Australian Journal of Basic and Applied Sciences, 4(7): 2143-2154, 2010
ISSN 1991-8178

The Role of Culture in Business Process Management Initiatives

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Abstract: Business Process Management is a rather new concept in management that promises many advantages to the organizations. Implementation of this concept similar to the other management techniques needs to consider different factors. One of the factors that its importance has been mentioned in many research, is "culture". Despite of many research that have mentioned this factor as an important success factors, there are few research that consider the way that culture affects on BPM implementation. In this study a survey has been conducted between BPM experts to find the ways that culture affects on BPM implementation. SA framework that were introduced by Kettinger and Teng was used for specifying tasks during implementation. Different aspects of culture were extracted from the items that have been introduced by Alibabaei, Bandara *et al*. The results show that the culture affects Project Planning and Analyzing Process Problems phases more than other phases and has the least effect on Strategy Linkage phase. On the other hand, between culture items, management awareness of employees` expectation, tendency for future planning and existing of documented process have more influences on the tasks in compare with other items.

Key words: Business Process Management, Initiative implementation, Culture, Survey

INTRODUCTION

In almost every period of time, different management buzzwords and techniques have been arisen, that all promise many advantages and even some of them claim as a "silver bullet" that can solve all the organization problems. Total Quality Management (TQM), Balanced scorecard, Business Process Reengineering (BPR) and six sigma were some of latest ones. Obviously, not all of the organizations` efforts are succeeded for solving their problems. Nowadays we face with another three word abbreviation, BPM, that stands for Business Process Management.

BPM has potential power to apply on an enterprise – wide basis. In some ways, BPM is no different from any other management venture (McCoy D.W., Hill J. B. *et al*. 2008). One of these commons is the influence of culture in BPM initiatives implementation. Different research has shown that culture have a significant impact on how the objectives of Business Process Management initiatives are accomplished (Skerlavaj M., Stemberger M.I. *et al*. 2007). In fact, in BPM initiatives, without a match between the culture of an organization and the culture embedded within BPM concept a failed implementation is predictable. If BPM implementation conflicts with culture of the organization, implementation will be resisted in one of two ways, either the new system will be rejected or it poorly is modified so that matches with the exiting culture (Ke W. and Wei K.K. 2008).

This research tries to find out the cultural effects on the procedure of implementing BPM projects. For this purpose, the effects of different dimension of culture will be studied on the procedure that is followed to implement the BPM initiatives based on survey method.

The remainder of this paper will first present BPM concept. Then it will provide a review on culture and compare the different frameworks. Then overall study design that shows how the analysis took place, will be introduced. It then will present the study findings. The paper will conclude with a summary of the study findings, contributions, limitations and an outlook to extension research.

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Business Process Management:

Andrew Spanyi Has Defined BPM as (Spanyi A. 2003)

"the deliberative, collaborative and increasingly technology-aided definition, improvement and management of a firm`s end to end enterprise business process"

Researchers in BPM context claim it can have better results in compare with other management techniques, whereas the Business Process Management has gained from the success and failure experiences to achieve process based organizations (Jeston J. and Nelis J. 2008).

Recent Gartner studies (Gartner 2005; 2006; 2007; 2008; 2009) have identified BPM as the number one business priority of CIOs globally. Earlier research also shows the importance of process management in Europe and US (Elzinga, Horak *et al*. 1995; Pritchard and Armistead 1999; de Bruin and Rosemann 2007). While Process orientation is rising in importance, it is not a new concept. From 1980s when TQM received considerable attention and after that in 1990s, when BPR was introduced, process orientation was already existed. Then ERP systems were appeared for increasing flexibility and robustness in IT systems in order to implementing and integrating business processes (Spanyi A. 2003). However, there are few organizations could completely integrate business functions, formed them as end-to-end processes, and got efficiency by process-based activities (Hammer 2007). Therefore, the quest to find and explore the success and failure factors, which should be considered during BPM initiatives implementations, has been interesting research agenda for a considerable time.

Other than the direct BPM success studies, BPM maturity studies have emerged in recent years. The Process and Enterprise Maturity Model (PEMM) (Hammer 2007), BPM and Organization Maturity (Curtis and Alden 2007) and Business Process Management Maturity Model (BPMM) (de Bruin, Rosemann *et al*. 2006) are some examples of such studies.

