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Introducing a new continuous improvement framework for increased organisational return on investment

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Introducing a new continuous improvement framework for increased organisational return on investment

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Abstract

Purpose – The purpose of this paper is to develop and validate a new framework for continuous improvement.

Design/methodology/approach – The literature review on customer value and strategic quality provides the basis for the identification of a conceptual framework for continuous improvement. This conceptual framework is validated using the in-depth interview and the survey approach.

Findings – The empirical study concluded that the new framework contains all the core components or forces of continuous improvement. These forces are customer value focused co-leadership, customer value focused strategic objectives, improvement specialists with people performance knowledge and improvement methodology. By adopting this framework, all process personnel can have a role to play in process improvement leading to increased organisational returns on investment. Overall, it is an effective framework that is easily understood and can be applied throughout any process led organisation. This is supported by the empirical data.

Practical implications – This new framework can demonstrate to each organisational employee where they fit into the organisational continuous improvement strategy. This paper provides practitioners with a new validated continuous improvement framework that has application in all organisations that are involved in process customer value improvement. The researchers contend that this new framework can compliment existing continuous improvement frameworks.

Originality/value – This paper develops and validates a new framework for continuous improvement. By adopting this framework, all process personnel can have a role to play in process improvement leading to increased organisational returns on investment. This is supported by the empirical data. Also, the authors contend that this framework embraces the systems thinking approach (Conti, 2010) or systemic approach as people interact with customers, processes, improvement methodologies and each other to drive customer value improvement. Consequently, this generates a need to take global view of the combined effect of all customer value improvement components. This systems thinking can feed into future research.

Keywords Competitive strategy, Business excellence, Continuous improvement, Change management

Paper type Research paper

1. Introduction and rationale for the study

Many excellence frameworks and improvement methodologies have guided organisations to performance improvement since the late 1980s. Both the Malcolm



Baldrige National Quality Award (MBQNA) and the European Foundation for Quality Management (EFQM) are two excellence frameworks that have provided value (e.g. Conti, 2007; Garvin, 1991; George *et al.*, 2003; Dale *et al.*, 2000; Denney *et al.*, 2009) for organisational improvement. Garvin (1991) reports that “in just four years, the Malcolm Baldrige National Quality Award has become the most important catalyst for transforming American business” (p. 80). The value of the MBQNA is captured succinctly by Denney *et al.* (2009): “The criteria provide a structure to help align and focus all areas of an organisation with key stakeholder needs and expectations” (p. 40). Dale *et al.* (2000) writes that “EFQM case studies confirms many successes across most European countries” (p. 5). George *et al.* (2003) provides insights into how the EFQM excellence model generates success for organisations:

The aim (EFQM Excellence Model) is to identify performance weaknesses with a view to identifying root cause and thereby instigate improvements in order to achieve planned goals (p. 123).

Despite their popularity, Conti (2007), one of the founders of the EFQM excellence model and past VP for Corporate Quality at Olivetti Group, states that “further innovation is needed in quality management, if we really want to pursue continuous organisational improvement” (p. 112).

Conti (2011) elaborates further on the type of innovation that is required:

I believe that both the Malcolm Baldrige and the EFQM models had a good start but their evolution toward complete fitness models was restrained by their own initial success. They were conceived as the main instruments to contrast the Japanese quality offensive based substantially on defect rates reduction. Their focus was then mainly on “doing things right”. So far so good. But, in order to become fitness of/for purpose models they should have evolved to cover all the value generation activities. That did not happen because the emphasis was more on exploiting their success than on pursuing further innovation (p. 257).

In line with Conti’s (2011) call for the development of a model that “covers all the value generation activities”, this study’s objectives are focused on the development and validation of a new continuous improvement framework. In specific terms, the aim addresses the following:

- (1) To develop and validate a new continuous improvement framework for increased organisational return on investment (ROI).

In order to address the research aim, the study answers the following questions:

- Q1. What are the key components of continuous improvement?
- Q2. How are these components connected inside a customer value improvement framework for increased ROI?

The first part reviews customer value and strategic quality. This forms the basis for the conceptual framework. This next part details the methodology that was adopted. The final part of the paper presents the results and discusses the implications.

2. Customer value

Without the customer there is no business. Organisations exist because of the value that they bring to the customer. Therefore, it is of paramount importance that an organisation understands first, how value is defined and second, what the customer

means by value. Many authors highlight the importance of customer value (e.g. Conti, 2013; Faryabi *et al.*, 2013; Khan *et al.*, 2013; Woodruff, 1997). For example, Khan *et al.* (2013) writes: "Customer value is considered as a critical prerequisite for long-term company survival and success" (p. 43).

