

Exploring the Applicability of Deming's Concept of "Continuous Improvement" in the Contemporary Public Sector Organisations

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Abstract

Continuous improvement is a prerequisite for effective performance of the contemporary public sector organisations. This research explores the applicability of Deming's concept of "continuous improvement" in the contemporary South African public sector organisations. The motive of the study was to identify the major paradoxes and the remedial improvement strategies that can be suggested. Using conceptual analysis as a qualitative research technique, a meta-synthesis of continuous improvement theories was undertaken and triangulated with the results of empirical studies conducted on continuous improvement in the South African public sector organisations. In contrast to the articulation in the continuous improvement theory of Plan-Do-Check-Act, the concept of continuous improvement was found to be overshadowed by over-emphasis of monitoring and evaluation which are also in turn largely saddled by unsupportive cultural practices, ineffective implementation of improvement measures and lack of easily discernible plans. In the context of such paradoxes, the study enriches the existing theories by suggesting a five steps' (Analyse-Plan- Improve-Measure- Improve) cyclical framework that the public sector managers can emulate as a moderator for undertaking effective continuous improvement in the increasingly contemporary complex and demanding public sector organisations.

Keywords: a cyclical framework; continuous improvement, performance, public sector organisations

1. INTRODUCTION

A continuous improvement framework that a public sector organisation uses predicts the extent to which it is able to perform more effectively (Bamberger, Rao & Woolcock, 2010:16; de Waal, 2010:86). Continuous improvement is an iterative cyclical analytical process that edifies the identification of major inhibitors and relevant changes and modifications that can be undertaken to ensure effective organisational performance (Bamberger, Rao & Woolcock, 2010:16; de Waal, 2010:86). Continuous improvement renders public sector managers more responsive to the increasingly complex and changing demands of the contemporary citizens. Although the essence of continuous improvement is widely recognised in the South African public sector organisations, empirical facts indicate not only lack of a suitable framework, but also stronger substitution of the notion of continuous improvement with concepts of monitoring and evaluation. Monitoring and evaluation moderate effectiveness of continuous improvement (Sedgwick, 2010:5). However, an analysis in the context of Deming's PDCA (Plan-Do-Check-Act) theory heralds monitoring and evaluation as just a single technique for continuous improvement. Such approach limits the entrenchment of the concept of continuous improvement in the South African public sector organisations. Several scholars have examined different discrete techniques such as performance management and benchmarking as critical for enhancing effectiveness of continuous improvement in the contemporary South African public sector organisations (Radebe, 2014:14; Sedgwick, 2010:5). However, most of them have not evaluated the integrated continuous improvement framework that can be adopted by the executive authorities in the contemporary public sector organisations (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16). It is such a gap that this research fills by undertaking a meta-synthesis of theories on continuous improvement vis-à-vis the approach for continuous improvement in the South African public sector organisations. Such analysis would facilitate the identification of the major inhibitors and an integrated continuous improvement framework that can be suggested.

2. LITERATURE REVIEW

The evolution of the contemporary continuous improvement theories was shaped by the primary quality management theories of the 1960s (Stone, 2012:120; Suganthi & Samuel, 2011:16). One of such theories is the Kaizen quality management philosophy that agitates for continuous improvement through identification and elimination of wastes. This edifies minimisation of costs and improvement of the overall operational efficiency of an organisation (Stone, 2012:120; Suganthi & Samuel, 2011:16). Kaizen quality management philosophy also shaped Peter Drucker's (1968:4) argument in a seminal paper titled: "Managing in turbulent times" that continuous improvement and innovation are central pillars in the quest for improving an organisational performance. In that paper, Drucker outline the four strategies for continuous innovation and improvement to encompass; organised abandonment, continuous productivity improvement, exploiting successes and innovation.

Drucker argues that organised abandonment is one of the strategies for improving the performance of an enterprise (Drucker, 1985:16). Abandonment connotes the process of conducting relevant analysis and identifying the processes, products or ventures that must be eliminated. He reveals the elimination of such processes, products or ventures contributes to edify cost reduction and the freeing of resources that held up in redundancies (Drucker, 1985:16). However, points that the application of the organised abandonment must be accompanied by the second strategy that emphasises continuous productivity improvement (Rasheed and Abdul, 2007:161). Drucker argues that gradual incremental continuous productivity improvement influences the turning around and improvement of the performance of an enterprise (Olsen, 2009:559). In this endeavour, he explains that significant attention must be directed towards evaluating and identifying quality, process, and methodological and system's inhibitors. Through such approach, the executives are often able to improve the quality of their services, products and process to thereby impact positively on the improvement of the competitiveness of an enterprise (Olsen, 2009:559). As such strategies are being undertaken, Drucker suggests that exploiting of success is part of the complementary strategies that must be undertaken.

