

Designing Project Monitoring Mechanisms for Improved Public Sector Governance and Accountability

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Abstract: *Project management practice forms the basis of administering the activities of the public sector. Many South African government entities have embraced the projects-type of management approach in their endeavours. Officials are subjected to training in this regard, and are expected to perform their project management and administrative duties with circumspect and South Africa's public sector organisations' capacity to plan, execute, monitor and evaluate activities have improved.*

Yet, many current project monitoring mechanisms do not adequately address the problematic of tracking the as-planned deliverables of on-time, in-budget and required quality – the principle project management deliverable triumvirate. Practitioners confess that too many projects fail because dysfunctional monitoring mechanisms allow for some, or all of the above three imperatives not to be met.

In an attempt to remedy such problems, private sector models to identify possible “best practices” may be prudent, which may assist the public sector. This paper presents in an adapted form possible private sector-derived project monitoring solutions to the public sector, given its unique political and policy backdrop. The research is of a qualitative nature and is part-based on the researcher's observations (participant observer) and experience in the respective sectors, and augmented with relevant literature.

Key Words: *Project management, Monitoring and evaluation, Public sector, Private sector, Triumvirate*

Introduction

Project management is currently viewed as essential to the achievement of greater organisational goals and objectives. Politicians and companies' boards of directors often make certain commitments as to what they wish to deliver. In a public sector context, much is often said about the issue relating to service delivery. The South African public sector faces daily criticism about its perceived inability to render effective services; its inability to complete developmental programmes according to plan, and in such a way that its citizens are of the opinion that they derive value for their tax revenue (Davids, Theron & Mapunye, 2009).

In a project management environment, implementation of projects as per the project plans, project managers in particular and project stakeholders in general are often ill-informed as to the status and progress of their projects' journey toward completion (Burke, 2000). Ile, Eresia-Eke & Allen-Ile (2012) mention that monitoring and evaluation (M&E) within a projects-type of management approach enhances the probability of project success. Project success is generally measured against the criteria of *on-time, in-budget and required quality* (Knipe, Van der Waldt, Van Niekerk, Burger & Nell, 2002) – the principle project management deliverable triumvirate.

This article seeks to elucidate on the above aspect and proposes exploration of private sector practices to draw from techniques which may be prudent for the public sector to consider; although borrowing models from the private sector may educate the public sector on certain project management modalities. Selected templates of such mechanisms are included for the purposes of example.

Research Methodology

The research methodology applied in this is essentially of a qualitative nature where secondary sources in a literature survey are consulted from existing research to highlight

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normative project management related modalities. In addition an empirical component is added to illustrate practices observed in private sector practices end template examples in this regard is presented. The researcher contributes thus to the article body of knowledge as a participant observer.

The Importance of Project Planning and Execution

Planning is a process that managers use to identify and select ways in which to ensure that organizational goals and objectives are realized –thus if success is achieved (Jones & Gorge, 2009: 263). Project *execution*, with reference to implementation practices is important for successful project management. However, this part of any project process also includes the essential elements associated with project control. The following elucidation refers to this important aspect.

Project Control and Controlling

In particular, project *controlling* as a process seeks to ensure that project objectives are met by monitoring and measuring progress regularly to identify variances from plan so that corrective actions may be taken. Against this backdrop, the Project Management Institute (Horine, 2009: 126) defines project controlling processes as such actions that ensure that project objectives are met by *monitoring* and *evaluating* (M&E) progress regularly to identify variances in order to employ corrective action.

According to Horine (2009: 127) project control is embodied by three essential principles: *Firstly*, prevention - where active focus is placed on preventing variances from occurring. *Secondly*, timely detection - where measures are put in place where early detection of variances should be possible. *Finally*, action - where after a variance is detected, an appropriate and timely action is triggered.

These principles underlie a process of performance reporting essential to measuring and communicating project status to the appropriate project stakeholders. To illustrate the monitoring and evaluation framework in a concise way the following two-component but complementary aspects should be developed. The following self-explanatory figures 1 & 2 illustrate the framework (Ile, Eresia-Eke & Allen-Ile, 2012: 95):

Figure 1: Flow Chart of the Monitoring and Evaluation Process

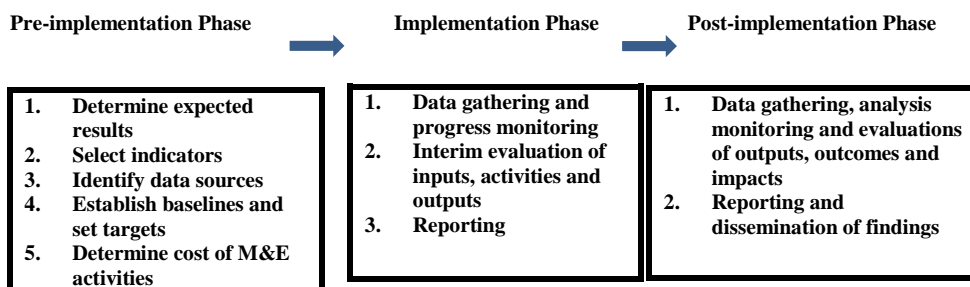


Figure 2: Performance Grid

Result	Indicator	Definition of	Study unit	Unit of measure	Data source	Frequency of data	Method of data	Frequency of data	Responsible person
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		indicator				collection	collection	collation	
Improved M&E competency	Portion of employees trained in M&E	Number of employees	Permanent employees	Percentage	Human development reports	Monthly	Record review	Quarterly	HR manager

The above are a descriptive outline of how M&E activities in the project will be undertaken. The focus of this component should be on the actual M&E process. Secondly, the tabular component reflects the performance or results component associated with the project. The descriptive component should focus on: The results that need to be monitored and evaluated; the identification of specific monitoring and evaluation activities appropriate for the expected results and the project; determining people responsible for each M&E activity; when M&E should be executed, the manner in which M&E activities would be undertaken; and the actual resource requirements with relation to financial resources and human resources, for all M&E activities.

During the implementation phase, data collection is primary. The data serves to be the basis for tracking the intervention's progress towards achieving results. The second component, the performance grid: reflects expected results, as displayed in the results chain; lists indicators for each expected result; shows how indicators are defined and calculated; states what the data appropriate sources are; expresses on the method on how data is to be collected; outlines how often the data required would be collected – this is premised on how frequently the indicator is expected to be measured; highlights how often data will be collected; and defines who would be responsible for each recruit-specific M&E function.

In the above, such a framework will serve as part-basis upon which data used for project performance will be reported. The following section serves to explain the concept of performance reporting.

Performance Reporting

Performance reporting is an essential component of the process where project managers are required to account as per request and required intervals and detail, on the basis of monitoring and evaluation. Project reporting templates are designed to maintain the project progress (Oosthuizen & Venter, eds., 2012: 206). Examples of reporting documents utilized by the private sector and to be adapted by public sector entities, are provided in appendices 1 (Project Dashboard) & 2 (Overall Programme Report). It should be noted that different industries have different requirements as far as their reporting information is concerned. Naturally, many factors dictate what such documents should inform upon; aspects such as project type, duration, approach, the different levels and types of audiences play a role in the design of reporting documents. Many documents are designed to provide information on the status of projects on the basis of who (management level and audience type - internal or external etc.) should receive the information. According to Portny (2001:234) reports may include information such as performance highlights, performance details, problems and issues, approved changes to the plan, risk management plan, risk management status and plans for the next period.

Conclusion

The preceding discourse served to concisely highlight the basic modalities associated with project management and especially sought to highlight aspects relating to project monitoring and evaluation for improved public sector governance and accountability. The public sector operates against a political and public policy backdrop and utilizes public funds for the

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No.	Escalated Risk	Impact	Actions required / Decisions	Owner

Appendix 2: Overall Project Status Report

(To indicate relative project progress set against particular criteria e.g. project management triumvirate)

Project Owner	Project Manager	Project name	Project description	Comments / Issues
RED				
AMBER				
GREEN				

Legend:	No action will resolve current status
	Action: I will be able to improve status
	On track / deliver planned scope

A Capabilities-Based Approach to Exploring Organisational Agility Enablers in the NHS

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Abstract: *Today's uncertain and dynamic environmental reality demands organisations to respond in an agile manner, thus paving the way for the emergence of the organisational agility paradigm. In light of this, this study explores Organisational Agility enablers in the context of the British National Health Service (NHS), through conceptually developing and empirically validating three main constructs drawing from the "dynamic capabilities" literature: "Dynamic Integration of Knowledge", "Dynamic Co-ordination of Resources", and "Operational Flexibility". The effects of these enablers were subsequently tested via multiple and stepwise regression analyses and proven collectively to significantly explain the variance in agility, based on primary data collected from two NHS Hospital Trusts: a one star, lower performing Trust, and a three star, higher performing Trust. In particular, "Operational Flexibility" emerged as the most important enabler, followed by "Dynamic Co-ordination of Resources". However, "Dynamic Integration of Knowledge" was found not to have a significant effect upon organisational agility.*

Keywords: *Organisational Agility, Dynamic Capabilities, Operational Flexibility, National Health Service, Stepwise Multiple Regression.*

1. Introduction

Although environmental uncertainty triggered by increasing dynamism and complexity is not a new phenomenon, an organisation's ability to quickly adapt and respond to such changing conditions "*is considered to be one of the most critical capabilities for long-term success and growth*" (Bititci et al., 1999, page 190). As a result, there has never been a stronger need for new thinking in the fields of strategic management, organisational theory, and operations management, which would replace the outmoded, traditional mechanistic/bureaucratic organisation paradigm, towards realising the desired agile organisation state, reflected in the organisational agility paradigm. Timeliness, responsiveness to customer needs, as well as agility, have become the main ingredients of the competitiveness equation (Stalk Jr. and Hout, 1990; Goldman and Preiss, 1991; Goldman and Nagel, 1993; Goldman et al., 1995; Ahmed et al., 1996; Goldman, 1998; Salauroo and Burnes, 1998; Zairi and Youssef, 1998; Goldman and Graham, 1999; Wright et al., 1999). Such calls for a shift in management philosophy and thinking towards embracing the notion of organisational agility has also been strongly supported by Shafer et al. (2001), who clearly state that: "*Constant marketplace discontinuities, coupled with an accelerating pace of changes, are making a mockery of traditional business and organisational models, so the search is on for new, more agile paradigms*" (Shafer et al., 2001, page 197).

