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*Corresponding author: Hamed Taherdoost, Research & Development Department, Ahoora Ltd (Management Consultation Group), Kuala Lumpur, Malaysia
E-mail: hamed.taherdoost@gmail.com

Reviewing editor:
Shaofeng Liu, University of Plymouth, UK

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A retrospective critic Re-Debate on Stakeholders' resistance checklist in software project management within multi-cultural, multi-ethnic and cosmopolitan society context: The Malaysian experience

Hamed Taherdoost^{1*}, Abolfazl Keshavarzsaleh² and Chen Wang³

Abstract: Risks stemming from software projects were extensively studied. However, software project risk management has rarely researched organizational risks within multi-cultural and multi-ethnic atmospheres. The fact of the matter is that problems occur when the stakeholders' cultural and ethnic aspects are not addressed, especially in multi-cultural, multi-ethnic, and cosmopolitan society such as Malaysia. To avoid analyzing something that has already been studied in detail, this study conducted based on in-depth literature review considering key word search in subject-specific databases. Journal articles published in reputed journals were reviewed. By employing Rumelt's resistance to change checklist and culture gap tool source, this paper develops an organizational risk framework considering cross-cultural and cross-ethnic critical factors in order to show how can risks be

ABOUT THE AUTHORS

Hamed Taherdoost is a PhD holder of Management of Information System. His research interests include Information Security, Management of Information System, IT User Acceptance, Project Management, Performance Management, and Web Services supported by his vast publications. Currently, he is the chairman of Ahoora Ltd that is the management consultation group and the director of Asanware Sdn Bhd which is the research and development group.

Abolfazl Keshavarzsaleh is a student in business administration in the faculty of business and law, International University of Malaya and Wales. His research interests are project management, swarm intelligence, entrepreneurship, and IT project management.

Chen Wang is Associate Professor of Construction Innovation, Surveying, and Engineering Management in University of Malaya. His research interests include mathematics modeling for civil engineering, swarm intelligence, ant colony optimization, vertical greenery systems, sustainability in construction management, and international BOT projects, supported by his vast publications.

PUBLIC INTEREST STATEMENT

Stakeholders are of central importance in various project management spheres, particularly in volatile and competitive projects such as software projects. Stakeholders' resistance to change management has become very important factors in project management, particularly within multi-cultural, multi-ethnic, and cosmopolitan society atmosphere such as Malaysia. Stakeholders' checklist is serving dual purposes: it is employed to manage stakeholders' resistance to change and consequently employed to increase odds of success in project management. Generally speaking, success here means resolution of any conflicts generated from leadership and cultural barriers. Cultural diversity frequently causes misunderstanding and misinterpretation in international project execution. Therefore, comprehending bio-polar culture dimensions, stakeholders' resistance indicators, and appropriate leadership styles lead to success in terms of on time, on-budget, and preplanned scope project delivery. This study develops an organizational risk framework considering cross-cultural and cross-ethnic critical factors in order to show how can risks be better comprehended and managed.

better comprehended and managed. The significance of bio-cultural dimensions was scrutinized as vital criteria which should be considered in international project sphere, so that, not only the odds of project success would be increased but also the risks can be mitigated significantly. A review of the risk management process, Rumelt's Checklist, cultural issues in international project environment allows a better understanding of the importance of cultural dimensions in project spheres.

Subject: Management of IT

Keywords: classification frameworks; cross-cultural management; process model; software project management; bio-polar cultural dimensions

1. Introduction

Since globalization has provoked serious debates about international project spheres within global village, strategic alliances beyond the world borders led to the attention to national culture per se (Barlett & Ghoshal, 1998). Therefore, lots of researchers in project management spheres highlighted the fact that adopting project management approach requires not only the usage of the project management tools and techniques but also cultural values for project success (Andersen, 2003; Kendra & TapUn, 2004; Vaupel & Schmoike, 2000).