Despite the importance of value, difficulties can arise in defining value. For instance, de Chernatony *et al.* (2000) posit that this difficulty stems from the "subjectivity of value (Hardy, 1987), variations between customers (Wilstrom and Normann, 1994), within customers (Parasuraman, 1997), between cultures (Assael, 1995), in different situations (Ravald and Grönroos, 1996), pre- and post-purchase (Gardial *et al.*, 1994), and between tangible and intangible offerings (Naumann, 1995)" (p. 41). Conti (2013) writes that "customer value perception is in fact a complex construct of the specific satisfactions and dissatisfactions, related to the different "qualities" exhibited by the product, each of them associated with different levels of importance and value expectation" (p. 224). The researchers concur with de Chernatony *et al.* (2000) and Conti (2013) by contending also that value is a subjective term and can mean different things to different people. Awareness of this difficulty will assist organisations in understanding challenges that arise in customer value identification and delivery. According to Porter (1996), value is concerned with "what buyers are willing to pay for" (p. 3). Nauman (1995) refers to customer value as "the ratio of benefits to the sacrifices necessary to obtain those benefits" (p. 102). So, in the case of an organisation receiving a high-quality product in parallel with support services below the organisation's expectation, the organisation may decide to cease business with the supplier as a consequence of the sacrifice element. This comparison between performance and expectation is central to business and has received a lot of attention in the literature (e.g. Grönroos, 1982; Parasuraman *et al.*, 1985; Zeithaml *et al.*, 2009).

In line with Grönroos's (1982) view, Parasuraman *et al.* (1985) argues succinctly that one dimension of quality involves a "comparison between expectations and performance" (p. 42). Similarly, Zeithaml *et al.* (2009) identifies the customer gap as the "difference between customer expectations and perceptions" (p. 32). Naumann (1995) refers to this gap as the "reality gap" (p. 98). This gap is critical to customer value improvement for organisations. Consequently, it is of paramount importance that organisations identify the gap with a view to putting strategic improvements programmes in place to close the gap. For example, a hotel front desk could pose the questions in Table I to their customers with respect to front desk service levels.

The output to the questions on Table I could form the basis for the construction of the performance-expectation grid on Figure 1. This grid on Figure 1 represents an adaptation of Martilla and Jame's (1977) performance-importance grid.

Figure 1 will help to provide clarity on where improvement needs to take place from a customer expectation perspective. From an internal customer value perspective, this performance-expectation gap has relevance to all process led organisations. Asking the powerful question below can be the start of an exciting journey in process customer value improvement.

What are the performance-expectation gaps in the processes that my organisation executes?

For example, where a customer requires delivery of emergency parts inside a certain timeframe, a delay in the delivery could cause major performance problems in the customer value chain. In this example, achieving customer performance expectation for the lead-time criteria provides value for the customer. At an organisational level,

this systematic identification and closure of the performance-expectation gaps at all key processes will provide strategic benefits for both the customer and the organisation.

At a global level, one major breakthrough for customer value delivery was the Quality Function Deployment (QFD) tool or the House of Quality tool. The QFD tool was first introduced (Akao and Mazur, 2003) into Japan in the 1970s. Mehrjerdi (2010) cites O’Sullivan (1986):

QFD provides a means of translating customer requirements into appropriate technical requirements for each stage of product development and production (i.e. marketing strategies, planning, product design and engineering, prototype evaluation, production process development, production, sales) (p. 616).

Overall, the QFD tool ensures customer requirements are heard and translated into technical requirements that can be delivered through the various functions (e.g. design, engineering and production) in the organisation.

