2. LITERATURE REVIEW

Researchers Galliers RD, Baker BSH(1995) analyzed the current thinking on business process reengineering (BPR) is evaluated in the context of 4 schools of thought - classical, processual, evolutionary, and systemic - with respect to business strategy, with aspects of the management of change literature, and with concepts taken from the socio-technical and soft operational research (OR) traditions. Based on the latter, a means of undertaking BPR projects is proposed and illustrated by means of a case study. Inter alia, the centrality of information technology in BPR is questioned with greater emphasis being given to the identification of required information and an organization's ability to manage its information services[11].

Sampler, Jeffrey L, Short, James E (1994) found that an explanatory framework is developed based on 2 constructs - expertise half-life and information half-life. It is proposed that under certain conditions high project failure rates are associated with weak coupling between reengineering project objectives and the firm's general business and information systems planning agenda. Under other conditions, this weak coupling is associated with successful projects. By conceptualizing information technology's (IT) capability to destroy both tangible and intangible organizational assets in the explanatory framework, 2 central observations regarding strategic assets, IT, and process reengineering are arrived at: 1. IT's capability to destroy tangible as well as intangible assets suggests a far more dramatic and complex role for IT in the development of core competencies in the firm. 2. Reengineering efforts that do not acknowledge the important difference between restructuring physical assets and rethinking the flow or characteristics of intangible assets increasingly are incomplete.[12]

G.M. Giaglis, R.J. Paul, R.M. O'Keefe (1999) inherent the interrelationships between business processes (BP) and the underlying information technology (IT) infrastructure imply that the design of these two organizational facets should be performed in parallel, this does not seem to be the case in practice. For example, simulation is being extensively used in both the BP and IT domains, albeit in a disjointed fashion. This paper investigates the potential of integrating different simulation models to facilitate concurrent engineering of business processes and information technology and to support the process of investment evaluation. Drawing on the findings of an example case, a number of pertinent issues are identified and future research directions towards the integration of simulation usage in the business domain are discussed.[13]

Maull, R S, Weaver, A M, Childe, S J, Smart, P A, Bennett (1995) found that the results of empirical research into issues faced by 25 companies undertaking business process re-engineering (BPR) programs are presented. The research team sought to understand the BPR phenomenon through visits to 21 leading practitioners and four in-depth case studies. The research indicated that 6 key issues affect the way in which BPR programs are carried out, namely the nature of the change proposed (radical or incremental), the performance measures applied during the program, the impact of information technology, the impact of human factors, the presence or absence of a process architecture and the link between BPR and strategy. The outcome of this research has implications for both practitioners and researchers.
Where practitioners are concerned, the conventional, step-by-step BPR methodology should be amended to take into account these 6 issues more fully. For researchers there is a need for substantial research into good practice in BPR in each of the 6 areas.[14]

Namchul Shin (1999) analyzed the use of information technology (IT), organizations radically redesign their business processes and improve their business profitability and productivity. Previous information systems (IS) research has investigated whether or not IT improves business profitability and productivity. However, most of the previous studies failed to consider any contextual or moderating factors that might affect firm performance and productivity. Because it is intangible and intermediate benefits, e.g. better coordination, quality improvement, increased variety, and innovation, complicate the justification process for IT investments, this paper empirically examines the direct relationship between IT and coordination. The results of this study clearly show that IT spending is strongly associated with a decline in coordination costs. From the results, it can be inferred that IT enhances coordination of economic activities by reducing coordination costs, and thereby can improve firm performance and productivity.[15]

Peng S. Chan and Carl Land (1999) found that the US management has bought into the idea that radical change may be their only hope for survival in the competitive environment of the 1990s. From failing companies on the brink of bankruptcy to solid corporations interested in achieving better performance, these hopes are found in a concept called reengineering. Much has been written about reengineering and the methods by which companies can achieve success. However, it is important for companies to understand the critical role interdependence plays between technology, practice, and strategy. For IT to improve business processes successfully, communication, coordination and understanding are required. When managers have a better understanding of the problems facing IT, as well as the tools which can help promote internal process change, then the corporation can dramatically improve its chances for achieving reengineering success.[16]