In this context, it is argued that environments affecting healthcare organisations are experiencing a similar pace of change. The evidence emanating from literature concerned with health services management research in the UK supports the contention that today's healthcare organisations are operating in increasingly changing environments. Such change is significantly impacting the way in which healthcare organisations are managed and organised, and the challenge has become more of how such organisations can respond to the shifting environmental conditions.

The market reforms, which have been introduced by consecutive Conservative Governments, particularly the "internal market" reforms in the early 1990s, in addition to changes introduced by The New Labour Government through the publication of The Department of

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Health (1997) White Paper: “*The New NHS: Modern, Dependable*”, and The Department of Health (2000) White Paper: “*The NHS Plan: A Plan for investment. A Plan for reform*”, have created new environmental conditions that have widespread changing effects on the way, in which healthcare organisations operate within the NHS. In its publication of The Department of Health (2000) White Paper: “*The NHS Plan: A Plan for Investment. A Plan for Reform*”, the New Labour Government has inextricably linked the promise of investing more resources into the NHS with the need for managerial and organisational reform in the NHS. Linking the injection of more resources into the NHS (A Plan for Investment) with the need for managerial and organisational reform (A Plan for Reform) emphasises the need for effectively managing resources in the best manner possible, which enables adaptation and response to environmental demands. This implicitly stresses the vital role and contribution of effective management of the organisation and of its resources and capabilities in enabling healthcare organisations operating in the NHS to proactively and successfully respond to, and even thrive in, an environment of changing expectations and requirements. As such, the different governmental reform initiatives of the NHS have arguably sought to advocate the principle that the health service should be a responsive and an agile one, which is sensitive to the needs, requirements and expectations of a wide multitude of stakeholders.

Building on such an intensifying need for agility, the major aim of this study is concerned with exploring those capabilities, which may well underpin an organisation’s ability to attain agility. The agility literature is characterised by its overwhelming emphasis on investigating the application of the concept in manufacturing organisations. Few studies addressing agility have been conducted in service organisations, particularly in healthcare, with virtually no previous study examining organisational agility in the British National Health Service. In this way, the usefulness and practicality of this concept can arguably be enhanced, through investigating it in various contexts / sectors, of which healthcare was particularly chosen in this research to be the context for exploring this concept of organisational agility, due to the important expected benefits of facilitating agility in the NHS as earlier reported, thus further contributing to new knowledge and better understanding of the concept.

2. Literature Review: Theoretical Development of the "Organisational Agility" Enablers & Hypotheses

Development of the “Dynamic Capabilities” Construct

Due to today's turbulent environmental conditions driven by continuous and often unpredictable changes, the strategic management literature has witnessed a shift in the philosophical bases, which inform how organisations can build and sustain their competitiveness and effective operation. The outcome of such a shift has been the emergence and recognition of the need to incorporate the building and nurturing of dynamic resources, capabilities, and core competencies, in strategy development and planning. This emphasis on leveraging organisational resources and competencies, as argued by the proponents of the Resource-Based View of strategy (RBV) representing such a new approach to strategy development, is considered to be vital in enabling organisations to effectively respond to and, thus, thrive in, dynamic environments (Wernerfelt, 1984; Prahalad and Hamel, 1990; Grant, 1991; Lado et al., 1992; Barney, 1991, 1995, 1996, 2001; Peteraf, 1993; Hamel and Prahalad, 1993, 1994; Leonard-Barton et al., 1994; Collis and Montgomery, 1995; Hart, 1995; Hayes et al., 1996; Hitt et al., 1998, 1999; Gagnon, 1999; Johnson and Scholes, 1999; Gilgeous and Parveen, 2001). Such an approach to strategy development supplements the idea of fit

reflected in the Market-Based View of strategy. In addition, it is warranted by the new environmental landscape, which as Hitt et al. (1999) argue, mandates that an organisation builds a unique set of resources and capabilities, which are dynamic so as to achieve congruence and flexibility with such an environment. This thinking has paved the way for the emergence of the Dynamic Capabilities approach (Teece and Pisano, 1994; Iansiti and Clark, 1994; Grant, 1996; Lei and Hitt, 1996; Teece et al., 1997; Hitt et al., 1998; Petroni, 1998; Gagnon, 1999; Eisenhardt and Martin, 2000). According to this approach, an organisation should think of itself as a collection of evolving capabilities and competencies, not just as a collection of products/services, which provide the organisational agility to embark on new directions. As such, Dynamic Capabilities can be described as reflecting an organisation's capacity to achieve new and innovative forms of competitive advantage, by consistently renewing competencies to respond to the requirements of a changing environment. They are considered as organisational processes or routines embedded in organisations, by which organisations synthesise, integrate and acquire various resources and knowledge assets, and generate new applications from those resources. As such, they are responsible for maintaining a dynamic congruence between an organisation's resources, knowledge and skill bases underlying its capabilities and core competencies, and the changing requirements, demands, and conditions of its environment. In this sense, the means by which dynamic capabilities achieve such adaptation and rejuvenation of organisational competencies are primarily based upon organisational processes/routines, which continually build and renew/regenerate organisational capabilities through the important roles of coordination, integration, and learning. In particular, it is the integration and reconfiguration of organisational tangible as well as intangible resources, particularly knowledge, that is responsible for conferring upon an organisation's capabilities the trait of being dynamic.

Based on the previous discussion and the contributions of the aforementioned writers in the area of dynamic capabilities, items DC1-DC12 items were developed in order to measure the "agility-enabling" construct of Dynamic capabilities (see Table 3). Item DC1 reflects the basic conceptualisations of dynamic capabilities reflected in the literature. Items DC2-DC6 were developed according to Grant's (1996) "*knowledge-based theory of organisational capability*", which is primarily based on the contention that knowledge is the foundation of capability, and that the capacity of the organisation to integrate the diverse knowledge bases held by its individual members is considered the essence of organisational capability. Such an integrative capacity forms the foundation of building and renewing organisational capabilities, thus informing dynamic capabilities. In this sense, Grant's (1996) theory builds on and synthesises the aforementioned themes, in terms of: focusing on organisational processes or routines that inform the organisation's integrative and reconfiguration capacity of its knowledge and skills bases, and the important role of learning in renewing the knowledge underlying organisational capabilities and competencies. The synthesis of these themes is reflected in the integration of knowledge within organisations to form capability, which is characterised by three main characteristics incorporated into the design of items DC2-DC6. These include the *efficiency of integration*, which represents the extent to which the capability accesses and utilises the specialist knowledge held by individual organisational members; the *scope and span of integration*, which refers to the breadth of knowledge bases underlying organisational capabilities; the *flexibility of integration*, which represents the extent to which a capability can access additional knowledge and reconfigure existing knowledge.

Items DC.7-DC12 were primarily developed in the light of the duality, which the dynamic capabilities approach stresses between *response to change* and the important role of *resource reconfiguration* in facilitating such response. This emphasis on the importance of deploying and reallocating resources in enabling an effective response to change has been argued by Chow et al. (1999) to be relevant in the case of healthcare environments. They share the view expressed by Peters (1994), and Deloitte and Touche et al. (1997), in that in order for healthcare organisations to be able to respond effectively to increasing pressure emanating from relevant stakeholders, they are required to ensure that resources are allocated to their most effective use, and that resources are quickly re-deployed in response to information about unexpected and unfavourable changes, impending threats, and emerging opportunities. Consistent with this is the important role of co-ordination and integration in facilitating agility, as stressed through the “dynamic capabilities” approach. Notions of collaboration, networking, consolidation of resources, integrated care, partnerships and alliances have been repeated time and again in related literature discussing how healthcare organisations can deal with and respond to the changing requirements of today’s healthcare environment (Iansiti and Clark, 1994; Goldman et al., 1995; Goldman and Graham, 1999; Wright et al., 1999; Meredith and Francis, 2000; Miller and Ahmad, 2000).

Development of the "Operational Flexibility" Construct

Most of the literature discussing operational flexibility mainly does so from a manufacturing context, in that most research into this area mainly addresses the flexibility of manufacturing systems or manufacturing organisations. However, the focus of this research is on service organisations, particularly healthcare provider organisations represented by NHS Trusts. This has led the researcher to considering certain types of operational flexibility, which are primarily those that have a significant effect on the management and delivery of healthcare services provided by NHS Trusts. The problems or issues often encountered by NHS Trusts have quite often been concerned with changes in volume of demand, ability to deliver a wide mix of healthcare services and/or certain types of services, as well as capacity and demand issues addressing the ability of these Trusts to quickly and easily adjust capacity (e.g. additional professional staff, equipment, beds, etc.), in view of changes in patient demand. Based on this, the types of operational flexibility that are of concern and relevance in this research are those, which cover the aforementioned problems/issues, in terms of volume flexibility, mix flexibility, as well as capacity flexibility. Adopting such a conceptualisation of flexibility by this research has taken into consideration the warning expressed by Pagell and Krause (1999), in that the multi-dimensional nature of flexibility makes studying the entire construct difficult, especially at the operational level of analysis. Therefore, particular attention has been paid towards delineating those types of operational flexibility, which mostly address the issues affecting the nature of healthcare services delivery.

