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Sustainable Continuous Production Improvement Strategies: A Framework for Reviving Failing Companies in Zimbabwe

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Abstract

This article developed sustainable strategies for reviving failing companies in Zimbabwe. The companies should convert all permanent positions to contract positions in order to adopt the team concept that promotes continuous production improvement. The research discovered that corruption, inexperience, mismanagement and inadequate funding were the major factors causing companies to fail. The signs of failing companies were high indebtedness and staff turnover, financial loss, low production, poor product quality and dilapidated machines. The immediate intervention by the industry and Government by implementing the proposed strategies could reduce the effects of the challenges facing failing companies in Zimbabwe.

Keywords: Reviving Strategies, Resuscitating Strategies, Failing Companies, Management Functions, Management Bases, Team Member, Rotational Employment Concept

JEL Classification: M1, M11

Paper Classification: Research Paper

Introduction

A company fails due to management inexperience, insufficient money, poor credit arrangements, location and inventory management, over-investment in fixed assets, personal use of business funds and unexpected growth (Ames & Wellsfry, 1983). A large proportion of failing companies is found in developing economies, where there are abundant natural resources that can be exploited to revive them. In Zimbabwe, many companies have closed operations since the downturn of the economy in 2007. The companies still operating in Zimbabwe are facing many production challenges such as high product costs, high staff turnover and inadequate funds just to mention a few. The human capital left the country en mass and according to Zanamwe and Devillard (2009), a maximum of 1.5 million Zimbabweans are staying in South Africa. A number of economic blue prints have been proposed and implemented but the companies continue to close

down, affecting thousands of workers. According to the Minister of Finance's 2015 national budget statement, the companies and workers that were closed and affected respectively are presented in Figure 1.

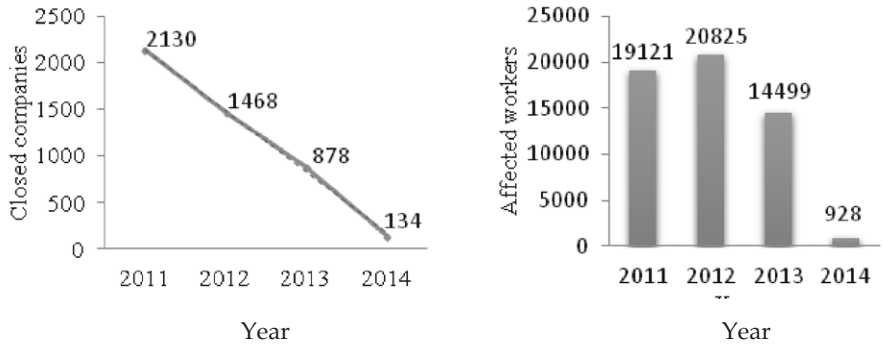

Figure 1. Closed companies and affected workers (2011 – 2014)

Figure 1 shows bedeviling trends of the closed companies and affected workers for the period (2011 – 2014). The fitted linear trend (dotted line) shows that the number of closed companies decreased drastically for the period. Thus, Figure 1 poses two hypothetical conclusions; may be the introduction of the multi-currency system in Zimbabwe in 2009 stabilized the economy to the extent that most companies started to recover from failing and most companies had closed before 2011 that the few companies that remained were closing in small numbers. Therefore, one can assume that there are very few companies still operating in Harare, Zimbabwe.

The 2015 National Budget Statement (2015 NBS) also revealed that the average time and cost for establishing a business in Zimbabwe was 90 days and 141.20% of income per capita respectively. According to the 2015 NBS, the figures were very high when compared to other African countries such as South Africa with 19 days and 0.3% of income per capita and Mauritius, 6 days and 3.6% of income per capita. The 2015 NBS also revealed that an investor had to complete on average, 9 procedures to open a business in Zimbabwe against 7.8 in sub Saharan Africa and 4.8 for developed countries.

Therefore, it was difficult to attract new investors to open companies in Zimbabwe. Some of the few remaining companies were failing and shutting down due to production challenges caused by the depressed economy. The phased approach can be used to address the challenges faced by companies. The first phase will be to revive failing companies. The second phase will be to open closed companies. The third phase will be to lure investors to open new companies. During the first two phases, the authority must draft legislation that addresses the hindrances to opening companies in Zimbabwe. Therefore, the goal of the article is to determine the production challenges being faced by failing companies in Harare, Zimbabwe and develop resuscitating strategies.

Production system

This is the source of the products that determine the production state of the company. The four production states are failed, failing, recovering and flourishing and are discussed later. The production system adapted from Slack, Chambers and Johnston (2010) is depicted in Figure 2.

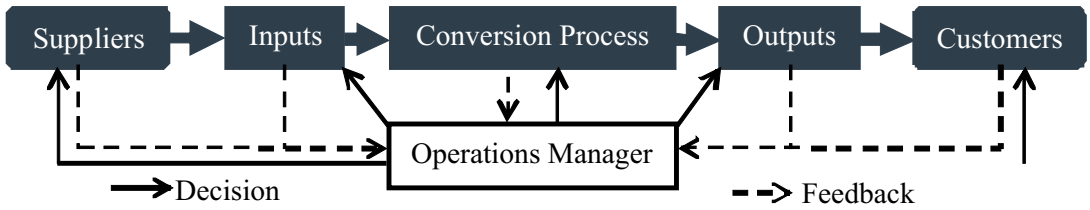

Figure 2. Production system

It is the duty of the operations manager to monitor (observe and measure the actual performance), evaluate (compares the production statistics of actual performance against the set up standards or expected performance and makes recommendations based on the evaluation results) and control (decides whether the performance is acceptable and analyzes the evaluation results) the production system and its environment to keep the company in a flourishing state. This is an adaptation of the Deming Cycle, also known as the Plan, Do, Check and Act (PDCA) cycle (Sokovic, Pavletic & Kern-Pipan, 2010). The operations manager must be multi-skilled and competent to successfully manage the production system. The process of monitoring, evaluating and controlling is presented in Figure 3.

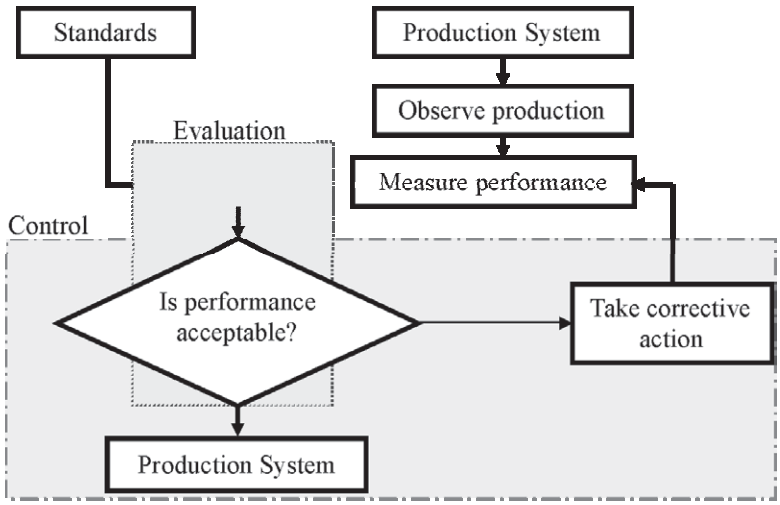

Figure 3. Monitoring, evaluation and controlling process

The process in Figure 3 requires continuous implementation throughout the production period in order to ensure that the production system is performing at the expected level.

Management Skills

The company managers must possess management skills in order to continuously improve production. The management skills are divided into two distinctive groups, management functions and management bases, as presented in Figure 4.

Figure 4. Management skills (Functions and Bases)

The management functions and bases are absolutely essential for team members to successfully implement the business strategies. The management skills are acquired and nurtured over a long period of time starting from childhood chores such as herding cattle. The childhood activities inculcate professionalism that is currently lacking in most production team members. Therefore, the applicants must have basic knowledge of the management skills to be considered for senior company positions.

Management Bases. The management bases required for team members are as follows:

Responsibility. The team has an obligation to execute production tasks with or without assistance to the assigner's satisfaction. A team member is assigned a duty to man the production system and gives feedback to the assigner.

