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SCENARIO-BASED RE-ENGINEERING AND PERFORMANCE IMPROVEMENT APPLIED STUDY

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ABSTRACT
The purpose of this paper is that of analyzing the hypothesis related to a new methodology in the strategy called the methodology of the scenario methodology and how to employ it to re-engineer the process and improve it in order to extract and reduce the multiple stages. The review and comparison of works previously published on this subject revealed that the scenario technique helps to identify re-engineering for improving efficiency. The study supported this finding, additionally highlighting the fact that the scenario technique is important to success re-engineering for performance improvement.

KEYWORDS:
Re-engineering, Process , Scenario Methodology ,Performance Improvement, GLM , Mix Model .

INTRODUCTION

Change in organizations has become necessary and important at the present time and became looking for innovation and development (Carnall, 2007), which helps to overcome the challenges and problems faced by the one hand, and keep up with the times and increase the ability to compete and stay on the other hand, to reach the goals and the promotion of culture, where the change has become the feature of the characteristics of this era, in which movement and speed are the main factors of excellence.

Several questions have raised about the ability of the mechanisms of administrative to deal with the developments of the times and appeared claims to review many of the concepts of administrative (Thompson, 2017), so it should be absorbed and exercise of these transformations occurring around and the initiative immediately to reconsider all organizations, so that the main objective is to reach high levels of performance and quality of outputs (Karatepe, 2013). These circumstances require an invitation to adopt a method of process re-engineering.

Literature have focused on the importance of the availability of many elements for the success of implementing a reengineering program (Shen & Chou,2010), as the availability of critical factors for success is an essential component of success of reengineering, and within the framework of this basic evaluation of the mission and objectives, restructuring focuses on organizing business operations steps and procedures that help how to use resources to improve services and completely redesign (Salimifard et al., 2010), So it need to know the implications of different perspectives to re-engineering, Figure 1 shows the three recognized perspectives on business processes, operational perspective deals with operative processes with definite inputs and outputs, organizational perspective deals with marketing, delivery, and R&D, Strategic perspective deals with resources and services and capabilities (Tinnilä, 1995).

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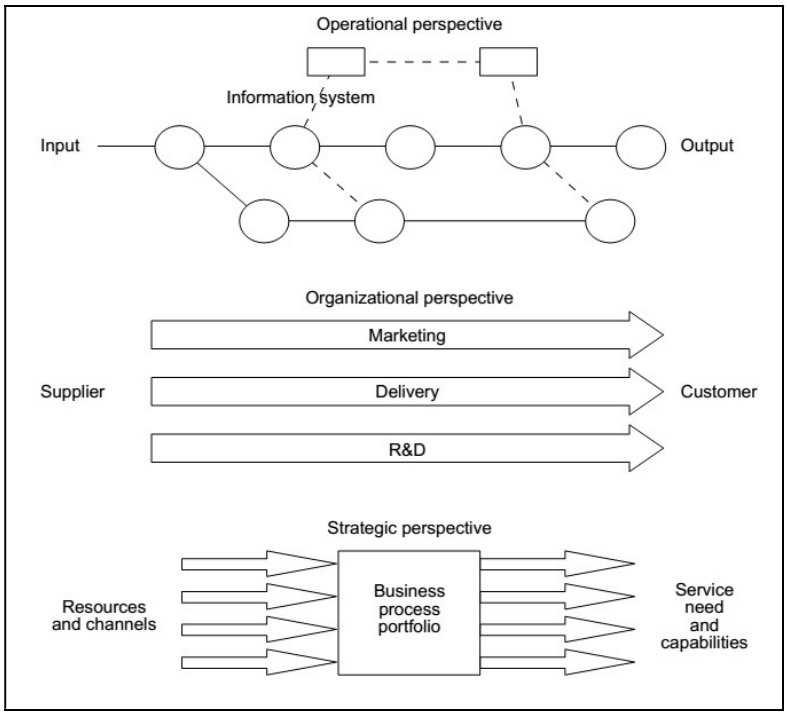

Figure 1: Perspective on business Process

Therefore, there is a need to know the basic requirements for applying process re-engineering and its role in improving performance. Therefore, organizations that aim to re-engineer and improve performance need to search for the appropriate tools for this work.

In this field, the scenario methodology emerged as a scientific method that achieves the required goals in re-engineering operations (Stikić et al., 2018). A number of studies in this field have indicated that the scenario methodology is a successful method for re-engineering operations and is reflected positively in raising the efficiency of outputs for organizations.

Accordingly, this study aims to identify how to adapt the scenario methodology in re-engineering to improve performance.

LITERATURE REVIEW

Process Re-engineering

In the early 1990s, business process reengineering began to spread widely among organizations (Sockalingam & Doswell, 1996) as an organizational practice aimed at achieving significant performance improvements through the radical transformation of business processes (Hammer, 1990). In recent years, the BPR has experienced a new impulse, as it is the approach used by many organizations for the implementation of enterprise resource planning systems (Parkes & Davern, 2011), which have become a central part of management information systems.

The BPR has generated an extensive literature, in which the technical and functional approaches predominate. Reengineering is an administrative approach of great acceptance among companies today, which consists in administering the processes instead of the functions, redesigning the processes of the organization instead of introducing small changes to carry out continuous improvement (Bertolini et al.,2011).

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According to this approach, the organization must direct its efforts towards the achievement of goals that consider the client and its value criteria (Ozcelik, 2010).
Process reengineering aims to reduce business costs and redundancies process (Yu, 2011), it may sound like an improvement in business processes, however, there are fundamental differences that distinguish both concepts.
Process improvement could be to reduce the size of the current equipment or adjust some rules here and there, but reengineering is an unrestricted approach, to look beyond the defined limits and bring changes to another scale (Robson, 2010), the best process would be how to improve the efficiency.
While process improvement focuses on analyzing existing processes to improve them, process reengineering has another broader perspective, Process improvement identifies the process bottlenecks and recommends changes in specific processes, but the production process remains the same (Shih & Huang, 2010).