In many research, culture has been mentioned as one of the key success and failure factors in any change initiative or as one of important factors in business process maturity (Khoong C.M. 1996; Al-Mashari and Zairi 1999; Shanks G and Parr A 2000; Martinsons M.G. and Hempel P. 2001; Tsai 2003; Deshpande R. and Farley 2004; Rosemann and Bruin 2004; Paper and Chang 2005; de Bruin, Rosemann *et al*. 2006; Jones M.C., Cline M. *et al*. 2006; Melenovsky and Sinur 2006; Hammer 2007; McCoy D.W., Hill J. B. *et al*. 2008; Ngai E.W.T., Law C.C.H. *et al*. 2008; Alibabaei, Bandara *et al*. 2009). However, most of the research related to the field of business process change just introduced the culture as a one of important success factors, but they have not discussed about the "how to" effects of culture in initiatives` implementation.

There are organizations that understand BPM and can sustain continuous process improvement (McCoy D.W., Hill J. B. *et al*. 2008), although, or successful BPM implementation in an organization, leaders should transform the way of their thinking about practices. They should change it from a traditional functional style to a new model that is based on business processes. (Spanyi A. 2003), This new way of thinking is not only for managers and leaders, also people in organizations have to understand this concept. The new way of doing works (based on process thinking) brings new disciplines and rules.

However, Skerlavanj *et al*. has criticized that what is often neglected, is that most problems regarding business process change initiatives are not technical but arise from an inappropriate organizational culture. In fact, the way people perceive changes and react to them plays an important role in such efforts(Skerlavaj M., Stemberger M.I. *et al*. 2007).

Changing stable situation that an organization works with it, related to the culture of organization as well as the organization`s capabilities.. Most of the capabilities can be earn even during the implementation. However, culture would not change easily.

Culture:

Culture is composed of values, beliefs, attitudes and behaviors in people mind that shape the behavior, action and practices and distinguish one group or category of people from another (Hofstede G. 1993; Schein 1996; Prajogo D.I. and McDermott C.M. 2005). However, culture has different levels; national and organizational culture are two of important ones. National culture and organizational culture are phenomena of different orders, in that while national cultures are characterized by core values, the core of an organization`s culture is not shared "values" but shared "perceptions of daily practices". In fact, organizational culture provides unwritten and often unspoken guidelines for how to get along in the organization. However, they are not completely independent (Deshpande R. and Farley 2004). For instance, IBM has its own uniform and monopolistic organizational culture but there are some differences in each IBM national unit based on the differences between national cultures.

Differences in national and organizational cultures are the reason of many difficulties that developing countries are facedduring implementation and using western technologies, management processes, information systems methods, and information systems techniques (Shanks G and Parr A 2000).

Culture can be effective in organizational performance (Flamholtz and Kannan-Narasimhan 2005). In addition, culture has a direct effect on the implementation of business process projects. It can help project progress by leading it to success or it can hinder the attempt (Tsai 2003). For instance, hierarchical organizations have different policies and procedures that are clearly in contrast with business process concepts. In such organizations, employees are encouraged to do their assigned job based on some predefined rules and instructions, which they must follow. Introducing employees empowerment to such an environment would be seen with skepticism, and it would not be accepted by either managers or employees (Tsai 2003).

A business process project in TELECO has been initiated in 90s, but it failed and culture had an important role in the failure. Business process projects need cross-functional activities. In organizations like TELECO, when members of teams try to work together, they will often attribute disagreement to personalities and fail to notice the deeper, shared assumptions that color how each functional area thinks. Therefore, in TELECO, the lack of detailed knowledge about functional areas was considerable (Sarker and Lee 1999). On the other hand, company culture was an obstacle to create suitable communication and as a result, some poor metaphors became prevalent in organization (Sarker and Lee 1999).

Consideration of customer requirements and expectations in designing the process is an important factor for success of initiatives. The culture of TELECO was not consistent with this customer-oriented attitude (Sarker and Lee 1999).

British Airlines and General Motors are instances of the companies that manage to get magnificent results by changing in their organizational culture (Grugulis and Wilkinson 2002). They found out that they were lacking those elements in the organizational culture that were necessary for the improvement activities to succeed. Therefore, they changed their cultures to be consistent with the initiatives. Of course, culture issues are subtle. Culture is collection of beliefs and values, in addition of some informal rules that are permeate an organization. Changing the traditional culture in organization to a new culture which is adaptive with process orientation is difficult. It cannot be proclaimed or forced by managers - managers just can lead the way (Tsai 2003).

