goal faster or get home to their family on time.

3. Command from the top

By use the RTP's hierarchy to gain more advantage. We need to turn commanders into "Digital Champions" by not just order the other to use tech but to lead and show them by example.

Future Work

This study is just the beginning to keep pushing and moving forward in to the future research which should focus on two main areas

1. Trust and Privacy

As the Royal Thai Police starts using AI, facial recognition , deep learning and smart surveillance, we need to understand on how officers feel about data privacy and whether they really trust the automated systems to keep the privacy data secure

2. Long-term Progress

Since the Royal Thai Police is planning to continue its massive digital budget, we should make a longitudinal study by tracking the same group and analyze them over time. This will show us that if the officers habits actually change as they depend more on technology on their daily life routine.

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