

Effective Virtual Project Management

by:
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April, 2011

Increasing globalization of organizations and proliferation of new technologies have made multi-cultural virtual project teams not only a reality but important also. Virtual project team members rarely meet face-to-face and thus deal with challenges. These challenges faced by virtual project team members form the basis for the first phase of research. In the second phase, the researcher conceptualized that Emotional Intelligence plays a very decisive role in the performance of managers even in virtual project management. In phase three, the relationship of Social Intelligence and Empowerment Climate with Leadership Style in partly and truly global virtual projects was analyzed. The end objective is to establish their significance for virtual project teams which would result in enhancing their overall effectiveness thus resulting in proposing various Models of Effective Virtual Project Management. The findings would help the virtual project management and human resource management professionals as how to enhance the effectiveness of projects with varying degree of virtuality.

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Effective Virtual Project Management

Emotional Intelligence, Empowerment Climate, Leadership Style

Effective VPM



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Overview

Research is

- broadly divided into three phases
- suggest Models for Effective Virtual Project Management (VPM)

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• First Phase of Research

- various challenges of VPM were identified
- these factors were gathered within a framework named the "*Factor Reinforcing Model*®"
- Findings from the model conclude
 - several contributing factors of VPM, namely, communication, motivation, information security, trust building etc reinforce each other leading to effective VPM

First Phase of Study

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Overview

- **Second Phase of Research**

- > relationship between
 - EI & Challenges of VPM
- > Research establish that EI helps project managers to cope with challenges of VPM

Second Phase of the Study

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Overview

- **Third Phase of Research**

- > Analyze preferred leadership behaviour (concern for task & people) for effective VPM
- > Factors based on leadership behaviour were identified
 - like participative decision making, open communication, conflict management, delegation of power, task monitoring, time management, coaching, and team work
- > Model for effective VPM proposed in leadership context

Third Phase of the Study

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Overview

- **Next Examine**

- > Relationship of SI & leadership style
- > Results show
 - > social awareness and relationship management are positively related to concern for task & concern for people
 - > higher in truly global than partly global virtual projects

Third Phase of the Study

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Overview

- > Relationship of *Empowerment Climate* with leadership style & customer service
 - > as a measure of effective VPM
- > Examine moderating role of virtuality on
 - > relationship between empowerment climate & leadership style

Third Phase of the Study

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What is Effective VPM?

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What is Effective VPM?

Project management effectiveness
refers to success of the project

(Hyva`ri, 2006)

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Traditional Approach for Project Management Success

- Metrics for PM Success
 - > Time
 - > Allocated Budget
 - > Scope
 - > Project accuracy (specifications met)
 - > Change Request
 - > Quality

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What is Project Success and PM Success?

- Sometimes Project Management is not successful but projects are successful?

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What is Project Success and PM Success?

Project Management Success	Project Success	Effective Project Management
Meeting time, cost, and quality objectives	Benefit to the Organization Meeting organizational objectives	
Quality of the project management process	Users Satisfaction (ease of use)	
Satisfying project stakeholders needs related to the project management process	Stakeholders Satisfaction	

Sydney Opera House

Project Management Success Perspective	Project Success	Effective Project Management
<p>Project management perspective, it was a spectacular failure</p> <p>Completion takes ten more years</p> <p>Cost shoots from \$7 million to over \$100 million (Architecture Week, 2003)</p>	<p>Sydney Opera House</p> <p>Icon of Sydney</p>	

Justification for Research



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Why VPM?

Better, faster, cheaper & smarter

» Lipnack & Stamp, 1997; Townsend et al., 1998

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Why VPM?

- Cost effective way of meeting the demands of globally located customers
 - Jaegers, Jansen & Steenbakkers, 1998; Van Aken, 1998; Davidow & Malone, 1992; Mowshowitz, 1994

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Justification for Research

- **Effective VPM**
 - > *Several researchers (Chiesa, 1996; Coughlan & Brady, 1996; Dalton & Serapio, 1995; Medcof, 2001; Roebuck & Britt, 2002)*
 - **pointed out importance of understanding management within virtual environments**
 - > *There is a need to identify*
 - **What practices & processes are effective for virtual projects?**

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Rationale & Significance

- There is a need for research in the area of project management for the study of human variables (Hoffman, 2002)
- Our research bridges this gap and focuses on understanding impact of human behaviour for effective management of virtual projects

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Key Variables

- Virtual Projects
- Challenges of VPM
- Emotional Intelligence
- Empowerment Climate
- Leadership Style
- Partly Global & Truly Global Project Teams

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Virtual Projects & Teams

- ❑ Cynthia (1997) views virtual projects & teams
 - ❑ as projects and teams with virtual overlay
- ❑ Technology enables & helps create "virtual workspace"
 - ❑ through which a project team communicates and collaborates
- ❑ Virtual team
 - ❑ geographically distributed
 - ❑ not engage in face-to-face contact (Rad & Levin, 2003)

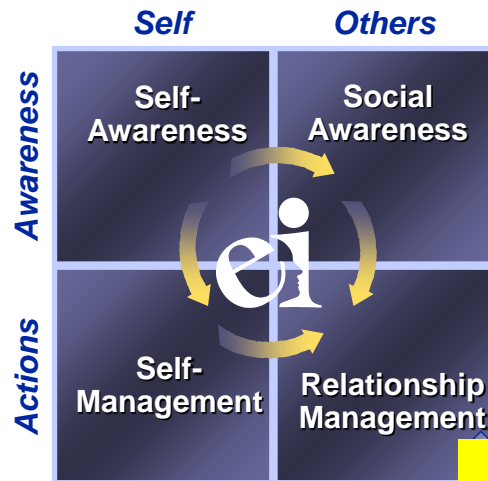


Challenges of VPM

Communication
 Language barriers
 Information redundancy
 Time zone difference
 Motivation
 Cultural differences
 Conflict resolution
 Trust building
 Knowledge sharing

