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Green Bay, WI (USA)
Email: russm@uwgb.edu

IJMB c/o IAMB Office
3010 Medway Street
Silver Spring, MD, 20902 (USA)
Email: russm@iamb.net

Associate Editors

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Titular Professor
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Email: fblasco@emp.ucm.es

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Email: jan.schaaper@bem.edu

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IAMB Office
3010 Medway Street
Silver Spring, Maryland 20902 (USA)

Editorial Board Members

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Email: berrygrr@ccsu.edu

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Email: vmoleroa@ccee.ucm.es

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Faculty of Economics, University of Indonesia
Jakarta (Indonesia)
Email: bsuetjipto@hotmail.com

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Assistant Professor
Department of Management
Thompson Rivers University
Kamloops, BC (Canada)
Email: wsong@tru.ca

Pedro Soto-Acosta,, Ph.D.

Associate Professor
Department of Management and Finance
University of Murcia, Espinardo Campus
Murcia, Spain
Email: psoto@um.es

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From the editor

Introduction

It is with great pleasure that I welcome all of you to the sixth issue (Vol. 4, No. 1) of the *International Journal of Management and Business* (IJMB). In this editorial I will provide reminders of potential additions of new types of articles to the journal and of our request for proposals for special issues and their guest editors, ponder on the near future of IJMB, list IAMB future conferences, and introduce the first issue of our 4th volume.

New additions to the journal

Since its commencement, the IAMB published three types of articles: research papers, case studies and feature articles. All formats are peer reviewed. We invite our readership to consider new options, such as book reviews and opinions for future submission to IJMB.

Once again, it is a real pleasure for this editor to thank his team without whom this and previous issues would not have the qualities and the scope of subjects covered. I want to thank my Associate Editors: J. Michael Geringer, Maria Francisca Blasco Lopez, Marc Eulerich, Jan Schaaper, Zu'bi Al-Zu'bi, and Shmuel Batzri; and a large team of reviewers and the Editorial Board Members for their ongoing participation and contribution to the journal.

I also want to take this opportunity to thank Shmuel Batzri, Ph.D., the founder and the organizer of IAMB, for his continuous and unwavering support and Kelly Anklam for her continuing assistance in editing the papers. I also wish to thank the Frederick E. Baer Professorship in Business at UWGB for partial financial support.

Request for proposals for special issues and their guest editors

Once more we want to announce a request for proposals for special issues and their guest editors. We continue to look for subject matters that will strengthen the in-depth knowledge exchange between disciplines and between international academic communities by providing high-quality and novel contributions organized by renowned experts in the area that have the potential to attract articles of the highest quality.

The subject matters should be similar to those covered by the journal and are broadly defined as management and business issues that are of interest to an international academic and practitioner audience. The following subjects serve as broadly defined areas of interest:

- Organizational Studies
- International Business
- Strategic Management
- Marketing Management
- Technology & Innovation Management
- Human Resource Management
- Education & Training

- Management of Social Issues
- Management Studies
- Research Methods
- Auditing & Control
- Finance & Accounting
- Corporate Governance
- Not-for-profit Management

The only requirement regarding content is that articles must include implications for an international audience. For some subjects this will be a natural inclusion. For the others, the authors are expected to add and elaborate on such implications. In either case, the relevance and the importance of the conclusions and implications should be apparent to non-specialists.

For more information about the request for proposal for special issues and their guest editors see pp. 8-9, in Vol. 2, No. 1, available at http://www.iamb.net/IJMB/journal/IJMB_Vol_2_1.pdf

The near future for the IJMB

We are presently on a track to annually publish two issues of the journal. Special issues will be published in coordination with their editors.

The Journal continues to expect submissions for publications from the participants in IAMB conferences, as well as from other high quality scholars in the global academic and practitioners' communities. We encourage submission of traditional research papers (empirical and theoretical) as well as feature articles, case studies, research notes, book reviews, opinion papers, and spotlight on practice papers.

To support our vision, we are including abstracts in multiple languages. This is also the place to thank wholeheartedly our translators for their excellent work, and to express interest in inclusion of additional languages that are presently missing from our journal. Specifically, we are still looking for translators of abstracts to Chinese, Japanese, Korean and Russian. Serious consideration will be given to additional languages if proposed.

If additional information is needed, you are encouraged to contact the editor.

Future conferences

We currently have conferences scheduled for Washington, DC – November 6-7, 2013; São Paulo, Brazil, April, 2014; and Rome, Italy - September 17-19, 2014. More updated information can be found on the IAMB main website page at www.iamb.net.

This issue of IJMB

We are extremely proud to include in the first issue of the fourth volume *five* outstanding papers written by highly esteemed colleagues, *four of* which won paper awards. The first, written by Hensler *et al.*, won the Best Student Paper Award at the 12th IAMB conference in Warsaw, Poland

2012; the second, written by Pierce and Hansen, won the Best Applied Paper Award at the 15th IAMB conference in Lisbon, Portugal 2013; the third, written by Monika Glonoka, won the Best Young Scholar Paper Award at 12th IAMB conference in Warsaw, Poland 2012; and the fourth, written by Agata Chudzicka-Czupała, won the Best Applied Paper Award at 12th IAMB conference in Warsaw, Poland 2012.

A few of the papers went through *nine* reviews over a *fourteen* month period, while others went through *five* reviews over *twenty-two* months. The acceptance rate as of today is 19.8%. All the papers in this issue were peer reviewed.

The first paper written by **Philipp A. Hensler, Tony Lingham, and Sheri Perelli**, titled “Learning from Disruptive Market Events: A Study of Financial Advisor Behavior” [from USA] is the winner of the Best Student Manuscript Award. The paper examines the learning of financial advisors during major discontinuous change resulting in a major market disruption. The academic literature is scarcely covering the learning of financial advisors, specifically regarding their assets allocation process in a highly dynamic environment. The static portfolio construction process, whereas an efficient, rational and impressively successful approach for allocating client assets in relatively static markets, may subsist less so in disruptive markets when dynamic and timely financial advisor involvement may be required. The authors conducted semi-structured interviews with 30 senior US financial advisors generating insights about their allocation decisions prior to and after the 2008 financial crisis. The authors’ key conclusion is that the post-crisis endurance in beliefs and behaviors can be attributed to a persistent belief in recurring historic patterns, unwavering trust in traditional model assumptions, and proactive time horizon management. The authors also found significant differences in cognitive capacity and perceived locus of control differentiating between the majority of the financial advisors which found it difficult to adopt to the needed changes from the relatively few who have adopted more dynamic portfolio management approaches following the 2008 crisis. This study’s findings should be of interest to financial industry professionals as well as to the broader audience interested in decision making in uncertain environments and discontinuous change. The paper is a worthy example of the use of individual and group level aspects of cognitive micro-behavioral constructs in the financial management discipline, and expanding the use of the discipline of decision making into new application by using qualitative research methods.

The second paper written by **Eugene Pierce and Sean W. Hansen**, titled “Technology, Trust and Effectiveness in Virtual Teams” [from USA] is the winner of the Best Applied Manuscript Award. The paper studies the characteristics of effective leaderships in virtual teams, deemed critical for success of business and governmental organizations operating in a global context. Leading an effective virtual team by means of technology is seen here as a key issue, since virtual teams present opportunities for cost savings and entry to global expertise. The authors explore the relationships between team leader personalities, team trust, and team perceived effectiveness by surveying 873 engineers. The research findings suggest that a virtual team leader’s personality has a major impact on the team’s perceived effectiveness although this effect is mediated through cognitive and personality based trust. Most interestingly, the authors suggest that the traits of agreeableness and openness in dealing with the suggestions and contributions of team members could be effectively fostered and improved by training in organizational leaders, whereas extraversion and emotional stability might be more difficult to induce through formal training. They also recommend that

organizational leaders select virtual team leaders who are organizationally diligent and task oriented since they might be more effective at fostering the adequate structure for virtual team trust building processes. This paper is a welcome contribution to the growing body of literature discussing leadership in the new technology stimulated environment and provides for real-life practical advice to both organizational and team leaders on improving team effectiveness.

The third paper written by **Monika Golonka**, titled “Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?” [from Poland] is the winner of the Best Young Scholar Paper Award. The paper discusses the impact of culture on alliance formation. The author analyses the alliance formation within the global ICT (Information and Communication Technology) industry, which is one of the fastest-growing industries driving changes in other market sectors. This study empirically tested the hypothesis that ICT firms from collective cultures that are characterized by a “relational mindset” form different types of alliances than firms from individualistic cultures. Specifically, such firms develop exploratory alliances with culturally diverse partners, forming multiple weak alliances, in comparison to more exploitative alliances formed with more similar minded partners. The author is using a sample of 30 leading global ICT giants with 10,247 alliances in their alliance portfolios. This finding is then supported by a case study using an example of two firms’ alliance portfolios: one from China and one from France. The paper is a worthy example of the use of quantitative and qualitative method when conducting an international study that is merging cultural and business strategy analysis. The implications for business decision makers are significant in terms of how to use alliances and what to look for when they are pursuing a portfolio of alliances both in terms of potential partners as well as in term of the expected outcomes.

The fourth paper written by **Agata Chudzicka-Czupala**, titled “Ethical Ideology as a Predictor of Ethical Decision Making” [from Poland], is the winner of the Best Applied Paper Award. The paper investigates the role of individual ethical ideology as a predictor of moral judgement and ethical decision making at work. The author studies moral judgement and ethical decision making using three different points of view: the observer of an unethical behaviour, the victim, and the offender. Specifically, the author studies the recognition of the behaviour as an unethical issue, the perceived magnitude of emotional consequences for the victim, and the intended behaviour. The research uses two scales that were developed by the author: The Ethical Ideology Scales (EIS) and The Questionnaire of Moral Judgement and Ethical Decisions (QMJED). Using a sample of 326 employees in Polish organizations and cluster analysis as a statistical method, the author finds two clusters in terms of ethical ideology, that have impact on the individual’s ethical choices. The most significant differences could be noticed between the survey participants with regard to the acceptance of the Machiavellian principle and of the narcissistic principle, thinking in terms of costs/benefits, idealism, relativism and altruism. The author’s findings suggest that some individuals may be more sensitive to harm of another than others, for whom benefits and costs are more important. The results also prove that individual readiness to help may be a question of the ethical ideology of the person. The implementation of high ethical standards and enforcement of the code of ethics constitute an element of caring for employees and for customers and should be used, according to the author, as training for staff development purposes. This paper suggests that individual ethical philosophy is a significant predictor of individual ethical decision making and contributes to the growing body of literature discussing corporate social responsibility in an international context as an important aspect of companies’ responsibilities and strategies.

The last and fifth paper, written by **Elizabeth F. Cabrera**, titled “Using the Job Demands-Resources Model to Study Work-Family Conflict in Women” [from USA] studies work-family conflict. Using the Job Demands-Resources model and surveying online 662 women working in diverse industries in the US, the author’s findings support the manifestation of a dual process where job demands have an effect on work-family conflict and job resources, specifically job control and supervisor support, impact job satisfaction, affective commitment, and turnover intentions. The author also found that simultaneously, job resources directly affect work-family conflict. The most interesting finding of the study is that work-family conflict mediates the relationships between job demands and job satisfaction, affective commitment, and turnover intentions. An additional practical guidance to organizations is provided by indicating that job control and supervisor support can be utilized to mitigate the negative effects of work-family conflict, especially in international organizations where the pressure on employees could potentially be even higher. Employees can manage increased job demands much better if they have the autonomy to decide when, where and how to perform their jobs. Having more control over their work lets them organize their job in a way that reduces potential work-family conflict, which is critically important for women that are often care-takers in their families. The study insinuates potential venues of managerial training, suggesting that managers might benefit from providing higher autonomy to employees and thereby reducing employee turnover.

I hope you will agree that our journal is a valuable academic resource, and you will consider submitting a paper to the journal, reference appropriate papers in your own work, as well as promote it among your colleagues. I am looking forward to an exciting future and I hope to hear from you if you have comments or questions.

Meir Russ

Learning from Disruptive Market Events: A Study of Financial Advisor Behavior

Philipp A. Hensler*, Tony Lingham, Sheri Perelli

Case Western Reserve University, philippensler@mac.com

Abstract

The static portfolio construction process, while an efficient, rational and stunningly successful strategy for allocating client assets in well behaved markets, may prove less so in disruptive markets when active financial advisor intervention may be necessary. The literature is silent about how financial advisors learn from market dislocations and how market dislocations affect their asset allocation practices. Semi-structured interviews with 30 senior US financial advisors yielded insights about their allocation decisions prior to and after the 2008 financial crisis. Post crisis persistence in beliefs and behaviors are attributable to an enduring belief in recurring historic patterns, unwavering reliance on traditional model assumptions and active time horizon management. Furthermore, striking differences in cognitive capacity and perceived locus of control distinguish the post-2008 practice of most financial advisors from the relatively few who have adopted more dynamic portfolio management approaches.

Findings should be of interest not only to financial industry professionals but to the clients who rely on their advice.

Keywords: Financial crisis, financial advisors, disruptive event, individual learning, organizational learning

Introduction

The 2008 financial market crisis put an abrupt end to the honeymoon period of static asset allocation models (Solow, 2009) which were dogma for financial planners during a time of steadily rising markets and low volatility (Mishel, Mishel, Bernstein, & Boushey, 2003; Jahnke, 2004). With the most popular asset allocation portfolios losing 17% to 40% in 2008 (Ibbotson Associates, 2009), more tactical and adaptive allocation strategies have been suggested (Waldert, 2010).

Most asset managers, however, continue to rely on the tenets of Modern Portfolio Theory proposed by Markowitz (1952, 1959), Sharpe (1964), Lintner (1965), and Fama (1965) when managing clients' money (Horseshmouth, 2008). Unlike some large institutional managers, who employ dynamic allocation strategies, financial planners use the static "buy and hold" approach as it is easy to market and implement (Jahnke, 2004). However, while static allocation models make sense in stable and predictable environments (BNY Mellon Wealth Management, 2009), they are very sensitive to dramatic changes such as the 2008 market dislocation (Jahnke, 2004) when financial advisor intervention to protect clients' assets is paramount. Unfortunately, there is insufficient knowledge about how financial organizations and advisors respond to and perform in highly volatile and disruptive market situations.

The claim that unexpected incidents or failures are a prerequisite for learning has found widespread expression in social psychology and organizational behavior literature (Sitkin, 1992; Zakay, Ellis, & Shevsky, 2004). How such experiences are transformed into knowledge (Kolb, 1984) and how this knowledge precipitates change in behavior or mental models (Argyris & Schön, 1978; Huber, 1991; Friedlander, 1983) has not been systematically researched with respect to financial advisors. As a consequence, important questions such as whether and to what extent the 2008 market dislocation triggered advisor learning and what advisors are doing differently to better serve clients remain unanswered. Also less researched is whether the environment in which advisors operate facilitates adaptation to new situations.

To bridge this gap, we designed an exploratory study based on semi-structured interviews with 30 long tenured US financial advisors. We sought to generate a grounded theory about how, and to what extent, advisors learn from and adapt to unexpected market dislocation. We did so through rigorous analysis of rich narratives comparing and contrasting client communication and asset allocation strategies prior to and after the 2008 financial crisis. Our work contributes to the literature on learning from disruptive events in the unique context of financial advisors. It should be of interest to financial planning firms looking to better develop advisors who can respond to turbulent economic events.

Literature Review

Empirical research on the role of financial advice in portfolio composition is scarce (Jansen, Fischer, & Hackethal, 2008). Most research in this field focuses on recommendations from security analysts, but few studies have evaluated the influence of professional financial advice (e.g., Avery, Bostic, Calem, & Canner, 1997; Elton & Gruber, 2000).

Over the last 30 years, most financial advisors have embraced the rational choice assumption of Modern Portfolio Theory as the foundation of their financial planning work, despite extensive evidence that households deviate considerably from rational investment behavior (Goetzmann & Kumar, 2004, 2008; Hirshleifer, 2001; Korniotis & Kumar, 2005). Rationality has its limitations as decision makers are bounded by their values and unconscious reflexes, skills, and habits (Simon, 1956) including cognitive and affective biases (De Bondt & Thaler, 1985; Hirshleifer, 2001; Kahneman & Tversky, 1973, 1979, 1981; Shefrin & Statman, 1994; Slovic, 1972). The world is not perfectly rational and cannot be explained by mathematical models alone (Gigerenzer, Todd, & ABC Research Group, 1999).

Learning from Disruptive Events

When facing the unexpected, sensemaking becomes difficult, because the existing framework is lost, unusable, or inappropriate to the situation (Weick, 1995). Especially challenging are circumstances or events that are “high-impact, low probability” (Hale, 1997) or what Taleb (2011) called “Black Swans.” While gradual change is the paradigm in finance, history proceeds by jumps, accidents, the unseen, and the unpredicted (Taleb, 2011), which makes the past an unsuitable guide for the future. Perrow (1984) notes that accidents in complex systems are unavoidable because innocent and seemingly unrelated events accumulate and align to create major malfunctions that produce results difficult to comprehend or control. But Cyert, and March (1992) argue that organizations can develop behaviors that help them adapt.

Learning from Failures and Successes

While repeated reliance on successful practices can create competitive advantages (March, 1991), persistence may prove detrimental when the environment changes. Past competence becomes a liability when adaptation to a new situation is needed and the new reality is incompatible with old mental models (Argyris, 1991). Experts are prone to overconfidence when predictability is low and evidence is ambiguous, as in rapidly changing environments (Griffin & Tversky, 1992). Extensive research on overconfidence shows that people attribute successes to their skills, and failures to external events perceived to be outside their control (Odean, 1998). According to Kolb (1984), unexpected events prompt a sense of discomfort and perplexity, which motivates change or stimulates growth. Louis and Sutton (1991) suggested that unexpected, unpleasant, or atypical events trigger hypothesis testing, intensify the attribution process, and stimulate increased sensemaking efforts.

Individual Learning

The revision of old routines involves cognitive elaboration of experiential data (Busby, 1999) and may result in new and significant insights and awareness that can reshape mental models (Friedlander, 1983) and lead to behavioral changes (Huber, 1991). The literature refers to this as reflective learning (Boud, 1985; Boyd & Fales, 1983) or learning from experience (Lewin, 1951; Dewey, 1916). Knowledge is not generated by repeating the same experience several times thereby becoming highly proficient at one behavior, but by reflection during which knowledge is continuously created and re-created and cognitive change results (Kolb, 1984). While highly standardized routines may be efficient under stable conditions (Hannan & Freeman, 1984), they can be dangerous if conditions change unexpectedly (Weick, Sutcliffe, & Obstfeld, 1999).

However, learning from past experiences is subject to interpretation errors and biases (Ariely & Zakay, 2001; March, Sproull & Tamuz, 1991) – such as confirmation bias (Brehmer, 1980; Feldman & March, 1981; Feldman & Pentland, 2003), the tendency to overlook information that is not compatible with a priori assumptions, or hindsight bias (Fischhoff, 1975).

Organizational Learning

Organizations learn through the experiences of members by encoding experiential lessons into organizational norms and routines (Argyris & Schön, 1978; Nystrom, Starbuck, & Hedberg, 1981). The capacity to learn from experience leads firms to gradually adopt routines and strategies that produce favorable outcomes and alternative options (March, 1981). Unfortunately, resulting specialization can lead to a “competency dilemma,” when favorable performance is based on an inferior process (Cooper & Schendel, 1976). If firms do not detect and improve the flaws in the process their competitiveness will be affected, particularly in fast changing environments (Levitt & March, 1988) as demonstrated during the recent crisis by many advisors who exposed clients to excessive risk by building portfolios on unrealistic return assumptions. Sitkin (1992) suggests that when the environment is changing rapidly, organizational focus should be on reliability and resilience to counterbalance a narrow focus on short term performance.

Methods

Design

We conducted a qualitative study using semi-structured interviews to develop a grounded theory (Corbin & Strauss, 2008) about how learning from disruptive events affects financial advisor behavior. A qualitative approach using grounded theory was appropriate for this study as prior

empirical work on financial advisor learning from disruptive events is rare. Grounded theory, an explorative, iterative and cumulative way of building theory (Glaser & Strauss, 1967) involves the constant comparison of data and theoretical sampling (Corbin & Strauss, 2008). Constant comparison is a rigorous method of analysis that involves intensive interaction with the data (Maxwell, 2005) to compare and contrast emerging with already emergent ideas and themes. Simultaneous collection and processing of data (Lincoln & Guba, 1985) lead to the generation of firmly grounded theory. Theoretical sampling refers to ongoing decisions about who to interview next and how. As the constant comparison of data yields insights about phenomena of interest, the sample and the interview protocol are continuously refined.

Sample

Our sample consisted of 30 US financial advisors with at least 10 years of experience in financial planning. Fifteen advisors (50%) worked for national wirehouses, twelve (40%) for the largest independent firms and the remaining 10% were bank advisors. Eighty percent were located in the North East (with 67% in the greater New York area (Manhattan, Long Island, New Jersey) and 13% in Boston), 13% on the West coast (10% in California and 3% in Washington) and 7% in the Midwest, more specifically the metropolitan Chicago area. Most (90%) were male. All advisors were college graduates, the majority with an economics, business or finance degree. Approximately half carried additional finance related designations, such as a CFA, CFP or CFRP (certified financial retirement planner). Respondents were selected initially from the principle researcher's professional network. Thereafter, a snowball technique was adopted to solicit respondents as indicated by themes emerging from the data.

Data Collection

Data was collected between May and July, 2011. The principle research method was semi-structured interviews of approximately 60 minutes duration. Most (22) were conducted in person at or near the advisor's office and the remainder (8) by telephone. All were digitally recorded. Participants were assured of confidentiality. A reputable commercial transcription company transcribed the interviews. The interviews focused on advisor interactions with clients prior to and after the 2008 financial crisis. Following a basic introduction about the research project, we asked a number of open-ended questions. Questions were open-ended to elicit rich and specific narratives and we used probes when needed to clarify and amplify responses. First, informants were invited to talk about themselves, their backgrounds, and their work followed by questions about the most surprising facets of the recent market dislocation. We asked them to describe a recent specific client interaction and explain in detail how they managed the client's money and communicated with him/her. We asked them to then describe a specific meeting with the same client before and after the 2008 financial crisis and to compare and contrast the two experiences in detail. For both instances we used probes to provoke specific information about communication and portfolio construction processes.

Data Analysis

Consistent with a grounded theory approach, data analysis commenced simultaneously with data collection. The audio recordings of each interview were listened to several times and the transcripts of each interview read repeatedly. Three stages of rigorous coding then ensued. First, all transcripts were "open-coded," a process that required the researcher to identify fragments of data with potential interest (commonly called "codable moments" (Boyatzis, 1998). Open coding, which can be compared to a brainstorming process for the analysis of data (Corbin & Strauss, 2008),

requires detailed line-by-line readings of each transcript. These were captured, roughly labeled, and compared to, and categorized with, similar fragments from other interviews. In a second phase of coding (“axial coding”) these categories were further redefined as ideas, and themes began to emerge from the data. Finally, in the third phase (“selective coding”), we focused on key categories and themes that then yielded our findings. The analysis involved both manual coding and the use of qualitative data analysis software. Throughout this process, we composed interpretative memos (Maxwell, 2005) and notes reflecting “the mental dialog between the data and the researcher” (Corbin & Strauss, 2008).

Findings

All of the 30 financial advisors in our sample acknowledged the events of 2008 as the most disruptive in their careers in the financial industry. Yet, surprisingly, only six (20%) described the crisis as a “*game changer*” that powerfully influenced their practice. Instead, 80% (24 respondents) described their interaction with, and portfolio management for, clients as fundamentally unchanged from the pre 2008 period. The data revealed five similarities among US financial advisors who persisted in client practices in the aftermath of the 2008 financial market dislocation:

1. Enduring Belief in the Recurrence of Historic Patterns

The majority of advisors in our sample (80%) described the 2008 crisis as the low point of a normal market cycle which they expected would soon revert to equilibrium conditions. These respondents, convinced that “*history always repeats itself*” and “*the same cycle happens over again,*” predicted an eventual market rebound similar to previous, albeit less dramatic, market dislocations. In their view, abruptly changing clients’ long term asset allocations would jeopardize the recovery potential of their portfolios once markets reverted to historic means.

Of the six advisors who acknowledged substantially changing their practices, three described the events of 2008 as a “*game changer*” that created “*new market realities.*” These advisors emphasized the importance of continuous – sometimes radical – adaptation to better service clients.

2. Unconditional Belief in Rational Choice Models

Most respondents (80%) stressed the importance of sticking with a routine process and adhering to models based on rational choice assumptions even, they reported, if some of those assumptions might have been violated during the market crisis. These advisors described 2008 as a confluence of rare events during which “*nothing seemed to work.*” One advisor described the situation as “*a perfect storm*” and another as a one-off event unlikely to reoccur: “*...I still tell people we may never see this again in our lifetime. That’s how pivotal it was*”. Surprisingly, the severity of the crisis did not dampen advisors’ faith in static allocation models and most respondents in the majority group (20 of 24) rationalized 2008 as a mathematically improbable event with no bearing on the future validity of planning models. They also highlighted the importance of maintaining a routine process and keeping clients committed to an agreed upon plan to sustain them in extremely volatile markets. Successful experience with a traditional static approach increased their commitment to it.

The six advisors (20%), who proactively changed their practice, however, described shortcomings in traditional approaches to portfolio management and criticized colleagues who adhered to it. These advisors reported a lack of commitment to the traditional buy and hold approach to investing and admitted they now manage their clients’ assets differently. While two of the six revealed that “*strategic asset allocation still matters,*” they described approaching it more

dynamically. They also described the limitations of computer generated allocations based on past empirical data and stressed the danger of relying too much on them.

3. Reframing Time Horizon

Most (26) of our 30 advisors (including two that changed their practice in response to the events of 2008), emphasized the influence of “time horizon” in their advice to clients. Some advisors expressed an unconditional long term view: *“I’m not managing your money for the next 12 months, so if you’re down in 12 months, you can call me but I’m gonna say ‘so what... I’m managing your money for your lifetime, and I’m trying to basically stop you from you’”*, while a veteran advisor simply stated that: *“...there is no other way”*. Others recognized the shortcomings of their long term approach when it came to responding to unexpected dislocations: *“...I think we tend to manage so much for the long term that it’s very difficult for us to make a decision”*. In the absence of an alternative solution, however, staying put and trusting the long term was reported to be the most practical strategy for the majority of advisors. Four advisors alluded to the time horizon with respect to being focused on the present when advising clients, emphasizing the importance of “staying in the moment” and adjusting their planning horizons to those of clients: *“... clients don’t have the same timeframe that the model has ...”*

4. Cognitive Capacity

All but one of the advisors who did not change practices defined the market dislocation as complex and extremely difficult to deal with: *“...it was overwhelming for everybody”*. An advisor in Westchester described the events as *“paralyzing”* and himself *“being frozen”*. In describing peers’ behavior, another remarked: *“...a lot of guys ...were absolutely mystified, flummoxed, panicked...”*, which restricted the capacity to learn from the current crisis and reduced adaptive capacity with respect to future crisis.

In contrast, four of the six advisors who changed their practices described efforts to reduce the complexity of the crisis by taking small bets. One described *“just putting (my) toe in the water... and... seeing the way it behaves and learn(ing).”*. Three of the minority advisors stressed the importance of being proactive, as one female advisor on the West Coast stated: *“...this sounds risky, but I would rather be earlier than a little bit later.”*

5. Locus of Control

Asked to recall specific recommendations to clients during the crisis, the majority described events as outside of their control. Typically, they reported *“... markets are gonna do what they’re gonna do. They’re gonna go up, and they’re gonna come down,”* and *“there’s nothing you (can) do about it”*.

Advisors reported some solace from the fact that they were not alone in their fate and that the majority of financial advisors suffered similarly. *“I mean if it’s wrong, then we’re not the only ones wrong, I guess is what I would say. But I still would feel confident if everybody around me...is telling me that we’re going to be okay....”*

Six advisors didn’t delegate responsibility for taking action to somebody else. Among them, three financial advisors were especially explicit in expressing their sole responsibility to protect clients’ portfolios. These respondents reported a heightened alertness for, and more proactive scanning of, the environment for clues about how to better position their clients during difficult times. *“I ...pay attention to everything”*.

Discussion

We wondered how and to what extent the 2008 crisis impacted the professional behavior of US financial advisors, what they learned from it, and how it affected their portfolio construction practices. All advisors in our sample were deeply shaken by the events of 2008 and struggled to make sense of them. They described a tension between reliance on financial models that had been a mainstay for decades and evidence of their potential obsolescence.

According to Festinger's Theory of Cognitive Dissonance (1957), holding conflicting views of the world causes discomfort which may be reduced by changing one's attitudes and beliefs, blaming others, or denial. The majority of our sample adopted the latter responses, framing the events of 2008 as a statistical anomaly that did not dictate change. By choosing to understand the 2008 crisis as a recurrence of historic patterns or market cycles and assuming that the market would eventually "heal itself," these advisors could justify adhering to practices that had yielded successful results in the past – a behavior we refer to as "collective adherence". Furthermore, the overwhelming complexity of the crisis "froze" many advisors, caused them to rely on "powerful others" to resolve it, or they took comfort in the view that their peers were equally challenged by the unfolding events. They sought shelter from this threatening environment in group cohesion, a reaction we label "collective uniformity."

Collective Adherence

Dane (2010) proposes that inflexibility arises most directly, not from expertise, but from cognitive entrenchment – a high level of stability in one's domain schemas. Stable schemas predispose individuals to respond consistently and, thus, reduce their adaptability to a novel situation. Experts can escape entrenchment by engaging in a dynamic environment. While we found strong cognitive adherence among financial advisors, we did not find evidence that exposure to a dynamic environment (which the financial market unquestionably is) reduced entrenchment. On the contrary, we observed an active and collective resistance to change the more dynamic the environment became. "Collective adherence" manifested in active defenses of long held assumptions that had historically been effective. We identified three distinct beliefs; a) the enduring belief in the recurrence of historic patterns, b) the unconditional belief in rational choice models and c) the belief that extending the time horizon always delivers the right results.

1. Enduring Belief in the Recurrence of Historic Patterns

Portfolios are traditionally built on a mean/variance optimization framework (Markowitz, 1952) which assumes that outcomes are normally distributed around a historically observed mean. A fundamental assumption of this model is that returns oscillate around that mean and create somewhat predictable patterns. Our data revealed most advisors strongly believe in these patterns or cycles and in the notion of mean reversion. This is not surprising as there has been little in the last 30 years to challenge this consensus view of generally benign markets interrupted only by relatively brief and isolated downturns (Black Monday, 1987; Emerging Markets Debt Crisis, 1993/94; Asian Crisis, 1997/98; Technology Bubble, 2000/01; Sub-prime Mortgage Crisis, 2008). These sharp corrections could have served as warning signs, but strong rebounds repeatedly reinforced advisors' beliefs that staying the course was ultimately the best strategy. Passivity was rewarded as the market eventually reverted to its mean, bailed out underperforming portfolios and, as a consequence, no adaptation or learning was deemed necessary.

As Nystrom, Starbuck, and Hedberg (1981) observed, managers often do not respond to environmental signals that suggest the need for strategic change. Similarly, our respondents failed to

significantly change their portfolio construction approach. Baumard & Starbuck (2005) propose that "events that appear rare to academic observers likely appear unique to learners, and uniqueness impedes learning." A catastrophic crisis is, by definition, a unique event and thus any learning from it is likely to be considered neither relevant nor applicable in other settings (Wilkinson & Ramirez, 2010). In the aftermath of the 2008 crisis, our advisors preferred to focus on historically successful outcomes, rely on simplistic assumptions, and steadfastly repeat standard processes to determine clients' optimal portfolio allocations.

2. *Unconditional Belief in Rational Choice Models*

Research suggests past success inhibits learning and adaptation (March, 1991; Levinthal & March, 1993). The emergence of standardized asset allocation software some 20 years ago made the construction and monitoring of portfolios very efficient and the static "buy and hold" approach delivered impressive results during the secular bull market of 1982-2006. However, successes do not create an urgent need to revise existing knowledge as they confirm prior expectations (Cyert & March, 1992; Weiner, 1985, 2000), increase confidence in old routines (Daft & Weick, 1984; Audia, Locke, & Smith, 2000) and discourage cognitive activity associated with immediate change (Sitkin, 1992). Our findings strongly suggest that advisors' success and institutional memory blinded them from the need to change their models. The very factors that facilitated their success may have handicapped their responsiveness and agility under changing circumstances (Christensen, 1997).

When probed, most of our respondents stated a strong commitment to the context free classical decision making (CDM) approach assuming full rationality of their environment. Only a few acknowledged that those assumptions were violated during the crisis and that a more "contextual" approach was necessary. While not specifically mentioned, Naturalistic Decision Making (NDM; Klein, Orasanu, Calderwood, & Zsombok, 1993) seems prevalent with the more resilient advisors as they adapt quickly to changing circumstances. However, most of our respondents continued, post-2008, to believe in and allocate clients' assets according to static buy and hold strategies – a seemingly classic example of belief perseverance (Ross, Lepper, & Hubbard, 1975). Our data suggest that the longer an advisor has used static allocation models successfully, the more he/she believes in their merit under almost any market scenario. According to Staw (1976; Staw, Sandelands, & Dutton, 1981), this results in escalation of commitment, the bias to commit resources to justify previous actions whether or not the rationale for the initial commitments remains valid.

3. *Reframing the Time Horizon.*

Prospect theory distinguishes two phases in the choice process: a phase of framing and editing, followed by a phase of evaluation (Kahneman & Tversky, 1979). The first consists of a preliminary analysis of the decision problem which frames effective acts, contingencies, and outcomes. Framing is controlled by the manner in which the choice problem is presented, as well as by norms, habits, and expectancies of the decision maker. Many of our respondents framed the market dislocation as a short term "glitch" that appeared less significant if the time horizon was conveniently extended, which, in turn, reduced the need for immediate action. Such behavior might be described as "procrastination," which occurs when current costs are more salient than future costs, leading individuals to postpone tasks (Akerlof, 1991). This salience can lead to systematic distortion of individual perception and interfere with the process of rational utility maximization.

Collective Uniformity

According to Festinger (1950) stronger group cohesiveness develops during turbulent times as members perceive uniformity as necessary for survival. Turbulent times might be understood as accidents in complex systems (Perrow, 1984) that are unavoidable and impossible to anticipate because of our limited ability to comprehend what is transpiring and our lack of control over it.

We saw vibrant evidence of both of these phenomena in our data. Financial advisors admitted to limited comprehension of, and lack of control during, the crisis. As Simon (1956) explained, decision makers are limited by their values and unconscious reflexes, skills, and habits and, therefore, cannot envision all the alternatives available to them (Gavetti & Levinthal, 2000). Few advisors endeavored to learn through active intervention (enactment) and to test existing rules and precedents (Choo, 2002; Weick, 1995). Most demonstrated “threat rigidity” described by Staw et al. (1981) as the tendency to respond to states of stress and anxiety with reliance on prior expectations and well-learned responses. This means that even with increased search, information received would likely be similar to that of the past, resulting in little learning and adaptation (Starbuck, Greve, & Hedberg, 1979).

Finally, our data revealed strong evidence that advisors sought one another’s guidance and advice during the financial crisis “*We can be here together, and... (provide)... a sense of stability*”. The downside of group cohesiveness is groupthink which occurs when a group’s desire for harmony overrides a realistic appraisal of alternatives (Janis, 1972). This tendency toward harmony led to homogenous advisor behavior leaving clients with little choice but to stay with their existing advisor as the marginal difference between advisors was slight.