1.1. Unique projects and unique challenges; insight from software project management

Projects, particularly, Information Technology projects regularly fail due to their dynamic, complex, and volatile nature of the projects. As it is published by Standish group over 50,000 IT projects between 1992 and 2004, only 29 percent could be categorized as successful projects in all (Johnson, 2006). The root cause of failures in overwhelming majority of projects are tied with failure; to meet preplanned schedule within approved scope; to meet cost performance targets of the project; to provide well-coordinated and well-sequenced expected project scope (Taherdoost & Keshavarzsaleh, 2015b). To illustrate, these three dismal failures are interrelated to correspondence, procedural, interaction, and expectation failures (Lyytinen & Hirschheim, 1987). From macro IT projects to micro software projects vantage point, software projects are perceived as high-risk projects instinctively due to their competitive market and dynamic natures (Taherdoost & Keshavarzsaleh, 2015a). The software projects are intended to be high-risk activities because of two main reasons; the rapid pace of technological changes and the organizational changes (Aloini, Dulmin, & Mininno, 2012; Altuwaijri & Khorshed, 2011; Bannerman, 2008; Cule, Schmidt, Lyytinen, & Keil, 2000; Hong & Kim, 2002; Kwahk & Kim, 2007; Li, Yang, & Chen, 2011), thereby, paying attention to risk management is essential for project success (Baccarini, Salm, & Love, 2004; Low & Leong, 2000; Pan & Zbang, 2004; Tiwana & Keil, 2004; Wallace & Keil, 2004; Wang & Liu, 2007). Recently, much has become interested in software projects and why software projects are at failing risk (de Bakker, Boonstra, & Wortmann, 2010). Accordingly, two main efforts have been conducted so far; (1) several risk factors have been identified (Bannerman, 2008); (2) process models based on widespread theories and practices are classified (Aloini et al., 2012; Bannerman, 2008). However, software project risk management seems to be on the infant stage and are still not managed effectively (Aloini, Dulmin, & Mininno, 2007; de Bakker et al., 2010; Bannerman, 2008; Gerald, Kutsch, & Turner, 2011; Kappelman, McKeeman, & Zhang, 2006; Kutsch & Hall, 2005; Osipova & Eriksson, 2013). Because the successful application of resistance checklist requires a holistic and integrative perspective, in this paper, we adopted Rumelt's checklist which has also been empirically tested (Pardo del Val & Martinez Fuentes, 2003; Rumelt, 1995). In this paper, we argue that the various components of Rumelt's checklist would significantly influence the general interactions between stakeholders and project managers. The objective of this article is to draw on a wide range of project management literature to develop a framework that guides potential stakeholders and software project managers through application of Rumelt's checklist, considering cross-cultural and multi-ethnic factors within culturally diverse societies such as Malaysia. In order to increase the odds of success, we highlighted the significance of Culture gap tool Source as a guideline in which all bio-polar cultural dimensions (Elena, 2010) were clarified.

To that end, we seek to integrate what the literature suggests we know about the significance of crossvergence and hybridization concept on multi-cultural management (Elena, 2010). The advantages of this approach are that we are able to walk through the Rumelt's checklist as well as bio-polar cultural dimensions guideline and use existing research to outline the stakeholders' resistance sources associated with software project management, to identify the significant roles of cross-cultural and ethnical indicators in stakeholders' resistance management within Malaysia's context, to develop success-focused practical recommendations and implications of resistance checklist in software project management, and to discuss the benefits of engaging resistance checklists considering bio-polar cultural dimensions. Central to re-debate on this matter is a question of how cultural and ethnical diversity in Malaysia affect Rumelt's checklist, from stakeholders' resistance checklist vantage point within software project management sphere? The results deduced from answering this question are pertinent to software project managers for the purpose of improving and strengthening their practices and decisions in this area.

1.2. A pilot investigation and case selection

Malaysia is a country in Southeast Asia, approximately 30 million inhabitants live in Malaysia, including Malays, Indians, and a number of indigenous tribes. In addition, more than approximately 700000 people from foreign countries work in the country. These cultural diversity lead to various cross-cultural and multi-ethnical interactions. Moreover, these interactions from project management vantage point lead to creation of new concepts of managing projects considering multi-cultural and multi-ethnical indicators among all teams, and stakeholders. Recently, Malaysian discovered project management as an important success factor. In the past, mostly foreign professionals undertook the responsibility for project management and provided services as general contractors for the coordination of project task. In 2013, the Malaysian Association of Project Management (MAPM) was founded to support the development of necessary competence and operational excellence. Accordingly, MAPM joined IPMA (International Project Management Association) to get support, network with other associations in the region and create a project management mechanism that fits the country-specific situation; moreover, this merged cooperation conducted activities toward considering culture and ethnic as two main indicators among all participants, especially stakeholder (Wagner, 2013). However, there is a lack of research in the case of how equipping project managers with a tacit knowledge of cultural and ethnical matters can prevent any challenges among stakeholders as well as increasing the projects' performance targets. Various case studies have been conducted in Malaysia considering cultural and ethnical diversity within different industries but none of them put spotlight on the significance of bio-polar cultural and ethnical indicators within volatile projects such as software projects considering the Rumelt's checklist influence on stakeholders and project managers interactions. For example, the case of multi-national corporations in Malaysia indicates that a direct influence of expatriates' cultural intelligence have positive effects on both expatriates' task and contextual performance (Malek & Budhwar, 2013). Moreover, a case study in safety project within Malaysia's context uncovers the fact that the establishment of cooperative safety management in Malaysia is intriguing and noteworthy due to its uniqueness in term of its multi-ethnical culture and thought, political status quo, administration constraints and readiness of industry to partake (Ramli, Mokhtar, & Aziz, 2014). Furthermore, within construction sector, risk identification considering stakeholders and project managers interactions are revealed as key factors of construction project success in Malaysia (Abdullah & Rahman, 2012). Within software development industries in Malaysia, among the key problems of information systems, requirements process (Requirement is an important factor for the development of any project which relies on communication and mutual cultural awareness of counterparties and it defines what different stakeholders need and how system will fulfill these needs) is the gap between analysts and stakeholders (Rahman, Haron, Sahibuddin, & Harun, 2014). The stakeholder management approach assists to integrate managerial concerns, such as strategic management, marketing and human resource management, and organizational management as well as social responsibility. Thus, this enables project managers to identify important issues, raised from miss-communication, and lack of mutual cultural and ethical awareness (Henrie & Sousa-Poza, 2005; Kendra & TapUn, 2004; Shore & Cross, 2005; Vaupel & Schmoike, 2000); to develop proactive strategies (Andersen, 2003; Chen & Partington,