Unfortunately, people are unaware of their culture until it is challenged. One of the challenging situations is initiating a business process change project. The managers should be aware of the organizational culture in order to lead it, and on the other hand, they should know how to conduct the project in the way that is compatible with the cultural characteristics.

Many researches in this context have mentioned the role of culture in change projects implementation. They have expressed the relation between culture and success and failure of change initiatives. Nevertheless, few of them speak about how culture affects those aspects. Culture has different dimensions and characteristics that some of them can facilitate changes and some of them work as barriers for changes. So, knowing the way that culture characteristics affects on implementing successful BPM project are important. However, it helps to foster that dimensions of culture which facilitate BPM project implementing. On the other hand, it helps organizations be aware about their weaknesses and probable difficulties that underlie the culture, to find out a solution for overcoming them.

At the cultural level, different researchers have introduced some models that can be used to identify differences between cultures. Some of them can be seen in table 1.

House and his colleagues have studied 62 countries culture, organization and leadership in 2004. They used Hoftsede model as a base but they added some other elements for their studying (House R.J., Hanges P.J. *et al*. 2004).

The organizational culture profile (OCP) has been developed by O`reilly *et al* in 1991. This model included eight dimensions, and can be used to assess person-organization fit (Prajogo D.I. and McDermott C.M. 2005).

Another framework is competing value framework (CVF) developed by Denison and Spereitzer in 1991. This framework is developed based on two dimensions; first dimension is the flexibility versus control that which reflects stability and control. Second dimension is internal versus external that describes organization orientation toward maintenance and improvement of the exiting organization or focused and adaption and interaction with the external environment. The combination of two dominations results four quadrants of culture and twelve elements (Prajogo D.I. and McDermott C.M. 2005).

Table1: dimensions of culture

House *et al* (2004)	Detert *et al* (2000)	Hurly Helt (1998)	O`Reilly (1991) OCP Model	Denison & Spereitzer (1991) CVF model
Power distance	Control, coordination and responsibility	Participative decision making Power sharing		Empowerment Agreement
Individualism versus collectivism	Orientation to collaboration	Support and collaboration	Team orientation	Team orientation Coordination & Integration
Uncertainly avoidance	Orientation to change Motivation	Tolerance for risk and conflicts	Decisiveness Innovation	Creating change
Future orientation	Nature of time horizon		Attention to detail	Vision Strategic direction Goals & objective
Human orientation	Basis trust and rationality	Learning and development	Supportiveness	Capability development Core values
Performance orientation	Orientation to work Orientation to focus		Outcome orientation Emphasis on rewards	Customer focus
Assertiveness			Aggressiveness	
				Organizational learning
Masculinity versus femininity				

Detert *et al*. in 2000 developed another framework, this framework linking culture and improvement initiatives in organizations and has eight dimensions (Detert J.R., Schroeder R.G. *et al*. 2000).

Another model developed by Hurley and Helt in 1998. These model characterized organization culture in five dimensions (Ke W. and Wei K.K. 2008).

Research Method:

In this research the survey method has been used. This survey has been conducted between some knowledgeable people who had experience in BPM initiatives implementation.

For collecting required information a matrix has been used that shown in figure 1. In this matrix, the rows show the different aspects of culture. These items have been extracted from Alibabaei, Bandara *et al* (2009), which has introduced a holistic framework for BPM success including means to achieve. Items have introduced in two levels, first level which includes sub constructs that characterize culture and the second level that includes the items should be considered in each of these sub constructs.

The columns show the different phases that should be considered during project implementation. Each phase has broken down to some activities and each activity includes different tasks that should be fulfilled. For defining these tasks S&A framework that was developed by Kettinger and Teng (Kettinger and Teng 2000), has been used.

		Phases				
		Activities				
		Task1	Task 2	Task3	…….	Task 74
Sub Constructs	Item 1					
	Item 2					
	.. . .					
	Item 32					

Fig. 1: The structure of collecting data

For filling each of cells, the effect of each items on each task, using two words, “D” and “I”, “D” for direct effects of culture and “I” as “Implied” effects. “D” refers if one of cultural items affects one of tasks directly and “I “ refers to each of them if it affects indirectly.

Because the structure of survey was difficult, before starting data collection, a meeting was hold to introduce the structure of survey. The data collection has been completed in two rounds:

- In first round the survey has been sent for the experts to complete it.
- In second round different focused group has been hold in order to solving the conflicts between ideas.

