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## **FACTOR EFFECTING ERP IMPLEMENTATION**

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### **Abstract**

Enterprise resource planning (ERP) is business process administration programming that permits an association to utilize an arrangement of incorporated applications to deal with the business and computerize numerous back office capacities identified with innovation, administrations and human resource management. This paper contains primary data that is collected from questionnaire using likert scaling technique. For the purpose of analysis descriptive statistics have been applied to collected data through Likert scaling from 140 employees of different organizations. Results have been organized on the basis of means average for every question with graphical representation of likert scale results for every question separately. Experience is most important with means score of 4.66 and only 1% people are disagreeing on this variable. The importance of user support could not be ignored as its mean score is 4.48 with 100% participant agreed upon this point. Redesigning the business process must be there as votes in this favor are 93%. This research seems that as it ignore the importance of cooperation between departments using ERP system. As 42% people are agreed on this point and 13% are strongly agreed, collectively 45% participants voted against the cooperation of departments.

**Key words:** Enterprise Resource Planning, User behavior, Management Support, Project Management and Business Process Reengineering.

## **Introduction**

Enterprise resource planning (ERP) is business process administration programming that permits an association to utilize an arrangement of incorporated applications to deal with the business and computerize numerous back office capacities identified with innovation, administrations and human resource management.

Notwithstanding, Ifinedo expressed that individual effect and hierarchical effect are unessential with regards to ERP frameworks (Ifinedo, 2007). In any case, the aftereffect of actualizing ERP does not generally demonstrate fruitful. Numerous studies were examined keeping in mind the end goal to decide components identifying with the disappointment of ERP frameworks at the different phases of ERP execution life cycles. A few organizations had introduced ERP frameworks, yet needed to surrender their usage. It is portrayed that a heap given of disappointment variables are poor innovation arranging, client inclusion and preparing, invades of spending plan and plan, and satisfactory aptitudes accessibility (Wright & Wright, 2002).

A couple of years ago, Information Technology (IT) and Information Systems (IS) assume an imperative part in business environment. As to developing worldwide rivalry, various best in class data frameworks have been produced. A large portion of these new frameworks are Enterprise Resource Planning (ERP) frameworks.

All the more comprehensively called enterprise framework and ERP frameworks intended to reassure both the utilitarian and operational procedures of the value chain of a firm, are business programming bundles that "guarantee the consistent incorporation of all the data moving through the company—financial and bookkeeping data, human asset data, production network data, client data" (Davenport, 1998; Ranganathan & Brown, 2006). ERP frameworks endeavor to coordinate all business forms into one undertaking wide answer for upgrade information homogeneity and joining of particular applications (Morris & Venkatesh, 2010). Immediately, a meant advantage of ERP frameworks is to streamline the work process crosswise over different offices, guarantee a smooth move and faster consummation of procedures, and empower all the between departmental exercises to be appropriately followed and none of them to be "passed up a great opportunity" gave that preparing all business demonstrations as per data handling (Rajesh, 2011).

Effective usage of ERP frameworks yields progressions in arranging, settling on choice, enhances the firm execution and makes open doors for development. ERP framework goes about as a compelling device that improves firm execution and manages a constant upper hand (Li, Liao, & Lei, 2006). In any case, numerous fizzled ERP framework executions might be ascribed to the determination of a wrong ERP framework or absence of the backing from partner related.

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*ERP System and Business Value*

The acronym ERP was designed in the 1990s by the Gartner Group as an augmentation of Material Requirements Planning (MRP), later Manufacturing Resource Planning (MRPII) and PC coordinated assembling (Gould, 2002). Be that as it may the foundations of ERP frameworks forerun from the 1960s on brought together processing frameworks like Inventory Control Packages and the late 1980s on big business data frameworks like MRP and MRP II (Rashid, Hossain, & Patrick, 2002). Without supplanting these terms, ERP accomplished speak to a bigger entire that mirrors the movement of utilization combination past assembling. While actualizing, ERP framework disperses a bound together database that incorporates all information for the product modules over a whole association. Therefore, clients in various divisions all see the same data and can upgrade it. In addition, that PC security is incorporated inside an ERP framework brings about ensuring against both untouchable and insider wrongdoing. Other than above points of interest, ERP frameworks, in any case, have their downsides that should be beat, for example, cost, mastery, adaptability and changes, particularly customization that is tricky.