2004; Downes, Hemmasi, Graf, Kelley, & Huff, 2002; Firth & Krut, 1991; Müller & Turner, 2004), to handle potential conflicts (Chen & Partington, 2004; Foster, 1992; Gobeli, Koenig, & Bechinger, 1998; Pinto & Slevin, 1988; Schneider & De Meyer, 1991) effectively and efficiently, through engaging a comprehensive stakeholders' resistance checklist considering cultural and ethnical indicators. In stakeholder management, essential features such as understanding cross-cultural management, relationship, communications, leadership, commitment, interests and influences, incentives and motivations, and alignment of values should be considered and related issues should be addressed earlier by the firm or organization for better cooperation among stakeholders and project managers, so that, mutual understanding toward project success would be established (Karim, Rahman, Berawi, & Jaapar, 2007). Therefore, there is required for us to have further study on the important role of stakeholders toward the project management since there still not have the sufficient information to prove that considering their culture and ethnic can be beneficial. The Software projects were extensively studied. However, software project risk management has rarely researched organizational risks within multi-cultural and multi-ethnic atmospheres, in spite of the fact that problems occur when the cultural and ethnical aspects are not addressed, especially in multi-cultural, multi-ethnic, and cosmopolitan society such as Malaysia.

2. Research methodology

The study conducted based on in-depth literature review considering key word search in subject-specific databases. There is empirical evidence that key word search in subject-specific databases is known as a prevalently used and widely accepted methodology when it comes to review articles (Xue, Shen, & Ren, 2010; Yi & Chan, 2013). Within academic context, articles decisively selected based on their cultural and ethnical contents from both PMI's project management journal and IPMA's international journal of project management. The article search was performed by searching the title, abstract, and keywords in the EBSCO and Science Direct databases. Based on the study objectives, retrieved articles were tabulated in Table 1.

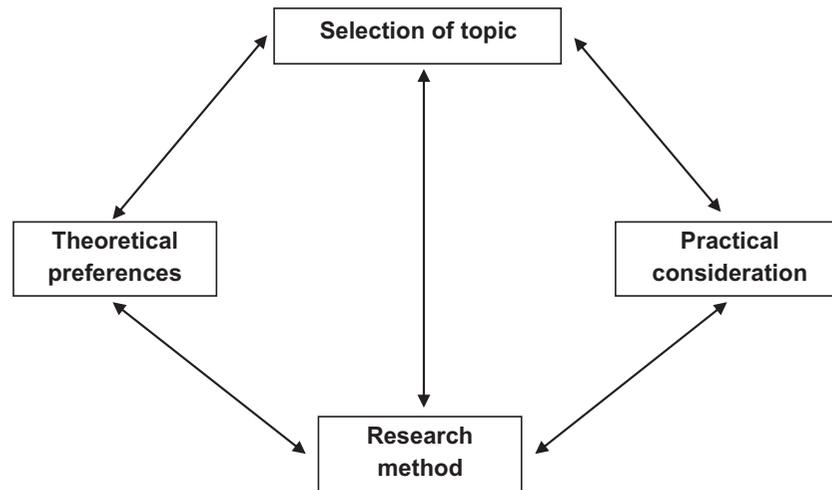
It is intended that this conceptual research paper help researchers and projects stakeholders in international business environment better re-formulate resistance checklists in multi-cultural project execution. Figure 1 depicts relation among choices of topic, methods, theoretical, and practical considerations.

This method assists us to answer the main research question of this paper "how cultural and ethnical diversity in Malaysia affect Rumelt's checklist, considering stakeholders' resistance sources?" Our aim was to summarize the existing research on the definition of project success and failure from the supplier's perspective, and establish in which journals the articles selected for this study were published.