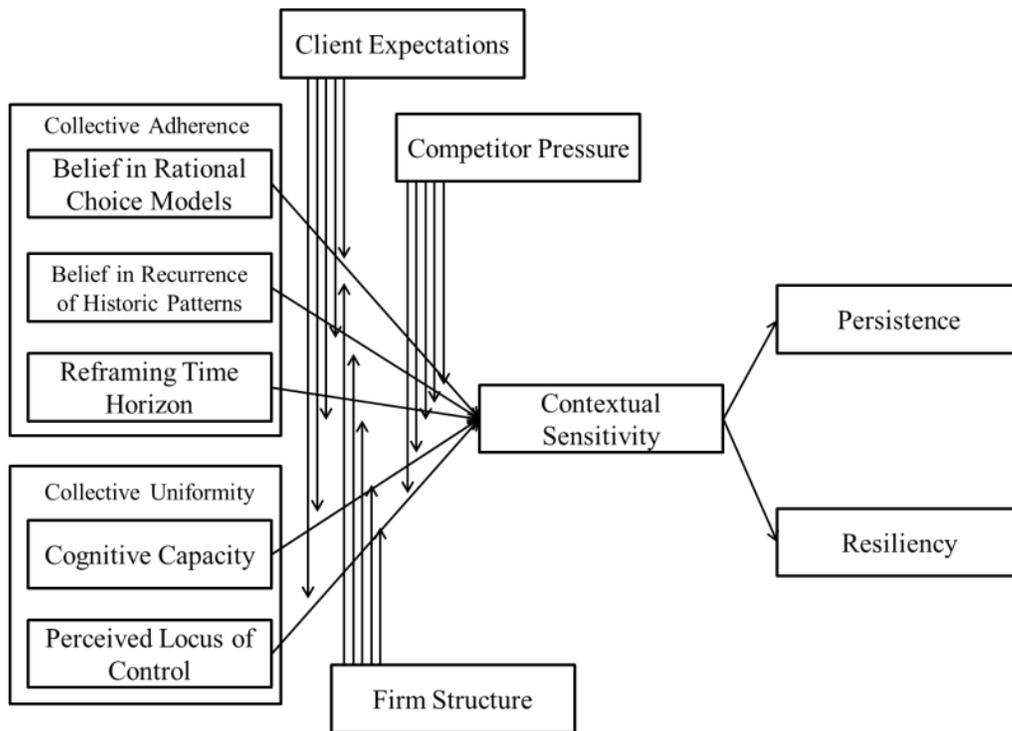
Contextual Sensitivity

Our findings are reflected in the conceptual model presented in Figure 1. The model suggests financial advisor persistence to adhere to old routines or resilience to adjust to adverse market conditions is influenced by “contextual sensitivity.” Contextual sensitivity reflects how strongly an advisor is committed to, and believes in, the traditional portfolio construction process and the recurrence of historic patterns. Time horizon management, ability to grasp unfolding developments and perceived degree of control affect contextual sensitivity. These relationships may be moderated by client expectations, competitor pressures or structural factors.

Limitations

Our findings should be considered in light of several limitations that may impact their generalizability. Our sample, while considered appropriate for a grounded theory inquiry, was small (n=30) and concentrated in the North East of the United States. The sample captures the gender distribution of the financial advisor population in the US fairly accurately (approx. 10% female advisors), however, our sample does not include diversity in terms of race or experience, as all our respondents were Caucasian and had at least 10 years of experience. While a purposeful effort was made to minimize researcher bias, we acknowledge that the principle researcher’s 25 years of experience as an investment management executive may have influenced how data was collected, analyzed and interpreted.

Figure 1: Conceptual Model



Implications for Practice and Future Research

We recognize many opportunities for further research on how learning from disruptive market events affects financial advisor behavior. Empirical validation of the conceptual models is recommended. While our research revealed five factors influencing advisor contextual sensitivity to market jolts, investigation of additional factors is desirable. Conducting similar research on a global basis might deliver exciting insights into cultural and geographic differences in advisor behavior. Also, a longitudinal study of advisor behavior over multiple market cycles might reveal new insights. Exploration of behavioral differences related to gender is also recommended as an additional avenue for future research.

Our findings should be of interest to the financial advisor community and its clients and around the world. While there is ample research on optimal behavior under normal market circumstances and some of the behavioral pitfalls faced by professional and private investors when making decisions under uncertainty, there is scant research with respect to financial intermediaries and the particular challenges they face. Our findings might help employers in selecting, evaluating and training advisors for what may well be a very different investing environment in the future. Finally, our results may be of interest to clients, enabling conversations with their advisors about the portfolio construction process and appropriate responses to future unexpected market events.

References

Akerlof, G. (1991). Procrastination and obedience. *The American Economic Review*, 81(2), 1-19.

- Argyris, C. (1991). Teaching smart people how to learn. *Reflections*, 4(2), 4-15.
- Argyris, C., & Schön, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. A joint publication in the Jossey-Bass Higher and Adult Education Series and the Jossey-Bass Management Series. Jossey-Bass Inc.
- Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. Reading, MA: Addison-Wesley.
- Ariely, D., & Zakay, D. (2001). A timely account of the role of duration in decision making. *Acta Psychologica*, 108(2), 187-207.
- Audia, P. G., Locke, E. A., & Smith, K. G. (2000). The paradox of success: An archival and a laboratory study of strategic persistence following radical environmental change. *The Academy of Management Journal*, 43(5), 837-853.
- Avery, R. B., Bostic, R. W., Calem, P. S., & Canner, G. B. (1997). Changes in the distribution of banking offices. *Federal Reserve Bulletin*, 83, 707.
- Baumard, P., & Starbuck, W. H. (2005). Learning from failures: Why it may not happen. *Long Range Planning*, 38(3), 281-298.
- BNY Mellon Wealth Management. (2009). *A fresh look at asset allocation*. The Bank of New York Mellon Corporation. Available at: http://www.bnymellonwealthmanagement.com/Resources/documents/Asset_Allocation_Insight.pdf
- Boud, D. (1985). *Reflection: Turning experience into learning*. London, UK: Routledge.
- Boyatzis, R. E. (1998). *Transforming qualitative information: Thematic analysis and code development*. Thousand Oaks; London; New Delhi: Sage Publications, Inc.
- Boyd, E. M., & Fales, A. W. (1983). Reflective learning: Key to learning from experience. *Journal of Humanistic Psychology*, 23(2), 99-117.
- Brehmer, B. (1980). In one word: Not from experience. *Acta Psychologica*, 45(1-3), 223-241.
- Burgelman, R. A., & Sayles, L. R. (1988). *Inside corporate innovation: Strategy, structure, and managerial skills*. New York, NY: The Free Press.
- Busby, J. S. (1999). An assessment of post-project reviews. *Project Management Journal*, 30(3), 23-29.
- Choo, C. W. (2002). *Information management for the intelligent organization: The art of scanning the environment* (3rd ed.). American Society for Information Science and Technology (ASIST) Monograph Series. Medford, NJ: Information Today Inc.
- Christensen, C. M. (1997). *The innovator's dilemma: When new technologies cause great firms to fail*. Boston, MA: Harvard Business Press.
- Cooper, A. C., & Schendel, D. (1976). Strategic responses to technological threats. *Business Horizons*, 19(1), 61-69.
- Corbin, J. M., & Strauss, A. L. (2008). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks; London; New Delhi; Singapore: Sage Publications, Inc.
- Cyert, R. M., & March, J. G. (1992). *A behavioral theory of the firm*. Malden, MA; Oxford, England: Blackwell Publishers.
- Daft, R. L., & Weick, K. E. (1984). Toward a model of organizations as interpretation systems. *The Academy of Management Review*, 9(2), 284-295.

- Dane, E., (2010). Reconsidering the trade-off between expertise and flexibility: A cognitive entrenchment perspective. *The Academy of Management Review*, 35(4), 579-603.
- De Bondt, W. F. M., & Thaler, R. (1985). Does the stock market overreact? *Journal of Finance*, 40(3), 793-805.
- Dewey, J. (1916). *Democracy and education: An introduction to the philosophy of education*. New York: The Macmillan Company.
- Dosi, G., & Nelson, R. R. (1994). An introduction to evolutionary theories in economics. *Journal of Evolutionary Economics*, 4(3), 153-172.
- Dweck, C. S. (2002). Beliefs that make smart people dumb. In R. J. Sternberg (Ed.), *Why smart people can be so stupid* (pp. 24-41). New Haven, CT: Yale University Press.
- Ellis, S., Mendel, R., & Nir, M. (2006). Learning from successful and failed experience: The moderating role of kind of after-event review. *Journal of Applied Psychology*, 91(3), 669-680.
- Elton, E. J., & Gruber, M. J. (2000). The rationality of asset allocation recommendations. *Journal of Financial and Quantitative Analysis*, 35(1), 27-41.
- Fama, E. F. (1965). The behavior of stock-market prices. *The Journal of Business*, 38(1), 34-105.
- Feldman, M. S., & March, J. G. (1981). Information in organizations as signal and symbol. *Administrative Science Quarterly*, 26(2), 171-186.
- Feldman, M. S., & Pentland, B. T. (2003). Reconceptualizing organizational routines as a source of flexibility and change. *Administrative Science Quarterly*, 48, 94-118.
- Festinger, L. (1950). Informal social communication. *Psychological Review*, 57(5), 271-282.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Evanston, IL: Row Peterson.
- Fischhoff, B. (1975). Hindsight is not equal to foresight: The effect of outcome knowledge on judgment under uncertainty. *Journal of Experimental Psychology*, 1(3), 288-299.
- Friedlander, F. (1983). Patterns of individual and organizational learning. In S. Srivastva & Associates (Eds.), *The executive mind: New insights on managerial thought and action* (pp. 192-220). San Francisco: Jossey-Bass.
- Gavetti, G., & Levinthal, D. (2000). Looking forward and looking backward: Cognitive and experiential search. *Administrative Science Quarterly*, 45(1), 113-137.
- Gigerenzer, G., Todd, P., & ABC Research Group. (1999). *Simple heuristics that make us smart*. New York: Oxford University Press.
- Glaser, B. G., & Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Piscataway, NJ: AldineTransaction.
- Goetzmann, W. N., & Kumar, A. (2004). *Why do individual investors hold under-diversified portfolios*. Yale University and University of Notre Dame Working Paper.
- Goetzmann, W. N., & Kumar, A. (2008). Equity portfolio diversification. *Review of Finance*, 12(3), 433.
- Griffin, D., & Tversky, A. (1992). The weighing of evidence and the determinants of confidence. *Cognitive Psychology*, 24(3), 411-435.
- Hale, J. (1997). A layered communication architecture for the support of crisis response. *Journal of Management Information Systems*, 14(1) 235-255.
- Hannan, M. T., & Freeman, J. (1984). Structural inertia and organizational change. *American Sociological Review*, 49(2), 149-164.

- Hirshleifer, D. (2001). Investor psychology and asset pricing. *The Journal of Finance*, 56(4), 1533-1597.
- Horseshmouth, LLC. (2008). *Lessons advisors learned from the crash of 2008*. Available at: <http://www.horseshmouth.com>
- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization Science*, 2(1), 88-115.
- Ibbotson Associates. (2009). *Ibbotson target maturity report fourth quarter 2008*. Available at: <http://corporate.morningstar.com/us/documents/q4ibbotsontargetreport/maturityreportq42008.pdf>
- Jahnke, W. W. (2004). It's time to dump static asset allocation. *Journal of Financial Planning*, 17(6), 26-28.
- Janis, I. L. (1972). *Victims of groupthink: A psychological study of foreign-policy decisions and fiascoes*. Oxford, England: Houghton Mifflin
- Jansen, C., Fischer, R., & Hackethal, A. (2008). *The influence of financial advice on the asset allocation of individual investors*. EFA 2008 Athens Meetings Paper. Available at SSRN: <http://ssrn.com/abstract=1102092>
- Kahneman, D. (2011). *Thinking fast and slow*. New York, NY: Farrar, Strauss and Giroux.
- Kahneman, D., & Tversky, A. (1973). On the psychology of prediction. *Psychological Review*, 80(4), 237.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica: Journal of the Econometric Society*, 47(2), 263-291.
- Kahneman, D., & Tversky, A. (1981). The framing of decisions and the psychology of choice. *Science*, 211(4481), 453-458.
- Klein, G. A., Orasanu, J., Calderwood, R., & Zsombok, C. E. (Eds.). (1993). *Decision making in action: Models and methods*. Norwood, NJ: Ablex Publishing Corporation.
- Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice-Hall.
- Korniotis, G., & Kumar, A. (2005). *Does investment skill decline due to cognitive aging or improve with experience?* Unpublished paper, University of Notre Dame. Available at: <http://old.nhh.no/for/seminars/2006-spring/300106.pdf>
- Krausz, M., & Paroush, J. (2002). Financial advising in the presence of conflict of interests. *Journal of Economics and Business*, 54(1), 55-71.
- Levinthal, D. A., & March, J. G. (1993). The myopia of learning. *Strategic Management Journal*, 14, 95-95.
- Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology*, 14, 319-340.
- Lewin, K. (1951). *Field theory in social science: Selected theoretical papers*. D. Cartwright (Ed.). Oxford, England: Harpers.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park; London; New Delhi: Sage Publications, Inc.
- Lintner, J. (1965). Security prices, risk, and maximal gains from diversification. *Journal of Finance*, 20(4), 587-615.

- Louis, M. R., & Sutton, R. I. (1991). Switching cognitive gears: From habits of mind to active thinking. *Human Relations*, 44(1), 55.
- March, J. G. (1981). Footnotes to organizational change. *Administrative Science Quarterly*, 26(4), 563-577.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.
- March, J. G., Sproull, L. S., & Tamuz, M. (1991). Learning from samples of one or fewer. *Organization Science*, 2(1), 1-13.
- March, J. G. S., & Simon, H. A. (1958). *Organizations*. New York: John Wiley & Sons Inc.
- Markowitz, H. (1952). The utility of wealth. *The Journal of Political Economy*, 60(2), 151-158.
- Markowitz, H. M. (1959). *Portfolio selection: Efficient diversification of investments*. New Haven, CT: Cowles Foundation
- Maxwell, J. A. (2005). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage Publications, Inc.
- Mishel, L., Mishel, L. R., Bernstein, J., & Boushey, H. (2003). *The state of working America, 2002/2003*. Ithaca, NY: Cornell University Press.
- Nystrom, P. C., Starbuck, W. H., & Hedberg, B. (1981). *Handbook of organizational design: Vol. 1: Adapting organizations to their environments*. New York: Oxford University Press.
- Odean, T. (1998). Are investors reluctant to realize their losses? *The Journal of Finance*, 53(5), 1775-1798.
- Osterman, K. F. (1990). Reflective practice: A new agenda for education. *Education and Urban Society*, 22(2), 133-152.
- Perrow, C. (1984). *Normal accidents: Living with high-risk technologies*. NY: Basic Books.
- Ross, L., Lepper, M. R., & Hubbard, M. (1975). Perseverance in self-perception and social perception: Biased attributional processes in the debriefing paradigm. *Journal of Personality and Social Psychology*, 32, 880-892.
- Sharpe, W. F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance*, 19(3), 425-442.
- Shefrin, H., & Statman, M. (1994). Behavioral capital asset pricing theory. *Journal of Financial and Quantitative Analysis*, 29(03), 323-349.
- Simon, H. A. (1956). Rational choice and the structure of the environment. *Psychological Review*, 63(2), 129-138.
- Sitkin, S. B. (1992). Learning through failure: The strategy of small losses. In B. M. Staw & L. L. Cummings (Eds.), *Research in organizational behavior*, 14 (p. 231-266). Greenwich, CT: JAI Press.
- Slovic, P. (1972). Psychological study of human judgment: Implications for investment decision making. *The Journal of Finance*, 27(4), 779-799.
- Solow, K. R. (2009). *Buy and hold is dead (again): The case for active portfolio management in dangerous markets*. Garden City, NY: Morgan James Publishing, LLC.
- Starbuck, W. H., Greve, A., & Hedberg, B. (1979). Responding to crises. *Journal of Business Administration*, 9(2), 112-137.

- Staw, B. M. (1976). Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Performance*, 16(1), 27-44.
- Staw, B. M., Sandelands, L. E., & Dutton, J. E. (1981). Threat rigidity effects in organizational behavior: A multilevel analysis. *Administrative Science Quarterly*, 26(4), 501-524.
- Taleb, N. N. (2011). *The black swan: The impact of the highly improbable*. New York: Random House Trade Paperbacks.
- Tversky, A., & Kahneman, D. (1986). Rational choice and the framing of decisions. *The Journal of Business*, 59(4), 251-278.
- Waldert, B. (2010). Post-crisis financial advisor professional development. Investment Management Consultants Association (IMCA). *IMCA Research Quarterly*, IV 2010. Investments & Wealth Monitor. Available at: http://www.imca.org/cms_images/file_1392.pdf
- Weick, K. E. (1995). *Sensemaking in organizations*. Thousand Oaks; London; New Delhi: Sage Publications, Inc.
- Weick, K. E., & Quinn, R. E. (1999). Organizational change and development. *Annual Review of Psychology*, 50, 361-362.
- Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (1999). Organizing for high reliability: Processes of collective mindfulness. In R.S. Sutton & B.M. Staw (Eds.), *Research in Organizational Behavior*, 1 (pp.81-123). Stanford: JAI Press.
- Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological Review*, 92(4), 548-573.
- Weiner, B. (2000). Intrapersonal and interpersonal theories of motivation from an attributional perspective. *Educational Psychology Review*, 12(1), 1-14.
- Wilkinson, A., & Ramirez, R. (2010). Canaries in the mind: Exploring how the financial crisis impacts 21st century future mindfulness. *Journal of Future Studies*, 14(3), 45-60.
- Zakay, D., Ellis, S., & Shevsky, M. (2004). Outcome value and early warning indications as determinants of willingness to learn from experience. *Experimental Psychology* (formerly Zeitschrift für Experimentelle Psychologie), 51(2), 150-157.

English Abstract

Learning from Disruptive Market Events

A Study of Financial Advisor Behavior

Philipp A. Hensler*, Tony Lingham, Sheri Perelli

Case Western Reserve University

philpphensler@mac.com

Abstract

The static portfolio construction process, while an efficient, rational and stunningly successful strategy for allocating client assets in well behaved markets, may prove less so in disruptive markets when active financial advisor intervention may be necessary. The literature is silent about how financial advisors learn from market dislocations and how market dislocations affect their asset allocation practices. Semi-structured interviews with 30 senior US financial advisors yielded insights about their allocation decisions prior to and after the 2008 financial crisis. Post crisis persistence in beliefs and behaviors are attributable to an enduring belief in recurring historic patterns, unwavering reliance on traditional model assumptions and active time horizon management. Furthermore, striking differences in cognitive capacity and perceived locus of control distinguish the post-2008 practice of most financial advisors from the relatively few who have adopted more dynamic portfolio management approaches.

Findings should be of interest not only to financial industry professionals but to the clients who rely on their advice.

Keywords: Financial crisis, financial advisors, disruptive event, individual learning, organizational learning

French Abstract*

Learning from Disruptive Market Events: A Study of Financial Advisor Behavior

Apprentissage et événements de marché disruptifs

Une étude du comportement du conseiller financier

Philipp A. Hensler*, Tony Lingham, Sheri Perelli

Case Western Reserve University

philipphensler@mac.com

Résumé

Le processus de construction d'un portefeuille statique par une stratégie efficace, rationnelle et réussie d'allocation des actifs de clients, dans des marchés qui fonctionnent bien, peut s'avérer moins réussi dans des marchés disruptifs, qui nécessitent l'intervention active d'un conseiller financier. La littérature est muette sur la façon dont les conseillers financiers apprennent des disruptions du marché et comment celles-ci influent sur leurs pratiques en matière d'allocation d'actifs. Des entretiens semi-structurés avec 30 conseillers financiers séniors américains donnent un aperçu de leurs décisions d'affectation avant et après la crise financière de 2008. La persistance des croyances et comportements post- crise sont attribuables à une croyance durable de la reproduction des schémas historiques et l'inébranlable confiance dans les hypothèses des modèles traditionnels de la gestion active de l'horizon temporel. En outre, des différences frappantes dans la capacité cognitive et le locus du contrôle perçu distinguent la pratique postérieure à 2008 de la plupart des conseillers financiers de ceux, relativement rares, qui ont adopté des approches plus dynamiques de la gestion de portefeuille. Les résultats devraient intéresser non seulement les professionnels de l'industrie financière, mais aussi les clients qui comptent sur leurs conseils.

Mots-clés: crise financière, conseillers financiers, un événement disruptif, l'apprentissage individuel, l'apprentissage organisationnel

* Translated by: Johannes Schaaper, Senior professor in International Management, BEM Bordeaux Management School

German Abstract*

Learning from Disruptive Market Events: A Study of Financial Advisor Behavior

Lernen aus krisenhaften Marktereignissen

Eine Studie über das Verhalten von Finanzberatern

Philipp A. Hensler*, Tony Lingham, Sheri Perelli
Case Western Reserve University
philipphensler@mac.com

Zusammenfassung

Der statische Portfoliokonstruktionsprozess, der eine effiziente, rationale und überaus erfolgreiche Allokationsstrategie für Kundenvermögenswerte innerhalb gut funktionierender Märkte darstellt, kann sich hingegen in unbeständigen Märkten als weniger erfolgreich erweisen, insofern dort ein aktiver Eingriff eines Finanzberaters erforderlich ist. In der Literatur findet man nur wenige Hinweis darauf, wie Finanzberater aus Marktverwerfungen lernen und wie diese Marktverwerfungen ihre Vermögensallokation beeinflussen. Semi-strukturierte Interviews mit 30 Senior US-Finanzberatern sollen nun einen Einblick in die Allokationsentscheidungsprozesse vor sowie nach der Finanzkrise im Jahr 2008 geben. Der Glaube und das Verhalten nach der Krise sind von dem Glauben an das Wiederholen historischer Muster geprägt, genauso wie das unerschütterliche Vertrauen in traditionelle Modellannahmen und das strategische Management von Zeithorizonten. Seit der Finanzkrise sind zudem entscheidende Unterschiede hinsichtlich der kognitiven Fähigkeiten und der wahrgenommenen Kontrollüberzeugung der Finanzberater zu erkennen, zumal ihre Berufspraktiken sich heute zunehmend an einem dynamischen Portfoliomanagement orientieren.

Die Ergebnisse der Studie sind nicht nur für den Berufsstand der Finanzberater von Bedeutung, sondern auch für die Mandanten die von ihnen beraten werden.

Stichwörter: Finanzkrise, Finanzberater, krisenhaftes Ereignis, individuelles Lernen, organisatorisches Lernen

* Translated by: Prof. Dr. Marc Eulerich, University Duisburg-Essen, marc.eulerich@uni-due.de

Spanish Abstract*

Learning from Disruptive Market Events: A Study of Financial Advisor Behavior

Aprendiendo de Sucesos de Mercado Perturbadores

Un Estudio del Comportamiento Asesor Financiero

Philipp A. Hensler*, Tony Lingham, Sheri Perelli
Case Western Reserve University
philippensler@mac.com

Resumen

En el proceso de construcción de la cartera estática, mientras que una estrategia eficiente, racional y sorprendentemente exitosa para la asignación de activos de los clientes en los mercados de buen comportamiento, puede resultar mucho menos exitosa en los mercados perturbadores cuando es necesaria la intervención del asesor financiero activo. La literatura no dice nada acerca de cómo los asesores financieros aprenden de trastornos del mercado y cómo las perturbaciones del mercado afectan sus prácticas de asignación de activos. Se llevaron a cabo entrevistas semi-estructuradas con 30 altos asesores financieros de Estados Unidos que dieron ideas sobre sus decisiones de asignación de antes y después de la crisis financiera de 2008. La persistencia en las creencias y los comportamientos después de la crisis son atribuibles a una tendencia perdurable en repetir los patrones históricos, a una inquebrantable confianza en los supuestos del modelo tradicional y a la gestión activa del horizonte temporal. Por otra parte, se observan grandes diferencias en la capacidad cognitiva y el lugar de control percibido en la práctica post-2008 de la mayoría de los asesores financieros, de los relativamente pocos que han adoptado enfoques de gestión de carteras más dinámicas.

Los resultados deben ser de interés no sólo para los profesionales del sector financiero, sino también para los clientes que confían en sus consejos.

Palabras clave: crisis financiera, asesores financieros, evento perturbador, aprendizaje individual, aprendizaje organizacional.

* Translated by: Francis Blasco. Universidad Complutense de Madrid. fblasco@emp.ucm.es

Arabic Abstract*

Learning from Disruptive Market Events: A Study of Financial Advisor Behavior

التعلم من أحداث السوق التخريبية: دراسة حول سلوك القطاع المالي

Philipp A. Hensler*, Tony Lingham, Sheri Perelli
Case Western Reserve University
philipphensler@mac.com

ملخص

ان عملية انشاء المحفظة المالية الساكنة بالرغم من كونها ناجعة، عقلانية، و استراتيجية ناجحة في توزيع أصول العملاء في أسواق مربحة الا أنها لا تتسم بهذه الصفات الايجابية في الاسواق التخريبية حيث يكون هنالك حاجة ماسة لتدخل المستشارين الماليين، الأدبيات السابقة لا تذكر كيف يتعلم المستشارين الماليين من سوء توزيع الأسواق و من كيفية تأثير هذه الوزيعات السوقية على ممارسات توزيعات الأصول. تم اجراء ثلاثين مقابلة شبه هيكلية مع كبار المستشارين الماليين في الولايات المتحدة الأميركية حيث تم سبر أغوار آلية توزيعهم للأصول قبل و بعد الأزمة المالية عام 2008 . تم أكتشاف أن ثبات معتقدات و سلوكيات الاخبراء الماليين بعد أزمة 2008 تعزى الى ايمانهم المطلق بأن التاريخ يعيد نفسه أي أن هنالك انماط متكررة عبر الزمن و ايضا اعتمادهم على النماذج التقليدية و ادارتهم للأفق الزمني للاستثمارات بشكل فعال. و أيضا خلصت الدراسة أن هنالك فروقات واضحة بين القدرة الإدراكية و تمركز السيطرة بعد أزمة 2008 من العدد القليل من الخبراء الماليين الذين تبنو طرق دينميكية و أكثر حداثة لادارة المحافظ، هذه النتائج ذات قيمة للمهنيين في القطاع المالي و ايضا للعملاء الذين يعتمدون على نصائحهم.

الكلمات الدالة: الأزمة المالية، المستشارين الماليين، الأحداث التخريبية، التعلم الفردي، التعلم التنظيمي

* Translated by: Zu'bi M.F.Al-Zu'bi, Ph.D, FHEA, University of Jordan, z.alzubi@ju.edu.jo

Italian Abstract*

Learning from Disruptive Market Events: A Study of Financial Advisor Behavior

Apprendere da mercati colpiti da cambiamenti dirompenti

Uno studio sul comportamento di consulenza finanziaria

Philipp A. Hensler*, Tony Lingham, Sheri Perelli

Case Western Reserve University

philipphensler@mac.com

Abstract

La costruzione di un portfolio statico, efficiente, razionale e con una strategia di successo per allocare gli asset di clienti in mercati che hanno un buon comportamento, può essere meno efficace quando l'intervento attivo di un consulente finanziario è necessario. Facendo colloqui semi strutturati con 30 consulenti finanziari senior negli USA ha dato degli spunti importanti su come cambiamenti dirompenti sul mercato abbiano un impatto sul loro modo di allocare le risorse prima e dopo la crisi finanziaria del 2008. La persistenza di convinzioni e comportamenti post crisi sono attribuibili a convinzioni ricorrenti dal passato, alleanze che persistono, il continuare della dipendenza su convenzioni riguardanti modelli tradizionali e una gestione attiva degli orizzonti temporali. Inoltre, marcate differenze in capacità cognitive e percepiti fulcri di controllo, distinguono le pratiche post 2008 della maggior parte dei consulenti finanziari rispetto a pochi che hanno adottato una gestione di portfolio più dinamica. Le conclusioni dovrebbero essere di interesse non solo per i professionisti del settore, ma anche per i loro clienti che dipendono dai loro consigli.

Keywords: Crisi finanzia, Consulenti Finanziari, Eventi Dirompenti di Cambiamento, Apprendimento Individuale, Apprendimento organizzativo

* Translated by: Riccardo Paterni, Synergy Pathways, riccardo@synergypathways.net

Technology, Trust and Effectiveness in Virtual Teams

Eugene Pierce¹ and Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org

¹Weatherhead School of Business, CASE Western Reserve University, eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA shansen@saunders.rit.edu

Abstract

Business and government organizations today need to compete and interoperate globally to survive. Effective virtual team management through technology is a key factor. Virtual teams present advantages for cost control and access to global expertise. Previous research suggests a variety of factors for effective functioning of virtual teams. This study explored technology and relationships between team leader personalities, team trust, and team perceived effectiveness by surveying 873 engineers. The findings suggest that a virtual team leader's personality has a significant impact on the team's perceived effectiveness but this effect is mediated through cognitive and personality based trust. Implications for managers and further research are discussed.

Keywords: Cognitive Trust, Leader personality, Personality based Trust, Virtual Teaming, Big Five personality model, Structural equation modelling

Introduction

In the most contemporary work environments, it is increasingly likely that workers will be called upon to participate on virtual teams at several points throughout their careers. Whether working on a project, contributing to a task force, or managing the global operations of an organization, modern professionals are frequently required to collaborate with individuals who they have never met face-to-face or who live and work thousands of miles away. The emergence of advanced information and communications technologies (ICTs), such as email, video conferencing, and online collaborative environments, has enabled the development of a wide variety of such distributed work arrangements and novel organizational forms (Fulk & DeSanctis, 1995). As a result, commercial activity on an expanded geographic scale and continuous timeline has become a prevailing reality.

Virtual teaming presents organizations with a range of potential benefits, including improved access to high-level talent, increased flexibility for knowledge professionals, enhanced ability to serve markets on a global scale, and reduction in travel costs and other expenses associated with traditional meeting arrangements (Lipnack & Stamps, 1997; Majchrzak, Rice, Malhotra King, 2000; Mowshowitz, 1997). Yet significant challenges remain. While technology has created new horizons for communication and interaction over time and space, these novel work arrangements demand a set of interpersonal competencies, coordination processes, and leadership

skills that are markedly distinct from those required in co-located team environments (Jarvenpaa & Leidner, 1999). To achieve the envisioned benefits of virtual teaming, organizations must bring the right people together at the right time and do so quickly (Townsend, DeMarie, & Hendrickson, 1998). As working virtually becomes increasingly commonplace it is important to understand what factors influence the effectiveness of a virtual team.

The current study explores the factors that drive team effectiveness within a virtual teaming arrangement. A number of such factors have been proposed within the research community, including the technologies employed and their adaptation by team members (King & Majchrzak, 2003; Majchrzak et al., 2000), patterns of communication (Pauleen, 2003), the frequency of face-to-face interaction (Handy, 1995), and incentive structures for team members (Lawler III, 2003). Perhaps no facet of virtual team dynamics has received more attention than the question of trust among team members. Drawing upon the centrality of trust in traditional group dynamics research, several researchers have considered the degree to which various forms of trust are established and nurtured in virtual team environments (Iacono & Weisband, 1997; Jarvenpaa & Leidner, 1999; Kanawattanachai & Yoo, 2002; Meyerson, Weick, & Kramer, 1996). Another area of significant interest in the management of virtual teams is the role of team leadership (Bell & Kozlowski, 2002; Kayworth & Leidner, 2001; Pauleen, 2003; Poole & Zhang, 2005; Yoo & Alavi, 2004; Zigurs, 2003). Many of these studies have focused on the emergence of leaders in ad hoc virtual teams, and as a result, others have called for greater research into the nature of virtual team leadership (Zigurs, 2003).

Research Problem, Objectives and Plan

In the present study, we seek to combine a consideration of leadership qualities with the dynamics of trust in virtual teams and their effects on team effectiveness. Specifically, we seek to assess the degree to which personality characteristics of virtual team leaders impact the emergence of various forms of trust within virtual teams and in turn the effective of the team's processes as perceived by its members. In this effort, we focus on the following research questions:

What is the effect of a team leader's personality on the existence of trust within virtual teams? Which personality factors have the greatest influence?

What is the effect of a team leader's personality on the perceived effectiveness of a virtual team? Which personality factors are most relevant in this regard?

What forms of trust have the greatest influence on the perceived effectiveness of a virtual team?

What forms of technology best support virtual team projects?

To address these questions we completed a large scale study of existing virtual teams within a large organization that is actively experimenting with, and expanding its use of, distributed work arrangements, namely the U.S. Department of Defense. With this focus on actual virtual teams and their experiences, we hope to advance research on the dynamics of virtual teams as they occur in situ.

In developing our analysis, we first provide a brief overview of the research on virtual teams with an emphasis on the roles of team leadership and trust in the management of such groups. We then present the theoretical model that grounds our study and the research methodology employed.

The methodology is followed by a thorough discussion of our research findings. We then turn to a discussion of the significant implications of the research before offering some concluding thoughts.

Literature review

Virtual Teams

While the term itself has been defined in a wide variety of ways by different authors (Bell & Kozlowski, 2002; Knoll & Jarvenpaa, 1998; Majchrzak et al., 2000), the basic features of a virtual team are geographic and temporal distribution of team members with limited face-to-face communication and interactions mediated by ICTs (Poole & Zhang, 2005). In their description, Jarvenpaa and Leidner (1999) add that virtual teams are generally temporary in nature, being rapidly formed (and disbanded) in an effort to address the emergent demands of a changing marketplace. Consistent with this fundamental picture of virtual teams, Henry and Hartzler (1997) offer a more detailed delineation of a team marked by the following: 1) relatively small size (i.e., usually consisting of less than 20 individuals), 2) geographical distribution, 3) working apart more frequently than in the same location, 4) making decisions based on a stratification of work, and 5) shared accountability for team results.

The emergence of virtual teams over the past two decades has been driven by several factors. Perhaps foremost among these is the tremendous advancement in computing and communications media in the latter half of the 20th Century, including the development of such resources as email, instant messaging, video conferencing, electronic information exchange, shared data repositories, and other online collaborative systems (Fulk & DeSanctis, 1995; Majchrzak et al., 2000). In addition to these technological enablers, virtual teaming has been encouraged by the development of global markets for goods and services, the expansion of the network organizational form, and the creation of flexible work arrangements in many industries (Poole & Zhang, 2005).

Trust in Virtual Teams

The significant interpersonal impediments posed by virtual teaming help to explain why the subject of trust has been a popular topic in research surrounding virtual teams. For the present discussion, *trust* is understood to mean "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer, Davis, & Schoorman, 1995, 712). The expectation that a positive outcome will result from someone else's action has an element of risk for the trusting party. The ability to trust is, as Panteli (2005) stated, "a dynamic and emergent social relationship that develops as participants interact with each other over time and depending on the situation" (p. 2). Researchers have consistently found that trust among virtual team members is one of the most critical success factors in regard to overall team success (Kostner, 1996; Nilles, 1998).

Trust has been well-established as a bellwether of team performance among traditional, face-to-face teams (Bromiley & Cummings, 1995; Butler Jr., 1991; McAllister, 1995). High levels of trust have been reported to reduce interpersonal transaction costs (Handy, 1995), increase security in relationships (Stinnett & Walters, 1977), promote open information exchange (Larzelere & Huston, 1980), enable risk taking (McAllister, 1995), and contribute to the well being of individuals and the stability of organizations (Cook & Wall, 1980). Morgan and Hunt (1994) found that trusting work relationships influenced cooperation, reduced conflicts, increased commitment to the organization, and reduced the tendency to leave. These findings are supported by Hinds and

Bailey (2003), who reinforce the link between trust and both the emergence and management of conflict on distributed teams.

Thus, the importance of trust to effective team dynamics is clear. Yet, if face-to-face interaction is considered the *sine qua non* for the development of interpersonal trust (Nohria & Eccles, 1992), how can trust be created and maintained in distributed work arrangements? Iacono and Weisband (1997) found that high levels of trust were achieved by virtual teams who remained focused on the work content of their group, moved efficiently between work tasks, and engaged in regular and frequent communication.

Leadership in Virtual Teams

Another key theme in the research on virtual teams is the role of leadership and the management of conflict. In a review of the virtual teams literature, Poole and Zhang (2005) observe that “it appears that in comparison to traditional teams, virtual team leaders play a more important role in scheduling and structuring the communication practices as well as the work process” (p. 377). This finding is somewhat intuitive as the reduced salience of interpersonal commitments in virtual teams might well be expected to result in diffusion of responsibility among members. The necessity of a leader to structure the group’s activities thus takes on greater relevance (Bell & Kozlowski, 2002; Kayworth & Leidner, 2001). In many work groups, the role of leader may be determined a priori (e.g., a project manager). At other times, the leader emerges from within the group. In distributed teams, Yoo and Alavi (2004) found that leader emergence was tied to one’s degree of effort in communication. Communications from the individuals that became leaders of their groups were more extensive, more frequent, and pulled together the ideas expressed by other participants. In addition to coordinating the efforts of the team, distributed group leaders can play a crucial role in resolved intragroup conflict. Armstrong and Cole (2002) have suggested that a virtual team leader can address conflict through multiple means, including polling of participants outside of group discussions, promoting appropriate dialogue when disagreements emerge, and fostering the input of the more introverted members of a group.

Finally, the interplay of trust and leadership behavior is a critical consideration which has received limited empirical analysis. Piccoli and Ives (2000) suggest that the open exchange of information, which provides a key basis for the development of trust (especially trust of the cognitive variety) within a group is critically tied to the leadership behavior within the team. Team members who share mutually valuable information with others establish a core for success within their teams. Team leaders are essential in fostering this sharing behavior (Cramton, 2001; Cramton & Orvis, 2003). Team members must be encouraged to help others and share what they know. In turn, they can expect the same behavior of other members. Thus, when team leaders promote this behavior by setting the example for others, trust among the members can be enhanced (Duarte & Snyder, 2000).