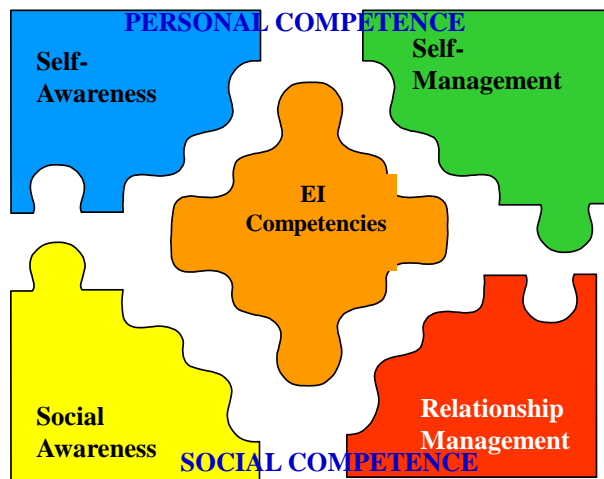
Emotional Intelligence Model

Goleman defined an “emotional competence” as a “learned capability based on emotional intelligence which results in outstanding performance at work.”



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Social Intelligence



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Social Intelligence

Emotional intelligence is the intelligent use of one's emotions

(Goleman et al., 2002)

Social intelligence is the application of this insight regarding others' emotions

(Goleman et al., 2002; Goleman 2006)

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Empowerment Climate

- Focus on work environment
- Proposed by SCOTT and colleagues (2004)
- Employees' shared perceptions of policies, and practices related to empowerment
- Identified 3 key organizational practices associated with empowerment:
 - information sharing
 - autonomy through boundaries
 - team accountability

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Leadership Style

- There is a best way to lead i.e. high along both dimensions (concern for task, concern for people)
Northouse, 2004
- Slevin and Pinto (1991) suggest that **project leaders need both relationships and task oriented leadership styles** to cope up with the challenges of different phases of project

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Modes of Virtual Projects

Partly or less global projects

- > project team members & team leader are collocated but having reliance on technology & latest communication channels

Truly or more global projects

- > project professionals worked in a single team collaborating with other virtual team members dispersed in different countries

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Objectives of Research

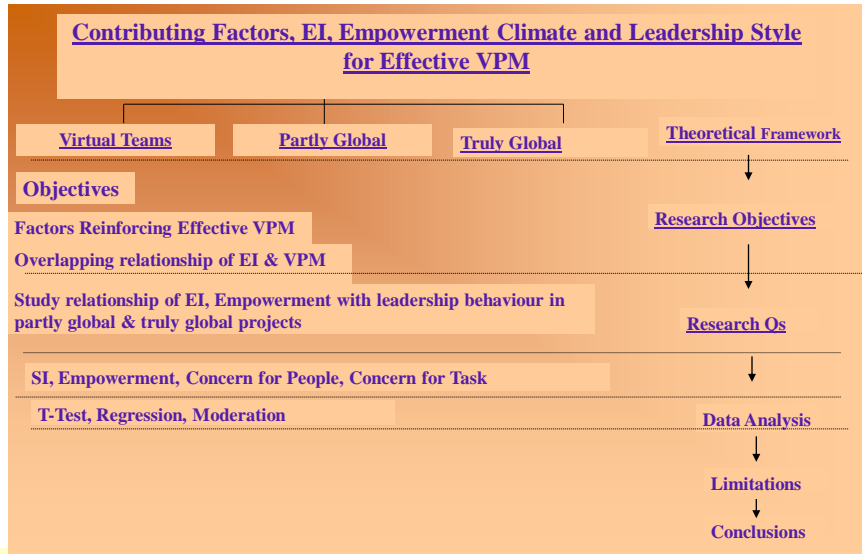
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Objectives of Research

- > Challenges of VPM
- > Significance of EI and leadership in VPM
- > Significance of Empowerment Climate & leadership in VPM

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Overview of Research



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Overview of Research First Phase

Present study is broadly divided into three phases

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Challenges of VPM

- ❑ Virtual project teams are important - increasing globalization of orgs
- ❑ Virtual Teams rarely meet in a face-to-face context
 - deal with challenging problems

First phase of study

- ❑ Various challenges of virtual project management identified

Communication, language barriers, face to face communication, information redundancy, time zone difference, motivation, cultural differences, trust, team knowledge, information security

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Challenges of VPM

Model called 'Factor Reinforcing Model'® proposed & validated through research findings

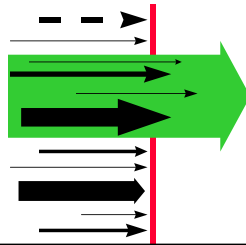
Concludes that various factors of VPM reinforce each other to effective VPM

All these elements of VPM - mostly behavioural

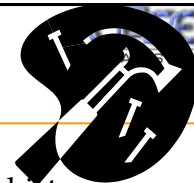
Challenges of Virtual Project Management

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RESEARCH METHODOLOGY



RESEARCH TOOLS



Research Survey of various software houses in Pakistan

Questionnaire with multiple choice & close-ended questions to identify challenges of VPM

Formal, informal interviews were conducted to support findings

72 participants, 14 IT project oriented companies, Lahore, Islamabad & Karachi

Content or Face Validity

- First, questionnaires were given to experts who rate it
 - > gave their opinion about whether the question is essential, useful or irrelevant
- Second face validity
 - > Requires a personal judgment of respondents
 - > Respondents were asked whether they thought that a questionnaire was well constructed and useful
 - > 6 questionnaires were pre tested and improvements made accordingly regarding
 - > utility of content, clarity & comprehension of questionnaires

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Questionnaire

- Questions were framed taking into account
 - > trust, communication, motivation, documentation, information redundancy, security measures, most common drawbacks, importance of face to face contact in VPM
- Open ended questions were asked about
 - > cultural differences, language barriers, time zone differences for effective management of projects in virtual environment

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Questionnaire Administration

- Data were collected over
 - > Internet and paper surveys were sent
- Friendly reminder to fill the questionnaires was sent
 - > after seven days
 - > followed with a second reminder after fifteen days
- Snowball sampling technique used
 - > to enhance sample size

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Qualitative & Quantitative Techniques