Sam Lubbe, Dan Remenyi (1999) found that the approach and identifies the assessment of the effectiveness of IT investment used by organizations. The research began using the case study method to collect evidence and then content analysis was employed to analyze this evidence to identify empirical generalizations and thus develop a theory of IT investment, IT investment evaluation and IT benefit identification. Correspondence analysis was used on the case study data as one step in establishing the theory. A focus group was used to present the relevant theory and the models that were created. Finally, the practical management guidelines suggested by the research and the models and content analysis figures were presented to practitioners as a cross-validation process and the results reported. The results of this research are an objectively developed theory of how IT investments are formulated and evaluated and how IT investment benefits are identified.[17]

O Connell, Sandra E (1994) found that the process re-engineering, human resources (HR) is discovering an entirely new role for technology - as the enabler of fundamental change. The re-engineered HR department at Lotus Development takes advantage of client-server technology, graphical-user interface, voice response and Lotus Notes. Employees can initiate
address changes, enroll in benefits, and get needed forms at their own PCs. The HR staff was reduced to 42 employees from 56 because the nature of the work changed as well as the workload. Hallmark Cards identified changes to HR/payroll processes with an annual cost savings of $260,000. Hallmark now sends paychecks to the employee's home. Innovative companies have 4 common attributes: 1. commitment to innovation, 2. shift in the focus of HR, 3. willingness to commit resources, and 4. technical infrastructure. While the technology appears to be the most daunting aspect of re-engineering, HR professionals will discover that the real work is to define the problem, develop and sell the solution.[18]

Hoplin, Herman P. (1995) found that the need for reengineering information systems in a rapidly changing environment and the urgency of doing this to meet current and future needs of organizations whose existence is dependent on coping with rapidly changing requirements are addressed. Implicit in this view is the need for restructuring the industry to meet new applications including the creation of software for an era that has not quite arrived. The interdependence of technical, organizational, and human aspects in the integration of a broad range of new methodologies and tools needed to create software for the balance of this century are stressed. Reengineering is the examination and alteration of a system to reconstitute it in a new form and the subsequent implementation of the new form. The major management alternatives or options with particular focus on functional and information managers and their organizations are examined.[19]

Petra Schubert, Susan P. Williams (2011) Purpose - Identifying the benefits arising from implementations of enterprise systems and realizing business value remains a significant challenge for both research and industry. This paper aims to consolidate previous work. It presents a framework for investigating enterprise systems benefits and business change, which addresses the identified limitations of previous research and provides a more detailed analysis of benefits and their contextual variation. Design/methodology/approach - Drawing on data gathered from 31 real-world organizations (case studies) of differing size, maturity, and industry sector, the study adopts an iterative content analysis to empirically derive a comprehensive benefits framework. Findings - The content analysis provides a detailed classification of expectations and benefits, which is described in a four-level framework. The four levels (areas) are further subdivided into aspects and criteria plus an attributed appraisal value. The resulting scheme for the "three-level benefit codes" provides a greater level of detail about the nature of expected and realized benefits. Practical implications - The high level of detail and the code scheme comprising 60 different codes and the method for deriving the codes allows companies to identify and define benefits as well as to assess the outcome of enterprise systems implementation projects. Originality/value - The paper empirically develops an applicable benefits framework, which addresses the lack of detail of previous frameworks.[20]

Alan Bowling (2009) found that the IT department is ideally placed to become the custodian of business processes as it understands how different parts of the company fit together and run. This means that the role of the IT department will change significantly. It will be able to use its knowledge of technical and business processes and how they fit together to influence how processes and services can be streamlined[21].
Bill Gates (1994) found that the empowered individuals and self-managed teams created by business process re-engineering need sophisticated computer systems. To solve customer problems and respond to local requirements, empowered individuals need to be able to build and modify procedures quickly and easily. The concept of Information At Your Fingertips (IAYF) is the key to making re-engineering practical and to building the base for the next big wave of growth in the PC market. Servers in the 1990s will make true IAYF possible by providing shared, friendly access to up-to-the-minute organizational data. These servers will allow not only information access, but even local customization of business procedures. [22]