Effectiveness of Virtual Teams

As with other technology-enabled innovations, the discussion of virtual teams must ultimately turn to the question of team performance or effectiveness. While our understanding of virtual team effectiveness in real work settings is still somewhat limited (Piccoli & Ives, 2000), a number of studies have shed some light on the subject. Building upon earlier group dynamics research (most notably, Hackman, 1990), Lurey and Raisinghani (2001) propose three criteria for assessing the effectiveness of virtual teams. First, team effectiveness can be assessed based on the group’s productivity and the degree to which the deliverables of the team address the requirements of the organization in which they are situated. Such measures of effectiveness are often determined

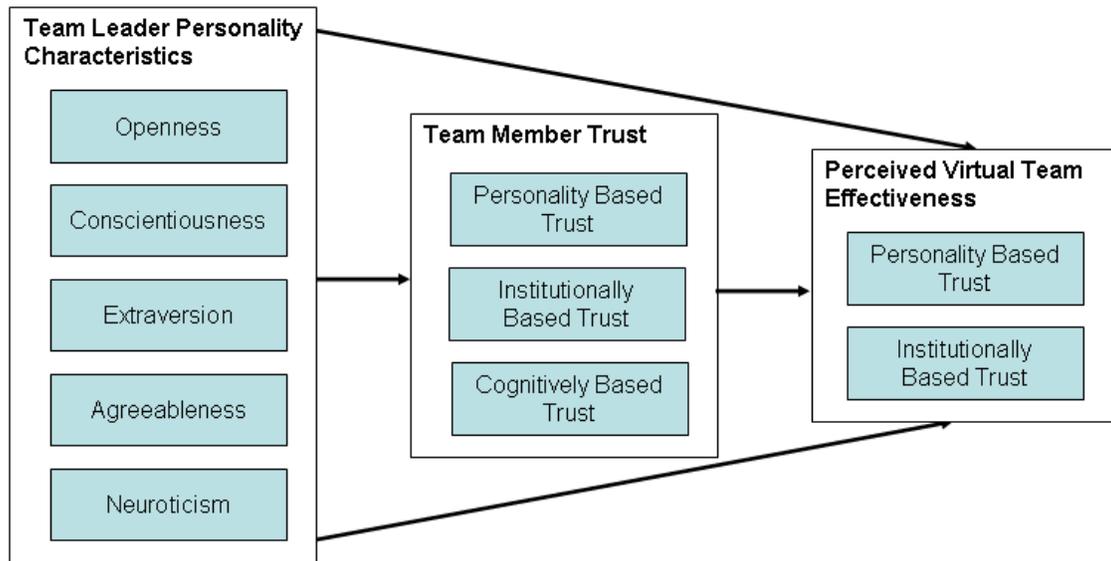
by an individual or group that is not a part of the team in question. Second, effectiveness can be assessed by the degree to which a virtual team's processes support the learning and maintenance of the team's function. Finally, the degree of satisfaction with team processes among members of the team provides a third approach to the measurement of virtual team effectiveness.

While acknowledging the challenges of using subjective measures of team performance, Lurey and Raisinghani (2001) note that those perceptual measures enable researchers to assess team effectiveness while a team is still in operation, in contrast to productivity measures which can often only be established after the fact. This point is reinforced by Campion, Papper and Medsker (1996), who argue that perceived measures of team effectiveness provide accurate predictions of a team's performance. In addition, Campion et al. (1996) call attention to the challenges posed by the relative dearth of clear-cut productivity measures in group work and limited comparability across teams.

Developing the Research Model and Hypotheses

In the present study, we seek to build upon these varied streams of virtual team research to explore the dynamics of leadership and trust within existing virtual teams. While a significant amount of the research literature has focused on emergent leadership, we believe it is essential that researchers consider the influence of formal or assigned team leaders, since this is the prevailing condition in most organizations. Whether they are given the label of senior manager, project manager, systems architect, or some other formal title, virtual team leadership is often established before team members interact for the first time or even before the team composition is established. Thus, it is relevant to consider what characteristics of virtual team leaders engender trust amongst team members and lead to effective virtual team experiences. To address the range of questions surrounding this domain, we adopt multi-dimensional measures of team leader personality, team trust, and perceived virtual team effectiveness. Our theoretical model, shown in Figure 1, reflects the research questions that have been established for this study and the hypothesized relationships between the five facets of virtual team leader personality, three dimensions of virtual team trust, and two measures of perceived virtual team effectiveness. Fundamentally, we seek to determine how various dimensions of team leader personality influence personality based, institutional based, and cognitive based forms of trust, and in turn perceived virtual team performance and satisfaction.

Figure 1 – Theoretical Model



Before we elaborate on the formal hypotheses reflected in our model, a more detailed discussion of construct definitions is in order.

Operational Definitions

As noted above, we have employed multi-dimensional measures of virtual team leader personality, virtual team member trust, and virtual team performance. The operational definitions for each of these constructs are provided in the following discussion. A summary table of all constructs is provided in Appendix 1.

Team Leader Personality Constructs

In this study, we assess the relevant characteristics of virtual team leaders using a widely-employed model of individual personality traits, often referred to as the *Big Five*. Consensus is emerging that a five-factor model can be used to describe the most salient aspects of individual personality (Goldberg, 1990). Building on work by Norman (1963) and Tupes and Christal (1992), the efficacy of the five-factor structure has been repeatedly reproduced in factor analytic studies of existing personality inventories, analyses of trait adjectives in various languages, and decisions regarding the dimensionality of existing measures made by expert judges (McCrae & John, 1992). In addition, the cross-cultural generalizability of the five-factor structure has been established through research in multiple countries (McCrae & Costa, 1997), and the evidence suggests that the Big Five model has been stable over time (Costa & McCrae, 1988; Digman, 1989).

The dimensions comprising the five-factor model are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. *Extraversion* represents the tendency to be sociable, assertive, and active, and to experience positive affects, such as energy and zeal (Watson & Clark, 1997). *Agreeableness* refers to the tendency to be trusting, compliant, caring, and gentle (Digman, 1990). *Conscientiousness* is comprised of two related facets: a behavioral organizing or task-orientation element and an element of prudence or dependability (McCrae & John, 1992). *Neuroticism* refers to the tendency to exhibit poor emotional adjustment and

experience negative affects, such as anxiety, insecurity, and hostility.¹ Finally, *openness to experience* (hereafter, *openness*) refers to a disposition to be imaginative, nonconforming, open to ideas, and unconventional (McCrae & Costa Jr., 1997).

Team Member Trust

As we have noted above, a recognition of the multi-dimensional nature of trust has been widely observed in the research on virtual teams (e.g., Jarvenpaa & Leidner, 1999; Kanawattanachai & Yoo, 2002). In one particularly insightful study, Sarker, Valachich and Sarker (2003) define virtual team trust as "the degree of reliance individuals have on their remotely located team members taken collectively (i.e., as a group)" (p. 37). They recognize three distinct dimensions of virtual team trust:

1. *Personality based trust* – Develops due to a person's propensity to trust.
2. *Institutional based trust* – A function of an individual's belief in institutional norms/procedures.
3. *Cognitive based trust* – Develops from social cues, impressions and interactive tasks that an individual receives/delivers to/from another.

In the present study, we adopt this three-faceted conception of trust, because we believe it incorporates and constructively extends the distinction between cognitive and affective trust established by Lewis and Weigert (1985).

Perceived Team Effectiveness

Following Lurey and Raisinghani (2001) and Walters (2004), we adopt an operational definition of perceived team effectiveness as the sum of perceived satisfaction and perceived performance. We decided to employ perceptual measures of the virtual team effectiveness because such measures allow for assessment of effectiveness during the lifecycle of the team, i.e., while the team is still engaged in work. The virtual teams that we have studied were extant and in process; therefore, we approach perceived team effectiveness as a process measure, rather than an objective outcome measure. *Perceived performance* refers to team members' discernment of the team's ability to complete their work assignments. *Perceived satisfaction* refers to the levels of satisfaction with the team processes achieved by team members.

Hypotheses

To reiterate, the primary focus of this study is to understand the relationships between team leader personality, team member trust, and perceived virtual team effectiveness. In general, we expect the "positive" measures of team leader personality to positively influence the levels of various forms of trust amongst team members.² Consistent with earlier research, enhanced team trust in turn is expected to result in higher measures of virtual team effectiveness. The detailed version of our hypothesized model is provided in Appendix 2.

¹ Several authors have employed the more positive and inverse framing for the construct of *Neuroticism* as *Emotional Stability*. We have opted to maintain the label of neuroticism because it reflects the current prevailing approach to the five-factor model (McCrae & John, 1992).

² Four of the five personality scale items used can be characterized as "positive" measures with higher values indicating more generally desirable personality states. In the case of *Neuroticism*, the sole exception to this pattern, we expect an inverse relationship with both trust and virtual team performance.

Surprisingly, there is a paucity of research investigating the relationships between team leader personality and trust among group members, even in the context of traditional teams. Thus, to a significant extent, the relationships we anticipate here reflect novel theorizing. However, our hypotheses are grounded in broader observations regarding the association of the five factor model of personality and leadership effectiveness. These insights can be extended to speculation regarding the relationship between leader personality traits and trust because of the inherent element of persuasion in effective leadership. As Hogan, Curphy and Hogan (1994) note: "Leadership is persuasion, not domination; persons who can require others to do their bidding because of their power are not leaders. Leadership only occurs when others willingly adopt, for a period of time, the goals of a group as their own" (p. 3). Thus we state the following high level hypothesis:

Hypothesis 1: *A virtual team leader's personality traits of extraversion, agreeableness, conscientiousness, (low) neuroticism, and openness will have a positive effect on the level of trust among team members.*

H1a: **A virtual team leader's extraversion will positively influence the level of trust among team members.**

H1b: **A virtual team leader's agreeableness will positively influence the level of trust among team members.**

H1c: **A virtual team leader's conscientiousness will positively influences the level of trust among team members.**

H1d: **A virtual team leader's neuroticism will negatively influence the level of trust among team members.**

H1e: **A virtual team leader's openness to experience will positively influence the level of trust among team members.**

Hypothesis 2: *A virtual team leader's personality traits of extraversion, agreeableness, conscientiousness, (low) neuroticism, and openness have a positive effect on perceived virtual team effectiveness.*

H2a: *A virtual team leader's extraversion has a positive effect on perceived virtual team effectiveness.*

H2b: *A virtual team leader's agreeableness has a positive effect on perceived virtual team effectiveness.*

H2c: *A virtual team leader's conscientiousness has a positive effect on perceived virtual team effectiveness.*

H2d: *A virtual team leader's neuroticism has a negative effect on perceived virtual team effectiveness.*

H2e: *A virtual team leader's openness to experience has a positive effect on perceived virtual team effectiveness.*

Hypothesis 3: *Team member trust has a positive effect on perceived virtual team effectiveness.*

H3a: *Personality based trust among the members of a virtual team has a positive effect on perceived virtual team effectiveness.*

H3b: Institutional based trust among the members of a virtual team has a positive effect on perceived virtual team effectiveness.

H3c: Cognitive based trust among the members of a virtual team has a positive effect on perceived virtual team effectiveness.

Research Design and Data Collection

Background of the Study

In 1995, the United States Department of Defense (DoD) adopted the integrated product team approach in an effort to improve its processes for weapon systems acquisition (GAO, 2001). The *integrated product team* (IPT) is a team structure and method that emphasizes multi-disciplinary representation and military-civilian collaboration. The IPT format is used to manage the acquisition of a wide range of products, including software systems and aircraft, to support the United States military. While the DoD has seen several advances in efficiency and effectiveness as a result of the IPT concept, the results of these efforts remain mixed. Despite the intention of the program, the generation of cross-functional solutions for difficult acquisition problems has not been uniformly achieved (GAO, 2001). The management of distributed team members has been cited as one of the central challenges of the IPT approach (GAO, 2001).

Data Collection and Sample Characteristics

Of the 3,500 virtual team members surveyed, 1,045 participants responded, a response rate of 29.9%. Of those participants who completed the survey, 873 records were maintained, while 172 were eliminated due to reporting errors or incomplete responses. For those participants who reported virtual team leader gender, there were 522 male (59.8%) and 351 female (40.2%) leaders noted. Teams consisting of 4 to 9 members dominated at 588 teams (67.4%). Teams having 10 to 19 members accounted for an additional 19.6%. The remaining 13.1% represented teams having 20 members or more. With regard to team leader selection, 53.7% of leaders were appointed, 17.6% were formally elected by team members, and 28.6% emerged informally. Over half (53.5%) of the team leaders had 5 years of experience or less; 24.5% had 6 to 9 years of experience; and 22% had over 10 years of experience in leading a virtual team. With respect to project topics, 28.5% were technical in focus, 39.8% were management related, and 31.7% were a combination of management and technical. Finally, contractors held 74.2% of the virtual team leader positions, civil servants held 23.2%, and military personnel held 2.7%.

Data Analysis

The interpretation of the data consisted of an iterative process that began with close analysis of the descriptive statistics to gain an overall impression of normality, means, and standard deviations for each data item. Structural equation modeling (SEM) was used to test for significant correlations and relationships between the independent and dependent variables with and without mediation. Reliability analysis was conducted on all constructs, with all Cronbach's α measurements exceeding .758 (see Table 1). A comprehensive test for mediation was conducted using the causal steps method developed by Baron and Kenny (1986; MacKinnon, 2008). The initial theoretical model was compared with a range of alternative SEM models to identify the most parsimonious quantitative model (i.e., reflecting the best goodness-of-fit results without over-specification).

Results

As noted above, a thorough assessment of construct reliability was conducted. The results are summarized in Table 1. For the core constructs of the study, the coefficient alphas range from .758 to .938, well within acceptable standards. Similarly, measures of composite reliability range from .764 to .952, with only one construct having a composite reliability of less than .800.

Table 1. Internal Reliability of Scales

Scale Construct	Cronbach's Alpha	Composite Reliability
Openness	.875	.816
Agreeableness	.778	.804
Conscientiousness	.875	.871
Neuroticism	.849	.869
Extraversion	.758	.764
Personality Based Trust	.938	.945
Cognitive Based Trust	.934	.952
Institutional Based Trust	.824	.860
Perceived Team Effectiveness	.896	.879

Utilizing exploratory factor analysis (EFA), there is clear evidence of convergent and discriminate validity for all items within the research model. The pattern matrix for the complete model reveals the expected major loadings for all items, with no significant cross-loadings (see Appendix 3).³ The factor correlation matrix indicates no cross-factor correlations greater than .685. Using AMOS, confirmatory factor analysis (CFA) identifies ten first order latent constructs and one second order latent construct (i.e., perceived effectiveness). The CFA produces the following model fit statistics: Chi-square = 1152.78, df = 396, p = .000; CFI=.961, PCFI=.818, NFI=.942, IFI=.961, and RMSEA=.047. The standardized factor loadings were all statistically significant (t-values > 2.32, p < .001) and all greater than .5, with the vast majority between .7 and .9. Overall, the analysis of measurement model strongly suggests that the items are suitable and that the constructs are appropriate for subsequent analysis and interpretation.

Evaluation of the Theoretical Model

SEM results for the path model, including the tests for mediation, are provided in Appendix 4. The analysis provides strong evidence that team leader personality traits do indeed have a positive effect on both team trust and perceived team effectiveness to varying direct and indirect degrees. In addition, the findings suggest that all three forms of trust have a statistically significant (p=<.01) effect on perceived team effectiveness, with cognitive based trust having the most profound effect. A comparison of multiple models (including partially mediated, fully mediated, and unmediated variants) with respect to goodness-of-fit results are provided in Table 2.

³ Major loadings include those greater than .500. Significant cross-loading would be indicated by differences of less than .300 between primary and secondary loadings across distinct constructs.

TABLE 2. Goodness-of-Fit Comparisons

Metrics	Partially Mediated	Fully Mediated	Unmediated	Hybrid Model*
Chi²	1684.2	1707.14	3747.4	1512.33
df	575	580	590	516
p	0.000	0.000	0.000	0.000
CFI	0.952	0.951	0.863	0.954
PCFI	0.822	0.828	0.765	0.827
NFI	0.929	0.928	0.842	0.932
TLI	0.944	0.944	0.845	0.947
RMSEA	0.047	0.047	0.078	0.047

* The hybrid model reflects adjustments based on the integration of the other three models: Full mediation for all virtual team leader personality constructs except Conscientiousness and elimination of the Institutional Trust construct.

Details regarding how individual personality traits and the team trust factors interrelated will be discussed in the following section. The findings pertaining to the hypotheses articulated for this study include the following:

Hypothesis 1: A virtual team leader’s personality traits of extraversion, agreeableness, conscientiousness, (low) neuroticism, and openness have a positive effect on team trust.

The results (see Appendix 4 for a summary of the results for the models evaluated) indicate very strong support for Hypothesis 1 and all of the associated sub-hypotheses. The coefficients for all five personality factors range between .7 and .85 (in the case of *neuroticism*, the direction of effect is, as expected, inverse with coefficients ranging from -.779 to -.852 for the three forms of trust). For all personality trait-trust construct relationships, a significance of $p < .001$ was observed in both the full and partial mediation conditions assessed. This indicates a statistically significant relationship between each of the five leader personality factors and the individual factors defining team trust.

Hypothesis 2: A virtual team leader’s personality traits of extraversion, agreeableness, conscientiousness, (low) neuroticism, and openness have a positive effect on perceived virtual team effectiveness.

The results from the unmediated model suggest substantial support for Hypothesis 2. The coefficients for the four positive leader personality factors of agreeableness, openness, extraversion, and conscientiousness have an effect on perceived virtual team effectiveness with a significance ranging from $p = .012$ to $p < .001$. Similarly, the “negative” construct of neuroticism is, as anticipated, inversely related to perceived virtual team effectiveness ($B = -.217$, $p < .001$).

Interestingly, in the partially mediated model, the results indicate that only conscientiousness has a statistically significant direct effect ($B = .236$, $p = .013$) on perceived virtual team effectiveness (when partially mediated by cognitive and personality based trust). Finally, in the fully mediated model, the remaining four leader personality factors (i.e., openness, extraversion, agreeableness, neuroticism) are statistically significant ($p < .001$) in their effects on the three forms of trust. Assessing the three models together, we see a clear indication that the effects of virtual

team leader personality on virtual team effectiveness are almost completely mediated through the constructs of team trust. Specifically, the effects of these team leader characteristics appear to be mediated through the cognitive and personality based form of trust. Intriguingly, institutional based trust does not serve a significant mediating role. The implications of these results will be addressed further in the Discussion section.

Hypothesis 3: *Team member trust (in personality, institutional, and cognitive based forms) has a positive effect on perceived virtual team effectiveness.*

The results offer complete support for Hypothesis 3 and each of the sub-hypotheses outlined. In the case of personality based trust, the unmediated model reveals a strong and statistically significant influence on perceived virtual team effectiveness ($B=.160, p < .001$). Similarly, the results indicate a significant relationship between institutional based trust and perceived virtual team effectiveness, although the loading is the weakest of the three trust constructs ($B=.068, p < .01$). Finally, the consideration of cognitive based trust reveals the strongest loading of the three trust constructs on perceived virtual team effectiveness ($B=.283, p < .001$). Thus, these results reinforce earlier findings regarding the relationship between various forms of trust and virtual team effectiveness.

Discussion & Conclusion

The nuances observed between the different dimensions of perceived virtual team leader personality and virtual team trust in their effects on perceived virtual team effectiveness provide several critical insights. Some of these observations reinforce arguments in the existing literature on virtual teams, while others push the virtual team research in new and intriguing directions. The strong support for each of the hypothesized sets of relationships in our theoretical model presents a range of significant implications for researchers, managers, and other knowledge professionals.

The Role of Leadership

One of the most interesting findings from the current study is that the perceived personality traits of virtual team leaders have a substantive influence on the perceived effectiveness of their teams, but this influence is almost completely mediated through the development and maintenance of team trust (specifically, the cognitive and personality based dimensions of trust). Virtual team leaders who are perceived agreeable, emotionally stable, extraverted, open, and conscientious may have a positive effect on the performance of their teams, because they engender feelings of trust among the team members. This has a number of important implications. The findings suggest qualities that organizational leaders should consider in the hiring and assignment of virtual teams leaders. As with virtual teams in real-world organizational contexts, most of the virtual teams in the study have leaders that were assigned from the inception of the group, underscoring the importance of leadership selection criteria and assignment processes employed by organizational executives. Many companies use personality assessment tools (e.g., the Myers-Briggs Type Indicator) to assist in matching the personality attributes of employees to specific work assignments. This study presents a number of the personality traits that are particularly relevant for those being considered for a leadership role in a virtual team environment. The key takeaway for organizational decision-makers is that assessment of leadership potential in virtual teams is less about an individual's ability to directly affect the outcomes of a team (e.g., via strong technical skills within the relevant domain) than the professional's capacity for fostering trust among team members. The one critical exception to this insight is the observation that conscientiousness and the associated ability to structure tasks

effectively may improve virtual team performance both directly and through the development of greater levels of intra-team trust (this insight is discussed further below).

In addition to aiding in the selection of leaders in virtual team environments, the findings of this study suggest areas for ongoing training and development of virtual team leaders. In contrast to the perception that personality traits are strictly innate to an individual, a growing body of evidence suggests that organizational leaders can be effectively trained to enhance their charismatic characteristics and in turn to improve team performance (Barling, Weber, & Kelloway, 1996; Kelloway & Barling, 2000; Towler, 2003). In the case of the virtual team leadership characteristics considered in this study, certain traits appear particularly amenable to training. For example, one might imagine that the traits of agreeableness and openness in dealing with the suggestions and contributions of team members could be effectively fostered in organizational leaders, whereas extraversion and emotional stability (i.e., the counterpoint of neuroticism) may be more difficult to influence through formal training.

Finally, it is interesting to note that, of all the virtual team leader personality traits considered, only conscientiousness had an influence on team effectiveness that was not simply mediated by the dimensions of team trust.⁴ Why is this the case? One plausible explanation is that the direct effect of conscientiousness is tied to the task oriented facet of the construct. Readers will recall that the construct of conscientiousness incorporates both an organizing facet and a discernment oriented facet.⁵ The organizing element may be most relevant here. Virtual team leaders who are organizationally diligent and task oriented may be more effective at fostering the adequate structure for virtual team processes. As we noted earlier, several researchers have argued for the enhanced importance of structure as teams move from co-located to virtual contexts (Kayworth & Leidner, 2001; Poole & Zhang, 2005). Thus, the influence of team leader conscientiousness may go beyond the formation of team trust by supporting the structure necessary to keep team members on the same page operationally.

In addition to the implications for the management of virtual teams, we believe the present study contributes significantly to the research on virtual teams. First, by studying existing virtual technical and managerial teams, we provide an opportunity to better understand the dynamics of virtual teams *in situ*. The literature on ad hoc virtual teams in academic settings has established a strong base for theorizing about this emergent phenomenon, but additional research should be directed at virtual teams as they actually occur within contemporary organizations. We believe the current study contributes to this agenda. Second, the study introduces an empirical evaluation of the ways in which virtual team leader personality traits are relevant for the functioning of virtual teams. This creates a natural complement to the behavioral focus of the earlier virtual team leadership research. Finally, the current study offers an integrated look at antecedents of virtual team effectiveness which have generally been considered in isolation. By considering the ways in which leadership and team trust interact, we began to see a more complex and nuanced understanding of the factors that contribute to success in the management of virtual teams.

Virtual Team Effectiveness and the Dimensions of Trust

The current study provides a strong validation of earlier research regarding the role of virtual team trust in establishing a foundation for virtual team success. As we have noted, several researchers have argued that trust is a critical success factor for virtual teams (Costa, Roe, &

⁴ The direct effects of conscientiousness are in addition to indirect effects that were mediated by team trust.

⁵ The two facets of conscientiousness have been combined in the five-factor research literature because of a consistent finding of strong covariance of the facets (McCrae & John, 1992).

Taillieu, 2001; Hinds & Bailey, 2003; Jarvenpaa & Leidner, 1999; Kostner, 1996; Lipnack & Stamps, 1997). By demonstrating a significant positive relationship between each of the three forms of team trust and perceived team effectiveness, this study reinforces the findings of these researchers. The implications for managers and other organizational leaders are substantial. It appears that virtual teams would benefit from having their members share personal information with each other. Team building exercises that help members discover the things they have in common will help strengthen their bond and cognitive trust in each other. As in traditional teams, it is important for team members to know and share a common goal and vision. Members need to feel as though they are all working toward the same mission and sharing the same challenges. Furthermore, team members must have confidence that the other members of the team have the skills and reliability to address their respective contributions to the broader effort.

While the general insight about the importance of trust for team effectiveness is interesting, the differences observed between the three forms of trust in their effect on virtual team effectiveness are even more insightful. In the study, we find the largest effect on perceived virtual team trust is associated with the cognitive based dimension of trust. This finding offers support for the contention that cognitively oriented trust is more relevant than affectively oriented trust in the context of virtual teams (Kanawattanachai & Yoo, 2002). In the absence of regular social interaction, virtual team members appear to place a premium on rational assessments of the dependability and competence of their fellow team members. Importantly, personality based trust is also shown to have a significant effect on perceived virtual team effectiveness at the $p < .001$ level. With the third form of trust, i.e., institutional based trust, the significance of the effect is not as strong.⁶ In the non-mediation model, the effect size for this form of trust is substantially lower than for the other two forms of trust, resulting in significance at the $p = .01$ level (compared to $p < .001$ for the other two dimensions). Furthermore, in the full and partial mediation models, the effect of institutional trust on perceived virtual team effectiveness appears to disappear altogether.

Assumptions, Limitations and Implications for Research

Our findings suggest several intriguing avenues for additional research on the interplay between team leader personality and the emergence of trust in virtual teams. First, we believe a longitudinal study may be warranted. In the present study, we examined the relationship between virtual team leader personality, trust, and perceived virtual team effectiveness at a single point in time. However, the teams in the study had been in existence for varying lengths of time and the development of trust may be expected to vary over time. While we believe that the focus on existing virtual work teams is one of the strengths of the study, it does not allow us to assess the ways in which the dynamics of team leader characteristics, trust, and effectiveness change over time. Future research should include longitudinal studies to determine if the relationships between team leader personality, trust, and perceived virtual team effectiveness are strengthened, weakened, or simply maintained over time.

Second, this study was conducted within a single organizational context (albeit with individuals from across multiple “parent” organizations). Subsequent research should include participants from multiple organizations to determine if the results are similar across populations. Similarly, the population for this study was a mixture of participants who worked virtually only some of the time and those who worked virtually all of the time. The degree of virtuality may affect the relationship between virtual team leader personality, trust, and team effectiveness.

⁶ The reader will recall that institutional based trust refers to an individual’s belief in the norms and rules of the relevant institution and the perception that these norms will guide the behavior of others (Sarker et al., 2003).

Finally, future studies should examine multiple configurations of virtual working to determine what differences exist between these populations and how the differences may affect the interplay of virtual team leadership and team trust. Of particular importance is supporting technology and how different teams with different configurations and sophistication levels may achieve differential levels of trust and in turn virtual team effectiveness.

We acknowledge a number of potential limitations associated with the present study. First, the study assumes there will be a measurable level of trust among virtual teams (Walters, 2004). Despite the strong validity of the Virtual Team Trust instrument, measuring trust on only three dimensions (personality, cognitive and institutional) could preclude unacknowledged factors such as fidelity and accuracy. Second, as Zellars and Perrewé (2001) point out, the use of single-source, self-report data can overstate the actual behavior of the team. However, the impact of this issue greatly depends upon the research questions being investigated. In this study, perceptions are of theoretical interest and thus single source bias may not be a serious concern. Other limitations may be considered based on the specific context investigated. As noted, the IPTs maintained by the DOD generally have a leader assigned prior to the initiation of team activities. We perceive this to be a distinct strength of our study in that it reflects the prevailing approach to the determination of leader roles in real-world virtual teaming efforts, but it may limit the generalizability of findings to virtual teams marked by emergent leadership. Similarly, while the virtual teams studied were geographically distributed, they were not global in scope – all virtual team members were based in the United States. Thus, the study does not account for cultural differences that may emerge in virtual teams that include members from distinct national contexts. Finally, there is a potential limitation related to the characteristics of the participants themselves. Many participants in this study were members of more than one virtual team. Even though participants were instructed to rate only one virtual team (if he or she was a member of more than one team), their perceptions of the trust and effectiveness of their other teams, which could be in various stages of team development, could have spilled over into the ratings provided in the current study.

References

- Anderson, G., C. Viswesvaran. 1998. An update of the validity of personality scales in personnel selection: A meta-analysis of studies published after 1992. *13th Annual Conference of the Society of Industrial and Organizational Psychology*. Dallas, Texas, USA,
- Archer, N. P. 1990. A comparison of computer conferences with face-to-face meetings for small group business decisions. *Behaviour & Information Technology*. **9**(4) 307-317.
- Armstrong, D. J., P. Cole. 2002. Managing distances and differences in geographically distributed work groups. P. Hinds, S. Kiesler. *Distributed Work*. MIT Press, Cambridge, MA, 167-186.
- Aubert, B. A., B. L. Kelsey. 2003. Further understanding of trust and performance in virtual teams. *Small Group Research*. **34**(5) 575-589.
- Avolio, B. J., S. Dionne, L. Atwater, A. Lau, J. Camobreco. 1996. Antecedent predictors of a "full range" of leadership and management styles. U.S. Army Research Institute for the Behavioral and Social Sciences, Alexandria, VA.
- Barker, R. A. 2001. The nature of leadership. *Human Relations*. **54**(4) 469-494.
- Barling, J., T. Weber, E. K. Kelloway. 1996. Effects of transformational leadership training on attitudinal and financial outcomes: A field experiment. *Journal of Applied Psychology*. **81**(6) 827-832.

- Baron, R. M., D. A. Kenny. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*. **51**(6) 1173-1182.
- Barrick, M., M. Mount. 1991. The big five personality dimensions and job performance: A meta-analysis. *Personnel Psychology*. **44**(1) 1-26.
- Barry, B., G. Stewart. 1997. Composition, process, and performance in self-managed groups: The role of personality. *Journal of Applied Psychology*. **82**(1) 62-78.
- Bell, B. S., S. W. J. Kozlowski. 2002. A typology of virtual teams: Implications for effective leadership. *Group & Organization Management*. **27**(1) 14-49.
- Bromiley, P., L. Cummings. 1995. Transaction costs in organizations with trust. *Research on Negotiations in Organizations*. **5** 219-247.
- Butler Jr., J. 1991. Toward understanding and measuring conditions of trust: Evolution of a conditions of trust inventory. *Journal of Management*. **17**(3) 643.
- Campion, M., E. Papper, G. Medsker. 1996. Relations between work team characteristics and effectiveness: A replication and extension. *Personnel Psychology*. **49**(2) 429-452.
- Chidambaram, L., R. Bostrom. 1993. Evolution of group performance over time: A repeated measures study of GDSS effects. *Journal of Organizational Computing*. **3**(4) 443-469.
- Chidambaram, L., L. L. Tung. 2005. Is out of sight, out of mind? An empirical study of social loafing in technology-supported groups. *Information Systems Research*. **16**(2) 149-168.
- Cook, J., T. Wall. 1980. New work attitude measures of trust, organizational commitment and personal need non-fulfillment. *Journal of Occupational Psychology*. **53**(1) 39-52.
- Costa, A., R. Roe, T. Taillieu. 2001. Trust within teams: The relation with performance effectiveness. *European Journal of Work and Organizational Psychology*. **10**(3) 225-244.
- Costa, P. T., R. R. McCrae. 1988. Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. *Journal of Personality and Social Psychology*. **54**(5) 853-863.
- Cramton, C. D. 2001. The mutual knowledge problem and its consequences for dispersed collaboration. *Organization Science*. **12**(3) 346-371.
- Cramton, C. D., K. L. Orvis. 2003. Overcoming barriers to information sharing in virtual teams. C. B. Gibson, S. Cohen. *Virtual Teams That Work*. Jossey-Bass, San Francisco, CA, 214-229.
- Cummings, L., P. Bromiley. 1996. The organizational trust inventory (OTI). R. M. Kramer, T. R. Tyler. *Trust in organizations: Frontiers of theory and research*. SAGE Publications, Thousand Oaks, CA, 302-330.
- Davis, D. D. 2004. The Tao of leadership in virtual teams. *Organizational Dynamics*. **33**(1) 47-62.
- DeNeve, K. M., H. Cooper. 1998. The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin*. **124**(2) 197-229.
- Digman, J. M. 1989. Five robust trait dimensions: Development, stability, and utility. *Journal of Personality*. **57**(2) 195-214.
- Digman, J. M. 1990. Personality structure: Emergence of the five-factor model. *Annual Reviews in Psychology*. **41**(1) 417-440.
- Duarte, D. L., N. T. Snyder. 2000. *Mastering virtual teams: Strategies, tools, and techniques that succeed*. Jossey-Bass, San Francisco, CA.

- Edwards, H. K., V. Sridhar. 2003. Analysis of the effectiveness of global virtual teams in software engineering projects. *System Sciences, 2003. Proceedings of the 36th Annual Hawaii International Conference*. 9.
- Fayol, H. 1949. *General and industrial management*. Pitman, London, UK.
- Fells, M. J. 2000. Fayol stands the test of time. *Journal of Management History*. **6**(8) 345-360.
- Friedman, H. S., J. S. Tucker, J. E. Schwartz, C. Tomlinson-Keasey, L. R. Martin, D. L. Wingard, M. H. Criqui. 1995. Psychosocial and behavioral predictors of longevity. The aging and death of the "termites". *American Psychologist*. **50**(2) 69-78.
- Fulk, J., G. DeSanctis. 1995. Electronic communication and changing organizational forms. *Organization Science*. **6**(4) 337-49.
- GAO. 2001. Best practices: DOD teaming practices not achieving potential results. U.S. General Accounting Office, Washington, DC.
- Goffin, R. D., M. G. Rothstein, N. G. Johnston. 1996. Personality testing and the assessment center: Incremental validity for managerial selection. *Journal of Applied Psychology*. **81**(6) 746-756.
- Goldberg, L. R. 1990. An alternative "description of personality": The big-five factor structure. *Journal of Personality*. **59**(6) 1216-1229.
- Haas, D. 2003. Government-wide Information Technology (IT) Acquisitions. *Program Manager*. **32**(3) 12-23.
- Hackman, J. R. 1990. *Groups that work (and those that don't)*. Jossey-Bass, San Francisco, CA.
- Handy, C. 1995. Trust and the virtual corporation. *Harvard Business Review*. **73**(3) 40-50.
- Henry, J. E., M. Hartzler. 1997. Virtual teams: Today's reality, today's challenge. *Quality Progress*. **30**(5) 108-109.
- Hinds, P., M. Mortensen. 2005. Understanding conflict in geographically distributed teams: The moderating effects of shared identity, shared context, and spontaneous communication. *Organization Science*. **16**(3) 290-307.
- Hinds, P. J., D. E. Bailey. 2003. Out of sight, out of sync: Understanding conflict in distributed teams. *Organization Science*. **14**(6) 615-632.
- Hogan, R., G. Curphy, J. Hogan. 1994. What we know about leadership: Effectiveness and personality. *American Psychologist*. **49**(6) 493-504.
- Hogan, R., J. Hogan, B. W. Roberts. 1996. Personality measurement and employment decisions. Questions and Answers. *American Psychologist*. **51**(5) 469-77.
- Hough, L. M., D. S. Ones, C. Viswesvaran. 1998. Personality correlates of managerial performance constructs. *13th Annual Conference of the Society for Industrial and Organizational Psychology*. Dallas, TX,
- Hoyle, R. H., A. M. Crawford. 1994. Use of individual-level data to investigate group phenomena issues and strategies. *Small Group Research*. **25**(4) 464-485.
- Huff, L. C., J. Cooper, W. Jones. 2002. The development and consequences of trust in student project groups. *Journal of Marketing Education*. **24**(1) 24.
- Hurtz, G. M., J. J. Donovan. 2000. Personality and job performance: The big five revisited. *Journal of Applied Psychology*. **85**(6) 869-79.
- Iacono, C. S., S. Weisband. 1997. Developing trust in virtual teams. *Thirtieth Hawaii International Conference on System Sciences*. Wailea, HI, 412-420.