The conceptualisation of operational flexibility that is adopted in this research is consistent with that of Volberda (1996, 1997) and Chang et al. (2003). Volberda (1996, 1997) describes operational flexibility as part of the organisation’s repertoire of flexibility capabilities, which enables it to respond to turbulent environmental conditions at the right time and in the right way. Examples of such a type of flexibility include variation of production volume, or level of service delivery in the case of this research, the building up of capacity required to perform the activities, which the service delivery process entails, as well as types and mix of services provided. In a similar fashion, Chang et al. (2003) indicate that several studies have classified manufacturing (operational) flexibility into internal as well as external flexibility. Internal

flexibility is concerned with the need for operations efficiency, such as machine, material handling and routing flexibility, and as such is not directly related to market demand and environmental uncertainties. External flexibility, on the other hand, is the one that is relevant in the context of responding to environmental uncertainty and stakeholders' demands, in that linkages and interrelationships have been drawn between manufacturing/operational flexibility and agility/strategic flexibility (Beach et al., 2000; D'Souza and Williams, 2000; Vokurka and O'Leary-Kelly, 2000). Examples of external flexibility representing the interface between organisational capabilities and responding to environmental pressures include introducing new products/services and modifying existing ones, providing a mix of products/services, as well as delivery flexibility and volume flexibility. Therefore, operational flexibility in this research refers to the ability of the service delivery system of the hospital to adjust, adapt and, thus, respond flexibly to changes in the pressures and requirements posed by key stakeholders in the external environment (e.g. demand and requirements of patients, GPs, Health Authorities, Government/DoH, etc.). Accordingly, this research measures the "agility-enabling" construct of Operational Flexibility through items OPFLEX1-OPFLEX5 in Table 4.

Measuring the Level of Organisational Agility

Literature discussing the concept of Organisational Agility has linked it with the ability of the organisation to respond to and deal with the changes brought about by environmental factors surrounding and affecting its operation, in a flexible, adaptable, and responsive manner (Goldman et al., 1995; Volberda, 1996, 1997; Goldman, 1998; Hitt et al., 1998; Goldman and Graham, 1999). In this study, the environment affecting the NHS has been represented by twenty environmental factors categorised under seven main categories. These include: Potential Customers / Purchasers (Patients, General Practitioners, Primary Care Trusts, Health Authorities), Potential Competitors / Providers (Private, Overseas, and other NHS Hospitals), Governmental / Political and Legislative Factors (Govt Plans, Policies, League Tables, EU Directives), Technology, Supply (Workforce, Equipment, Funding), Social Services, and Demographic Factors (Diseases, Population Profile, Media). Based on these factors, respondents to the questionnaire were asked to evaluate the current level of agility at which their hospital is dealing with changes related to such factors.

Based on the aforementioned discussion, the following hypothesis is formulated:

H1: There is a positive and significant effect of organisational agility enablers (Dynamic Coordination of Resources, Dynamic Integration of Knowledge, Operational Flexibility) on the organisation's ability to attain agility.

3. Research Methodology

Due to the obvious lack of studies examining the paradigm of organisational agility in service organisations, particularly healthcare, with none being conducted within the context of the (NHS), the purpose of this study is to explore and investigate how organisational agility can be enabled or facilitated in such a context. Building on such an exploratory purpose, a "case study" research design was adopted, involving two NHS Hospital Trusts: Trust A, which is a *one star, lower performing Trust*, and Trust B, which is a *three star, higher performing Trust*, according to the NHS Performance Ratings published by the Commission for Health Improvement (CHI) (2003). Star ratings are based on a wide range of performance indicators

about the Trust covering organisational, financial and systems issues, as well as information about services to patients. The identification of the NHS as the population of study involved a literature review, which found that such Trusts are experiencing both: A high degree of uncertainty and change in their external operating environments, as well as an increasing need to build adaptive capacities believed to enable them to become more flexible and responsive towards the continually changing needs and requirements of environmental stakeholders (Baggott, 1994; Waddington, 1995; Dahiyat, 2004). A self-completion questionnaire was designed based on the items measuring each of the research's main constructs (Dynamic Capabilities and Operational Flexibility) indicated in Tables 1 & 2. Stratified random sampling was used in distributing the questionnaires within each Trust to ensure representativeness of responses, as specified in Tables 3 & 4, which also show the relevant response rates for each stratum. The findings emanating from a case study research are generalised to the theory underlying the study, that is, to the theoretical constructs developed by the study. This is known as “Analytic Generalisation” and has been contrasted with another way of generalising results, known as “Statistical Generalisation”. In such a case, results obtained are compared and discussed in view of the literature used in developing the study. Construct validity was ensured through developing a sufficient operational set of measures for the set of constructs employed by the study (see section 2). Also, the initial draft of the questionnaire was refereed by six academic referees, including two PhD holders and four undertaking PhD research in the areas of business and management. In addition, a pilot study was conducted to gather feedback on the suitability of the measures employed in the questionnaire to a healthcare organisation setting from eight practitioners in both Trusts. The resulting items were also subjected to Exploratory Factor Analysis to empirically delineate the main variables emanating from its two main constructs. Reliability was checked through the internal consistency measure of Cronbach's alpha (see table 3 &4).

Table 1: The Relevant Population and Response Rates, for Trust A

Level	<u>Population No.</u>	No. of Respondents	Response Rate
Executive Management Board (Executive Directors and Divisional Directors)	4	2	50%
Senior Level of the Clinical Management Structure (Clinical Directors + General Managers + Matrons)	28	6	21.4%
Managerial Support to Executive Directors (Assistant Executive Directors)	5	2	40%
Managerial Support to the rest of the Clinical Management Structure (Clinical Directorates)	62	13	20.96%
Total	99	23	23.3%

Table 2: The Relevant Population and Response Rates, for Trust B

Level	<u>Population No.</u>	No. of Respondents	Response Rate
Executive Management Board (Executive Directors and Divisional Directors)	6	3	50%
Senior Level of the Clinical Management Structure (Clinical Directors + General Managers + Matrons)	24	5	20.84%
Managerial Support to Executive Directors (Assistant Executive Directors)	5	2	40%
Managerial Support to Divisional Directors (Assistant Divisional Directors)	4	2	50%
Managerial Support to the rest of the Clinical Management Structure (Clinical Directorates)	202	48	23.76%
Total	241	60	24.89%

4. Main Findings

After conceptually developing the "Dynamic Capabilities" and the "Operational Flexibility" constructs theorised to enable organisational agility, Exploratory Factor Analysis (EFA) was employed in order to empirically validate these constructs and to delineate any latent dimensions within them. To ensure the suitability of the data for factor analysis, two tests were undertaken for each construct: The Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy. The Bartlett's Test of Sphericity was statistically significant for both constructs: "Dynamic Capabilities" (380.227, $P < 0.001$); "Operational Flexibility" (159.752, $P < 0.001$). As for the Kaiser-Meyer-Olkin Measure of Sampling Adequacy, this was acceptable for both constructs: "Dynamic Capabilities" (0.855); "Operational Flexibility" (0.771). These indicated that conducting (EFA) for each of these two constructs was appropriate and that it satisfied the conditions for using such a statistical technique (Kaiser, 1974). For both constructs, principal component analysis was used as the extraction method, with Varimax rotation. First, Two factors emerged from the "Dynamic Capabilities" construct: "**Dynamic Integration of Knowledge Resources**" (**DINTKR**) and consisted of items (DC.2, DC.3, DC4, DC5, DC6), and "**Dynamic Co-ordination of Resources**" (**DYNCORR**) and consisted of items (DC8, DC9, DC10, DC11, DC12) (see Table 3). Two items (DC1, DC7) were deleted since they had cross loadings with relatively weak factor loadings that ranged from 0.424 to 0.557 (Nunnally, 1978; Nunnally and Bernstein, 1994; Hair et al. 1998). None of the loadings for the two resulting factors was less than 0.40, and they ranged from 0.481 to 0.801. The total cumulative variance explained by both of these factors was 55.6%, and both factors had an eigenvalue greater than 1. Second, EFA results presented in Table 4 confirmed the unidimensionality of the Operational Flexibility construct, in that all items loaded significantly on only one factor, and none of these had a loading that was less than 0.50. The loadings ranged from 0.567 to 0.877. The total cumulative variance explained by the resulting factor was 58.314%, and it had an eigenvalue greater than 1 (2.916). The construct was labelled "**Operational Flexibility**" (**OPERFLX**) and consisted of 5 items (OF1, OF2, OF3, OF4, OF5). The internal consistency reliability coefficient measures (Cronbach's alpha) for the three resulting enablers were 0.865, 0.765, and 0.818, respectively (Table 4). As for Organisational Agility, Cronbach's alpha score was 0.872. These measures indicate very good levels of reliability, since the recommended minimum acceptable level is 0.60, as advised by Hair et al. (1998).

Table 3: Exploratory Factor Analysis for the "Dynamic Capabilities" Construct

Items and Measures Description	DINTKR	DYNCORR
DC1 The hospital continually adapts and renews its skills and competencies.	.444	.456
DC2 Access and integration of a diverse collection of specialised knowledge is one of the fundamental efforts undertaken by the hospital to form organisational capabilities.	.686	
DC3 The hospital accesses and utilises the specialised knowledge held by its professional individuals in a manner that results in many benefits for the hospital.	.801	
DC4 Capabilities within the hospital draw upon the integration of a broad scope of diverse types of individual specialised knowledge and expertise.	.837	
DC5 The hospital continually extends its existing capabilities, through accessing additional new types of knowledge.	.746	
DC6 The hospital continually makes new uses and arrangements of existing knowledge.	.749	
DC7 Broad networks, which allow the transfer/sharing of specialised knowledge, link our hospital and/or professional staff with their counterparts.	.424	.557
DC8 The hospital is capable of co-ordinating and integrating quickly and efficiently various resources within the trust and/or with other trusts.		.741

DC9 The hospital forges collaborative relationships and networks with other organisations		.481
DC10 The trust is effective in building linkages and sharing resources across locations		.798
DC11 Symptoms of Problems are Identified Quickly		.652
DC12 Sufficient resources are allocated to find an effective and quick solution.		.655
Eigenvalues	5.139	1.352
Percentage of variation explained	44.329%	11.267%
Cumulative Percentage	44.329%	55.596%
Cronbach's alpha	0.865	0.765

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 3 iterations.