Some basic points that can be highlighted in reengineering are the following:

- Continuous improvement is replaced by a radical improvement.
- There is a strong orientation towards the market, looking for the product or service offered to be considered the best by consumers.
- The results are measured through external factors such as market share.
- It is oriented towards the basic processes of the organization.
- Question the principles, purposes and assumptions of business.
- It allows the efforts of "Just in Time (JIT) and Total Quality Management (TQM)" to be increased.

According to Johansson, a very important aspect of the process of de-functionalization of projects is to have a completely new picture about the main components of an organization, which according to Johansson, McHug, Pendlebury and Wheeler (Beugre,1998) (the four experts of current reengineering), can be identified as (People , Administration and leadership, Organizational culture, Functional skill, Accumulation of reserves, Immediate reaction, The new assets and their administration).

Types of Process Reengineering

There are three types of process reengineering that can be implemented by a company (Johanson, 1995):

- Improve costs
- Achieve "be the best in its class"
- Make a point of radical innovation

The basic process reengineering approach consists of three phases:
Phase 1. Discovery: The company defines a strategic vision in search of domination and renewed competitiveness in the market, determining the way in which its processes can be modified in order to achieve the established strategic vision.
Phase 2. Redesign : The redesign process is detailed, planned and organized.
Phase 3. Execution: The redesign is carried out to achieve the established strategic vision.
Accordingly, business process can be three main types as it shown in Figure 2.

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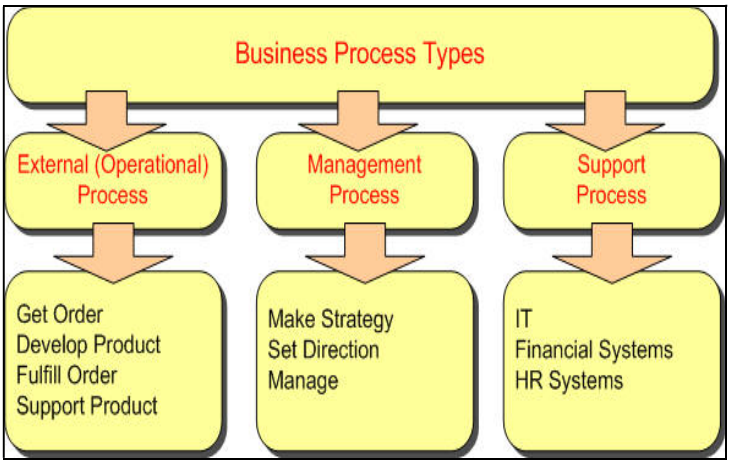

Figure 2: Types of Business Process

According to (Kahlout, 2017) process re-engineering includes: (commitment and support, technology, empowerment, organizational structure, organizational culture).

Performance Improvement

The performance improvement is a strategic and systematic activity aimed at improving business results, maximizing the performance of people in the organization. It is strategic because it provides lasting and long-term improvements in the performance of the organization and is systematic because it includes an organized methodology that avoids excessively accidental and reactive approaches (Cai et al.,2009).

Performance is one of the main and important functions of human resources management in all organizations, whether profitable or not-profit and whether it is productive or service, which is necessary to achieve its strategic goals, it has an important role in developing procedures and improving performance, and an effective way to solve many of the problems it faces organizations in various fields (Hesketh & Fleetwood, 2006), as they target human resources as the driving force of the various activities that are based on the behavioral roles of participating in decisions and work teams, which may contribute to creating an environmental climate that stimulates enthusiasm, helps to innovate and develop responsibility.

The process is about the way in which goods or services are produced, as it is a specific mix of machines, workers, resources, tools, environmental factors and methods of performing the process, as this combination converts the mentioned inputs into outputs whether the product is a good or service (Evans, 1997), and the concept of the process is not determined by changing the raw materials and converting them into a final product as in making the product, but rather in monitoring the progress of the process and its development. For example, transferring ownership by selling the product, or changing the site by moving the product from one place to another, or changing its existing condition, when perform maintenance or repair of the product.

According to (Prajogo et al.,2012) performance improvement includes: (quality, flexibility, costs, and delivery)

METHODOLOGY

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Questionnaire Design

The basic instrument used in the survey investigation is the questionnaire, It consists of three parts, the first part includes the demographic profile, the second one includes the independent variable reengineering (RE) with dimensions of (commitment and support (RE1), technology (RE2), empowerment (RE3), organizational structure (RE4), and organizational culture (RE5)), the third part of the questionnaire includes the dependent variable performance improvement (PI) with dimensions of quality (PI1), flexibility (PI2), cost (PI3), delivery (PI4), as it shown in Figure 3.