- Jarvenpaa, S. L., D. E. Leidner. 1999. Communication and trust in global virtual teams. *Organization Science*. **10**(6) 791-815.
- Judge, T., J. Bono. 2000. Five-factor model of personality and transformational leadership. *Journal of Applied Psychology*. **85**(5) 751-765.
- Judge, T., J. Bono, R. Ilies, M. Gerhardt. 2002. Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*. **87**(4) 765-780.
- Kanawattanachai, P., Y. Yoo. 2002. Dynamics of trust in virtual teams. *Journal of Strategic Information Systems*. **11**(3/4) 187-213.
- Kayworth, T. R., D. E. Leidner. 2001. Leadership effectiveness in global virtual teams. *Journal of Management Information Systems*. **18**(3) 7-40.
- Kelloway, E. K., J. Barling. 2000. What we have learned about developing transformational leaders. *Leadership & Organization Development Journal*. **21**(7) 355-362.
- Kickul, J., G. Neuman. 2000. Emergent leadership behaviors: The function of personality and cognitive ability in determining teamwork performance and KSAs. *Journal of Business and Psychology*. **15**(1) 27-51.
- Kiesler, S., J. N. Cummings. 2002. What do we know about proximity and distance in work groups? A legacy of research. P. Hinds, S. Kiesler. *Distributed work*. MIT Press, Cambridge, MA, 57-82.
- King, N., A. Majchrzak. 2003. Technology alignment and adaptation for virtual teams involved in unstructured knowledge work. C. B. Gibson, S. G. Cohen. *Virtual Teams That Work*. Jossey-Bass, San Francisco, CA, 265-291.
- Knoll, K., S. L. Jarvenpaa. 1998. Working together in global virtual teams. M. Igarria, M. Tan. *The virtual workspace*. Idea Group Publishing, Hershey, PA, 2-23.
- Kostner, J. 1996. *Virtual leadership: Secrets from the round table for the multi-site manager*. Warner Books, New York, NY.
- Kurland, N. B., T. D. Egan. 1999. Telecommuting: Justice and control in the virtual organization. *Organization Science*. **10**(4) 500-513.
- Larzelere, R., T. Huston. 1980. The dyadic trust scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family*. **42**(3) 595-604.
- Lawler III, E. E. 2003. Pay systems for virtual teams. C. B. Gibson, S. G. Cohen. *Virtual teams that work*. Jossey-Bass, San Francisco, CA, 121-144.
- Lewis, J. D., A. Weigert. 1985. Trust as a social reality. *Social Forces*. **63**(4) 967-985.
- Lipnack, J., J. Stamps. 1997. *Reaching across space, time, and organizations with technology*. Wiley & Sons, Inc., New York, NY.
- Lurey, J. S., M. S. Raisinighani. 2001. An empirical study of best practices in virtual teams. *Information & Management*. **38**(8) 523-544.
- MacKinnon, D. P. 2008. *Introduction to statistical mediation analysis*. Lawrence Erlbaum Associates, New York, NY.
- Majchrzak, A., R. Rice, A. Malhotra, N. King, S. Ba. 2000. Technology adaptation: The case of a computer-supported inter-organizational virtual team. *MIS Quarterly*. **24**(4) 569-600.

- Mayer, D., L. Nishii, B. Schneider, H. Goldstein. 2007. The precursors and products of justice climates: Group leader antecedents and employee attitudinal consequences. *Personnel Psychology*. **60**(4) 929-963.
- Mayer, R. C., J. H. Davis, F. D. Schoorman. 1995. An integrative model of organizational trust. *Academy of Management Review*. **20**(3) 709-734.
- Maznevski, M. L., K. M. Chudoba. 2000. Bridging space over time: Global virtual team dynamics and effectiveness. *Organization Science*. **11**(5) 473-492.
- McAllister, D. J. 1995. Affect- and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*. **38**(1) 24-59.
- McCrae, R. R., P. T. Costa. 1997. Personality trait structure as a human universal. *American Psychologist*. **52**(5) 509-516.
- McCrae, R. R., P. T. Costa Jr. 1997. Conceptions and correlates of openness to experience. R. Hogan, J. Johnson, S. Briggs. *Handbook of personality psychology*. Academic Press, San Diego, CA, 825-847.
- McCrae, R. R., O. P. John. 1992. An introduction to the five-factor model and its applications. *Journal of Personality*. **60**(2) 175-215.
- Meyerson, D., K. Weick, R. Kramer. 1996. Swift trust and temporary groups. *Trust in Organizations: Frontiers of Theory and Research*. **195**(3) 32-55
- Montoya-Weiss, M. M., A. P. Massey, M. Song. 2001. Getting it together: Temporal coordination and conflict management in global virtual teams. *Academy of Management Journal*. **44**(6) 1251-1262.
- Morgan, R. M., S. D. Hunt. 1994. The commitment-trust theory of relationship marketing. *Journal of Marketing*. **58**(3) 20-38.
- Mowshowitz, A. 1997. Virtual organization. *Communications of the ACM*. **40**(9) 30-37.
- Nardi, B., S. Whittaker. 2002. The place of face-to-face communication in distributed work. P. Hinds, S. Kiesler. *Distributed Work*. MIT Press, Cambridge, MA, 83-112.
- Nilles, J. 1998. *Managing telework: Strategies for managing the virtual workforce*. John Wiley & Sons, New York, NY.
- Nohria, N., R. G. Eccles. 1992. Face-to-face: Making network organizations work. N. Nohria, R. G. Eccles. *Networks and organizations: Structure, form, and action*. Harvard Business School Press, Boston, MA,
- Norman, W. T. 1963. Toward an adequate taxonomy of personality attributes: Replicated factors structure in peer nomination personality ratings. *Journal of Abnormal & Social Psychology*. **66**(6) 574-583.
- Nowack, K. 1996. Personality inventories: The next generation. *Performance in Practice*.
- O'Connor, T. 2006. General administrative theorists. *MegaLinks in criminal justice*. International Journal of Police Science & Management: September 2008, Vol. 10, No. 3, pp. 255-266
- Panteli, N. 2005. Trust in global virtual teams. *Ariadne*. **43**(2) 1-9.
- Pauleen, D. J. 2003. Leadership in a global virtual team: An action learning approach. *Leadership & Organization Development Journal*. **24**(3) 153-162.

- Piccoli, G., B. Ives. 2000. Virtual teams: Managerial behavior control's impact on team effectiveness. *Proceedings of the twenty first international conference on Information systems*. 575-580.
- Ployhart, R. E., B.-C. Lim, K.-Y. Chan. 2001. Exploring relations between typical and maximum performance ratings and maximum performance ratings and the five factor model of personality. *Personnel Psychology*. **54**(4) 809-843.
- Poole, M. S., H. Zhang. 2005. Virtual teams. S. A. Wheelan. *Handbook of group research and practice*. Sage Publications, Thousand Oaks, CA, 363-384.
- Raymark, P. H., M. J. Schmit, R. M. Guion. 1997. Identifying potentially useful personality constructs for personnel selection. *Personnel Psychology*. **50**(3) 723-736.
- Rubin, R. S., D. C. Munz, W. H. Bommer. 2005. Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *The Academy of Management Journal*. **48**(5) 845-858.
- Sally, D. 1995. Conversation and cooperation in social dilemmas: A meta-analysis of experiments from 1958 to 1992. *Rationality and Society*. **7**(1) 58-92.
- Sarker, S., J. S. Valacich, S. Sarker. 2003. Virtual team trust: Instrument development and validation in an IS educational environment. *Information Resources Management Journal*. **16**(2) 35-55.
- Stinnett, N., J. Walters. 1977. *Relationships in marriage and family*. Macmillan, New York, NY.
- Towler, A. J. 2003. Effects of charismatic influence training on attitudes, behavior, and performance. *Personnel Psychology*. **56**(2) 363-381.
- Townsend, A. M., S. M. DeMarie, A. R. Hendrickson. 1998. Virtual teams: Technology and the Workplace of the Future. *Academy of Management Executive*. **12**(3) 17-29.
- Tupes, E. C., R. E. Christal. 1992. Recurrent personality factors based on trait ratings. *Journal of Personality*. **60**(2) 225-251.
- Walters, K. K. G. 2004. A study of the relationship between trust and perceived effectiveness in virtual teams. Capella University.
- Warkentin, M. E., L. Sayeed, R. Hightower. 1997. Virtual teams versus face-to-face teams: An exploratory study of a web-based conference system. *Decision Sciences*. **28**(4) 975-996.
- Watson, D., L. A. Clark. 1997. Extraversion and its positive emotional core. R. Hogan, J. Johnson, S. Briggs. *Handbook of Personality Psychology*. Academic Press, San Diego, CA, 767-793.
- Watson-Manheim, M. B., K. M. Chudoba, K. Crowston. 2002. Discontinuities and continuities: A new way to understand virtual work. *Information Technology & People*. **15**(3) 191-209.
- Weick, K. E., K. H. Roberts. 1993. Collective mind in organizations: Heedful interrelating on flight decks. *Administrative Science Quarterly*. **38**(3) 357-381.
- Yoo, Y., M. Alavi. 2004. Emergent leadership in virtual teams: What do emergent leaders do? *Information and Organization*. **14**(1) 27-58.
- Zellers, K., P. Perrewe. 2001. Affective personality and the content of emotional social support: Coping in organizations. *Journal of Applied Psychology*. **86**(3) 459-67.
- Zigurs, I. 2003. Leadership in virtual teams: Oxymoron or opportunity? *Organizational Dynamics*. **31**(4) 339-351.

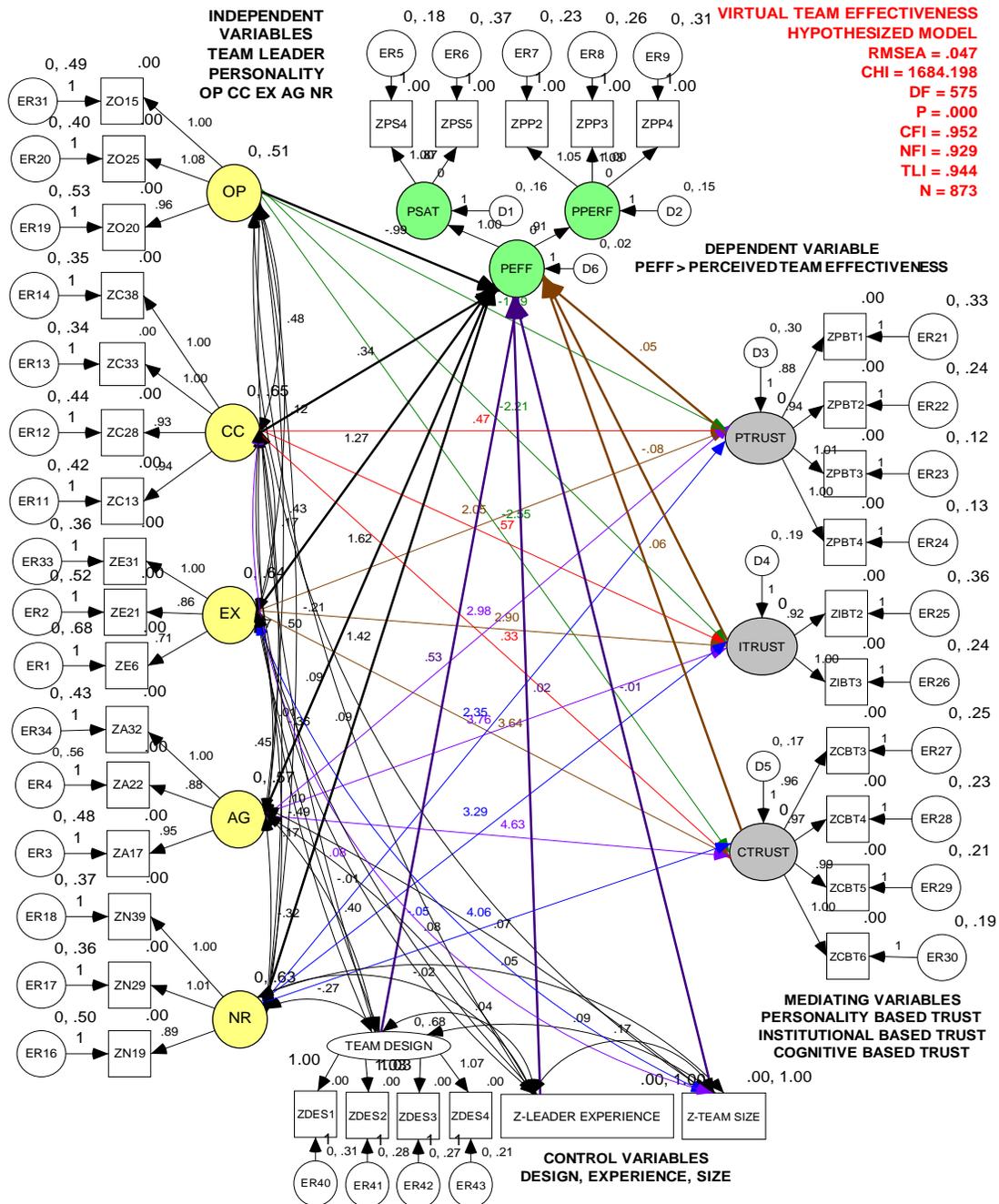
Appendix 1

Table of Constructs

Construct	Description	Sources
<i>Team Leader Personality Constructs</i>		
Openness	A disposition to be imaginative, nonconforming, open to ideas, and unconventional	Goldberg, 1990; McCrae & Costa Jr., 1997; McCrae & John, 1992
Conscientiousness	The disposition that combines the tendency to be governed by conscience with diligence and thoroughness in organizing behavior [<i>The dimensions are combined because past research supports the empirical assertion of strong covariance in these traits (McCrae & John, 1992)</i>]	Goldberg, 1990; McCrae & Costa Jr., 1997; McCrae & John, 1992
Extraversion	The tendency to be sociable, assertive, and active, and to experience positive affects, such as energy and zeal	Goldberg, 1990; McCrae & John, 1992; Watson & Clark, 1997
Agreeableness	The tendency to be trusting, compliant, caring, and gentle	Digman, 1990; Goldberg, 1990; McCrae & John, 1992
Neuroticism	The tendency to exhibit poor emotional adjustment and experience negative affects, such as anxiety, insecurity, and hostility	Goldberg, 1990; McCrae & John, 1992
<i>Virtual Team Trust Constructs</i>		
Personality based trust	Trust that develops due to the personal propensity to trust among individual team members	Sarker et al., 2003
Institutional based trust	Trust that is a function of the belief in institutional norms and procedures	Sarker et al., 2003
Cognitive based trust	Trust that develops from social cues, impressions, and interactive experiences that an individual has with others	Sarker et al., 2003
Perceived Team Effectiveness Constructs		
Perceived performance	Team members' discernment of the team's ability to complete their work assignments	Lurey & Raisinghani, 2001; Walters, 2004
Perceived Satisfaction	The levels of satisfaction with the team processes achieved by team members	Lurey & Raisinghani, 2001; Walters, 2004

Appendix 2

Detailed Hypothesized Model with AMOS Output



Appendix 3

Exploratory Factor Analysis – Pattern Matrix

Item/Factors	1	2	3	4	5	6	7	8	9	10
Extraversion1						0.711				
Extraversion2						0.783				
Extraversion3						0.529				
Agreeableness1								0.779		
Agreeableness2								0.620		
Agreeableness3								0.598		
Conscientiousness1				0.574						
Conscientiousness2				0.536						
Conscientiousness3				0.875						
Conscientiousness4				0.806						
Neuroticism1			-0.775							
Neuroticism2			-0.872							
Neuroticism3			-0.683							
Openness1							0.504			
Openness2							0.829			
Openness3							0.568			
PersTrust1		0.795								
PersTrust2		0.724								
PersTrust3		1.011								
PersTrust4		0.976								
InstTrust1										0.782
InstTrust2										0.636
CogTrust1	0.800									
CogTrust2	0.789									
CogTrust3	0.905									
CogTrust4	0.935									
PercPerf1					0.519					
PercPerf2					1.054					
PercPerf3					0.724					
PercSatis4									0.845	
PercSatis5									0.744	

Extraction Method: Maximum Likelihood.

Rotation Method: Promax with Kaiser Normalization.

Appendix 4

Comparison of Alternative Models

Relationship	Partial Mediation		Full Mediation		Non-Mediation	
	<i>Std Est.</i>	<i>P</i>	<i>Std Est.</i>	<i>p</i>	<i>Std Est.</i>	<i>p</i>
Openness → Team Effectiveness	0.136	0.375			0.140	0.002
Neuroticism → Team Effectiveness	-0.059	0.762			-0.217	***
Extraversion → Team Effectiveness	0.483	0.459			0.158	0.012
Agreeableness → Team Effectiveness	0.178	0.230			0.251	0.004
Conscientiousness → Team Effectiveness	0.236	0.013			0.487	***
Personality Trust → Team Effectiveness	0.082	0.033	0.144	***	0.169	***
Institutional Trust → Team Effectiveness	-0.009	0.855	0.059	0.126	0.068	0.010
Cognitive Trust → Team Effectiveness	0.185	***	0.216	***	0.283	***
Openness → Personality Trust	0.792	***	0.791	***		
Openness → Institutional Trust	0.861	***	0.853	***		
Openness → Cognitive Trust	0.852	***	0.846	***		
Neuroticism → Personality Trust	-0.779	***	-0.779	***		
Neuroticism → Institutional Trust	-0.852	***	-0.852	***		
Neuroticism → Cognitive Trust	-0.830	***	-0.830	***		
Extraversion → Personality Trust	0.781	***	0.781	***		
Extraversion → Institutional Trust	0.869	***	0.869	***		
Extraversion → Cognitive Trust	0.868	***	0.868	***		
Agreeableness → Personality Trust	0.823	***	0.823	***		
Agreeableness → Institutional Trust	0.853	***	0.853	***		
Agreeableness → Cognitive Trust	0.826	***	0.826	***		
Conscientiousness → Personality Trust	0.795	***	0.794	***		
Conscientiousness → Institutional Trust	0.836	***	0.837	***		
Conscientiousness → Cognitive Trust	0.778	***	0.777	***		

English Abstract

Technology, Trust and Effectiveness in Virtual Teams

Dr. Eugene Pierce¹ and Dr. Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org
Weatherhead School of Business, CASE Western Reserve University. eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA. shansen@saunders.rit.edu

Abstract

Business and government organizations today need to compete and interoperate globally to survive. Effective virtual team management through technology is a key factor. Virtual teams present advantages for cost control and access to global expertise. Previous research suggests a variety of factors for effective functioning of virtual teams. This study explored technology and relationships between team leader personalities, team trust, and team perceived effectiveness by surveying 873 engineers. The findings suggest that a virtual team leader's personality has a significant impact on the team's perceived effectiveness but this effect is mediated through cognitive and personality based trust. Implications for managers and further research are discussed.

Keywords: Cognitive Trust, Leader personality, Personality-based Trust, Virtual Teaming, Big Five personality model, Structural equation modeling

French Abstract*

Technology, Trust and Effectiveness in Virtual Teams

Technologie, confiance et efficacité des équipes virtuelles

Eugene Pierce¹ and Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org
Weatherhead School of Business, CASE Western Reserve University. eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA. shansen@saunders.rit.edu

Résumé

Les organisations professionnelles et le gouvernement doivent aujourd'hui faire face à la concurrence et interagir au niveau mondial pour survivre. Une gestion efficace des équipes virtuelles ainsi que la technologie sont des facteurs clé de succès. Les équipes virtuelles présentent des avantages en termes de contrôle de coûts et de l'accès à l'expertise mondiale. Des recherches antérieures suggèrent une qu'il existe une variété de facteurs qui permettent un fonctionnement efficace des équipes virtuelles. Cette étude explore la technologie et les relations entre la personnalité du leader d'une équipe virtuelle, la confiance au sein de l'équipe et l'efficacité de l'équipe perçue par 873 ingénieurs, qui ont été questionnés. Les résultats suggèrent que la personnalité du chef d'une équipe virtuelle a un impact significatif sur la perception de l'efficacité de l'équipe, mais cet effet est médié par le biais cognitif et la confiance. Des implications pour les managers et pistes de recherche sont discutées.

Mots-clés: Confiance cognitive, la personnalité d'un leader, confiance personnelle, le modèle de personnalité *Big Five*, modélisation par équations structurelles

* Translated by: Johannes Schaaper, Senior professor in International Management, BEM Bordeaux Management School

German Abstract*

Technology, Trust and Effectiveness in Virtual Teams

Technologie, Vertrauen und Effektivität in virtuellen Teams

Dr. Eugene Pierce¹ and Dr. Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org
Weatherhead School of Business, CASE Western Reserve University. eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA. shansen@saunders.rit.edu

Zusammenfassung

Unternehmen und staatliche Organisationen müssen heutzutage miteinander konkurrieren und global zusammenarbeiten um zu überleben. Ein Schlüsselfaktor ist das effektive virtuelle Team Management durch Technologie. Virtuelle Teams präsentieren dabei Vorteile der Kostenkontrolle und Zugang zu globalem Know-How. Vorangegangene Forschungen schlagen eine Vielzahl an Faktoren für ein effektives Funktionieren von virtuellen Teams vor.

Diese Studie erforscht die Technologie und die Beziehungen zwischen Führungspersönlichkeiten, Team Vertrauen und die wahrgenommene Effektivität durch das Team indem 873 Ingenieure befragt werden. Die Ergebnisse deuten an, dass eine virtuelle Führungspersönlichkeit eine signifikante Auswirkung auf die wahrgenommene Effektivität des Teams hat, aber der Effekt durch kognitives und persönlichkeitsbasiertes Vertrauen mediiert wird. Auswirkungen für Manager und weiterführende Forschungen werden diskutiert.

Stichwörter: kognitives Vertrauen, Führungspersönlichkeit, Persönlichkeit basiertes Vertrauen, Virtuelles Teaming, Big Five Personality-Modell, Strukturgleichungsmodell

* Translated by: Prof. Dr. Marc Eulerich, University Duisburg-Essen, marc.eulerich@uni-due.de

Spanish Abstract*

Technology, Trust and Effectiveness in Virtual Teams

Tecnología, Confianza y Eficacia en Equipos Virtuales

Eugene Pierce¹ and Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org
Weatherhead School of Business, CASE Western Reserve University. eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA. shansen@saunders.rit.edu

Resumen

Las organizaciones empresariales y del gobierno hoy en día necesitan competir e interactuar a nivel global para sobrevivir. La gestión eficaz de equipos virtuales mediante la tecnología es un factor clave. Los equipos virtuales presentan ventajas en el control de costes y el acceso a la experiencia global. Las investigaciones previas sugieren una variedad de factores para el funcionamiento eficaz de los equipos virtuales. En este estudio se exploran la tecnología y las relaciones entre la personalidad del líder del equipo, la confianza del equipo, la eficacia del equipo percibida mediante encuestas a 873 ingenieros. Los resultados sugieren que la personalidad de un líder de un equipo virtual tiene un impacto significativo en la eficacia percibida del equipo, pero este efecto es mediado por la confianza basada en la personalidad y el conocimiento. Finalmente se discuten las implicaciones para la empresa y para el ámbito académico.

Palabras clave: Confianza cognitiva, personalidad del líder, confianza basada en la personalidad, equipos virtuales, modelo de las cinco grandes personalidades, modelos de ecuaciones estructurales.

* Translated by: Maria Avello. Universidad Complutense de Madrid. mavello@emp.ucm.es

Arabic Abstract*

Technology, Trust and Effectiveness in Virtual Teams

التكنولوجيا، الثقة، والفاعلية في فرق العمل الافتراضية

Dr. Eugene Pierce¹ and Dr. Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org
Weatherhead School of Business, CASE Western Reserve University. eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA. shansen@saunders.rit.edu

المخلص

تحتاج منظمات الأعمال و الحكومات في الوقت الحالي الى التنافس و التعامل على الصعيد العالمي لتتمكن من البقاء حيث تعتبر الفرق الافتراضية الفعالة من خلال التكنولوجيا عامل اساسي في ذلك. حيث تتيح الفرق الافتراضية مزايا لمراقبة التكاليف والحصول على الخبرات العالمية. تشير الأبحاث السابقة الى عوامل مختلفة من أجل تحقيق الاداء الفعال للفرق الافتراضية. بحثت هذه الدراسة التكنولوجيا و العلاقات بين شخصية قائد الفريق، ثقة الفريق، و فعالية الفريق المدركة من قبل 873 مهندسا. حيث تشير النتائج إلى أن شخصية قائد الفريق الافتراضي لديها أثر كبير على فعالية الفريق المدركة، لكن يتوسط هذا التأثير أو هذه العلاقة الثقة المبنية على المعرفة و الشخصية. المزيد من البحوث و التطبيقات للمدراء تمت مناقشتها ايضا.

الكلمات الدالة: الثقة المعرفية، شخصية القائد، الثقة المبنية على الشخصية، الفرق الافتراضية، نموذج الصفات الشخصية الخمسة الكبيرة، نمذجة المعادلة المهيكلية.

* Translated by: Zu'bi M.F.Al-Zu'bi, Ph.D, FHEA, University of Jordan, z.alzubi@ju.edu.jo

Italian Abstract*

Technology, Trust and Effectiveness in Virtual Teams

Tecnologia, Fiducia e Efficacia in team virtuali

Dr. Eugene Pierce¹ and Dr. Sean W. Hansen²

¹MITRE Corporation, epierce@mitre.org
Weatherhead School of Business, CASE Western Reserve University. eap18@case.edu

²Rochester Institute of Technology, Sanders College of Business
Rochester, New York, USA. shansen@saunders.rit.edu

Abstract

Organizzazioni private e governative oggi devono competere nell'ambito globale per sopravvivere. La gestione virtuale di team attraverso la tecnologia rappresenta un fattore chiave a questo. I team virtuali presentano vantaggi riguardanti il controllo dei costi e accesso all'expertise globale. Ricerche precedenti suggeriscono una varietà di fattori per l'efficace funzionamento di team virtuali. Questo ha esplorato la tecnologia e la relazione fra i team leader e le loro personalità, la fiducia nei team, e l'efficacia percepita da 873 ingegneri coinvolti nello studio. Quanto riscontrato evidenzia che la personalità del leader del team ha un grosso impatto sulla prestazione del team ma questo impatto é mitigato dal senso di fiducia a livello cognitivo e di carattere. Sono evidenziati implicazioni per manager e spunti di ricerca aggiuntiva.

Keywords: Fiducia Cognitiva, Carattere del Leader, Fiducia basata sul Carattere, Team Virtuali, I modelli di Carattere basati sui 5 aspetti chiave, Modello di Equazione Strutturale

* Translated by: Riccardo Paterni, Synergy Pathways, riccardo@synergypathways.net

Emerging Asian ICT Global Players

Natural Born Collaborators or Stuck With Aliens?

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland
monikagolonka@kozminski.edu.pl

Abstract

Researchers studying firms' strategies have begun to recognize the role of alliances, alliance portfolios and alliance networks in improving access to resources and their impact on a firm's performance. However, so far, most studies have focused on firms' alliance portfolio analysis based on a single country only, i.e. the U.S. banking or software industry. In the prevailing literature, the cultural context has been practically ignored. The real "explosion" of alliances is a phenomenon clearly observed in the global ICT (Information and Communication Technology) Industry, which is one of the fastest-growing industries, directly shaping global communication and leading changes in many other market sectors. Within this clearly trailblazing domain, we can observe a rapid growth of inter-firm cooperative ties in the convergence of digital products and services — alliances, alliance portfolios and alliance networks, as well as mergers and acquisitions. Using a sample of 30 leading global ICT giants with 10,247 alliances in their alliance portfolios, this study empirically tested and supported the hypothesis that ICT firms originated from collective cultures are more willing to cooperate with culturally diverse partners, forming multiple weak alliances, than firms from individualistic cultures. Are they natural-born collaborators, or are they "stuck" with existing giants in the mature economies?

Keywords: Alliance Strategy, ICT Industry, Emerging Asian Global Leaders

Introduction

The main objective of this study is to answer the following questions: 1) Are global ICT players from cultures characterized by high levels of collectivism (Hofstede, 2005) and "relational perspective" (Chen & Miller, 2011) – e.g. emerging economies like China and India — more open to collaboration with partners from different cultures than firms from individualistic cultures? The latter cultures are also called "Western" (Gupta & Wang, 2009; Chen & Miller, 2010) or "transactional" in the existing literature. 2) What kind of alliances do cultures characterized by high levels of collectivism tend to form?

The research results may help to explain how leading global ICT firms create their alliance portfolios¹. The findings aim to provide a deeper understanding of paths of global development for future market leaders from collective, emerging Asian countries, primarily China and India.

¹ By alliance I mean all cooperative agreements, or in other words, interfirm ties. Alliance portfolio is an ego-centric network, where the focal firm (ego) creates ties with its partners (allies).

Cooperation strategy, based on weak ties in the global ICT industry (Contractor & Lorange, 1988), has been increasingly important and effective for the last 10 years (Golonka, 2011). ICT firms are being forced to quickly acquire complementary resources, and to test new options, strategies scenarios, products, services or solutions as well as business models. As time to market has become a crucial success factor, there is not enough time to form costly, strong alliances, with fixed scope, duration and cost. During the 10-year period of 2000-2009, 30 leading global ICT firms have established over 2000 new alliances, which is approximately 34 percent of the increase to the current number - over 10,000 ties. More than 70 percent of these ties are weak alliances. In the analyzed sample, the average number of weak ties increased 55 percent, while the number of strong ties increased only by 0.56 percent.

One of the most interesting phenomena at present is the alliance strategy of global players from emerging economies (BRIC - Brazil, Russia, India, China). This strategy has become extremely important in the context of emerged global ICT giants from China and India. Strong evidence transpires showing that cultural factors influence firm-level characteristics such as the firm's organizational culture, organizational processes, strategy and performance. Culture has been seen as one of the most significant barriers in mergers and acquisitions, alliances, and organizational change. The national culture that shapes a firm's organizational model can also influence its interfirm relationships and the firm's alliance strategy. Some researchers argue that the "Eastern, relational mindset" affects organizational structure, leadership and strategy (Cheng & Miller, 2010; 2011); thus, creating relationships, competing, and cooperating may be affected by cultural factors. Explaining such phenomena can provide insights into ways of alliance creation and management by global players from different cultures. In fact, although there has been considerable theoretical discussion on cultural factors and numerous implications for strategy, leadership and organization, there is little empirical evidence to date. There are still several gaps, theoretical and empirical, in this research area. Based on quantitative analysis of ICT global leaders' alliance portfolios (10,247 alliances and 7,258 unique allies), this study shows two different ways of alliance portfolio creation.

The findings contribute to the understanding of differences in collaborative strategies of global firms originating from different cultures – Western: more individualistic, and Eastern: collective. This study provides several theoretical and practical implications for researchers and managers, although it does not provide a complete explanation of the presented phenomena. The analysis begins to offer an explanation for cultural factors' impact on a firm's alliance portfolio strategy. Future research, based on both quantitative and qualitative research methods, should provide more in-depth explanations of the phenomena.

This paper is structured as follows. First, it explains the context of emergence of global ICT giants in terms of competitive and cooperative strategies - such as alliances, alliance portfolios and networks - as well as national culture. Then, the hypotheses based on the literature analysis are provided. Second, a description is provided of methods used in the quantitative part of the research, and the results of the analysis. Then, the illustrations of the results are presented; they include descriptions of two very different cases in terms of culture of origin – a global ICT company from China and one from France. Finally, the conclusions and implications of the study are described.

Discussion and Hypotheses

Currently, particularly in the ICT Industry, forming alliances, alliance groups and networks is seen as one of the most effective methods to acquire necessary resources, including knowledge, abilities, and relationships with business partners and customers (Dyer & Singh, 1998; Gulati,

2007). The emergence of multinational ICT giants from developing markets and their establishment of a competitive advantage worldwide is associated with forming alliances with partners and potential competitors (Low, 2007; Yanqing, 2007).

One of the major factors that affect a firm's corporate culture, strategy, processes and performance is national culture. Culture is generally understood to facilitate two critical functions: external adaptation and internal integration (Schneider, 1989). Strong evidence exists in the literature on the influence of national culture on firms' strategic choices (Kogut & Singh, 1988), internal processes and decisions (Rugman & Collinson, 2009), and organizations' members' values (Chang, Wong, & Koh, 2003; Ralston, Holt, Terpstra & Kai-Cheng, 1997), as well as interfirm cooperation (Child & Faulkner, 1998; Lee, Li, & Shenkar, 2008) and a firm's performance (Ghamewat, 2001; Versakelis & Kessapidou, 2002). Corporate cultures do not depend on a national culture alone, but strong evidence exists that national cultural dimensions still influence the structure and function of organizations (Hofstede, 2009), and lead to different implicit models in people's minds of what an organization should be (Varsakelis & Kessapidou, 2002, p. 269). Corporate culture, to some extent, is shaped by national culture and the values of the firm's founders (Morosini, 1998; Veraskelis & Kessapidou, 2002). Global firms need to constantly monitor the impact of cultures on their global activities and projects (Bing, 2004).

There are several concepts in the literature describing differences between "East" and "West" in the context of approaches to forming and maintaining relationships. Well established in the literature is the Collectivism versus Individualism construct (Hofstede, 2005). However, also noteworthy are Exclusionism versus Universalism (Minkov, 2011) (correlated to collectivism-individualism dimension), Relational versus Transactional (Cheng & Miller, 2011), and West versus Dragons (China), and Tigers (India) (Gupta & Wang, 2009).

Collectivism-individualism has been a widely studied dimension in cross-national business relationships (Williams, Satterwhite, & Saiz, 1998). Collectivism-individualism relates to the relationship between the individual and his/her group (Hofstede, 2005; Triandis, 1986). In a collectivist culture, a person gives higher priority to the group's interests and norms than to his/her own interests, while in an individualistic culture, a person pursues achievement of his/her own interests over others' welfare (Hofstede, 2005). Members of an individualistic culture value individual freedom and interests, and endorse competition (Hsu, 1985). The Eastern, relational mindset, affects organization, leadership and strategy (Chen & Miller, 2011). According to Kumar and Das (2011), collectivism-individualism may affect legitimacy dynamics in international alliances during the alliance formation stage, operation stage, and alliance outcome (Kumar & Das, 2011). The ability to collaborate, as well as the ability to think non-linearly (Vance, Zell, & Groves, 2008), and the tendency of a collectivist network to maintain harmony, even with dissimilar partners (Terawatanavong & Quazi, 2006) may be useful in forming relationships with different partners and creating culturally diverse alliance portfolios for firms from collective cultures. Thus, the first hypothesis of this study is formulated as follows:

Hypothesis 1: The Cultural Diversified Allies ratio in focal firms' alliance portfolios is positively associated with a level of collectivism characterizing the focal firm's culture of origin.

According to March (1991) and Granovetter (1985) the types of firm strategies accomplished within alliances with other companies are related to the strength of ties. Based on the strength and purpose of ties, two groups of alliances have been distinguished in the literature: weak ties, often related to the explorative strategy; and strong ties, related to exploitative strategy (Granovetter, 1985; Uzzi, 1996; Larson, 1992; Krackhardt, 1992).

Weak, explorative alliances are often preferred in order to gain access to the latest

information and are connected with the possibility of "penetrating" the network of alliances. This type of cooperative strategy is usually not associated with a relationship involving joint capital (Koza & Lewin, 1998). This strategy allows for the research of new, uncertain, risky sectors, testing rules and strategic choices (Lant, Milliken, & Batra, 1992).

Exploitative alliances often go beyond short-term benefits by creating solutions to problems in the long term. In such alliances, firms are able to transfer quality and useful knowledge (Krackhardt, 1992). In such relationships, only interested strategic partners (allies) who are valuable are directly connected with real, measurable commitment. Within this kind of relationship, partners learn about one another's organizations and become more dependent on each other, thus building mutual, relational trust (Larson, 1992; Krackhardt, 1992; Kogut & Singh, 1988; March, 1991).

Both types of ties can be useful to gain adequate resources. Some studies show that during collaboration, firms were able to acquire useful knowledge from their partners to develop relationships with other market players independently from the partner (Palakshappa & Gordon, 2007). Since strong, exploitative alliances require mutual understanding, relational trust, and building long-term cooperation with strong commitment, the cultural differences between "Eastern" and "Western" ICT firms may be a significant barrier. Particularly, the effect of trust on interfirm cooperation is stronger in the collectivist culture than in the individualist culture (Terawatanavong & Quazi, 2006). According to Gitelson, Bing, and Laroche (2001), over 80 percent of mergers and acquisitions fail in terms of achieving benefits for shareholders, due to cultural differences. However, "Eastern" giants can still get access to other firms' resources by establishing weak alliances. Therefore, the second and third hypotheses are posited as follows:

Hypothesis 2a: The Exploitative alliances ratio is negatively associated with the level of collectivism of a focal firm's culture of origin.

Hypothesis 2b: The Explorative alliances ratio is positively associated with the level of collectivism of a focal firm's culture of origin.

Procedures for collecting data

This study identified the leading global ICT firms based on SIC codes, press analysis and industry reports (Technology Business Research, Ovum, Gartner, 2007-2009). Subsequently, the list of selected firms was confirmed by industry experts. In order to ensure complete coverage of alliances, a database of alliances was created. The data were obtained from SDC Platinum Database. Following Anand and Khanna (2000) and Nohira (1991), this researcher compiled records of ties formed by each focal firm, then complemented and corrected the data by searching for publicly announced alliances in press releases and corporate web sites of focal firms. In total, 10,247 alliances and 7,258 unique allies have been defined, out of which only about 70% were reported in SDC Platinum. Prior to 2000, the U.S. played a primary role in shaping the global ICT industry. After 2000, the EU as well as the Asia and Pacific region became increasingly relevant on the global scale (European Commission of Information Society and Media, 2010). Thus, the alliance data for this analysis covers a 10-year time period, from 2000 until 2009. In the sample, there are focal firms originating in the U.S. (13), UK (2), France (4), Sweden (1), Canada (1), Finland (1), Korea (1), Japan (2), China (2), and India (3). For each focal firm and for each partner firm, additional data was coded — namely, the alliance status, type of alliance, firm name, and firm country of origin. Subsequently, cultural dimensions for each country of origin were coded,

according to Hofstede's model (Hofstede, 2009)²— namely, individualism and collectivism index, (which is also related in the literature to the relational versus transactional perspective (Chen & Miller, 2011), and exclusionism versus universalism (Hofstede, 2009; Minkov, 2011)). For each alliance, the type of tie was coded based on the description of its status, purpose and scope (Contractor & Lorange, 1988). Following Anand and Khanna (2000) and Nohira (1991), all identified alliances have been grouped into two categories in this study: explorative ties (including marketing agreements, license agreements, selling, and service agreements) and exploitative ties (capital alliances, joint ventures, production joint ventures, R&D alliances, and multiple agreements with the same partner).