ERP frameworks are embraced by associations to bolster an incorporated, bundled answer for their data needs. To date, earlier research contemplates have recorded blends proof on tending to the best basic variables for ERP tasks' prosperity. Variables which are one of a kind to ERP execution comprise of comprehension corporate social change, business process reengineering (BPR), and utilizing business experts on the undertaking group (Sumner, 2000). DeLone and McLean (2004) decided the components that may affect on the accomplishment of the ERP framework under six principle classifications to be specific framework quality, data quality, framework use, client fulfillment, singular impact and authoritative effect (DeLone & McLean, 2004).

*Research questions*

Which factors are most significant while implementing ERP?

To what extend user behavior is important while implementing ERP?

*Objectives of research*

The basic object of research is to find out the factors that mostly impact on implementation of ERP in an organization working in Pakistan. The primary objective of this paper is to conduct the consultants' interviews to obtain reliable and detailed information on the current status of ERP implementation. Firms in Pakistan face too many problems while implementing ERP in organization in Pakistan. Many organizations in Pakistan even do not know concept of ERP but number of organization trying to apply ERP systems, SAP and other data entry programs but they face problems. This paper identifies the most important factors that need solution to successfully apply ERP systems in any organization.

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### **Literature Review**

Difficulties of ERP usage implementing on ERP framework is not a modest or danger free wander. Truth be told, 65% of officials trust that ERP frameworks have no less than a moderate possibility of harming their organizations as a result of the potential for usage issues (Morris & Venkatesh, 2010). As per the Panorama Consultant's 2014 ERP report, just 63-percent of respondents consider their ERP venture a "win." Nearly one fourth of respondents are "unbiased" or "don't have the foggiest idea" if their task was a win, showing that associations won't not have made a business case, directed a post-usage review or imparted about undertaking comes about. About one in five respondents demonstrates that their association's ERP task was a disappointment (Ifinedo, 2007). Notwithstanding ERP's guarantees to profit organizations and a considerable capital venture, not all ERP executions have effective results. ERP usage regularly has postponed an expected calendar and invades an underlying spending plan (Rajesh, 2011). Moreover, the writing shows that ERP usage has once in a while neglected to accomplish the association's objectives and wanted results. The greater part of the explores reported that the disappointment of ERP executions was not brought about by the ERP programming itself, yet rather by a high level of multifaceted nature from the gigantic changes ERP causes in associations (Gould, 2002).

#### *Change management implementation*

Changes are really realized through usage of techniques. Kurupparachchi et al. (2002) inspected the achievement (and disappointment) components and execution philosophies that add to change administration methodology detailing in associations (Kurupparachchi, Mandal, & Smith, 2002). Kurupparachchi et al. (1999) broke down around 130 exploration papers to discover components impacting the implementation of ERP and new technologies to business. They ordered execution achievement components as purchaser's qualities, vender attributes, buyer-seller interface, and environment.

#### *Top Management Support*

Top administration support has been reliably distinguished as the most imperative and pivotal achievement component in ERP framework execution ventures. Characterize top administration to give the essential assets and power or power for task achievement. Top administration support in ERP execution has two primary features: (1) giving initiative; and (2) giving the essential assets. To execute ERP framework effectively, administration ought to screen the usage advance and give clear bearing of the undertaking. They should need to take into consideration an outlook change by tolerating that a great deal of learning must be done at all levels, including themselves (Sumner, 2000).

#### *Cooperation and organization*

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ERP cooperation and organization is critical all through the ERP usage venture. An ERP venture includes the majority of the practical offices and requests the exertion and participation of specialized and business specialists and in addition end-clients. As indicated by a review directed by ERP execution group involves, practical work force and administration, IT staff and administration, top administration, IT advisors, ERP merchant , guardian organization representatives, administration specialists, equipment seller. The ERP group ought to be adjusted, or cross utilitarian and include a blend of outside experts and inner staff so the inward staff can build up the important specialized aptitudes for configuration and ERP execution. As per review, having equipped individuals in the undertaking group is the fourth most imperative achievement component for IS execution. Further, the individuals from the undertaking team(s) must be engaged to settle on brisk choices (Rajesh, 2011).