Table 4: Exploratory Factor Analysis for the "Operational Flexibility" Construct

Items and Measures Description	OPERFLX
OF1 The hospital quickly & efficiently adjusts, adapts and responds to changes/fluctuations in the volume of demand posed on its Health Care Services	.736
OF2 The hospital quickly & efficiently adjusts the number of services it delivers according to changes in demand	.877
OF3 The hospital quickly & efficiently adjusts the type and mix of services provided	.873
OF4 The hospital quickly & efficiently introduces new healthcare services	.722
OF5 The hospital quickly & efficiently adds to and expands its capacity (in terms of additional professional staff, equipment, beds, etc.)	.567
Eigenvalue	2.916
Percentage of variation explained	58.314%
Cronbach's alpha	0.818

Extraction Method: Principal Component Analysis.

a. Only one component was extracted. The solution cannot be rotated.

The collinearity statistics reported in tables 5 and 6 show that tolerance is higher than 0.1 and VIF is less than 10 for all variables, which is considered the commonly accepted cut-off points for accepting that collinearity does not impact the study's results (Hair, 1998; Field, 2000). The resulting three main constructs were subsequently subjected to multiple and stepwise regression analyses. Multiple regression analysis shows that the three agility enablers collectively have an overall positive and significant effect on organisational agility, in that they explain 43.6% of the variance in agility. More specifically, analysis of the individual enablers reveals that "Operational Flexibility" has the strongest positive effect on organisational agility that is statistically significant, followed by "Dynamic Coordination of Resources". However, "Dynamic Integration of Knowledge" did not have a statistically significant effect on agility with a very weak Beta value. Stepwise regression analysis added further support to such findings, in that it has totally excluded "Dynamic Integration of Knowledge" from any model depicting the effects of the developed enablers on agility. Model 1 is mainly based on "Operational Flexibility" as an only predictor of agility with an R Square of 0.387 and a significant effect with a beta value of 0.622. Model 2 includes two enablers: "Operational Flexibility" and "Dynamic Coordination of Resources", which have increased the adjusted R Square from 0.379 to 0.417. However, although both enablers have statistically significant effects on agility, "Operational Flexibility" emerged once again as the enabler with the strongest effect on agility, with a beta value of 0.474 compared with 0.258 for "Dynamic Coordination of Resources".

Table 5: Multiple Regression. Dependent Variable: Organisational Agility							
Model	Unstdised Coeffs		Stdised Coeffs	t	Sig.	Collinearity Statistics	
	B	Std.	Beta			Tolerance	VIF

		Error					
1	(Constant)	1.315	.183		7.182	.000	
	Dynamic Integration of Knowledge	.055	.070	.085	.793	.430	.635
	Dynamic Coordination of Resources	.164	.082	.224	1.999	.049	.575
	Operational Flexibility	.321	.077	.451	4.184	.000	.623
R =0.660; R Square =0.436; Adjusted R Square =0.414; R Square Change =0.436; Regression F-value =20.108; Significance of F =.000							

Model	R	R Square	Adjusted R Square	R Square Change	Regression F-value	Sig. F Change		
1	.622a	.387	.379	.387	50.473	.000		
2	.657b	.432	.417	.045	29.988	.000		
Model		Unstdised Coeffs		Stdised Coeffs	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.605	.143		11.242	.000		
	Operational Flexibility	.443	.062	.622	7.102	.000	1.000	1.000
2	(Constant)	1.375	.166		8.274	.000		
	Operational Flexibility	.338	.074	.474	4.587	.000	.673	1.486
	Dynamic Coordination of Resources	.189	.076	.258	2.497	.015	.673	1.486

a. Predictors: (Constant), Operational Flexibility

b. Predictors: (Constant), Operational Flexibility, Dynamic Coordination of Resources

5. Conclusions

It has become clear from the findings of the study that Operational Flexibility has emerged as the critical factor in explaining the ability of the Trusts to respond and adapt to changes in the requirements and demands of their external environments, in an agile manner and, thus, thrive in the midst of such changes. Hence, it is recommended that more investment and attention is to be directed towards improving the ability of the service delivery system to better adjust, adapt and, thus, respond flexibly to changes in the pressures and requirements posed by key stakeholders in the external environment, including patients, Health Authorities, and Government/DoH. The improvement of operational flexibility entails paying particular attention to a number of issues, including: Varying the type and mix of services that the Trust provides; introducing new healthcare services, in response to changing requirements and expectations; overcoming the chronic problems of limited capacity and resources, particularly in the light of an ever-increasing demand on healthcare services provided by NHS Hospital Trusts. Although this seems to be a straightforward recommendation to improve the operational flexibility of hospitals' delivery systems, the importance of injecting more resources (e.g. professional staff, equipment, beds, and financial resources) cannot be over emphasised. Also, this study has provided important support for the recent views in the strategy literature represented by the *resource-based view of strategy*, and the *dynamic capabilities approach*, particularly the important role of "Dynamic Co-ordination of Resources" in facilitating organisational agility.

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Case: The Perceived Risk and Value of Shell Gasohol

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Abstract

In 2004, the escalation of oil prices worldwide has caused an energy crisis in Thailand. The Thai minister of energy has tried to solve this problem by encouraging the use of alternative energy, gasohol. Shell went along with the government policy and devised several marketing strategies in order to enhance the diffusion of gasohol by reducing the perceived risk of gasohol adoption and heightening the functional and emotional values of that adoption.

The main objective of this case study is to illustrate the theoretical concept of the relative advantage of the diffusion of innovation; in other words, the perceived risk and value of gasohol. It also shows that consumers' reaction to the company's strategies should be monitored in order to provide the corporation with proper feedback. The case also provides a chance to exercise the application of some other marketing strategies that might help facilitate the diffusion of innovation.

Shell Enters Gasohol Market

During the opening ceremony of the launching of Shell gasohol 95 on 28 September, 2004, Tiraphot Vajrabhaya, chairman of Shell Thailand said in front of the Thai minister of energy and many high ranking government officers of the ministry and relevant others that it was the pride of Shell to be the first multinational company in Thailand to serve the Thai government policy of promoting the use of alternative energy, which has generated a lot of benefits. These benefits included the reduction of oil imports, friendliness to the environment, acting as an additional channel of distribution for agricultural products, and more importantly, saving money by using gasohol. Additionally, Shell is good at renewable energy technology. It goes without saying that Shell is the number one seller of gasohol in the world. Thus it was not too late for Shell to begin selling gasohol 95 after Bangchak (a local Thai petrochemical company) resumed gasohol 95 production and marketing in October 2003 due to its successful commercial production of ethanol in cooperation with an individual manufacturer. As of August 2004, gasohol had become widely available at 147 Bangchak petrol stations in and around Bangkok. With the warm welcome of consumers, Bangchak planned to raise its gasohol stations in rural areas in that year. According to one gasohol 95 perspective survey, price incentive was mentioned as a major benefit by 50% of the consumers. Thus, it was not a bad idea at all that Shell wanted to enter the gasohol 95 market by offering a savings of 50 satang per liter as well, although its outlets were limited to only 9 petrol stations in the Bangkok area. Shell gasohol pumps were clearly seen by their green paint and signified in front by banners and flags. Gasohol 95 is a fuel that comes from the blending of unleaded gasoline and 10% ethanol or ethyl alcohol at 99.5% purification. This ethanol is a substitute for imported MTBE (Methyl Tertiary Butyl Ether), an octane increased agent which results in the saving of foreign currency. Ethanol is produced mainly from sugarcane, which in turn helps growers economically. According to the Environmental Protection Agency of the United States, gasohol can reduce the emission of hydrocarbon and carbon monoxide up to 30%, thus yielding cleaner air.

Shell Gasohol 95 Price Reduction

Several months after the test market, sales were not as expected. "This may be because the only 50 up to 75 satang saving from buying gasohol 95 instead of benzene 95 octane is not a

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noticeable difference by the consumers. In addition, the first segment of this gasohol market was likely to be the variety seekers only,” a Shell marketing manager pondered. Coincidentally, Thai government policy makers got the idea of further promoting the use of gasohol. Then came an announcement by the Thai government on reducing the price of gasohol 95 to be cheaper than benzene 95 by 1.50 Baht per liter in order to draw more traffic to the petrol stations. That is to say, the price of Shell gasohol 95 was 18.59 Baht/liter as compared to benzene 95, which was 20.09 Baht/liter instead of 18.94 Baht/liter versus 19.69 Baht/liter. This invitation to car owners and motor cycles riders to use Shell gasohol 95 is expected to be driven by a larger savings of 7.5%, twice as much as before. In other words, a just noticeable difference of economic value was gained by the users, in spite of several other benefits of this alternative energy. It followed that sales increased on average around 25% a month for five months.

Gaining a Better Understanding of Consumers by Doing Research

Although car drivers responded fairly well, Shell was still the third in the market, with a market share of only 20% as compared with Bangchak Petroleum and PTT, with a market share of 39% and 38% respectively. Eventually, it was suggested that research be conducted by using six focus groups, including the gasohol users of Shell and its competitors. The results of the research showed that the consumers did not know what gasohol was. Some misunderstandings came from the word gas-ohol, which led to the misinterpretation concerning whether it as gas or oil, or even gas used for taxis. A puzzle to many consumers was whether it could be used with their cars. Some of their comments are as follows:

Although it is 1.50 Baht per liter cheaper, it will not be worth it if the car engine fails.

My car is quite expensive. In the case of failure, who will be the guarantor?