In summary, organisations exist because of the value they bring to customers. Therefore, it is critical that organisations understand their value proposition through

No	Question	Category
1	How would you rate the front desk service level?	Performance question
2	Does the front desk service level meet your expectations?	Expectation question
3	What changes if any are required in front desk service levels to meet your expectations? Please describe	Performance-expectation gap question

Table I. Performance expectation sample questions

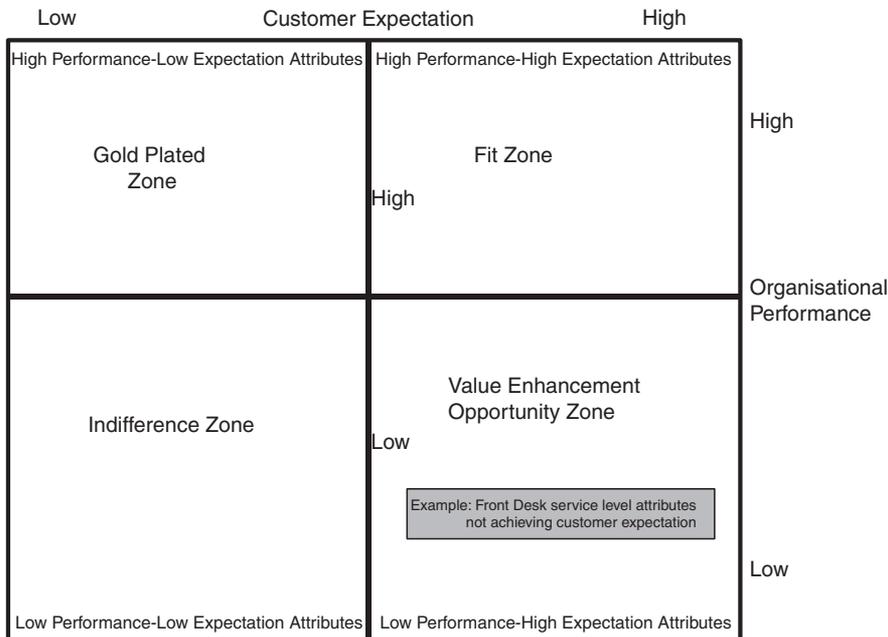


Figure 1. Performance expectation gap analysis grid

the eyes of the customer and that they have programmes in place to identify and close any internal and external customer value gaps that exist in their processes.

3. Strategic quality

In line with Deming's (1994) thinking, a service could be deemed a quality service if it helps somebody, provides customer value and has a sustainable market. Quality is connected to the customer through the value that is generated by the organisation to meet the customer requirements and expectations. These requirements and expectations are not static and require continuous improvement by the organisation in order to understand and meet the ever-changing customer value requirements. In addition to the improvement of organisational products and services for the benefit of the customer, cost efficiencies are also of paramount importance for organisations. Therefore, an organisation is constantly focused on improving the customer value experience and improving the way the value is delivered to the customer through the company quality initiatives. This connection or fit between the customer or market and the organisation highlights the strategic role of quality.

Our views are also aligned closely to Peters (1999) contention that the origins of quality stems from a desire to run the organisation better by first focusing on the customer needs and second, by producing the customer service in the most efficient manner. Similarly, Wilshaw and Dale (1996) posit that differentiation of a company's offering in the market place "could only be achieved by a combined product and service offering, which fulfilled the needs, wants and future expectations of customers, in a cost-effective manner" (p. 402).

We believe that this customer focus and efficiency drive, a central part of the quality strategy, needs to be reflected in the overall business strategy and quality improvement programme objectives. Our views are closely connected to Asif *et al*'s (2009) views. Asif *et al.* (2009) contends that there is potential for competitive advantage when Quality Management Programmes (QMP) are "effectively aligned with organisational strategy and institutionalised in an organisational setting (p. 788).

In summary, we contend that these views on customer focus, efficiency and integration of the customer to the overall strategy, capture the essence of quality's strategic role and represent a vital cog in the development of a continuous improvement framework. Also, this strategic view of quality helps to distil out the key quality concepts of a continuous improvement framework.

4. Quality concept inputs for a continuous improvement framework

Pulling out a key theme from the previous section: the customer drives the strategy and the strategy drives or directs the organisation. With the customer central to the strategy, organisational improvement objective targets are cascaded down to the various levels in the organisation. In our opinion, this is central to improvement. We contend also similar to Oakland (2005) that the strategic focus for a continuous improvement framework needs be around customer, process and people. Without the customer, there is no business. With the customer as the central focus, people and processes combine to meet customer needs and expectations.

In addition, Oakland and Tanner (2007) contend that the process is central to improvement. Oakland and Tanner (2007) found that the key link between the strategic objectives and the operational improvement is the core processes. In order to integrate the components of customer, process and people inside a continuous improvement framework, we argue that there is a need also for a visionary (leadership component),

a customer focused strategic objective component and a vehicle to structure the vision (methodology component) and improvement specialists to drive the methodology. So the question arises: what is the rationale for the inclusion of these core components inside a continuous improvement framework?

