ROLES OF INFORMATION SECURITY AWARENESS AND PERCEIVED FAIRNESS IN INFORMATION SECURITY POLICY COMPLIANCE

INTRODUCTION

- Information security is one of the top priorities of managers in many organizations as risks related to information security may result in consequences ranging from monetary damage to loss of credibility
- Based on the general deterrence theory, deterrent and preventive strategies, such as providing disincentives and imposing sanctions, to reduce insiders' misuse and abuse of IS resource
- The direct and indirect roles of procedural fairness with regards to security rules and regulations have not been studied in the extant literature
- The lack procedural fairness in the workplace may result in arousal of employees' negative emotions toward security compliance, which in turn may lead to their intentional abuse of resources or ignorance of security requirements

INTRODUCTION

- i.What are the direct and indirect roles of an employee's information security awareness in influencing her attitude toward compliance and in turn intention to comply?

- ii.What is the role of an employee's perceived fairness of the requirements of the ISP in influencing her attitude toward compliance and in turn intention to comply?

Constructs adopted from the Theory of Planned Behaviour

- Intention to comply with the ISP is defined as an employee's intention to protect information and technology resources of her organization from potential security breache

- Hypothesis 1.Anemployee's attitude toward complying with the requirements of the ISP positively affects her intention to comply

Information Security Awareness

- ISP Awarenessis defined as an employee's knowledge and understanding of the requirements prescribed in his organization's ISP and the aims of those requirements

- Cause the persuasion stage influences decisions, attitude toward compliance influences the decision to comply with theISP. This approach is consistent with the argument that providing organizational security awareness is the most important factor in persuading employees to change their compliance actions

- Hypothesis 2:An employee's ISA positivelyaffects her attitude toward complying with the requirements of the ISP.

Perceived Fairness of the Requirements of the ISP

- Similar motivations exist in the context of ISP compliance and propose an employee's perceived fairness of the requirements of the ISPas an intrinsic motivational factor.
- We define perceived fairnessas an employee's belief in the procedural justice of the organization's implementation of security rules and regulations prescribedin the ISP.
- Besides the widely accepted role of organizational injustice on deviant behavior, the group engagement model (Tyler and Blader, 2000) also argues that procedural justice is central to shaping social identities within a group, which in turn positively influence attitudes, values, and cooperative behavior.
- Hypothesis3: An employee's perceived fairness of the requirements of the ISP positively affects her attitude.
- employee's knowledge of the security rules and regulations as well as her understanding of the major goals and objectives behind them would enhance her perceived fairness of these rules and regulations

Perceived Fairness of the Requirements of the ISP

- Awareness of information security can also be based on information obtained from external sources, such as newspapers, professional journals, and/or organizational policy documents.
- In the context of information security, we posit that an employee's ISA leads to formation of her belief in the fairness of the requirements of the ISP.
- Hypothesis 4:An employee's ISA positively affects her perceived fairness of the requirements of the organization's ISP.

RESEARCH METHODOLOGY

- developed a questionnaire creating appropriate measurements considering the existing scales in the literature
- easurement items of the other constructs were developed by closely following our definitions of constructs in this study
- a total of 928 individuals opted to go on and participate to the survey by agreeing consent agreement

DATA ANALYSES AND RESULTS

- Assessment of Measurement Validation
  - component-based partial least squares (PLS) approach was used to evaluate the psychometric properties of measurement scales and to test the research hypotheses proposed in this study

- Structural Model Testing
  - measurement of the structural model was estimated by using PLS approach to structural equation modeling
  - all hypotheses were supported at minimum of p<0.001. Approximately 27% of the variance is explained for attitude and 24% of the variance is explained for the intention to comply
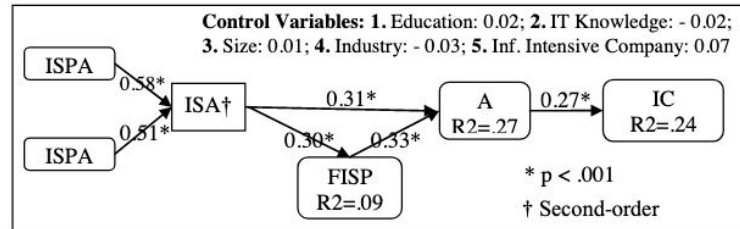
DISCUSSIONS, IMPLICATIONS, AND FUTURE RESEARCH

- Discussion of the Findings
  - this study emphasizes the importance of the role of an employee's information security awareness and her perceived fairness of the requirements of the ISP

- Theoretical and Practical Contributions and Further Research Directions
  - study makes important contributions to the emerging body of knowledge about the behavioral and organizational issues of information security
  - found that ISA plays a key role in employees' compliance behavior

- Limitations of the Study
  - one limitation of this study relates to the selection of participants
  - the perception-based measure for ISA we used and our measuring the compliance intention instead of actual compliance behavior