IT Outsourcing in the Face of Global and Technology Challenges

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INTRODUCTION

IT outsourcing is facing numerous challenges that emanated from not only socio-political and economic imbroglo but also from the race in technology novelty. This has made refocusing, re-analysing, re-engineering and re-assessing to become major challenges facing IT outsourcing drive in the current millenium. Do It Yourself (DIY) has become a syndrome in organisations, this has posed unprecedented challenge to IT outsourcing drive. Therefore this article provides a comprehensive and pragmatic definitions to IT outsourcing from the perspective of socio-political economic reality in line with the 4Rs Matrix (Refocusing, Re-analysing, Re-engineering and Re-assessing).This study provides related definitions such as Shared-Service outsourcing, In-sourcing, Eco-sourcing and offshore. By relating all these terms to 4Rs, a new dimension to IT outsourcing definition emerges from socio-political economic outlook of IT outsourcing based on previous studies conducted by the authors.

BACKGROUND

Outsourcing is complex, time-consuming, and at times even a career-killer. There is no single approach to outsourcing that will guarantee success. Every situation is unique in one way or another (Pepple, 2011). This complexity seems responsible for numerous project failures recorded. Therefore, one must understand the seven deadly sins underlying most failed outsourcing efforts, of which is outsourcing activities that should not be outsourced (Barthélemy, 2003). Though ITO has experienced a rapid growth since early 1990s in developed countries, this growth did not come by without any challenge. The continous drive for greater efficiencies and cost reductions has forced several organisations to increasingly specialise in a limited number of key areas, thereby outsourcing the potential problematic and challenging areas. A critical analysis of these challenges redirects this research to Refocusing, Re-analysing, Re-engineering and Re-assessing (4Rs). The sluggish and nose-diving economic growth of some developed countries, which has cumulated into industrial layouts at an accelerating speed, has brought several transnational corporations (TNCs) to be increasingly "refocusing, re-analysing, re-assessing and probably re-engineer their operations (Shittu, et al., 2012, Jing & Jian, 2010). These 4Rs measures are equally applicable to public and private information technology outsourcing practises.

Previous studies had shown that some developing countries such as India, China and Mexico are experiencing economic buoyancy due to effect of ITO (Jiang, 2009; Shittu & Adedokun-Shittu, 2011). Across organizations, ITO has been identified as one of the best practices for the management paradigm shift (Lin et al., 2011; Shittu et al., 2011; Ahlan & Shittu, 2006). It is one the matured business strategies used for more competence in the new organization system (Archstone, 2011).

ITO can equally minimize the costs and increase efficiency and flexibility of organizational business operations. However, vendors need to focus on services level target but equally the cost, security, arrangement and of course quality of service (Anderson, 2011). This means that vendors need to view ITO from wider perspectives such as Business operation, and Logistics system. This holistic view of ITO can be achieved through a strategic outsourcing where companies outsource everything except those core activities in

which they could achieve a unique competitive edge (Franceschini et al., 2003). Either the outsourcing activities are executed by the client "*Capacity Outsourcing*" or the outsourcing activities are no longer pursued by the client "*Non-capacity Outsourcing*" the ability of the organisation to correctly apply 4Rs would determine the outcome of outsourcing arrangements (Fill & Visser, 2000).

OUTSOURCING FRAMEWORKS

Early prescriptions on the outsourcing decisions tend to focus on outsourcing in a manufacturing context - the classic make-or-buy decision by using quantitative models to evaluate the decision and the Transaction cost economics as the yardstick (Sachdeva & Bello, 2013). Proponents of approaches influenced by the transaction cost perspective argue that the optimal sourcing option will be chosen on the basis of transaction (McIvor, 2008). The skewing of outsourcing decision towards cost as sole determinant, has raised some challenges, as it is obvious that scanty attention were given to how the decision impacts the overall business strategy of the organisation (Baden-Fuller et al., 2000; Shittu & Adedokun-Shittu, 2011).