Ghassan Aouad, Michail Kagioglou, Rachel Cooper, John Hinks, Martin Sexton (1999) found that the development of many technological advances in the construction industry. At the same time, IT has been perceived as a driver for many of the construction business and operational processes. The 1990s have seen a technological shift in the construction sector from IT driven solutions to IT enabling ones. The industry, however, has become frustrated with the failing of IT as many companies have invested in the wrong technologies without addressing business needs. This is now being rectified by developing IT systems that support business processes taking into account process, people and cultural needs. This paper describes how IT systems are being developed within a major EPSRC (Engineering and Physical Sciences Research Council) funded research project in order to help the construction industry develop feasible technological IT solutions. This is achieved by considering the co-maturation of processes and IT within the context of process improvement. [23]

Victoria L Mitchell; Robert W Zmud (1999) found that the organization adoption to competition often means inventing or adopting a process innovation and daunting challenge of implementing. Increasingly, process innovation rely on the capabilities embedded in an organization’s IT infrastructure, successfully implementing an IT enabled process innovation depends largely on how a project’s IT and work process design fir and evolve with this IT infrastructure. [24]

Elena Ramona STORIE, Alina Cristina RUSU (2011) found that today’s economic context, organizations are looking for ways to improve their business, to keep head of the competition and grow revenue. To stay competitive and consolidate their position on the market, the companies must use all the information they have and process their information for better support of their missions. For this reason managers have to take into consideration risks that can affect the organization and they have to minimize their impact on the organization. Risk management helps managers to better control the business practices and improve the business process. [25]

Dr. Badrodin Orei Yazdani, Dr. Habibollah Salarzehi, Mohsen Shahbeigi (2011) found that the economic-social evolutions in recent decades at the world have forced the customs as general reconsidering their own situations, functions and traditional roles; they obtain the required preparation to accept the new responsibilities. Concentrating to the determining roles and effects of business particularly external trade in achieving of a permanent and all-directions development at the our country, the important function that the customs are accountable in providing of necessary fields in order to access development, is understandable. [26]
Javier García Guzman, Hugo A. Mitre, Antonio Amescua, Manuel Velasco (2010) found that the strategic management is a key discipline that permits companies to achieve their competitive goals. An effective and explicit alignment and integration of business strategy with SPI initiatives based on measurement is essential to prevent loss of income, customers and competitiveness. By integrating SPI models and measurement techniques in the strategy management process, an organization’s investments will be better aligned with strategy, optimizing the benefits obtained as a result of an SPI program. [27]

Mario Caldeira, Gurpreet Dhillon (2010) found that the purpose of this paper is to present organizational competencies for gaining information technology (IT) benefits within organizations. Following the analysis of 16 in-depth case studies, a set of six high level, fundamental competencies and 17 facilitating competencies are identified. A framework for orchestrating the organizational competencies is also presented. The results of this research would be useful to academics in developing measures for assessing the level of organizational competence and for practitioners in identifying and nurturing competencies for organizational benefits realization.[28]

Ahmad Sobhani, Mohammad Taghi Hamidi Beheshti(2010) found that the Proving business value of Information Technology on organizational productivity has caused contradictory results in studies. Incorporated IT with complementary investments in business activities extend its contribution to overall companies’ performance. The association of IT and Business Process Reengineering constitutes opportunities to demonstrate the impact of IT investment on productivity. This paper employs econometric technique assessing the impact of IT investment on productivity at Telecommunication Company of Tehran. IT investment verifies its positive involvement with TCT economic indicators while the status of BPR factors expose the potential of reengineering in enhancing the value of IT contribution in an effective approach.[29]

Enrique Castro-Leon and Jackson (2009) found that the alignment of information technology and business has shifted significantly since computing mainframe era. The high costs of mainframe technology meant that only the largest organizations could afford it, and applications were relatively few. Business was expected to adapt to the technology. At the same time, the Web emerged as an entirely new kind of link between businesses and customers—a link demanding applications that could deliver customer services directly and fast.[30]