In the first round the survey was sent for the experts and the cells were filled by them. If more than 75% of the experts had a same idea about one cell, the dominant idea was accepted and the cell was filled by this idea. But there were some cells that there were inconsistencies among the ideas and we could not find any idea that was dominant. About these cells, decisions were finalized in the second round.

In the second round, for deciding about each cell, different focus groups have been hold and about contains of each of the remain cells (from the first round), was discussed. After discussions, experts were asked to give their new idea for each of the cells. Then based on the new votes, the dominant idea has been selected.

Research Findings:

Selecting Culture Dimensions:

As discussed before some cultural characteristics in organizations provide suitable conditions for the success of a BPM initiative, the following sub constructs explain different aspects of Culture:

- *Formalism in processes and business planning:* This involves the clear documentation of processes and business plans. These documentations lead organizations and help them to forecast business outcomes and events. Moreover, they can be used to set the project objectives (which are well aligned with business objectives) (Martinsons and Hempel 1998; Al-Mashari and Zairi 1999). Existing these documented and current processes and planning show organizational attitude in future planning and facing with uncertainties.
- *Accepting change and readiness for change:* This encompasses an environment that encourages creativity, and values initiative behaviors, hence, human resources are considered as a core asset for achieving business objectives (Maull, Weaver *et al*. 1995; Martinsons and Hempel 1998; Khong and Richardson 2003; House 2004).
- *Abandoning authorities (higher tendency for collaboration):* This relates to the high involvement of employees in organizations, which often abandons the authoritative boundaries between them. This also provides a suitable environment for collaboration between employees by overcoming issues with teamwork (Martinsons and Hempel 1998; Paper 1998).

Alibabaei, Bandara *et al*. (2009) further explain each of the sub constructs by following items.

Table 2: Means to achieve the Culture success factor in BPM initiatives (Alibabaei, Bandara *et al*. 2009)

CULTURE	
Sub- Construct	Formalism in processes and business planning
Means	• Formal documented business processes exists and is used in the organization. • Detailed planning across all organization functions have been designed for the organization. • Business planning has been propagated in the organization and all the stakeholders were informed. • There is a tendency of planning for future. • There are documented procedures and policies that prevent from temporary ad-hoc decision making. • All employees' duties and responsibilities are clearly documented. • Inter organizational communication and transaction contracts are based on formal agreements. • Performance measurement models are based on outcomes and objectives and not on the management's personal judgment. • Decisions are made based on information (facts) rather than management attitudes and opinions.
Sub- Construct	Accepting the change and readiness for change
Means	• There is a tendency to change (and innovate), with little fear for loosing stability. • Creativity is encouraged and rewarded. • Direct and explicit communication is preferred. • Management considers employees as a most valuable asset in the organization. • Management is aware of expectations and issues important to the employees. • Employees trust the managers. • Employees are ready to accept the changes in their work. • A suitable learning environment is provided in the organization. • There are suitable procedures to find out and solve political issues among the employees and managers. • Middle managers have an important role in solving the issues and conflicts among the employees. • Dependence to the other stakeholders in value chain is not an obstacle for starting processes change.
Sub- Construct	Abandoning authorities (higher tendency for collaboration)
Means	• Managers are ready to abandon authorities. • There are bottom-to-up information streams for helping managers in decision-making. • There are top-to-bottom information streams to empower employees for adequate decision-making. • Decision-making is not centralized and limited to the higher organizational levels. • Employees have tendency for accepting responsibility for their own decision-making. • Employees are involved in decision-making and their ideas are used. • Employee productivity increases when they work together in a team.

Table 2:

• Team members have tendency to accept leadership in the team.
• Employees realize the purpose of the work is to deliver customer value.
• Employees have an understanding about how their work is integrated to others' efforts and value added.
• Management can tolerate mistakes that are made by employees who are in new positions with new responsibilities.
• The managerial positions are not fixed and management have enough flexibility in changing the management structure.

Selecting Business Process Management Methodology:

Different methodologies for business process change, process redesign and process innovation were developed during last two decades (Adesola and Baines 2005). Based on comparison between different methodologies, the one which was developed by Kettinger and Teng *et al* (2000) was selected in the research as a reference methodology. In addition of introducing this methodology in one of high rank journals (MISQ) (Kettinger, Teng *et al*. 1997), following there are other reasons for selecting this methodology.