This consumer concern regarding the financial risk that might occur after using gasohol was quite well understood by Shell executives, especially with big items like cars.

Shell Response to Customer Worries

A month later, Mr. Tiraphot and a Permanent Secretary of the Energy Ministry were seen relaunching a new campaign for the full guarantee of Shell gasohol 95 in order to boost customers’ confidence in using it. According to Mr. Tiraphot, “This is the first time for an oil trader in Thailand to offer a guarantee relating to the use of gasohol 95. Shell is offering this guarantee which would cover the full cost of repairs arising from the use of Shell gasohol 95 on the engine and the fuel distribution system of car and motorcycle models certified by auto companies to be compatible with gasohol 95. Should there be any engine problem caused by Shell gasohol 95, customers can have their cars repaired at service centers operated by auto companies or authorized dealers.” This demonstrated the good intention of Shell, as indicated by its chairman, that Shell was willing to reduce the potential risk of its gasohol 95 performance by standing behind its product.

Additionally, Mr. Tiraphot went further: “Even though gasohol 95 is 1.50 Baht per litre cheaper than gasoline 95, the number of gasohol 95 users is still only 30% compared to 70% who use gasoline 95. This is because most customers have little confidence in gasohol 95. Shell has over 25 years of experience in the global gasohol market in countries such as the U.S.A., Brazil, and Sweden. Shell is a leading retailer of gasohol in the world offering

trouble-free motoring to millions of customers every month. We have full confidence in the product quality control process and can, thus, offer such a guarantee. We believe this campaign will give a correct understanding to motorists and, as a consequence, a greater number would turn to Shell gasohol 95.” What the Shell chairman wanted to share with his customers was the heritage of innovation of Shell in the global market. The innovative value of Shell gasohol was presumably another guarantee of its product.

Distribution Channels Count

A little while before this relaunch of the guarantee program, a Shell marketing manager came to the conclusion that the number of petrol branches had an important impact on petrol market share, as shown in Table 1.

Table 1 The number of petrol stations and the market share of petrol companies in Thailand.

Petrol Company	Number of Sites	Share of Stations	Market Share
Bangchak	516	33%	39%
PTT	679	43%	38%
Shell	316	20%	20%
Others	71	4%	3%
Total	1,582	100%	51.2 M lit. = 100%

The reason of sales increase in relation to the number of petrol outlets is that consumers like a convenient location, whether it be the stations near their homes or workplaces or else on their way to work. After the relaunch of the gasohol guarantee program, Mr. Supan Suthisarn, a Shell general manager for retail, said that “Shell is spending Baht 160 million, in addition to the guarantee, to broaden its gasohol 95 retail network from 320 stations at present to 450 by the end of this year, and to cover over 600 Shell outlets across the country by the middle of next year. With our focused marketing efforts, sales of Shell gasohol 95 is expected to account for 50% of the gasoline 95 volume by the end of this year.”

Communications Do Work

Concurrently, Mr. Kamol Kongsakulvatanasook, a Shell retail price manager, took the lead in further creating an awareness and the trial of Shell gasohol 95, as well as ensuring its quality through key visuals. One of them was the smiling gasoline tank with the symbol of satisfaction guarantee and free repair in case of difficulties. Another testimonial was the many hands of people from various professions gripping the gasoline pump along with the symbol of guarantee. Several other TV advertisements had been done through banners, Shell gasohol shirts for moderators, ads using an actor, and billboards. Further, print ads in newspapers and magazines were placed, spots, jingles and games were carried over the radio, and banners were also placed at pantip.com websites. Outdoor billboards were used as well as the entire Shell oil fleet was painted with words and the symbol of gasohol 95. At the same time, Shell related to the public mainly through the press and dealer conferences, as well as Shell Caravan and seminars for the general public and university students, in addition to the interviews given by Shell chairman on TV shows. Shell also used a below-the-line communication strategy by putting its gasohol 95 symbol and guarantee on the stands, hangers, banners, and posters at the point of sale, in addition to distributing free stickers of gasohol 95 to the cars.

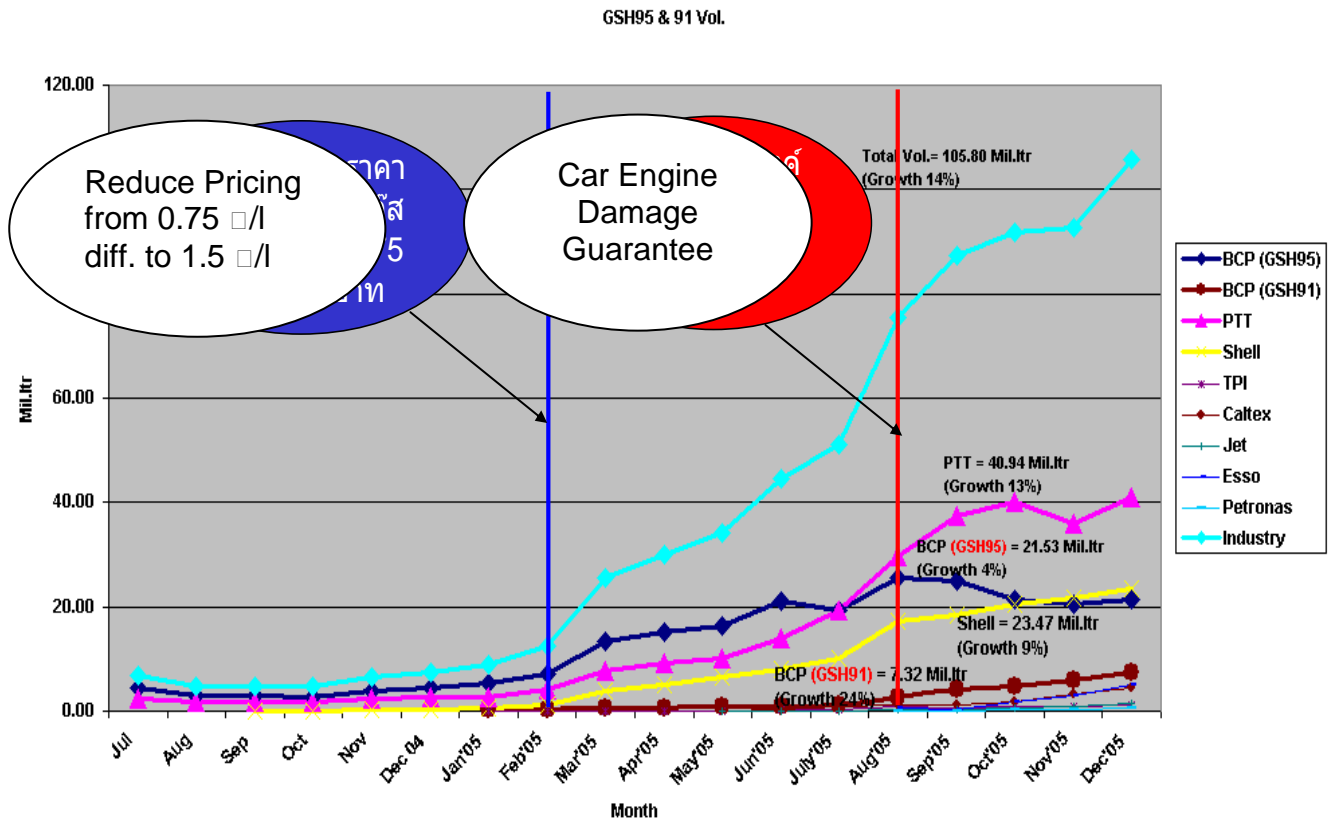
It Is Time for Promotion

It goes without saying that three months after the Shell gasohol 95 guarantee program, the main complaints of Shell customers were not relevant to the use of Shell gasohol 95 but had to do with the car usage behaviors of the customers, for instance, the failure of disc brakes and clutch disorders. Then, things seemed to go well, so it was a good time for promotion to be in because of its pulling strength in addition to price. Presumably, hesitators could be persuaded by this extra sweetener. One big campaign was the “free full tank every week.” Shell gave a free full tank or up to a maximum 1,000 Baht of Shell gasohol 95 to 100 cars and motorcycles a week for about two months, or 800 customers in total. The campaign alternately took place at one Shell station each week both in Bangkok and upcountry. Although things went smoothly, a Shell marketing manager did not want to stop at the gas stations. Thus, a more aggressive marketing campaign had been undertaken by approaching potential customers in their office buildings. This included the presentation of Shell gasohol 95 coupons worth 1,000 Baht to some of the lucky winners in the “free full tank with Shell gasohol 95” campaign organized at the United Centre Building – Silom. Consumers could join the lucky draw at the booth by showing a gasoline receipt of any oil brand to win a prize ranging from a 20 Baht discount coupon, up to the grand prize, which was a free full tank of Shell gasohol 95. Similar sessions of the campaign were also held at SCB Park Plaza East Building and Sermmitr Building. Comedians from the Sapa Joke TV program also joined to add color to the event. This was seen as an attempt to both promote the use of Shell gasohol 95 with current customers, as well as switching users from its competitors.

Shell Strategies Seem to Function

Up to this point, Shell had used numerous strategies in order to boost sales of gasohol 95, and the impact on their sales figures is reflected in Figure 1.

Figure 1 Sales growth of Shell gasohol 95



For the next move, a Shell marketing manager wanted to draw a new customer segment by using an in-trend scenario. The main print advertising that came out during this phase was the questioning of the people that did not use Shell gasohol 95 as out of trend because numerous headlines of Shell were on the front cover of popular magazines. The in-trend campaign took the entire year of 2006 and cost 70 million Baht. This emotional marketing was supposed to draw customers that were more willing to follow others by learning through observing others and using other Shell customers as double guarantors.