In reaction to this transaction-cost-skewed development, a number of frameworks that were proposed later in the literature have focused on the strategic implications of the outsourcing decision (Roy & Aubert, 2002; Insinga & Werle, 2000). This later metarmophisised

into core competence approach in determining which between processes that should be kept in-house and outsourced.

McIvor (2008) identified that the existing frameworks shows that there is lack of a structured approach to outsourcing, which is clearly underpinned by antecedents of both. The Cost Economies the Resource-Based View. Suprisingly, some authors have found both capability considerations and factors such as asset specificity and the threat of opportunism are present in outsourcing practice (McNally & Griffin, 2004; McIvor, 2007).

In Figure1, the researcher realized the interdependence of factors such as ITO Policy; Mutual Trust and ITO Service that none of these factors could independently lead to ITO success. Therefore, he proposed a performance and outcome-based pricing model which was tested among some ITO Vendors. He claimed that this model is in response to the Fleming (2007) call for new ITO model while Currie and Parikh (2007) advocated for ITO model built around flexible pricing model, partnership, etc. These and other emerging models propelled the need for a matrix-based model, that enables organisations to compare and constrast their organisational needs, value and expectations from outsourcing.

Anderson and Parker (2012) further reiterated that "each firm's tasks cannot be executed in isolation but instead must be tightly coordinated in order to ensure product success" this call supported the earlier Fleming's (2007) call for new ITO model.

Figure1. Performance and outcome based ITO model (Shittu, 2009)
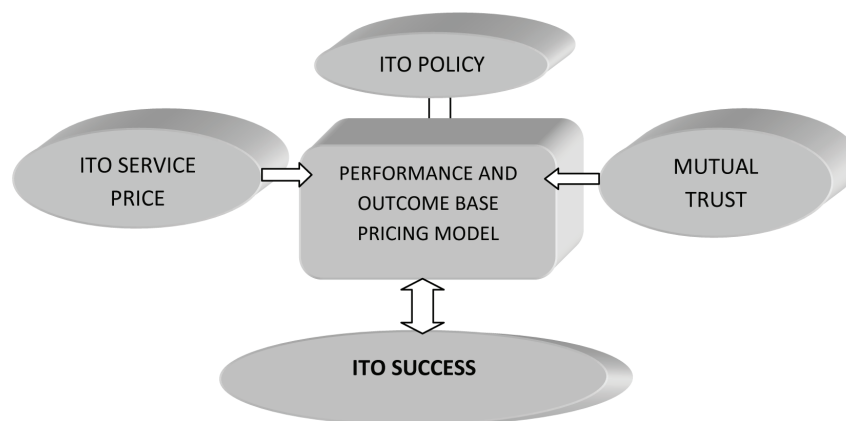
4RS: AN OUTSOURCING FRAMEWORK

Several frameworks have been postulated for oursourcing, in 2011, Pepple suggested a "high-level five-step continuum for the assessment, contracting, transformation, transition, and management of the outsourcing process." According to him, the framework "provides all major phases and processes of outsourcing are addressed. At the sametime, he identifies any gaps or missing processes that need to be included for proper planning of an outsourcing engagement. Figure2 depicts Pepple (2011) outsourcing framework.

Though Pepple asserts that the key to success is preparation and experience, however, these two items alone cannot guarantee success, especially when dealing with outsourcing that is constantly and consistently unstable. This and some other factors made the authors to look at outsourcing from the 4Rs perspective. For instance, in the Table 1 below, a matrix of Pepple's outsourcing framework and Shittu's 4Rs were used in determining whether a particular outsourcing deal should be accepted or not. This matrix is not applicable only to the ITO vendors but also their clients.

