



Risk Perception and Cultural Intelligence in Human Factors: The Interaction of Emotional Intelligence and Organisational Culture in 'High' Risk Industries Across Borders

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Outline

- Background / Practice
- Aim of the study
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- References / Acknowledgements



Background – Practice Issue/s

Professional practice issue/s empirically suggests not everyone has the same understanding and perception of risk that presuppose the framework of a Safety Management System (SMS) and Risk Management Standard (ISO31000)

Empirical evidence on errors and violations that lead to accidents and incidents suggest individuals and organisations have different inherent risk acceptance traits reflected in decision making and risk judgement

Aligning culture, emotional schema, and organisational values in the perception of risk is difficult to achieve in practice based on perception and cultural / behavioural norms

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Aim of the study

Aim of the study is to gain an understanding of the relationship of value systems, and cultural and emotional frameworks that influence risk judgement, behaviour, and decision making in cross-cultural organisational environments in high risk industries such as aviation

This research uncovered a number of latent factors that act as mediators and moderators within these paradigms that help further understand these issues



Underpinning Theory & Research Focus

Draws from the social theory of risk (Douglas & Wildavsky, 1982) and its affect on risk perception and decision making in a Human Factors context

Study examined:

1. The '*mediating*' role of emotional intelligence (EI) in the relationship between risk perception (RP) and cultural intelligence (CQ) and;
2. The '*moderating*' role of organisational culture (OC) between RP and EI in 'high risk' industries across borders

Explanation - Mediation and Moderation

Mediating variable

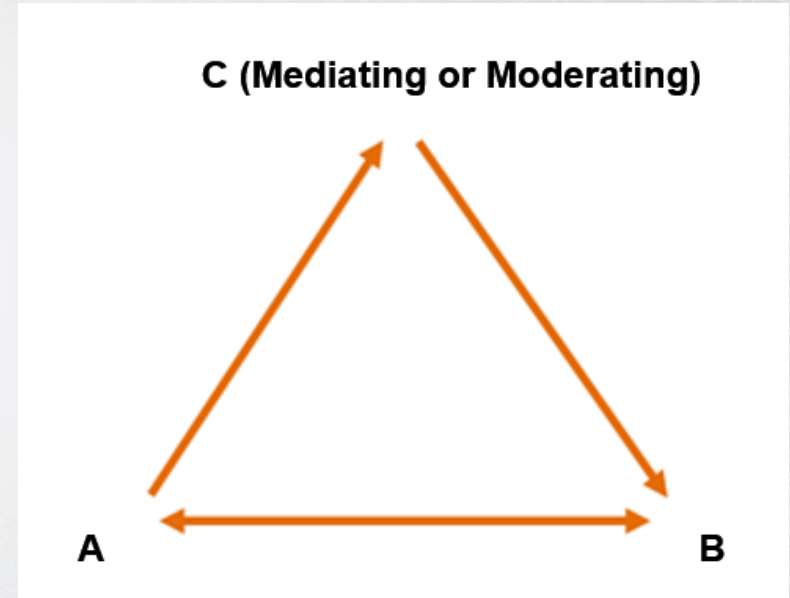
Explains the relationship between the two other variables, i.e. How or why such effects occur between the *two variables

Moderating variable

The strength of the relationship between the *two other variables

*Independent / Dependent variables

An independent variable (IV) is that which is changed or controlled. A dependent variable (DV) is that which is being tested



**A / B illustrated as independent / dependent variables,*



Explanation and context of variables in this research

- 1. Risk Perception (RP) and Social Theory**
- 2. Cultural Intelligence (CQ)**
- 3. Emotional Intelligence (EI)**
- 4. Organisational Culture (OC)**

Concept of Risk Perception and the social theory of risk



- Social Theory - The concept of risk and how it is perceived by diverse societies is selected within various **societal spheres based on a collective people's method of assessment and revealed preference**, that is, the risk people take or accept (Douglas & Wildavsky, 1982)
- In essence, individuals are ethnocentric when it comes to risk perception and assessment in that they strongly feel **what is normal in their culture should be normal everywhere** (Triandis, 2006)

Example

Citing the example of risk perception within a cross-cultural setting, a study with respondents from the People's Republic of China, USA, Germany and Poland measured buying prices for risky financial options (Weber & Hsee, 1998)

The study revealed differences in risk preference were mainly associated with *cultural differences in the perception of the risk... rather than with cultural differences in attitude towards perceived risk

*Risk perception is similarly believed to be influenced by geography, sociology, political science, anthropology and psychology (Slovic & Peters, 2006)



- Cultural intelligence requires that an individual observe, comprehend, feel compelled to react/interact, and implement action
- It is the ability to construct ways of conceptualising, gathering data, and operating in a new culture
- It is how well people understand AND adapt to new cultures

- [illegible]

1. Met
2. Cog
3. Mot
cogn
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Concept of Emotional Intelligence (EI)

Emotional intelligence (EI) involves a combination of competencies allowing a person to:

- Understand, and to be aware of their own emotions
- Recognise and understand the emotions of others
- Use this knowledge for personal success and for the success of others

Emotional Intelligence engages:

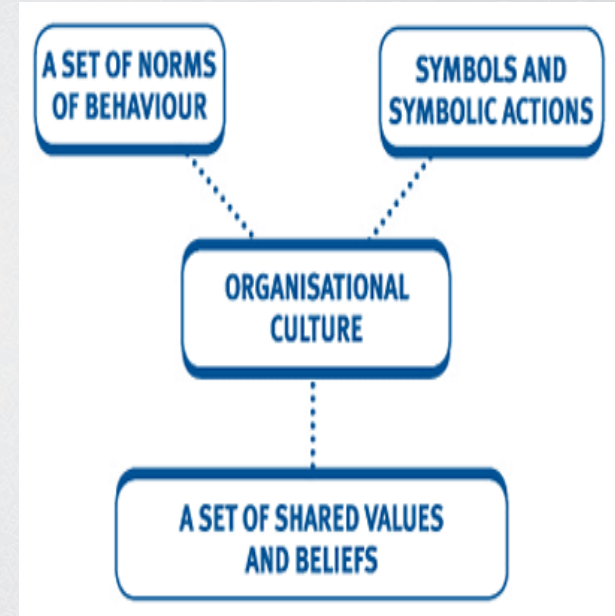
1. Self Awareness
2. Social Awareness
3. Self Management
4. Social Skills/Relationship Management
(Goleman, 1995)



Organisational Culture (OC)

- Organisational culture is defined as *"a pattern of shared basic assumptions learned by a group... to solve its problems of external adaptation and internal integration"*
- Organisational culture is based on underlying assumptions that include unconscious beliefs and values that determine behaviour, perception, and thought.

(Schein, 2010)



Hypothetical Models

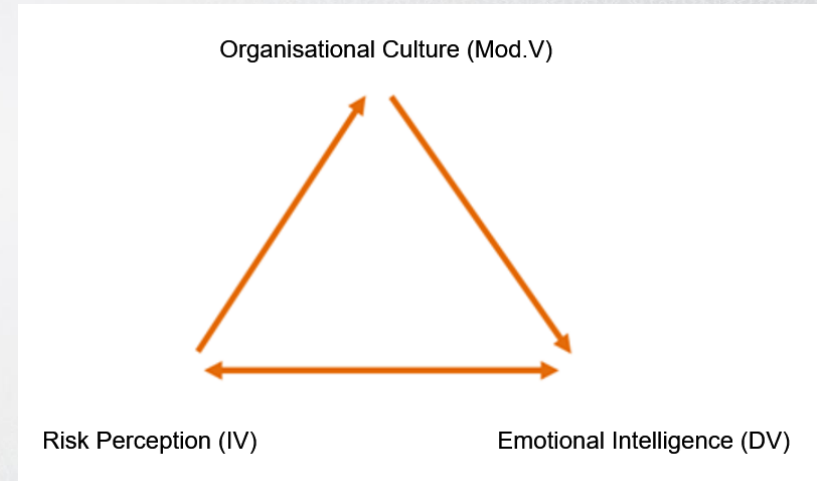
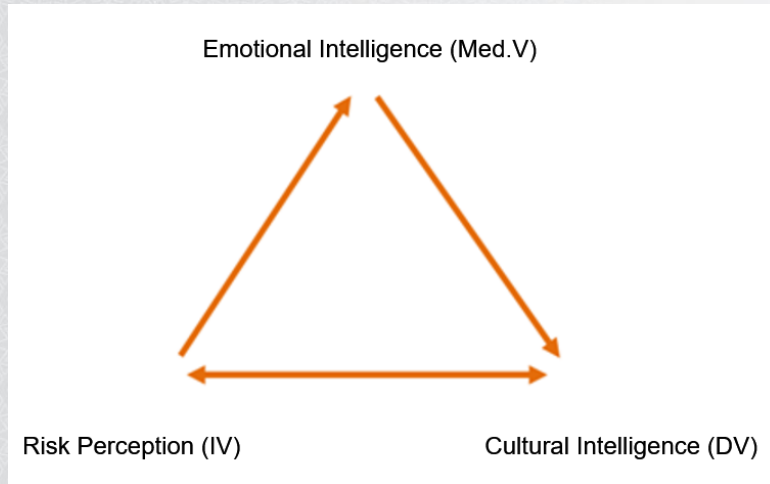


FIGURE 1 (a) / (b) Hypothetical model/s showing the relationships between Risk Perception, Organisational Culture, Emotional Intelligence and Cultural Intelligence



Research Method

Quantitative Study - Survey data collected from 343 respondents from Australia, USA, UK, and Singapore from 'high risk' industries with a focus on the aviation sector.