4.1 *Customer value focused process*

First and foremost an organisation operates in the marketplace because of the customer. Therefore, an organisation exists to meet the needs and expectations of the customer. Once we have established the customer needs and expectations, organisational processes need to be configured around what the customer is willing to pay for. Oakland and Tanner (2007) provide credence to the power and central role of the process. In a study of 28 public sector organisations, Oakland and Tanner (2007) found that the key link between the strategic objectives and the operational improvement is the core processes. Oakland and Tanner (2007) added that if this link is broken the change becomes ineffective. Oakland (2005) crystallises further the process roles in organisations:

Everything we do is a process, which is the transformation of a set of inputs into the desired outputs. In every organisation there are some core business processes that must be performed especially well if the mission and objectives are to be achieved (p. 1055).

Many authors also highlight the importance of the connection between customer and process (e.g. Botha *et al.*, 2012; Burrill and Ledolter, 1999; Deming, 1986; Gronroos, 1996; Hastings, 2008; Walsh, 1995). Grönroos (1996) further adds that this process approach allows organisations to “direct efforts towards the demands and expectations of customers” (p. 10). Walsh (1995) argues that a process approach allows reward and recognition systems to be based on the contribution people make to the process and its outcomes. Walsh’s (1995) thinking connects the customer to the process, and the people to the process and customer, through the alignment of the process outcomes to the customer requirements and expectations. Hastings (2008) of Kansas, a regional network of hospitals (Hastings, 2008) highlights the practical significance of the process: “[...] we discovered that processes – not the individuals performing them – accounted for 90 percent of our problems and that we’d been wasting time and resources using audits to improve performance” (p. 25). The process views articulated (i.e. Grönroos, 1996; Walsh, 1995) in addition to the practical example at Saint Luke’s (Hastings, 2008) provides credence to the significance of the process. Overall, this customer focused process component integrates the needs and expectations of the customer into the overall organisational process structure for the purpose of enhancing the customer value experience.

4.2 *Customer value focused leadership*

The second component is focused on leadership. Numerous authors highlight the importance of leadership (e.g. Dahlggaard and Dahlggaard-Park, 2006; Dean and Bowen, 1994; Deming, 1986; Feigenbaum, 1991; Oakland, 2011).

Oakland (2011) articulates the essence of effective leadership:

Effective leadership starts with the chief executive’s and his top team’s vision, capitalising on market or service opportunities, continues through a strategy that will give the organisation competitive or other advantage, and leads to business or service success. It goes on to embrace all the beliefs and values held, the decisions taken and the plans made by anyone anywhere in the organisation, and the focusing of them into effective, value-adding action (p. 525).

In addition, central to effective leadership is that leaders, who operate in the various units of the business and at different levels of the business, are jointly committed to the same quality goals. In other words, effective leadership fosters unity of purpose and commitment throughout the organisation. For example, an organisation that has a strong quality focus at middle management level will not generate optimum results if the senior management team does not demonstrate the same levels of commitment. Johnes and Harborne (2003) conducted a leadership empirical study involving retail bank new product development. They concluded that effective co-leadership between the different levels in the organisation was the critical success factor for new product project success. This co-leadership component fostered participation, communication and co-operation at all levels. Co-leadership drives “joined up leadership”.

Overall, the customer value focused co-leadership component has the potential to increase communication, help to create a partnership between strategy development and strategy execution, bring ownership and strategy implementation to the fore, and in turn, provide a platform for higher levels of process customer value improvement.

4.3 Customer value focused strategic objectives

As organisations exist because of the customer, it is essential that the organisational improvement strategy is aligned to both the internal and external customer. Asif *et al.* (2009) research findings call for an effective integration of QMP into the business strategy:

The QMPs need to be effectively integrated with the business strategy, which steers the business processes towards its unique competitive advantage. An undesirable scenario would be employing QMPs as sub-methodologies that take the form of tools and techniques (quick fixes) and thus remain as stand-alone programs which fail to yield desired results (p. 778).

Similarly, Coronado and Antony (2002) view the link between Six Sigma and the business strategy, and the link between Six Sigma and the customer as critical factors for the successful implementation of Six Sigma.

In summary, effective customer focused strategy formulation and implementation guides an organisation in a direction that fits its capabilities and the customer market that it serves.