Relationship between Refocusing and Assessment

The first thing for an organisation is to understand why they want to outsource, what it is they are trying to accomplish through outsourcing and whether outsourcing is a strategic or tactical decision for the organisation. Therefore, their business needs, mission and key objectives should be clearly defined and at the sametime benchmark their current process not only with organisation current performance but also the future expectation. In that sense, a negative relationship between refocusing and assessment will spell doom for the outsourcing move, while the positive relationship between the duo factors will contribute in solidifying the current status and generate an amiable environment for the business in future

Relationship between Re-Analysing and Assessment

The future of any organisation lies in their present practices, that is, a proper understanding of an organisation critical success factors from SWOT

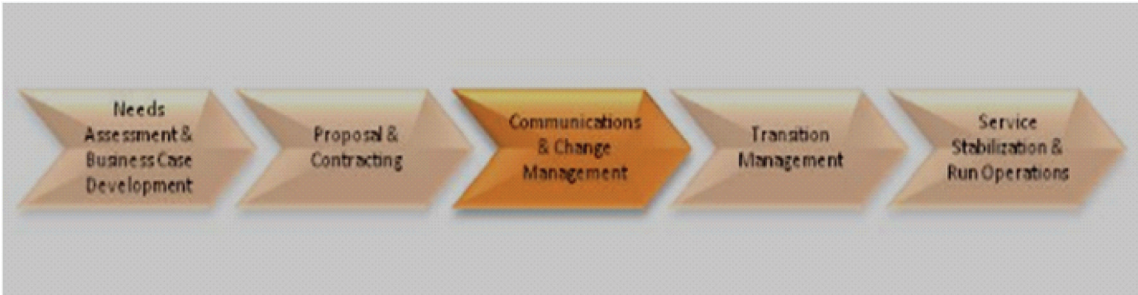*Figure 2. Olen Pepple outsourcing framework (2011)*

Table 1. Shittu matrix table for outsourcing

	Assessment	Contracting	Transformation	Transition	Stabilization
Refocus	X	X	X	X	X
Re-analyze					
Re-engineer					
Re-assess					

analysis perspective would enable them to understand the current status of their activities and service level measurements. Organisation needs to internally audit itself beyond Dollars permutation in order to be able to review future service and delivery options. Though expenditures and incomes should be looked into from sustainability perspective. This will enable the organisation to avoid being ensnared by past failures and create competitive advantage

Relationship between Re-Engineering and Assessment

Recent studies in Germany have shown very clearly that the impact of new business formation on regional development is distributed over a longer period of time (Fritsch & Mueller, 2007). Therefore organisations need to develop unique business case for corporate social responsibility (CSR). The business case refers to the underlying arguments or rationales supporting or documenting why the business community should accept and advance the CSR 'cause. Therefore, CSR must align with business sponsor (Carroll & Shabana, 2010). Outsourcing has generated outcry over the increase of unemployment in certain region due to offshore-sourcing activities. Business should look into possible medium cause that benefit both in-bound and out-bound sourcing destinations. They should be ever ready to investigate implications of assessment

Relationship between Re-Assessing and Assessment

The process of assessment itself needs to be re-assessed in order to be aquinted with the risks related to outsourcing. Bear in mind that, the risk associated with outsourcing can offset the often more publicized benefits (Welborn, 2007). He said further that:

Sometimes the risk doesn't pay off. Some U.S. companies have joined the outsourcing trend only to be disappointed in the overall net effect on business operations and eventually returned jobs back to the United States.

As Welborn (2007) considered analyzing the risk associated with a supply chain and outsourcing is a relatively new subject, and that little research has been done, similar opinion is applicable to several

other business activities. Most of business risk analyst considered documenting and analyzing risk is an essential element to continued learning and process improvement. Therefore, it is critical to have an easily understood method to identify and manage risk, in other word, creating a mitigation plan. This can be done by firstly identifying risk categories along with potential risks, then rate the opportunity, probability and severity for each risk.

Proper analysis of outsourcing risk would enable organisation to define strategy for service delivery alternatives such as insource, nearshore, multi-shored delivery, or combinations of any, etc. At this juncture, another 4Rs Matric can be deploy in assessing feasibility of service delievey options. Figure 3 represents 4Rs as continously rotating factors that should be considered for any outsourcing deal.