Statistical Analyses

- Validated scales for all variables
- Confirmatory Factor Analysis (CFA)
- Structural Equation Modelling (SEM)
- Descriptive statistics and correlations on all variables
- Hierarchical Regression Analysis (HRA)
- Goodness of fit measures and latent path coefficients
- Testing effects between variables - Moderating and mediating
- Slope tests
- Sobel Tests
- Bootstrapping (5000)



Results

1. A positive relationship between RP and CQ
2. A positive relationship between RP and EI
3. The relationship between RP and CQ is *mediated* by EI
4. OC is a *moderator* between variables across multi-cultural settings

Theoretical Model

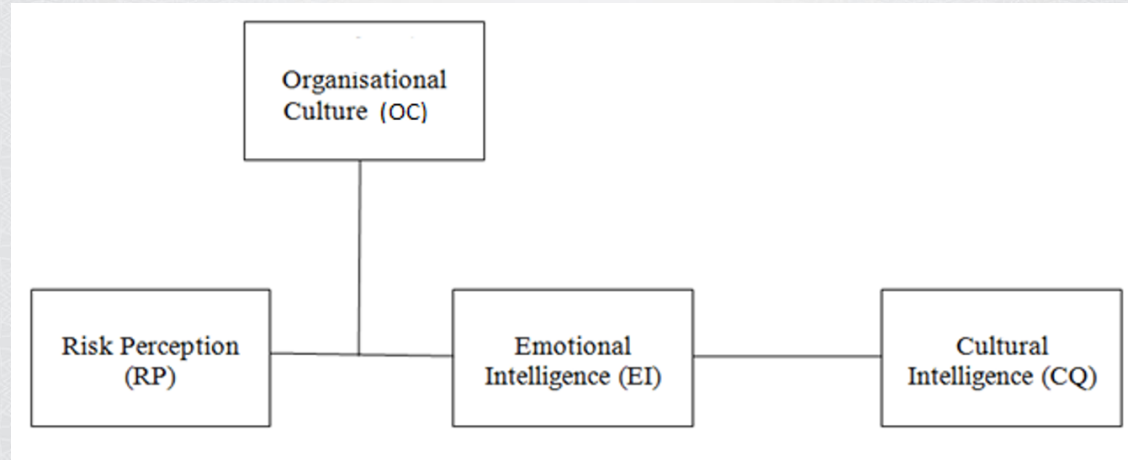


FIGURE 2. Theoretical model illustrating the relationships between Risk Perception, Organisational Culture, Emotional Intelligence and Cultural Intelligence



Professional Practice Implications - Relationship between RP and CQ

A positive relationship between RP and CQ recognises cultural adaptability may influence the perception of risk and risk judgement in decision-making environments within a cross-cultural or multicultural settings

1. Highlights the importance of not only recognising cultural differences, but to also have the ability to culturally adapt in multi-cultural team environments
2. Identifies the interactions of CQ elements i.e. judgements, specific knowledge, commitment to act, and capability of actions to a given cultural situation, positively influence the way risk is perceived to be incorporated in SOPs



Professional Practice Implications - Relationship between RP and EI

A positive relationship between RP and EI indicates:

1. The combination of competencies allows individuals to:
 - understand and be aware of their own emotions,
 - recognise and understand the emotions of others, and to
 - use this knowledge for personal success and for the success of others to influence how risk is perceived to an individual or group / team
2. Illustrates an ability to positively align the perception of risk and risk judgements to a standard template of operations and procedures



Professional Practice Implications – Relationship between RP and CQ is mediated by EI

The relationship between RP and CQ is mediated by EI - Self-awareness, social-awareness, self-management, and social skills/relationship management support cultural adaptability and the way risk is perceived

1. This positively influences the perception of risk and risk judgement in decision-making environments within a cross-cultural or multicultural settings
2. The degree of EI and CQ can therefore align the perception of risk and risk judgements to a standard template of operations in different cultural settings and environments

Professional Practice Implications – OC is a *moderator* between variables across multi-cultural settings

The strength of OC will determine the degree to which these variables can be harnessed across multi-cultural settings

1. Hence, unconscious beliefs and values that determine behaviour, perception, and thought within organisations may / should be measured
2. For example EI, CQ, RP, and OC inventories may collectively determine whether those measured results fit into the values and mission of the organisation



Conclusion

1. Theory suggests risk is not so much about cross-cultural attitude, more so about perception
2. EI, CQ, OC, and RP can influence the Human Factors component to effective risk judgement and decision-making across borders and/or in cross-cultural environments
3. Individuals / Teams with high EI and CQ will positively influence RP
4. Organisations (national / multi-national) have the power to regulate the degree of adaptability between variables in the way RP is aligned

References



References PACDEFF 2017.pdf

Acknowledgements

Appreciation to Rabdan Academy – Abu Dhabi, UAE for supporting the presentation of this research at PACDEFF 2017



Special thanks to Associate Professor Dr Ramudu Bhanugopan
Sub-Dean (Graduate Studies) Faculty of Business, Justice and Behavioural Sciences
Charles Sturt University, Australia for collaborative contributions throughout this international research

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Thank You



Questions?

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