Debriefing

The lessons learned from the case of Shell gasohol 95 are manifold. One key underlying theme throughout this diffusion of innovation is the minimization of perceived risk and maximization of customer value. In the early stage of the product launch, a major motivation for consumers to switch from benzene to gasohol was the economic value gained from the price differential. Supposedly, the first group of customers were those that like to try the new things before others and are more willing to accept any risks that might occur. This economic value had been adjusted from 50 satang to 1.50 Baht in order to attract the second group of customers, who were more price sensitive, especially concerning this commodity. The third

group of customers tended to be those that were worried about the performance risk of gasohol 95; namely, the probability that damage might occur to their car engines after the use of gasohol 95. In order to reduce this risk to a tolerable level, Shell offered a repair guarantee for any damage that might have arisen. Additionally, the brand name “Shell” that has been well known in Thailand for a few decades was likely to be a means of building confidence if not loyalty. It was the Shell brand name that was more familiar and far less ambiguous than gasohol 95 that could be used as a surrogate of quality. This performance risk tended to be a major hurdle for customers to cope with and for the corporation to overcome. Thus, the performance risk was supposed to work against the functional value. The next segment of customers were those that exhibited ambiguity avoidance and seemed to take a “wait and see” strategy. That is to say, this group of customers likes to reduce risk by learning through taking others as examples. The in-trend campaign of Shell gasohol 95 came out in order to address this group inclination. On top of that, being in-trend also indicates the social identity of Shell customers in such a way that they demonstrate the in-group prototype and normative behavior. The last group of gasohol adopters consisted of those that were likely to avoid risk. That is to say, they are willing to follow all others in order to minimize risks. This risk aversion process might take a much longer time without other marketing stimuli, for instance, a wide distribution network, appropriate promotion, and integrated marketing programs. The Thai government can also play a facilitating role by helping to solve certain problems, for instance, the shortage of local ethanol supply as well as the tax exemption of ethanol.

Opportunities and Challenges of the Customization Megatrend: A Management Tool to Evaluate Customization Potential

Michaela Weiss* and Franz Schweiggert**

Abstract Customization is a megatrend in today's economy. Customers can buy products that meet their needs. However, customization offers many more advantages. Thus, a wide range of studies tried to analyze customization. Unfortunately, these studies are either limited to a particular effect or business sector. This makes it very complex for a company to grasp all aspects of customization and decide on its implementation. We close this gap by merging the results of existing studies, enabling a comprehensive overview of the advantages of customization and an analysis of one's own business. We also provide the Customization Profile Chart (CPC), a management tool to illustrate a company's opportunities and challenges in terms of customization. On the one hand, our findings explain the megatrend of customization. On the other hand, they help companies to decide whether to follow this trend by providing them with an adequate management tool.

Keywords: Customization, Tailoring, User-Centered Design, Management Tool.

1. Introduction and Related Work

In 1987, Stanley Davis introduced the business strategy *Mass Customization*, combining cost leadership and differentiation. This strategy had a great impact on the economy. Today, customization is a megatrend and customized products have found their way into almost every line of business.

There are different ways of supplying customers with customized products. According to Coates and Wolff (1995), products can either be customized by the retailers (*hard customization*) or by the vendors or customers themselves (*soft customization*). Hard customization is based on the flow of information between manufacturer and customer and increases the complexity of production and distribution. In contrast, soft customization is based on the implementation of self-adaptation options and has less impact on production and delivery. In 1996, Lampel and Mintzberg extended this classification. They specified *pure standardization*, *segmented standardization*, *customized standardization*, *tailored customization* and *pure customization*. These categories differ in the degree of freedom, resulting in the subdivision being slightly more detailed. Another classification of customization can be made by considering customization starting points. The *DEFS* classification of Weiss and Heidenbluth (2012) distinguishes four areas of customization: *design*, *ergonomics and fitting*, *functionality* and *services*. This makes clear that customization could help meet customer needs in many respects. However, meeting customer needs is only one advantage of customization. Due to the increasing importance of customization much research has been done to analyze its benefits. However, most of these studies are limited to a specific business sector or a particular aspect of customization. For instance, Kieserling 1999 and the Euroshoe Consortium 2002 analyzed the effects of customization in the shoe industry and Piller et al. (2004) tried to evaluate the earnings.

However, to our knowledge, there is no overall analysis of customization which could help companies decide on implementing customization. Our contribution is to close this gap. For this purpose Section 2 combines the findings of a multitude of previous studies on customization. This helps to get a comprehensive overview of the opportunities and challenges of customization in the *Business to Consumer* (B2C) area. Section 3 sums up the drivers of customization potential and provides a management tool to evaluate a company's ability for customization.

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Finally, Section 4 gives a conclusion and outlines aspects for future research.

2. Opportunities and Challenges of the Customization Megatrend

Various studies have been conducted to analyze the advantages of this highly visible megatrend. In the following, the most important aspects are merged to get a comprehensive overview.

2.1. Heterogeneous Needs

It is getting harder and harder to generalize customers because their needs and preferences greatly differ (Hart 1995). Berger and Piller (2003) called this effect the “individualization in demand”. Needs and preferences are also changing faster and faster. Traditional mass markets try to meet average customer needs. Consequently, standard products usually cannot cope with individual customer requirements (Schreier 2006). This mismatch in product characteristics and individual customer needs is called the *Customer Sacrifice* (Gilmore & Pine II 1997). Its existence has been empirically validated by Bardakci and Whitelock (2004). One possibility to bridge the gap is segmentation. However, an analysis by Franke and von Hippel (2003) clearly showed that segmentation only copes with about 50% of customer needs. The challenges of heterogeneous, changing needs could be mastered by the help of customization, thus, researchers agree that there is a need for customization (e.g., Piller & Müller 2004; Marathe & Sundar 2011; Weiss & Heidenbluth 2012).

By taking individual needs into account customization increases the accuracy of value for money aspects. This strengthens market share. In a study by Åhlström and Westbrook (1999), mass customizers rated this effect as a key benefit of customization.

Due to the fact that the heterogeneity in demand varies across the lines of business, companies considering customization should first of all rate the heterogeneity of customer needs. This could be done with the help of market research or existing customer feedback.

2.2. Buyer Power and Individual Fulfillment

The idea that human life is unique rather than a part of a group was developed in medieval times. However, in traditional societies the class, caste, village or family determined consumption. Nowadays, in modern consumer societies, consumers decide on their own consumption (Solomon et al. 2010). They look for individual fulfillment and use consumption to define and communicate their personal identity (Möslein et al. 2000; Berger & Piller 2003; Piller & Müller 2004). Thus, customers have become more and more sophisticated and demand products that exactly meet their needs (Marathe & Sundar 2011). Consequently, the trend for customization is demand-driven. Studies document that the demand for customized products will rise and companies plan to increase their customized offers (Åhlström & Westbrook 1999; Booz & Company 2004).

The opportunity of expressing individuality differs from product to product, as does the chance of this emotional aspect of customization. Hence, companies should evaluate their product’s potential to express individuality before implementing customization.

The lure of the unique increases the perceived value of customized products (Schreier 2006). According to a study by Lynn and Harris (1997), the individual level of *Need for Uniqueness* (NFU) determines the strength of this effect. Several studies have documented that the NFU depends on the culture (Kim & Drolet 2003, Ruvio 2008). Thus, companies should analyze the culture of their markets. Implementing customization in non-individualist countries is generally not advisable.

2.3. Configuration Experience

Another important psychological aspect is the opportunity to provide a joyful configuration experience (Berger & Piller 2003). However, offering too many customization options can confuse customers and prevent them from participating in the co-design (Huffman & Kahn 1998). Thus, it is of crucial importance to offer *virtuous variety*. According to Oliver et al. (2004), this is the amount of customization options that creates value for both customer and producer. Excitement and satisfaction also depend on the customization toolkit (Franke & Piller 2003). Another critical point is the customers' knowledge of their needs (Berger & Piller 2003).

Thus, companies planning to implement customization need a positive answer to these questions:

- Is it possible to limit the number of customization options to an amount that customers could handle and still produce valuable customized products for each customer?
- Can my customers use my customization tool and identify their optimum product?

2.4. Satisfaction and Willingness to Pay

Customer satisfaction is one of the key assets of customization (Wind & Rangaswamy 2001). From a company's point of view, it results in higher profitability and sales, improves reputation and facilitates customer acquisition (Reichheld & Sasser 1990; Zairi 2000). Many customization aspects contribute to satisfaction. Customer participation can cause a feeling of pride. Schreier (2006) referred to this as the *Pride of Authorship*. Furthermore, involvement enhances the sense of identity and strengthens the connection between customer and product (Turpeinen & Saari 2004). Customization also gives the customer the feeling of being in control. This results in increased customer satisfaction, well-being and mental health. Moreover, it reduces stress (Marathe 2007). From a customer's point of view, customization increases satisfaction in various ways. This in turn enhances the *Willingness to Pay* (WTP). However, the increase in WTP depends on the product category and the customization options offered. This can be seen in the wide range of empirically documented WTP. Piller et al. (2004), for example, documented an increase of 5% in the case of customized Nike shoes whereas Schreier (2006) found an increase of 207% in the case of customized mobile phone covers. Hence, companies should evaluate in advance the WTP increase that could be realized in their line of business.

2.5. Implementation Costs and Complexity

It is indisputable that offering customization takes a long time and costs a lot of money. Implementing customization requires large up-front investment. It also increases complexity in production, delivery and after-sales (Piller & Müller 2004, Piller et al. 2004). Thus, successfully implementing customization highly depends on financial power and existing technological and human resources.

According to Ponn et al. (2004), implementation of customization requires flexible structures. A lot of helpful research has been conducted to identify good strategies for implementing flexibility (e.g., Simpson 2004). Many mass customizers rely on utilizing product families. However, customization could be implemented more easily if the product already had flexible structures.

