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For the 2021 issue, the aspect of sustainabili-
ty goals should be related to the research
topic where applicable.

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In order to support this idea and contribute to excellence in management skills, SBS Swiss Business School has developed the *SBS Journal of Applied Business Research (SBS-JABR)*.

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All original articles should be sent to the Editor-in-Chief, Cassandra Budlong, at editor@sbs.edu

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All work must abide by the following technical specifications found at www.jabr.sbs.edu/guidines.pdf

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The primary goal of the *SBS Journal of Applied Business Research* is to highlight those business practices based on action and applied research that sustain business excellence. It is a referenced, multi-disciplinary journal targeting academics, business managers, CEOs and Doctor of Business Administration (DBA) candidates and graduates.

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The *SBS Journal* will cover areas for applied research papers and case studies in the fields of General Business, Human Resources, Marketing and Sales Management, Finance, and International Business.

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Integrated Leadership and Management For Performance Increase

By

Grzegorz Sobiecki , DBA and Agnieszka Nizioł-Kapłucha

Abstract

The aim of this research is to examine how the integrated model of leadership and management with tools influences the organization’s performance.

A longitudinal case study research method was used in the SKF factory in Poland over the period of 2014 – 2017.

The study confirmed the research hypothesis that the integrated model’s application increases performance at the delivery level. It reveals the relationships between the application of the integrated model and the level of safety at work, as well as between the application of the integrated model and effectiveness of working in a two-person team called a dyad, and between the application of the model and the level of the horizontal leadership practices in the everyday managing of the case study organization.

The study suggests that implementation of the integrated model supports transformation of the organization culture, securing the performance improvements at the delivery level.

The research contributes to the area of the applied business in introducing a new model of integrated leadership and management with tools, not explored by scholars yet.

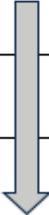
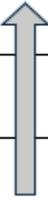
Keywords: Leadership, Management, Performance, Business case for leadership and management integration, Safety, Dyads, Horizontal leadership

Introduction

Skills in leadership and management, when practiced together tend to enable managers to deliver performance results above average. Using both skills simultaneously is not common. In 2017 Ze-nger and Folkman analysed “360-degree assessment data from more than 60 000 leaders” and revealed “only thirteen percent of leaders (...) ranked in the top quartile on both driving for results and people skills” (p. 3).

These two aspects of the supervisory activities could be seen at three levels: strategic (what’s to be achieved), operational (what’s to be done) and de-livery level (how it’s to be done). Adapting Drucker (2010, p. 15) leads to the visual combination’s pro-posal of the two skills and the three levels in Table 1.

Table 1. *The Conceptual Combination of Drucker’s Views on Three Jobs of Managing*

	Leadership		Management	Time - Future	Time - Present
	Enterprise managing as commercial institution	Society managing as non-commercial institution			
Strategic level (<i>what is to be achieved?</i>)	Managing the business		Daily managing as three jobs at the same time.		
Operational level (<i>what is to be done?</i>)		Managing managers Managing workers and work			
Delivery level (<i>how is it to be done?</i>)			Managing the business Managing managers Managing workers and work		

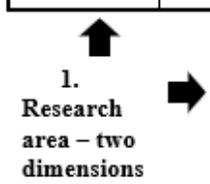
Leadership and management are different, and such a claim can be based for instance on the literature in which these activities have been named and described differently for many years. A good example supporting this opinion is a bibliometric research of Haskel and Westlake (2018). They indicate that in 1950-2000 leadership and management appeared as two separate terms, and leadership was mentioned approximately 12 times less often than management in 1950-1960, up to five times less often in 2000.

The integration of both leadership and management is not present in the research at the delivery level, and even at the strategic level it is scarcely represented. Researchers such as Castro et al. (2015) and Zenger and Folkman (2017), after examining the

HBR bibliography between 1968 and 2013, concluded that very rarely anyone dealt with leadership and management as a common issue, especially in regard to performance results.

Thus, integrating skills in the two competencies, applying them, and relating this integration to performance, seem to lack the methodological support both in the literature and in the research, which suggests that a research gap exists. The position of this gap inside the research field is visualized in Table 2, which presents the research area.

Table 2. *The Research Area, Research Field, Research Problem,*

Strategic level (what is to be achieved)	Specific	Pearce and Conger (Shared Leadership, 2003)	Henry Mintzberg. (Simply managing, 2013)				Blake and Mouton, Managerial grid, 1994
	Universal		Henry Mintzberg. (Simply managing, 2013)	Beer and Nozria (Theory O and Theory E)	Peter G. Northouse (Leadership Theory and Practice), 2004)		
Operational level (what is to be done)	Specific	Fernandez et al., Leadership and Public Sector Performance, 2010	Sveiby, Collective Leadership, 2011				Kim and Mauborgne (Blue Ocean Strategy tools)
	Universal		Kouzes and Posner (Leadership practices) 2002				Keller and Price (Universal Five "A" frames tools) 2011
Delivery level (how to do it)	Specific					2. Research field	
	Universal	Anicich et. al. Mount Everest expeditions, 2014	Deming 2018 (Management: Plan Do Study Act)			3. Research gap area	
1. Research area – two dimensions 		No tools	Tools	No tools	Tools	No tools	Tools
		Management OR Leadership		Sequential Leadership Then Management		Integrated leadership and management. 4. Research problem	
		A proposal of the integration continuum in the approach to development and implementation of leadership and management in the integrated form.					

Note: This table was created with material from Pearce and Conger (2003) and other authors. Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

A map of publications distributed on the model reveals that literature has not been focused on the research field and the research gap. Thus there is neither a practical methodology nor tools available at the delivery level to practice integrated leadership and management on a daily basis.