#### *User Involvement*

Client contribution alludes to a mental condition of the individual and is characterized as the significance and individual pertinence of a framework to a client. It is likewise characterized as the client's interest in the usage procedure. There are two regions for client association when the organization chooses to execute an ERP framework: (1) client contribution in the phase of meaning of the organization's ERP framework needs, and (2) client support the usage of ERP frameworks. The elements of the ERP framework depend on the client to utilize the framework in the wake of going live, however the client is additionally a critical element in the execution (Li, Liao, & Lei, 2006).

#### *Business Process Reengineering*

Another essential component that is basic for the accomplishment of ERP execution is the Business Process Reengineering. It is characterized by as" the crucial reevaluating and radical overhaul of business procedures to accomplish sensational upgrades in basic, contemporary measures of execution, for example, cost, quality, administration and pace". Associations ought to will to change their organizations to fit the ERP programming so as to minimize the level of customization required. The execution of ERP requires examination of numerous business forms, which accepted to be one of the critical and advantageous consequences of the usage of ERP framework (Rao, 2009).

#### *User preparing and instruction*

In ERP execution process numerous undertakings fall flat at last because of absence of appropriate preparing. Numerous analysts consider clients preparing and training to be an imperative variable of the effective ERP execution. The fundamental explanation behind instruction and preparing program for ERP usage is to make the client alright with the framework and increment the aptitude and learning level of the general population. ERP related idea, components of ERP framework, and hands on preparing are exceedingly essential measurements of preparing system for ERP execution.

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Preparing is utilizing the new framework, as well as in new procedures and in comprehension the combination inside the framework – how the work of one representative impacts the work of others (Nelson & Somers, 2003).

#### *Project Management*

Project Management includes the utilization of abilities and learning in organizing the booking and checking of characterized exercises to guarantee that the expressed destinations of usage undertakings are accomplished. The formal venture usage arrangement characterizes venture exercises, submits work force to those exercises, and advances hierarchical backing by sorting out the execution procedure (Gupta, 2000).

#### *Successful Communication*

Correspondence is one of most difficult and troublesome assignments in any ERP usage venture. It is viewed as a basic achievement component for the execution of ERP frameworks by numerous creators. It is crucial for making a comprehension, an endorsement of the execution and sharing data between the task groups and imparting to the entire association the outcomes and the objectives in every usage stage. Notwithstanding picking up endorsement and client acknowledgment, the correspondence will permit the execution to start the essential last acknowledgment. The correspondence ought to begin right on time in the ERP usage extend and can incorporate diagram of the framework and the explanation behind executing it be predictable and nonstop (Davenport K. , 2011).

### **Research methodology**

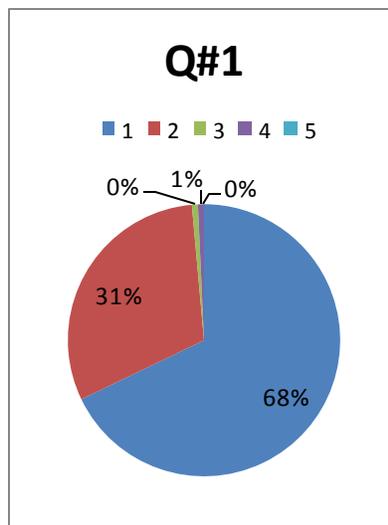
This paper contains primary data that is collected from questionnaire using likert scaling technique. Likert scaling provides options about views on a question. Options on a question contains strongly agree, agree, neutral, disagree and strongly disagree. Participant has to select an option to give his/her opinion on given question, this paper contains 7 questions those are most important for implementation of ERP. About 20 factors have been selected randomly, and these 20 factors were considered having effect on implementation of ERP. Discussion with professionals in Benzai Group limited (a group of seven companies) has been taken to select most important facts effecting the implementation of ERP in an organization. Employees of Benzai Group included from the age of 22 to 56 years of age. Total number of employees were selected from white collar category were about more than 200 from these seven companies group. Mostly employees have experience of working in more than one organization. From these 200 participants only 112 employees replied to the questionnaire seriously. All incomplete data from other employees have been rejected for research purpose. Total number of participants was taken up to 140 because 28 employees participated from Ahmad consultants and BB Chempack.