Refocusing Outsourcing

'Put again into focus or focus more sharply' is how wordweb dictionary (2012) defines refocusing. This aspect emcompases policies, strategies and frameworks sorrounding ITO. Lin et al., (2011) submitted that the largest influence on outsourcing comes from policy factor in the undertaking country, followed by technical factor and industrial factor. They however recommend that for a country like China to maintain its competitive edge it needs to refocus outsourcing especially on

Figure 3. Shittu 4Rs outsourcing frameworks
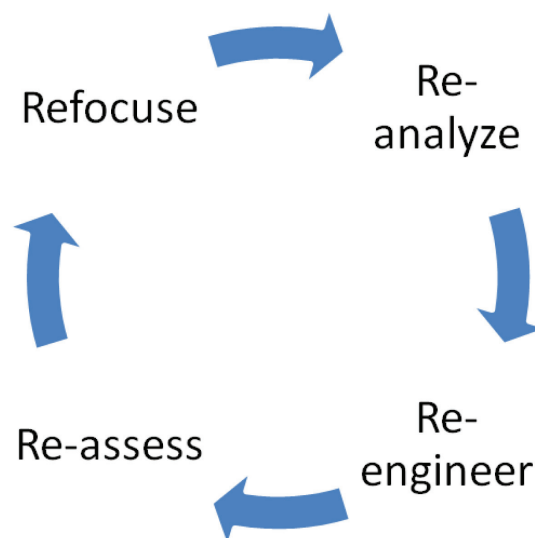
transnational corporations TNC's service outsourcing policy. Therefore it should consider adoption of "Best practices which dictate that a policy be implemented and enforced that details the terms of the outsourcing relationship (Instant security, 2012).

Information Technology Outsourcing Policy outlines the organisation or state's policies on using external vendors or consultants, or managed service providers to handle certain functions of IT. This includes and not limited to the decision to outsource, evaluation of outsourcing providers, and security controls/risks associated with outsourcing. As much as outsourcing is a logical practice which required specialized expertise due to frequent occurence in the field of Information Technology (IT),." information security incidents such as inappropriate access to or disclosure of sensitive information, loss of intellectual property protection or the inability of the outsourcer to live up to agreed service levels, would reduce the benefits and could jeopardize the security posture of the organization" (Implementers' Forum, 2008).

Despite the considerable risks inherent in outsourcing business-critical technology, Polaris was found to be achieving business advantage by adopting refocused outsourcing strategy (Willcocks & Lacity, 1999)

In an attempt to fuse some previous researches conducted by Shittu, et al., (2012) and Shittu and Adedokun-Shittu (2011) where effects of government policies on ITO put under scrutiny, five questions emerged during the interview sessions with identified organisations. Information technology outsoucing policy were viewed from the spectrum of "Re-focusing" and questions focus on relationship between ITO incentives and government policy, whether the current government policy could lead to refocused and amiable ITO or not, effectiveness of government policy on ITO, and obstacles emanating from government policy on ITO.

Re-Analysing Outsourcing

Numerous failures has been recorded on information technology outsourcing dealings, this development has led to countless calls for proper and comprehensive analysis of ITO contracts. A massive wave of outsourcing has been blowing for the past few years even a decade, such as London Olympic outsourcing and State of Indiana versus IBM cases among others, (Nicolle, 2012). Some if not most of these outsourcing deals were done in a hurry or under duress, some projects

were executed poorly or inappropriately. The collapse of global financial markets fueled many outsourced projects, and has equally provided a massive test environment to find out what works and what does not.