Confidence. Confidence is the management's faith, trust and belief that the team is capable of meeting the required production quota with minimum supervision.

Maturity. Maturity is the team's behaviour, reasoning and ability to understand and manage the production system. A mature team has confidence and satisfactorily performs tasks independently. A mature team is flexible and innovative.

Accountability. All the production incidents that occur are the responsibilities of the team. The team members make decisions that assist the operations managers to monitor, evaluate and control the production system.

Reliability. Reliability is the worth of the team for honesty, accuracy and achievement. This is the likelihood that the team would meet the production quota without fail. This requires the setting up of standards that will assist to measure each team's reliability on consistence performance of the production tasks.

Experience. The accumulation of knowledge, opinions and skills from previously implemented production activities. There is a direct relationship between the number of years worked and experience. The candidates must have enough experience for the vacant positions. An experienced team member is independent and works with minimum supervision.

Management Functions. The functions are the drivers for resuscitating failing companies. The interaction of the management functions is presented in Figure 5.

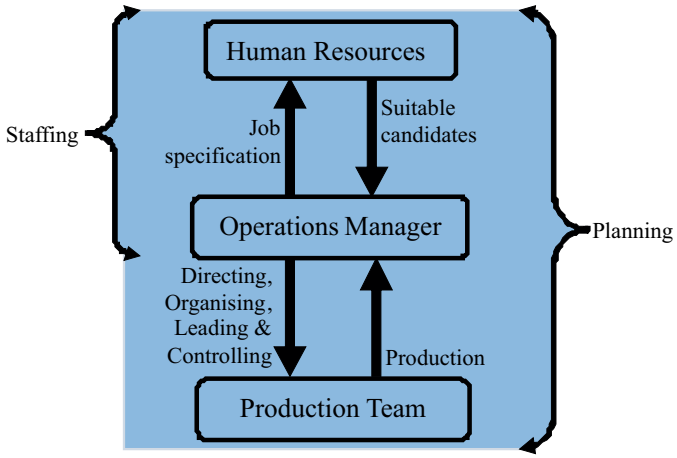

Figure 5. Fundamental interaction of the management functions

The explanations of the management functions are based on the interaction portrayed in Figure 5.

Controlling. A process of correcting any deviation from the set standards.

Directing. This looks at issuance of work orders, incentive plans and job assignments to the team. The operations manager guides the team on how to achieve the company's production goals and objectives.

Staffing. This deals with laws and regulations affecting the team, determining the team's resource needs, selecting the best candidate for the vacant position, developing and implementing training programmes, evaluating team's performance and compensating the team members. It also encompasses training, performance appraisals, promotions, demotions and transfers of the team members.

Leading. This involves motivating, communicating, guiding and encouraging the team members. The management must manage by participation.

Planning. This is the scheduling of all company production activities. According to Gido and Clements (1999), the planning function is a systematic arrangement of tasks to accomplish an objective. There is need to schedule production activities using the work breakdown structure (WBS), logical breakdown structure (LBS), Gantt chart, project evaluation and review technique (PERT) and critical path method (CPM).

Organising. This deals with the coordination of the team according to the planning function. The management assigns activities to the team and empowers it to make meaningful production decisions.

Literature Review

Hartsell (2015) published seven turnaround strategies for a company. The turnaround strategies include realization of the problem; redefining the company's strategy, re-engage people, innovation, branding and marketing, finance and cash flow and execution and tough decisions. Schoenberg, Collier and Bowman (2013) conducted a survey on effective historical business

turnaround and recovery strategies. The study discovered convergence in the results of the prior studies and six core recovery strategies, namely, cost efficiencies, asset retrenchment; focus on core activities, building for the future, reinvigoration of company leadership and culture change. Homola (2013) investigated on the double figure increase in productivity of production line workers. The researcher discussed training of team members, changing of shifts and absenteeism due to abuse of sick leave days. The article looked at the importance of coaches of the production group. A lasting increase in productivity of production line workers by 12% and 15% in the first and second factories respectively was recorded after 14 months after the project had finished. The result was confirmed by the top management (Homola, 2013). Karrer (2012) had investigated the Production Control Strategies (PCS). The PCS are part of the short term production planning as discussed in Stadtler and Kilger (2008). Karrer (2012) also discussed the Production Systems Engineering (PSE). According to Li and Meerkov (2009), the PSE is an emerging branch of Engineering intended to uncover fundamental properties of production systems and utilize them for analysis, continuous improvement and design. Eberhardt and Teal (2010) had estimated cross country production functions for 48 developing and developed countries. The findings had important implications for productivity analysis at both sectoral and aggregate economy levels.

Belak and Duh (2012) proposed the MER model of integral management which has entrepreneurship and culture as two of the key success factors of a company. The companies cannot be successful in the long term without people who possess the characteristics of entrepreneurs (Belak & Duh, 2012). The new St. Gallen management model (Ruegg-Sturm, 2005) reveals some production stakeholders: customers, investors, personnel, public NGOs, Government, suppliers and competitors. The model shows three processes that should be monitored and controlled; management, business and support processes. The Ruegg-Sturm model shows that the production stakeholders should support the company for continuous improvement of production. The model portrays that companies produce goods and services in a complex environment that requires the working together of all production stakeholders. The new St. Gallen management model (Ruegg-Sturm, 2005) is presented in Figure 6.

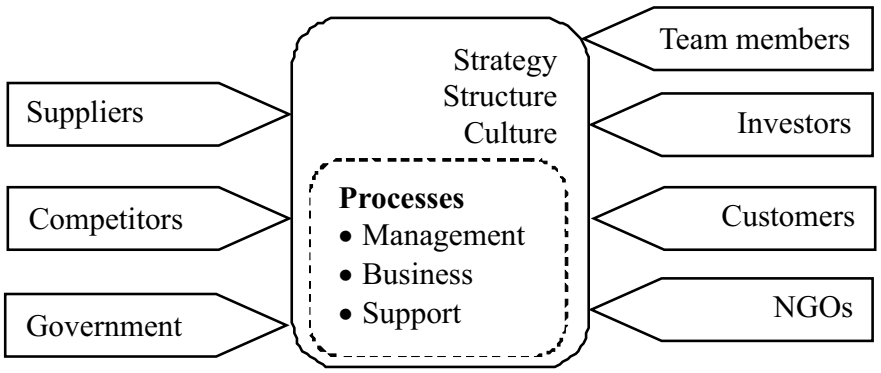

Figure 6. New management model (Ruegg-Sturm, 2005)

Figure 6 shows seven stakeholders; processes; environmental factors; and requirements for successful management and improvement of the production of a company. Bengtsson, Dabhilakar and Niss (2000) investigated the distribution of qualified production team members and process-oriented companies within the Swedish engineering industry. The advanced production team performed better than the less advanced production team.

Research Gap

There are many companies that are facing operational viability in developing and under developed countries. In Zimbabwe, many companies have closed due to operational challenges caused by the depressed economy. A number of studies have been conducted in improving company production (Homola, 2013; 2012; Eberhadt & Teal, 2010) but there is no evidence in the literature of researches that attempted to formulate sustainable strategies for continuous production enhancement especially for companies in depressed economies in which the Zimbabwean economy falls. Eberhardt and Teal (2010) stated that despite the importance of the manufacturing industry for successful development, very few researches investigated this sector. This was in agreement with a survey study by Durlauf, Johnson and Temple (2005) which recognized the limited empirical evidence of work dedicated to cross country empirical analysis. There is desperate need for home grown solutions to revive and establish companies in depressed economies. Therefore, this research attempts to fill this literature gap by proposing a framework of continuous production strategies using a sample of Harare companies in Zimbabwe. The researcher answers the following questions: (1) What causes the companies to fail?; (2) What are the challenges facing failing companies?; (3) What are the possible solutions to the challenges facing failing companies?; and (4) What are the sustainable strategies that can revive and establish companies in Zimbabwe?

Contribution of the Research

The research provides a framework for reviving and establishing companies in depressed economies. The framework can be implemented by companies in developing and under developed economies. On the other hand, the research responds to the call for home grown solutions for companies facing operational challenges in Zimbabwe and Africa as a whole. There is no evidence in the literature of related researches conducted in the area of sustainable continuous improvement production strategies for reviving and establishing companies in depressed economies. This research is thus responding to the call and may be a starting point for other researchers to further probe the critical area for possible solutions that may assist struggling companies. The research suggests sources of getting funds for sustaining production during difficult periods. The production improvement strategies call for the alignment of industrial legislation in line with the new proposed way of managing production.