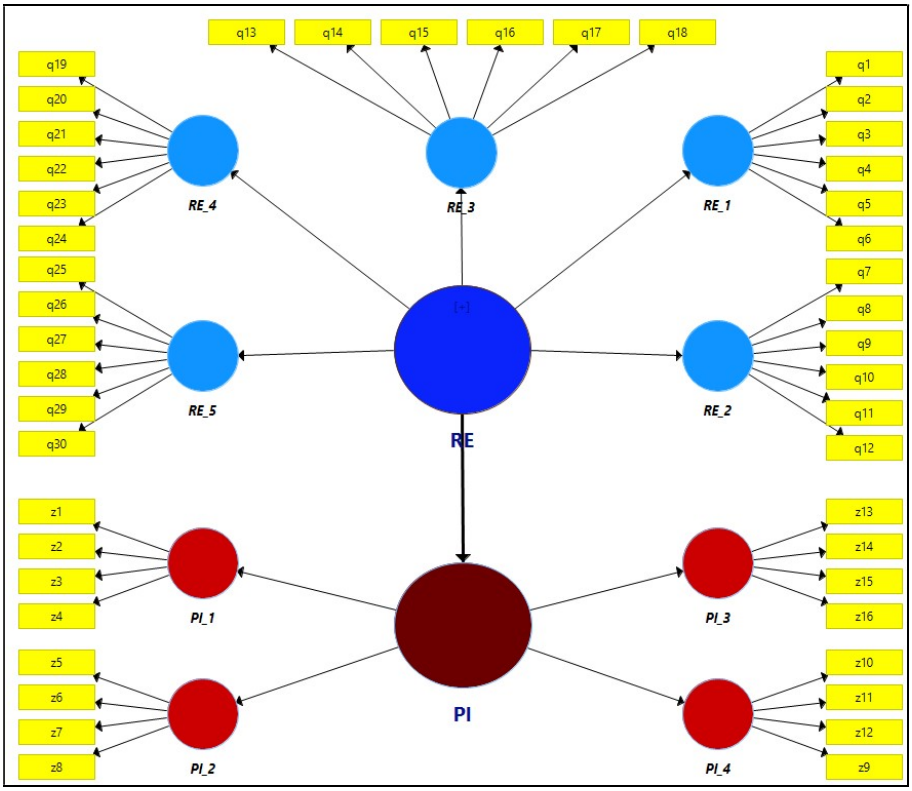

Figure 3: Conceptual Framework

Design of Research

In order to achieve the objectives proposed in the article, a model was developed, with a qualitative character (Godoy et al., 2007). According to Amaratunga et al., (2002), qualitative research is performed to find perceptions, make assumptions and prejudices. In turn, is used as a research strategy, since it is an empirical investigation that seeks to examine a contemporary phenomenon within its context, by building a scenario to predict the effect of re-engineering on performance improvement.

According to (Stikic,2018) the pretest includes (aggregate data, outlier data, normal distribution, models quality, mixing model, and forecasting), Scenario building includes (coding , adequacy of the model, scenario limits, network analysis, building scenarios for all possibilities, possibilities, and appropriate scenario).

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Scenario Building

The methodology of scenarios is one of the techniques of future studies, which contribute to discovering many predictive perceptions in the future, and it is considered a guide for developing a predictive concept of ideas in designing the future, and enables scenarios for policymakers to make decisions and thinking in a rational and participatory way around the future and authorizing the creation of effective policies (Khorshid,2002), Concentrated this methodology is not about to predict the future but also on the future study of the possibilities possible option or a path, and the establishment of the ability to discern and identify procedural options available within that track, designed scenarios methodology to the study of possible possibilities, and capacity development to prepare for the solutions strategy and its responses effectively (Durance & Godet, 2010).

Scenario building for re-engineering involves "preparatory work including vision development, stakeholder workshops, and post-workshop activities. Scenarios are built up by using a matrix, this matrix contains factors which are beyond the control of planners (external factors) (Godet, 2006), which are used to develop scenarios. Factors that are within the control of planners (internal factors) can be applied to develop strategies and it can extract the points or steps adequacy to (0-100) (poor model, fair model, average model, good model, excellent model)". The relevant steps and conditions to perform a re-engineering scenario building session are:

Step 1: A brainstorming and discussion should be conducted to identify all internal and external factors that will affect achieving the vision.

Step 2: Classifying the factors, the factors quadrant which is labeled as the most important to make different between possible and narrative scenario.

Step 3: Apply data aggregation in order to group information and expressed in a summary form (Jansen, 2012). For scenario it is best to group data together from questionnaire and observation, it should consider the scale for the questionnaire and extract a column equal to the observation column for all dimensions as it is shown in Table 1.

Table 1: Data Aggregation

Var.	*PI*	*Aggregation*	*Stat.*	*Sig.*
RE 1	*0 .611*	*0.622*	*0 .609*	*0. 000*
RE 2	*0 .714*	*0 .702*	*0 .731*	*0. 000*
RE 3	*0 .688*	*0 .652*	*0 .611*	*0. 000*
RE 4	*0 .599*	*0 .623*	*0 .603*	*0. 000*
RE 5	*0 .642*	*0 .632*	*0 .666*	*0. 000*
PI 1	*0 .755*	*0 .722*	*0 .701*	*0. 000*
PI 2	*0 .741*	*0 .734*	*0 .712*	*0. 000*
PI 3	*0 .645*	*0 .664*	*0 .623*	*0. 000*
PI 4	*0 .741*	*0 .712*	*0 .774*	*0. 000*

Step 4: Biased and outlier data should be calculated and the data should follow the normal distribution, we used the skewness and kurtosis to identify the normality by comparing the values with condition of (+1.96, -1.96) (Mahajan & Luthra,2013), As Tables 2 and 3 refer to that all data are in acceptable range as it proved by Figure 4, so the data of RE and PI follow normality.