2.6. Economies of Customization

Despite the above named costs of customization there are economic advantages, too. In addition to the higher WTP there are the *Economies of Customization*. Piller and Müller (2004) defined them as cost reduction because of a decrease in stock levels and customer integration. Due to the made-to-order principle which is closely linked to customization,

stock levels are low (Wind & Rangaswamy 2001; Berger & Piller 2003). In many companies the risk of wrong forecasts in terms of customer requirements and storage is very critical (Gilmore & Pine II 1997). This risk could be limited using customization. Thus, especially companies that are exposed to forecast risks easily benefit from the implementation of customization.

Due to the co-design, customers take part in the production. This cuts costs and enables Open Innovation (Berger & Piller 2003). Parent et al. (2011) highlighted that active customers spent an even more valuable asset than their money: their time. They called this *Willingness to Participate* “the new WTP”. Thus, companies who wish to apply Open Innovation could enjoy extra benefits.

2.7. Competitive Conditions

Customization can also be seen as a reaction to changing market conditions. Besides the increase in customer power, market transparency and customer information levels increase, too. Additionally, switching costs and customer loyalty decrease. According to Lampel and Mintzberg (1996), traditional markets could not cope with such a competitive market situation. The uniqueness of customized products helps avoid price competition. Thus, customization is some kind of differentiation (Mintzberg 1988, Sievänen 2002) and protects the product from becoming a commodity (Wind & Rangaswamy 2001). However, the increasing supply of customized products even heightens the pressure to offer customization. As a result, especially companies in highly competitive markets could gain advantages by implementing customization.

2.8. Learning Relationship

The company’s willingness to offer customized products can cause positive emotions and increase trust (Schorrmann 1995). Due to the acquisition of individual needs and preferences, customization could build an even stronger relationship between the customer and the producer which is called a *learning relationship*. Over time, the producer gets more and more sticky information on each customer (Piller & Müller 2004). The loss of this information if the relationship ends causes customer commitment and increases switching costs (Lemon et al. 2001; Gustafsson et al. 2005). Thus, customization could help to retain customers (Piller et al. 2004). Furthermore, the information gives insights into customer requirements (Sievänen 2002). They could be used to improve the production process and tailor the customization options (Piller et al. 2004; Ponn et al. 2004). A study by Åhlström and Westbrook (1999) showed that knowledge of the customer is one of the key assets of customization. It could also be used to avoid inefficient advertising (Piller et al. 2004) and improve the *Customer Lifetime Value* by implementing cross and up-selling (Wind & Rangaswamy 2001; Riemer & Totz 2003). Consequently, companies that suffer from customer defection or rely on cross and up-selling could highly benefit from establishing learning relationships through customization. However, collecting customer data should always be linked to a high level of data security.

3. A Management Tool to Evaluate Customization Potential

Section 2 clearly showed that there are lots of advantages which could be gained by offering customization. However, each subsection highlighted that the positive effects vary according to the product group and market situation, the target audience as well as the company’s characteristics. We merged all these facts in our *Customization Profile Chart* (CPC) to help companies assess their potential of becoming part of the customization megatrend.

This chart could be used as a basis for decision. Moreover, it highlights how stable the company’s threats are with regard to customization. Aspects that limit the potential of

customization but are determined by the company itself may be changed. Negative aspects which are determined by the customers could sometimes be influenced by the company, too. In contrast, aspects that are determined by the market or product group are stable. Thus, individual room for improvement becomes visible. By using a CPC even small and medium-sized companies in the B2C area could analyze their customization opportunities. The following chart shows an example of a CPC.

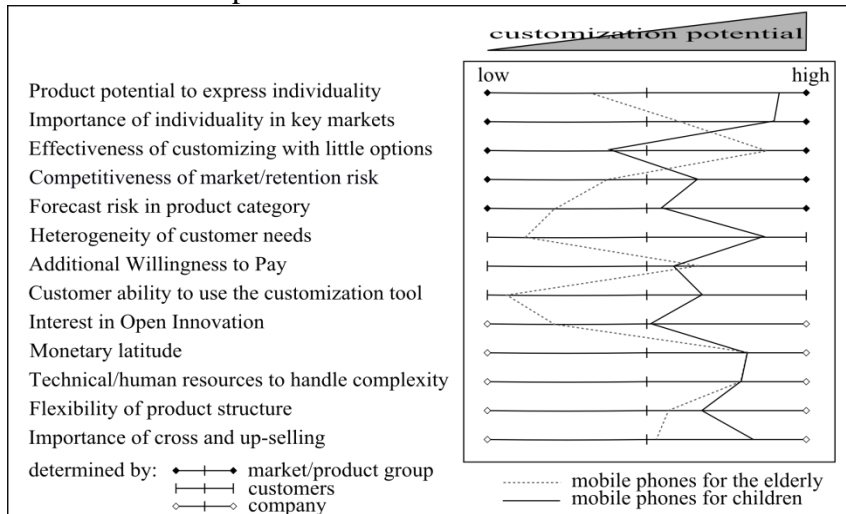


Figure 1: Customization Profile Chart

By including several profiles in the CPC, companies can not only evaluate the potential of one product, they can also compare the customization potential of several products or product categories. Moreover, different companies could be juxtaposed.

In our example an imaginary company producing mobile phones for the elderly and mobile phones for children compares the customization potential of both product. It becomes visible that mobile phones for children are more suitable for customization than mobile phones for the elderly. The convincing results of the mobile phones for children indicate that implementing customization would create competitive advantage. However, the multitude of customization options needed highlights the need for a sophisticated customization tool. The great monetary latitude, resources and flexible product structure suggest that the company has good chances of mastering this challenge.

4. Conclusions and Future Work

Customization is a highly visible trend in our experience economy. This paper illustrated the reasons for this megatrend. It clearly showed that customization affects customers and manufacturers in various ways. From a company's point of view, this results in a multitude of opportunities and challenges. The individual potential of customization depends on the market and product group, the target audience and the company's characteristics. Thus, we provided a management tool to estimate a company's customization potential. This helps managers to decide whether to implement customization and enables comparison of different companies or products. Consequently, challenges could be identified and competitive advantages could be realized.

For future work, putting the CPC into practice and evaluating its results are valuable extrapolations.

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The opportunities and challenges of managing Cultural Diversity in a small emerging island economy

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The advent of technology has revolutionised our lives. Where the world has shrunk to a global village and expatriation is on its increase, the proper management of cultural diversity of internationally mobile professionals is a must for organisations. Many studies have been done on the subject in developed countries, however, a shortage in small emerging island. This paper addresses the opportunities and challenges that a culturally diverse workforce may represent to management in Mauritius with practicability that it will help Human Resource Managers reinforce the strength their organisation represent in cultural mixity management and tackle the challenges. Unstructured interviews have been conducted with 37 managers who at that time had a worldwide coordination responsibility within their functional domain. Findings reveal that innovation, competitive edge, knowledge generation acquiring new market represent the pros of cultural diversity and superiority/inferiority clashes, expatriate adjustment, work life balance, racism, discrimination and responsibility overload are the cons of cultural diversity.

Keywords: *Cultural Diversity in a small emerging island economy*

Introduction

During the 21st century, one of the most important trends affecting the workforce is that of increasing diversity (Lavaty and Kleiner, 2001). Among the many environmental trends affecting organisations in recent years is the rapidly changing composition of the workforce, a phenomenon known as workforce diversity (Bhadury et al., 2000). Higgs (1996) also stated that one of the hot topics for the latter part of the 1990s would seem to be a diversity and in a global context, the management and development of people inevitably leads to considerations of diversity and related challenges. Responding to challenges with sound diversity management strategies and concrete practices requires commitment by top management and is often reflected in clear and transparent corporate diversity policies. The policies are necessary to provide direction and guidance for management and employees crucial in an area as complex, multifaceted and comprehensive as workforce diversity (Großschl, 2004). Mauritius, is no exception in this trend facing the challenges of the liberalised global economy has resulted in a significant influx of non-Mauritian executives in both foreign and locally owned organisation. This trend therefore demands that a study be undertaken to identify the opportunities and challenges that a diverse workforce represent to the management of expatriates.

This paper examines the opportunities and challenges the expatriates face in the local set-up of the organisation. In particular, issues and prospects about the Mauritian work practices have been analysed at a preliminary assessment with a view to making a contribution to the management of cultural diversity literature. A sample of executives from a diverse pool of sectors have been approached and interviewed where key features have been captured for analysis.

Cultural diversity in the workplace

The word “diversity” here can be defined as a mixture of people with different group identities within the same social system (Fleury, 1999). The criteria discriminating these groups include race, geographic origin, ethnicity, gender, age, functional or educational background, physical and cognitive capability, language, lifestyles, beliefs, cultural background, economic category, tenure with the organisation and sexual preference

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(Dessler, 1998; Galagan, 1991:1/9; Bhadury et al., 2000). As the workforce grows more diverse, tensions over cultural issues rise. Cultural clashes can be a significant drain on the energy of the people involved, especially minority workers who are more likely to feel oppressed by the differences. To employers, these changes in workforce demographics offer both opportunities and challenges. Research oriented to the unified cooperation between managers and other workers in organisations, the people coming from different cultures and the struggles to understand the similarities and differences between one another have rapidly increased (Iles, 1995; Spector et al., 2001; Smith et al., 2002; Chang, 2002). Bhadury et al. (2000) acknowledges diversity can have both positive and negative impacts on organisations, but the nature of the impact depends, to a large extent, on the type of diversity climate that exists rather than the fact of diversity itself. Lobel & MacLeod (1991) and Cox & Blake (1991) reveal that teams and a general workforce composed of individuals coming from different cultures can present more effective resolutions for the business problems. Multicultural organizations have an advantage in attracting and retaining the best available human talent. Mixity of cultures display higher creativity and innovation. Especially in research-oriented and high technology organizations, the array of talents provided by a gender- and ethnic-diverse organization becomes invaluable where "creativity thrives on diversity" (*Morgan, 1989*). Adler (*1991*), for example, found multicultural organizations to possess a greater openness to new ideas. Cultural diversity can be helpful in knowledge transfer. Although human beings come in different colours, shapes and forms, they do not seek to be different from others.