Research Objectives

1. To establish what causes companies to fail,
2. To find out the challenges facing failing companies,
3. To determine the possible solutions to the challenges facing failing companies and
4. To propose sustainable strategies that can revive failing companies in Zimbabwe.

Research Methodology

Type of Study

This is a cross sectional study which applied a hybrid of qualitative and quantitative studies to reach the conclusions. The condition of the companies that participated in the research survey was determined at the particular point the data was gathered for this research.

Research Sample

The data was collected from 250 company directors, managers and supervisors who volunteered to participate in the research survey. The research used voluntary sampling design (Murairwa, 2015) to select willing directors (including deputy directors), managers (including deputy managers) and supervisors to fill in the questionnaire.

Methods of Data Collection

The research applied interview method to gather data from Harare Central Business District (HCBD) and Workington Industrial Area in Zimbabwe. The information on the target population and the number of questionnaires distributed is presented in Table 1.

Table 1: Companies Investigated

Company	Questionnaires distributed	Target
HCBD Banks	55	50
Workington companies	160	150
HCBD SMEs	55	50
Total	270	250

The questionnaire with both closed and open ended questions was designed and pre-tested on the general public in the HCBD a week before the data for the research was gathered. A total of 270 questionnaires were printed and distributed to respondents as presented in Table 1.

Hypothesis

The research investigated the relationship between the factor and the company's high productivity at 10% level of significance with the Pearson Chi-square hypothesis *"H_o: Factor and production are independent versus H1: Factor and production are dependent"*.

Data Analysis Tools

The research applied the following statistical tools to analyze the data:

(a) Pearson Chi-square

$$x^2 = \sum \left(\frac{I_{ij} - E_{ij}}{E_{ij}} \right)^2 \quad (1)$$

where i and j index the rows (r) and columns (c) of the table data. The statistic from the formula is approximately distributed as x^2 on (r – 1)(c – 1) degrees of freedom. If the probability of $x^2 > \alpha$, the study fails to reject H_o; otherwise H_o is rejected. The research applied the Chi-square test because it is the best statistic test for categorical data. The level of measurements for the independent variables are employment position (director, manager, chief executive officer), market type (local, export, both), multiple skills (yes, no, not sure), level of education (diploma, first degree, masters, doctorate, professorship) and training (yes, no) and work experience (1 – 5, 6 – 10, 11 – 15, 16+ years) and the dependent variable is high production.

(b) Risk

$$\text{RR} = \frac{\text{Risk in exposed}}{\text{Risk in non exposed}}, \quad (2)$$

A value of one indicates that the estimated effects are the same for both the exposed and non-exposed. If the risk odds ratio (ROR) is greater than one, the exposed is better than the non-exposed. If the ROR is less than one, the non-exposed is better than the exposed.

Results and Discussions

The data and information gathered were analyzed, discussed and presented henceforth.

Table 2: Gender and Employment Position

Gender		Employment position			Total
	Director	Manager	Supervisor		
Female	Count	14	34	65	113
	% of total	5.60	13.60	26.00	45.20
Male	Count	19	53	65	137
	% of total	7.60	21.20	26.00	54.80
Total	Count	33	87	130	250
	% of total	13.20	34.80	52.00	100.00

The survey participants were supervisors (52%), managers (34.80%) and directors (13.20%). The research gathered data to determine the performance trends for the companies for the period (2003 – 2014). The summarized results are presented in Figure 7.

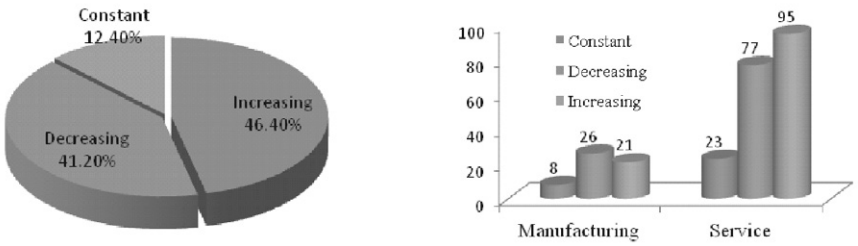

Figure 7. Production trends (2003 – 2014)

Figure 7 shows an insignificant difference between companies that were experiencing an increase (46.40%) and a decrease (41.20) in production. A number of companies were struggling to recover from failing. Of all the respondents, 22% were from manufacturing companies while 78% were from service companies. The survey results support the current shortage of locally manufactured goods in Zimbabwe. The closed companies must be opened. The research established the challenges that were facing failing companies. The results are presented in Table 3.

Table 3: Challenges Facing Failing Companies

Challenge	Male	Female	Total
Mismanagement	40.40	34.80	75.20
High staff turnover	30.00	25.20	55.20
Inadequate funding	29.20	23.20	52.40
Below capacity	23.60	18.40	42.00
Decreasing production	22.80	18.00	40.80
Unskilled workforce	22.80	16.40	39.20

(Continued)

Lack of training	18.40	18.80	37.20
Poor business strategy	19.60	15.60	35.20
Corruption	18.00	16.80	34.80
Poor product quality	16.80	14.40	31.20
Lack of technology	14.00	10.40	24.40
Dilapidated machinery	7.60	2.80	10.40

Table 3 shows the production challenges that failing companies were facing in their order of priority according to the respondents. The mismanagement (75.20%) was the major challenge facing failing companies. This implies that most failing companies are under incompetent management. The second and third highly selected production challenges were high staff turnover (55.20%) and inadequate funding (52.40%) respectively. Thus, a holistic approach of all production stakeholders is required to formulate strategies that counter the effects of the challenges. The research established the causes of the challenges that were facing failing companies and presented the results in Table 4.

Table 4: Causes of Challenges Facing Failing Companies

Cause	Male	Female	Total
Mismanagement	40.40	34.80	75.20
Inadequate funding	29.20	23.20	52.40
Economic challenges	24.80	18.00	42.80
Unskilled labour	22.80	16.40	39.20
Poor business strategy	19.60	15.60	35.20
Corruption	18.00	16.80	34.80
Lack of technology	14.00	10.40	24.40

Table 4 shows that mismanagement (75.20%) and inadequate funding (52.04%) were the root causes of challenges facing failing companies. In order to reduce the effects of these causes, the companies must employ multi-skilled team members, inject funds, advice Government with sound economic policies, redefine business strategies and develop policies to curb corruption. The mismanagement (75.20%) can be addressed if companies change the employment approach and convert all permanent positions to contract positions. This will usher in the use of the title "team member" and abolish "employee". The research established the symptoms of failing companies in Zimbabwe and presented the results in Table 5.

Table 5: Signs of Failing Companies

Sign	Male	Female	Total
High indebtedness	38.00	30.80	68.80
High staff turnover	30.00	25.20	55.20
Failure to pay salaries	30.80	22.80	53.60
Financial loss	26.40	25.20	51.60
Production below capacity	23.60	18.40	42.00
Retrenchment	16.80	20.80	37.60
Poor product quality	16.80	14.40	31.20
Dilapidated machines	7.60	2.80	10.40

The highly selected signs of failing companies were high indebtedness (68.80%), high staff turnover (55.20), failure to pay salaries (53.60%) and financial loss (51.60%). The total responses for product quality and dilapidated machines are evidence that most companies were regarding quality and technology as insignificant production factors. There is need to conscientise companies on the symptoms and advise them on the drastic measures to implement in order to avoid total failure. The research investigated the relationship between the factor and the company's high productivity at 10% level of significance with the Pearson Chi-square hypothesis "H_o: Factor and production are independent versus H_1: Factor and production are dependent" and presented the summary of the results in Table 6.