Table 1. Studies which are of central importance in cultural issues in project management

Cultural and ethnical symptoms	Studies
Project failure	(Dinsmore, 1984; Jaeger & Kanungo, 1990; Muriithi & Crawford, 2003; Verma, 1995)
Conflict resolution	(Chen & Partington, 2004; Foster, 1992; Gobeli et al., 1998; Pinto & Slevin, 1988; Schneider & De Meyer, 1991)
Risk management	(Low & Leong, 2000; Pan & Zbang, 2004; Wang & Liu, 2007)
Leadership and empowerment	(Andersen, 2003; Chen & Partington, 2004; Downes et al., 2002; Firth & Krut, 1991; Müller & Turner, 2004)
Business relationships	(Low & Leong, 2000; Pan & Zbang, 2004; Wang & Liu, 2007)
Teamwork	(Chen & Partington, 2004; Low & Leong, 2000; Mead, 1998; Wang & Liu, 2007)
Cultural awareness	(Henrie & Sousa-Poza, 2005; Kendra & TapUn, 2004; Shore & Cross, 2005; Vaupel & Schmoike, 2000)

Figure 1. Research Design & Plan (Kothari, 2004).



3. Typical cause of project failures; retrospective exhibit

There is empirical evidence that causes of project failures are associated with the dynamic nature of the project (Dinsmore, 1984; Jaeger & Kanungo, 1990; Meredith & Mantel, 2002; Muriithi & Crawford, 2003). There are two types of projects such as (1) well understood, routine projects so-called non-complex and (2) complex projects include not only unknown but also unclear scopes (Meredith & Mantel, 2002). The terms “perceived failure” stand for the result of the combination of both actual failure and planning failure (Kerzner, 2009). The actual failure occurs under some circumstances such as there is contradiction between what was preplanned and what was accomplished, whereas planning failure occurs under some circumstances such as there is contradiction between pre-planned schedule and achievable (Kerzner, 2009). Humans are considered as to be at the core of the project and are perceived as heartbeat of it. Generally speaking, teamwork (Chen & Partington, 2004; Low & Leong, 2000; Mead, 1998) is of central importance in any projects. The failure factors based on Kerzner’s acknowledgment are as citing poor motivation, productivity, and human relations; lack of employee and functional commitment; delayed problem-solving; and unresolved policy and stakeholder issues (Kerzner, 2009). On the other hand, the IT project failure attributes are categorized as unrealistic project scope, project development experience, improper management of scope creep, lack of keeping pace with emerging technologies, problem in investigation of organization issues (Murray, 2000). There has been developed a unique perception of project failures in which related to canceled projects due to managers perceptions that the project does not have potential to be successful. These related factors are known as abandonment factors (Ewusi-Mensah, 2003). A literature-based guideline of abandonment factors and other associated ones are clarified as (1) personnel shortfall and straining, computer science technical know-how, unrealistic scheduling and budgeting concept, development of wrong functionalities, properties, and/or user interfaces, requirements volatility and constantly changes, and shortfall in procurement of components and staff (Boehm, 1991); (2) Scheduling and timing, System functionality, Subcontracting, Requirements management, Resource usage and Performance, and Personnel management (Ropponen & Lytinen, 2000); (3) abandonment factors: Unrealistic project goals and objectives, Poor project team composition, Project management and control problems, Inadequate technical expertise, Problematic technology base/infrastructure, Lack of executive or support/commitment, Changing requirements, and Cost overruns and schedule delays (Ewusi-Mensah, 2003). Therefore, all aforementioned failure sources indicates the fact that why projects cannot be managed successfully, and why still project managers face challenges within project context, especially when it comes to volatile, dynamic projects such as software project management.

4. Evolution and domains of software project risk management; what we know

Risk can be defined as effect of ambiguity and uncertainty on presupposed objectives (ISO, 2009). The Risk, itself can have either positive (unimpeded) or negative (impeded) effects on a project

(Hartono, Sulisty, Praftiwi, & Hasmoro, 2014). There have been conducted lots of researches regarding identifying risk factors also known as source of risks, critical success/failure factors, ambiguity factors, risk drivers based on literature (Aloini et al., 2007; Bannerman, 2008; Benaroch, Lichtenstein, & Robinson, 2006; Tiwana & Keil, 2004). Risks can be perceived based on the project natures, for example, in construction projects, risk factors do not affect project in a direct way (Tah & Carr, 2001), on the contrary, in software projects, risks affect project directly (Aloini et al., 2007; ISO, 2009). There are three main mechanisms in software project risk management in which provoked ongoing debate about stakeholders' resistance checklist in this paper. The main approaches to software risk management are checklists, classification frameworks, and process model (de Bakker et al., 2010; Bannerman, 2008).