YA-CHING LEE, PIN-YU CHU, HSIEN-LEE TSENG (2009) found that the study investigates the impacts of information technology on business process reengineering from intra- and extra-organizational perspectives. This research proposes a framework for facilitating business process reengineering efforts towards competitive organizations. The framework was tested using data from a sample of 382 chief information officers or senior information systems managers, each of whom completed a survey. The survey results indicate that organizational innovation, market pressure and competitive intensity positively affect information technology adoption, which in turn trigger changes or business process in terms of workplace, workforce and business structure. [31]
Cosmin TOMOZEI, Marius VETRICI, Christian AMANCEI analyses the effect of applying the core elements of software engineering and reengineering, probabilistic simulations and system development auditing to software development projects. Our main focus is reducing software development project duration. Due to the fast changing economy, the need for efficiency and productivity is greater than ever. Optimal allocation of resources has proved to be the main element contributing to an increase in efficiency.[32]

ALES GROZNIK, ANDRES KOVACIC, PETER TRKMAN (2008) found that the transition to e-government is not a simple introduction of information technology. It requires a radical change of the ways and mechanism of operating the administration which means a major business process change. Therefore business renovation is a prerequisite for successful information. This paper develops a possible approach to modeling, renovation and informatization of the business process in the order to achieve efficiency, effectiveness and data quality improvement.[33]

Alan Eardley, Hanifa Shah and Andrea Radman (2008) found that the extensive literature on business process management suggests that organizations could enhance their overall performance by adopting a process view of business. However, there is a lack of empirical research in this field. The purpose of this paper is to investigate the understanding of the process view and process maturity levels in a transition economy and to test the impact of process orientation maturity level on organizational performance.[34]

Jacobs (2008) found analyzes the tasks performed under the ENCORE II contracts will include enterprise IT policy and planning, integrated solutions management, performance benchmarking, business process reengineering, requirement analysis, market research and prototyping, information and knowledge engineering, custom application development, product integration, test and evaluation, asset management, communications engineering, security engineering certification and accreditation, telecommunications support, computer-telephone integration, web services, hardware and equipment when such items are incidental to the overall IT solution, software applications and licenses, and managed services.[35]

Ronald Ramirez, Nigel Melville, Edward Lawler(2010) examining synergies between information technology, process redesign, and firm performance in three ways: analyze a firm's entire IT and BPR portfolio, examine production and market value performance implications, and conduct analysis using a unique dataset of 228 firms between 1996 and 1999. We find a contingent association between IT, process redesign, and performance. The interaction of IT and BPR portfolios is positively associated with firm productivity and market value. However, we find mixed evidence of a difference in these impacts across different types of BPR. Insights for business investment in IT and process redesign are discussed.[36]

[Maria Aiello, 2007]: found that any process changes in today's business environment could be satisfactorily accomplished without being accompanied by technology improvements. However, the technology must be introduced in collaboration, with business value attached to the process improvement, supported by the appropriate stakeholders. There needs to be a plan that says process must be stabilized before you introduce any degree of automation -
understanding that automation will only be done to improve the process; we're not going to introduce bells and whistles without business justification. [37]

Meridith Levinson (2006) found that the business process improvement has a new name, business process management, and is in vogue again. Spurred by the pressures of global competition, commoditization and government regulation, American companies are reexamining their business processes in search of more efficient ways to execute them through automation or even outsourcing. Companies again see business process management (BPM), the practice of continually optimizing business processes through analysis, modeling and monitoring, as a systematic approach for solving business problems and helping them meet their financial goals. [38]

G Di Vitantonio, J Legh-Smith, W Millar and M Wilkinson (2006) found that the information and communications technology infrastructure can be used by businesses in a much more flexible and dynamic manner allowing elements of the infrastructure to be dynamically allocated to business processes as they are needed. This has the effect of increasing the efficiency of the underlying infrastructure and making better use of the available resources. Some challenges still remain, however, in linking the performance of the underlying infrastructure to the business objectives. In order to provide this linkage, there is a need to integrate the control of all the elements (from network to application) in the infrastructure. This integrated monitoring and control is still at an early stage of maturity.[39]

Moheson Attaran (2003) found that the business process redesign and information technology are natural partner, yet this relationship has not been fully exploited. Those organizations that have been used information technology to the reengineer processes have benefited enormously. This article argues that those aspiring to do business process redesign must begin to apply the capabilities of information technology. Process redesign is not always successful and always accomplished by pain or at least unpleasant side effects. Many companies have undertaken re-engineering effort only to abandon then with little or no positive effect. [40]