Table 6: Pearson's Chi-Square Tests

Factor		High productivity			Table statistic	H_0
		Chi-square	Df	Sig.		
a	Employment position	9.381	4	0.052*	9.49	Reject
b	Market type	4.910	4	0.297	9.49	Accept
c	Multi-skills	14.374	4	0.006*	9.49	Reject
d	Level of education	0.780	2	0.677	4.61	Accept
e	Training on the job	28.823	2	0.000*	4.61	Reject
f	Work experience	11.616	6	0.071*	10.60	Reject

** The Chi-square statistic is significant at the 0.1 level.*

The computed chi-square statistic and significant values of each factor against high production are experience (11.616), market type (4.910), position (9.381), multi-skilled (14.374), training (28.823) and level of education (0.780) respectively. Since the significant values are less than 10% level of significance, the hypothesis of independence is rejected in all factors except in b and d factors. Thus, all the other factors (a, c, e, f) are related to production level. Therefore, all the factors (except b and d) are key significant factors for improving production in failing companies. Table 6 shows that experience, employment position, multi-skills and training on the job directly affect productivity. There is need for continuous injection of new knowledge, innovation, skills and experience in the companies. However, the market type and level of education do not affect production. The research analyzed the risk of training on each factor and presented the results in Table 7.

Table 7: Risk of Training by Gender

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Gender (Female / Male)	1.409	0.841	2.359
For cohort Training = No	1.239	0.898	1.708
For cohort Training = Yes	0.879	0.723	1.070
Number of Valid Cases	250		

Table 7 shows that the female team members are 1.239 times as likely not to be trained on-the-job than the male team members. In other words, the male team members are 0.879 times more likely to be trained on-the-job than the female team members. The male team members have a high prospect of being trained on-the-job in companies when compared to female team members at

the current prevailing economic conditions. The odds for the female team members of not being trained on-the-job are 1.409 times the odds for the male team members of not being trained on-the-job. The research investigated the risk of training by company type and presented the results in Table 8.

Table 8: Risk of training by company type

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Company type (Manufacturing / Service)	1.885	1.028	3.456
For cohort Training = No	1.450	1.040	2.024
For cohort Training = Yes	0.770	0.583	1.016
Number of Valid Cases	250		

The team members in manufacturing companies are 1.450 times more likely not to be trained on-the-job than the team members in service companies. In other words, team member in service companies are 0.770 times more likely to be trained on-the-job than the team members in manufacturing companies. The odds of team members not likely to be trained on-the-job in manufacturing companies are 1.885 times the odds of the team members not trained on-the-job in service companies. The research investigated the risk of high staff turnover by company type and presented the results in Table 9.

Table 9: Risk of high staff turnover by company type

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Company type (Manufacturing / Service)	1.654	0.906	3.020
For cohort HST = No	1.297	0.969	1.737
For cohort HST = Yes	0.784	0.573	1.073
Number of Valid Cases	250		

HST = High Staff Turnover

The manufacturing companies are 1.654 times more likely to have low staff turnover than service companies. In other words, service companies are 0.784 times more likely to have a high staff turnover than manufacturing companies. The odds of having low staff turnover in manufacturing companies are 1.885 times the odds of having low staff turnover in service companies.

The research analyzed the views of the respondents on what should be done to revive failing companies and presented the results in Figure 8.

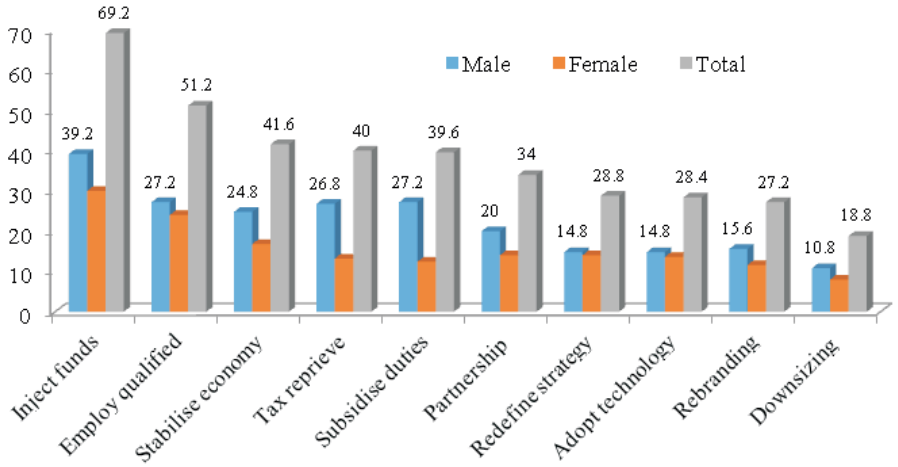

Figure 8. Measures to revive failing companies in Zimbabwe

Figure 8 shows, in order of priority, the respondents' views on what must be done to resuscitate failing companies in Zimbabwe. The first two (capital injection, 69.20%; and employ qualified team members, 51.20%) were proposed by more than half of the respondents. The views form the basis of the reviving strategies formulated in this article.

The research findings highlighted the major challenges and the need to open closed companies, formulate reviving strategies for failing companies, sensitize companies of the signs of failing, doing away with permanent positions and use of an employment model that continuously brings in new knowledge, innovations, skills and experience in the failing companies. The production strategies of the present study are similar to the findings of Hartsell (2015) except in suggestions like stabilize economy, employ qualified team members, and adopt technology and downsizing. The differences could be due to the state of the economy from which a sample was selected for this research. Similarly, the production stakeholders slightly differ with that of Ruegg – Sturm (2005). This research included the local authority and information house. Ruegg-Sturm (2005) could have classified local authority and information house under Government and under society respectively. However, this research found local authority and information house to be critical for providing land and service to the production system and marketing the company's products respectively. Just like Bengtsson et al. (2000), the research found the skilled team to be critical for continuous improvement of production.

Rotational Employment Concept

The companies should abandon the concept of creating permanent positions. The team members should take turns rotationally to operate the production system. The team member's contract should be for a term (four year period) renewable for the second and final term only, if there is no better candidate available after a term. Thus, a team member can work for the same company for only two terms. This reduces mismanagement and corruption that predominantly features in second and final terms of contract team members. The production stakeholders should formulate strategies to guard against such malpractices. The rotational employment concept (REC) is presented in Figure 9.

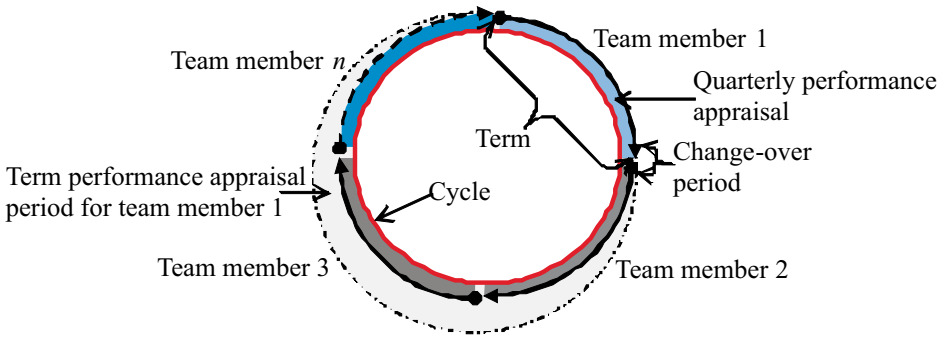

Figure 9. Rotational Employment Concept

The REC presented in Figure 9 summarizes the processes involved in forming a production team. The REC abolishes all permanent positions in preference of contract positions. The team members take turns rotationally to operate the production system. The incumbent team member retains the same position for the second and final term when the company fails to identify a better replacement candidate from the multi-skilled and entrepreneurial team (MET) database: otherwise a new candidate is recruited. A cycle is a period that a candidate waits for the second final term with the company. The candidate appointment process is presented in Figure 10.