- This research utilized a plural methodology
 - > qualitative & quantitative to complement one another
- In addition to questionnaire,
 - > 7 interviews were conducted to validate findings
- Descriptive statistics
 - > mainly percentages were used for data analysis

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Hypothesis

- *There exists a reinforcing relationship between various factors e.g. communication, motivation, information security, trust building etc that contributes towards effective Virtual Project Management*

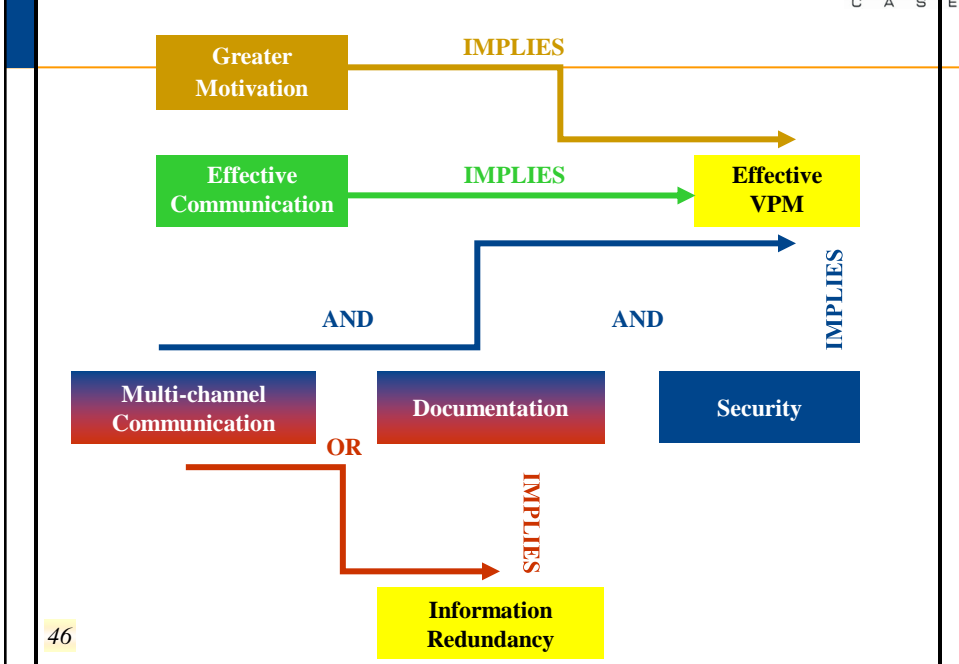


PROPOSITIONS

- Proposition 1:** Effective Communication => Effective VPM
- Proposition 2:** Greater the degree of Virtual Project Management => Greater degree of multi-organizational culture
- Proposition 3:** Documentation OR Multi-channel communication => Information Redundancy
- Proposition 4:** Multi-channel communication AND Documentation AND Information Security => Effective VPM
- Proposition 5:** Greater geographical distance (time zone differences) OR non- existence of face-to-face interaction => Lower levels of motivation among team members
- Proposition 6:** Greater degree of physical one to one interaction AND Greater degree of flexibility among parties (conflict resolution) AND Greater level of trust among geographically distributed teams => High levels of motivation among geographically distributed teams
- Proposition 7:** Time zone difference advantage => High productivity and profitability of an organization

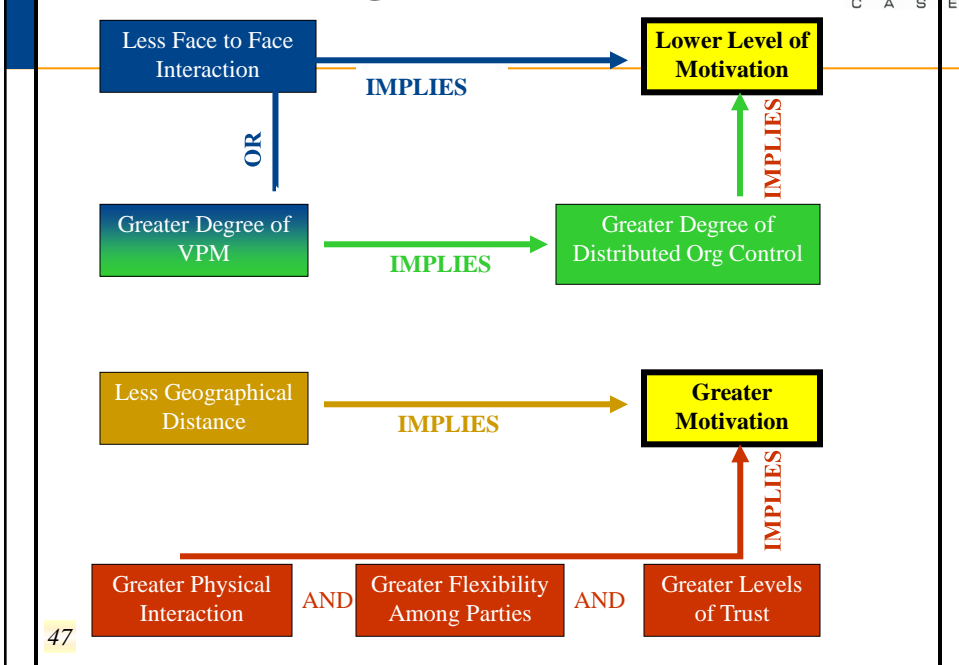
Factor Reinforcing Model for VPM Elements

CASE

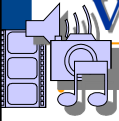


Factor Reinforcing Model for VPM Elements

CASE



Recommendations for Improving Virtual Processes



Members in a distributed project management environments often have expertise in a specific area, so there is a great need for knowledge sharing via effective communication and knowledge management techniques.

- Initial face-to-face communication is an essential prerequisite in establishing higher levels of trust and motivation among managers working from geographically dispersed locations.
- Managers or team leaders must play as a communication bridge between the two developers of virtual teams in order to minimize conflict.
- A single communication point is a must to avoid redundancy and conflict.
- For effective communication, the appropriate use of telephones, video-conferencing and face-to-face meetings should be considered essential.
- Clear ownership, roles and responsibilities are essential. Leaders should play an effective role to implement these processes.