4.4 Improvement specialists with people performance knowledge

The fourth component centres on improvement specialists with people performance knowledge. Organisational performance improvement is achieved through people. For example, many organisations utilise Six Sigma Green Belts, Six Sigma Black Belts (BBs) and Master Black Belt (MBB) resources or in-house trained specialist to lead improvement. As people are central to improvement, improvement specialists need to understand the behavioural element of improvement. Our views are aligned closely to Antony and Snee's (2010) views and to del Angel and Pritchard's (2008) views. Antony and Snee (2010) contend that MBBs and BBs need to deal effectively with teams and group dynamics. Antony and Snee (2010) conclude that “leadership requires dealing with people, which in turn requires understanding human behaviour to be effective” (p. 11). Similarly, del Angel and Pritchard (2008), change and performance improvement consultants, report that technically sound change designed by Six Sigma, Lean or similar applications could be at risk of failing unless supported by the appropriate behavioural change. del Angel and Pritchard (2008) add that “experiences in the field indicate that most managers come up short in their approach to the

behavioural elements of change” (p. 41). On the same theme, Bennis and Namus (2007) argue that “the capacity to generate and sustain trust is the central ingredient in leadership” (p. xiv). Bennis and Namus (2007) add that “the trust factor is the social glue that keeps any system together”.

Overall, improvement specialists are process change leaders who need an understanding of how to get the most out of people in addition to the technical elements of continuous improvement. An improvement specialist who has deep knowledge and understanding of how to build trust and commitment, and on what drives people performance will have the potential to achieve higher performance outcomes for the organisation. Finally, this component ensures that the organisation has improvement specialists with a balanced soft and technical skill set. This component will provide the leadership team with a platform for the development of strategic capabilities to deliver and enhance customer value.

4.5 Improvement methodology

Deming (1986) puts the methodology component into perspective: “Where do you hope to be five years from now? How may you reach this goal? By what method?” (p. 19). Motorola and GE have made breakthrough improvements using Six Sigma. Similarly, Toyota has built their competitive advantage around the Toyota Production System.

The methodology component translates into selecting the appropriate customer value improvement methodology for the process. In some cases, Six Sigma may be deemed to be the most appropriate methodology. In other cases, Six Sigma may not be the preferred methodology. For example, Douglas *et al.* (2009) contend that Six Sigma, a reductionist approach, “works well for simple, well defined ‘hard’ problems but fails to perform well on complex, ill defined ‘soft’ problems and when the parts of a more complex problem are independantly optimised” (p. 144). An improvement methodology can vary in complexity from a process mapping approach or individual suggestion and implementation approach (Bhuiyan and Baghel, 2005) to a customised approach. Akamavi (2005) reports on the use of the process mapping approach to streamline the process of opening a Lloyds TSB student account at a local branch. The process mapping approach (Akamavi, 2005) facilitated the introduction of a simpler, faster and more economical process.

Another important point worth noting, which is often overlooked, is that an agreed improvement methodology provides a common language for the execution of improvement objectives. In other words, a common improvement methodology, which is understood by the organisational team, enhances communication and ultimately organisational outcomes.

In summary, the core challenge for organisations today and in the future involves identifying, delivering and improving value to the customer, both at an internal and external level. In order to optimise this value improvement paradigm, the researchers argue in line with Sections 4.1-4.5, that the following components are needed:

- a customer value focused process component allowing inputs to be transferred into the desired outputs (see Section 4.1);
- a customer value focused co-leadership component where key leaders at all levels are driving for the same goals and objectives (see Section 4.2);
- a customer value focused strategic objective component where the customer requirements are integrated into the organisational objectives (see Section 4.3);

- An improvement specialist component with people performance knowledge providing expertise in areas such as Lean, Six Sigma, Agile, Project Management or customised methodologies (see Section 4.4); and
- An improvement methodology component allowing the organisation to follow methodologies that fits the organisational needs (e.g. Lean, Six Sigma or a customised methodology (see Section 4.5)).

Overall, the researchers contend that the proposed framework on Figure 2 incorporates all the core components of organisational customer value improvement.

5. Methodology

Field-based data were collected using a two-step approach. The first step involved interviewing seven people who were organisational experts in continuous improvement activity. The second step involved the collection of survey data from a sample of companies from the IDA company list. The target respondents were quality managers. In total, 610 companies were contacted resulting in 152 completed responses being returned for analysis. This represented a 24.9 per cent useable response rate which compares favourably with Edwards and Peccei (2010) study (31 per cent response rate) on organisational identification. The questionnaire developed for this study was structured into three main sections. The first section asked respondents to rate the continuous improvement framework component effectiveness for driving customer focused process improvement. In this section of the survey, the researchers probed for the possibility of missing continuous improvement components. The next section focused respondent's attention on rating the overall effectiveness of the framework for increased organisational ROI. The final section probed for demographic organisational information.