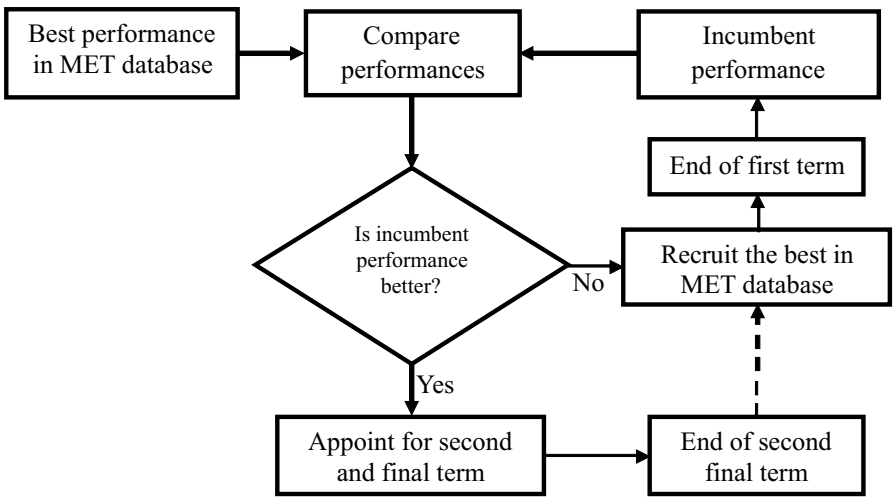

Figure 10. Recruitment Process

If a new team member is identified, the preceding team member waits for the second and final term during the production cycle in a different capacity within or outside the company. However, the appointment to the second and final term depends on the candidate's performance during the first term. Therefore, the best candidate from the multi-skilled and entrepreneurial team (MET) database is appointed. Thus, the selection of the best candidate takes into consideration the age, experience, skills, qualifications, innovation, leadership, health, criminal, communication, driving and citizenship records.

Age. The candidate should be of the legal employment age at the appointment time but the duration of the contract should be within the retirement age. The reader is referred to the Employee Production Assessment Scheme (EPAS) (Murairwa, 2012).

Experience. The candidate should provide traceable employment history for consideration. A company should set a minimum acceptable experience for all positions. However, there should be a policy that enforces appointment of inexperienced but qualified candidates, as trainees, in the company.

Skills. The companies should employ multi-skilled entrepreneurial candidates who are innovative and with acceptable management kills.

Qualifications. This assesses the basic academic qualifications, experience, communication (both written and verbal), problem solving and interpretation skills, ability to work independently and exercise flexibility, innovative, discretion and judgement of the candidate.

Innovative. The candidate must possess entrepreneurial skills in order to continuously improve production.

Leadership. The companies must engage candidates who can command, control and inspire the team members to achieve high production.

Health. A candidate must be cleared by a medical institution to perform the tasks of the vacant position. However, this must not be used to discriminate candidates with certain health conditions.

Criminal record. The drug screening and criminal conviction history must be checked before appointing any candidate to any company position.

Communication. The candidate must speak a native language and a foreign language for appointment to any company position.

Driving record. The candidate must have a clean driving record for appointment to any position that uses a company vehicle.

Citizenship. The candidate must be a national citizen, a lawful permanent resident especially for senior management positions.

The REC ensures that new ideas are introduced at the beginning of each term. After each term, an evaluation is conducted during the transition period (TP) or period performance evaluation (PEP) and the recommendations made. The results determine whether the incumbent can have a second and final term or has to wait for the full PEP report to be considered. During the term, quarterly performance appraisals are conducted to determine whether or not the set targets are on course of being achieved. A major deviation may warrant the dismissal of the incumbent team member.

The implementation of the REC requires the alignment of the recruitment policy of the country. The creation of the MET database will eliminate employment agencies, change the employment procedures, encourage serious monitoring of candidates and team members and create higher recruitment standards. There is need for the inclusion of entrepreneurship curriculum in training at both the institutional and company levels.

Production Reviving Strategies

The research results highlighted the challenges that were faced by companies in Harare, Zimbabwe. Therefore, the research proposes thirteen production resuscitating strategies (S1, S2, ……, S13) that could be implemented by failing companies.

S1. Redefine business strategy. One of the challenges established by the survey was of poor business strategy (35.20%). The need for redefining failing company's strategy was supported by 28.80% of the survey respondents. The companies must adopt robust and incredible business strategies that are based on the SWOT and PEST analysis results. The failing companies should redefine the five key business areas, namely, purpose, vision, mission, values and brand. The companies should also redefine their production, operations and service strategies.

S1.1. Rebrand the company. The failing company must change the name, logo or image of itself or the product or both in order to appear differently to customers. The rebranding strategy was proposed by 27.20% of the survey respondents.

S2. Adopt and Adapt the Rotational Employment Concept (REC). The REC will ensure persistent coming in of new knowledge and innovations in the production system. Thus, the scheme promotes a culture of re-innovation and re-employment. The strategy's success depends on the implementation of the following sub-strategies:

S2.1 Create and maintain the multi-skilled and entrepreneurial team (MET) database. The MET database will assist in tracing successful and experienced multi-skilled and innovative candidates for company positions. The system of promoting team members to positions nurtures incompetence (75.20%) and corruption (34.80%) in companies. The MET database can be operated by an autonomous body or the production council at the industrial incubation centre.

S2.2 Establish production performance standards. The production council should develop performance standards that should be used by companies to appraise their team members.

S2.3 Set proficiency standards. The production council should set the minimum education level, experience and skills required for each company position. This will determine the candidates to be captured in the MET database.

S3. Appoint successful, innovative and experienced candidates. The companies should hire competent and highly qualified candidates and fire incompetent team members as advocated for by point plan 9 (PP-9) (Murairwa, 2012) in order to continuously improve production. Human capital is the most significant asset in production because it is the means through which the business strategies are achieved. A company team member has three essential roles to play in production; leadership (effective), management (efficient) and entrepreneurship (innovative). Therefore, the candidates in the MET database should be given the first priority for open company positions. The practise of appointing under-qualified and inexperienced candidates was established to be one of the challenges causing companies to fail. On the other hand, companies must offer attractive working conditions in order to attract candidates who will be listed in the MET database.

S4. Adapt total quality management (TQM). All the team members should be involved in the implementation of quality in the company's production system. The successful implementation of quality increases the demand of products made by a company. The strategy requires training and a complete overhaul of the company culture. The TQM's primary elements, Deming's (1986) step 6 (institute training on the job) and Crosby's (1979) step 10 (involve everyone in goal setting) of the 14 points could be used to implement this strategy.

S5. Train the team members. The strategy advocates for the training of all team members who contribute towards continuous improvement of the company's production. This is equivalent to Deming's (1986) number 6 of 14 points on quality management. The team members could be trained on-the-job or off-the-job. The training on the job takes place in a normal production

environment. The training off the job takes place away from the production environment. The third approach is the off and on (off–on) job training approach. This is a hybrid training approach that is advocated for by this research. Training improves efficiency, morals and skills of the team members.

S6. Industrial incubation centre (IIC). This calls for a strong synergy between companies and human capital development institutions. The IIC will be a centre where industrial experts and researchers can meet for seminars, workshops and conferences.

S7. Introduce production quota system. The production stakeholders should introduce and determine what each company should produce for the national demand. Any excess production should be for foreign demand. The company that fails to meet its production quota should be put under the management of the production council. The strategy can be achieved through the implementation of the following sub-strategies:

S7.1 Appoint the owner of excess production. The production council owns excess supply from the companies on behalf of the Government. In circumstances of low demand, the Government should be mandated to purchase the excess production. Thus, the Government should budget for excess production from companies. Consequently, the companies should produce specifically for national demand. Therefore, the companies' aggregate excess production is for foreign demand. The difference between the company's production and national demand quota is the company's excess production. The excess production ownership structure is presented in Figure 11.

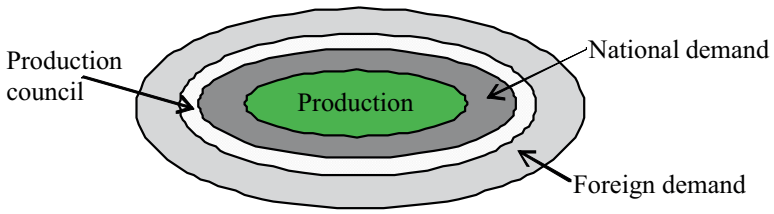

Figure 11. Excess Production Ownership Structure

For a company to access foreign demand, it must produce above its national demand quota. Figure 11 shows that foreign demand is accessed after meeting national demand and getting approval from the production council.