This test environment leads to re-analysing outsourcing deal mostly in the four corners of court rooms. where former business partners are arguing over who was at fault for the failure." An excellent example of this is the $1.4 billion contract between the State of Indiana and IBM, which the siting judge declared that "Neither party deserves to win this case. This story represents a 'perfect storm' of misguided government policy and overzealous corporate ambition. Overall, both parties are to blame, and Indiana's taxpayers are left as apparent losers." Judge David Dreyer

Intensive effort and comprehensive planning were absolutely required in order to overcome difficult problems. Problems must be identified from the bud and resolved, in this process the outsourcing agreement should be re-analysed and probably lead to project refocusing, that is creating a new plafform or policy for the project. This does not apply to failed projects alone, a routine project re-analysis could safe billions and time therefore, ITO parties should not wait too long for moment where the matter is past resolution.

Re-Engineering Outsourcing

Several IT companies have formed strategic alliance or partnership between IT and non IT-based companies (Sauer & Willcocks, 2004: 3). This arrangement positioned such IT vendors in the board of the allied or partnership companies. Such alliances and partnership arrangement are mostly based on long term strategic relationship which involves long periods of due diligence that focused on the intents, interests, capabilities and viability of the parties as Applegate et al., (2003: 14) rightly puts it:

Formal contracts contain provisions for joint planning processes that are designed to identify and address strategic uncertainties and for changing terms to deal with unforeseen opportunities and risks. Provisions for 'death' and 'divorce' become critical in outsourcing strategic IT system development or operation.

Other new strategic responses to outsourcing as identified by Weerakkody and Currie (2003) apart from strategic alliances and partnerships outsourcing

mentioned earlier by Applegate et al., (2009), include joint ventures, re-engineering and rightsizing. Soliman (2003: 736) identified a new trend in outsourcing drive, which he called 'global outsourcing'. He distinguished global outsourcing from traditional one because "*the required development tasks are contracted to an offshore service provider*." He categorized global outsourcing into three; direct global outsourcing, global outsourcing via domestic consultant, and global outsourcing via application service provider (ASP).

They advised that instead of small IT clients (SMEs) patronizing big vendors they "*better do their IT outsourcing with small IT vendors if they see price offer by big IT vendors to be too high*" [2-2]. Despite these two dissenting opinions, the two groups also expressed their optimism in creating a leeway for cost reduced services especially for SMEs. One interviewee advised further:

Most ITO vendors should build leverage on cost over a few customers. They will also leverage on the skills already developed to deliver the services. That's how vendors make their margin and at the same time should offer lower cost to their customers. But if the clients are looking at innovation and re-engineering of their business processes, then there is value for the vendor to charge more. In any case, the additional cost should be cheaper and innovation can be achieved at much quicker time. But please bear in mind that not all outsourcing projects take cost cutting as the main criteria.

Another interviewee realized that in other to build a formidable ITO in Malaysia, SMEs need to be carried along, "*if we really want to improve the ITO practices in Malaysia we would have to consider the SMEs along*."

This approach has triggered a *global operating model* which allows organizations to provide low budget Website design and Web base application solutions in a very efficient and quality manner, enabling businesses to go online fast and at reduced costs. Some organizations believed that SMEs are better off outsourcing their IT functions to small IT vendors in order to be able to reduce high service cost emanating from patronizing big IT vendors. Others advocated for flexible costing, on-job training and flexible charging as ways of leveraging and reducing ITO service cost.

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Re-Assessing Outsourcing

Outsourcing options can be evaluated in much the same manner as product and process defects. Risks are evaluated in terms of opportunity, probability and severity, and can be grouped into intuitive categories (Welborn, 2007).

Gewald and Rouse, (2012) contractual arrangements and outsourcing decisions required by an IT outsourcing deal entail numerous risks. This is not to say that outsourcing is bad in itself. Though this is not synonimous with outsourcing only, the same goes with other risky business ventures, such as new product development, capital investments and IS projects, risk assessment and risk management are important contributors to the success of an IT outsourcing venture (Aubert, Patry & Rivard, 1998).