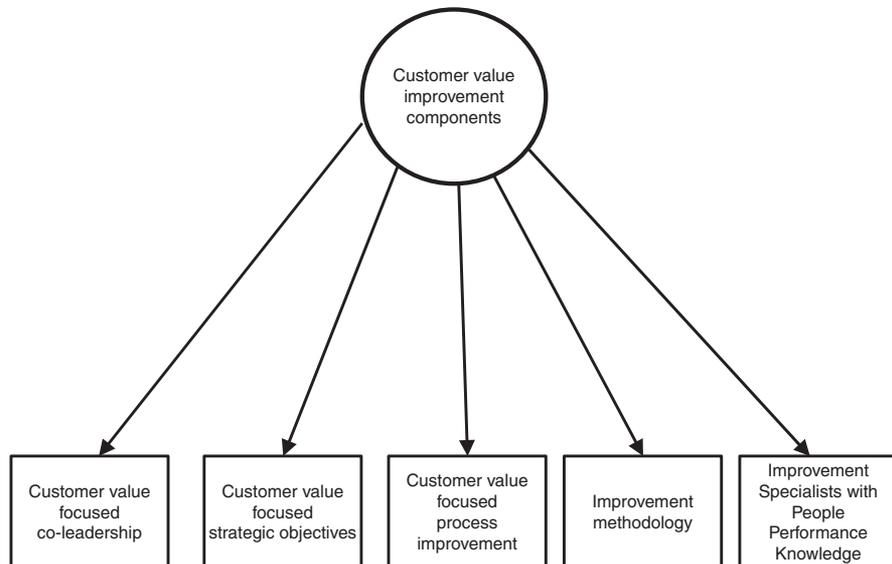


Figure 2.
A conceptual framework for continuous improvement

Step 1: interview phase

The first step of the empirical phase involved interviewing organisational quality experts. The organisational quality experts were selected based on their experience in continuous improvement and their certifications. Table II outlines the profiles of the personnel that were utilised for the interviews.

The first objective of the interviews was to determine if there were any components missing from the conceptual framework. The second objective was focused on determining the significance of each of the components with respect to process improvement presented on Figure 2. The third objective focused on determining how these components are interconnected inside a continuous improvement framework. Two themes emerged from the first round of the interviews. First, the components presented on Figure 2 represent the complete set of components. Second, the components of improvement methodology and improvement specialists can have different levels of importance inside different organisations. For example, some improvement activities may require dedicated specialists using structured improvement methodologies. On the other hand, other continuous improvement activities may be completed by existing process personnel. The consensus from the first round of interviews resulted in the development of a path conceptual framework that is presented on Figure 3.

After completion of the first interview phase, a second round of interviews was carried out involving the same interviewees from round one. As a consequence of the second round of interviews, the consensus evolved from the path conceptual framework (See Figure 3) to the view that improvement must take place with the process at the core. The second theme that emerged was that the components of customer value focused co-leadership, customer value focused strategic objectives, improvement specialists with people performance knowledge and improvement methodology combine to drive process customer value improvement leading to increased ROI. Taking this a step further, the framework presented on Figure 4 recognises formally improvement that is carried out by process personnel throughout the organisation. In specific terms, an organisation may advance to a maturity level whereby all process personnel are trained on specific improvement tools and

No	Position	Country	Industry
1	Consultant (internal and external process improvement) and Six Sigma MBB certified with over 30 years experience in continuous improvement	Ireland	Service
2	Quality manager and Six Sigma MBB certified with over 20 years experience in continuous improvement	Denmark	Electrical casing manufacturing
3	External process improvement consultant and six sigma black belt certified with over 25 years experience in continuous improvement	Ireland	Service
4	Internal improvement specialist and certified BB with over 15 years experience in continuous improvement	USA	Medical devices
5	Operations manager and Lean certified with over 20 years experience in continuous improvement	USA	IT services
6	Product development specialist and certified MBB with over 20 years experience in continuous improvement	USA	Medical devices
7	Head of quality and MBB certified with over 20 years experience in continuous improvement	Germany	Medical devices