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Table 2: Summary of Normality Test for RE Data

Variable	min	max	skew	c.r.	kurtosis	c.r.
q 30	2. 000	5. 000	-.451	-2.458	-.710	-1.934
q 29	1. 000	5. 000	-.764	-4.162	.192	.522
q 28	1. 000	5. 000	-.555	-3.023	-.479	-1.304
q 27	1. 000	5. 000	-.611	-3.327	-.240	-.654
q 26	1. 000	5. 000	-.742	-4.042	.828	2.255
q 25	2. 000	5. 000	-.580	-3.158	-.752	-2.047
q 24	1. 000	5. 000	-.482	-2.624	-.280	-.763
q 23	2. 000	5. 000	-.488	-2.660	-.403	-1.097
q 22	1. 000	5. 000	-.755	-4.114	.720	1.960
q 21	1. 000	5. 000	-.995	-5.422	.658	1.793
q 20	1. 000	5. 000	-.499	-2.718	.980	2.669
q 19	1. 000	5. 000	-.617	-3.360	.709	1.931
q 18	1. 000	5. 000	-.581	-3.167	.294	.801
q 17	1. 000	5. 000	-.859	-4.681	-.501	-1.363
q 16	1. 000	5. 000	-.694	-3.782	-.300	-.817
q 15	1. 000	5. 000	-1.078	-5.871	.239	.650
q 14	1. 000	5. 000	-.658	-3.583	-.330	-.899
q 13	1. 000	5. 000	-.601	-3.272	-.249	-.678
q 12	1. 000	5. 000	-.530	-2.887	-.619	-1.686
q 11	1. 000	5. 000	-.642	-3.495	.096	.261
q 10	2. 000	5. 000	-.139	-.756	-1.032	-2.811
q 9	1. 000	5. 000	-.441	-2.402	-.372	-1.014
q 8	1. 000	5. 000	-.909	-4.951	.932	2.539
q 7	1. 000	5. 000	-.495	-2.694	-.349	-.951
q 6	1. 000	5. 000	-.657	-3.581	.345	.939
q 5	2. 000	5. 000	-.029	-.158	-.971	-2.643
q 4	1. 000	5. 000	-.315	-1.715	-.422	-1.149
q 3	1. 000	5. 000	-.654	-3.560	.646	1.760
q 2	1. 000	5. 000	-.512	-2.787	.094	.256
q 1	1. 000	5. 000	-.616	-3.353	.145	.395
Multivariate					196.451	29.908

Table 3: Summary of Normality Test for PI Data

Variable	min	max	skew	c.r.	kurtosis	c.r.
z 16	1. 000	5. 000	-.792	-4.314	.611	1.663
z 15	1. 000	5. 000	-.614	-3.347	.233	.634
z 14	1. 000	5. 000	-.550	-2.996	-.284	-.773
z 13	1. 000	5. 000	-.556	-3.026	.056	.154
z 12	1. 000	5. 000	-.760	-4.138	.662	1.804
z 11	1. 000	5. 000	-.681	-3.710	-.142	-.385

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z 10	*1. 000*	*5. 000*	*-.534*	*-2.911*	*.118*	*.322*
z 9	*1. 000*	*5. 000*	*-.372*	*-2.027*	*-.493*	*-1.343*
z 8	*1. 000*	*5. 000*	*-.790*	*-4.301*	*.761*	*2.072*
z 7	*1. 000*	*5. 000*	*-.749*	*-4.080*	*.328*	*.893*
z 6	*1. 000*	*5. 000*	*-.666*	*-3.629*	*.724*	*1.971*
z 5	*1. 000*	*5. 000*	*-.392*	*-2.137*	*-.330*	*-.899*
z 4	*1. 000*	*5. 000*	*-.295*	*-1.606*	*-.541*	*-1.472*
z 3	*1. 000*	*5. 000*	*-.886*	*-4.825*	*1.119*	*3.047*
z 2	*1. 000*	*5. 000*	*-.583*	*-3.176*	*-.023*	*-.063*
z 1	*1. 000*	*5. 000*	*-.760*	*-4.137*	*.887*	*2.415*
Multivariate					*144.791*	*40.245*

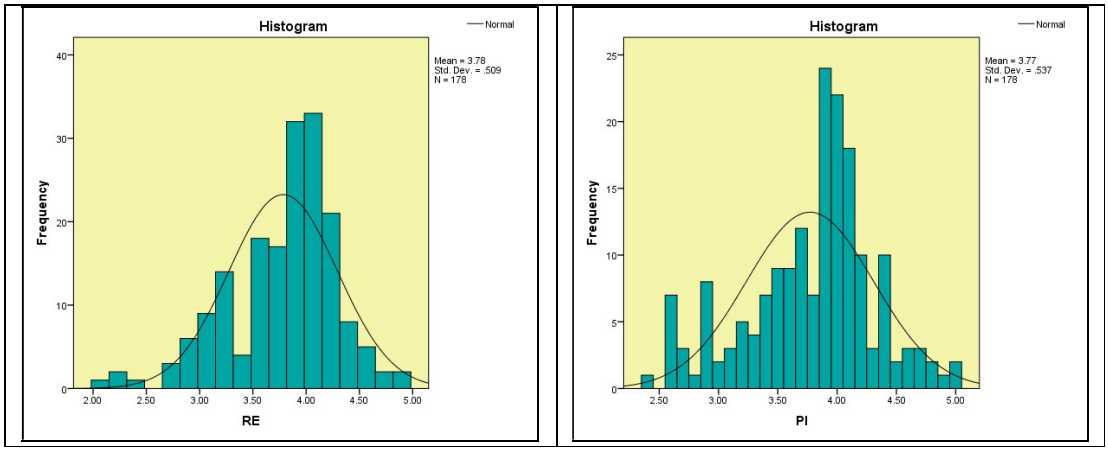

Figure 4: Normality Histogram

Mix Model

The model is good by establishing the conditions of conformity good fit index and depending on the size of the sample on the quality of the models using the modeling and direct methods with mix mode , and it is better to use both methods. the sample size is appropriate to a direct method with mix as it is shown in Figure 5 it is good to fit index.