Drucker reasons that as much as the performance of most enterprises is in most instances marred by challenges, executives need not focus on challenges, but on exploiting successes. Drucker argues that as the executives solve the identified problems and focus on exploiting success, their overall level of innovation improves (Olsen, 2009:559). This edifies the identification of new opportunities for further profitability and growth. Part of the strategies for exploiting successes includes improving or increasing the usage of the existing products, quality improvement and investment in operational improvement strategies such as the adoption of relevant technologies to drive costs down (Olsen, 2009:559). As the executives focus on exploiting the prevailing opportunities, Drucker highlights essence for the executives to invest heavily in innovation and continuous improvement to reap more opportunities. Innovation is the process of investing in the initiation and invention of new ideas to change and transform the present operational process and methods. Innovations also entail investing new product development, improvement product features, quality and new ventures (Sakbani, 2010:91). Innovation is critical for effective performance of the contemporary business enterprises. The modern business enterprises operate in turbulent times characterised by constant changes in the political, economic, technological, ecological and legal variables (Sakbani, 2010:91). This implies that the application of the accompanying change and transformational strategies is critical for enhancing the diffusion of the newly adopted ideal throughout the entire enterprise (Kai, 2008:501). Kaizen quality management philosophy was also central in the evolution of process and quality management techniques such as Total Quality Management (TQM), performance management, benchmarking, lean operational system, process re-engineering, restructuring and Taguchi quality management methods (Singh & Singh, 2013:39).

The six-sigma's DAMAIC's concept of define, measure, analyse, improve and control has been widely transposed into the techniques for managing continuous improvement in most of the contemporary public sector organisations. However, other theories herald effectiveness of continuous improvement process to be moderated by seven processes encompassing the formulation of work teams and identification of the areas of challenges that need improvement, identification of the root causes of the problems, and charting the ideal processes that need to be identified and eliminated (Deming, 1993:9; Dudin, Frolova, Gryzunova & Shuvalova, 2015:244). This is followed by identification of inhibitors to enhance the realisation of the ideal model, implementing change, and monitoring and evaluation to assess whether the process for the implementation of the relevant changes is successful. Following the introduction of the concept of New Public Management in the 1980s, the notion of continuous improvement has been increasingly integrated in the domain of public sector management (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16). However, the adoption of a more meaningful and coherent framework that renders it easy for managers and employees in the contemporary South African public sector organisations to apply the concept of continuous improvement with relative ease seems to be yet a challenge (Department of Performance Monitoring and Evaluation-DPME, 2015:16; Klijjn, 2008:233; Sedgwick, 2010:5; Singh & Singh, 2013:39). Instead, empirical facts indicate it is not only lack of appropriate framework which is a challenge, but that also the endeavour to undertake the necessary improvement measures is also often constrained by skills' shortages and lack of training of supervisors on the required statistic control methods. Other challenges are linked to poor commitment of the administrative and political interface, poor accompanying change and transformation of the organisational culture (Department of Performance Monitoring and Evaluation-DPME, 2015:16; Klijjn, 2008:233; Sedgwick, 2010:5; Singh & Singh, 2013:39). It is such limitations that motivate this research.

3. PROBLEM INVESTIGATED

The use of less integrated and coherent continuous improvement framework saddles effectiveness of continuous improvement initiatives undertaken in the contemporary South African public sector organisations. It also affects the translation of the process of the implementation of different government programmes to attain not only the desired outputs, but also outcomes that in the long run impact positively on the wider population.

4. PURPOSE OF THE RESEARCH

The purpose of this research is to undertake a meta-synthesis of theories on continuous improvement vis-à-vis the approach for continuous improvement in the South African public sector organisations, so as to identify major inhibitors and an integrated cyclical continuous improvement framework that can be postulated.

5. METHODOLOGY

In a bid to accomplish the above indicated research purpose, the study uses conceptual analysis, and specifically a meta-synthesis as a principle qualitative research technique (Blanchette, 2012:46; Boghossian, 2011:488; Shelby & Vaske, 2008:99). The process for the accomplishment of a meta-synthesis was guided by three critical research questions:

- Which continuous improvement framework is used in the contemporary South African public sector organisations?
- What are the major inhibitors of the continuous improvement framework used in the contemporary South African public sector organisations?
- Which framework can be suggested for undertaking an integrated cyclical continuous improvement in the contemporary South African public sector organisations?

In a bid to seek answers to these research questions, a meta-synthesis of different theories and prior empirical studies were undertaken using four main steps:

- Critical analysis of continuous improvement theories in the contemporary public sector organisations.
- Evaluation of prior empirical studies on the methods and challenges of continuous improvement in the contemporary South African public sector organisations.

These were followed by identification and mapping of themes to develop an integrated cyclical continuous improvement framework that can be adopted by the contemporary South African public sector organisations. The details of the results of meta-synthesis are as presented in the next section.