Checklists; refers to a tool in which risk factors have been identified in past projects (de Bakker et al., 2010), are check and list isomorphically. Various checklists have been applied so far and can be found in the literature (Aloini et al., 2007; Schmidt, Lyytinen, Keil, & Cule, 2001). The checklists encompass a combination of technical and organizational risks structured by typical risk probability in software projects (Aloini et al., 2007) as well as often comprise too many potential risk factors in which should be considered proactively and reactively.

Classification frameworks; As all listed risks in checklists have instinctively potential to be an active, the risk factors may be grouped and managed concurrently. The term classification frameworks extracted from construction management context in which the risks can be classified according to different criteria such as their perceived source (Baccarini et al., 2004; Bannerman, 2008; Cule et al., 2000; Keil, Cule, Lyytinen, & Schmidt, 1998; Liu & Wang, 2014; Wallace & Keil, 2004).

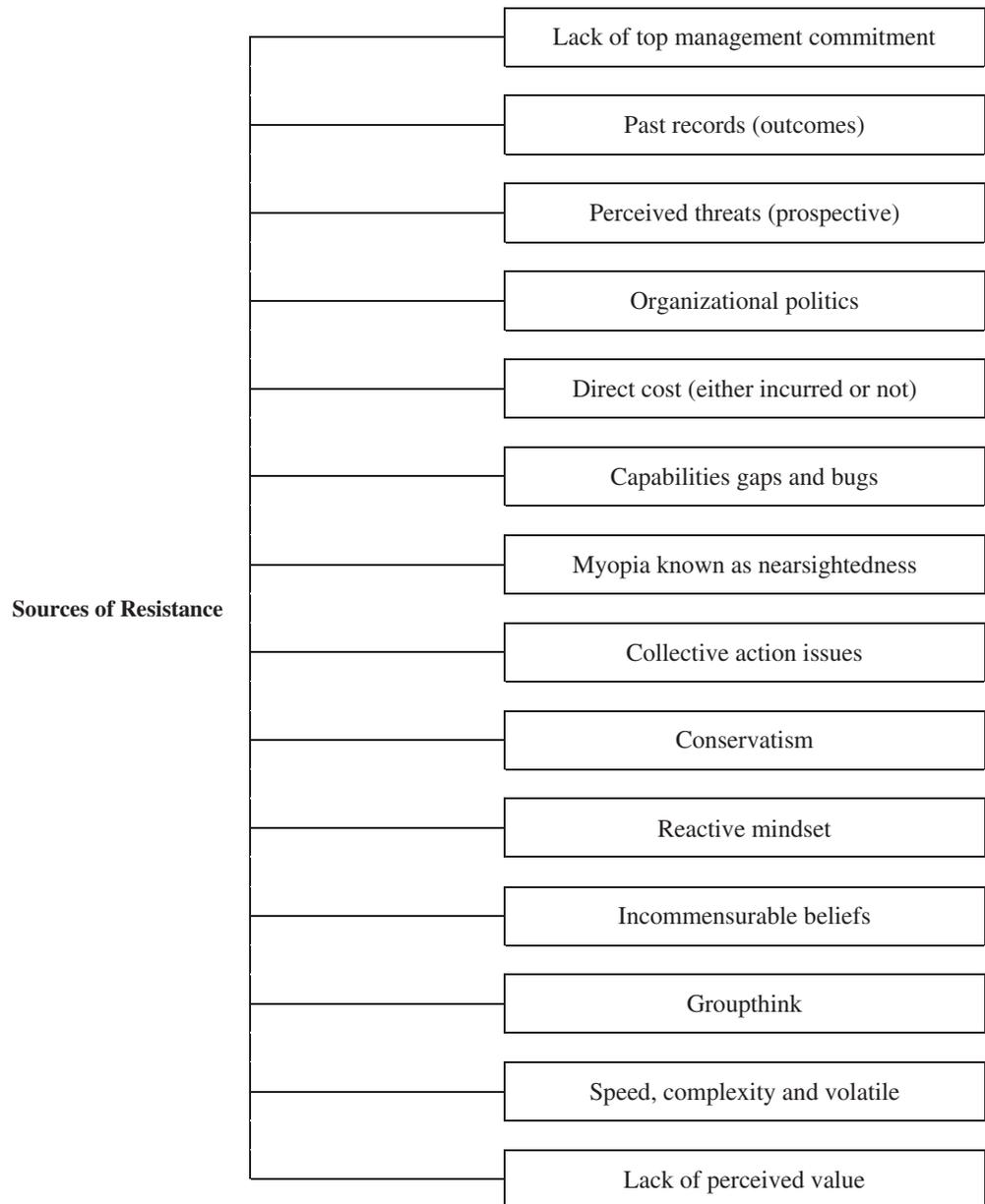
Process models; the third risk management approach is process models in which specify risk management activities pertinent to a general risk management process such as to establish the context, to identify risks, to evaluate risks, to mitigate risks, to communicate, to consult, to monitor, and to review in all (Aloini et al., 2012; Baccarini et al., 2004; Bandyopadhyay, Mykytyn, & Mykytyn, 1999; Bannerman, 2008; ISO, 2009; Kwan & Leung, 2011).