Variables

The dependent variable in this study is the culturally diversified alliances ratio. This is the measure of the total share of partners in a firm's alliance portfolio from cultures other than that of the focal firm, in terms of the individualism and collectivism culture dimensions (Hofstede, 2005; 2009).

Culturally diversified alliances ratio = (Total number of alliances with partners originating from opposite cultures in terms of individualism/collectivism index x 100%) / Total number of alliances in alliance portfolio.

One of the explanatory variables in this study is the *Collectivism index*. This study used one of the cultural dimensions measured by the individualism/collectivism index identified for each focal firm, obtained from Hofstede's model of cultural dimensions (Hofstede, 2009) for each focal firm and for each partner firm based on their country of origin. For each partner firm, the level of collectivism was coded, defining collective countries (as characterized by the individualism index) up to 50 and individualistic countries above 50 (Hofstede, 1980).

The second and third explanatory variables in this study are the *exploitative alliances ratio* and *explorative alliances ratio*. This study used the total number of exploitation/ exploration alliances over the total number of alliances in a focal firm's alliance portfolio as the ratio.

Exploitative alliances ratio = (Total number of exploitation alliances x 100%) / Total number of alliances in focal firm's alliance portfolio.

Explorative alliances ratio = (Total number of exploration alliances x 100%) / Total number of alliances in focal firm's alliance portfolio.

Controls

This study is focused on leading (in terms of size, significance according to industry reports and industry experts, and SIC qualification) global ICT vendors. However, the size of the firm is normally used in empirical estimations, assuming that it affects profitability due to economies of scale. A *firm size* variable was measured by the logarithm of the focal firm's employees in a given year. The study also controlled for *firm age*, taking into account that well-established firms originating from mature economies usually are incorporated earlier than global players from emerging markets. Firm age was calculated by subtracting the year the firm was incorporated from

² Nardon and Steers (2009) analyzed the five existing cultural dimensions models in literature, created by: Hofstede (2001), Hall and Hall (1990), Trompenaars and Hampden-Turner (1998), Schwartz (1994) and also GLOBE project, the study conducted by House, Hanges, Javidan, Dorfman and Gupta (2004) concluding that all existing models serve to amplify or clarify Hofstede's five dimensions model. According to Peng (2009) and Nardon and Steers (2009) Hofstede's model of national culture dimensions is still the most influential.

the alliance contraction year or in other words, the number of years the firm had been in operation. The study controlled for *alliance portfolio size* by calculating the logarithm of the total number of alliances in a focal firm’s alliance portfolio. It also controlled for the *inter-industry variation* by using four-digit SIC codes.

Results

Descriptive statistics (means, standard deviations), and correlations of the variables are listed in Table 1.

Table 1. Descriptive statistics and correlation matrix.

No.	Variable	Mean	Std Dev.	1	2	3	4	5
1	Portfolio size	2,004	0,65					
2	Firm age	41,03	33,47	0,53				
3	Firm size	4,8	0,45	0,65	0,37			
4	Collectivism index	33,03	25,43	-0,06	-0,01	0,34		
5	Culturally diversified alliances ratio	40,21	26,75	-0,04	-0,005	0,22	0,71	
6	Exploitative alliances ratio	65,18	19,65	0,07	-0,05	-0,02	-0,64	-0,27

N=300

The observed modest overall level of correlation indicates that there is no threat of multi-collinearity in this study. However, in order to avoid potential multi-collinearity, this study did not include all variables in the same regression; the variables were entered sequentially. First, the control variables are provided. Then the direct effects are provided. Finally, the additional variable was provided to the regression. Missing values were treated with case deletion. The regression model shows very good adjustment; the explanatory power of the full model reached 77 percent.

The findings are listed in Table 2. Hypothesis 1 examines the effect of the collectivism index on the ratio of culturally diverse allies in a firm’s alliance portfolio. The culturally diverse alliances ratio is strong, statistically significant, and positively associated with the collectivism index of a focal firm’s culture of origin ($\beta = 0,74$, $p < 0,001$). This suggests that the proportion of culturally different partners in a firm’s alliance portfolio increases as the collectivism index of a firm’s country of origin increases. Thus, Hypothesis 1 is supported. The result of the full model (Model 3) indicate that the effect intensifies with provision of an additional explanatory variable, the exploitative alliances ratio ($\beta = 0,83$, $p < 0,001$). Hypotheses 2a and 2b investigate the correlation of the exploitative and explorative alliance ratios and the collectivism index. Supporting Hypothesis 2a, the exploitative alliances ratio is negatively related to the collectivism index of the focal firm's country of origin ($\beta = -0,30$, $p < 0,05$), as well as supporting Hypothesis 2b, there exist a positive correlation between the exploration alliances ratio and the collectivism index of the focal firm's country of origin ($\beta = 0,30$, $p < 0,05$).

Table 2. Regression models for culturally diverse alliances ratio.

Variables	Model 1	Model 2	Model3
<i>Controls</i>			
Firm size	0,43 (1,77)	-0,06 (-0,28)	-0,15 (-0,76)
Firm age	0,00 (0,03)	-0,001 (0,008)	-0,03 (-0,25)
Portfolio size	-0,32 (-1,22)	0,05 (0,23)	0,14 (0,69)
<i>Main variables</i>			
Collectivism index		0,74 (4,56) ϕ	0,83 (5,33) ϕ
Exploitative alliances ratio			-0,30 (2,22)*
Explorative alliances ratio			0,30 (2,22)*
Number of observations (year-firm)	292	292	292
Adj. R²	0,33	0,71	0,77
F – statistic	1,08	6,63 ϕ	7,21 ϕ

t-statistics in parantheses. Dependent variable: Culturally diverse alliances ratio. Note: Missing values were treated with case deletion. ϕ $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

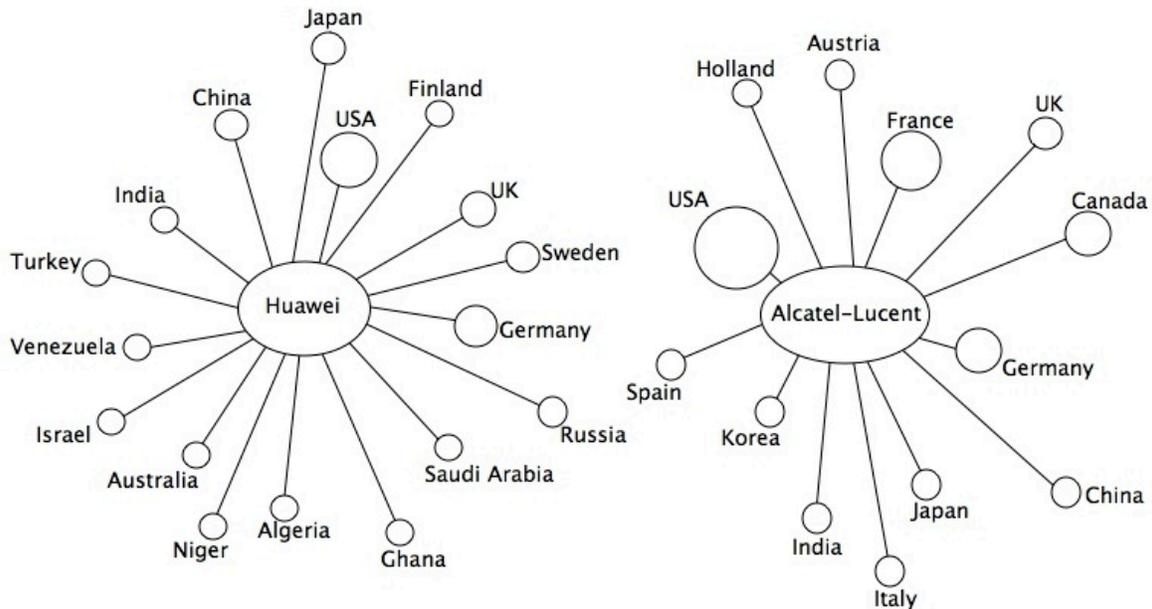
Results suggest that the studied ICT firms from “Eastern” collective cultures (characterised by a high level of collectivism) create alliances with broader spectrum of partners, including partners from different, opposite, individualistic, (Hofstede, 2005) called also transactional (Chen & Miller, 2011) cultures (Hypothesis 1). “Eastern” ICT firms tend to form less strong, exploitative alliances with their partners (Hypothesis 2a), which also means that there are more weak, explorative ties in their alliance portfolios (Hypothesis 2b).

In order to illustrate the results, two different firms in terms of cultural characteristics were chosen for this study. Ovum (2009) reports that they are direct competitors — one from France³ (Alcatel-Lucent, individualism index of country of origin = 65), and one from China (Huawei, individualism index = 10). Alcatel-Lucent was founded as Alcatel in 1898, and merged with Lucent Technologies in 2006. Currently, it is one of the leading vendors in the ICT industry with revenue of 15,99 billion EUR, employing 79,800 people. Huawei was incorporated in 1988 in China, and is the most well-established Asian global vendor, with revenue of 22,03 billion EUR and 110,000 employees (KPMG, 2010 in Huawei’s corporate report 2010). Currently, both firms are trying to take the position of a leading business partner for their customers in the fast-growing ICT market sector (Low, 2007; TBR, 2009).

For Huawei, the ratio of alliances with culturally diverse partners is 65 percent, while in Alcatel-Lucent’s portfolio the ratio is only 31.46 percent (year 2009). Figure 1 shows the the major allies’ countries of origin.

³ Alcatel’s country of origin is France; however Alcatel merged with Lucent Technologies from Germany in 2006.

Figure 1. Alliance portfolios of Huawei and Alcatel-Lucent: major allies' countries of origin (2009).⁴



As observed in the alliance portfolios of the two presented ICT vendors, there are significant differences in the choice of allies. The “Eastern” emerging giant Huawei’s alliance portfolio shows that more than 65 percent of its partners originated from different countries and cultures, involving firms both from emerging and mature markets. “Western” Alcatel-Lucent has focused on alliances with firms from similar, economically mature, and individualistic countries, having over 31 percent of alliances with culturally different partners. Both firms have declared global expansion into each market for the last ten years (based on the analyzed secondary data, e.g. reports, interviews with executives, and corporate websites). It is clear that the “Eastern” Chinese firm has built up a much more culturally diverse alliance portfolio as well as a strong market presence in almost every ally’s country of origin.

Conclusions

Emerging Asian ICT global giants from collective cultures seem to cooperate with more “Western,” individualistic partners, forming often weak, explorative alliances, while “Western” global ICT players are more likely to cooperate with allies from similar, individualistic cultures.

It is worth noting that one of the reasons for this situation may be the fact that global ICT firms from emerging economies like China or India have a limited numbers of potential allies originating from similar, collective cultures within the global market. However, the age of firms (a control variable in this study) proved to have no significant meaning. Results suggest that Asian (including Chinese and Indian) global ICT players are willing to cooperate with more diverse partners from different cultures, using their abilities to collaborate, maintain harmony within the

⁴ The circles’ size indicates the number of allies.

relationships and networks, and explore and acquire the necessary resources, to compete on a global scale.

Certain emerging Asian firms developed their positions in other emerging markets, at first, because of various barriers that prevented them from developing in mature economies. Only after building a stronger reputation and forming numerous alliances were they able to expand into the mature markets (Low, 2007), especially using weak, explorative ties (Tang, 2006). The fact that the firms were practically forced to cooperate with diverse partners to build up a competitive advantage globally is an additional factor influencing the abilities to build and maintain culturally diverse alliances. This type of development might also have an impact on building the skills necessary to acquire and use “network resources” effectively (Gulati, 2007). As a result, current Asian emerging global players may have a certain competitive advantage through cooperating in multinational, cross-cultural markets. Moreover, several studies (e.g. Green, Deschamps, & Paez, 2005; Bond et al., 2004) showed that there is a significant, negative correlation between individualism level and competitiveness (approval of competition). Thus, the cooperation strategies of Asian firms might play a major role in developing their competitive advantage.

Since there are currently only a few global Asian ICT players from India and China — which is the reason why the number of “Western” firms dominates the total sample — and the ICT industry is one of the fastest-growing and rapidly-changing sectors, similar research should be conducted, and the development of cooperation strategies of firms from different cultures should be observed over a longer term.

Research and managerial implications

According to Gupta (2009) and Khanna and Palepu (2010), the emergence of global leaders from China and India is taking place at a much faster rate than was the case with their predecessors from Japan and South Korea (Gupta, 2009, p. 151). Emerging Asian global ICT players seem to have learned from their own cultures and from the experiences of their Japanese and Korean predecessors, but also from Western, individualistic “aliens,” by cooperating and competing with them. Asian firms from China and India are changing the rules of the global game, having a transformational effect on competitive advantage (Gupta, 2009). Knowing and understanding the differences in cooperative strategies of global giants originating from different countries and cultures seems to be a crucial challenge facing researchers in the Strategic Management and International Management fields. Scholars need to undertake more research to investigate performance implications of different cooperative strategies, and consider the impact of cultural factors. Future empirical research may also examine how organizational level factors, such as managerial decisions, processes and structures, affect cooperation strategies. Future research could also examine the influence of cultures on those characteristics. It is hoped that this study will set the stage for further empirical research relating to both alliances portfolios and cultural dimensions that incorporate additional existing cultural concepts and approaches, e.g. cultural distance (Ghamewat, 2010).

Partnering in the current business environment is one of the most effective ways to acquire necessary firm resources. From a managerial perspective, creating and effectively managing an alliance portfolio has become one of the most important tasks. Three key concerns that managers need to address are: how to form and manage alliance portfolios on a global scale, the impact of culture of origin on the cooperative strategies and organizational processes, and cooperative and competitive strategies of their global rivals from different cultures.

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References

- Anand, B., & Khanna, T. (2000). Do firms learn to create value? The case of alliances. *Strategic Management Journal*, 21, 295-315.
- Bing J. (2004). Hofstede's consequences: The impact of his work on consulting and business practice. An Executive Commentary by John W. Bing. *Academy of Management Executive*, 18, 234-249.
- Bond, M. H., Leung, K., Au, A., Tong, K. K., De Carrasquel, S. R., Murakami, F., ... Sam, D. L. (2004). Culture-level dimensions of social axioms and their correlates across 41 cultures. *Journal of Cross-Cultural Psychology*, 35(5), 548-570.
- Chang, W. C., Wong, W. K., & Koh, J. B. K. (2003). Chinese values in Singapore: Traditional and modern. *Asian Journal of Social Psychology*, 6, 5-29.
- Chen, M., & Miller, D. (2011). The relational perspective as a business mindset: Managerial implications for East and West. *Academy of Management Perspectives*, August.
- Chen, M. J., & Miller, D. (2010). West meets East: Toward an ambicultural approach to management. *Academy of Management Perspectives*, 24, 17-24.
- Child, J., & Faulkner, D. (1998). *Strategies of cooperation: Managing alliances, networks, and joint ventures*. Oxford and New York: Oxford University Press.
- Contractor, F. J., & Lorange, P. (1988). *Cooperative Strategies in International Business*. Lexington, MA: Lexington Books.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and source of interorganizational competitive advantage. *Academy of Management Review*, 23(4), 660-679.
- Ghamewat, P. (2001). Distance still matters. The hard reality of global expansion. *Harvard Business Review*, September.
- Gitelson, G., Bing, J. W., & Laroche, L. (2001). *The impact of culture on mergers & acquisition*. CMA Management, March . Available at: <http://www.itapintl.com/facultyandresources/articlelibrarymain/the-impact-of-culture-on-mergers-a-acquisitions.html>
- Golonka, M. (2011). Cultural factors and interfirm ties in the global sectors. Empirical perspective. *Gdansk Business School Publications*, 12, 5-23.
- Granovetter, M. S. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91, 481-510.
- Green, E. G. T., Deschamps J. C., & Paez, D. (2005). Variation of individualism and collectivism within and between 20 countries. *Journal of Cross-Cultural Psychology*, 36(3), 321-339.
- Gulati, R. (2007). *Managing network resources*. Oxford: Oxford University Press.
- Gupta, A., & Wang, H. (2009). *Getting China and India Right*. USA: Wiley.

- Hall, E. T., & Hall, M. R. (1990). *Understanding Cultural Differences*. USA: Edward T. Hall Associates.
- Hofstede, G. (2001). *Culture's consequences* (2nd ed.). Thousand Oaks, CA: Sage.
- Hofstede, G. (2005). *Cultures and organizations: Software of the mind* (2nd ed.). New York: McGraw Hill.
- Hofstede, G. (2009). *Dimensionalizing cultures: The Hofstede Model in context*. Online Readings in Psychology and Culture, Unit 17, Chapter 14. Available at <http://orpc.iaccp.org>
- House, R. J., Hanges, P. J., Javidan, M., Dorfman, P. W., & Gupta, V. (2004). *Leadership, culture, and organizations: The GLOBE Study of 62 Societies*. USA: Sage Publications.
- Hsu, F. L. K. (1985). *Americans and Chinese: Passage to differences*. Hawaii: University Press of Hawaii.
- Khanna, T., & Palepu, K. G. (2010). *Winning in emerging markets. A road map for strategy and execution*. USA: Harvard Business Press.
- Kogut, B., & Singh, H. (1988). The effect of national culture on the choice of entry mode. *Journal of International Business Studies*, 19, 411-432.
- Koza, M. P., & Lewin, A. Y. (1998). The Co-evolution of strategic alliances. *Organization Science*, 9, 255-264.
- Krackhardt, D. (1992). *The strength of strong ties: The importance of philos in organizations* (pp. 216-239). Boston, MA: Harvard Business School Press. 216-239.
- Kumar, R., & Das, T. K. (2011). National culture and legitimacy in international alliances. In T. K. Das (Ed), *Strategic Alliances in Globalizing World* (pp. 243-261). Charlotte, NC: IAP-Information Age Publishing.
- Lant, T, Milliken, F., & Batra, B. (1992). The role of managerial learning and interpretation in strategic persistence and reorientation. *Strategic Management Journal*, 13(8), 585-608.
- Larson, A. (1992). Network dyads in entrepreneurial settings: A study of the governance of exchange processes. *Administrative Science Quarterly*, 37, 76-104.
- Lavie, D. (2007). Alliance portfolios and firm performance: A study of value creation and appropriation in the U.S. software industry. *Strategic Management Journal*, 28, 1187-1212.
- Lee, S., Li J., & Shenkar, O. (2008). Cultural distance, investment flow, and control in cross-border cooperation. *Strategic Management Journal*, 29, 1117-1125.
- Low, B. (2007). Huawei Technologies Corporation: From local dominance to global challenge? *Journal of Business & Industrial Marketing*, 22(2), 138-144.
- March, J. G. (1991). Exploration and exploitation in organizational learning. *Organization Science*, 2(1), 71-87.
- Marosini, P. (1998). *Managing cultural differences: Effective strategy and execution across cultures in global corporate alliances*. New York: Pergamon.
- Minkov, M. (2011). *Cultural differences in a globalizing world*. USA: Emerald Group Publishing Limited.
- Nardon, L., & Steers, R. M. (2009). The culture theory jungle: Divergence and convergence in models of national culture. In R. S. Bhagat & R. M. Steers (Eds.), *Cambridge handbook of culture, organizations and work* (pp. 3-22). Cambridge: Cambridge University Press.

- Neter, J., Kutner, M., Nachtsheim, C., & Wasserman, W. (1996). *Applied Linear Regression Models* (3rd ed.). Homewood, IL: Irwin.
- Nohira, N. (1991). Global strategic linkages and industry structure. *Strategic Management Journal*, 12, Special Issue: Global Strategy, 105-124.
- Palakshappa, N. N., & Gordon, M. E. (2007). Collaborative business relationship. *Journal of Small Business and Enterprise Development*, 14(2), 264-279.
- Peng, M. (2009). *Global strategy* (2nd ed.). Cincinnati: South-Western Cengage Learning.
- Ralston, D., Holt, D. H., Terpstra, R. H. & Kai-Cheng, Y. (1997). The impact of national culture and economic ideology on managerial work values. *Journal of International Business Studies*, 28, 177-207.
- Rugman, A., & Collinson, S. (2009). *International business* (5th ed). UK: Pearson Education Limited.
- Schneider, S. C. (1989). Strategy formulation: The impact of national culture. *Organizational Studies*, 10, 149-168.
- Schwartz, S. H. (1994). Beyond individualism/collectivism: New cultural dimensions of values. In U. Kim, H. C. Triandis, C. Kagitcibasi, S. Choi, & G. Yoon, (Eds.), *Individualism and collectivism: Theory, method and applications* (pp. 85-119). Thousand Oaks, CA: Sage.
- Stumpf, E. (2011). *The GLOBE Project*. Germany: GRIN Publication.
- Tang, Y. K. (2006). Managing the strengths of ties for internationalization: Lessons from four rapidly internationalized Chinese SMEs. *Journal of Asia Business Studies*, 1, 54-63.
- Terawatanavong, C., & Quazi, A. (2006). Conceptualising the link between national cultural dimensions and B2B relations. *Asia Pacific Journal of Marketing and Logistics*, 18, 173-183.
- Triandis, H. (1986), *Collectivism vs. individualism: A reconceptualization of a basic concept in cross-cultural psychology* (pp. 223-249). London: Macmillan.
- Trompenaars, F., & Hampden-Turner, C. (1998). *Riding the waves of culture: Understanding cultural diversity in global business*. New York: McGraw-Hill.
- Vance, C., Zell, D., & Groves, K. (2008). Considering individual linear/nonlinear thinking style and innovative corporate culture. *International Journal of Organizational Analysis*, 16, 232-248.
- Veraskelis, N., & Kessapidou, S. (2002). The impact of national culture on international business performance: The case of foreign firms in Greece. *European Business Review*, 14(4), 268-275.
- Uzzi, B. (1996). The sources and consequences of embeddedness for the economic performance of organizations: The network effects. *American Sociological Review*, 61, 674-698.
- Williams, J. E., Satterwhite, R. C., & Saiz, J. L. (1998). *The importance of psychological traits: A cross-cultural study*. New York: Plenum.
- Yanqing, Z. (2009). *Successful Strategies for Convergence*. Win-Win. Available at: www.huawei.com/en/static/hw-079514.pdf

Reports

Gartner: Global Telecommunications Market Take, December 2007

Huawei Corporate Reports, www.huawei.com, (2010), available at:

http://www.huawei.com/ucmf/groups/public/documents/csr_report/hw_093033.pdf

OSS Observer - Global Telecom Software Market Analysis, 2008

Ovum Reports, 2007, 2008, 2009

TBR- Technology Business Research, 2007, 2008, 2009

Telecom Contracts & Vendors, 2007

English Abstract

Emerging Asian ICT Global Players Natural Born Collaborators or Stuck With Aliens?

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland
monikagolonka@kozminski.edu.pl

Abstract

Researchers studying firms' strategies have begun to recognize the role of alliances, alliance portfolios and alliance networks in improving access to resources and their impact on a firm's performance. However, so far, most studies have focused on firms' alliance portfolio analysis based on a single country only, i.e. the U.S. banking or software industry. In the prevailing literature, the cultural context has been practically ignored. The real "explosion" of alliances is a phenomenon clearly observed in the global ICT (Information and Communication Technology) Industry, which is one of the fastest-growing industries, directly shaping global communication and leading changes in many other market sectors. Within this clearly trailblazing domain, we can observe a rapid growth of inter-firm cooperative ties in the convergence of digital products and services — alliances, alliance portfolios and alliance networks, as well as mergers and acquisitions. Using a sample of 30 leading global ICT giants with 10,247 alliances in their alliance portfolios, this study empirically tested and supported the hypothesis that ICT firms originated from collective cultures are more willing to cooperate with culturally diverse partners, forming multiple weak alliances, than firms from individualistic cultures. Are they natural-born collaborators, or are they "stuck" with existing giants in the mature economies?

Keywords: Alliance Strategy, ICT Industry, Emerging Asian Global Leaders

French Abstract*

Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?

Acteurs issus de pays émergents d'Asie des industries de TIC mondiales

Des collaborateurs né naturellement ou collés à des étrangers?

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland

monikagolonka@kozminski.edu.pl

Résumé

Les chercheurs en stratégie d'entreprises ont commencé à reconnaître le rôle des alliances, des portefeuilles d'alliances et de réseaux d'alliances dans l'amélioration de l'accès aux ressources et leur impact sur la performance de l'entreprise. Toutefois, jusqu'à présent, la plupart des études ont porté sur l'analyse du portefeuille d'alliance des entreprises, basé sur un seul pays seulement, à savoir le secteur bancaire américain et l'industrie de la programmation informatique. La littérature ignore le contexte culturel. La véritable explosion des alliances est un phénomène clairement observé dans le secteur des TIC mondial (Technologie de l'Information et Communication). Cette industrie, qui est parmi les plus dynamiques, dessine directement la communication globale et les principaux changements dans de nombreux autres secteurs du marché. Dans ce domaine, clairement pionnier, nous pouvons observer une croissance rapide des relations de coopérations inter-entreprises (alliances, portefeuilles d'alliances et de réseaux d'alliance), la convergence des produits et services numériques ainsi que des fusions et acquisitions. En utilisant un échantillon de 30 géants mondiaux des TIC avec 10,247 alliances dans leurs portefeuilles, cette étude empirique teste et soutient l'hypothèse selon laquelle les entreprises de TIC provenaient de pays à culture collectiviste sont plus disposées à coopérer avec partenaires culturellement différentes, formant des alliances multiples faibles, que les entreprises issues de pays à culture individualiste. Sont-ils des collaborateurs naturellement-nés, ou sont-ils « coincés » par des géants existants dans les économies matures?

Mots-clés: stratégie de l'Alliance, de l'industrie des TIC, Emerging Global Leaders asiatiques

* Translated by: Johannes Schaaper, Senior professor in International Management, BEM Bordeaux Management School

German Abstract*

Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?

Entwicklung der ICT Global Players Geborene Mitarbeiter oder Festhalten an Ausländern?

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland
monikagolonka@kozminski.edu.pl

Zusammenfassung

Wissenschaftler, die Firmenstrategien studieren, haben begonnen die Rolle der Allianzen, Allianz Portfolios und Allianz Netzwerke in der Verbesserung des Zugangs zu Ressourcen und dessen Auswirkung auf die Unternehmensperformance, zu erkennen. Allerdings haben sich bis jetzt die meisten Studien auf die Allianz Portfolio Analyse eines einzigen Landes, zum Beispiel die US-amerikanische Banken oder Software Industrie, fokussiert. In der überwiegenden Literatur wurde der kulturelle Kontext praktisch ignoriert. Die wirkliche „Explosion“ der Allianzen ist ein Phänomen, welches in der globalen ICT (Informations und Kommunikations Technologie) Industrie beobachtet wird. Diese ist eine der am schnellsten wachsenden Industrien, die direkt die globale Kommunikation und Veränderungen in vielen anderen Märkten geprägt hat. In diesem wegweisenden Bereich können wir ein rasches Wachstum von zwischenunternehmerischer kooperativer Bindung in der Konvergenz digitaler Produkte und Dienstleistungen – Allianzen, Allianzportfolios, Allianz Netzwerke und Mergers and Acquisitions. Anhand einer Stichprobe aus 30 führenden globalen ICT Giganten mit 10.247 Allianzen in ihren Allianzportfolios, untersucht und bestätigt diese empirische Studie die Hypothese, dass ICT Unternehmen aus kollektiven Kulturen eher mit Partnern aus mannigfaltigen Kulturen kooperieren wollen. Sind sie geborene Mitarbeiter oder sind diese festgefahren mit existierenden Giganten in reifen Volkswirtschaften?

Stichwörter: Allianzstrategie, ICT Industrie, Entstehung asiatischer globaler Führer

* Translated by: Prof. Dr. Marc Eulerich, University Duisburg-Essen, marc.eulerich@uni-due.de

Spanish Abstract*

Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?

TICs Asiáticas Emergentes Globales Colaboradores Natos o Adheridos a los Extranjeros

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland
monikagolonka@kozminski.edu.pl

Resumen

Los investigadores que estudian las estrategias de las empresas han comenzado a reconocer el papel que juegan las alianzas, la cartera de alianzas y las redes de alianzas en la mejora del acceso a los recursos y su impacto en el rendimiento de la empresa. Sin embargo, hasta el momento, la mayoría de los estudios se han centrado en el análisis de las carteras de alianzas de las empresas en un solo país, como por ejemplo la banca de USA o la industria del software.

En la literatura existente, el contexto cultural ha sido prácticamente ignorado. La verdadera "explosión" de alianzas es un fenómeno claramente observado en la industria de las TIC (Tecnologías de Información y Comunicación), que es una de las industrias con mayor y más rápido crecimiento, que influye directamente en la comunicación global y que lidera los cambios en muchos otros sectores.

En este dominio claramente pionero, se observa un rápido crecimiento de los lazos de cooperación entre empresas en la convergencia de productos y servicios digitales,- alianzas, carteras de alianzas y redes de alianza, así como de las fusiones y adquisiciones.

Utilizando una muestra de 30 empresas TIC, gigantes líderes mundiales, con 10.247 alianzas en sus carteras de alianzas, este estudio empírico, constata la hipótesis de que las empresas TIC que se crearon en países con culturas colectivas están más dispuestas a cooperar con socios de diversas culturas, formando múltiples alianzas débiles, que las empresas de culturas individualistas. Son colaboradores natos, o están "adheridos" a los gigantes existentes en las economías maduras?

Palabras clave: Estrategias de Alianzas, Industria TIC, Líderes globales asiáticos emergentes.

* Translated by: Maria Avello. Universidad Complutense de Madrid. mavello@emp.ucm.es

Arabic Abstract*

Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?

شركات التكنولوجيا الآسيوية الناشئة:

متعاونة بالفطرة أم مرغمة على التعاون مع الغرباء؟

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland

monikagolonka@kozminski.edu.pl

المخلص

تعرف علماء استراتيجيات الشركات على دور التحالفات، محافظ التحالف، و شبكات التحالف في تحسين الوصول الى الموارد و أثرها على أداء الشركة. بالرغم من ذلك، ركزت غالبية الدراسات التي اجريت الى الوقت الحالي، على تحليل تحالف المحافظ بناء على دولة واحدة، على سبيل المثال، القطاع المصرفي الاميركي أو صناعة البرمجيات. حيث تم تجاهل السياق الثقافي من الناحية العملية في الأدبيات السائدة السابقة. لوحظ الانتشار الحقيقي لظاهرة التحالف في قطاع تكنولوجيا الاتصالات و المعلومات العالمي، الذي يعد احد أسرع القطاعات نمواً، و مؤثر مباشر على تشكيل و كيفية الاتصالات العالمية، و قائد للتغيرات الرائدة في الكثير من القطاعات الاخرى في السوق. ضمن هذا المجال الرائد بوضوح، يمكن أن نلاحظ النمو السريع في العلاقات التعاونية بين الشركات في تحالفات تقارب المنتجات والخدمات الرقمية، محافظ التحالف وشبكات تحالف، فضلا عن عمليات الاندماج والاستحواذ فعن طريق استخدام عينة من 30 شركة رائدة و ضخمة في مجال تكنولوجيا الاتصالات و المعلومات مع 10247 تحالف من ضمنها محافظ التحالف، أختبرت هذه الدراسة تجريبيا و دعمت الفرضية القائلة بأن شركات الاتصالات و تكنولوجيا المعلومات نشأت من الثقافات الجماعية و هي أكثر استعدادا على التعاون مع شركاء من ثقافات متعددة / متنوعة، و تشكيل عدة تحالفات ضعيفة، مقارنة مع الشركات ذات الثقافات الفردية. هل هم متعاونون في منذ المنشأ أم مرغمين على التعامل مع عمالقة الشركات في الاقتصاديات الناضجة؟

الكلمات الدالة: استراتيجيات التحالف، قطاع الاتصالات و تكنولوجيا المعلومات، القيادة العالمية الآسيوية الناشئة

* Translated by: Zu'bi M.F.Al-Zu'bi, Ph.D, FHEA, University of Jordan, z.alzubi@ju.edu.jo

Italian Abstract*

Emerging Asian ICT Global Players: Natural Born Collaborators or Stuck With Aliens?

Organizzazioni Emergenti in Asia nel contesto IT globale

Collaboratori naturali o bloccati con alieni?

Monika Golonka

Department of Management, Kozminski Business School, Warsaw, Poland

monikagolonka@kozminski.edu.pl

Abstract

Ricercatori hanno iniziato a concentrarsi sul ruolo di alleanze e reti di alleanze per migliorare l'accesso a risorse e il loro impatto sulle prestazioni dell'azienda. Comunque, fino ad oggi, la maggior parte degli studi, si sono concentrati su analisi di questo tipo riferiti solo ad un Paese, ad esempio aziende USA nel settore bancario o del software. Nella letteratura più importante l'aspetto culturale é stato praticamente ignorato. La vera "esplosione" di alleanze é un fenomeno che chiaramente é osservato nel contesto globale dell'industria IT (Information Technology) che é una delle industrie in più rapida crescita con una influenza sui mercati di comunicazione globale e sui cambiamenti riguardanti molti settori di mercato. All'interno di questo settore che apre nuove aree e sentieri, possiamo osservare una rapida crescita di legami di cooperazione riguardanti prodotti e servizi digitali - alleanze, varietà di alleanze e reti di alleanze includendo anche fusioni e acquisizioni. Utilizzando un campione di 30 aziende che sono al top nel settore con 10,247 alleanze e varietà di alleanze, lo studio mette alla prova in modo empirico e supporta l'ipotesi che le aziende di IT che originano da culture globali sono più disposte a cooperare con partner che rappresentano diversità culturali e formare varie alleanze più deboli rispetto a aziende con una cultura più individualista. Rappresentano dei collaboratori naturali o sono bloccati nell'essere giganti immobili in economie mature?

Keywords: Strategie di Alleanza, industria IT, Mercati Emergenti Asiatici Globali

* Translated by: Riccardo Paterni, Synergy Pathways, riccardo@synergypathways.net

Ethical Ideology as a Predictor of Ethical Decision Making

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland
e-mail: agata.chudzicka-czupala@us.edu.pl

Abstract

The study investigates the role of individual ethical ideology as a predictor of moral judgement and ethical decision making at work. Moral judgement and ethical decision making were examined from three points of view: of an observer of unethical behaviour, of the victim, and of the perpetrator. Dimensions of moral judgement and ethical decision making were distinguished partly on the basis of Jones' issue-contingent model (1991). These dimensions are as follows: recognition of the behaviour as an unethical issue, the perceived magnitude of emotional consequences for the victim, and the intended behaviour.

As a result of a cluster analysis conducted on a sample group of 326 people employed in Polish organizations, two subgroups were specified differing in terms of ethical ideology. The two groups were subsequently compared to each other and the way they make ethical decisions was characterized.

Results of the research demonstrate that individual ethical philosophy is a significant predictor of ethical decision making. The research offers implications for the practice of moral awareness in organizations.

Keywords: ethical ideology, ethical decision making, moral judgement, Poland

Introduction

The political transformation that took place in Poland at the end of the 20th century, together with globalization and market liberalization processes, led to changes in Polish organizations. One of the results of such changes was the development of greater interest in the humanization of labour. Human resource development concepts and the democratic approach to management have become more popular, and ideas of making work easier for the individual have started to evolve. While such issues started to enjoy much interest in Poland in the 1990s, much less attention and research were dedicated to ethics in business and to morality at work.

Biernacka (2009) emphasizes: "Foreigners who represent foreign capital and corporate standards of professional commitment can sometimes be heard saying in a confidential tone: 'There is no work ethic in Poland!'" (p. 183). Poland became a capitalist country nearly overnight and did not go through the series of transformations characteristic of a capitalist economy. The strong legacy of attitudes rooted in the Communist era, different historical experiences and traditions, and also the large impact of Roman Catholicism are factors that could make Poles behave differently. Research shows, however, that despite the differences, individualistic attitudes are similarly strong

here as in Western countries, which proves that the same kind of evolution took place in Poland as in Western Europe and North America.