6. FINDINGS

The findings of the meta-synthesis are examined according to the two sub-headings that include:

- Theories: Critical steps for continuous improvement in the contemporary public sector organisations.
- Empirical Facts: Continuous improvement in the South African Public Sector.

The details are as follows.

6.1 Theories: Critical Steps for Continuous Improvement in the Contemporary Public Sector Organisations

A meta-synthesis of different theories on continuous improvement implies most authors strongly support the articulation in Deming's PDCA theory that effectiveness of continuous improvement is moderated by the application of a four-step's framework encompassing plan-do-check-act (PDCA) (Deming, 1993:9; Drucker, 1968:4; Putnik, 2012:179; Stone, 2012:120; Suganthi, and Samuel, 2011:16). These four steps and their associated defining variables are illustrated in Figure 1.

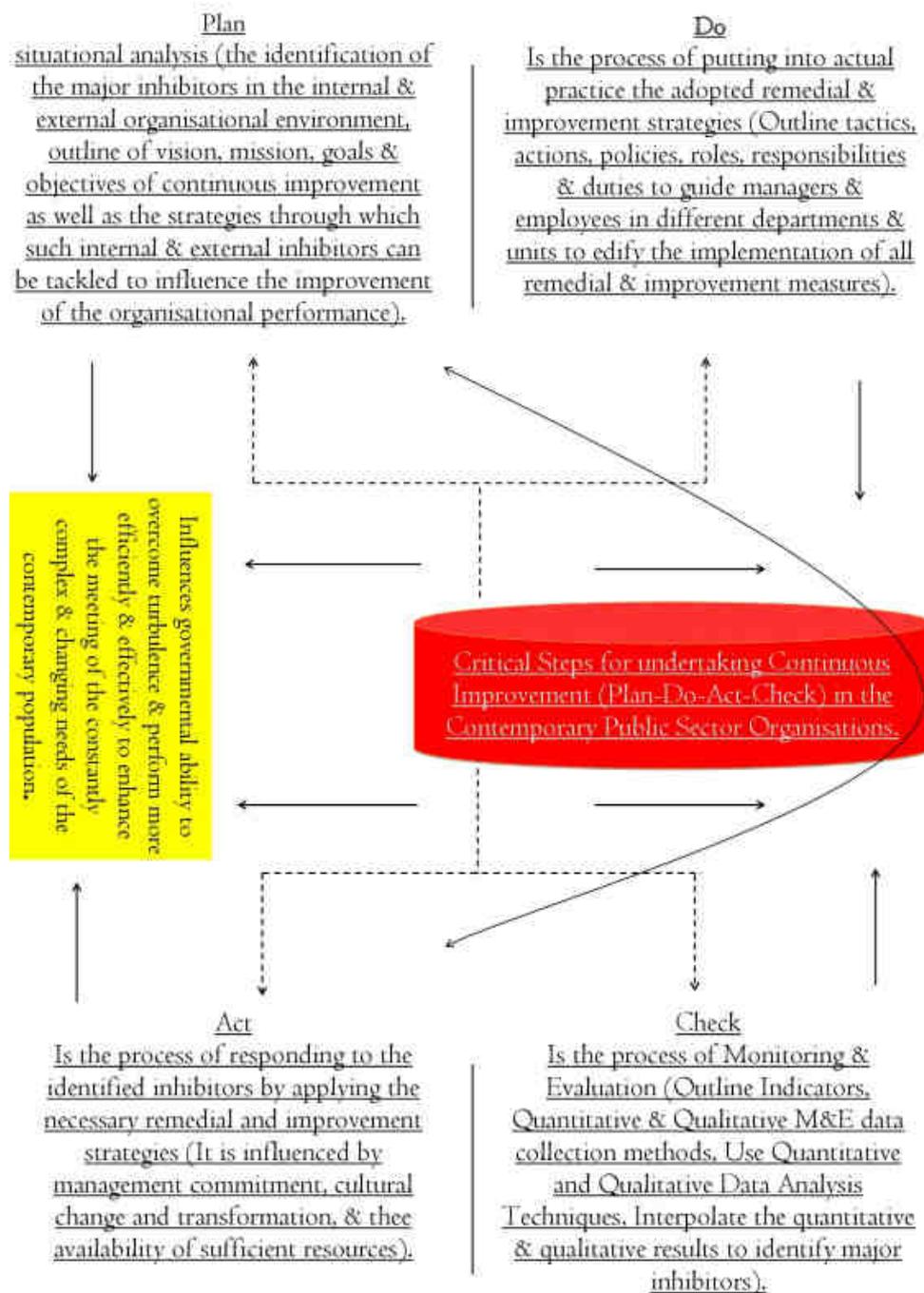


Figure 1: Critical Steps for Continuous Improvement in the Contemporary Public Sector Organisations

Source: As derived from the interpretation and comparison of Deming’s PDCA theory with the views of authors such as Drucker (1968:4), Putnik (2012:179), Stone (2012;120)

- **Plan**

Planning requires relevant analysis and outlining critical objectives and activities that must be effectively accomplished to enhance the attainment of such strategic objectives. It is the planning phase that rationalises how the process of continuous improvement can be undertaken (Deming, 1993:9; Drucker, 1968:4; Putnik, 2012:179). Critical steps for formulating the continuous improvement plan include situational analysis; the identification of major inhibitors in the internal and external organisational environment, the outline of the critical strategies through which such internal and external inhibitors can be tackled. These steps are followed by doing.