1. Managers in organizations use different names and perspectives for their process improvement projects that are not similar to each others. Depth of projects and strategic effects of them are different from one organization to another (Grover, Kettinger *et al*. 2000). Stage and Activity framework has been developed based on this fact and it would be suitable for business process change cases with different depth and scope.
2. Kettinger and his colleagues developed the methodology based on studying of 25 different re-engineering methodologies practiced by leading BPR consultants. In addition, a survey was conducted between BPR consultants to validate the methodology. The proposed methodology involves activities and tasks have been employed successfully in different business process change projects.
3. Recently, Adesola and Baines (2005) reviewed and analyzed 17 business process improvement methodologies. They used different criteria such as structured, generic, simple, flexible, model-based and industry relevant. Kettinger methodology is one of the latest methodologies which obtained high rank in their comparison (Adesola and Baines 2005).

This framework introduced 7 phases, for each phases different activities have been identified and these activities have been further elaborated by some tasks.

Kettinger Stage and Activity methodology includes seven stages (Kettinger and Teng 2000).

Stage 1: Strategy Linkage

This phase relies on securing of management commitment and the discovery of re-generation opportunities. In this phase project champion would be identified and management taskforce would target a business process for improvement based on business process strategies and IT opportunities review.

Table 3: Activities and tasks related to the first stage

Activity 1.1) Secure Management Commitment		1.2) Discover Re-generation Opportunities
Tasks	• Identify Champion and/or Expert • Conduct Re-generation Overview • Assign Top Management Task Force	• Review Strategy and Business Performance • Identify Business Processes • Conduct High-Level Evaluation of Business Processes • Identify Candidate Processes
Activity 1.3) Align with Corporate Strategy		1.4) Identify IT Levers
Tasks	• Link IT/Process/Strategy	• Review IT Plan • Target IT Levers
Activity 1.5) Select Process		
Tasks	• Conduct Preliminary Analysis of Candidate Processes • Prioritize and Select Process • Determine Project Scope	

Stage 2: Change Planning

This phase is the project initiation and preparation for implementation. In this phase, process owner would be identified and project team would be assigned. In addition, performance goals would be set and project planning and stakeholder/employee notification would be considered.

Table 4: Activities and tasks related to the second stage

Activity	2.1) Inform Stakeholders	2.2) Organize Re-generation Team
Tasks	• Identify Stakeholders • Initiate Communications Campaign	• Identify Process Owner • Determine Re-generation Team Skill Requirements • Select Re-generation Team Members
Activity	2.3) Conduct Project Planning	2.4) Set Performance Goals of a "Re-designed" Process
Tasks	• Conduct Re-generation Team Training • Set Project Schedule • Allocate Resources	• Determine External Process Customer Requirements • Develop "Stretch Targets" and Process Attributes • Review Current Process Performance • Determine Feasible Performance Range • Set Improvement Objectives

Stage 3: Process Problems

This phase emphasizes on organization current processes and sub processes documentation. This documentation should be including the process attributes such as activities, resources, communication, roles, IT and cost. This phase also would involve the critical analysis of the pathologies of the existing process, finding root causes for problems and identifying non-value adding activities.

Table 5: Activities and tasks related to the third stage

Activity	3.1) Document Existing Process	3.2) Uncover Pathologies
Tasks	• Capture Process • Capture Communications • Determine Process Costs • Document Job and IT Roles	• Detail Internal Customers Process Requirements • Identify Non Value Adding Activities • Analyze Problem Causes • Assess Conformance to Detailed Customer Requirements • Summarize and Rank Process Pathologies

Stage 4 & 5: Social and Technical Re-Design

In forth phase new process design would be developed by using ideas, which would be gathered through brainstorming and creativity techniques. The focus of this phase would be directed to select alternatives, which would meet strategic objectives. New human resource and organizational architectures would be developed in this phase for integration with new process design.

The focus of fifth phase would be on designing new IT architecture that would be integrated with new process design. In this phase also new information systems for supporting new processes would be completed. The holistic process prototyping and new process documentation in this phase would be considered.