Despite the powerful advantages possessed by the multicultural organization, diversity is nevertheless not a panacea and not without its drawbacks. With the benefits of diversity come organizational costs. Diversity increases ambiguity, complexity, and confusion. Diverse organizations may have difficulty converging meanings, may find it hard to reach a single agreement, and have difficulty agreeing on courses of action (*Adler, 1991*). In many organizations, diversity can produce negative dynamics such as ethnocentrism, stereotyping and cultural clashes. The diversity movement has the potential to polarize different social groups and harm productivity while breeding cynicism and resentment, heightening intergroup frictions and tensions, and lowering productivity -- just the opposite of what managing diversity is intended to accomplish (*Carnevale & Stone, 1994*). Different languages and various cultural backgrounds increase the difficulty of communication between employees in the workplaces. Language differences often result in miscommunication. In addition, an intercultural communication may encounter more specific problems than a communication with one culture does. With different knowledge or experience, people in an intercultural communication have more difficulty to interpret others' behavior, which increases their uncertainty of how other persons will respond to the communication (*Baum et al, 2007*). Employees of a company with diversity environment are therefore often poorly prepared to manage the high uncertainty experienced in intercultural communication.

Methodology

To examine the opportunities and challenges that cultural diversity represents to organisation, this study relies on a qualitative research design, seeking to capture data. As survey instrument, unstructured interviews have been used allowing the respondents to elicit their professional realities. As there was little research that had been done on the opportunities and challenges of managing cultural diversity in Mauritius, an emerging economy, this paper is the starting point for addressing the subject.

The empirical study started by identifying organisations; regional, multinational and transnational, where there is the possibility of having a diverse workforce, followed by data analysis with 37 managers who at that time had a worldwide coordination responsibility within their functional domain. Key respondents were briefed over the phone about the research objective followed by interview schedule. The unstructured interview investigated numerous themes, evolving around the research objective. The transcription were analysed thematically, and the key patterns emerging from the responses were identified, to be used in the elaboration of the main survey instrument. The target respondents who were approached for the qualitative interview were exclusively HR Managers, HR Directors, Operational Managers, Head of Operations and in some cases Team Leaders.

Findings

The survey revealed key patterns in favour and against cultural diversity. Narrations have been developed from the key emerging patterns and identified by the 37 respondents.

Opportunities in cultural diverse environment

The fact of employing people from around the world, each one with unique talents, specialized skills and diverse background enhances the competitive advantage of the organisation. Colleagues with diverse cultural backgrounds bring unique experiences and perception to the table and work teams. Pooling the diverse knowledge and skills of culturally distinct expatriates reinforce team's performance and responsiveness to changing conditions. As such a diverse team not only helps to achieve the best strategies but also amplify the workforce with international standards where both locals and expatriates work together increasing productivity and profitability. The culturally rich workforce may nurture innovative culture and promote creativity amongst employees. Organisations would normally recruit expatriates because there is a shortage of specific skills on the market or because they have been assigned by the headquarters. Very often expatriates possess excellent linguistic abilities. When brought to the organisation they have specialist skills that benchmark the organisation to that of competitors. By pooling the global players, it adds up to the sharing of knowledge from their valuable past experience, openness of the organisation culture, international working patterns thus enriching intellectual capital and competitive edge. In respond to heightened global competition, global mindset emerged as an important asset to benchmark competitors and gain competitive edge. The diversity of cultures creates a more flexible workforce where differences are respected. Communication flows are easily formed thus developing the mutual understanding of among the various nationalities. Although a pleasant atmosphere may be difficult to achieve, employees nevertheless recognise the numerous strengths and talents that diversity brings and respect their colleague's contribution. Thus, a cosmopolitan culture is created that encompasses culture differences and promotes cultural understanding, self development and the elimination of social taboos. Cultural diversity contributes in elevating the corporate image of the organisation. Simultaneously, the best global practices acts as motivators in attracting potential candidates and fosters loyalty and retention of employees towards the organisation. Expatriates can easily forecast the market demands and make analysis quicker due to their international exposure and market sensibility they have acquired. They are more receptive, possess the ability to effectively execute the changing customer requirements and flexible market demand. Within the globalisation phenomenon, organisations are using language, international expertise and cultural knowledge of highly competent expatriates to identify successful import and export opportunities. Consequently expatriates helps to improve the existing service line towards customers. Since the latter know the culture, industry and

customers needs or acts as a liaison between the service provider and the client, conformance to customer's requirements becomes easier. Organisation having a wide range of linguistic skills may through the use of global experts bring new projects to the organisation. It opens up avenues for new acquisitions and business ventures. In addition to this, employees from diverse background may better understand the customer's needs if the latter is from the same country where the customer is. It helps to improve the service line. The lead time is short for setting business in new locations. Hence, expatriates act as catalysts for international and big business deals.

Challenges in a cultural diverse environment

The commonest risk associated with expatriation project is that of failure. Some people experience culture shock when they are in a completely new working environment with new cultures, working styles, values and norms. The inability to overcome emotional disturbance can disorient the expatriate which can result into depression, stress, lack of trust and self-confidence representing higher cost. Another challenge for the expatriate is to be accepted by locals in the new cultural setting and the support the latter will have from the locals. Communication emerges as one of the biggest challenge in expatriation assignments. Language, one of most important cultural features that make up cultural diversity, can very often breed misunderstandings both verbal and non verbal which can hinder productivity. Employees failing to communicate clearly may feel themselves excluded, frustrated and may provoke feelings of suspicion, low self confidence and hostility. Cultural mixity brings along varying values in working style, communication, habits, respect and numerous dimensions. It is extremely important that locals and managers creating acceptance between different culture and local associates, harmonising different values and beliefs which are influenced by cultural and social perceptions at different levels of development and social emancipation. Prejudice can create miscommunication and misunderstanding between teams in the organisation. Local employees do not feel very comfortable with foreigners in their environment as they feel threatened by the expatriate's potentials, professionalism, knowledge and competencies. Racism and discrimination is quite common in a culturally diverse workforce. Some minority groups would face the issue of career progression and acceptance in the organisation. Stereotyping limits the minority group to the glass ceiling and they suffer from promotion barriers and lack of career development opportunities which can lead to frustration affecting their productivity. Development and integration of expatriates can be challenging. Although training needs help expatriates to embed the new culture, the open mindset of the latter will help determine the resistance or acceptance level he will develop vis-a-vis the new working environment. Exchange of working styles, various international exposures constitutes the differentiation factor between organisations. Respondents have mentioned that there is enormous knowledge creation but no real means and ways to store the tacit and explicit knowhow. This remains as one of the biggest challenges and if not tackled organisation may lose its competencies and competitive edge in situations of exits and brain drain. As mentioned by some respondents, there is the issue of emotional immaturity amongst locals and expatriates. Combination of high responsibility and social status may be beyond control for people who cannot manage their emotional maturity. This is a potential risk for expatriates as it can lead to career failures or relationship breakup. They are often faced with heavy workloads and the pressure to deliver adds to physical burn outs. The combination of emotional despondency and physical exhaustion from stress and overwork is common for expatriates. Expatriates very often feel that they are superior to the locals. This attitude create place for frustration and the superiority and inferiority clashes. Locals feel inferior to the expatriates and are reluctant to cooperate with them. Also, the expatriate may risk alienation

and polarisation at work if the dominant groups take unwelcome positions. Accommodating expatriates may represent huge cost for the subsidiary branch. Financial aspects like disturbance allowance, schooling fees for kids, company car and location might cost. This would reassure themselves in their vicinity but at the same time the high monthly rentals in coastal areas would be higher than in that inland adding to the cost invested on the expatriate. In such, an expatriate failure would be greater loss on investment. Expatriate accepting international assignments often face the issue of disruptive personal life and trailing partner. Even if the recruited expatriate possess the skills to be flexible in a completely new working environment, it is not always the case that the accompanying partner do possess same. This can disturb the couple's life and bring their relationship to a halt. As a responsible employer, it is important that the organisation make close follow-ups with the adjustment and comfort level of the expatriate's family because failure in personal relationship would impact negatively on performance delivery in the business.

Discussion

As globalisation unfolds, cultural diversity is inevitable. Global labour mobility and global careers is the call of the new globalised marketplace. Findings show that organisations facing both the pros and the cons of globalisation have to be managed properly so as the workforce and performance does not suffer. Human Capital plays a vital role in determining the success or failure of an organisation. As seen from the findings, expatriates possess specific skills and they add up to the knowledge base of the organisation. Global labour mobility would inevitably be of greater emergence within the years to come and HR managers should be equipped to be able to face the challenges it represent and capitalize on the numerous opportunities that it encompasses. Failure to do so would inevitable drive the business out of the global market place. HR's role is of utmost importance in determining the acceptance of foreigners in organisation. As ambassadors, HR should define the expected role of locals within the culturally diverse workforce and develop the global mindset of employees to create a culture of acceptance and team work with the expatriates. Moreover HR should conduct selective recruitment so as to avoid situations of emotional immaturity could lead to expatriate failures. Cost is to be better managed and provide support to the expatriate to enjoy a healthy personal, professional and family life. Simultaneously locals have an important role to play in organisations. They should show willingness to cooperate, share and learn from each other. The acceptance of expatriates is a new mindset that calls for a complete re-education process. The importance of having experts from around the world, not to intimidate locals, but to push the country's capacity and goodwill to the next level, without the contribution of the expatriates would not have been possible. Locals need to understand that the expatriates present no threats to them, but they can all together as a team learn and share from each other thus lifting barriers of prejudices and enhancing self development and cultural richness.

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