- **Do**

Doing is the process of putting into actual practice the adopted remedial and improvement strategies. It also outlines tactics and critical actions outlining roles, responsibilities and duties that managers and employees in

different departments and units need to effectively accomplish to edify the implementation of all the critical improvement and remedial measures (Stone, 2012:120; Suganthi, and Samuel, 2011:16). The completion of the implementation of relevant remedial and improvement measures leads to checking and studying to assess whether the remedial and improvement measures that have been put in place are contributing towards the attainment of the desired positive effects.

- **Check**

Checking requires the use of the appropriate framework for monitoring and evaluation (M&E). Monitoring refers to an ongoing systematic process of assessing the extent to which the process of project implementation is influencing attainment of the desired positive outcomes. Evaluation is a periodic analysis of efficiency, impact, relevance and sustainability of the effectiveness of project implementation (Adato, 2011:11; Dudin, Frolova, Gryzunova & Shuvalova, 2015:244; Maletic, Maletic & Gomiscek, 2012:35; Preble & Hoffman 2012:26). The effectiveness of M&E framework is predicted by the clarity of the outlined quantitative and qualitative indicators, selection of appropriate interface of quantitative and qualitative M&E methods, the application of appropriate quantitative and qualitative techniques for data analysis and interpretation, and identification of inhibitors and intervention strategies that can be undertaken to influence improvement of the organisational performance (Garbarino & Holland, 2009:7). Depending on the targets and baselines outlined in the continuous improvement plan, indicators are the symbols that must be clearly outlined to highlight the criteria for the assessment of the effectiveness of the process for the implementation of the continuous improvement measures (Preble & Hoffman 2012:26).

Indicators can be input, process, output, and outcome and impact indicators. Input indicators facilitate evaluation of the level of optimisation of financial and non-financial resources used in the implementation of continuous improvement strategies (Adato, 2011:11; Dudin, Frolova, Gryzunova & Shuvalova, 2015:244). Process indicators measure efficiency and effectiveness of programme implementation, as output indicators assess the results of the effects of programme vis-à-vis the amount of resources used. Outcome indicators evaluate the short-term effects of a programme on the improvement of the condition and standards of living of the population. Impact indicators on the other hand focus on the evaluation of the long term effects of a programme (Adato, 2011:11; Dudin, Frolova, Gryzunova & Shuvalova, 2015:244). The clear outline of indicators is followed by the actual quantitative M&E process of monitoring and evaluation using techniques such as surveys, KAP (Knowledge, Attitude and Practices) survey, case study and analysis of existing statistics. Qualitative M&E techniques encompass the use of interviews, focus group discussions, rapid appraisals, performance management, benchmarking, letters, citizens' report cards and telephone hotlines. After relevant data has been collected, quantitative analysis is often undertaken using parametric (t-test, analysis of variance (ANOVA), multivariate analysis, correlation analysis and regressive analysis) and non-parametric tests (sign-test and chi-squared (χ^2) analysis) (Maletic, Maletic & Gomiscek, 2012:35; Preble & Hoffman 2012:26).

- **Act**

The interpretation of the results of qualitative and quantitative data analysis influences the assessment of the level of progress of the implementation of the continuous improvement measures (Corder & Foreman, 2014:5; Maluccio, Adato and Skoufias, 2010:29; Pepper & Spedding, 2010:140). It also enhances identification of the causes of failures and the intervention remedial and improvement strategies that can be undertaken. Some of the deficiencies explaining the organisational failures are often linked to lack of political commitment, municipal capacity constraints and poor service quality management. Other challenges are usually related to poor investment in the governmental efficiency improvement strategies such as the establishment of electronic-government and the adoption of the service delivery models such as one-stop-shop citizen-centric service delivery models. Some of the difficulties can arise from the poor responsiveness to the changes in the citizens' needs resulting from the changes in demographics that can precipitate rising demand for investment in more educational and health facilities as well as the provision of social security services (Pepper & Spedding, 2010:140). The rise in a country's demographic figures also implies that the government must be responsive to the employment needs of the population. This can be accomplished by improving the performance of state-parastatals and the creation of a favourable business environment for local and foreign direct investments (Corder & Foreman, 2014:5). Depending on the nature of the challenges identified, the iterative process in the continuous improvement initiative suggests that public managers must be able to cyclically apply the four-step's framework of Plan-Do-Check-Act (PDCA) until all the new challenges are identified and addressed (Maluccio, Adato and Skoufias, 2010:29; Pepper & Spedding, 2010:140). However, that seems not to be the case in the contemporary South African public sector organisations.