It is common to use an integrated approach including all above mechanism in risk identification (Bannerman, 2008; de Bakker et al., 2010). However, this integrated approach can cover projects' specific risks rather than cover generic risk factors (de Bakker et al., 2010). In this paper, we put spotlight on resistance checklist in-depth. The resistance is perceived as a complex phenomenon which can have variety of causes such as innate conservatism, lack of felt need, and uncertainty (Hirschheim & Newman, 1998). The software project is evaluated by user based on the individual, peer group, and organizational level (Joshi, 1991). Therefore, resistance occurs due to inequity in each level. There are four antecedent circumstances to resistance; enforced proceduralization, organizational and personnel issues, discipline and non-engagement with the system, which may result in various kinds of workarounds (Ferneley & Sobreperez, 2006). Other resistance might be considered as switching costs (Kim & Kankanhalli, 2009), conflict raised from vying for power (Markus, 1983), and combination of the individual behaviors (Lapointe & Rivard, 2005). Source of resistance are depicted in Figure 2 (adapted from (Vrhovec, Hovelja, Vavpotič, & Krisper, 2015)).

All aforementioned resistance sources, generated from interactions between stakeholders and their projects are illustrated as;

- (1) *Lack of top management commitments*; management should create and clearly pursue a vision and provision of supporting and incentivizing the alteration. If stakeholders do not comprehend significantly the fact that management is as following the formal vision pertinent to the new software, they are improbably to be its enthusiastic advocates (Aloini et al., 2012; Baccarini et al., 2004; Hirschheim & Newman, 1998; Lundy & Morin, 2013; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (2) *Past outcomes (lesson learned)*; lessons learned from past software projects influence the perceptions and expectations about prospective ones which much more drive project managers'

Figure 2. Resistance checklists; sources perspectives (Vrhovec et al., 2015).



affective and behavioral reactions to it. Also may significantly affect users' perceptions toward a new software retrospectively (Martinko, Henry, & Zmud, 1996; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).

- (3) *Perceived threats*; the perceived threats are generated from a change and uncertainties. For example, the stakeholders resistance generates from uncertainty, losing their jobs, being transferred away from their friends, losing status, or sacrificing past investments (Hirschheim & Newman, 1998; Jiang, Muhanna, & Klein, 2000; Kim & Kankanhalli, 2009; Lapointe & Rivard, 2005; Lawrence, 1954; Long & Spurlock, 2008; Lundy & Morin, 2013; Marakas & Hornik, 1996; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995; Vrhovec & Rupnik, 2011).
- (4) *Organizational politics*; the organizational politics are perceived as the most source of resistance. For example, the software project often cause a re-distribution of resources effectively which could contribute to challenges in terms of power of interests in the organization

(Altuwajri & Khorsheed, 2011; Baccarini et al., 2004; Ferneley & Sobreperez, 2006; Hirschheim & Newman, 1998; Jiang et al., 2000; Lapointe & Rivard, 2005; Markus, 1983; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).

- (5) *Direct costs*; software projects usually struggle with some issues such as a temporal disruption of day-to-day work, temporally increased risk of organizational failure and excess effort in which deal with cost matters easily (Long & Spurlock, 2008; Lundy & Morin, 2013; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (6) *Capabilities gaps and bugs*; these gaps and bugs raised from any mismatches between the tasks need to be performed and competencies and capabilities of users (Fiedler, 2010; Long & Spurlock, 2008; Lundy & Morin, 2013; Ocepek, Bosnić, Šerbec, & Rugelj, 2013; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (7) *Collective actions problem*; this issue generated from users refusal to fully use the new software because they afraid of dissatisfaction, generating from the difficulty of deciding (Ferneley & Sobreperez, 2006; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (8) *Myopia known as nearsightedness*; the expected dominance of short-term goals over long-term goals lead to inability of the management to be proactive and prospective rather than to be reactive (Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (9) *Conservatism*; this issue is made manifest when the new software projects face changes in working processes and structures as users want to stay with the way which they are accustomed to (Ferneley & Sobreperez, 2006; Hirschheim & Newman, 1998; Hong & Kim, 2002; Lundy & Morin, 2013; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (10) *Reactive mindset*; if the obstacles are inevitable, then the stakeholders may resist (Long & Spurlock, 2008; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (11) *Incommensurable beliefs*; these issues are considered as resistance when there are problems about nature of the issues and their alternative solutions (Atkinson, Crawford, & Ward, 2006; Hartono et al., 2014; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (12) *Groupthink*; despite its advantages, this leads to peer pressure, restricted thinking, rejecting or even punishing ideas and information that deviate too much from those generally accepted in the group (Eckhardt, Laumer, & Weitzel, 2009; Ferneley & Sobreperez, 2006; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (13) *Speed and complexity*; fast and complex changes lead to a situation in which the enterprises cannot analyze the circumstances properly (Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).
- (14) *Lack of perceived value*; if the benefits of new software are relatively low compared to the old one, then stakeholders may resist due to dulled motivation for change (Fiedler, 2010; Joshi, 1991; Kim & Kankanhalli, 2009; Long & Spurlock, 2008; Lundy & Morin, 2013; Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995).