Table 6: Activities and tasks related to the fourth and fifth stages

Activity	1) Explore Alternative Process Designs	2) Design New Process
Tasks	• Review Performance Goals and Process Pathologies • Develop New Process Ideas • Generate Alternative Process Design Concepts • Assess and Select Process Design Alternative • Conduct High-Level Process Prototyping	• Conduct Detailed Process Design • Simulate and Refine Design • Compare Simulated Results with Performance Goals • Finalize Detailed Process Design
Activity	3) Design Human Resource Architecture	4) Design IT Architecture
Tasks	• Develop New Human Resource Architecture Ideas • Design Sub-unit/Team Structure • Design New Jobs • Design Communication Structure • Design New Team and Individual Satisfaction Measures • Design Knowledge and Skill Development Plan • Design Team and Individual Performance Measures	• Review Organizational IT Plan and IT Lever Opportunity Report • Consider Alternatives and Select IT Platform • Conduct Information Systems Requirements Analysis and Design
Activity	5) Conduct Holistic Process Prototype	6) Construct Information Systems
Tasks	• Prototype Holistic Process	• Prepare IT Specification and Acquire IT • Develop Information Systems
Activity	7) Select Conversion Plan	
Tasks	• Plan and Determine Conversion Strategy	

Stage 6: Process Re-Generation

This phase emphasizes on the change management techniques to implement the new process. During this phase new IT platforms would be implemented and new human resource structure would be developed. In addition, necessary training would be conducted for employees. Purpose of the trainings is preparing the employees for their new roles and responsibilities.

Table 7: Activities and tasks related to the sixth stage

Activity	6.1) Reorganize	6.2) Deploy IT
Tasks	• Initiate Change Management Campaign • Communicate with Stakeholders • Assign New Jobs • Educate Employees	• Install IT • Integrate and Test with Corporate Information Systems • Train Users • Cut-over Process

Stage 7: Continuous Improvement

The last phase of the methodology involves monitoring and measuring the redesigned process performance to determine if it met its objectives. This phase also requires linking to the other firm's quality improvement plans and tuning the new processes.

Table 8: Activities and tasks related to the seventh stage

Activity	7.1) Measure Performance	7.2) Link to Quality Program
Tasks	• Monitor and Evaluate Process Performance • Assess Communication Efficiency and Effectiveness • Evaluate Conformance to Customer Requirements • Assess Cost/Benefit/Risks • Audit Redesigned Process • Evaluate Individual and Team Satisfaction • Disseminate Evaluation Results	• Integrate with Continuous Improvement Plan

Table 8: the affects of Formalism in processes and business planning in phase 1 of BPM implementation

	Secure Management Commitment			Discover Re-generation Opportunities				Identify IT Levers		Align with Corporate Strategy	Select Process		
Formalism in processes and business planning	Identify Champion and/or Expert	Conduct Re-generation Overview	Assign Top Management Task Force	Review Strategy & Business Performance	Identify Business Processes	Conduct High-Level Evaluation of Business Processes	Identify Candidate Processes	Review IT Plan	Target IT Levers	Link IT/ Process /Strategy	Conduct Preliminary Analysis of Candidate Processes	Prioritize and Select Process	Determine Project Scope
Formal documented business processes exists and is used in the organization	I	D	-	-	D	I	D	-	-	I	D	D	D
Detailed planning across all organization functions have been designed for the organization	-	-	I	D	-	I	I	D	I	I	I	I	I
Business planning has been propagated in the organization and all the stakeholders were informed	-	-	-	-	-	-	-	-	-	-	-	-	-
There is a tendency of planning for future.	-	I	-	I	I	-	I	-	I	-	-	I	I
There are documented procedures and policies that prevent from temporary adhoc decision making	I	-	-	-	I	-	I	-	-	-	-	I	I
All employees' duties and responsibilities were clearly documented	D	-	I	-	-	-	-	-	-	-	-	-	-
Inter organizational communication and transactions contracts are based on formal agreements	I	-	-	-	-	-	-	-	-	-	-	-	-
Performance measurement models are based on outcomes and objectives and not on the management's personal judgment	-	I	-	D	-	D	-	-	I	-	D	-	I
Decisions are made based on information (facts) rather than management attitudes and opinions	I	I	-	I	-	-	D	-	I	I	-	I	I

Survey Results:

One sample of detailed result is shown in table 8. This sample is related to the first sub construct` effects on the first phase implementation tasks.

The table 9 summarizes the result of culture effects in each phase. Under the column "effects" the number of "D" and "I" that have been seen in each phase, has been written. Because the number of tasks which had been defined for each phase was different, the number of effects divided on the number of tasks (it can be seen under "average" columns).