The mixing model is approved to identify the percentage of each component's contribution to the quality of the model when mixing data. The results within the two groups indicate in Figures that the dimensions of each element were an acceptable contribution to the quality of the model in relation to the contribution to the paragraphs of its dimension, and readings greater than 25 were acceptable value for the mixing model.

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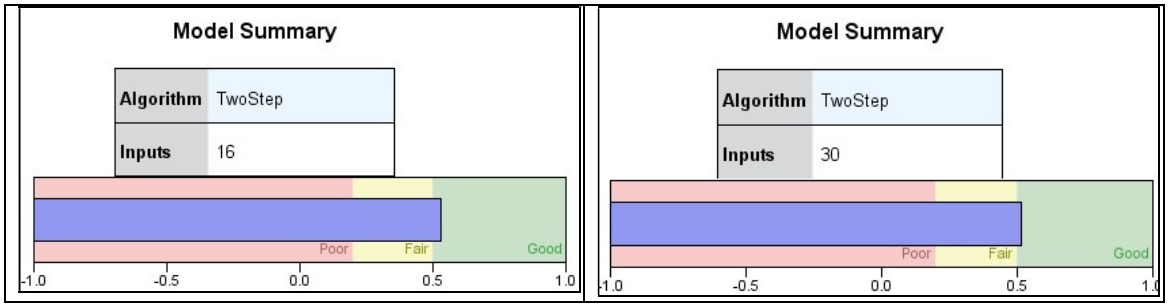

Figure 5: Goodness of Mix Model for RE and PI

RESULTS

Mixed Effect

In order to identify the mixed effect of the paragraphs, as they are adjustable and changed over time, the intersection effect is done to find the effect that causes the possibility of change during the time progression (Robert, 2013), The results of the Tables 4 and 5 refer to that it is clear that the effect through time is significant, as the level of significance indicated that it is within the acceptance area, which is required to be less than (0.05).

Table 4: Mixed Effect for RE

Item	*Estimate*	*SE.*	*F*	*t*	*Sig.*	*Conf. 95%*	
						Low	*High*
q1	*3.0967*	*.22885*	*183.09*	*13.53*	*0 .000*	*2.629*	*3.564*
q2	*3.5806*	*.18993*	*355.41*	*18.85*	*0 .000*	*3.192*	*3.968*
q3	*3.8387*	*.24581*	*243.87*	*15.61*	*0 .000*	*3.336*	*4.340*
q4	*4.0000*	*.21751*	*338.18*	*18.39*	*0 .000*	*3.555*	*4.444*
q5	*3.9032*	*.20922*	*348.04*	*18.65*	*0 .000*	*3.475*	*4.330*
q6	*3.7419*	*.24524*	*232.80*	*15.25*	*0 .000*	*3.241*	*4.242*
q7	*2.9677*	*.20988*	*199.93*	*14.14*	*0 .000*	*2.539*	*3.396*
q8	*3.4516*	*.23572*	*214.40*	*14.64*	*0 .000*	*2.970*	*3.933*
q9	*3.7096*	*.22809*	*264.50*	*16.26*	*0 .000*	*3.243*	*4.175*
q10	*3.8387*	*.22764*	*284.35*	*16.86*	*0 .000*	*3.373*	*4.303*
q11	*3.9032*	*.20922*	*348.04*	*18.65*	*0 .000*	*3.475*	*4.330*
q12	*3.8709*	*.24425*	*251.16*	*15.84*	*0 .000*	*3.372*	*4.369*
q13	*4.0000*	*.14664*	*744.00*	*27.27*	*0 .000*	*3.700*	*4.299*
q14	*4.0000*	*.21251*	*354.28*	*18.82*	*0 .000*	*3.565*	*4.434*
q15	*3.9354*	*.20179*	*380.34*	*19.502*	*0 .000*	*3.523*	*4.347*
q16	*3.6129*	*.21087*	*293.54*	*17.13*	*0 .000*	*3.182*	*4.043*
q17	*3.8064*	*.21462*	*314.54*	*17.73*	*0 .000*	*3.368*	*4.244*
q18	*3.64516*	*.19426*	*352.08*	*18.76*	*0 .000*	*3.248*	*4.041*
q19	*3.7741*	*.24847*	*230.71*	*15.18*	*0 .000*	*3.266*	*4.281*
q20	*3.6451*	*.19972*	*333.10*	*18.25*	*0 .000*	*3.237*	*4.053*
q21	*4.0322*	*.22472*	*321.94*	*17.94*	*0 .000*	*3.573*	*4.491*

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q22	4.0000	.21751	338.18	18.39	0 .000	3.555	4.444
q23	3.9677	.22472	311.72	17.65	0 .000	3.508	4.426
q24	3.8064	.19902	365.77	19.12	0 .000	3.399	4.212
q25	3.9354	.13862	805.993	28.39	0 .000	3.652	4.218
q26	3.5806	.21639	273.80	16.54	0 .000	3.138	4.022
q27	3.9354	.17311	516.80	22.73	0 .000	3.581	4.289
q28	3.6774	.21941	280.89	16.76	0 .000	3.229	4.125
q29	4.0645	.16678	593.86	24.36	0 .000	3.723	4.405
q30	4.0000	.19674	413.33	20.33	0 .000	3.598	4.401