5. New alternatives for new resistance checklists; critic re-debate

In this paper, the Rumelt's checklist which has been empirically tested (Pardo del Val & Martínez Fuentes, 2003; Rumelt, 1995), discussed above in details. We tend to think that in this global village, international project management in terms of multi-cultural and multi-ethnic matter should be considered significantly as additional checklist resistance sources. In tough economic times and under global competition, management by projects is now regarded as a competitive way for managing projects, especially software projects, more particularly among stakeholders from different cultures and ethnics. Malaysia is perceived as a shining example, a cosmopolitan community with divergence in culture and ethnic. This paper seeks to outline the importance of considering culture and ethnic diversity as additional matters when it comes to outline resistance checklists from stakeholders' perspectives. In order to improve the odds of success, global project managers should use originality to deviate from general norms and obtain advantages. This research indicates that cross-vergence which is about merging together management practices of two or more cultures, so that a

Table 2 Countries and project communication preferences source: Ralf Mueller and Rodney Turner, “cultural differences in project owner-project manager communications” (Mueller & Turner, 2004)

Country group	Preferences
Japan, Taiwan and Brazil, Japan, Taiwan and Brazil	Face-to-face, analytical at milestones
Hungary and India	Written status reports, fixed intervals
Netherlands and Germany	Detailed progress reports, fixed intervals
Australia, United States, Canada, New Zealand, United Kingdom, and Sweden	Continuous phone updates with written backup

practice relevant to a heterogeneous culture can be assembled (Elena, 2010). Global teams can provide all components for an effective merged of different project management practices as people from various country and company cultures, enriched by different experiences and management theories, implemented by a team in different countries, with a wealthy mix of skills and beliefs (Binder, 2007). Another fact were indicated in this research is hybridization concept on multi-cultural management, which can be defined as use of a common body of knowledge, intensified with selective parts of successful practices from ethnic to ethnic and culture to culture (Elena, 2010). Fisher and Fisher suggest there are four steps framework for effective cross-cultural project management; Learn the definition and different types of culture, Understanding the cultural differences, Respect the cultural differences, Enjoy the richness of a multi-cultural team (Fisher & Fisher, 2001). Countries and project communication preferences are tabulated in Table 2.

The fact of the matter is that our study and observation in Malaysia indicates that preferences in Malaysia encompass face-to-face and written status confirmation reports in further stage, and ultimately in order to conclude continues updates and backup either offline or online seems to be a good communication ways among different cultures and ethnics in Malaysia. In order to debate on significance of considering multi-culturalism and multi-ethnicity in Malaysia, we investigate all indicators related to cultural gaps in software project management among Malaysian stakeholders including; Malay, Chinese, and Indian. The Table 3 indicates in which aspects in international project management the cultural differences manifest themselves widely.

Table 3 Culture gap tool source (Koster, 2010)

	Bio-polar cultural dimensions	
Equality	Managing risk and uncertainty, defining & planning the project, organizing the project leading and managing the team, communicating, co-operating	Hierarchy
Embracing risks	Defining the project managing risk and uncertainty, planning the project, organizing the project, implementing & controlling	Avoiding risks
Individual	Managing risk, organizing projects, implementing & controlling, motivating and leading the team learning	Group
Universal	Matching strategy with projects, defining the project, planning the project, implementing & controlling, learning	Circumstantial
Task	Managing stakeholders, planning the project, implementing & controlling, leading and managing the team learning	Relationship
Achievements	Planning the project, organizing the project, implementing & controlling, motivating and leading the team	Standstill status
Conflict	Defining the scope, leading and managing the team, communicating, co-operating	Consensus
Theoretical	Planning the project, executing & controlling the project learning	Pragmatic
Sequential	Defining the project, planning the project, implementing & controlling	Synchronic

Considering tabulated factors in Table 2 provides the management team of the multi-cultural and multi-ethnic project with valuable input for stakeholder management process as it is considered significantly in resistance checklists as additional alternatives in Malaysian software project management scope.