To date, very little research has been carried out on ethical issues in Poland. Rok, Stolorz, and Stanny (2003) performed a survey asking managers of the 500 largest Polish companies about their attitude towards ethical issues, taking into account the problem of social responsibility of businesses. Nearly all respondents (99 percent) answered that observing ethical principles in business was very important or important. More awareness of the significance of ethical principles can be found in companies with foreign shareholding where actions were taken to promote ethical forms of behaviour. Larger companies understand the importance of socially accountable practices. However, are ethical principles implemented there? Do companies really take into account the interests of their employees, consumers and contracting parties and care for the natural environment? Filek (2001) claims that in Poland an ethical image of the business is often created in order to “sell it well”, and that such a public image has little to do with reality. Poland opened itself to international trade and to the exchange of labour force, for instance within the European Union, which made it imperative for practitioners and scholars to understand Polish workers’ views on ethics and ethical practices. This inspired the research and results presented in this paper. Studies of unethical behaviour in the workplace, carried out for over 30 years, mainly in Western European countries, the U.S.A., and Asia, have pointed to many factors determining employee conduct. Empirical investigations dedicated to ethical decision making and unethical behaviour in an organization often focus on the ethical climate (Ford and Richardson, 1994; Schein, 1996). The climate appeared an important factor that may determine ways of conduct of its employees and lead to different ethical choices (Cullen, Joyce, Hassall, and Broadbent, 2003; Treviño, Weaver, and Reynolds, 2006; Treviño, and Youngblood, 1990).

Treviño (1986) emphasizes the importance of selected personality traits of individuals engaged in such conduct and the need to take into account individual differences in that respect. Individual differences are factors that play a prominent role in models of ethical decision making. Business ethics literature shows that some differences, such as personal characteristics (age, gender, religion, neuroticism, introversion and extroversion, locus of control) are, surprisingly, often unrelated to moral judgement (Ford, and Richardson, 1994). Research has not provided sufficient empirical evidence to prove that ethical decision making depends unequivocally on any of the traits listed above.

According to Kakabadse, Kakabadse, and Kouzmin (2002), investigation of moral judgement should mainly take into account the individual differences in ideology. Theoreticians (Erundu, Sharland, and Okpara, 2004) assert that individuals make ethical decisions after considering actions in regard to universal principles of right and wrong.

Literature review and hypothesis

The purpose of the study presented here was to investigate the influence of individual ethical ideology on moral judgement and ethical decision making at work. A short description of the variables that were investigated is provided below together with a research hypothesis.

Ethical ideology

It is important to learn about the individual’s ideology and moral philosophy in order to understand moral judgements and behaviour in situations when the individual is faced with the need to solve an ethical dilemma and make a decision (Barnett, Bass, and Brown, 1994; Bass, Barnett, and Brown, 1999).

The theory of individual moral philosophy was derived from normative philosophical theories. The measurement of the moral philosophy subscribed to by an individual shows the latter's beliefs within the limits set by the applicable moral standards. Research in the field proves that the individual's moral philosophy has an impact on her or his opinions and approach to various moral issues: on moral judgements concerning other people's behaviour, on the manner of attributing responsibility for the effects of such behaviour (which can be described as bad conduct) and on deciding which behaviour the individual regards as unethical and when. The moral values subscribed to are also related to individual resistance to temptations of unethical nature and to the reaction to one's own errors in that respect (Forsyth, 1992). Kujala, Lamsa, and Penttila (2011) state that "every moral decision-making situation forces a business manager to choose, if not explicitly then implicitly, the guiding principles according to which the final decision is made" (p. 191).

Much of the research has focused on only a single selected ideology. Reidenbach and Robin (1990) developed and used a multidimensional ethics scale which was derived from many ethical theories, and later different versions of that scale were used in studies related to business ethics (e.g., Cruz, Shafer, and Strawser, 2000; McMahon, and Harvey, 2007; Nguyen, Basuray, Smoth, Kopka, and McCulloh, 2008).

Idealism and relativism are some of the most significant moral philosophy dimensions, and also the ones taken into account and used most often in research. Other principles followed by individuals were also investigated, together with moral perspectives and the related dimensions of the "individual moral ideology" construct, such as narcissism, Machiavellianism, utilitarianism, altruism, cost/benefit balance and the Golden Rule. They were distinguished on the basis of literature on the subject (Burton, and Goldsby, 2005; Luthy, Padgett, and Toner, 2009; Peter, and Donnelly, 2006) and considered in the survey reported in this paper. Idealism, relativism, utilitarianism and justice theories are also frequently discussed in business ethics manuals (De George, 1999; Davis, Andersen, and Curtis, 2001; Kakabadse et al., 2002; Velasquez, 1998). The dimensions of ethical ideology controlled in the present study are as follows: *idealism, relativism, Machiavellianism, narcissism, the Golden Rule, utilitarianism, altruism, cost/benefit balance*.

Idealism and relativism.

As Forsyth (1980) points out, there is primarily one continuum that exists among the many possible and available moral philosophies, namely that of idealism – relativism, which can be used to classify most people. Idealists believe in the existence of universal standards, take into account the good of others and are concerned about it, while relativists believe there is no universal standard – moral principles depend on the situation and may change. An extreme idealist faced with a moral dilemma believes that harming another person can always be avoided and seeks to act in such a way as to ensure that, while someone who is not an idealist thinks that "harm is sometimes... necessary to produce good" (Forsyth, 1992, p. 462). People who are relativists to a slight extent, are convinced that a universal ethical standard can be found in every situation showing us how to behave, in other words: a principle that should be observed. Extreme relativists are of a different opinion: in their view, situations differ to a large extent and all current circumstances need to be considered before a decision is made; moreover, such a decision may never be considered the only legitimate one, since no single guideline exists that would justify our unequivocal decision and conduct.

Relativists seem less inclined to identify the unethical aspects of various situations, to treat or define people's behaviour as "unethical" and to actively intervene in situations that spark ethical controversy, since they need to learn about the full background of the behaviour and know all its aspects before they make a decision and give an unequivocal opinion. People that have a more

idealistic approach towards the world, on the other hand, may feel obliged to give a quick and decisive opinion, as well as to act in response to behaviour that seems inappropriate to them.

Barnett et al. (1994) investigated the impact of individual moral philosophy and of the principles an individual believes in, on moral judgements and behaviour in ethical dilemma situations. In their studies they demonstrated that ethical judgements of people employed in business depended on the moral ideology they believed in. Interestingly, the relationships they discovered were linked most of all with the idealism of the people surveyed, while relativism did not have a significant impact on the respondents' answers.

While Forsyth (1980) presented a bipolar model of moral philosophy, suggesting that moral judgements fluctuated between idealism and relativism, other investigators of ethical decisions combine the two dimensions, speaking of situationism, subjectivism, absolutism and the inclination to depart from ethical principles, referred to as exceptionism. Situationists (high idealism, high relativism) do not tend to reject ethical principles and are usually guided by the aspiration to achieve the maximum benefits possible in the relevant situation. Subjectivists (low idealism, high relativism) behave in a similar manner, rejecting ethical principles. Their moral judgements are based exclusively on personal perceptions of the situation and on the behaviour of the people involved. Absolutists (high idealism, low relativism) represent the opposite position – they consider behaviour normal only if it is subordinated to the moral absolutes they regard as significant and if its outcomes are positive for all persons involved. Exceptionists (low idealism, low relativism) consider compliance with moral standards as important, but allow exceptions to the rules.

Barnett et al. (1994) also used four variables related to individual moral philosophy as antecedents. The results of their studies prove that people with a very idealistic approach toward the world gave the most severe judgements while evaluating various ethical issues – this was the case with judgements in fourteen out of twenty-six stories presented. In a similar manner, absolutism (high idealism, low relativism) was related to high ethical rigorism: persons who obtained such results considered as unethical the behaviour of protagonists of ten stories, while those acting in response to a situation (and scoring high in terms of idealism and relativism) voiced an unequivocally negative opinion about the behaviour of protagonists of only four stories. High scores on the scale of relativism, on the other hand, were not connected with the ethical judgements made by the persons surveyed.

In another study, Barnett, Bass, and Brown (1996) checked the connections between religiosity, idealism, relativism, ethical judgements and the intent to report inappropriate conduct of a co-worker. The study confirmed that idealism was positively linked and relativism was negatively linked with judgements concerning the inappropriate conduct of co-workers and with the inclination to react to such behaviour, although even in that study, the connection between relativism and ethical judgement was rather weak compared to the significance of the relevant individual's idealism. Similarly, the level of religiosity of the survey participants was negatively associated with relativism, which would point to the existence of a strong connection between religiousness and belief in universal moral principles.

Forsyth (1980) emphasizes that absolutists are much more strict and unequivocal in their judgements, if the relevant behaviour leads to definitely positive or definitely negative consequences. The author discovered that absolutism was related to a negative judgement of aspects such as the death penalty, euthanasia or homosexuality. Idealists tend to strongly deplore people (the protagonists of the stories) whose behaviour led to definitely negative consequences, regardless of whether they had violated moral standards or complied with them (Forsyth, 1985).

Machiavellianism.

Machiavellianism has been empirically proven to have an impact on ethical decision making (Bass et al., 1999; Jones, and Kavanagh, 1996; Singhapakdi, and Vitell, 1992). Individuals scoring high on the scale of Machiavellianism, which is generally “synonymous with amoral action, sharp dealing, hidden agendas, and unethical excess” (Nelson & Gilbertson, 1991, p. 633), tend to treat relationships with others instrumentally and to use other people for their hidden aims. Research confirms that the acceptance of Machiavellian views is related to the frequency of making unethical choices and decisions in the organizational environment (Kish-Gephart, Harrison, and Treviño, 2010). Christie and Geis (1970) assert that Machiavellians “manipulate more, win more..., persuade others more” (p. 312). Pilch (2008), demonstrated that Machiavellians were less prone to help others than people who were not Machiavellians. Machiavellians help with equal readiness, but only when the person in need of help is highly likely to return the favour.

Narcissism.

A broad definition describes narcissism as “a grandiose sense of self-importance” (Judge, Le Pine, and Rich, 2006, p. 762). Research shows that most people have certain narcissistic tendencies, which is an utterly normal and healthy phenomenon as a mechanism used to raise one’s self-esteem. People secretly think they are better, more independent, smarter and cleverer, and that they work harder than others. Narcissism may be a problem only once it exceeds healthy limits (Vogel, 2006). Many years of research carried out by Twenge (2006) proved that generational changes had taken place in the level of narcissistic inclinations of young people. She concluded that young people born in the 1970s, 1980s, and 1990s are of the most narcissistic generation that has existed to date. The research also points to the relationship between narcissistic inclinations and the manner of decision-making. People who present narcissistic tendencies are more likely to behave in an unethical way (Judge et al., 2006; Brown, Sautter, and Littvay, 2010).

The Golden Rule.

It is emphasized that what is referred to as the “golden rule” is one of the best known and most universal ethical principles in the world. The rule stating “do unto others as you would want done to you” has appeared in various forms in ethical and philosophical systems as well as among the moral imperatives of most world religions. As Burton and Goldsby (2005) emphasize: “the rule seems one of the few candidates for a universally acceptable moral principle... As a consistency principle, the rule allows for different actions to be taken as moral by different actors using different moral perspectives... Its universality... lies in the understanding of cultures and traditions throughout the world that consistency, the willingness to abide by rules we apply to others, is a vital component of moral thinking” (p. 372, 377, 382). The Golden Rule is a significant principle, taken into account many times in research related to business ethics (Cunningham, 1998).

Utilitarianism.

Utilitarianism or utilitarian principles of moral philosophy suggest that individuals make ethical decisions by considering the negative or positive consequences of actions on referent others. In accordance with utilitarian ethics, every behaviour is morally legitimate if it contributes to the common good or brings advantages to the entire community (Erondu et al., 2004). Research confirms that utilitarian grounds are some of the most important criteria taken into account when managers and staff formulate moral judgements and make ethical decisions (Kujala et al., 2011).

Altruism and Cost/Benefit Analysis.

The concept of altruism was derived from the French word “altruisme” (Barnhart, 1995) and is defined as “behaviour that promotes the welfare of others without conscious regard or one’s own self-interest” (Davis et al., 2001, p. 39). Even though there is much controversy as to whether an “altruistic personality” exists, since it is not certain whether altruistic behaviour is consistent with the nature, many studies regard altruism to be an individual variable and treat it as a permanent trait of the individual.

Weber, Ames, and Blais (2005) underline that people use calculation-based decision making. It involves decomposition of choice alternatives, evaluation of benefit components, and integration of those components to determine the best value. Calculation-based decision making may include the use of mental shortcuts that help to simplify the task and to make a quick decision (Shah, and Oppenheimer, 2008).

Cost/benefit analysis is a term that refers to making decisions and, according to Velasquez (1998), the common way of evaluating a manager’s decision is by relying on cost/benefit analysis. Do people think in terms of costs and losses when they make ethical decisions in their relations with others? The literature points out different conditions of giving help (Batson, 1998) and building trust (Ferrell, and Gresham, 1985). According to Bennis, Medin, and Bartels (2010) systematic cost-benefit analysis is a normatively superior moral decision strategy.

Moral judgement and ethical decision making

Moral judgement and ethical decision making were examined from three points of view: of an observer/a witness of unethical behaviour, of the victim, and of the perpetrator. It was assumed that the adoption of different points of view could result in different ethical choices. Schmitt, Gollwitzer, Maes, and Arbach (2005) checked how people reacted to unethical behaviour, not only as victims, but also when they were involved in the relevant situation as witnesses and perpetrators. The authors emphasize how the research shows that “... unfair events often imply the involvement of three roles, a victim, a perpetrator, and an observer.” (Schmitt et al., 2005, p. 202).

Dimensions of moral judgement and ethical decision making were distinguished in this research partly on the basis of Jones’ issue-contingent model (1991). These dimensions are as follows: recognition of the behaviour as an unethical issue, the perceived magnitude of emotional consequences for the victim, and the intended way of behaving.

Hypothesis

Based on the findings of existing research, the following hypothesis was formed: *The ethical philosophy of the individual looking at the situation from the point of view of an observer, of the victim and of the perpetrator influences the manner in which the same individual forms moral judgements and makes ethical decisions, determining whether the situation is recognized as unethical or not, the perceived magnitude of emotional consequences for the victim and the declared manner of behaving.*

Procedures for collecting data

Participants

The sample consisted of 326 individuals, all of them Polish citizens, employed full-time in Poland. The respondents were employees of organizations of different sizes and types. A review of the sample indicates that the average age of the subjects was 32 (range = 20 to 63). 63.8 percent of the respondents were female and 36.2 percent male. 54.9 percent of them were holders of higher

education degrees and another 45.1 percent had secondary education. 12.9 percent of the respondents were managers. Data were collected in Spring 2011.

Measures

The methods used in the study were The Ethical Ideology Scales (EIS) and The Questionnaire of Moral Judgement and Ethical Decisions (QMJED).

The Ethical Ideology Scales. Based on an examination of selected theories (Burton, and Goldsby, 2005; Luthy et al., 2009; Peter, and Donnelly, 2006) a listing of ethical perspectives was constructed and The Ethical Ideology Scales (EIS) (Chudzicka-Czupala, 2012b) were developed to measure the ethical ideology of subjects. The method used in this study consists of eight statements and each statement shows a different ethical principle. Initial versions of the tool used were reviewed by professionals for technical accuracy and ethical complexity.

Respondents were asked to assess the extent to which they agree with each of the eight ethical dimensions: relativism, idealism, Machiavellianism, narcissism, the Golden Rule, utilitarianism, cost/benefit analysis and altruism. Five-point Likert-type scales were used ranging from “strongly disagree” (1) to “strongly agree” (5). All ethical ideology questions are included in Appendix 1.

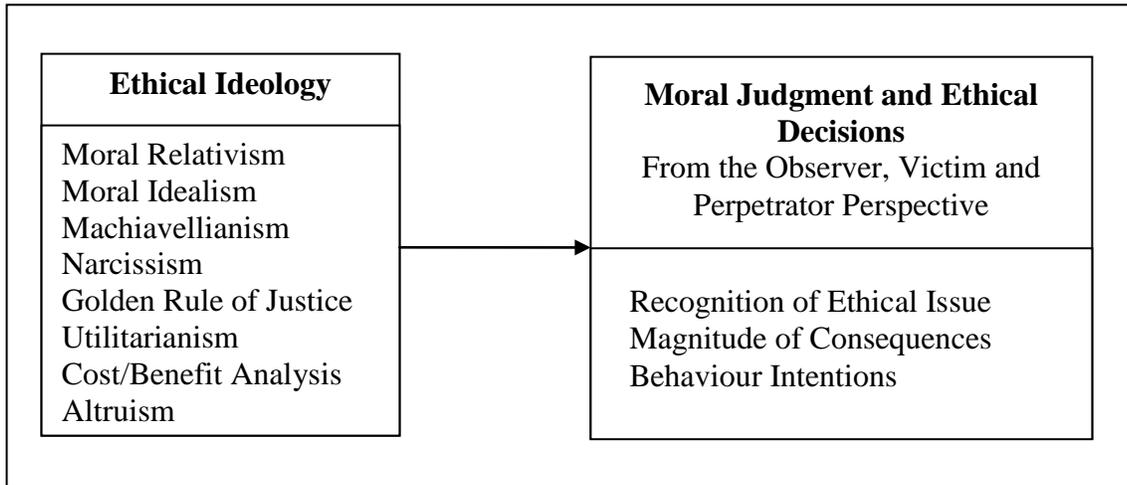
The Questionnaire of Moral Judgement and Ethical Decisions. The Questionnaire of Moral Judgement and Ethical Decisions (QMJED) (Chudzicka-Czupala, 2012a) was developed and a scenario conducted by the author was employed in the study. Consistent with Weber’s (1992) recommendation to use scenarios, this study used a single one, eliminating potential problems related to effects in studies with multiple scenarios (see: Decker, 1994; Frey, 2000a, 2000b).

A morally problematic, fictitious story was used to examine the respondents’ moral decision-making patterns. It was a story about a boss and her subordinate (Appendix 2). There was a hypothetical ethical dilemma in the story dealing with a work-related situation, and the respondent had to look at it from the point of view of all three persons involved in turn and assess the extent to which s/he agreed that the situation was an unethical issue (that the victim was hurt and that the perpetrator’s behaviour was contrary to the system of values of the survey respondent), assess the magnitude of emotional consequences for the victim and decide what actions s/he would take in such a situation. Only the order of perspectives changed randomly to prevent the framing effect. The decisions about how the person would act in a given situation, more or less ethical, were tested from the three mentioned perspectives. The individual points of view were separated by short instructions emphasizing the perspective at issue.

A list of statements connected strictly with the situation shown in the scenario was created. A separate list of statements for each of the perspectives was built. The statements were divided into three groups, corresponding to the recognition of the behaviour as an unethical issue (4 statements), perceived magnitude of emotional consequences for the victim (4 statements) and behaviour intentions (10 statements). Then, fifteen experts, psychologists and philosophers, were asked to assess the statements. Each expert was presented a series of statements and asked to rate their compliance with the general category using a seven-point scale. Only the statements which were rated higher than 80% of the maximum number of points were chosen and included in the final version of the questionnaire.

The Questionnaire of Moral Judgement and Ethical Decisions is included in Appendix 2. The survey model is presented in Figure 1.

Figure 1. Research Model



Results

The data gathered in the survey were explored in order to learn how people with different moral ideologies formed moral judgements and made ethical decisions.

Ethical Ideology

The first step was to check whether and how people differed in terms of the ethical values they subscribed to. K-means clustering method was used for this purpose. This method makes it possible to distinguish natural data clusters in the studied set without interference of the investigator, who does not determine their nature.

The k-means method maximizes the distances between selected clusters. The Euclidean distance was assumed as a measure of cluster distance because the measures of all the variables included in the model were the same. There was no need to increase the significance of variables that were weaker and more distant.

The number of clusters in the k-means method is not known a priori. The statistical package used (STATISTICA 9.1.210.26) includes v-fold cross-validation which is an algorithm for automatic determination of the number of clusters (StatSoft, 2012; Hill, and Lewicki, 2007). The results of v-fold cross-validation (v=10) showed that the sequence diagram had the characteristic form of a scree plot. The optimum number of clusters that were distinguished was two and they corresponded to two groups of survey participants differing as far as possible between each other in terms of the ethical ideology. The number of clusters determined in this manner makes it possible to interpret the results logically (StatSoft, 2012).

The two clusters distinguished in this manner were called: *Relativistic Egoists* (140 people) and *Idealistic Altruists* (186 people). Accordingly, the survey participants were divided into two groups differing in terms of moral philosophy, and the division was performed according to the degree of acceptance of individual ethical values by the respondents. The result of the division is shown in Table 1.

Table 1. Centroids for k-means clustering

	Cluster 1	Cluster 2
	Relativistic Egoists	Idealistic Altruists
Moral Relativism	3,69	2,88
Moral Idealism	3,31	3,61
Machiavellianism	2,52	1,29
Narcissism	2,49	1,28
Golden Rule of Justice	4,47	4,81
Utilitarianism	3,93	4,04
Cost/Benefit Analysis	3,52	2,12
Altruism	3,06	3,42
Number of cases	140	186
Percentage (%)	42,9	57,1

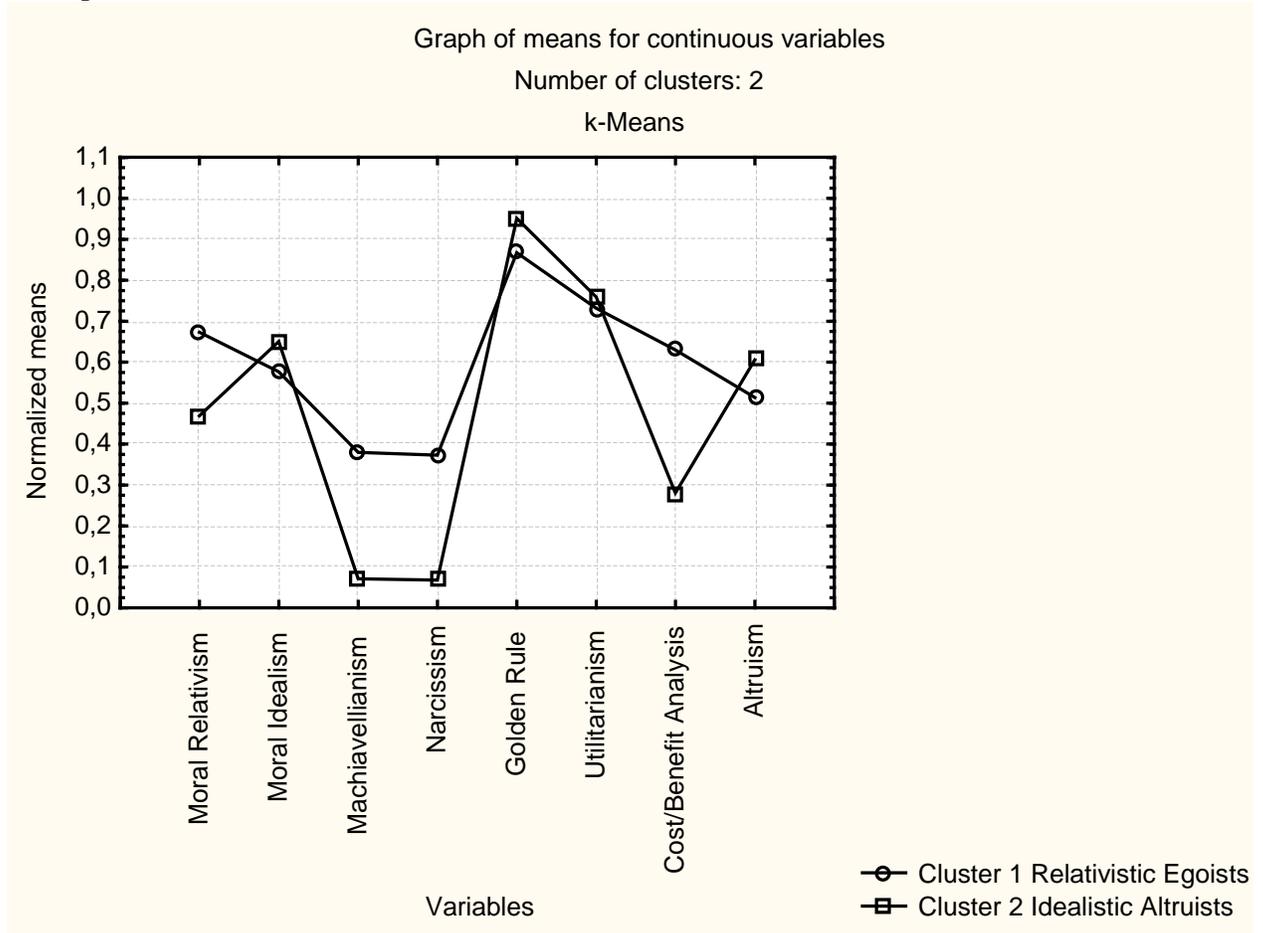
Legend: Number of clusters: 2; Total number of training cases: 326

Table 1 shows the centroids of the values forming the individual’s ethical ideology and corresponding to the clusters identified and studied. Standardized means for both clusters are shown in Figure 2.

The analysis of the differences between the means in the clusters identified using the single-factor ANOVA method (Table 2) showed that all differences in the acceptance of the individual values making up moral ideology were statistically significant, with the exception of acceptance of the principles of *utilitarianism*. This means that both respondent groups that were distinguished agreed to a similar extent with the assertion that “the aim of an action should be the greatest good for the greatest number.”

The people making up the first cluster, referred to as *relativistic egoists* (N=186), accepted the Machiavellian principle “Whatever I can get away with is acceptable” to a higher degree than the people from the second cluster, referred to as *idealistic altruists* (N=140) and presented a more narcissistic approach, agreeing with the motto that “one should have no regard for others”. They also agreed to a greater extent, compared to the persons belonging to the other cluster, with the principle that “people should, in their actions, strive most of all to maximize their own benefits and minimize their costs”, which points to a higher degree of egocentricity in their cost/benefit balance. The people from the first cluster are significantly more relativistic and,

Figure 2. Graph of variable means for clusters



at the same time, less idealistic: in their opinion there are no univocal moral principles, and circumstances determine what is right or wrong. Members of both clusters are also characterized

Table 2. Variance Analysis for the group of variables “Ethical Ideology”

	Between SS	df	Within SS	df	F
Moral Relativism	53,25	1	399,95	324	43,14**
Moral Idealism	6,95	1	452,35	324	4,97*
Machiavellianism	122,12	1	208,83	324	189,47**
Narcissism	118,6291	1	256,01	324	150,13**
Golden Rule of Justice	8,97	1	2	324	19,90**
Utilitarianism	0,950	1	296,02	324	1,04
Cost/Benefit Analysis	156,06	1	283,09	324	178,61**
Altruism	10,79	1	374,99	324	9,32**

Legend: ANOVA for continuous variables; Number of clusters: 2; Total number of training cases: 326; Significant at $p < ,05^*$ and $p < ,01^{**}$

by different levels of acceptance of altruism and of the golden rule: *relativistic egoists* are less altruistic and significantly less often agree that action has a value if it is aimed at bringing benefits to another person, even if it is performed at one's own expense. *Idealistic altruists*, on the other hand, accept the principle to much more extent and they are much more inclined to admit that others should be treated in the same way as one would like to be treated.

The impact of ethical ideology on the development of moral judgements and ethical decision making

The relationships between the method of forming moral judgements/ethical decision making from the point of view of the observer, of the victim and of the perpetrator and ethical ideology were analysed using the single-factor ANOVA method (multi-dimensional and single-dimensional).

The results of the analysis point to the existence of significant differences between the surveyed persons in the two clusters (*relativistic egoists* and *idealistic altruists*). The differences concern the manner of forming moral judgements and of making ethical decisions in each of the perspectives.

Perspective of the observer

When compared, the groups of *relativistic egoists* and *idealistic altruists*, having adopted the perspective of the observer, differ in terms of the manner of forming moral judgements and making ethical decisions (Table 3).

Table 3. Multivariate ANOVA for the Observer's Perspective

	Test	Value	F	Effect df	Error df	Partial eta-squared	Non-centrality	Observed power (alpha=0,05)
Intercept	Wilks	0,01	4026,64	7	318	0,99	28186,51	1,00
Ethical Ideology	Wilks	0,95	2,4159*	7	318	0,05	16,91	0,86

Legend: Multivariate Tests of Significance, Effect Sizes, and Powers; Sigma-restricted parameterization; Effective hypothesis decomposition; Significant at $p < ,05^*$

Looking at the situation from the observer's point of view, *relativistic egoists* are less inclined to consider a situation as an ethical issue. They do not admit as readily as *idealistic altruists* that the victim was harmed. *Idealistic altruists* as observers are more aware of the creation of an ethical issue, namely the harm inflicted. *Relativistic egoists* are also less ready to give support to the victim, as opposed to the other group surveyed, which declared an intention to help the victim. *Relativistic egoists* accept the perpetrator's behaviour to a much larger extent and are more inclined to support it, while *idealistic altruists* do not accept and do not support the perpetrator's behaviour (Table 4).

Perspective of the victim

When the survey participants adopt the perspective of the victim of unfair behaviour, the *relativistic egoists* and *idealistic altruists* groups differ in terms of the manner of forming moral judgements and making ethical decisions (Table 5).

Table 4. Univariate ANOVA for the Observer`s Perspective

	Observer- Recognition of Ethical Issue 1	Observer- Recognition of Ethical Issue 2	Observer- Magnitude of Consequences 3	Observer- Behaviour Intentions 4	Observer- Behaviour Intentions 5	Observer- Behaviour Intentions 6	Observer- Behaviour Intentions 7
Ethical Ideology MS	3,92	0,10	0,38	0,28	6,77	3,24	8,10
Error MS	0,81	6,08	0,57	1,47	0,64	1,58	0,99
Ethical Ideology F	4,81*	0,02	0,66	0,19	10,67**	2,05	8,12**

Legend: Univariate Results for Each DV; Sigma-restricted parameterization; Effective hypothesis decomposition; Significant at $p < 0,05^*$ and $p < 0,01^{**}$

Relativistic egoists, looking at the situation from the victim’s point of view, are less prone to perceive any ethical issues and tend to judge the unethical situation in terms of the harm they suffered less frequently. *Idealistic altruists*, on the contrary, are more aware of the harm inflicted and identify an ethical issue in the situation more easily. At the same time, they declare to be more inclined than *relativistic egoists* to challenge the perpetrator by actively opposing him or her (Table 6).

Table 5. Multivariate ANOVA for the Victim’s Perspective

	Test	Value	F	Effect df	Error df	Partial eta-squared	Non- centrality	Observed power (alpha=0,05)
Intercept	Wilks	0,02	2909,76	7	315	0,98	20368,28	1,00
Ethical Ideology	Wilks	0,93	3,17**	7	315	0,07	22,21	0,95

Legend: Multivariate Tests of Significance, Effect Sizes, and Powers; Sigma-restricted parameterization; Effective hypothesis decomposition; Significant at $p < ,01^{**}$

Perspective of the perpetrator

Relativistic egoists and *idealistic altruists* form moral judgements and make ethical decisions in a different manner when they adopt the perpetrator’s perspective (Table 7). The largest number of differences between the groups surveyed was revealed when this perspective was adopted.

Relativistic egoists, looking at the situation from the perpetrator’s perspective, are less inclined to perceive it as an ethical issue. As opposed to the other group, they do not see the harm that occurred, and they do not admit that the behaviour of the perpetrator (in this case their own behaviour) may have been contrary to their system of values. *Idealistic altruists*, despite having adopted the perpetrator’s perspective, are more ready to consider the perpetrator’s behaviour as the cause of an ethical issue and to agree that harm was inflicted. They also concur more often with the opinion that the perpetrator’s behaviour – which is in this perspective their own – would be contrary to their system of values.

Table 6. Univariate ANOVA for the Victim`s Perspective

	Victim - Recognition of Ethical Issue 1	Victim - Recognition of Ethical Issue 2	Victim - Magnitude of Consequences 3	Victim - Behaviour Intentions 4	Victim - Behaviour Intentions 5	Victim - Behaviour Intentions 6	Victim - Behaviour Intentions 7
Ethical Ideology MS	3,11	0,80	0,10	3,62	0,03	15,91	2,42
Error MS	0,70	0,97	0,68	1,56	553,74	1,28	1,27
Ethical Ideology F	4,48*	0,838	0,15	2,33	0,02	12,47**	1,91

Legend: Univariate Results for Each DV; Sigma-restricted parameterization; Effective hypothesis decomposition; Significant at $p < 0,05^*$ and $p < 0,01^{**}$

Relativistic egoists not only judge the severity of consequences of the perpetrator's behaviour differently and admit to a lesser extent that the victim suffered any emotional costs, but also have a guilty conscience less often than *idealistic altruists*. Also, they do not express as strongly as *idealistic altruists* the wish to apologize to the victim or to compensate for the latter's harm.

Table 7. Multivariate ANOVA for the Perpetrator's Perspective

	Test	Value	F	Effect df	Error df	Partial eta-squared	Non- centrality	Observed power (alpha=0,05)
Intercept	Wilks	0,02	1977,92	7	317	0,98	13845,42	1,00
Ethical Ideology	Wilks	0,92	4,08**	7	317	0,08	28,55	0,99

Legend: Multivariate Tests of Significance, Effect Sizes, and Powers; Sigma-restricted parameterization; Effective hypothesis decomposition; Significant at $p < ,01^{**}$

Relativistic egoists are inclined to justify the wrongdoer (in this perspective themselves), while *idealistic altruists*, when asked to look at the problem with the perpetrator's eyes, are not inclined to justify the perpetrator's behaviour and accept that behaviour less often (Table 8).

Conclusions

The results of this study support the basic arguments of theories pointing out the role of individual moral philosophy. Many researchers (e.g., Davis et al., 2001; Jones, 1991; Treviño, 1986) agree that hopes to create an accurate model are based on research taking into account the differences in individual ethical ideology. This investigation, similar to earlier research, proves the impact of individual moral ideology on the opinion of moral issues, on the readiness to give help and, in some way, on attributions of responsibility in response to wrongdoing and on the moral judgments of others (Jones, 1991; Treviño, 1986).

Table 8. Univariate ANOVA for the Perpetrator`s Perspective

	Perpetr.- Recognition of Ethical Issue 1	Perpetr.- Recognition of Ethical Issue 2	Perpetr.- Magnitude of Consequences 3	Perpetr.- Behaviour Intentions 4	Perpetr. - Behaviour Intentions 5	Perpetr.- Behaviour Intentions 6	Perpetr.- Behaviour Intentions 7
Ethical Ideology MS	15,87	6,38	5,98	18,18	33,05	21,32	8,72
Error MS	1,14	1,45	0,67	1,42	1,45	1,26	1,49
Ethical Ideology F	13,83**	4,41*	8,99**	12,81**	22,85**	16,95**	5,87*

Legend: Univariate Results for Each DV; Sigma-restricted parameterization; Effective hypothesis decomposition; Significant at $p < 0,05^*$ and $p < 0,01^{**}$

The results of the research reported in this paper confirm the impact of an individual’s moral ideology on his or her ethical choices. Acceptance of the Machiavellian principle and of the narcissistic principle, thinking in terms of costs/benefits, idealism, relativism and altruism proved particularly important. The most significant differences could be noticed between the survey participants with regard to the above values, while slightly less significant differences were recorded in relation to the Golden Rule. Such differences were not found in the approach of the survey participants to the utilitarian principle.

Persons belonging to the more ethical group of surveyed persons distinguished in the cluster analysis, namely that of idealistic altruists, are also characterized by significantly lower scores on the scales of Machiavellianism and narcissism as well as by a stronger inclination to follow the cost/benefit analysis, despite the adoption of the perpetrator’s perspective; they are also more willing to recognize the latter’s behaviour as the cause of an ethical issue, admit that the victim was harmed and agree that this would be contrary to their system of values.

Theories pointing to the connection between altruism, empathy and prosocial behaviour such as Batson’s works (1991; 1998; Batson, Klein, Highberger, and Shaw, 1995), shed some light on the results obtained. Batson (1991), author of the empathy – altruism hypothesis, which is rooted in the study of pro-social behaviour and explains why and when people are ready to help others, suggests that there are two main conditions of help: the degree of initial empathy and the ease of psychological escape. According to this author, pure altruism is possible and “feeling empathy for a person in need evokes motivation to help [that person] in which ... benefits to self are not the ultimate goal of helping; they are unintended consequences” (Batson & Shaw, 1991, p. 114). If the individual does not find altruistic incentives to act, s/he performs the cost/benefit analysis and the result of it determines whether to help out or not.

Batson’s theory was criticized by Cialdini, Schaller, Houlihan, Arps, Fultz, and Beaman (1987) whose opinion is that helping others does not always result from altruism and that there are many egoistical reasons that persuade us to help, such as guilty conscience or the wish to avoid a bad mood which can result from the lack of reaction to the situation of a person in need. The authors conclude: “It is instructive that theorists coming from very different starting points – multiculturalists, on the one hand, and evolutionary psychologists, on the other – are teaching the same lesson: Crucial features of the self exist outside the body of the individual and inside close

others. Consequently, what one does to and for these others one does to and for oneself” (Cialdini, Brown, Lewis, Luce, and Neuberg, 1997, p. 492).