Table 5: Mixed Effect for PI

Item	Estimate	SE.	F	t	Sig.	Conf. 95%	
						Low	Low
z1	3.354	.2297	213.13	14.60	0 .000	2.885	3.824
z2	3.129	.2112	219.49	14.81	0 .000	2.697	3.560
z3	3.483	.2491	195.48	13.98	0 .000	2.974	3.99
z4	3.483	.2491	195.48	13.98	0 .000	2.974	3.992
z5	3.129	.2653	139.04	11.79	0 .000	2.587	3.670
z6	3.032	.2341	167.77	12.95	0 .000	2.554	3.510
z7	2.806	.2244	156.38	12.50	0 .000	2.348	3.264
z8	3.064	.2818	118.23	10.873	0 .000	2.488	3.640
z9	3.064	.2537	145.87	12.07	0 .000	2.546	3.582
z10	3.290	.2631	156.37	12.50	0 .000	2.752	3.827
z11	3.322	.2679	153.75	12.40	0 .000	2.775	3.869
z12	3.419	.2654	165.88	12.88	0 .000	2.877	3.961
z13	3.387	.2303	216.17	14.70	0 .000	2.916	3.857
z14	3.451	.2446	198.99	14.10	0 .000	2.951	3.951
z15	3.225	.2351	188.20	13.71	0 .000	2.745	3.706
z16	3.225	.2527	162.86	12.76	0 .000	2.709	3.742

Forecasting

The prediction process is performed by adopting the previous and current data to reach an acceptable future prediction (Sweet, 1999), the prediction requires that the data be up to date and that the prediction value pass the first quarter of the probable values, Table 6 and Figure 6 clarify the prediction results which are acceptable values of (47.1%), as Table 6 indicates the significance of the prediction model, where the value of (T) was acceptable and it is within the level of significance of (0.01) which is less than (P <0.05).

Table 6: Forecasting Model

Factor	Mean	Low	High	%						
				5	10	25	50	75	90	95
S. R-s.	.119	.119	.119	.119	.119	.119	.119	.119	.119	.119
R-s.	.471	.471	.471	.471	.471	.471	.47	.47	.47	.471
RMSE	.756	.756	.756	.756	.756	.756	.756	.756	.756	.756
MAPE	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2

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MaxAPE	*123.6*	*123.6*	*123.6*	*123.6*	*123.6*	*123.6*	*123.6*	*123.6*	*123.6*	*123.6*
MAE	*.584*	*.584*	*.584*	*.584*	*.584*	*.584*	*.584*	*.584*	*.584*	*.584*
MaxAE	*2.16*	*2.16*	*2.16*	*2.16*	*2.16*	*2.16*	*2.163*	*2.16*	*2.16*	*2.16*
Normal	*-.450*	*-.450*	*-.450*	*-.450*	*-.450*	*-.450*	*-.450*	*-.450*	*-.450*	*-.450*
Model	*Es.*	*SE.*	*t.*	*Sig.*						
IP-Mod.	*.600*	*.160*	*3.74*	*0.001*						

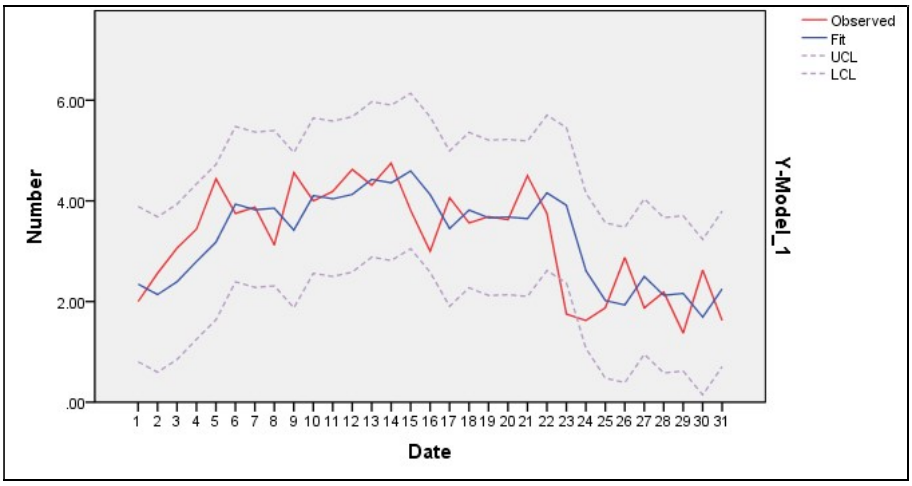

Figure 6: Forecasting limit

Model Adequacy

Figure 7 indicate that re-engineering and performance variable has achieved acceptable results within the appropriateness of the data for the prediction process, and it is clear that all data are located within the acceptance region that requires that the arithmetic mean to be positive and high (2.80 and more) in relation to the five-scale and that the standard deviation is low as far as possible, in addition to the relationship being distributed naturally, and following up on the results it becomes clear that the mean and the standard deviation are acceptable values, in addition to the values being distributed normally, with an acceptable interpretation rate of greater than (0.25).

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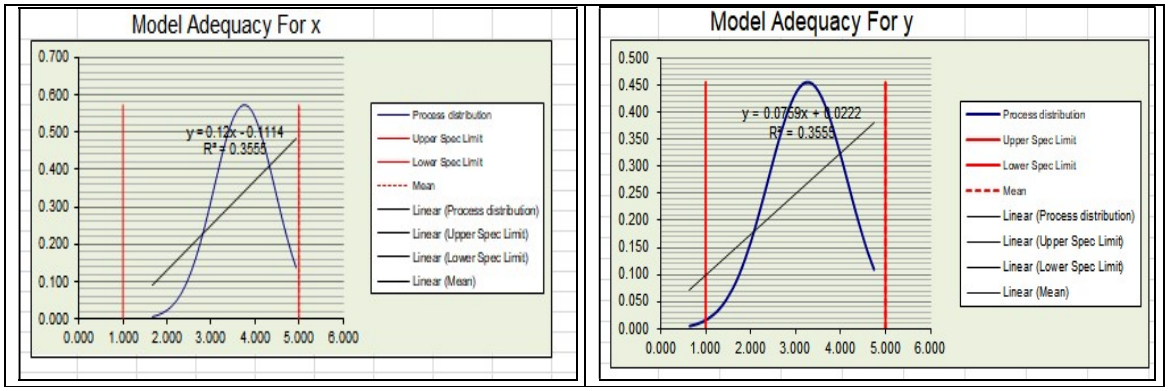

Figure 7: Model Adequacy for RE and PI

Scenario Limit

Radar analysis is performed to identify points outside the boundary and therefore must be excluded. This method relies on extracting the gap between the actual scenario and the predicted scenario, Figure 8 indicates that all paragraphs represented by points within the radar are located within the boundaries and therefore can be adopted to construct the scenario, where no points were located outside the border.