6.2 Empirical Facts: Continuous Improvement in the South African Public Sector

Empirical studies and different government documents indicate M&E is perceived in the South African public sector organisations as a tool that facilitates eliciting of relevant information and data on the successes and failures of the process of project implementation (Hoffman, 2010:18; Radebe, 2014:14; Schussler, 2012:7). This

renders it possible for public sector managers to identify major impediments and determine the remedial and improvement strategies that can be adopted. However, the limited linkage of M&E as a critical tool for enhancing effectiveness of continuous improvement still limits the entrenchment of the notion of continuous improvement in the contemporary South African public sector organisations. Effectiveness of continuous improvement is not only enhanced by the four step's framework of Plan-Do-Check-Act (PDCA), but also by the critical success factors encompassing skills and competencies of the employees, and change and transformation of the organisational structures, practices and culture (Department of Performance Monitoring and Evaluation-DPME, 2013:29; Department of Performance Monitoring and Evaluation-DPME, 2013:22; Mabe, 2015:5). The effectiveness of these factors is also predicted by the overall resources' availability and commitment of the political and administrative leaders to implement and apply relevant remedial and improvement strategies. Unfortunately, empirical facts and different government documents indicate that such factors are still the major inhibitors of the effectiveness of M&E as an initiative for enhancing the embracement of the concept of continuous improvement (Department of Performance Monitoring and Evaluation-DPME, 2013:29; Department of Performance Monitoring and Evaluation-DPME, 2013:22; Mabe, 2015:5).

6.2.1 Inhibitors: Continuous Improvement in the South African Public Sector

A meta-synthesis of different empirical facts indicates that the inhibitors of effectiveness of continuous improvement in the South African public sector are linked to poor organisational M&E culture, ineffective implementation of improvement measures and uneasily discernible plans (Department of Performance Monitoring and Evaluation-DPME, 2013:29; Department of Performance Monitoring and Evaluation-DPME, 2013:22; Mabe, 2015:5).

- ***Unsupportive Organisational Culture***

M&E can only influence effective application of the concept of continuous improvement if ordinary employees and managers recognise M&E as a technique critical not only for enhancing effectiveness of the organisational performance, but also their individual performance (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16). Empirical facts in the contemporary South African public sector organisations however indicate change and transformation of the organisational culture not to be supportive for edifying M&E's effectiveness as a tool for continuous improvement. M&E is still strongly detested among managers and employees as a policy and controlling tool rather than a technique for continuous improvement. Ordinary employees and managers feel M&E leads to the interference with the internal departmental activities and usurpation of the roles that should have been accomplished internally by managers and supervisors (Department of Performance Monitoring and Evaluation-DPME, 2013:18; Public Service Commission-PSC, 2008:244; World Bank, 2011:37). Such unwillingness on the part of the employees and managers affects effective management of data quality to ensure that decisions of the analysis and improvement strategies that can be adopted are based on sound quality data. Internal and external M&E influence measuring of the set performance targets against actual performance and the identification of the solutions that can be adopted to drive performance (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16). However, effectiveness of the internal M&E seems also to be undermined by a stronger culture of compliance among internal managers. This limits continuous learning and improvement. Besides the undertaking of M&E as a formality rather than as an embedded organisational culture, the other challenge is linked to the fact that M&E has only often been undertaken to focus on the evaluation of outputs, and not outcomes and impacts on the wider population. This affects effectiveness of learning, accountability and application of the appropriate remedial strategies. In other words, there is a challenge of transforming attitudes and perceptions of managers and ordinary employees about the importance of M&E as a continuous improvement tool.

- ***Ineffective Implementation of Improvement Measures***

Effective embracement of a culture of continuous improvement is influenced by the extent to which public sector managers are able to effectively implement relevant remedial improvement measures (Department of Performance Monitoring and Evaluation-DPME, 2013:18; Public Service Commission-PSC, 2008:244; World Bank, 2011:37). The Public Service Act and the Public Finance Management Act provide a legal disciplinary framework that can be used by executive authorities to foster accountability and consequences for poor performance (Department of Performance Monitoring and Evaluation-DPME, 2013:18; Public Service Commission-PSC, 2008:244; World Bank, 2011:37). This legal framework contributes towards improving performance by deterring other employees and managers from engaging in activities for which disciplinary actions were instituted. A challenge however arises from the unwillingness of most of the executive authorities to apply the required disciplinary measures (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16). The M&E regulatory framework bestows the responsibility for holding employees accountable on the external monitors, as the disciplinary regulatory framework emphasises the need for internal accountability. This creates conflicts and lack of cooperation between external monitors and executive authorities as to the authority responsible for holding departmental employees accountable for poor performance.