The influences of culture on different phases have been shown in figure 2. It shows that the culture has very strong effect in third and second phases which are "analyzing problems in the process" and "change planning". The results shows that culture has the least effect on the first phase that is "strategy linkage".

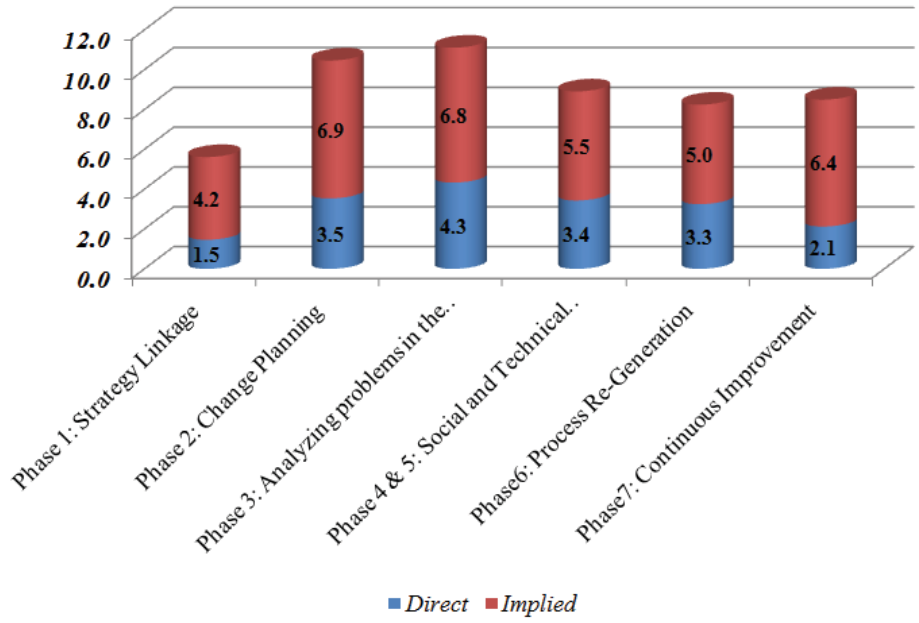

Fig. 2: Influences of culture on different phases

Table 9: The relations between Implementation phases and culture sub constructs

	Number of Tasks	Sub Construct 1: Formalism in processes and business planning				Sub Construct 1: Accepting the change and readiness for change				Sub Construct 1: Abandoning authorities (higher tendency for collaboration)				SUM			
		effects		Average		effects		Average		effects		Average		effects		Average	
		D	I	D	I	D	I	D	I	D	I	D	I	D	I	D	I
Phase 1: Strategy Linkage	13	13	35	1.0	2.7	6	9	0.5	0.7	0	10	0.0	0.8	19	54	1.5	4.2
Phase 2: Change Planning	13	14	32	1.1	2.5	28	26	2.2	2.0	4	32	0.3	2.5	46	90	3.5	6.9
Phase 3: Analyzing problems in the process	9	8	23	0.9	2.6	19	18	2.1	2.0	12	20	1.3	2.2	39	61	4.3	6.8
Phase 4 & 5: Social and Technical Re-Design	23	6	57	0.3	2.5	35	36	1.5	1.6	38	33	1.7	1.4	79	126	3.4	5.5
Phase6: Process Re-Generation	8	2	18	0.3	2.3	18	12	2.3	1.5	6	10	0.8	1.3	26	40	3.3	5.0
Phase6: Continuous Improvement	8	8	31	1.0	3.9	7	5	0.9	0.6	2	15	0.3	1.9	17	51	2.1	6.4

The detailed results show that culture has strong effects in following tasks:

Phase 1:

- Determine Project Scope

Phase 2:

- Select Re generation Team Members
- Allocate Resources
- Set Improvement Objectives

Phase 3:

- Capture Communications
- Identify Non Value Adding Activities
- Analyze Problem Causes

Phase 4&5:

- Develop New Process Ideas
- Generate Alternative Process Design Concepts
- Assess and Select Process Design Alternative
- Develop New Human Resource Architecture Ideas
- Design Sub unit/Team Structure
- Design New Jobs

Phase 6:
- Communicate with Stakeholders
- Assign New Jobs

Phase 7:
- Monitor and Evaluate Process Performance

The figure 3 shows effects of sub constructs on the implementation tasks. As it is shown in this figure "formalism in process and business planning" has most influences on implementation phases.
It should be noted that because the number of items which had been defined for each sub construct were different, the number of "D" and "I" has been divided into the number of items. It shows in average each item in first sub construct affects 5.7 tasks directly and 21.8 indirectly.