S7.2 Ensure team commitment to improve production. There is a positive correlation between team's commitment and high production. Some team members are committed to the company because they love what they could be doing or because they fear what they could lose if they resign or their goals could be aligned to those of the company. Meyer and Allen (1991) developed a three component model of commitment, namely, affective, continuance and normative commitments. The components can be used to increase team commitment and engagement. The team commitment comes from motivation and allegiance. The companies should develop programmes that instill commitment and allegiance in the team members. The company can develop a programme of awarding performance based incentives to team members. The team members could compete for the production related incentives.

S7.3 Offer performance awards. There is a need to offer incentives to companies operating above their local demand quotas. The Government could offer incentives in the form of reduction of tariffs, rates, rents and taxes to excelling companies. The process of offering performance based awards is depicted in Figure 12.

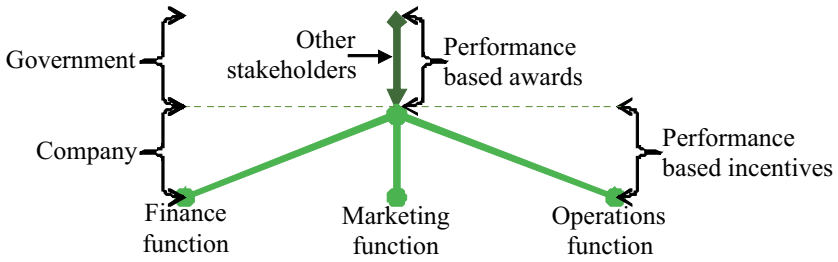

Figure 12. Performance based awards structure

Figure 12 shows the three major production functions and how performance based awards could be offered. The Government should initiate the process of offering performance based awards. The other stakeholders can assist the government in offering the awards. The company should offer its team members the performance based incentives on top of the traditional bonuses.

S7.4 Motivate the production team members. The team members should be motivated to achieve the required national production demand quota. There are two sources of motivation, namely, intrinsic and extrinsic sources. The company should recruit candidates who are willing to work for the company. The candidates will be easy to extrinsically motivate to increase production. The motivational theories such as Maslow (1943), McGregor (1960), Herzberg (1964) and McClelland (2010) could be useful in this endeavour to motivate the production team.

S8. Inject funds. All the challenges that are causing companies to fail are due to lack of funds. The companies require funds to purchase inputs and meet operational costs. From the survey, 69.20% of the respondents suggested the need for the government to source funds for ailing companies while 52.4% of the respondents blamed inadequate funding as the major challenge causing companies to fail. This strategy could be achieved through the implementation of the following sub-strategies:

S8.1 Create an industrial bank. The lack of production funds is the major challenge facing most failing companies as supported by 52.4% of the survey respondents. One of the strategies to resuscitate failing companies that were suggested by the respondents was capital injection (69.20%). Therefore, there is need to establish an industrial bank with the sole responsibility of providing a revolving fund for failing companies to borrow at relatively affordable terms. The stakeholders could raise the money to start the revolving fund from their savings, selling off some of their fixed assets, reducing unnecessary production costs and partnership. The strategy supports recapitalization of the company's production system.

S8.2 Embrace business partnership. This could be public and private or local and foreign partnership. The strategy was supported by 34% of the survey respondents. The survey results revealed that 42% of the companies investigated were operating below capacity. The business partners could be engaged to utilize the idle capacity while injecting the much needed production funds.

S8.3 Introduce industrial show. The activities of the show should be biased towards generating funds. The funds raised from this event should be used to resuscitate failing companies. The industrial show could be for national companies only.

S8.4 Introduce a production levy. All companies can be obliged to contribute a certain amount of money per year towards the reviving fund or starting the industrial bank. The funds should specifically be used to support failing companies. This levy could be extended to the general public.

S8.5 Downsizing the business. This reduces unnecessary costs in non-production functions by reducing the size of the team on the payroll. The companies can reduce costs in supporting functions by implementing the three functions model in Figure 13.

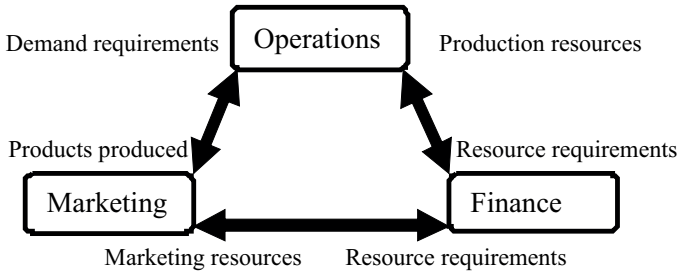

Figure 13. Three Functions Model

According to Porter (2011), the three functions support the business strategy. The successful implementation of the three functions model could minimise production cost drivers such as labour, premises rental and utility costs. However, it is not known whether companies in developing economies, Zimbabwe in particular, are aware of the model and to what extent they have implemented the model. This poses a question "How effective is the three functions model in failing companies?" The reduction in production costs in non-production functions can save funds that can be used to implement some of the strategies. Most developing economies have abundant natural resources that can be used to revive failing companies. The government plays a major role in this puzzle. The government as a major production stakeholder can save funds by prioritising on (i) agriculture, (ii) finance, (iii) education, (iv) rural and urban governance, (v) natural resources, (vi) labour and social welfare, (vii) security, (viii) health, (ix) national and international affairs, (x) industry and (xi) communication, information and technology. The companies can also reduce production costs by adopting re-engineering (technologies), re-employment and recapitalization.

S9. Promote exchange of production knowledge. The companies in developing industries could benefit from companies in developed and fast developing industries through exchange of production knowledge. The companies in developing industries can send their team members to companies in developed or fast developing industries to learn how to manage companies in order to improve production. The strategy requires the implementation of the following sub-strategies:

S9.1 Establish an industrial publication. The magazine will publish the human capital movement and availability, policies, strategies, performance statements and awards, challenges, meetings, demand patterns, innovations and new technologies among many other industrial activities. The objective is to keep production stakeholders informed of what will be taking place in companies.

S9.2 Establish training exchange programmes. The companies can develop a harmonised calendar and schedule training programmes at the IIC or could partner with other stakeholders or foreign companies to exchange team members for the purpose of learning how to redefine, rebrand, refinance and reengineer the business.

S10. Embrace new production technologies. This is the re-engineering of the company production system to incorporate new technologies. Most of the failing companies lag behind in adopting new technologies. There should be a deliberate policy to enforce companies to embrace new production methods. Each company should establish a technology desk or redefine the mandate of the research and development (R&D) desk to highly prioritise the research on new production technologies.

S11. Diagnose and evaluate the production system. All companies' production systems should be diagnosed and evaluated to ascertain the production statuses and classes. The monitoring, evaluating and controlling (MEC) process is presented in Figure 3. For successful implementation of the strategy, the following sub-strategies should be considered:

S11.1 Classify companies. The companies should be classified according to production status after the MEC process. There are four common production classes as presented in Figure 14.

Monitoring Level	High	Failing		
	Medium		Recovering	
	Low	Failed		Flourishing
		Low	Medium	High
		Production level		

Figure 14. Companies' Production Categories

i) *Flourishing.* A group of companies that are making profits and thriving.

ii) *Recovering.* A group of companies that are recovering from failing. The companies would be breaking even or realising marginal profits.

iii) *Failing.* A group of companies that are making financial loss. The companies in this group must be placed under the council management for a predetermined period while assessing the performance and determining the next step to take.

iv) *Failed.* A group of companies that failed to recover during the council management period. The companies should be recommended for merging and acquisition. A policy should be enacted to protect companies from liquidation.

S11.2 Schedule production assessment. There are internal, external and hybrid assessments that can be used to check the performance of failing companies. The internal assessment focuses on strategy, team members, customers, production, processes and finance. This is the most critical production diagnostic and turnaround strategy. The diagnostic process is presented in Figure 15.

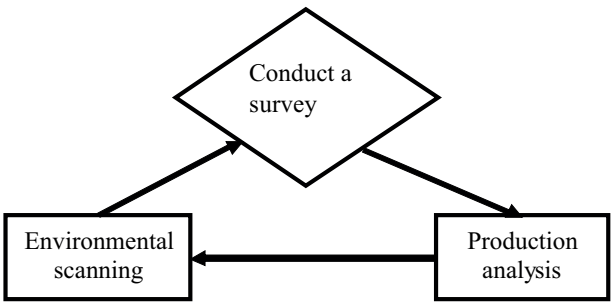

Figure 15. Production diagnostic process

Conduct a production survey. There are three forms of production survey that could be conducted and these are internal, external and hybrid surveys. An internal survey has questions directed to team members only while an external survey has questions directed to customers only. A hybrid survey has questions directed to both internal and external production stakeholders.