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Overview of Research Second Phase

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EI in Project Context

One of the toughest challenges in managing a project in the 21st century is to manage the people involved in delivering project successfully

EI, as a human resource management competence, is essential for project managers (Barry & Plessis, 2006; Rajagopalan, 2010)

Verma states that project managers must be very effective in interpersonal relationships

EI & VPM

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EI & VPM

- *EI competencies help project managers to
 - *tackle challenges of VPM**

- *Goleman's model of EI is taken as a basis for measuring EI of project managers*

EI & VPM

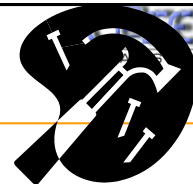
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Research Methodology: Phase Two



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Research Tools



Questionnaire with close-ended questions
to identify the role of EI in VPM

87 participants, 11 IT project oriented companies,
Lahore, Islamabad & Karachi

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Research Tools - Questionnaire

First part, questions related to Self Awareness, Self Management, Social Awareness and Relationship Management were framed for respondents considering VPM

Second part questions were framed to measure EI with out considering the VPM influence

Two parts were then compared to see what EI factors are demonstrated by respondents strongly in virtual projects

Descriptive statistics (mainly percentages) - used for data analysis

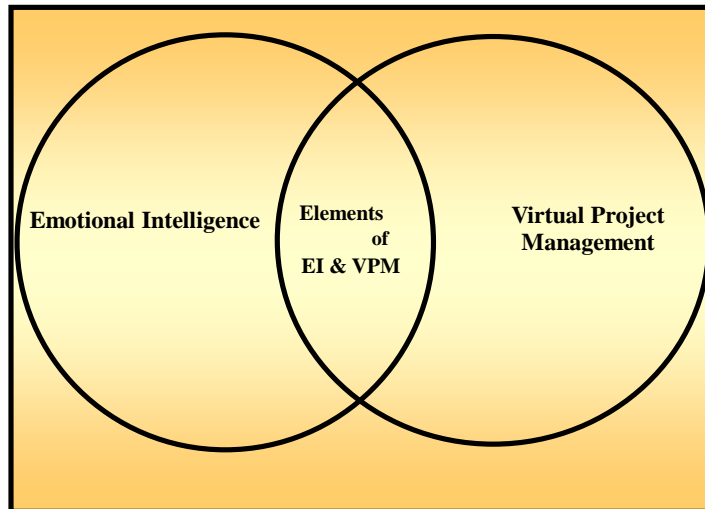
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Hypothesis

There exists a multi tier relationship between Emotional Intelligence (EI) and challenges/elements of VPM

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Proposed Model



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Role of EI in VPM

EI helps project managers to cope with challenges of VPM through self-awareness, self-management, social awareness, & relationship management

Research established that EI plays a very decisive role in performance of managers even in a VPM. It helps project managers to perform better in virtual environment

Research established that there exists an overlapping relationship between factors of virtual project and competencies of EI

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Findings

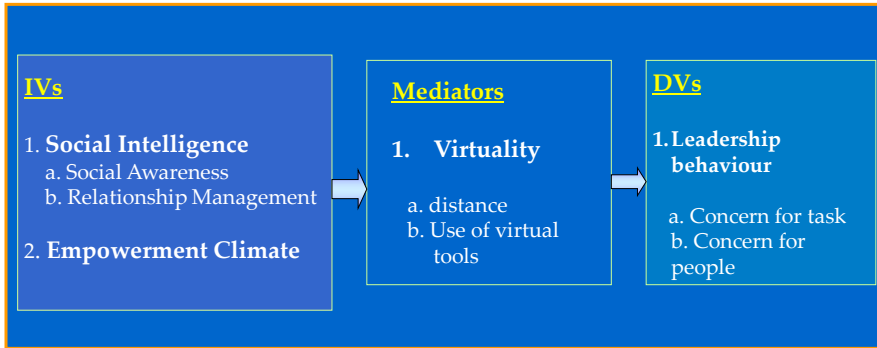
- **Findings show**
- research yields interesting conclusions that can help organizations to
 - manage their global virtual team projects more effectively by creating EI awareness
- research makes some initial observations regarding the role of EI in effective VPM
 - > project managers demonstrate strong social awareness & relationship management competencies in VPM environment
 - > providing us the rationale to further analyze SI in projects with varying degree of virtuality

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Overview of Research : Phase Three

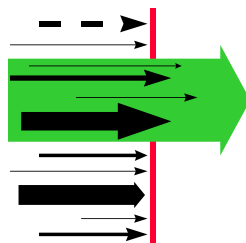
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Basic Research Model



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RESEARCH METHODOLOGY



Questionnaire

- ❑ Third questionnaire
 - ❑ *examine the relationship of SI & empowerment climate with leadership behaviour in partly global & truly global virtual projects*

- ❑ Five main parts to survey instrument
 - ❑ first part - demographic information
job title; job level; professional experience; industry & location of work
 - ❑ Second part - definition of terms
 - ❑ Third part measures virtuality

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Questionnaire

- ❑ Fourth part measure IVs
 - ❑ *Social Intelligence & Empowerment Climate*
- ❑ Fifth part measures DVs using
 - ❑ *Clark's managerial grid (concern for task, concern for people) and customer service*
- ❑ Conventional five-point rating scale
 - ❑ *more complex scoring systems possess no significant advantage (Oppenheim, 1992)*
- ❑ Likert rating scales are ordinal measures
 - ❑ they can be assumed as interval measures if the spacing between them is uniform (Blaikie, 2003)
- ❑ statistical tools such as t- test - used to analyze variables

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Measures Used in the Third Phase of Research

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Measure of Leadership Style

- Clark's (2004) five-point Managerial Grid scale (1, = "never," to 5 = "always") measure
 - > **Task oriented behaviour**
 - > Counseling employees to improve performance
 - > Easy for you to break large projects into small manageable tasks
 - > Managing time efficiently
 - > Ensuring every detail is accounted for a complex task

 - > **Relationship oriented behaviour**
 - > Encourage team participation in decision making
 - > Mentoring and coaching on new tasks
 - > Respect for other people's boundaries