Since the responsibility of external monitors seems to override the responsibility of the internal

executive authorities, it signifies that most of the executive authorities are often less willing to act on the report provided by the external monitors. Such a challenge limits the remediation of the identified inhibitors and the application of relevant improvement measures. The other impediments of the successful implementation of the continuous improvement measures are linked to the lack of sufficient financial resources and critical skills necessary for the implementation of certain specific improvement programmes (Department of Performance Monitoring and Evaluation-DPME, 2013:18; Public Service Commission-PSC, 2008:244; World Bank, 2011:37). The South African public sector organisations are riddled with a lot of challenges and competing priorities. In effect, only priorities that rank quite highly are considered during the budgetary deliberations. Due to resource constraints, it therefore signifies that only a few of the prescribed remedial and improvement measures are often implemented. The overall shortage of critical skills seems to affect also the formulation of clear plans on which the process for monitoring and evaluation as a technique for enhancing continuous improvement is based.

- **Poorly Discernible Plans**

The extent to which plans are easily discernible by persons who are not its formulators influences the outline of critical activities that must be accomplished in the endeavour for the implementation of continuous improvement (Department of Performance Monitoring and Evaluation-DPME, 2013:18; Public Service Commission-PSC, 2008:244; World Bank, 2011:37). Easily discernible plans often display clear strategic visions, missions, goals and objectives. Discernibility of plans is also assessed by the clarity of the outlined baselines and indicators. It is such indicators that are often transposed into the criteria for monitoring and evaluating the success and failures of the process for the implementation of different continuous improvement programmes (Hoffman, 2010:14; Schussler, 2012:7). The effectiveness of the strategic plan is further determined by the extent to which it provides the necessary change theory that can drive the process of activities' accomplishment and the translation of outputs into the attainment of the desired outcomes. However, lack of essential skills at the municipal levels has often prevented the formulation of easily discernible plans. In most of the cases, most of the integrated municipal development plans do not provide clear targets against which the actual performance can be measured against the expected performance (Hoffman, 2010:14; Schussler, 2012:7). This affects the effectiveness of monitoring and evaluation to identify the common inhibitors and the relevant improvement measures that can be adopted. Poorly formulated indicators also undermine the ability of relevant officials to collect relevant baseline information on the outlined indicators (Klijn, 2010:19; Prugsamatz, 2010:246; Whittington & Galpin, 2010:20). This limits the assessment of the effectiveness of the process of programme implementation on the attainment of the desired outcomes. The introduction of the new South Africa's Public Administration and Management Bill and the National Development Plan seeks to improve the skills and competencies of all public servants so as to improve among others the quality of planning and implementation of relevant government programmes at the municipal levels (Schussler, 2012:7; Schwella, 2013:16). Although the positive effects may be reflected in the near future, present trends indicate uneasily discernible plan to be a major challenge in the implementation of the measures for continuous improvement.

7. DISCUSSION

Conventional theories on the use of the concept of continuous improvement in the contemporary public sector organisations indicate most authors to agree with Deming's PDCA theory that the effectiveness of continuous improvement is enhanced by the four steps encompassing; planning, doing, checking and acting (Deming, 1993:9; Drucker, 1968:4; Putnik, 2012:179; Stone, 2012:120; Suganthi, and Samuel, 2011:16). Although the essence of continuous improvement was found to be cherished in the South African public sector organisations, a meta-synthesis of different empirical facts revealed the concept of continuous improvement to be overridden by the over-emphasis of monitoring and evaluation. Policy documents and regulatory frameworks highlight monitoring and evaluation as critical for assessing effectiveness of project implementation and eliciting relevant information that can be used to inform later policy decisions (Auditor General, 2013:12; National Planning Commission, 2011:144; Rothstein & Teorell, 2008:169). However, lack of a coherent framework reflecting a semblance of Deming's PDCA theory seems yet to be a deterrence of the extent to which most of the South African public sector organisations are able to achieve enormous positive outcomes from their present approach for undertaking continuous improvement. The use of a continuous improvement framework aligned to Deming's PDCA theory edifies improvement of the clarity and discernibility of plans, systematic process of programme implementation and the identification and remediation of all the major inhibitors (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16). It also fosters a culture of learning from the existing challenges and continuous improvement among the ordinary employees and managers. With Deming's PDCA theory not effectively integrated in the continuous improvement framework used in most of the contemporary South African public sector organisations, it is therefore not surprising that a meta-synthesis of different empirical facts indicates that the inhibitors of effectiveness of continuous improvement in the South African public sector are linked to poor organisational M&E culture, ineffective implementation of improvement measures and lack of easily discernible

plans (Hoffman, 2010:14; Schussler, 2012:7; Schwella, 2013:16).