6. Findings and discussion

This study conducted a critical review of the literature on software project management considering cultural and ethnic indicators in Malaysia. This study focuses on the Rumelt's checklist considering stakeholders and project managers' interaction in multi-cultural and multi-ethnic atmospheres. Understanding the cultural significance among cosmopolitan societies became vital in project management. This study scrutinized cultural issues, bio-cultural dimensions, root cause of project failures, and project management styles in Malaysia. To our best knowledge, it is the first study on national and international differences in software project management considering bio-polar cultural dimensions due to the uniqueness of Malaysia itself as both multi-ethnic and multi-cultural country.

Within projects including increased interaction between stakeholders of different cultures and ethnics, the comprehensive source of resistance checklists encompasses multi-cultural and multi-ethnic factors in addition to Rumelt's checklist can be prospectively beneficial. A project manager needs to understand his/her own culture and the stakeholders' cultures as well. Being part of a multi-cultural team or dealing with multi-cultural stakeholders has a lot of advantages in developing competitive markets such as Malaysia. The Rumelt's checklists along with culture gap indicators open a new horizon in project managers' career in order to how to manage stakeholders as the project manager, the customer and the project team in all. The purpose of the re-debated resistance checklist is to pave the way toward successful software project management in Malaysia. Additional research on improving this concept would be valuable. In our research, only resistance checklists considered. Research considering case study would also be beneficial. In conclusion, we feel that there is a strong case to be made for the benefits of stakeholders' resistance checklist for variety of potential stakeholders. As discussed, a number of benefits are available to those who choose to be directly involved in the outline process. Moreover, there are likely untold benefits to the communities, regions, and nations in which these conceptual endeavors take place.

Challenges exist, however, and the outline process of stakeholders' checklist's identification is not as efficient or as effective as it could be. It is hoped that this article provides a better understanding of the stakeholders' resistance checklist, its difficulties, recommendations for overcoming these, and the potential benefits that may be gained as academics and practitioners strive to develop improved outline of stakeholders' checklist within software project management context.

7. Implications and contributions

Increasing globalization has attracted interest of academics and practitioners to the study of cultural diversities into the management area. Likewise, the analogous trend toward running some business through projects has brought wider perspectives such as cross-cultural and cross-ethnic stakeholders' management perception into the project management field. Recent academic literature demonstrated that culture has a major impact on management practices, especially international and national project execution. No extensive implications and guidelines were found on the comparison of the project planning among countries, which could help to establish relationship between multi-cultural and multi-ethnic stakeholders and project planning capabilities in terms of resistance to change management.

- A competent project manager must have broad understanding of the culture of people he or she is leading as a team work or dealing as stakeholder before he or she undertakes a leadership style in projects.

- The problem of both attitudes along with prejudice must be addressed exhaustively before a project manager is allocated to be a project leader.
- There must be a guideline for every project manager on what to do and what not to do, moreover, the do's and don'ts in managing should be clarified. This will help effective communication among team members and project stakeholders (Sriussadaporn, 2006).
- Despite all technical know-how, the project manager must develop unique inter-personal skill in cross-cultural communication, must be fluent in speech with sound mind as well (Knotts & Thibodeaux, 1992).
- The project manager must develop a dynamic means of resolving conflicts, generated from lack of knowledge of stakeholders' cultures.
- The project manager should be capable of playing a role as a teacher and lead as an example (Catania, Armstrong, & Tucker, 2013).
- The project manager should have orientation including the cultural ethics and morals, considering crossvergence and hybridization on multi-cultural management when it comes to bio-polar culture dimensions, so that the stakeholders resistance can be managed properly.

To conclude, factors are crucial in cross-cultural communication with either team members or stakeholders in project management are; discussion on stereotyping, ethnocentricity, tolerance, respect, barriers to intercultural communication, negotiation skills, and conflict resolution in all (Singh, 2010). Before running any effective projects, all aforementioned factors should be considered in details in order to increase odds of success. Success in this case is perceived as managing stakeholders among multi-cultural, multi-ethnic, and cosmopolitan society such as Malaysia.

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Author details

Hamed Taherdoost¹

E-mail: hamed.taherdoost@gmail.com

ORCID ID: <http://orcid.org/0000-0002-6503-6739>

Abolfazl Keshavarzsaleh²

E-mail: abolfazl.keshavarz.saleh@gmail.com

Chen Wang³

E-mail: derekisleon@gmail.com

¹ Research & Development Department, Ahoora Ltd (Management Consultation Group), Kuala Lumpur, Malaysia.

² Faculty of Business and Law, International University of Malaya and Wales, Kuala Lumpur, Malaysia.

³ Faculty of Built Environment, University of Malaya, Kuala Lumpur, Malaysia.

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