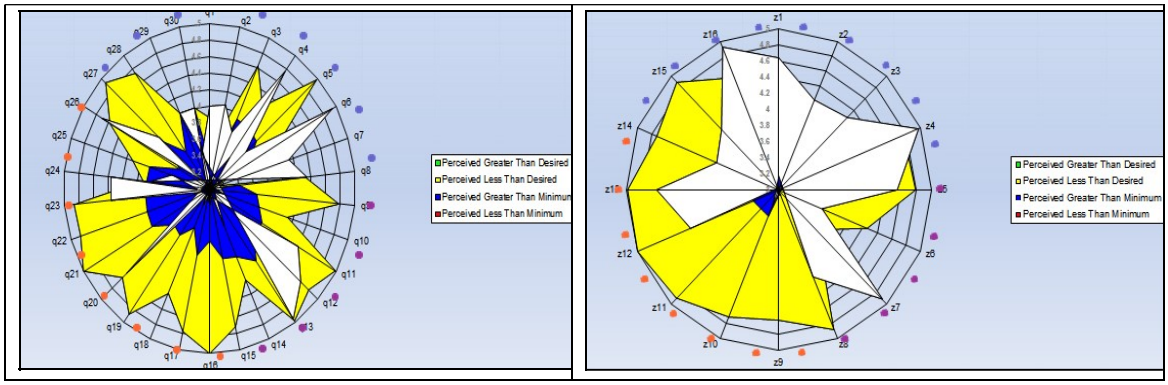

Figure 8: Radar Analysis

Possible Scenarios

The network path analysis is performed, which gives all possibilities for the future scenario, and then the closest scenarios are chosen between reality and ambition and depending on the expected verification percentage, and a number of studies indicate that the best scenario is considered by choosing three or four scenarios with ratios of verification that depend on the four sections start with the relative sequence, from the weakest to the strongest ((0-25%) are weak, and (75-100%) are high.

Figure 9 indicates all scenarios, which give an idea but difficult to verify model, and these scenarios are verified by performing procedures to arrive at the ideal scenario or scenarios, which can be verifiable, hence, the best scenarios are extracted within the acceptable ratios, Acceptable scenarios are achieved by merging or deleting operations, stages, or steps, which can give an idea and verifiable scenario or application and chose possible scenarios as it shown in Figure 10.

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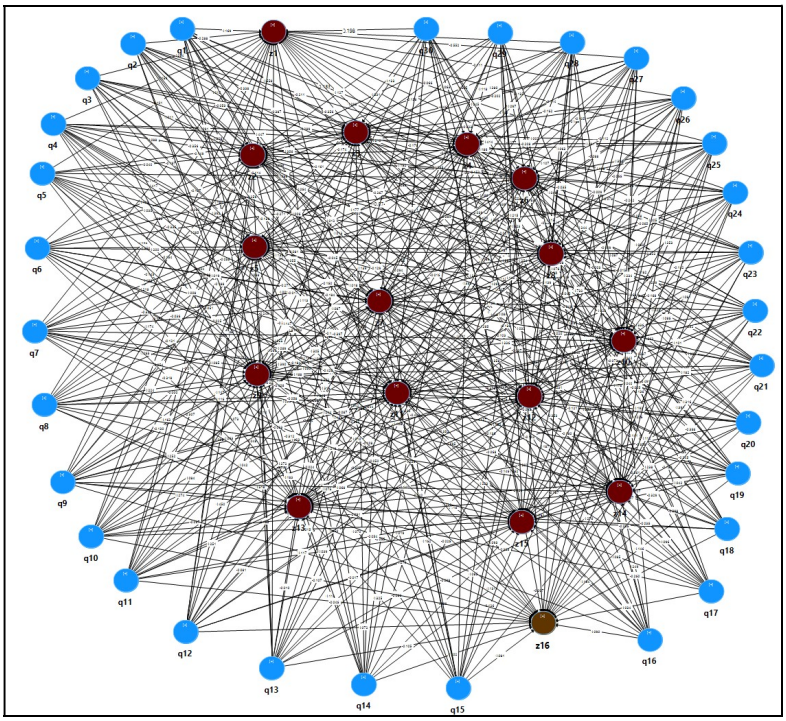