8. MANAGERIAL IMPLICATIONS

In a bid to effectively link it's the existing M&E framework to Deming's PDCA theory of continuous improvement; it is recommended that the executive authorities in the contemporary South African public sector organisations must consider using a cyclical framework postulated in Figure 2. This will require the utilisation of the steps encompassing:

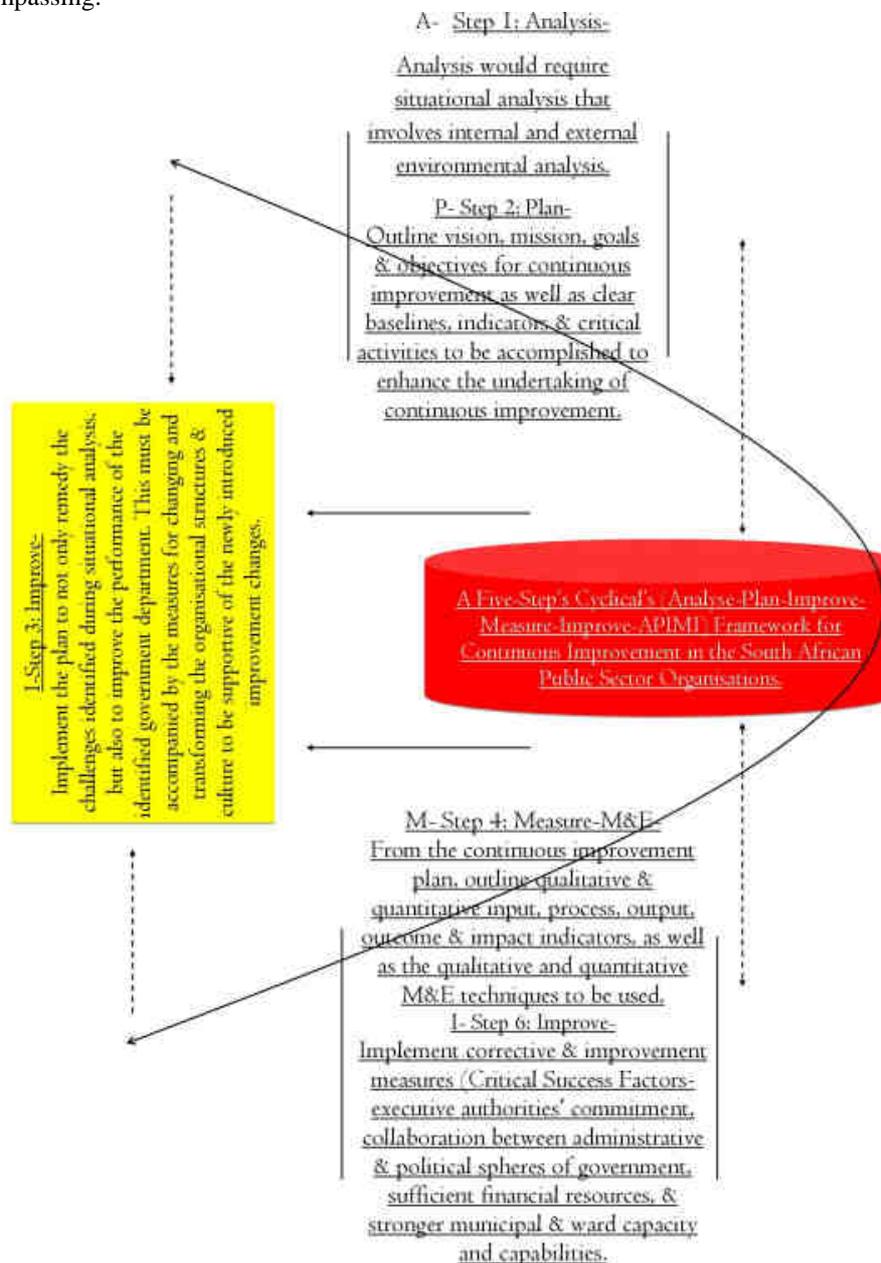


Figure 2: A Five-Step's Integrated Cyclical's (Analysis-Plan-Improve-Measure-Improve-APIMI) Framework for Continuous Improvement in the South African Public Sector Organisations

Source: Researcher's own construct as derived from the triangulation of the theories on continuous improvement with the results of empirical studies conducted on continuous improvement in the South African public sector organisations.