Production competitive analysis. This step verifies the relevance of the company's production among its competitors' production. This involves checking whether there are new competitors coming in and whether the production is up to date with the current innovations and technological trends. The company checks whether there are government regulations affecting its production and whether the competitive edge is still relevant.

Environmental scanning. This step is implemented after discovering that there are competitors affecting the company's production. The successful implementation of this step divulges the effects of social, infrastructure, disaster and economic (SIDE) factors to the company's production system.

S12. Merge and acquire. The failing companies must be placed under the production council management for a predetermined period. The company that fails to recover during the period will be recommended for merging or acquisition. The merging and acquisition model is presented in Figure 16.

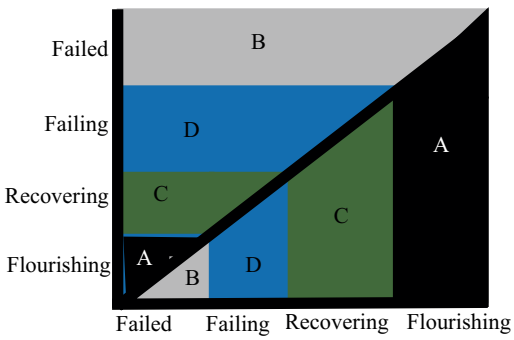

Figure 16. Merging or Acquisition Model

Figure 16 shows the merging and/or acquisition regions and the different companies that can be involved in the programme. There are four groups of companies, namely, flourishing (A), failed (B), recovering (C) and failing (D) companies. The A group companies can acquire groups B, C and D companies while group C companies can merge with group D companies. The group A companies can merge with group C companies.

S13. Implement and administer the strategies. The government should enforce the implementation of the resuscitating strategies for failing companies. To successfully implement and administer the strategies, the following sub-strategies should be implemented:

S13.1 Establish a production council. The council members should be selected from all production stakeholders. The industry must appoint the majority of the council members. The major function of the council is to implement and administer the strategies. The other functions of the council are as defined in the different strategies.

S13.2 Initiate relevant policies. There are a number of policies that need to be enacted in order to successfully implement and administer the reviving strategies. The policies supporting each strategy should be put in place before the beginning of the implementation.

The production reviving strategies should satisfy the business ethics enshrined in the four industrialisation steps (FIS) that are corporate governance, rationalisation, accountability and production (CGRAP). However, the FIS can be achieved if the five key pillars (5KPs) of the economy are flourishing. The 5KPs are transport, energy, agriculture, technology/engineering and human capital sectors. The industry requires the 5KPs to flourish for it to expand. The interaction of the FIS, CGRAP and 5KPs is presented in Figure 17.

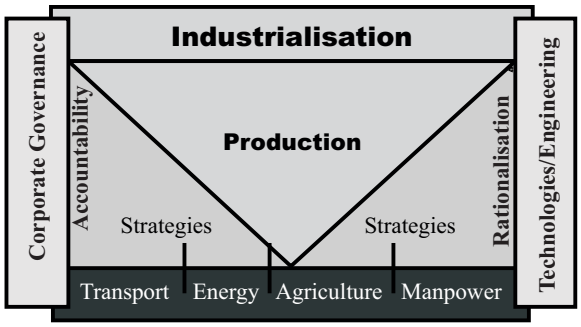

Figure 17. Industrialization Components and their Interaction

The industry's production and rationalisation increase gradually towards industrialisation in response to the growth in transport, energy, agriculture and manpower (TEAM) sectors. There is a direct relationship between industrialisation and the production status of the TEAM sectors. A strong TEAM wins a game. The TEAM is the foundation while the corporate governance and technologies or engineering are the walls of industrialisation. There is accountability and rationalisation in corporate governance and engineering respectively.

Implementation of the Reviving Strategies

This section identifies the stakeholders and their responsibilities and decisions in implementing the production reviving strategies in failing companies.

Production Stakeholders and their Responsibilities

All the production stakeholders should participate in the implementation of the production improvement framework in order to address the challenges facing failing companies. The production stakeholders {surrounding community (SC), non-governmental organisations (NGOs), local authority (LA), customers (Cs), industry, manpower development institutions (MDIs), resource suppliers (RSs), business competitors (BCs) and information house (IH)} are presented in Figure 18.

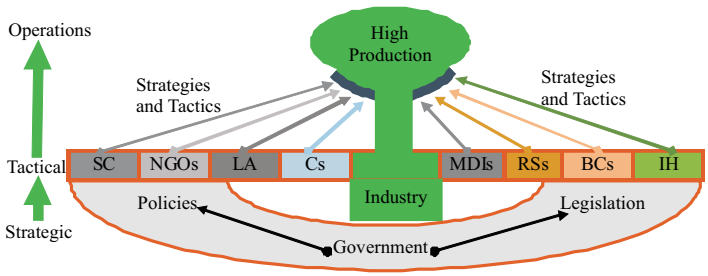

Figure 18. Production Decisions and Stakeholders and their Responsibilities

Figure 18 shows the stakeholders and their contributions towards the implementation of the production improvement strategies. The figure shows the different strategies and tactics that should be used to implement and resuscitate failing companies. The duties and responsibilities of the production stakeholders are discussed henceforth.

Government. The Government formulates policies and regulations that support the implementation of production reviving strategies. The Government owns the companies' excess production.

Surrounding community (SC). The companies should support communities' development programmes. The SC is the source of human capital, demand and raw materials for the company's production system.

Customers. The customers create demand for the companies' products. The pattern of demand is important in formulating continuous production improvement strategies. There are two categories of production demands, namely, national (local) and international (foreign) demands. The companies produce to satisfy the national demand. The excess production is for the foreign demand which can only be accessed after satisfying the national demand.

Local authority (LA). The LA provides adequate water for production and collects refuse from companies. The substances emitted from industry's production activities are controlled by the local authority. The wheel of responsibilities of the LA is presented in Figure 19.

Figure 19. Local Authority's Wheel of Responsibilities

The LA plays an important role in resuscitating failing companies through implementing the entire wheel of responsibilities.

Accommodation. The LA provides and maintains adequate accommodation. The LA also assesses the housing demand and build, purchase and lease dwellings for the community and provides (or facilitates) loans for repairs and improvements.

Health. The public health services are delivered at a local level by the LA in collaboration with other health institutions.

Planning. The LA is the planning authority and decides whether to grant or refuse planning permission for building and development in industrial and residential areas.

Recreation centres. The LA provides amenities, facilities and services related to sports and games, artistic, libraries, civic centres and cultural and leisure activities.

Environment. The LA in collaboration with other statutory bodies enforces the controlling of stray animals and pollution emitted into the air from companies and issues licenses for waste disposal from companies.

Essential service. The LA provides services such as roads and bridges, fire services, water and sewerage services and drainage and constantly supplies clean water to companies and residential areas and collects garbage.

Land. The LA provides land for recreational facilities and building companies and houses.

Non-Governmental organisations (NGOs). The NGOs should provide technical advice, training and mobilise resources for reviving failing companies. Both national and foreign NGOs should assist failing companies in identifying markets for their products.

Industry. The owners and team members participate directly in the production system. The team members should work as a unit to achieve the companies' production targets. The team members should behave like an ant colony that estimates demand and gathers enough food for shortage periods. The ant colony works together to accomplish difficult tasks. The companies' production levels should be controlled by the production order pattern such as make-to-stock (Hemmati and Rabbani, 2010), make-to-order (Parry and Graves, 2008; Hemmati and Rabbani, 2010) and assemble-to-order, a hybrid of the other two production strategies.

Make-to-order. The make-to-order (MTO) is also referred to as the build-to-order (BTO). The company can produce after receiving an order from the customers. The MTO or BTO is appropriate for highly customised (or low) production.