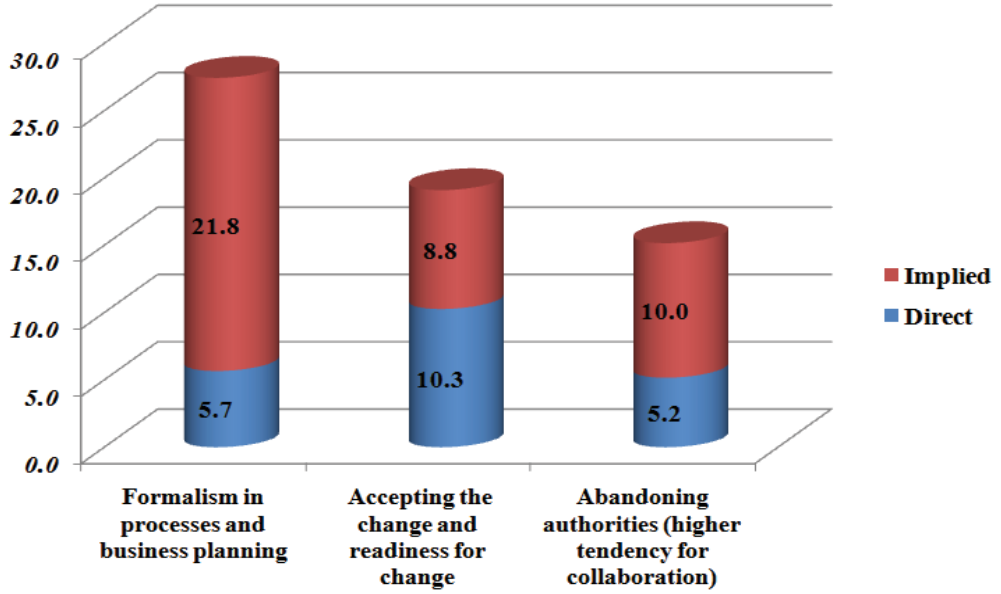

Fig. 3: The Sub Constructs effects

The detail results show that following items have more effects on the implementation tasks:
Sub construct 1:
- Formal documented business processes exists and is used in the organization.
- Detailed planning across all organization functions have been designed for the organization.
- There is a tendency of planning for future.
- There are documented procedures and policies that prevent from temporary ad-hoc decision making.
- Decisions are made based on information (facts) rather than management attitudes and opinions.

Sub construct 2:
- Management considers employees as a most valuable asset in the organization.
- Management is aware of expectations and issues important to the employees.
- Employees trust the managers.

Conclusion, Limitations and Outlook:

In spite of many research that have been mentioned culture as one of important success factors in Business Process Management initiatives, there are few studies which consider the way that culture affects the implementation. This paper is based on a study that tries to find out the culture effects on different phases of BPM implementation. In order to investigate the role of culture on implementation phases, a survey has been designed. The survey has been conducted between experts in BPM that had experience in BPM initiatives. The survey has been completed in two rounds, in the first round experts filled the survey and in the second round, different focused group have been hold in order to sovling the conflicts.

The culture items were extracted from the framework which were introduced by Alibabaei, Bandara *et al*. and S&A framework that were introduced by Kettinger and Teng were selected to determine the tasks related to the BPM initiatives implementation.

Results show that culture has strong effect on phase 2 and 3. And least effects on the first phase. Maybe the reason is because the first phase mostly related to the managerial decisions.

Between the sub constructs that have been used in this research, the first one which is related to the formalism in processes and business planning has more influences.

The most important limitations were related to the experts' selection and survey structure. In this study the experts were selected from number of people that authors knew and also most of the experts were from Iran, that Iran culture has influenced their answers. On the other hand, the survey structure was complex and difficult to fill that it made some people declined during the data collecting phase.

In order to overcome to the limitations, the survey should be simplified and also other experts participation from different communities should be seek. Furthermore, the result presented here can be further validated (and re-specified) with empirical evidence from case studies. In particular, the rich data from the case studies will also provide insights into how the factors interrelate to each other and how they differ across project and organisational characteristics.

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