- **Analyse**

For public sector managers in the South African public sector organisations to understand the critical improvement measures, the analysis of the external and internal environmental trends is critical. External and internal environmental analysis can provide sufficient information for public sector managers to understand internal and external challenges and opportunities that can be used to enhance the planning of the continuous improvement measures that must be undertaken. External environmental will require the evaluation of the demographical trends and implications on the delivery of services such as education, health and social security

services. This must be accompanied by the evaluation of the changes in citizens' needs for efficient and effective delivery of services such as water, electricity, housing and infrastructure, as well as how trends around the globe is shaping the perception of the local population. Other external environmental trends that can be evaluated include technological changes and impact on governmental operation, and performance of the economy and the overall level of optimisation of the available resources to finance different socio-economic activities.

Internal analysis can involve the evaluation of the responsiveness of the National Development Plan-NDP, Integrated Provincial Development Plan-IPDP & Integrated Municipal Development Plan to a country's major concerns. Further assessments can also be undertaken to facilitate the understanding of the level of the interpretation and successful implementation of such plans at the municipal and ward levels. Other areas of internal environmental analysis in the public can encompass evaluation of the degree of collaboration and cooperation between the administrative and political leadership at all levels of the governmental structures, adequacy of the allocated financial resources, and suitability of the existing human resource skills and competencies. Besides assessment of the level of the integration of technology to enhance effectiveness and efficiency of governmental operations, public sector managers must also assess the extent of the effectiveness of the use of appropriate management techniques such as innovation, benchmarking and process control to enhance resource optimisation. These must be accompanied by analysis of the effectiveness of the use of good governance techniques such as accountability, responsibility and transparency, overall governmental efficiency and degree of responsiveness to the changes in the needs of the population.

- **Plan**

The first activity in the formulation of the plan for continuous improvement will require the outline of objectives that must be achieved as a result of the implementation of continuous improvement measures e.g improvement of the quality of the quantity of services delivered to the population, improvement of governmental efficiency, employment creation etc. This must be followed by the outline of clear baselines and indicators for evaluating the successes of the continuous improvement plan. With clear objectives, baselines and indicators outlined, public sector managers need to also outline critical activities to be achieved. Some of these activities may include investment in infrastructure and policy review to create conducive investment environment to stimulate the creation of new employment opportunities. It can also entail undertaking relevant modifications of the National Development Plan-NDP, Integrated Provincial Development Plan-IPDP and the Integrated Municipal Development Plan to effectively respond to a country's new major concerns. Other critical activities may involve the use of e-government technologies to create a more citizen-centric government, fostering good governance and management competencies to improvement resource optimisation, and partnership with the private sector and the communities to initiate and implement new programmes at the ward levels. This also be accompanied by undertaking measures for strengthening the competencies and capacity at the municipal and ward levels, as well as investment in research and innovation to enhance the degree of a government's responsiveness to the emerging new needs and demands of the population.

- **Improve**

In terms of the improvement measures, implement the plan to not only remedy the challenges identified during situational analysis, but also improve the performance of the identified government department. This must be accompanied by measures for changing and transforming the organisational structures and culture to be supportive of the newly introduced improvement changes.

- **Measure**

From the continuous improvement plan, outline qualitative and quantitative input, process, output, and outcome and impact indicators. Use quantitative M&E techniques (surveys, KAP(Knowledge, Attitude and Practices) survey, case study and analysis of existing statistics), and qualitative M&E techniques (interviews, focus group discussions, rapid appraisals, performance management, benchmarking, letters, citizens' report cards and telephone hotlines). The quantitative data analysis techniques that can be used include parametric (t-test, analysis of variance (ANOVA), multivariate analysis, correlation analysis and regressive analysis) and non-parametric tests (sign-test and chi-squared (χ^2) analysis). Qualitative data analysis-use can entail the use of thematic content analysis to identify challenges linked to the outlined input, process, output, and outcome and impact indicators. After the identification of further improvements can be still be undertaken.

- **Improve**

In the context of the changes in circumstances and the challenges identified from the quantitative and qualitative M&E results undertake the necessary corrective and improvement measures. This must be however accompanied by considering the key success factors encompassing: commitment of the executive authorities to implement the adopted improvement measures, a strong interface between the administrative and political spheres of government, sufficient financial resources and strengthening the capacity at the municipal and ward levels. This leads to a cyclical process involving another phase of situational analysis, planning, implementing improvement measures, monitoring and evaluation and improving again.

9. CONCLUSION

Considering the increasing new challenges that the contemporary South African public sector organisations face, continuous improvement is a prerequisite for remaining more responsive to changes in citizens' needs and demands. Unfortunately imply the effectiveness of the concept of continuous improvement is still inhibited by lack of appropriate continuous improvement framework, poor organisational culture of continuous improvement, ineffective implementation of improvement measures and lack of easily discernible plans. The study fills such a gap by postulating a five-step's integrated cyclical continuous improvement framework that can be adopted by the South African Public Sector Organisations. However, future studies can explore the required change and transformation for the practicalisation of such a framework.

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