In their attempt to minimise and control IT outsourcing risks, Na and Zheng (2010) suggested a Framework Model of insurance IT outsourcing risk assessment based on the Control Objectives for Information and related Technology (COBIT) framework structure and the traditional model of IT outsourcing risk assessment. This shows that among the 4Rs, interpreting re-assessing from risk factor perspective would continue to be a daunting task. However, implementing the 4Rs matrix would mitigate risks and help in identifying potential risks i advance.

FUTURE RESEARCH DIRECTIONS

Future research on IT outsourcing would be on developing more robust models and frameworks that can always meet the test of time. 4Rs Matrix would remain

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a testing model for other models. Therefore, a series of existing models would be tested against 4Rs Matrix to ascertain and determine their viability.

CONCLUSION

4Rs matrix model has shown possibility of providing a solution that can withstand the test of time to numerous challenges facing IT outsourcing in particular and outsourcing in general. Re-focusing, re-analysing, re-engineering and re-assessing have become major challenges facing IT outsourcing drive in the current millenium. Do It Yourself (DIY) has become a syndrome in organisations, this has posed unprecedented challenge to IT outsourcing drive. Now with 4Rs Matrix organisation can evaluate any potential outsourcing deal itself.

This article provides a brief but detailed example of how to implement 4Rs in judging potentiality of outsourcing deal. Therefore this article provides a comprehensive and pragmatic definitions to IT outsourcing from the perspective of ever unstable socio-political economic reality in line with the 4Rs Matrix (Refocusing, Re-analysing, Re-engineering and Re-assessing

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KEY TERMS AND DEFINITIONS

Eco-Sourcing: Is the process of seeking expert skils not only in the best geographical location but in a manner that promote a sustainanble and friendly ecosystem. Either internally or externally to the organization. In this arrangement, the priority is giving to ecosystem, green technology, etc not just the cost and technology infrastructure.

In-Sourcing: Is a constrast of outsourcing, thereby the organisation decided to develop, execute and implement certain activities or application internally. This could be a strategic approach i.e a long term solution or tactical solution (short time). In another word Insourcing is the process of retaining a business (Information Technology) function internally, whether distributed across the organisation in various business units or maintained centrally in a share service center (Cook, 1999).

Re-Analysing: Looking into the existing structure in order to identify the causes of failure or potential failure as well as identifying the crictical elements when the new outsourcing arrangement is made.

Re-Assessing: Finding new reality as reality is what organisation takes to be true, especially when it is back-up with data and performance reports. "Reality is what we take to be true. What we take to be true is what we believe. What we believe is based upon our perceptions. What we percieved depends upon what we look for.what we look for depends upon what we think. What we think depends upon what we percieve. What we percieve determines what we believe. What we believe determines what we take to be true. What we take to be true is our reality" (As Zukav, 1980: 328).

Re-Engineering: "Reengineering is what we called creative destruction. That is the breaking down

of old unmanageable ways to free resources for new progressive and higher uses. Reduction in cost and time and quality in output and worklife were the yardstick in determining factors in re-engineering. Therefore re-engineering outsourcing parctices is to do away from organizations inefficiencies by freeing underutilized resources (primarily people and capital) to be recombined to create higher value-added products and services.

Refocusing: Ability of the company in making decision to reduce or increase the scope of its outsourcing activities in order to concentrate on the core business.

Shared-Service Outsourcing: A service oriented approach in providing a unified business solution and effective administrative management internally (insourcing) accross an organisation wide. According to Dell and Tsaplina (2004), they positioned that Shared Service Centers are generally composed of three parts, i.e Centre of Expertise (COE), Centre of Scale (COS) and Human Resource (HR). In some other studies, Centre of Scale is refered to as data center outsourcing (DCO). In these centers organisation policies were explicitly defined, also the needed skills were sorted. Da Rold and Erba (2000) believe that Economies of scale are expected to greatly benefit data center outsourcing (DCO) vendors. By providing services from large data centers, outsourcers are expected to be able to pass on savings to any client via low-cost MIPS.