The findings of the presented study support Batson’s perspective, as they show that some people may be more sensitive for somebody’s harm than others for whom benefits and costs are more important. The results prove that the readiness to help may be a question of the human beliefs – ethical ideology of the person.

Research directions and managerial implications

The perspectives studied were only a background in this case for the analysis of the relationships between the variables. The future analysis would have to go deeper and check whether perhaps they constitute a significant independent variable rather than an intermediate one, and in what way they influence the ethical conduct of humans really facing an ethical dilemma. This, however, would require a change of the analytical approach, which was the major limitation of the study. Schmitt et al. (2005) emphasize that “the same event will often be judged quite differently depending on the perspective from which it is viewed” (p. 202) and even though we may potentially become any of the three protagonists, since we may be harmed, harm somebody or witness harm, imagining the situation of the victim, of the perpetrator and of the observer is after all different from actually being in their place.

Despite the methodological limitation of using a questionnaire based on a fictitious story, the results of this study are believed to fill a gap in the organizational literature by showing the importance of ethical standards of individuals and their relations to the possible behaviour of workers. Ethical ideology is connected with a larger readiness to help the victim and to recognize the perpetrator’s fault. It would seem appropriate to check whether, and in what way, the ethical decision making characterising employees at Polish enterprises is connected with empathy and egoism.

Polish managers should seek not to diverge from Western European countries and from the U.S.A. in terms of the importance attributed there to corporate social responsibility and to ethical issues in business situations and organisational behaviour. The tools used to manage corporate social responsibility are numerous and they are inextricably linked with the company’s organisational culture and business profile. They also include ethical programmes for employees whose purpose is to integrate them around common values and to build the ethical climate of the organisation.

The implementation of high ethical standards and enforcement of the code of ethics constitute an element of caring for not only the employees of one’s own business, but also for the customer. This can be supported by diagnosing individual moral philosophy among the organisation’s management and employees, not to discriminate against those who are prone to unethical behaviour and to manipulate people more often, but rather to develop staff.

The results of the present study show the role of individual differences in ethical ideology and their connection with human behaviour in possible situations at work. Using the tools presented in this paper (see Appendix 1 and Appendix 2) for diagnosing individual ethical beliefs and moral behaviour intentions might be part of the training to make people more alert to their significance. The purpose of such training should be to make employees aware that immoral behaviour does not contribute to the building of a good image of the business. Even if such behaviour sometimes makes it possible to obtain a profit more rapidly, the profit is frequently only a short-term effect. In fact, we consider best business practice, appropriate from the ethical point of view, to be one which not only avoids unfair treatment and injustice, but also meets the requirements of virtue in general.

References

- Barnett, T., K. Bass, and G. Brown: 1994, 'Ethical Ideology and Ethical Judgment Regarding Ethical Issues in Business', *Journal of Business Ethics* 13, pp: 469–480.
- Barnett, T., K. Bass, and G. Brown: 1996, 'Religiosity, Ethical Ideology and Intentions to Report a Peer's Wrongdoing', *Journal of Business Ethics* 15, pp: 1161–1174.
- Barnhart, R. K.: 1995, *The Barnhart Concise Dictionary of Etymology*, (Harper Collins, New York).
- Bass, K., T. Barnett, and G. Brown: 1999, 'Individual Difference Variables, Ethical Judgments, and Ethical Behavioral Intentions', *Business Ethics Quarterly* 9(2), pp: 183–205.
- Batson, C. D.: 1998, 'Altruism and prosocial behavior', in D. T. Gilbert, S. T. Fiske, and G. Lindzey (eds.), *The Handbook of Social Psychology* Vol. 2, 4th edition (McGraw-Hill, New York), pp: 282–316.
- Batson, C. D.: 1991, *The Altruism Question: Toward a Social-Psychological Answer*, (Erlbaum, Hillsdale, NJ).
- Batson, C. D., T. R. Klein, L. Highberger, and L. Shaw: 1995, 'Immorality from Empathy-Induced Altruism: When compassion and Justice Conflict', *Journal of Personality and Social Psychology* 68, pp: 1042– 1054.
- Batson, C. D., and L. Shaw: 1991, 'Evidence for Altruism: Toward a Pluralism of Prosocial Motives.' *Psychological Inquiry* 2(2), pp: 107-122.
- Bennis W. M., D. L. Medin, and D. M. Bartels: 2010, 'The Costs and Benefits of Calculation and Moral Rules', *Perspectives on Psychological Science*, pp: 1–16.
- Biernacka, M.: 2009, *Człowiek korporacji. Od normatywizmu do afirmacji własnego Ja* [The corporate human. From normativism to the affirmation of the Self], (Wydawnictwo Naukowe Scholar, Warszawa, PL).
- Brown, T. A., J. A. Sautter, and L. Littvay: 2010, 'Ethics and Personality: Empathy and Narcissism as Moderators of Ethical Decision Making in Business Students', *Journal of Education for Business* 85, pp: 203–208.
- Burton B. K., and M. Goldsby: 2005, 'The Golden Rule and Business Ethics: An Examination', *Journal of Business Ethics* 56, pp: 371–383.
- Christie, R., and F. Geis: 1970, *Studies in Machiavellianism*, (Academic Press, New York, NY).
- Chudzicka-Czupała, A.: 2012a, 'Empathy and Ethical Decision Making at Work', *Polish Journal of Applied Psychology*, 10(1), pp: 169–185.
- Chudzicka-Czupała, A.: 2012b, 'Filozofia moralna jednostek jako przesłanka dobrych praktyk w biznesie [Individual Moral Philosophy as a Necessary Condition of Good Practices in Business]', *Zarządzanie i Finanse. Journal of Management and Finance* 1(3), pp: 535–546.
- Cialdini, R. B., S. L. Brown, B. P., Lewis, C. Luce, and S. L. Neuberg: 1997, 'Reinterpreting the Empathy-Altruism Relationship: When One into One Equals Oneness', *Journal of Personality and Social Psychology* 73(3), pp: 481–494.
- Cialdini, R. B., M. Schaller, D. Houlihan, K. Arps, J. Fultz, and A. Beaman: 1987, 'Empathy-Based Helping: Is It Selflessly or Selfishly Motivated?' *Journal of Personality and Social Psychology* 52(4), pp: 749–758.

- Cruz, C. A., W. E. Shafer, and J. R. Strawser: 2000, 'A Multidimensional Analysis of Tax Practitioners' Ethical Judgments', *Journal of Business Ethics* 24(3), pp: 223–244.
- Cullen, J., J. Joyce, T. Hassall, and M. Broadbent: 2003, 'Quality in Higher Education: From Monitoring to Management', *Quality Assurance in Education* 11(1), pp: 5–14.
- Cunningham, W. P.: 1998, 'The Golden Rule as Universal Ethical Norm', *Journal of Business Ethics* 17, pp: 105–109.
- Davis, M. H.: 1999, *Empatia. O umiejtnosci wspolodczuwania*, [Empathy. On the Ability to Empathize.] (Gdanskie Wydawnictwo Psychologiczne, Gdansk, PL).
- Davis, M. H., M. G. Andersen, and M. B. Curtis: 2001, 'Measuring Ethical Ideology in Business Ethics: A Critical Analysis of the Ethics Position Questionnaire', *Journal of Business Ethics* 32, pp: 35–53.
- De George, R. T.: 1999, *Business Ethics*, 5th edition, (Upper Saddle River, Prentice Hall, NJ).
- Decker, W. H.: 1994, 'Unethical decisions and attributions: Gains, losses, and concentration of effect', *Psychological Reports* 75, pp: 1207–1214.
- Erondu, E., A. Sharland, and J. O. Okpara: 2004, 'Corporate Ethics in Nigeria: A Test of the Concept of an Ethical Climate', *Journal of Business Ethics* 51(4), pp: 349–354.
- Ferrell O. C., L. G. Gresham: 1985, 'A contingency framework for understanding ethical decision making in marketing', *Journal of Marketing* 49, pp: 87–96.
- Filek J.: 2001, 'Firmy zagraniczne na polskim rynku-szkic do analizy kulturowo-etycznej' [Foreign Companies in the Polish Market: a Draft for a Cultural and Ethical Analysis], in W. Gasparski and J. Dietl (eds.), *Etyka biznesu w dzialaniu. Doswiadczenia i perspektywy*. [Business Ethics in Action. Experiences and Perspectives] (Wydawnictwo Naukowe PWN, Warszawa, PL).
- Ford, R. C., and W. D. Richardson: 1994, 'Ethical decision making: A review of the empirical literature', *Journal of Business Ethics* 13, pp: 205–221.
- Forsyth, D. R.: 1980, 'A Taxonomy of Ethical Ideologies', *Journal of Personality and Social Psychology* 39, pp: 175–184.
- Forsyth, D. R.: 1985, 'Individual Differences in Information Integration During Moral Judgment', *Journal of Personality and Social Psychology* 49, pp: 264–272.
- Forsyth, D. R.: 1992, 'Judging the Morality of Business Practices: The Influence of Personal Moral Philosophies', *Journal of Business Ethics* 11, pp: 461–470.
- Frey, B. F.: 2000a, 'The impact of moral intensity on decision making in a business context', *Journal of Business Ethics* 26, pp: 181–195.
- Frey, B. F.: 2000b, 'Investigating moral intensity with the world-wide web: A look at participant reactions and a comparison of methods', *Behavior Research Methods, Instruments, & Computers* 32, pp: 423–431.
- Hill, T. and P. Lewicki: 2007, *Statistics: Methods and Applications*, StatSoft, Tulsa, OK.
- Jones, G., and M. Kavanagh: 1996, 'An Experimental Examination of the Effects of Individual and Situational Factors on Unethical Behavioral Intentions in the Workplace', *Journal of Business Ethics* 15, pp: 511–523.
- Jones, T. M.: 1991, 'Ethical Decision Making by Individuals in Organizations: An Issue-Contingent Model', *Academy of Management Review* 16, pp: 366–395.

- Judge, T., J. Le Pine and B. Rich: 2006, 'Loving Yourself Abundantly: Relationship of the Narcissistic Personality to Self- and Other Perceptions of Workplace Deviance, Leadership, and Task and Contextual Performance', *Journal of Applied Psychology* 91(4), pp: 762–776.
- Kakabadse, N. K., A. Kakabadse, and A. Kouzmin: 2002, 'Ethical Considerations in Management Research: A Truth' Seeker's Guide', *International Journal of Value Based Management* 15, pp: 1051–38.
- Kish-Gephart, J. J., D. A. Harrison, and L. K. Treviño: 2010, 'Bad Apples, Bad Cases, and Bad Barrels: Meta-Analytic Evidence About Sources of Unethical Decisions at Work', *Journal of Applied Psychology* 95, pp: 1–31.
- Kujala, J., A. M. Lamsa, and K. Penttila: 2011, 'Managers' Moral Decision-Making Patterns Over Time: A Multidimensional Approach', *Journal of Business Ethics*, 100, pp: 191–207.
- Luthy, M. R., B. L. Padgett, and J. F. Toner: 2009, 'In the Beginning: Ethical Perspectives of Business and Non-Business College Freshmen', *Journal of Legal, Ethical and Regulatory Issues* 12(2), pp: 85–101.
- McMahon, J. M. and R. J. Harvey: 2007, 'Psychometric Properties of the Reidenbach–Robin Multidimensional Ethics Scale', *Journal of Business Ethics* 72, pp: 27–39.
- Nelson, G., and D. Gilbertson: 1991, 'Machiavellianism revisited', *Journal of Business Ethics* 10, pp: 633–639.
- Nguyen, N. T., M. T. Basuray, W. P. Smith, D. Kopka and D. McCulloh: 2008, 'Moral Issues and Gender Differences in Ethical Judgment Using Reidenbach and Robin's (1990) Multidimensional Ethics Scale: Implications in Teaching Business Ethics', *Journal of Business Ethics* 77, pp: 417–430.
- Peter, J. P., and J. H. Donnelly, Jr.: 2006, *A Preface to Marketing Management*, 10th edition (Irwin, Burr Ridge, Illinois).
- Pilch, I.: 2008, *Osobowość makiawelisty i jego relacje z ludźmi [The Machiavellian Personality and Its Relations with Others]* (Wydawnictwo Uniwersytetu Śląskiego, Katowice, PL).
- Reidenbach, R. E., and D. P. Robin: 1990, 'Toward the Development of a Multi-Dimensional Scale for Improving Evaluations of Business Ethics', *Journal of Business Ethics* 9, pp: 639–653.
- Rok, B., S. Stolorz, and D. Stanny: 2003, *Menedżerowie 500 i odpowiedzialny biznes. Wiedza-postawy-praktyka [Managers 400 and Responsible Business. Knowledge, Bases and Practice]* (Forum Odpowiedzialnego Biznesu, Warszawa, PL).
- Schein, E. H.: 1996, 'Culture: The missing concept in organization studies', *Administrative Science Quarterly* 41, pp: 229–240.
- Schmitt M., M. Gollwitzer, J. Maes, and D. Arbach: 2005, 'Justice Sensitivity: Assessment and Location in the Personality Space', *European Journal of Psychological Assessment* 21(3), pp: 202–211.
- Shah, A. K., and D. M. Oppenheimer, 2008, 'Heuristics Made Easy: An Effort-Reduction Framework.' *Psychological Bulletin*, 134, pp: 207–222.
- Singhapakdi, A., and S. J. Vitell, 1992, 'Marketing Ethics: Sales Professionals Versus Other Marketing Professionals', *The Journal of Personal Selling and Sales Management* 12 (Spring), pp: 27–38.

- StatSoft, Inc.: 2012, 'Electronic Statistics Textbook', Tulsa, OK: StatSoft. WEB: <http://www.statsoft.com/textbook/>.
- Treviño, L. K.: 1986, 'Ethical Decision Making in Organizations: A Person-Situation Interactionist Model', *Academy of Management Review* 11, pp: 601–617.
- Treviño L. K., G. R. Weaver, and S. J. Reynolds: 2006, 'Behavioral ethics in organizations: A review', *Journal of Management* 32, pp: 951–990.
- Treviño, L.K., and S. A. Youngblood: 1990, 'Bad apples in bad barrels: A causal analysis of ethical decision-making behavior', *Journal of Applied Psychology* 75, pp: 378-385.
- Twenge, J.: 2006, *Generation Me: Why Today's Young Americans are More Confident, Assertive, Entitled and More Miserable Than Ever Before*, (Free Press, New York).
- Velasquez, M. G.: 1998, *Business Ethics. Concepts and Cases*, 4th edition (Prentice-Hall, Englewood Cliffs, NJ).
- Vogel, C.: 2006, 'A Field Guide to Narcissism', *Psychology Today* 29(1), pp: 68–74.
- Weber, E. U., D. Ames, and A. R. Blais: 2005, 'How Do I Choose Thee? Let Me Count the Ways: A Textual Analysis of Similarities and Differences in Modes of Decision Making in China and the United States.' *Management and Organization Review* 1, pp: 87–118.
- Weber, J.: 1992, 'Scenarios in Business Ethics Research: Review, Critical Assessment, and Recommendations', *Business Ethics Quarterly* 2, pp: 138–159.

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All persons who took part in the research gave their informed consent prior to their inclusion in the study.

Appendix 1

Ethical Ideology Scales (EIS)

Please help us understand your ideas about life.

If you tend to disagree with the statement, circle a number on the left side of the scale; if you tend to agree, circle a number on the right side. If you are neutral, circle the “3”.

Please circle one number in each row. Be honest with yourself and think very carefully to what extent the statements below refer to you. Thank you.

State to what extent you agree with the following principles:

	Strongly disagree	2	3	4	Strongly agree
<i>Relativism</i>					
1. There are no universal moral principles: what is right and what is wrong depends on the circumstances.	1	2	3	4	5
<i>Idealism</i>					
2. Universal moral principles exist that should absolutely be respected.	1	2	3	4	5
<i>Machiavellianism</i>					
3. Whatever I can get away with is acceptable.	1	2	3	4	5
<i>Narcissism</i>					
4. One should have no regard for others.	1	2	3	4	5
<i>The Golden Rule</i>					
5. You should always treat others as you want to be treated.	1	2	3	4	5
<i>Utilitarianism</i>					
6. The goal of any action should be the greatest good for the greatest number.	1	2	3	4	5
<i>Cost/Benefit Analysis</i>					
7. In their actions, humans should strive most of all to maximize their own profits and to minimize their own costs.	1	2	3	4	5
<i>Altruism</i>					
8. Human actions have a value if their aim is to bring benefits to the other person, even if this happens at one's own expense.	1	2	3	4	5

Appendix 2

Questionnaire of Moral Judgement and Ethical Decisions (QMJED)

Please read the story below and afterwards express your honest opinion about the behaviour of its protagonists.

Elizabeth was asked by her direct superior Margaret to get involved in a project which had to be completed within a very short time. She worked intensely day and night for three weeks and she was very satisfied with what she had managed to come up with.

In the evening she sent the complete project to her boss Margaret and in the morning she was invited to come to her office. Margaret told Elizabeth at that point that she was removing her from the project Margaret would complete the project, and Elizabeth from now on was going to take care of something else. "This is where your role ends – it's better if someone else represents our company outside," the boss explained briefly.

John, a close co-worker of Elizabeth, who followed her work on the project, accidentally overheard her conversation with Margaret as he was passing the door.

The Observer's perspective

Imagine you are John from the story presented above. What would you have thought and what would you have done?

Please rate how strongly you agree or disagree with each of the following statements:

	Strongly disagree				Strongly agree
<i>Recognition of the Behaviour as an Ethical Issue</i>					
1. Margaret was unfair to Elizabeth.	1	2	3	4	5
2. Margaret's behaviour is contrary to my system of values.	1	2	3	4	5
<i>Perceived Magnitude of Emotional Consequences for the Victim</i>					
3. Margaret's behaviour must have been strongly irritating to Elizabeth.	1	2	3	4	5
<i>Behaviour Intentions</i>					
4. I would have decided I didn't know about anything and that I hadn't heard anything.	1	2	3	4	5
5. I would have tried to support Elizabeth.	1	2	3	4	5
6. I would have agreed to testify against Margaret if Elizabeth had asserted her rights in court.	1	2	3	4	5

- | | | | | | | |
|----|--|---|---|---|---|---|
| 7. | I would have supported Margaret’s decision – after all, as Elizabeth’s boss she had full right to decide who would represent the company in a better way before third parties. | 1 | 2 | 3 | 4 | 5 |
|----|--|---|---|---|---|---|

The Victim’s perspective

Imagine you are Elizabeth from the story presented above. What would you have thought and what would you have done?

Please rate how strongly you agree or disagree with each of the following statements.

Strongly disagree	Strongly agree
----------------------	-------------------

Recognition of the Behaviour as an Ethical Issue

- | | | | | | | |
|----|--|---|---|---|---|---|
| 1. | Margaret was unfair to me. | 1 | 2 | 3 | 4 | 5 |
| 2. | Margaret’s behaviour is contrary to my system of values. | 1 | 2 | 3 | 4 | 5 |

Perceived Magnitude of Emotional Consequences for the Victim

- | | | | | | | |
|----|---|---|---|---|---|---|
| 3. | I would have been strongly irritated by Margaret’s behaviour. | 1 | 2 | 3 | 4 | 5 |
|----|---|---|---|---|---|---|

Behaviour Intentions

- | | | | | | | |
|----|---|---|---|---|---|---|
| 4. | I would have obeyed Margaret and forgotten about the entire matter. | 1 | 2 | 3 | 4 | 5 |
| 5. | I would have tried to talk to Margaret and persuade her to change her mind and entrust me with the completion of the task. | 1 | 2 | 3 | 4 | 5 |
| 6. | I would have sued Margaret. | 1 | 2 | 3 | 4 | 5 |
| 7. | I would have supported Margaret’s decision – as the boss she had full right to decide who would represent the company in a better way before third parties. | 1 | 2 | 3 | 4 | 5 |

The Perpetrator’s perspective

Imagine you are Margaret from the story presented above. What would you have thought and what would you have done?

Please rate how strongly you agree or disagree with each of the following statements.

Strongly disagree	Strongly agree
----------------------	-------------------

Recognition of the Behaviour as an Ethical Issue

- | | | | | | | |
|----|---|---|---|---|---|---|
| 1. | After some time I would have come to the conclusion that I shouldn’t have given Elizabeth’s project to another employee and that I was unfair to her. | 1 | 2 | 3 | 4 | 5 |
|----|---|---|---|---|---|---|

2. My behaviour towards Elizabeth was contrary to my system of values. 1 2 3 4 5

Perceived Magnitude of Emotional Consequences for the Victim

3. Elizabeth must have been strongly irritated by my behaviour. 1 2 3 4 5

Behaviour Intentions

4. I would have had a guilty conscience. 1 2 3 4 5
5. I would have apologized to Elizabeth. 1 2 3 4 5
6. I would have tried to make up in some way to Elizabeth for my wrong behaviour. 1 2 3 4 5
7. I would have decided I had the right to act this way towards Elizabeth: as her boss I was after all authorized to decide who would present the project in a better way. 1 2 3 4 5

English Abstract

Ethical Ideology as a Predictor of Ethical Decision Making

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland

e-mail: agata.chudzicka-czupala@us.edu.pl

Abstract

The study investigates the role of individual ethical ideology as a predictor of moral judgement and ethical decision making at work. Moral judgement and ethical decision making were examined from three points of view: of an observer of unethical behaviour, of the victim, and of the perpetrator. Dimensions of moral judgement and ethical decision making were distinguished partly on the basis of Jones' issue-contingent model (1991). These dimensions are as follows: recognition of the behaviour as an unethical issue, the perceived magnitude of emotional consequences for the victim, and the intended behaviour.

As a result of a cluster analysis conducted on a sample group of 326 people employed in Polish organizations, two subgroups were specified differing in terms of ethical ideology. The two groups were subsequently compared to each other and the way they make ethical decisions was characterized.

Results of the research demonstrate that individual ethical philosophy is a significant predictor of ethical decision making. The research offers implications for the practice of moral awareness in organizations.

Keywords: ethical ideology, ethical decision making, moral judgement, Poland

French Abstract*
Ethical Ideology as a Predictor of Ethical Decision Making

Idéologie éthique comme prédicteur de la prise de décision éthique

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland
e-mail: agata.chudzicka-czupala@us.edu.pl

Résumé

L'étude examine le rôle de l'idéologie éthique individuelle comme prédicteur de jugement moral et prise de décision éthique au travail. Le jugement moral et la prise de décision éthique ont été examinés selon trois points de vue: celui d'un observateur des comportements non-éthiques, celui de la victime et celui de l'auteur. Sur la base du modèle de Jones (1991), des dimensions de jugement moral et de prise de décision éthique ont été distinguées, qui sont les suivantes: la reconnaissance du comportement comme problème éthique, l'importance perçue des conséquences émotionnelles de la victime et l'intention de comportement. A la suite d'une analyse typologique, réalisée sur un panel de 326 personnes travaillant dans des organisations polonaises, deux sous-groupes ont été identifiés qui diffèrent en termes d'idéologie éthique. Les deux groupes ont ensuite été comparés, les uns aux autres, et la façon dont ils prennent des décisions éthiques ont été caractérisés. Les résultats de la recherche montrent que la philosophie éthique individuelle est un facteur prédictif significatif de la prise de décision éthique. La recherche propose des implications pour les pratiques de la reconnaissance morale au sein des organisations.

Mots-clés: l'idéologie éthique, la prise de décision éthique, jugement moral, la Pologne

* Translated by: Johannes Schaaper, Senior professor in International Management, BEM Bordeaux Management School

German Abstract*

Ethical Ideology as a Predictor of Ethical Decision Making

Ethische Ideologie als Prädiktor für ethisch fundierte Entscheidungsprozesse

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland

e-mail: agata.chudzicka-czupala@us.edu.pl

Zusammenfassung

Die Studie untersucht die Rolle der individuellen ethischen Ideologie als einen Prädiktor für moralische Beurteilung und ethisch fundierte Entscheidungsprozesse im Beruf. Moralische Beurteilungen und ethische Entscheidungsprozesse werden aus drei Perspektiven untersucht: aus der Perspektive eines Beobachters mit unethischem Verhalten, aus der des Opfers und der des Täters. Dimensionen der moralischen Beurteilung und des ethischen Entscheidungsprozesses sind zum Teil auf Basis des Jones-issue-contingent-Modells (1991) unterschieden. Diese Dimensionen sind folgende: Erkennen des unethischen Verhaltens, der wahrgenommene Größen der emotionalen Konsequenzen für das Opfer und des intendierten Verhaltens.

Als Ergebnis einer Cluster Analyse, die auf einer Sample Gruppe von 326 Angestellten polnischer Unternehmen beruht, wurden zwei Untergruppen spezifiziert, die sich in ihrer ethischen Ideologie differenzieren. Die zwei Gruppen werden nachfolgend miteinander verglichen und die Art und Weise wie sie ethische Entscheidungen treffen wird charakterisiert.

Die Ergebnisse dieser Forschung demonstrieren, dass eine individuell ethische Philosophie einen erheblichen Prädiktor in der ethischen Entscheidungsfindung stellt. Die Forschung offeriert Implikationen für die Praxis des moralischen Bewusstseins in Organisationen.

Stichwörter: Ethische Ideologie, ethischer Entscheidungsprozess, moralische Bewertung, Polen

* Translated by: Prof. Dr. Marc Eulerich, University Duisburg-Essen, marc.eulerich@uni-due.de

Spanish Abstract*

Ethical Ideology as a Predictor of Ethical Decision Making

Ideología Ética como Predictora de las Decisiones Éticas

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland

e-mail: agata.chudzicka-czupala@us.edu.pl

Resumen

El estudio investiga el papel de la ideología ética individual como un predictor de juicio moral y de toma de decisiones éticas en el trabajo. El juicio moral y la toma de decisiones éticas fueron examinados desde tres puntos de vista: el de un observador de la conducta poco ética, de la víctima y del agresor. Se distinguieron dimensiones del juicio moral y de toma de decisiones éticas en parte sobre la base del modelo de emisión contingente de Jones (1991). Estas dimensiones son las siguientes: el reconocimiento del comportamiento como un problema ético, la magnitud percibida de consecuencias emocionales para la víctima, y el comportamiento previsto.

Como resultado de un análisis de conglomerados realizado a una muestra de 326 personas que trabajan en organizaciones polacas, se especificaron dos subgrupos que difieren en términos de ideología ética. Los dos grupos fueron posteriormente comparados entre sí y la forma en que toman decisiones éticas resultaron diferentes en cada grupo.

Los resultados de la investigación demuestran que la filosofía ética individual es un predictor significativo de la toma de decisiones éticas. La investigación ofrece implicaciones para la práctica de la conciencia moral en las organizaciones.

Palabras clave: ideología ética, toma de decisiones ética, juicio moral, Polonia

* Translated by: Francis Blasco. Universidad Complutense de Madrid. fblasco@emp.ucm.es

Arabic version*

Ethical Ideology as a Predictor of Ethical Decision Making

الفكر الاخلاقي كأداة توقع لاتخاذ قرارات أخلاقية

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland

E-mail: agata.chudzicka-czupala@us.edu.pl

ملخص

تبحث هذه الرسالة دور الفكر الأخلاقي للأفراد كأداة للتوقع بقدرتهم على اتخاذ القرار الأخلاقي في مكان العمل. تم فحص الحكم الأخلاقي واتخاذ القرارات الأخلاقية من ثلاث وجهات نظر: الأولى وجهة نظر مراقب للسلوك الغيلا الاخلاقي، الثانية من وجهة نظر الضحية، و الثالثة من وجهة نظر الجاني. أبعاد الحكم الأخلاقي واتخاذ القرارات الأخلاقية تم تمييزها جزئياً باستخدام نموذج جونز للظروف المحيطة (1991) هذه الأبعاد كما يلي، ادراك السلوك كقضية غير أخلاقي، ادراك حجم الأثار المترتبة على الضحية و البعد الاخير السلوك المقصود. تم اجراء التحليل العنقودي لعينة من ثلاثمائة و ستة و عشرون شخصا في منظمات بولندية حيث تم تمييز مجموعتان فرعيتان تختلفان في فكرهم الأخلاقي حيث تم مقارنة المجموعتين مع بعضهم البعض و تم دراسة خصائص و مميزات آلية اتخاذ قراراتهم الأخلاقية. حيث أظهرت النتائج أن الفكر الأخلاقي الفردي هو عامل هام لتوقع اتخاذ القرارات الأخلاقية و تقدم الورقة ايضا آثار ممارسة التوعية الأخلاقية في المنظمات.

الكلمات الدالة: الفكر الأخلاقي، اتخاذ القرارات الأخلاقية، الحكم الأخلاقي، بولندا

* Translated by: Zu'bi M.F.Al-Zu'bi, Ph.D, FHEA, University of Jordan, z.alzubi@ju.edu.jo

Italian version*

Ethical Ideology as a Predictor of Ethical Decision Making

Ideologia etica come strumento per prevedere un modo etico di prendere decisioni

Agata Chudzicka-Czupala

Department of Psychology, University of Silesia, Poland

e-mail: agata.chudzicka-czupala@us.edu.pl

Abstract

Il presente studio rappresenta una ricerca sul ruolo che l'ideologia etica ha come mezzo di predizione di una valutazione morale e decisioni etiche prese a lavoro. Valutazioni morali e il prendere decisioni in modo etico sono state esaminate da tre punti di vista: da chi osserva un comportamento non etico, da chi ne è vittima, da chi lo fa. Le dimensioni della valutazione morale e il modo etico di prendere decisioni sono state parzialmente distinte sulla base del modello di Jones che le rapporta alla contestualità del tema. Queste dimensioni sono le seguenti: riconoscimento del comportamento come non etico, la portata dell'effetto percepito delle conseguenze emozionali per la vittima e il comportamento che si voleva attuare. Come risultato del complesso di analisi condotte su un campione di 326 persone impiegate in aziende polacche, due sottogruppi sono stati individuati in relazione all'ideologia etica. I due gruppi sono stati poi comparati l'uno l'altro e il modo di giungere a decisioni etiche è stato individuato. I risultati dello studio dimostrano che l'etica filosofica individuale prevede in modo significativo delle decisioni etiche. La ricerca offre anche spunti per applicare la consapevolezza della moralità in aziende.

Keywords: Ideologia Etica, Decisioni Etiche, Valutazione Morale, Polonia

* Translated by: Riccardo Paterni, Synergy Pathways, riccardo@synergypathways.net

Polish Abstract*
Ethical Ideology as a Predictor of Ethical Decision Making

Filozofia moralna jako predyktor podejmowania decyzji etycznych

Agata Chudzicka-Czupala

University of Silesia in Katowice, Department of Education and Psychology, Poland
agata.chudzickaczupala@us.edu.pl

Streszczenie

Badania opisane w artykule dotyczą roli filozofii moralnej jednostki (jej przekonań etycznych) jako predyktora ocen moralnych i podejmowania decyzji etycznych w sytuacji pokrzywdzenia w miejscu pracy. Oceny etyczne i podejmowanie decyzji etycznych były badane z trzech perspektyw: obserwatora, ofiary i sprawcy. Wymiary ocen etycznych i elementy procesu podejmowania etycznych decyzji zostały wyróżnione częściowo w oparciu o model uwarunkowania decyzji etycznych w organizacji cechami kwestii etycznej Jonesa (1991). Badane zmienne to: dostrzeżenie problemu etycznego, ocena dotkliwości emocjonalnych konsekwencji ponoszonych przez ofiarę, intencje do zachowania się w określony sposób.

W wyniku analizy skupień, przeprowadzonej na próbie 326 pracowników polskich organizacji, dokonano podziału badanych na dwie grupy, różniące się między sobą w zakresie indywidualnej filozofii moralnej. Następnie członkowie obydwu skupień zostali porównani pod względem sposobu podejmowania decyzji etycznych.

Rezultaty badania dowodzą, że filozofia moralna jest istotnym predyktorem różnic w sposobie podejmowania decyzji etycznych. Badanie pociąga za sobą istotne implikacje praktyczne.

Słowa kluczowe: filozofia moralna, decyzje etyczne, oceny etyczne, Polska.

* Translated by the author

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

Elizabeth F. Cabrera

Center for Consciousness and Transformation, George Mason University
cabrerab@gmu.edu

Abstract

The current study uses the Job Demands-Resources model to study work-family conflict. Data was collected using an online survey of 662 women working in diverse industries. Results support the existence of a dual process whereby job demands affect work-family conflict and job resources, specifically job control and supervisor support, impact job satisfaction, affective commitment, and turnover intentions. Job resources were found to directly impact work-family conflict as well. Findings indicate that work-family conflict mediates the relationships between job demands and job satisfaction, affective commitment, and turnover intentions. In addition to its theoretical contribution, the study also provides practical guidance to organizations by showing that job control and supervisor support can be used to mitigate the negative effects of work-family conflict.

Key words: work-family conflict, job demands-resources model, job satisfaction, affective commitment, turnover

Introduction

Work-family conflict is an ever-increasing concern for organizations. Demographic trends, especially the increase in dual-career couples and single-parent households, have resulted in more and more employees struggling to meet the competing demands of work and family. Technology that makes it harder for employees to disconnect from work and reduced labor forces, as a result of the recession, have only increased the likelihood of work interfering with people's personal lives. Because work-family conflict is related to negative outcomes, such as lower job satisfaction, researchers have sought to identify the factors that influence work-family conflict so that organizations might find ways of reducing it.

Many studies have found that high job demands lead to work-family conflict. Research has also shown that job resources such as supervisor support and autonomy may help to reduce work-family conflict. The purpose of the present study is to increase our understanding of how job demands and resources relate to work-family conflict and employee outcomes. In order to do so, the Job Demands-Resources model is used to investigate work-family conflict, its antecedents, and its consequences. Both job demands and job resources, specifically job control and supervisor support, are examined in order to determine their relationship with work-family conflict and key employee outcomes.

Discussion and Hypotheses

Work-family conflict

The majority of work-family conflict models depict work-family conflict as a mediator variable, proposing that certain antecedent variables influence work-family conflict, which in turn is related to a variety of employee outcomes. A limited number of outcome variables, typically life and job satisfaction, have been studied in relation to work-family conflict (Carr, Boyar, & Gregory, 2008). Thus researchers have called for expanded models that include additional outcome variables (Greenhaus, Parasuraman, & Collins, 2001). Frone, Russell and Cooper (1992) predicted that turnover intentions would be related to work-family conflict. Allen, Herst, Bruck, and Sutton (2000), and Allen (2001) both found the predicted relationship. A number of studies have found a relationship between work-family conflict and organizational commitment as well (Allen, 2001; Carlson, Kacmar, & Williams, 2000; Carr et al., 2008).

A much greater number of antecedents of work-family conflict have been studied. A significant amount of consideration has been given to job demand variables, such as work role conflict or work time demands (Carr et al., 2008). More recently, interest has shifted to include resources that may help individuals meet job demands. Two resources that have received a reasonable amount of attention are job control and supervisor support.

In the area of job control, Moen and her colleagues studied the impact of control over work time and found that giving employees more choice over the timing and location of their work was related to lower levels of work-family conflict (Moen, Kelly, & Huang, 2008). Kossek and her colleagues showed that higher psychological job control was related to lower levels of work-family conflict (Kossek, Lautsch, & Eaton, 2006). In looking at supervisor support, Allen found that supervisor support was related to significantly lower levels of work-family conflict (Allen, 2001). Thomas and Ganster (1995) showed that supervisor support increased employees' perceptions of control, which in turn reduced work-family conflict. Thus, there is mounting evidence from research in work-family conflict that both job demands and resources are important factors that need to be considered going forward.

Job Demands-Resources Model

The Job Demands-Resources model (JD-R) considers the impact of job demands and job resources on employee outcomes (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). In this model, job demands include time pressure and emotional and physical demands associated with workload, while job resources include social support and autonomy or control. The model predicts the existence of two different underlying psychological processes, a strain process related to negative outcomes and a second motivational process impacting positive outcomes. Specifically, it hypothesizes that a greater amount of job demand leads to negative outcomes, like job strain or burnout, while the availability of job resources leads to positive outcomes such as employee engagement. Studies of the JD-R model have found support for a dual pathway of influence from job demands to burnout and from job resources to employee engagement (e.g., Bakker & Demerouti, 2007).

In line with the JD-R model and based on research that has shown work-family conflict to be a negative consequence of job demands, it is hypothesized here that increased job demands will lead to higher levels of work-family conflict:

Hypothesis 1: Job demand is positively related to work-family conflict.

The second psychological process proposed by the JD-R model is that job resources have positive consequences. Two specific job resources that studies have focused on are job control and supervisor support. Job control is the amount of freedom that employees have to decide how to do their work, while supervisor support refers to supportive behaviors by supervisors that help employees meet their family responsibilities. Research has shown positive relationships between these job resources and various employee outcomes.