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Measure of Social Intelligence

- We developed a measure of Social Intelligence based on Goleman's theory of SI
- **Relationship Management**
 - > acknowledge & reward people's strengths & accomplishments
 - > skilled at persuasion
 - > foster open communication and stay receptive to bad news as well as good
- **Social Awareness**
 - > sensitivity to cultural differences among team members
 - > understand customers' needs

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Measure of Empowerment Climate

Information sharing involves

- ❑ *Ensure understanding of budget and financial key performance indicators by all the team*
- ❑ *easy access to project information and project data*
- ❑ *Sharing the future development*
- ❑ *circulate pre-drafts of your documents for comments*
- ❑ *Feed back to team members of the performed work*

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Measure of Empowerment Climate

- **Autonomy through boundaries refers to**
 - > Organizational practices that encourage autonomous action, including
 - Open communication among team members
 - Standardization to reduce rework in project documentation
 - Clear understanding of individual roles & responsibilities
 - Comprehension of the end user requirements
 - Document policies & procedures

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Measure of Empowerment Climate

Team accountability involves

- ❑ *Encourage participative decision-making among team members*
- ❑ *Encourage professional growth training*
- ❑ *Delegate responsibilities,*
- ❑ *Team work (Important to you)*

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Measure of Customer Service

- ❑ Scale includes
 - ❑ the extent project professionals understand customers' needs & match them to services or products
 - ❑ seek ways to increase customer's satisfaction & loyalty

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Data Analysis

- ❑ Data - collected and entered into Microsoft excel
 - ❑ transferred into SPSS 13
 - ❑ independent sample t-test
 - ❑ linear regression and moderated step wise or hierarchical regression
- ❑ Prior to conducting any analysis of the data, normality and reliability was checked
 - ❑ Cronbach alpha reliability analysis
 - ❑ Pearson's correlation
 - ❑ Standardised Residual
 - ❑ Durbin-Watson Estimate
 - ❑ Multicollinearity
 - ❑ t test

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Participants in Third Phase of Research

Participants were 117 project management professionals working in IT companies

Projects of these professionals were either partly global or truly global

Sixty-seven respondents describe their project as partly global

Fifty respondents explicate their project as truly global

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Characteristics of Participants

Characteristics	No	%
Gender		
Male	91	77.8
Female	26	22.2
Education		
Graduate Degree	37	40.2%
Masters Degree	66	56.4%
PhD	4	3.4%
Job level		
Entry level	9	7.7%
Middle management	70	59.8%
Executive management	28	23.9%
Top management	10	8.5%

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Characteristics of Participants

Characteristics	No	%
Industry		
Telecom	26	22.2%
IT	71	60.7%
Construction	20	17.1%
Location		
Pakistan	65	55.6%
Australia	13	11.1%
Saudi Arabia	17	14.5%
Malaysia	9	7.7%
USA	13	11.1%

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Third Phase of Research Study (Patterns of Leadership for Effective Project Management)

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Leadership Style

Project leaders need both relationships & task oriented leadership styles

to cope up with the challenges of different phases of project
(Slevin & Pinto, 1991)

We'll examine how far this is true for projects with varying degree of virtuality

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Objectives

Examine effective VPM in the context of leadership behaviour (concern for task and people) in more and less global projects

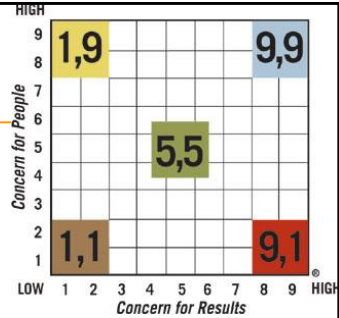
Propose that high concern for both task & people would result in better management of projects thus resulting in effective VPM

Propose a model for effective VPM by
identifying factors based on leadership behaviour

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Leadership Style

- Using Clark MG, we found



Authority Compliance Management	Country Club Management	Middle-of-the-road	Impoverished Management	Team Management
0%	1.7%	0%	0%	98.3%

Team management leader is predominant style of leadership leading to effective VPM

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Hypotheses, Results of Third Phase of Research Study
(Patterns of Leadership
for Effective Project Management)

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Rationale for Proposed Hypotheses

- Virtual teams tend to have more of a task-focus and less of a social-focus than traditional teams although, over time, virtual teams appear to lessen their task-focus (Chidambaram & Bostrom, 1993; Walther, 1995).
- Kayworth and Leidner (2001) found that highly effective on line leaders exhibit
 - > relationship-oriented behaviours (e.g., mentoring the members & demonstrating understanding of them)
 - > task-oriented behaviours (e.g., communicating with the members promptly)
- Strang (2007) proposed
 - > effective project leaders in a dynamic project environment display more relationship behaviours

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Proposed Hypotheses

- Based on above arguments, we propose following hypotheses:
- *H3: Concern for people is equally important for both less global & more global virtual projects*
- *H4: Concern for task is equally important for both less global & more global virtual projects*

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Independent Sample T test

- Independent sample T test is employed to compare concern for people and concern for task in less global and more global projects
- No difference is observed for concern for task and concern for people between professionals working in less global and more global projects
- (M=4.28, SD = . 506), $t(115) = 1.435, p > .05$
- (M=4.30, SD = . 492), $t(115) = 1.370, p > .05$