Figure 9: All Scenarios

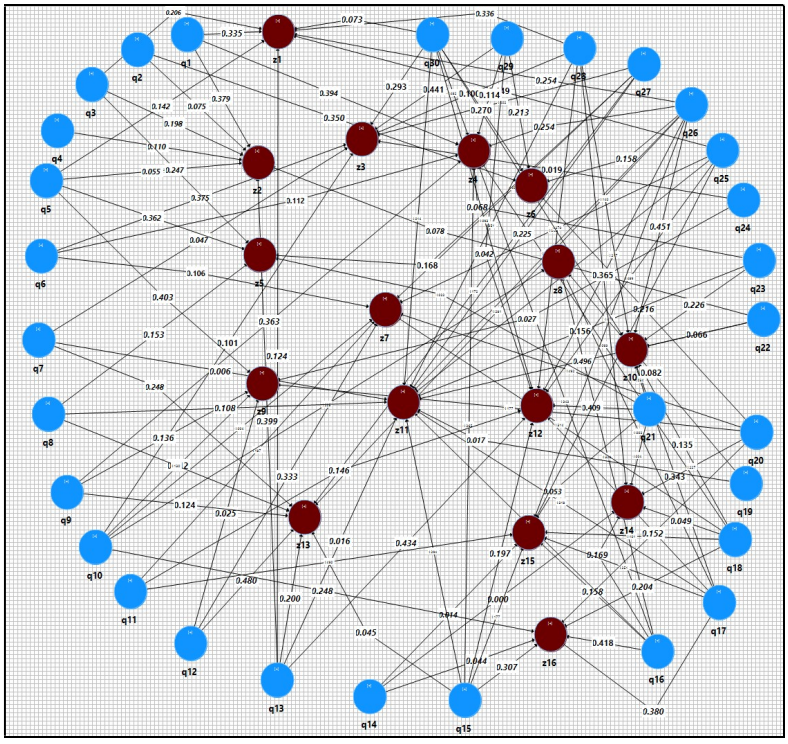

Figure 10: Possible Scenarios

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Scenario for Performance Improvement

The results of the structural network analysis in Figure 11 show that the re-engineering contributes to improving performance within the quality by (11.9%), flexibility by (35.3%), cost (3.9%), and delivery by (40.7%) The paragraphs contributing to the improvement process through the contribution of reengineering (RE) in improving the combined performance processes (PI) (quality, flexibility, cost, delivery) through (the administration's commitment to prepare a permanent plan to improve the performance of operations and services) (by) (28.2%), and (support the administration to improve operations and performance according to the concept of re-engineering) at (17.6%), and (the authority encourages global developments in the field of administrative procedures) at (36%).

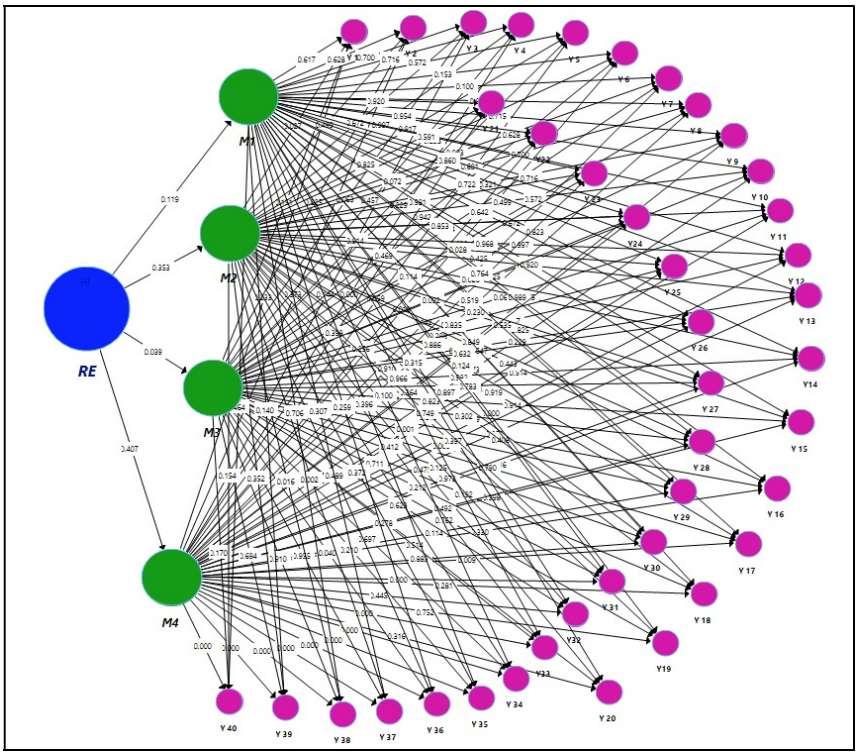

Figure 11: Scenario for Performance Improvement

DISCUSSION AND CONCLUSION

Process improvement is the systematic study of the activities and flows of each process to the improvement, the purpose of which is to understand the process and analyze it, and to draw conclusions and details, and once to understand the process accurately it can be improved, since organizations should continue with the process of improvement, whether the process is re-engineered or not, there is always a better way to work, and most operations can be improved if a way to develop and think about implementing it effectively is considered. Indeed, organizations will either adapt their process to the changing needs of customers or be at risk of disappearing, but success comes in the long run through managers and to understand business, hoping the fact that they do business (Krajewski et al, 2013).

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Many techniques and methodologies have emerged in this field that helps in achieving success for the re-engineering process (Ngoc et al.,2010), and the most important of these techniques is the scenario methodology, which has become one of the successful technologies in many areas.

This study presented the method of constructing the scenario for the re-engineering project in order to improve performance. The study concluded that many different and complex scenarios can be obtained, and they can be sorted and analyzed and choose the best scenario from them. The scenarios that are obtained are between three or four scenarios, it was concluded that among these scenarios is the improvement of quality, which multiple studies indicate that the scenario is a success factor to improve the quality (Choudhury, 2008). The study also concluded that there is a realistic scenario to improve flexibility, and in this field studies (Kim & Wu, 2013) indicated that it is possible to build a successful scenario that contributes to increasing flexibility. In regard to costs, the study presented a cost reduction scenario, and it came in line with a study of (Zomer et al., 2012). The study demonstrated that the delivery scenario can be applied, this result is in line with (Kryvinska et al., 2010).

Accordingly, the study concluded that the scenario methodology is a successful methodology for re-engineering and performance improvement

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