Mike (2003) analyzes that the automation of information technology in an organization’s current business process. Unfortunately it is usually a perfect flawed business process that gets automated. An organization’s business processes are very complex, spanning different department, offices, and even outside partner’s processes. The benefit of the automating a set of activities can never come close to the benefit of an improved overall business processes. Full blown business process reengineering is not always necessary or possible, but simplification of business process must always take place before any investment in IT, since IT is always part of solution.[41]

John Hinks (2002) analyzes the development of virtual working practices heralds a technology – lead revolution in the way of working for some type of business. For those which adapt successfully, this paper to offer potential of virtuous circle of process effectiveness and efficiency. For the laggard business there could be risk of an increasing unbridgeable technology gap leading to rapidly outdated business processes plus the prospect of cavernous re-engineering tasks.[42]
Erik Chabrow, David M Ewalt (2002) focuses on the importance of changing business process to get full value out of IT investment is a concept that have been floating around for years, but it is taken on a new and border urgency in the current economy. The huge investment in the internet technology in recent years, the demand for more real time information, the tighter collaboration among business partners to cut cost in a down economy all have IT buyers and sellers talking the same language in business processes.[43]

Leslie P Willcocks (2002) analyzes the many large claims have been made about the payoffs that can and must be made from business process reengineering (BPR). Information technology is usually ascribed a critical role in BPR success. There is still a shortage of detailed information on the BPR phenomenon in terms of costs and results. This paper uses data from 168 UK-based organizations surveyed in the BPR heyday (1994-1996 period) to establish the size of expenditure, types of costs, and the types and size of benefits anticipated and experienced among these organizations. [44]

Majed Al-Mashari (2002) focuses on business process management and its role in enterprises and organizations. It requires necessitates, the availability of skillful and knowledgeable people who can understand and work with different business processes. An others challenges would be related to globalization demand for extending business boundaries across geographical area where more customers in the different locations have to be satisfied in the same way, despite their cultural backgrounds.[45]

Majed Al-Mashari; Zahir Irani; Mohamed Zairi (2001) analyzes the despite of wide spreads adaption of business process reengineering (BPR), it has in many cases of repeatedly failed to deliver its promised results. The lack of integrated implementation approach to exploiting BPR in seen as one of the literature remains the scarcity of suitable models and framework that address the implementation issues surrounding business process reengineering.[46]

Jean-Pierre Kuilboer and Noushin Ashrafi analyzes the successful implementation of information systems (IS) is an essential part of executing new business strategies. Yet, IS development projects are most susceptible to fail. According to a report by the Standish Group 42% of IS projects are canceled before completion. This case addresses many of the causes of IS project failure. It is based on an information system redesign project undertaken by a state social services agency. The Project aims at automating the welfare system and providing mission-critical applications to the social workers in the field and federal subsidies distribution.[47]

John Tillquist (2000) found that the organizations are continually influenced by notions of management promoted through broadly held visions of management practices. These notions often incorporate models that generally prescribe information technologies as enabling agents for directed organizational change. Such concepts reflect highly cohesive, self referential system of beliefs, goals, and rules that structure perspective about computerization and work in organization. To achieve “break through” changes in efficiency, performance, or competitive advantage, organization must translate these high concepts into specific model of change appropriate for their organizational context.[48]
Tom Andriola (1999) found that the information technologies (IT) is driving change throughout organizations changes in what we do, how we do it, with whom we do it, and tools we use to get it done. The massive investment in IT is leading organizations to make fundamental changes in the way they run their businesses and ultimately they think about their businesses. [49]

Varun Grover; Kirk D Fiedler; James T C Teng (1999) found that the business process reengineering (BPR) has been a major catalyst of the pervasive organizational change we have witnessed over the past decade. Although we can speculate on the reasons for the popularity of this phenomenon, it is important that we carefully examine its underlying antecedents for initiation, implementation and ultimately success, if we are to add value to practitioners of this concept. This study empirically examines the importance of facets of the organizational structure, IT knowledge resources and infrastructure, and IS function in the initiation of BPR. [50]