Table II.
Interviewee profile for organisational quality experts

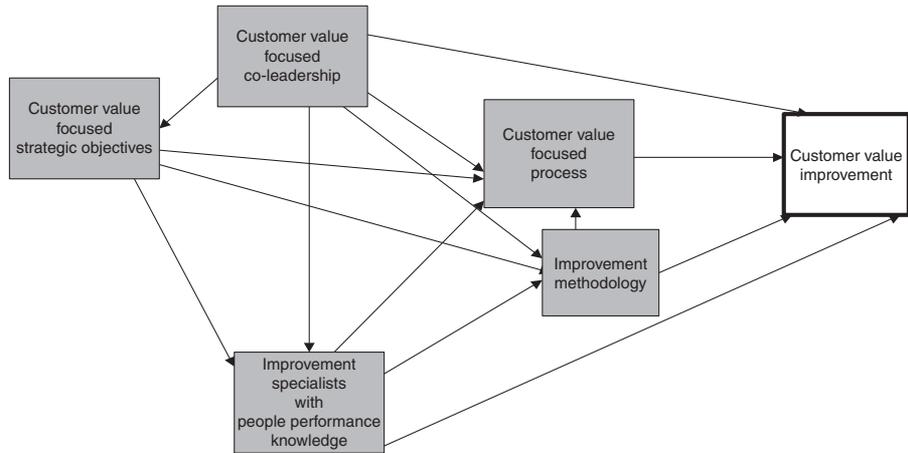


Figure 3.
A path conceptual framework for continuous improvement

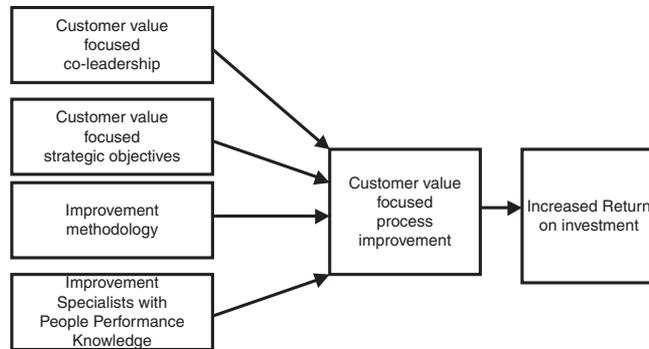


Figure 4.
A framework for continuous customer value process improvement based on in-depth interviews

techniques and are adopting a customised methodology for their respective processes. The revised conceptual framework from the second interview phase is shown on Figure 4.

Step 2: survey phase

A survey was then circulated to 610 companies from the IDA Company List (2012) seeking the quality managers opinion on the significance of the continuous improvement components and the effectiveness of the framework presented on Figure 4. The results of the survey are presented in the next section.

6. Results

In all, 152 completed surveys were used as a basis for analysis. This represents a useable response rate of 24.9 per cent. The analysis revealed that the framework on Figure 5 was deemed to be a valid framework for process customer value improvement and increased organisational ROI.

A five-point likert scale was used to assess the effectiveness (Scale: 1 = very ineffective, 2 = ineffective, 3 = neither effective or ineffective, 4 = effective and 5 = very effective) of the framework and the individual components. A one-sample *t*-test was carried out to measure the effectiveness of the framework presented on

Figure 5. In addition to testing the effectiveness of the framework, the effectiveness of each component for driving process customer value improvement was tested. The test output (see Figure 6) from the 152 companies provides statistical evidence that the framework is an effective framework (Table III).

From a practical standpoint, the main theme that emerged was that the component combination of customer value focused co-leadership, customer value focused strategic objectives, improvement methodology, improvement specialists with people performance knowledge combine to drive customer process improvement leading to increased organisational ROI. One common reason that was cited for the effectiveness of the framework was that it contains all the vital components or forces of process customer value improvement. Another important theme which emerged was that each individual or team from the organisation involved in process improvement could have their own framework (see Figure 6) that details the customer strategic objective(s) that they can influence, the co-leadership support names and the improvement methodology that they need to be competent in order to achieve their customer focused strategic objectives. In this way, a higher percentage of employees have a strategic focus and a formal role in organisational continuous improvement. Overall, it is an effective framework that is easily understood and can be applied throughout any process led organisation. This is supported by the empirical data.