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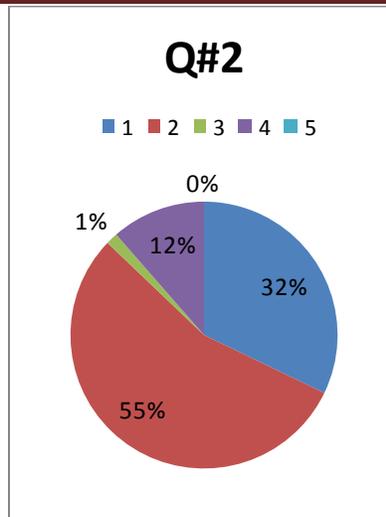
For the purpose of analysis descriptive statistics have been applied to collected data through Likert scaling from 140 employees of above mentioned organizations. Results have been organized on the basis of means average for every question with graphical representation of likert scale results for every question separately. These tools identify most important factors that become hurdles for an organization in a sequential manner of results presentations.

### **Analysis**

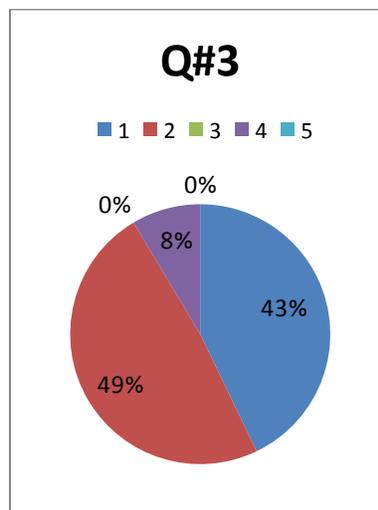
This portion contains the results of research after applying the statistical tools on primary data collected from likert scaling method. Question number one lights on the importance of experiences by asking “Experience effect on Implementation of ERP”. Going towards the mean average results, the average score of means in favor of experience is 4.66 out of 5. About 68% on strongly agree, 31% on just agree, So mean average score in case of experience is highest along with 99% people agreed on the importance of experience about implementation of ERP. Graph shows the results of average views upon each option.



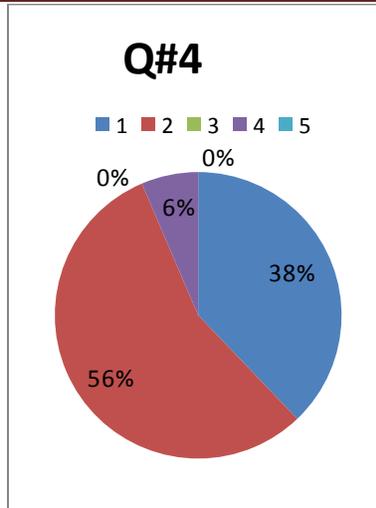
Going towards the question number two which states that Quality of hardware and software disturb the implementation. Upon this point we can say that mean score is 4.08 which is not good as compare to other variables that means other variables are more important than the quality of hardware and software. About 32% on strongly agree, 55% on just agree, So mean average score in case of experience is 87% people agreed on the importance of quality of hardware and software regarding implementation of ERP.



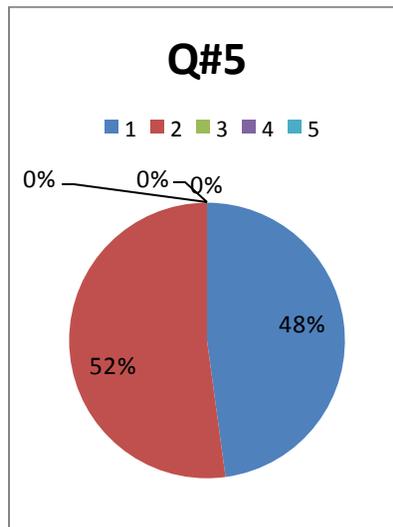
Question number three from questionnaire sheet that states that Top management support must be there for successful implementation of ERP. Only 8% viewers were disagreeing upon this point and mean score of this point is 4.26.