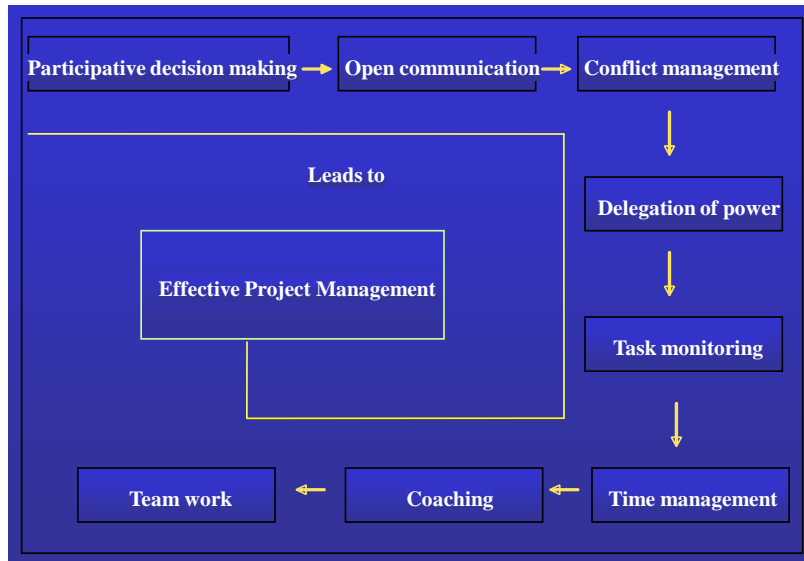
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Findings

- Research findings extend the work of Kayworth & Leidner (2001) and Slevin and Pinto (1991)
 - > both relationship & task oriented behaviour are important for more global as well as less global leaders in virtual project environment
- This style constitutes factors which are critical for effective project management as shown in the model for effective VPM

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Model for Effective VPM in Leadership Context



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Basic Principles of Leadership

- Based on the model basic principles of leadership are proposed which lead to effective VPM
 - > Provide coaching on new tasks as well as on improving performance & behaviour
 - > Do task monitoring of important tasks based on ranking from most important to least important tasks
 - > Strengthen team work by determining roles and responsibilities by involving the team

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Hypotheses of Third Phase of Research Study (Patterns of Social Intelligence and Leadership Style in Project Environment)

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Social Intelligence

- ❑ Current research contends research of
 - ❑ *Chidambaram and Bostrom (1993)*
 - ❑ *Walther (1995)*
 - ❑ *Lipnack and Stamp (2000)*
- ❑ *who suggested that virtual teams tend to have more of a task-focus and less of a social-focus*
- ❑ we propose that both task and relationship behaviours are important for virtual project teams
- ❑ this research extends the work of Kayworth & Leidner (2001) and Strang (2007)

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Social Intelligence & Leadership

- Previous studies on emotional intelligence did not consider whether emotional intelligence, as a human resource management competence, is essential for project managers (Barry & Plessis, 2006)
- Most research has been conducted in laboratory settings using student sample population (Lopes et al., 2004)
- Motivation to conduct research
 - > focusing on relationship of SI and leadership behaviour in an actual project management setting

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Proposed Hypotheses

- *Previous study suggests that SI plays a significant role in coping with the challenges of virtual project management thus contributing to effective virtual project management (Nauman et al., 2005)*
- Project managers demonstrate strong social awareness and relationship management in VPM environment
- H5: Concern for task will be positively related to social awareness
- H6: Concern for task will be positively related to relationship management

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Proposed Hypotheses

- H7: Concern for people will be positively related to social awareness
- H8: Concern for people will be positively related to relationship management
- H9: *Social awareness is higher in truly global virtual projects as compared to partly global virtual projects*
- H10: *Relationship management is higher in truly global virtual members as compared to partly global virtual members*

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Results of Patterns of SI & Leadership Style

- Correlation is conducted to have an initial look at relationship among variables
- Chronbach alpha for reliability
- Regression is employed to test H5, H6, H7, and H8 hypotheses by taking
 - > social awareness & relationship management as IVs
 - > concern for task and concern for people as DVs
- Regression was run to check multi collinearity issue

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Correlation Results

Means, Standard Deviations and Correlations

Variable	Mean	s.d.	1	2	3	4
1. Social Awareness	5.9	0.91	0.75			
2. Relationship Mngt	5.6	0.74	0.58**	0.76		
3. Concern for Task	4.2	0.66	0.35**	0.36**	0.85	
4. Concern for People	4.2	0.57	0.45**	0.41**	0.67**	0.83

**Correlation is significant at the 0.01 level (2-tailed). Coefficient alpha reliabilities are reported on the diagonal

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Correlation Results

- Correlations of constructs - all below 0.90
 - > indicates distinctness of each construct (Belsley et al., 1980)
- Social Awareness & Relationship Management are significantly positively related to:
 - concern for task
 - concern for people

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Chronbach alpha

- Chronbach alpha - high internal construct consistency
 - > alphas above 0.70 criterion (Nunnally, 1978)
- Relationship management = 0.755
- Social awareness $\otimes\otimes$ = 0.758
- Concern for task $\otimes\otimes$ = 0.836
- Concern for people $\otimes\otimes$ = 0.827

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Regression Results - Concern for Task

Results show that concern for task significantly related with

Social awareness
(H5: $\beta=.22$, $t=2.1$, $P<.05$)

Relationship management
(H6: $\beta=.23$, $t=2.2$, $P<.05$)

IVS	b	β
Social Awareness	0.160	0.221*
Relationship Management	0.208	0.233*

R2 is .163, $\Delta R2$ is 0.015, * $P<0.05$ (two-tailed)

β - RM has more influence on concern for task than SA
R2 is .163 - implies that 16.3. % concern for task is explained by IVS

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Regression Results - Concern for People

Result shows that concern for people is significantly positively related with

Social awareness

(H7: $\beta = .319$, $t = 3.2$, $P < .05$)

Relationship management

(H8: $\beta = .225$, $t = 2.2$, $P < .05$)

IVS	b	β
Social Awareness	0.202	0.319*
Relationship Management	0.175	0.225*

R² is .235, ΔR^2 is 0.013, * $P < 0.05$ (two-tailed)

β - SA has more influence on Concern for people than RM
R² is .235 - implies that 23.5. % concern for people is explained by IVS

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T- Test

- Social awareness is higher in truly global project professionals as compared to partly global project professionals

($M = 6.29$, $SD = .604$), $t(115) = 4.250$, $p < .05$

- Relationship scale is higher in truly global project professionals as compared to partly global project professionals

($M = 5.96$, $SD = .578$), $t(115) = 3.920$, $p < .05$

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Discussion

> Results of t test suggest

- Social awareness is higher in truly global project professionals as compared to partly global
- Understanding customers' needs and services found to be higher in truly global than partly global projects
- Reason for the existence of virtual project teams