Make-to-stock. In Make-to-stock (MTS) also known as build-to-stock (BTS), the production activities are implemented in anticipation of demand. Therefore, the company can produce en mass in anticipation of demand.

Assemble-to-order (ATO): This is a hybrid pattern of production that combines the benefits of both the MTS and MTO production strategies. Thus, the ATO offers a quick production while allowing the customisation of the products according to customer specifications.

Manpower development institutions (MDIs). The production management ethics (honest, reliability, accountability, hard working and punctuality) are no longer valued by team members. The MDIs churn out greedy, incompetent, inexperienced, non-innovative and negligent candidates who promote failing of companies. The MDIs can incorporate a two year internship in all disciplines and/or to espouse professional bridging programmes. The curriculum review is the mandate of any educational institution. However, there is need for more emphasis on continuous curriculum review in order to keep it in tandem with the ever changing global production trends.

Resource Suppliers. The continuous production improvement can be achieved if adequate resources are available. Therefore, companies should formulate strategies to manage resources' procurement processes. The techniques such as just-in-time (JIT) could be implemented to schedule the procurement of resources. The government should put in place policies and regulations that support the accessibility of resources by companies.

Business competitors: The company continuously enhances its production when there is competition in industry. Besides customers and researches, companies can get ideas on how to improve production from competitors. The competitors generate competition that can prompt continuous improvement of production.

Information house (IH). The IH should produce and disseminate production statistics. The IH should consist of the publishing houses, statistical agencies and all departments that gather, analyze and interpret production statistics.

Reviving Strategies Implementation and Responsibility Matrix

The production reviving stakeholders are Government (Govt), surrounding communities (SC), customers (Cs), local authority (LA), non-governmental organisations (NGOs), industry, manpower development institutions (MDIs), resource suppliers (RSs) and information house (IH). The approach for implementing the reviving strategies for failing companies is presented in Table 10.

Table 10: Strategies and Responsibilities

Strategy	Responsible authority								
	Govt	SC	Cs	LA	NGOs	Industry	MDIs	RSs	IH
S1						■		■	
S2	■					■	■		
S3						■			
S4	■	■	■	■	■	■	■	■	■
S5				■	■	■	■		■
S6	■	■	■	■	■	■	■	■	■
S7	■			■	■	■			
S8	■	■	■	■	■	■		■	
S9	■			■	■	■	■		■
S10						■			
S11	■	■	■	■	■	■	■		
S12	■					■			
S13	■	■	■	■		■	■	■	■

Table 10 presents the major implementing stakeholders of each of the production reviving strategies. The table also shows that government and industry are the two major stakeholders in reviving failing companies. Therefore, companies fail due to incompetence and negligence of these two major stakeholders.

Conclusion

Most of the team members operating failing companies' production systems were incompetent, inexperienced, corrupt and unskilled. This explains why these companies are failing to recover. The production challenges that were causing companies to fail were mismanagement, high staff turnover and inadequate funding, unskilled workforce, lack of training, poor business strategy, corruption, poor product quality, lack of technology and dilapidated machines. The Government should formulate and align policies and regulations that support the implementation of the production reviving strategies. The article attained that the chance for the workforce to be trained on the job is high in service companies than in manufacturing companies. The female team members had a high chance of not being trained on the job than the male team members in companies.

Limitations of the Study

The research faced challenges in collecting data. Most companies were skeptical of the purpose of the research. Even after assuring them that the data was going to be used only for academic purposes, some companies refused to participate in the research survey. However, the problem was addressed by adopting the Voluntary sampling design (Murairwa, 2015) to select participants for the research.

The other limitation faced by the research was that most big companies had closed down operations and the existing companies were operating below capacity. The research thus included Small and Medium Enterprises (SMEs) in the research sample.

Scope for Future Research

The research used a sample of companies selected in Harare, Zimbabwe. The results obtained in this research could be improved by employing a sample with proportional companies from all the provinces of Zimbabwe. The comparative studies could be conducted in fast developing and developed economies to fine-tune the framework developed by this research.

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Declaration of conflicting interests

The author declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

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References

Ames, M. D., & Wellsfry, N. L. (1983). *Small Business Management*. St. Paul: West publishing company.

Belak, J., & Duh, M. (2012). Integral Management: Key success factors in MER model. *Acta Polytechnica Hungarica*, *9*(3), 5 – 26.

Bengtsson, L., Dabhilakar, M., & Niss, C. (2000). Production teams, control methods and performance: Results of a survey. Manufacturing Agility and Hybrid Automation – III, University of Gavle, Sweden.

Crosby, P. B. (1979). *Quality Is Free*. New York, NY: McGraw-Hill Book Company.

Deming, W. E. (1986). *Out of the crisis.* Cambridge: MIT Press.

Durlauf, S. N., Johnson, P. A., & Temple, J. R. W. (2005). Growth Econometrics. In P. Aghion, & S. Durlauf (Eds.), *Handbook of Economic Growth* (pp. 555 – 677). North Holland: Amsterdam.

Eberhardt, M., & Teal, F. (2010). Productivity analysis in global manufacturing production. University of Oxford. Retrieved from http://degit.sam.sdu.dk/papers/degit_15/c015_019.pdf

Gido, J., & Clements, J. P. (1999). *Successful Project Management*. Cincinnati, OH: South Western College Publishing.

Hartsell, M. (2015). 7 Turnaround Strategies to Revive a Distressed Business. Magazine Premium. Retrieved from www.ceoadvisor.com/blog/?p=396

Hemmati, S., & Rabbani, M. (2010). Make-to-order/make-to-stock partitioning decision using the analytic network process. *International Journal in Advanced Manufacturing Technologies, 48*(5), 801 – 813.

Herzberg, F. (1964). The Motivation-Hygiene concept and problems of manpower. *Personnel Administrator*, *27*, 3 – 7.

Homola, L. (2013). Double-figure increase in productivity of production line workers. Karierovy koucing, Ltd. Retrieved from http://www.coachfederation.org/files/includes/docs/168-Double-Figure-Increase-In-Productivity-(coaching-process).pdf on 28.03.2016.

Karrer, C. (2012). Engineering Production Control Strategies, Management for Professionals. Springer-Verlag Berlin: Heidelberg.

Li, J., & Meerkov, M. S. (2009). *Production Systems Engineering*. Springer.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review, 50*(4), 370 – 396.

McClelland, D. C. (2010). *The Achieving Society*. Martino Fine Books.

McGregor, D. (1960). *The Human Side of Enterprise*. McGraw – Hill.

Meyer, J. P., & Allen, N. J. (1991). A three component conceptualisation of organisational commitment. *Human Resource Management Review, 1*, 64 – 89.

Murairwa, S. (2012). Re-engineering the education systems: continuous education quality improvement framework. *International Journal of Reliability, Quality and Operations Management, 3*(2), 129 -157.

Murairwa, S. (2015). Voluntary sampling design. *International Journal of Advanced Research in Management and Social Science*, *4*(2) 185 – 200.

Parry, G., & Graves, A. (2008). *Build to Order: the Road to the 5-day car*. London: Springer.

Porter, A. (2011). *Operations Management*. Ventus Publishing ApS.

Ruegg-Sturm, J. (2005). *The new St. Gallen Management Model: Basic Categories of an Approach to Integrated Management*. Basingstoke: Palgrave Macmillan.

Schoenberg, R., Collier, N., & Bowman, C. (2013). Strategies for Business Turnaround and Recovery: A Review and Synthesis. *European Business Review*, *25*(3), 243 – 262.

Slack, N., Chambers, S., & Johnston, R. (2010). *Operations Management*. UK: Financial Times Prentice Hall.

Sokovic, M., Pavletic, D., & Kern-Pipan, K. (2010). Quality improvement methodologies – PDCA cycle, RADAR matrix, DMAIC and DFSS. *Journal of Achievements in Materials and Manufacturing Engineering, 43*(1), 476 – 482.

Stadtler, H., & Kilger, C. (2008). *Supply Chain Management and Advanced Planning: Concepts, Models, Software and Case Studies*. Springer-Verlag Berlin: Heidelberg.

Zanamwe, L., & Devillard, A. (2009). Migration in Zimbabwe; a country profile 2009. Zimbabwe National Statistical Agency.

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