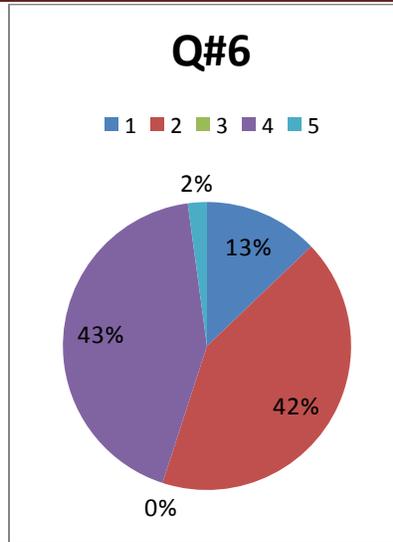
Studying the results of question number four we can see that 6% participant opposes this point of project management methodology's importance with mean score of 4.25, so there is no too much difference between the importance of project methodology and management support for implementation of ERP.



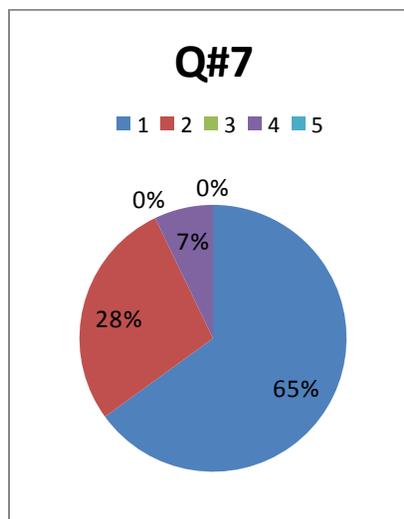
Surprisingly 100% participants think that the user support is most important to apply the ERP system for any organization in Pakistan.



This research seems that as it ignore the importance of cooperation between departments using ERP system. As 42% people are agreed on this point and 13% are strongly agreed, collectively 45% participants voted against the cooperation of departments.



On question number 7, only 7% people are disagreed on statement of redesign of business process, the mean score of this point is second highest having value of 4.51.



### Conclusion and recommendations

Analyzing the points regarding the important factors that must need a solution for successful implementation of ERP, here variables are categorized according to their importance based on this research paper. Experience is most important with means score of 4.66 and only 1% people are disagreeing on this variable. The importance of user support could not be ignored as its mean score is 4.48 with 100% participant agreed upon this point. Redesigning the business process must be there as votes in this favor are 93%. This research seems that as it ignore the importance of cooperation between departments using ERP system. As 42% people are agreed on this point and 13% are strongly agreed, collectively 45% participants voted against the cooperation of departments. Other points like project methodology, management support and quality of hardware and software lies

between having moderate importance. Suggesting to other researchers it could be said that there must be research on these issues discussed above. Before going to any other variables these variables must need solution in Pakistani organization.

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## Appendix

Questions	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Does experience effect on Implementations of ERP	68%	31%	1%	1%	0%
Quality of hardware and software disturb the implementation	32%	55%	1%	11%	0%
Top management support must be there for implementation of ERP	43%	49%	0%	9%	0%
Project management methodology must be in support of ERP	38%	56%	0%	6%	0%
To get user support	48%	52%	0%	0%	0%
Cooperation between user departments	13%	42%	0%	43%	2%
To what extent redesign of business process impact	65%	28%	0%	7%	0%

Q# >	1	2	3	4	5	6	7
<b>Mean deviation</b>	4.66	4.08	4.26	4.25	4.48	3.21	4.51
<b>Median</b>	5	4	4	4	4	4	5
<b>Mode</b>	5	4	4	4	4	2	5