> Results of t test suggest

- Relationship management is imperative for more global project leaders
- Negating the work of (Burke & Chidambaram, 1996; McDonough et al., 2001) who suggest
 - virtual team members generally report weaker relational links to team mates

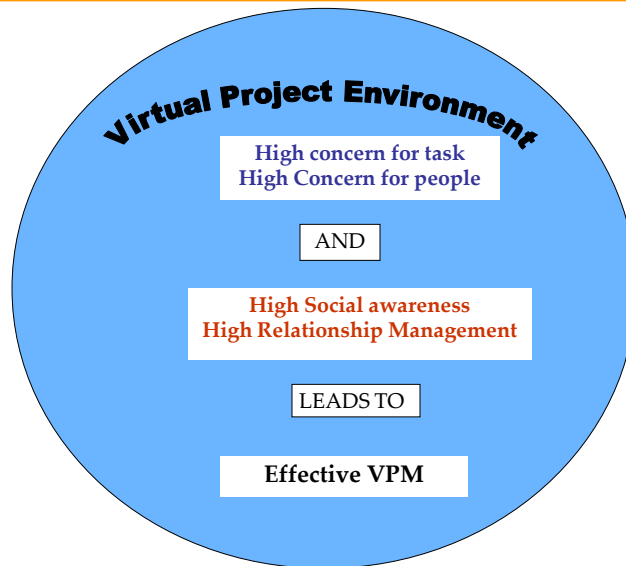
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Discussion

- Leadership behaviours which are established to be effective in collocated environments are sometimes not most effective in virtual environments (Balthazard et al., 2004)
- Truly global project environment demands high social intelligence than partly global
 - > Empathy – sensitivity to cultural differences
 - > Understanding customers' needs and services
- Higher the level of virtuality at a work place, the more there is a need for social intelligence

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Model for Effective Virtual Project Management



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Model for Effective VPM

- We propose that
 - > team management style along with high SI would lead to effective management of more virtual projects
- SI is imperative for truly global projects
 - > as it is demanded higher than partly global projects

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Hypotheses of Third Phase of Research Study (Patterns of Empowerment and leadership style in Project Environment)

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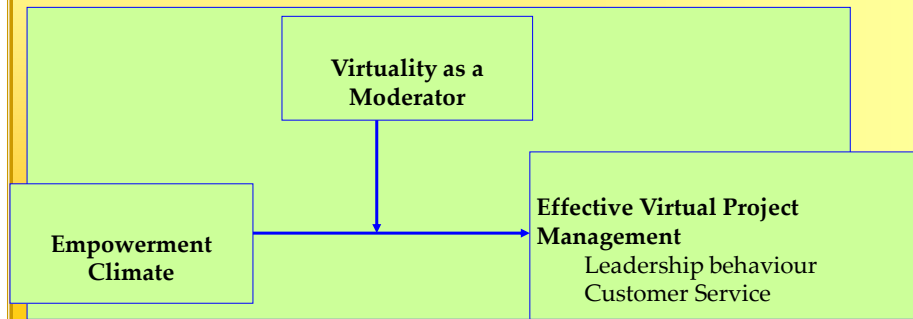
Empowerment Climate

- Members of VT are not closely supervised
 - > they function as empowered professionals who contribute value to customers and other stakeholders (Hammer, 1996)
- Empowerment in less and more global projects depends largely
 - > on its work environment which is predominantly dependent on communication and IT- reason for choosing empowerment climate
- How Empowerment Climate contribute towards effective VPM in less global and more global projects?

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Model of Effective VPM

- Kirkman et al. (2004) suggest that researchers who build models of virtual team effectiveness should include empowerment as an important predictor variable



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Rationale for Proposed Hypotheses

- Virtual team is a collection of task-driven members behaving as a temporary group, whose members are separated by geographic or temporal space (Delisle, 2003)
- The project manager has to achieve the tasks of project as well as manage his team members (Pheng & Lee, 1997)
- We propose various hypothesis to examine the relationship of empowerment climate and leadership style

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Proposed Hypotheses

H11a: Concern for task is positively related to empowerment climate in virtual projects

H11b: Concern for people is positively related to empowerment climate in virtual projects

H12a: The relationship between concern for task & empowerment climate is moderated by level of virtuality

H12b: The relationship between concern for people & empowerment climate is moderated by level of virtuality

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Empowerment Climate & Customer Service

- *Satisfying key internal and external customers is paramount to virtual team success (Kirkman et al., (2004)*
- *Research in collocated teams has demonstrated that team empowerment is positively related to customer service (Kirkman & Rosen, 1999)*
- We expect empowerment climate should enable virtual teams to better satisfy customers & provide high quality customer service
- **H13: Customer service will be positively related to empowerment climate of virtual projects**

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Cronbach's alpha Reliabilities

Variables	Reliabilities
Empowerment Climate	.94
Concern for Task	.836
Concern for People	.827
Customer Service	.73

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Correlation Results

Means, Standard Deviations and Correlations

Variables	Mean	s.d.	1	2	3	4
1. Virtuality	1.4	.5				
2. Empowerment	5.6	.96	.94			
3. Concern for Task	4.2	.66	.355**	0.85		
4. Concern for People	4.2	.57	.462**	0.677	0.83	
5. Customer Service	6.2	.83	.506**	0.371**	0.410**	.73

**Correlation is significant at the 0.01 level (2-tailed). Coefficient alpha reliabilities are reported on the diagonal

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Regression Results

To test Hypotheses H11a, H11b and H13

Variables	b	β	R2	$\Delta R2$
1. Concern for task	.244	.355*	.126	0.008
2. Concern for people	.278	.462*	.213	0.006
3. Customer Service	.438	.506*	.256	0.007

*P<0.05 (two-tailed).