New continuous improvement framework

605

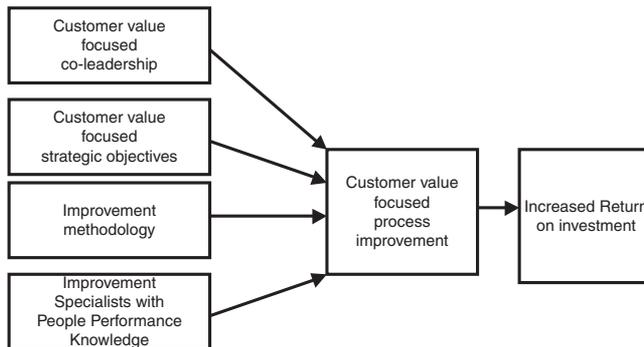


Figure 5.
A four forces framework for continuous customer value process improvement

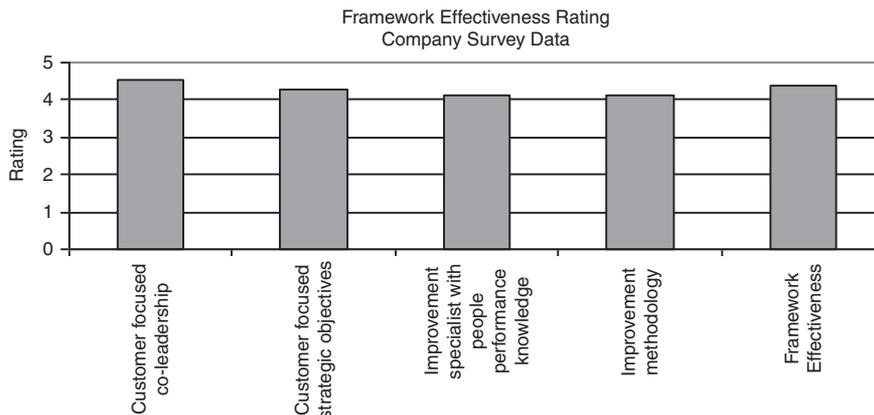


Figure 6.
Framework effectiveness average rating

TQM
26,6

606

Table III.
SPSS one sample
t-test output

	One-sample test					
	Test value = 4 95% Confidence interval of the difference					
	<i>t</i>	df	Sig. (two-tailed)	Mean difference	Lower	Upper
Customer focused co-leadership	10.437	151	0.000	0.533	0.43	0.63
Customer focused strategic objectives	6.513	151	0.000	0.263	0.18	0.34
Improvement specialist with performance knowledge	3.315	151	0.001	0.125	0.05	0.20
Improvement methodology	2.746	151	0.007	0.138	0.04	0.24
Framework effectiveness	7.907	151	0.000	0.375	0.28	0.47

7. Implications for practitioners and academics

The consensus from the empirical study is that this new continuous improvement framework is an efficient and effective model that has application in all process led organisations that are involved in customer value improvement. The empirical data indicates that the key forces of continuous improvement are customer value focused co-leadership, customer value focused strategic objectives, improvement methodology, improvement specialists with people performance knowledge. These forces can be improved inside the organisation to drive process customer value improvement and increased ROI.

The study answers Conti's (2007) call for the development of a model that incorporates all the value generating components. Also, the authors contend that this framework embraces the systems thinking approach (Conti, 2010) or systemic approach as people interact with customers, processes, improvement methodologies and each other to drive customer value improvement. Consequently, this generates a need to take global view of the combined effect of all customer value improvement components. This systems thinking can feed into future research.

8. Future research

First, future research could involve testing this framework in large complex organisations. The framework presented on Figure 5 could serve as a baseline for future research of large complex organisations. This future research should provide a facility for the inclusion of additional components and interactions. For example, future research in this field may uncover additional components that are specific to complex organisations or industrial sectors.

Second, the in-depth interviews and surveys were carried out on companies that have a base in Ireland. It would be beneficial to replicate this study in a different country. Second, future case studies that collect ROI information during the deployment of this framework would provide rich insights for management decision making. Third, a study that looks at the relationship between this new framework and the EFQM excellence model or the MBNQA has the potential also to provide additional value for organisations.

Fourth, this research focused on the perspectives of the quality manager. Future research in this field could elicit the opinions of first line managers and executives.

9. Conclusions

The conclusion from the empirical results, is that this is an efficient and effective continuous improvement framework that has application in all process led organisations. The empirical data indicates that the key forces of process continuous improvement are customer value focused co-leadership, customer value focused strategic objectives, improvement methodology, improvement specialists with people performance knowledge. By adopting this framework, all process personnel can have a role to play in process improvement leading to increased organisational ROI.

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Further reading

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