In a study of the relationship between work-family policies and employee loyalty, Roehling, Roehling and Moen (2001) found that both flexible time policies, which give more control to employees, and support were related to higher levels of commitment. Another study found that women who have control over their work hours reported higher levels of organizational commitment and job satisfaction (Scandura & Lankau, 1997). One study also found that job control was related to lower turnover (Kossek et al., 2006). Burke, Burgess and Fallon (2006) showed that supportive organizational practices were significantly related to job satisfaction and intent to quit. And Allen (2001) found that supervisor support was related to higher levels of job satisfaction and affective commitment and lower levels of intent to turnover.

Thus, based on the JD-R model and research findings, the current study proposes that two job resources, job control and supervisor support, are related to three key employee outcomes: job satisfaction, affective commitment, and turnover intentions. The expected relationships are:

Hypothesis 2a: Job control is positively related to job satisfaction and affective commitment and negatively related to turnover intentions.

Hypothesis 2b: Supervisor support is positively related to job satisfaction and affective commitment and negatively related to turnover intentions.

Several studies have also found a relationship between job resources, or lack thereof, and burnout (Bakker, Demerouti, & Schaufeli 2003; Schaufeli & Bakker, 2004). In fact, given the amount of evidence for a link between job resources and negative outcomes, the latest studies using the JD-R model have tested and found support for an expanded model that includes not only the dual pathway, but also an additional path from job resources to negative outcomes (Crawford, LePine & Rich, 2010; Schaufeli & Bakker, 2004). Extending these findings to the study of work-family conflict, it is also expected that job resources will reduce work-family conflict:

Hypothesis 3a: Job control is negatively related to work-family conflict.

Hypothesis 3b: Supervisor support is negatively related to work-family conflict.

Finally, while the J-DR model does not predict a relationship between job demands and employee outcomes, one study did find that teachers burdened by the demands of students who misbehaved had lower levels of engagement (Bakker, Hakanen, Demerouti, & Xanthopolou, 2007) and another found a relationship between physical workplace demands and employee engagement (Bakker, van Emmerik, & Euwema, 2006).

Many researchers have found support for a model of work-family conflict (Frone et al., 1992) in which work-family conflict mediates the effect of work-related stressors on employee outcomes. For example, Adamset al. (1996) showed that job involvement negatively affected job satisfaction through its impact on work-family conflict. Higginset al. (1992) discovered that higher worker expectations and job involvement led to greater work-family conflict, which, in turn, reduced levels of quality of work life. Another study found that accountants with greater work overload reported more work-family conflict, and this conflict led to greater stress and intentions to

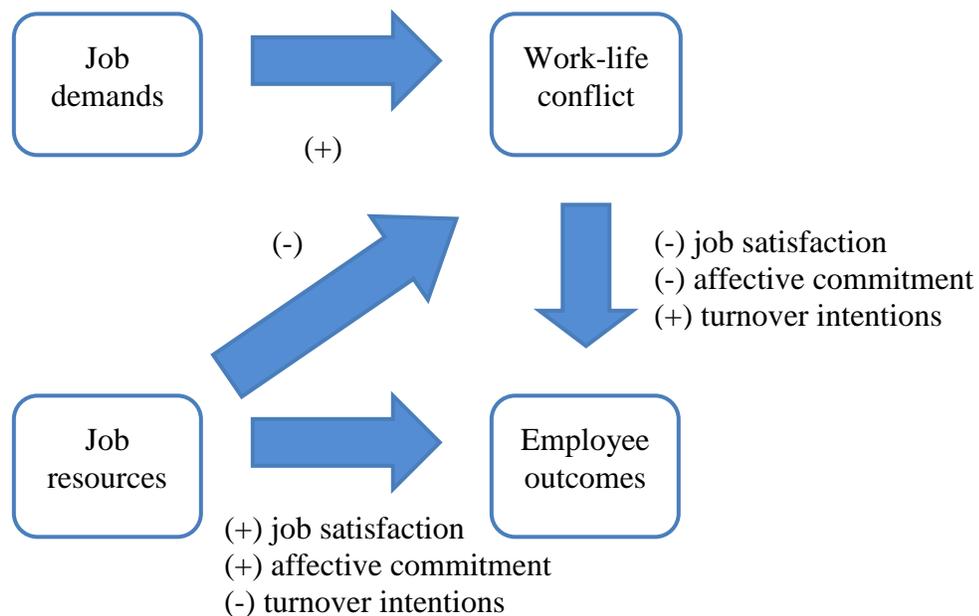
leave (Greenhauset al. 1997). Majoret al. (2002) showed that job demands led to higher work-family conflict, which resulted in greater psychological strain. Finally, a more recent meta-analysis of 178 studies (Ford, Heinen & Langkamer, 2007) concluded that work-family conflict mediates the relationship between work stressors and job satisfaction.

Thus, it is expected that work-family conflict will mediate the relationship between job demands and employee outcomes:

Hypothesis 4: Work-family conflict mediates the relationship between job demand and job satisfaction, affective commitment, and turnover intentions.

In summary, the current study investigates the existence of dual pathways as predicted by the JD-R model. It is expected that job demands will lead to higher levels of work-family conflict and that job resources, specifically job control and supervisor support, will lead to higher levels of job satisfaction and affective commitment and lower levels of turnover intentions. Job control and supervisor support are also expected to lead to lower levels of work-family conflict. Finally, a mediated model whereby job demands have an indirect effect on employee outcome variables through their impact on work-family conflict is examined. Figure 1 shows the predicted relationships among the study variables.

Figure 1. Hypothesized relationships



Legend: Figure 1 shows the hypothesized relationships among study variables

Procedures for Collecting Data

Participants

An online survey was sent to members of an internet staffing service for women interested in flexible job opportunities in 2009. A total of 1,114 women responded to the survey. After excluding the women who had not worked within the past year the final sample was 662.

Participants were asked to respond to all questions with regard to their current or most recent job.

Age ranged from 22 years to 65 years with the average age of respondents being 39 (SD = 7.79). Education level was bimodal with almost half of the women (45.5%) having an associate's or technical degree and another 31% having some graduate schooling. Sixteen percent of the respondents were working full-time, 21% were working part-time, and 62.7% were not currently working but had worked within the past year. Twenty-four percent of the women were hourly employees, 10.3% were first-level supervisors, half of them (50.2%) occupied middle management or professional jobs, and 13.7% were department heads or executives. The average number of hours worked each week was 43. Eighty-four percent of the respondents were married and 88.8% had children currently living with them.

Measures

Job demand. Psychological job demand was measured with the 6-item scale used by Moen et al. (2008). The items were rated on a 5-point response scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The alpha reliability coefficient was 0.85.

Job control. Job control was measured using Kossek et al.'s (2006) 7-item scale. Responses for the first 4 items ranged from 1 = *very little* to 5 = *very much*. Responses for the last 3 items ranged from 1 = *strongly disagree* to 5 = *strongly agree*. The alpha for this scale was 0.85.

Supervisor support. Allen, Shockley and Poteat's (2008) 8-item, 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*) was used to measure supervisor support. The alpha was 0.92.

Work-family conflict. Work-family conflict was measured using Carlson et al.'s (2000) 9-item subscale for assessing work interference with family. Items were rated on a 5-point response scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The alpha for the scale was 0.90.

Job satisfaction. Job satisfaction was measured using the 3-item, 5-point subscale (1 = *strongly disagree* to 5 = *strongly agree*) from the Michigan Organizational Assessment Questionnaire developed by Cammann, Fichman, Jenkins, and Klesh (1979). The alpha was 0.87.

Affective commitment. Commitment was measured using the short version of Meyer, Allen, and Smith's (1993) affective commitment scale. Items were rated on a 5-point response scale ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The alpha for this scale was 0.82.

Turnover intentions. A 3-item, 5-point scale (1 = *strongly disagree* to 5 = *strongly agree*) developed by Boroff and Lewin (1997) was used to measure turnover intentions. The alpha for this scale was 0.84.

Control variables. Age, marital status, number of children, job level, salary, organizational tenure, and hours worked were included as control variables in the regression equations because of their potential relationships with the dependent variables. Age was reported in years. Marital status was coded as a dummy variable (*not married* = 0 and *married or living with partner* = 1). Respondents were asked to report the number of children living in their home. Job level was measured using one item with four categories ranging from 1 = *hourly worker* to 4 = *department head or executive*. Salary was measured using a single item with six categories ranging from 1 = *under \$25,000* to 6 = *over \$150,000*. One item with six categories ranging from 1 = *less than 1 year*

to 6 = over 20 years was used to measure organizational tenure. For the last control variable respondents were asked to report how many hours they typically worked each week.

Results

Hypotheses 1 through 3b were tested by examining zero-order correlations among the variables. Means, standard deviations, and inter-correlations for all variables in this study are presented in Table 1. Job demand was positively related to work-family conflict ($r = .40, p < .001$). Job control was positively related to job satisfaction and affective commitment ($r = .46, p < .001$; $r = .43, p < .001$, respectively) and negatively related to turnover intentions ($r = -.36, p < .001$). Likewise, supervisor support was positively related to job satisfaction and affective commitment ($r = .55, p < .001$; $r = .41, p < .001$, respectively) and negatively related to turnover intentions ($r = -.43, p < .001$). Finally, job control and supervisor support were both negatively related to work-family conflict ($r = -.39, p < .001$; $r = -.45, p < .001$, respectively).

Table 1. Means, standard deviations, and inter-correlations for all variables

Variable	M	SD	1	2	3	4	5	6
Job demand	3.5	0.87						
Job control	3.0	0.95	-0.08					
Supervisor support	3.3	1.1	-0.20ϕ	0.44ϕ				
Work-family conflict	2.9	0.91	0.40ϕ	-0.39ϕ	-0.45ϕ			
Job satisfaction	3.3	1.1	-0.21ϕ	0.46ϕ	0.55ϕ	-0.50ϕ		
Affective commitment	2.7	1.1	-0.13*	0.43ϕ	0.41ϕ	-0.37ϕ	0.69ϕ	
Turnover intentions	3.4	1.2	0.20ϕ	-0.36ϕ	-0.43ϕ	0.40ϕ	-0.70ϕ	-0.66ϕ
Age	39.3	8.0	0.05	0.06	-0.10*	0.03	-0.01	0.04
Marital status	NA	NA	0.05	-0.06	-0.05	0.01	-0.04	0.04
Number of children	1.7	0.98	-0.01	0.09	0.12*	-0.04	0.11*	0.11*
Job level	NA	NA	0.19ϕ	0.25ϕ	0.02	0.03	0.10*	0.17ϕ
Salary	NA	NA	0.17ϕ	0.13*	0.03	0.01	0.04	0.05
Organizational tenure	NA	NA	0.14ϕ	0.07	0.02	0.05	0.05	0.18ϕ
Hours worked per week	42.7	11.0	0.42ϕ	-0.05	-0.12*	0.29ϕ	-0.11*	-0.03

Note: Ns range from 641 to 662, * $p < .01$, $\phi p < .001$ (bold)

Hypotheses 1, 2a, and 2b were further tested using ordinary least square regression. Table 2 summarizes the regression results. To test Hypothesis 1 work-family conflict was regressed on job demands, together with the control variables (job control and supervisor support were included as additional control variables). As predicted, there was a positive relationship between job demands and work-family conflict. Hypotheses 2a and 2b were tested by regressing job satisfaction, affective commitment, and turnover intentions on job control and supervisor support along with the control

variables. Again, as predicted, both job control and supervisor support were significantly related to higher levels of job satisfaction and affective commitment and were negatively related to turnover intentions. Thus full support was found for Hypotheses 1 through 3b.

Table 1 (continued). Means, standard deviations, and inter-correlations for all variables

Variable	7	8	9	10	11	12	13
Job demand							
Job control							
Supervisor support							
Work-family conflict							
Job satisfaction							
Affective commitment							
Turnover intentions							
Age	0.00						
Marital status	0.02	0.13*					
Number of children	-0.11*	-0.13*	-0.21ϕ				
Job level	-0.11*	0.13*	-0.08	0.05			
Salary	-0.07	0.16ϕ	-0.09*	-0.01	0.57ϕ		
Organizational tenure	-0.05	0.21ϕ	-0.04	0.04	0.20ϕ	0.25ϕ	
Hours worked per week	0.07	0.09*	0.05	-0.14ϕ	0.33ϕ	0.39ϕ	0.12*

Note. Ns range from 641 to 662, * $p < .01$, $\phi p < .001$

Hypothesis 4 was tested with hierarchical multiple regression. Results are shown in Table 3. James and Brett's (1984) steps for determining if mediation effects exist were followed. First, partial correlations controlling for the effects of the control variables were computed. These results showed that the first two criteria were met. That is, the independent variable, job demand, was significantly correlated with the mediator variable, work-family conflict, and the mediator variable was significantly related to all three dependent variables: job satisfaction, affective commitment, and turnover intentions. To determine whether the third and final criterion for mediation was met, the control variables were entered into a regression equation and, in a second step, job demand was entered into the equation. Finally, work-family conflict, the proposed mediator variable, was added to the equation. The same procedure was followed for each of the dependent variables.

Results from the mediation analyses support Hypothesis 4. When job demand was entered in step 2, it had a significant relationship with job satisfaction ($b = -.11, p < .01$). After entering work-family conflict, the beta weight associated with job demand became non-significant. Likewise, when affective commitment was the dependent variable and job demand was entered in step 2 their relationship was significant ($b = -.11, p < .01$). Yet the relationship was no longer significant after work-family conflict was entered. Lastly, the relationship between job demand and turnover

intentions was significant ($b = .13, p < .01$) until work-family conflict was added to the equation. Then the beta weight associated with job demand, which had been significant at .13, dropped to .07, which was non-significant.

Table 2. Regression results

Variable	Work-family conflict	Job satisfaction	Affective commitment	Turnover intentions
Age	0.00	0.01	0.02	-0.01
Marital status	-0.03	0.02	0.10	-0.05
Number of children	0.06	0.03	0.06	-0.07
Job level	0.04	0.08	0.13**	-0.07
Salary	-0.12**	-0.03	-0.07	-0.04
Organizational tenure	0.02	0.05	0.20 ϕ	-0.07
Hours worked per week	0.18ϕ	-0.03	-0.02	0.04
Job demand	0.27ϕ	-0.11**	-0.11**	0.13**
Job control	-0.21 ϕ	0.23ϕ	0.23ϕ	-0.17ϕ
Supervisor support	-0.29ϕ	0.44ϕ	0.30ϕ	-0.33ϕ
R^2	0.37	0.38	0.31	0.25
F value	33.1ϕ	35.0ϕ	26.2ϕ	19.4ϕ

Values represent standardized regression coefficients, * $p < .05$, ** $p < .01$, $\phi p < .001$

Legend: Table 2 shows the regression results for work-family conflict, job satisfaction, affective commitment, and turnover intentions.

The results of all three of the regression equations support the hypothesis that work-family conflict mediates the relationship between job demand and job satisfaction, affective commitment, and turnover intentions. When work family conflict is entered into the equation the previously significant relationship between job demand and the three outcome variables disappears because job demand only indirectly affects the outcome variables through its impact on work-family conflict.

Conclusions

The results of the current study have both theoretical and practical implications. Theoretically, the findings provide support for dual pathways as proposed by the JD-R model. The hypothesis predicting a positive relationship between job demands and work-family conflict was supported, as was the prediction of a positive relationship between job resources and job satisfaction and affective commitment and a negative relationship between job resources and turnover intentions. In line with more recent studies of the JD-R model, a direct negative relationship was also found between job resources and work-family conflict. And job demands were shown to indirectly relate to employee outcomes through their impact on work-family conflict (See Figure 1).

Table 3. Mediation results

Variable	Job satisfaction			Affective commitment		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Age	0.02	0.02	0.02	0.03	0.03	0.03
Marital status	0.02	0.03	0.02	0.10**	0.11**	0.10
Number of children	0.02	0.02	0.04	0.04	0.05	0.06
Job level	0.06	0.07	0.08	0.13**	0.13**	0.14**
Salary	-0.02	-0.02	-0.05	-0.06	-0.07	-0.09
Organizational tenure	0.04	0.05	0.06	0.19ϕ	0.20ϕ	0.20ϕ
Hours worked per week	-0.08*	-0.04	0.01	-0.08*	-0.03	-0.01
Job control	0.23ϕ	0.23ϕ	0.18ϕ	0.22ϕ	0.22ϕ	0.19ϕ
Supervisor support	0.45ϕ	0.43ϕ	0.35ϕ	0.32ϕ	0.30ϕ	0.25ϕ
Job demand		-0.11**	-0.04		-0.11**	-0.07
Work-family conflict			-0.27ϕ			-0.16ϕ
R ² at each step	0.37	0.38	0.42	0.30	0.31	0.33
R ²		0.01**	0.04ϕ		0.01**	0.02ϕ
Final F value			36.7ϕ			24.4ϕ

Values represent standardized regression coefficients, * $p < .05$, ** $p < .01$, $\phi p < .001$

Legend: Table 3 shows the results of hierarchical regression testing for mediation.

In addition to demonstrating the usefulness of the JD-R model for studying work-family conflict, the current study also answers the call for work-family conflict research to examine a broader set of outcome variables. Results showed that work-family conflict negatively affects not only job satisfaction, but also affective commitment, and it increases turnover intentions as well.

There are several limitations associated with the current study. First, the sample was limited to women. Thus, additional research including male populations is needed in order to determine the generalizability of results across genders. On the other hand, one of the study's strengths is that the sample is quite diverse as far as age, education level, job level, and occupation are concerned. A second limitation is that the study design was cross-sectional, so conclusions regarding causality cannot be made. Third, all of the data included in the study was self-reported data, making common method variance a possible concern. Also, given that data were collected using an online survey, it was not possible to control respondents. The volunteer sample is thus an additional limitation for external validity.

Table 3 (continued). Mediation results

Variable	Turnover intentions		
	Step 1	Step 2	Step 3
Age	-0.02	-0.01	-0.02
Marital status	-0.03	-0.04	-0.04
Number of children	-0.05	-0.06	-0.07
Job level	-0.06	-0.07	-0.08
Salary	-0.06	-0.05	-0.02
Organizational tenure	-0.06	-0.07	-0.07
Hours worked per week	0.10*	0.05	0.00
Job control	-0.17ϕ	-0.17ϕ	-0.12**
Supervisor support	-0.34ϕ	-0.32ϕ	-0.26ϕ
Job demand		0.13**	0.07
Work-family conflict			0.23ϕ
R ² at each step	0.24	0.25	0.28
R ²		0.01**	0.03ϕ
Final F value			19.9ϕ

Values represent standardized regression coefficients, * $p < .05$, ** $p < .01$, $\phi p < .001$

Legend: Table 3 shows the results of hierarchical regression testing for mediation.

Finally, over half of the women were not working at the time of the study, so they had to rely on their memory when responding to the questions. The participants who were not currently working were limited to those who had worked within the last year so that it was more likely that they would accurately recall the requested information. A comparison between respondents who were currently working and those who were not working showed no significant differences in education, number of children, job level, tenure, or salary. Women not currently working were older than the women who were working, 41-years-old versus 38-years-old. With regard to the study variables there was no significant difference in reported job demand, job control, work-family conflict, job satisfaction, or affective commitment between working and non-working women. Not surprisingly, the women who were not currently working reported higher levels of intention to quit and lower levels of supervisor support. So overall there were very few differences between women who were currently working and those who had worked within the past year.

In conclusion, the present study contributes to our knowledge of the relationships among the antecedents and consequences of work-family conflict. Specifically, job demands lead to greater work-family conflict, which negatively affects employee outcomes. Job resources, on the other hand, directly improve job satisfaction, affective commitment, and turnover intentions and indirectly impact these employee outcomes by reducing work-family conflict. According to the current findings, job control and supervisor support are key resources that organizations can employ in order to minimize the negative consequences of work-family conflict.

International and managerial implications

The results of this study provide important insights for business leaders. First is the need to be aware that increasing job demands can negatively impact key employee outcomes including job satisfaction, affective commitment and turnover intentions due to the fact that greater job demands increase work-family conflict. Unfortunately, however, there are times when managers may have no choice but to increase the workload of their employees. This happened in many organizations during the recent recession because companies were forced to reduce their workforce, which often resulted in fewer employees having to perform the same amount of work. The good news for managers is that the negative impact of, at times unavoidable, increases in job demands can be minimized by giving employees more job control and by providing supervisor support. Employees can handle increased job demands much better if they have the autonomy to decide when, where and how to perform their jobs. Having more control over their work lets them organize things in a way that reduces potential work-family conflict. Employees with supervisors who understand and help to accommodate family responsibilities also experience less work-family conflict and fewer of the negative outcomes it causes. So autonomy and supervisor support are powerful tools that managers can use to increase satisfaction and loyalty among their employees.

While the current study was conducted in the United States, research shows that work-family conflict is a problem facing employees around the world. A study of nurses from eight European countries found that job demands led to work-family conflict in all countries and that work-family conflict increased intention to leave the nursing profession in all but one of the countries (Simon, Kümmerling & Hasselhorn, 2004). A study in Taiwan showed that supervisor support moderated the impact of work-family conflict on job satisfaction (Hsu, 2011). Finally, a recent meta-analysis of 219 studies conducted outside of the United States found work demands and resources to be the biggest predictors of work-family conflict, and reduced satisfaction and commitment to be consequences of work-family conflict (Shaffer, Joplin & Hsu, 2011). Thus, managers everywhere should be concerned with the negative impact of work-family conflict on employee outcomes.

Managers of international companies should be especially concerned with work-family conflict, given that the job demands for employees working in these companies are often very high. Managing cultural differences, traveling and working across time zones are just a few of the additional job demands faced by employees who work in international businesses. The results of the current study suggest that managers of international organizations could help to minimize the negative consequences of the demands of international business by offering support and giving their employees greater control over their work.

References

- Adams, G., King, L., and King, D., (1996), "Relationships of job and family involvement, family social support, and work-family conflict with job and life satisfaction", *Journal of Applied Psychology*, Vol. 81, pp: 411-420.
- Allen, T., (2001), "Family-supportive work environments: The role of organizational perceptions", *Journal of Vocational Behavior*, Vol. 58, pp: 414-435.
- Allen, T., Herst, D., Bruck, C., and Sutton, M., (2000), "Consequences associated with work-to-family conflict: A review and agenda for future research", *Journal of Occupational Health Psychology*, Vol. 5, pp: 278-308.

- Allen, T., Shockley, K., and Poterat, L., (2008), "Workplace factors associated with family dinner behaviors", *Journal of Vocational Behavior*, Vol. 73, pp: 336-342.
- Bakker, A., and Demerouti, E., (2007), "The Job Demands-Resources model: State of the art", *Journal of Managerial Psychology*, Vol. 22, pp: 309-328.
- Bakker, A., Demerouti, E., and Schaufeli, W., (2003), "Dual processes at work in a call centre: An application of the job demands-resources model", *European Journal of Work & Organizational Psychology*, Vol. 12, pp: 393-417.
- Bakker, A., Hakanen, J., Demerouti, E., and Xanthopolou, D., (2007), "Job resources boost work engagement, particularly when job demands are high", *Journal of Educational Psychology*, Vol. 99, pp: 274-284.
- Bakker, A., van Emmerik, H., and Euwema, M., (2006), "Crossover of burnout and engagement in work teams", *Work & Occupations*, Vol. 33, pp: 464-489.
- Boroff, K. and Lewin, D., (1997), "Loyalty, voice, and intent to exit a union firm: A conceptual and empirical analysis", *Industrial and Labor Relations Review*, Vol. 51, pp: 50-63.
- Burke, R., Burgess, Z., and Fallon, B., (2006), "Organizational practices supporting women and their satisfaction and well-being," *Women in Management Review*, Vol. 21, pp: 416-425.
- Cammann, C., Fichman, M., Jenkins, D., and Klesh, J., (1979), *The Michigan Organizational Assessment Questionnaire*. Ann Arbor, Michigan: University of Michigan.
- Carlson, D., Kacmar, K., and Williams, L., (2000), "Construction and initial validation of a multidimensional measure of work-family conflict", *Journal of Vocational Behavior*, Vol. 56, pp: 249-276.
- Carr, J., Boyar, S., Gregory, B., (2008), "The moderating effect of work-family centrality on work-family conflict, organizational attitudes, and turnover behavior", *Journal of Management*, Vol. 34, pp: 244-262.
- Crawford, E., LePine, J., and Rich, B., (2010), "Linking job demand and resources to employee engagement and burnout: A theoretical extension and meta-analytic test", *Journal of Applied Psychology*, Vol. 95, pp: 834-848.
- Demerouti, E., Bakker, A., Nachreiner, F., and Schaufeli, W., (2001), "The job demands-resources model of burnout", *Journal of Applied Psychology*, Vol. 86, pp: 499-512.
- Ford, M., Heinen, B., and Langkamer, K., (2007), "Work and family satisfaction and conflict: A meta-analysis of cross-domain relations", *Journal of Applied Psychology*, Vol. 92, pp: 57-80.
- Frone, M., Russell, M., and Cooper, M., (1992), "Antecedents and outcomes of work-family conflict: Testing a model of the work-family interface", *Journal of Applied Psychology*, Vol. 77, pp: 65-78.
- Greenhaus, J., Collins, K., Singh, R., and Parasuraman, S., (1997), "Work and family influences on departure from public accounting", *Journal of Vocational Behavior*, Vol. 50, pp: 249-270.
- Greenhaus, J., Parasuraman, S., and Collins, K., (2001), "Career involvement and family involvement as moderators of relationships between work-family conflict and withdrawal from a profession", *Journal of Occupational Health* pp: Higgins, C., Duxbury, L., and Irving, R., (1992), "Work-family conflict in the dual-career family", *Organizational Behavior and Human Decision Processes*, Vol. 51, pp: 51-75.
- Hsu, Y., (2011), "Work-family conflict and job satisfaction in stressful working environments", *International Journal of Manpower*, Vol. 32, pp: 233-248.

- James, L., and Brett, J., (1984), "Mediators, moderators, and tests for mediation", *Journal of Applied Psychology*, Vol. 69, pp: 307-321.
- Kossek, E., Lautsch, B., and Eaton, S., (2006), "Telecommuting, control, and boundary management: Correlates of policy use and practice, job control, and work-family effectiveness", *Journal of Vocational Behavior*, Vol. 68, pp: 347-367.
- Major, V., Klein, K., and Ehrhart, M., (2002), "Work time, work interference with family, and psychological distress", *Journal of Applied Psychology*, Vol. 87, pp: 427-436.
- Meyer, J., Allen, N., and Smith, C., (1993), "Commitment to organizations and occupations: Extension and test of a three-component conceptualization." *Journal of Applied Psychology*, Vol. 78, pp: 538-551.
- Moen, P., Kelly, E., and Huang, Q., (2008), "Work, family, and life-course fit: Does control over work time matter?", *Journal of Vocational Behavior*, Vol. 73, pp: 414-425.
- Roehling, P., Roehling, M., and Moen, P., (2001), "The relationship between work-family policies and practices and employee loyalty: A life course perspective.", *Journal of Family and Economic Issues*, Vol. 22, pp: 141-170.
- Scandura, T., and Lankau, M., (1997), "Relationships of gender, family responsibility and flexible work hours to organizational commitment and job satisfaction", *Journal of Organizational Behavior*, Vol. 18, pp: 377-391.
- Schaufeli, W., and Bakker, A., (2004), "Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study", *Journal of Organizational Behavior*, Vol. 25, pp: 293-315.
- Shaffer, M., Joplin, J., and Hsu, Y., (2011), "Expanding the boundaries of work-family research: A review and agenda for future research", *International Journal of Cross Cultural Management*, Vol. 11, pp: 221-268.
- Simon, M., Kümmerling, A., and Hasselhorn, H., (2004), "Work-home conflict in the European nursing profession", *International Journal of Occupational and Environmental Health*, Vol. 10, pp: pp: 384-391.
- Thomas, L., and Ganster, D., (1995), "Impact of family-supportive work variables on work-family conflict and strain: A control perspective", *Journal of Applied Psychology*, Vol. 80, pp: 6-15.

English Abstract

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

Elizabeth F. Cabrera

Center for Consciousness and Transformation
George Mason University
cabrerab@gmu.edu

Abstract

The current study uses the Job Demands-Resources model to study work-family conflict. Data was collected using an online survey of 662 women working in diverse industries. Results support the existence of a dual process whereby job demands affect work-family conflict and job resources, specifically job control and supervisor support, impact job satisfaction, affective commitment, and turnover intentions. Job resources were found to directly impact work-family conflict as well. Findings indicate that work-family conflict mediates the relationships between job demands and job satisfaction, affective commitment, and turnover intentions. In addition to its theoretical contribution, the study also provides practical guidance to organizations by showing that job control and supervisor support can be used to mitigate the negative effects of work-family conflict.

Keywords: work-family conflict, job demands-resources model, job satisfaction, affective commitment, turnover

French Abstract*

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

Utilisation du modèle exigences-ressources de l'emploi pour étudier le conflit travail-famille chez les femmes

Elizabeth F. Cabrera

Center for Consciousness and Transformation
George Mason University
cabrerab@gmu.edu

Résumé

La présente étude utilise le modèle "exigences-ressources de l'emploi" pour étudier le conflit travail-famille. Des données ont été recueillies au moyen d'une enquête en ligne auprès de 662 femmes, qui travaillent dans diverses industries. Les résultats confirment l'existence d'un processus dual par lequel les exigences d'un emploi influent sur le conflit travail-famille et sur les ressources d'emploi. Plus précisément, le contrôle sur l'emploi et le soutien de l'encadrement influent sur la satisfaction de l'emploi, l'engagement affectif et les intentions de quitter l'entreprise. Aussi, les ressources d'emploi influent directement sur le conflit travail-famille. Les résultats indiquent que le conflit travail-famille a un effet de médiation entre les exigences d'un emploi et la satisfaction au travail, l'engagement affectif et les intentions quitter l'entreprise. En plus de cette contribution théorique, l'étude fournit également des conseils pratiques aux organisations en montrant que le contrôle de l'emploi et le soutien de l'encadrement peuvent atténuer les effets négatifs du conflit travail-famille.

Mots clés: conflit travail-famille, le modèle exigences-ressources de l'emploi, la satisfaction au travail, l'engagement affectif, l'intention de quitter l'entreprise

* Translated by: Johannes Schaaper, Senior professor in International Management, BEM Bordeaux Management School

German Abstract*

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

Das Job Demands-Resources-Modell in der Studie des Beruf-Familien-Konfliktes bei Frauen

Elizabeth F. Cabrera

Center for Consciousness and Transformation
George Mason University
[cabrerab@gmu.edu](mailto:cabrera@gmu.edu)

Zusammenfassung

Die vorliegende Studie nutzt das Job Demand-Resources-Modell um den Beruf-Familien-Konflikt zu untersuchen. Es wurden Daten über eine Online Umfrage von 662 Frauen, die in verschiedenen Industrien beschäftigt sind, erhoben. Die Ergebnisse unterstützen die Existenz eines dualen Prozesses, indem Arbeitsanforderungen den Beruf-Familien-Konflikt und die Job Ressourcen beeinflussen. Im Speziellen sind das die Job Kontrolle und die Unterstützung des Vorgesetzten, der Einfluss der Arbeitszufriedenheit, der affektive Einsatz und die Umsatz Absichten. Es wurde festgestellt, dass Job Ressourcen den Beruf-Familien-Konflikt ebenfalls beeinflussen. Die Ergebnisse zeigen, dass der Beruf-Familien-Konflikt die Beziehung zwischen Arbeitsanforderungen und Arbeitszufriedenheit, affektivem Einsatz und Umsatz Intentionen vermitteln. Die Studie liefert neben einem theoretischen Beitrag auch eine praktische Anleitung für Organisationen, indem sie aufzeigt dass Job Kontrolle und die Unterstützung durch den Vorgesetzten genutzt werden können um den negativen Effekten des Arbeits-Familien-Konfliktes entgegenzuwirken.

Stichwörter: Beruf-Familien-Konflikt, Job Demands-Resources-Modell, Arbeitszufriedenheit, Affektiver Einsatz, Umsatz

* Translated by: Prof. Dr. Marc Eulerich, University Duisburg-Essen, marc.eulerich@uni-due.de

Spanish Abstract*

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

Usando el Modelo de Empleo Demandas-Recursos para Estudiar los Conflictos Trabajo-Familia en las Mujeres

Elizabeth F. Cabrera

Center for Consciousness and Transformation
George Mason University
cabrerab@gmu.edu

Resumen

El presente estudio utiliza el modelo de empleo Demandas-Recursos para estudiar el conflicto trabajo-familia. Los datos fueron recolectados a través de una encuesta on-line de 662 mujeres que trabajan en diversas industrias. Los resultados apoyan la existencia de un doble proceso mediante el cual las demandas del trabajo afectan al conflicto trabajo-familia y a los recursos de empleo. En concreto, el control en el trabajo y el apoyo del supervisor impactan en la satisfacción laboral, en el compromiso afectivo y en las intenciones de rotación. Igualmente, se encontró que los recursos del trabajo impactan directamente en el conflicto trabajo-familia. Los resultados indican que la díada trabajo-familia media en las relaciones entre las demandas del trabajo y la satisfacción laboral, el compromiso afectivo y las intenciones de rotación. Además de su contribución teórica, el estudio también proporciona una guía práctica para las organizaciones, demostrando que el control sobre el trabajo y el apoyo del supervisor puede ser utilizado para mitigar los efectos negativos del conflicto trabajo-familia.

Palabras clave: conflicto trabajo-familia, modelo de empleo demandas-recursos, satisfacción laboral, compromiso afectivo, rotación

*Translated by: Francis Blasco. Universidad Complutense de Madrid. fblasco@emp.ucm.es

Arabic Abstract*

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

استخدام نموذج متطلبات العمل – الموارد العمل عند النساء-لدراسة صراع الأسرة

Elizabeth F. Cabrera

Center for Consciousness and Transformation
George Mason University
[cabrerab@gmu.edu](mailto:cabrera@gmuedu)

ملخص

تستخدم هذه الدراسة نموذج متطلبات العمل، الموارد لدراسة نزاع أولويات العائلية، العمل حيث تم استخدام استبيان الكروني لجمع معلومات من ستمائة و أثنان و ستون امرأة تعمل في صناعات مختلفة حيث أظهرت النتائج وجود عملية مزدوجة تتأثر من خلالها العائلة و موارد العمل و العمل تبعا لمتطلبات العمل. بشكل خاص السيطرة على العمل و دعم المشرفين و الرضى الوظيفي و الالتزام المؤثر و نوايا ترك العمل، موارد العمل تؤثر بشكل مباشر على الصراع / النزاع ما بين أولويات العائلية حيث أظهرت النتائج أن تزامن أولويات العمل و العائلة تتوسط العلاقة بين متطلبات العمل و الرضا الوظيفي و الالتزام المؤثر و نوايا ترك العمل. بالإضافة هنالك اسهام نظري لهذه الورقة حيث توفر العلاقة نصائح عملية للمنظمات لاستخدام السيطرة على العمل و دعم المشرفين لتخفيف الاثار السلبية للنزاع بين أولويات العمل و العائلة.

الكلمات الدالة: النزاع بين اولويات العمل و العائلة، نموذج متطلبات العمل و موارد العمل، الرضا الوظيفي، الالتزام المؤثر، معدل دوران العمل.

* Translated by: Zu'bi M.F.Al-Zu'bi, Ph.D, FHEA, University of Jordan, z.alzubi@ju.edu.jo

Italian Abstract*

Using the Job Demands-Resources Model to Study Work-Family Conflict in Women

Utilizzo il modello dei carichi lavorativi e risorse per studiare il conflitto lavoro-famiglia delle donne

Elizabeth F. Cabrera

Center for Consciousness and Transformation
George Mason University
cabrerab@gmu.edu

Abstract

Questo studio utilizza il modello carichi di lavoro-risorse per analizzare il conflitto lavoro-famiglia. I dati sono stati raccolti utilizzando un sondaggio on-line di 662 donne che lavorano in vari settori. I risultati danno valore alla presenza di un processo di doppia natura in cui i carichi di lavoro hanno un impatto sul conflitto lavoro-famiglia e le risorse lavorative; in modo più specifico: percezione di controllo sul proprio lavoro e supporto del supervisore, attaccamento al lavoro e intenzione di cambiare lavoro. Pure le risorse lavorative sono state identificate dalle studio come aventi un impatto diretto sul conflitto lavoro famiglia. In aggiunta ai contributi teorici, lo studio fornisce anche una guida pratica alle aziende mostrando che il controllo percepito sul lavoro e il supporto del supervisore possono essere utilizzati per mitigare il conflitto lavoro famiglia.

Keywords: conflitto lavoro famiglia, modello carichi di lavoro - risorse, soddisfazione lavorativa, attaccamento al lavoro, cambio di lavoro

* Translated by: Riccardo Paterni, Synergy Pathways, riccardo@synergypathways.net

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