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Regression Results

- Empowerment Climate is significantly related with
 - Concern for Task
 - > (H11a: $\beta=0.35$, $t=4.0$, $P<0.05$)
 - Concern For People
 - > (H11b: $\beta=0.46$, $t=5.5$, $P<0.05$)
 - Customer Service
 - > (H13: $\beta=0.51$, $t=6.2$, $P<0.05$)

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DISCUSSION OF RESEARCH FINDINGS

Discussion



- This research extends Kirkman & Rosen, 1999; Kirkman et al., 2004 work by establishing link
 - > between empowerment climate & customer service in project teams with varying degree of virtuality
- Both psychological empowerment & empowerment climate enhance
 - > customer service

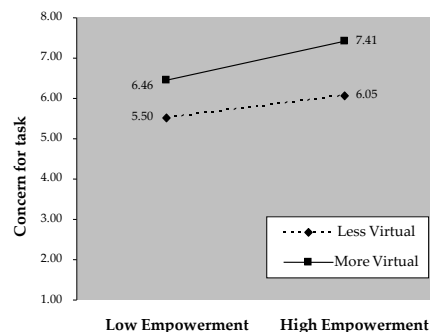
Discussion

- Malone (1997) suggested
 - > leadership fosters empowerment
- Findings of this research extend the work of Malone (1997) by demonstrating
 - > that empowerment climate facilitate effective leadership
- There is a demand for higher people's concern initiated by high empowerment in more virtual projects than less virtual projects

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Moderating Role of Virtuality

- Moderation occurs when the effect of an independent variable on a dependent variable varies according to the level of a third variable, termed a moderator variable, which interacts with the independent variable (Baron & Kenny, 1986)



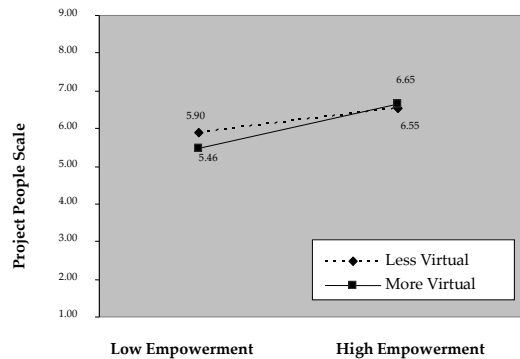
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Moderating Role of Virtuality

- This interaction is consistent with Hypothesis 11a
 - > *empowerment climate is significantly positively related to concern for task in less global and more global projects*
- virtuality (partly global, truly global) has no significant moderating affect on the relationship between
 - > *empowerment and concern for task*
- H12a is not accepted

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Moderating Role of Virtuality



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Moderating Role of Virtuality

- Hypothesis 11b predicts that
 - > empowerment climate is significantly positively related to concern for people in less global and more global project environment and this is supported by the interaction effect as well
- Graph shows
 - > empowerment is higher in more global projects than less global projects thus supporting hypothesis H12b
- Virtuality (less global, more global) has a significant moderating effect on relationship between
 - > empowerment & concern for people

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Discussion

- This research extends Kirkman & Rosen, 1999; Kirkman et al., 2004 work by establishing link
 - > between empowerment climate & customer service in project teams with varying degree of virtuality
- Both psychological empowerment & empowerment climate enhance
 - > customer service

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Discussion

- Teams that are highly empowered should be more likely to develop shared leadership as a result of the autonomy & meaningfulness of the work they are doing (Kirkman & Rosen, 1997)
- Shared leadership derives its meaning from
 - > concern for task and concern for people (Bales, 1953)
 - > this research supports that both are significantly positively related to empowerment climate in virtual projects

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Discussion

- Malone (1997) suggests
 - > leadership fosters empowerment
- Findings of this research extend the work of Malone (1997) by demonstrating
 - > that empowerment climate facilitate effective leadership
- There is a demand for higher people's concern initiated by high empowerment in more virtual projects than less virtual projects

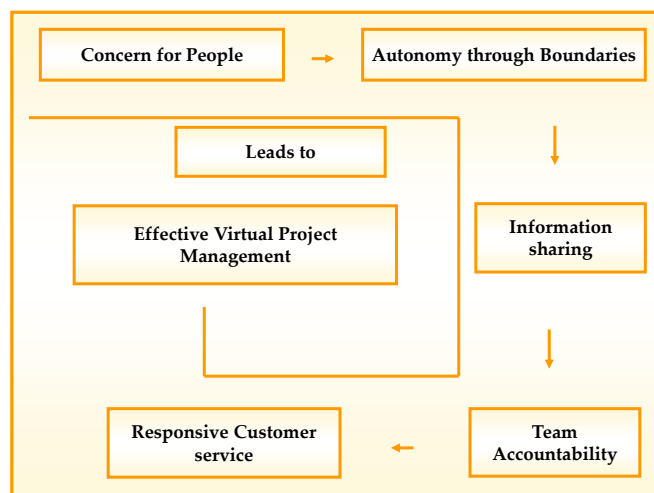
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Model for Effective VPM

- It is proposed
 - > high empowerment along with high concern for people would facilitate effective VPM

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Model for Effective VPM



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Limitations

- Research uses self-report data – common source bias
- Analysis is done at two levels of virtuality
- More levels of virtuality are not identified & analyzed



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Contributions - Academic Perspective

- Extends the work of Kayworth, Strang, Kirkman, Malone
- Several research studies on virtual teams were conducted however there is no study on virtual teams from EI, empowerment climate and leadership style perspective
 - > to determine factors for effective VPM taking project management professionals as a sample
- Human side in project management is analyzed
- Models for effective VPM are suggested

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Contributions - Industry Perspective

- Contributing factors to effective VPM are identified
- Recommendations for process improvement in VPM are given
- Role of empowerment climate in addition to psychological empowerment is emphasized for enhancing customer service
- Research yields interesting conclusions that help organizations to manage their global virtual team projects more effectively by
 - > creating EI awareness and providing a supportive Empowerment Climate
- The outcome of research is valuable to Hr of organizations (IT & Telecom) engaged in VPM within Pakistan and other countries
 - > Training and Hiring

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Thank you!

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Q & A

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SELF-MANAGEMENT

- Individual trustworthiness, conscientiousness, achievement orientation and optimism (70%)
- Demonstrated self-management was proportionally much higher (91%) in VPM environment
- More self-management skills must be employed

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