Model of Integrated Leadership and Management

The research gap can be formulated as the lack of the tools at the delivery level (Table 2), Thus, the authors decided to build up the model of integrated leadership and management with tools shown in Table 3, and to test statistically its validity and reliability for performance increase.

Table 3. The Model of Integrated Leadership and Management with Tools

Stages M1 – M9 of the managerial process			The Leadership process					
			Align the goals	Show and build respect	Develop cooperation	Build trust	Share knowledge	Instill the courage to lead
			L1	L2	L3	L4	L5	L6
The managerial process	Choose the priority	M1	Forum →	OGSM				
	Distribute tasks, joint objectives	M2						
	Motivate and unify efforts	M3				Forum's projects		
	Control execute, coordinate activities	M4						
	Appraise and develop talents	M5						
	Accumulate and apply knowledge	M6						
	Group and allocate assets	M7						
	Build the relations	M8						
	Balance and fulfill the interests of stakeholders	M9						

Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Un-published doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

Table 4. *The Managerial Process*

Managerial process stages.			
	By Hamel (2008, p.20)	By authors	Note: the following indication means that the authors' suggestion is based on inspiration from general practice/ sources unknown
1	Setting and programing objective	Choose the priority	
2		Distribute tasks, joint objectives	Inspired
3	Motivating and aligning effort	Motivate and unify efforts	
4	Coordinating and controlling activities	Control execution, coordinate activities	
5	Developing and assigning talents	Appraise and develop talents	
6	Accumulating and applying knowledge	Accumulate and apply knowledge	
7	Amassing and allocating resources	Group and allocate assets	Inspired
8	Building and nurturing relationships	Build the relations	
9	Balancing and meeting the stakeholders' demands	Balance and fulfill the interests of stakeholders	

Adapted from “The Future of Management,” by G. Hamel and B. Breen, 2007.

Element of Management in the Integrated Model

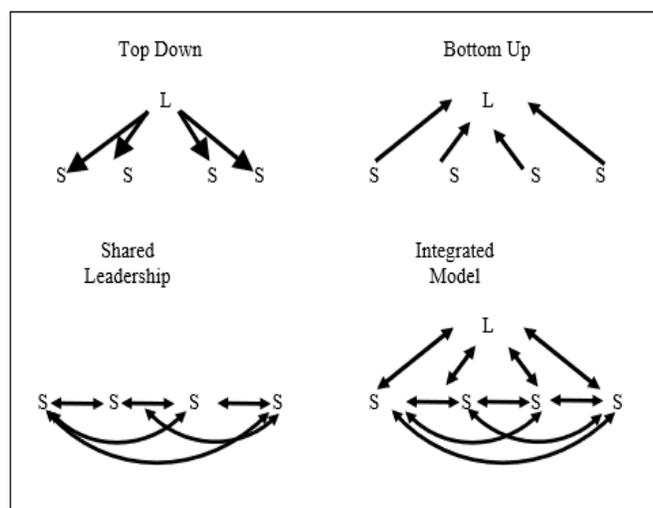
Management is proposed to be seen as a process as shown in Table 4.

The sequence of the managerial process had originally been taken from Hamel and Breen (2007), and later enriched by the authors based on their professional experience in management and coaching. The management team of the SKF Factory in Poland, in which the longitudinal research took place, had applied a nine-stage process described in Table 4. Implementation of the process required a number of trainings, workshops, and individual coaching and tutoring, conducted by the authors with the management teams of different levels as well as with individuals. All those educational activities increased the skills levels of the managers and allowed them to consciously apply actions appropriate to the circumstances and tasks performed.

Element of Leadership in the Integrated Model

The starting point in developing the leadership element for the integrated model was Locke’s proposal in Pearce and Conger (2003, p. 272). In 2003 Locke presented the following leadership models (Figure 1).

Figure 1. *Four Leadership Models*



Note: L stands for Leader, S stand for Subordinate. Adapted from “Shared Leadership. Reframing the Hows and Whys of Leadership,” by C. L. Pearce and J. A. Conger, 2003.

In 2014, when the research study began, the level of leadership skills, and particularly the awareness of the leadership role in everyday managing of teams amongst the managers of the case study company, was low. Similarly to the application of the management element of the model, the leadership skills and awareness had been gradually built up, mainly by introducing the tools of the integrated model, which is presented in Table 3, as well as by more traditional

educational means such as trainings and workshops. Overall the organization had a chance to cover the path from the Top-Down through Bottom-Up up to Shared Leadership structure, which eventually became a dominant leadership and management model in the company, corresponding to the business challenges it was facing at the time.

Shared Leadership

Fitzsimons (2016), explains the reasons why “organizations today” (...) need “leadership that is shared, rather than concentrated in a single, charismatic individual” (p.2). The concept of horizontal leadership is discussed in multiple sources, eg.: Badarraco (2001); Pearce et al. (2007); Hamel and Breen (2007), who present different definitions and measures. According to Pearce et al. (2007) “shared leadership is a predictor of high performance of change management teams” (p. 176), therefore it was incorporated into the integrated model.

The literature research revealed that none of the leadership scholars proposed a shared leadership process that could serve as a ready-made model to adopt and apply in an organization. Therefore the authors decided to develop a shared leadership process based on Karl Sveiby’s (2009) findings regarding a generic power-symmetric framework for collective leadership, in which the role of a temporary leader-task expert rotates depending on the task, situation, and context, leading to conjoint actions to achieve a collective outcome. In the next publication in 2011, Sveiby points to direction, alignment and commitment as three leadership practices to achieve a long-term outcome, (p. 397).

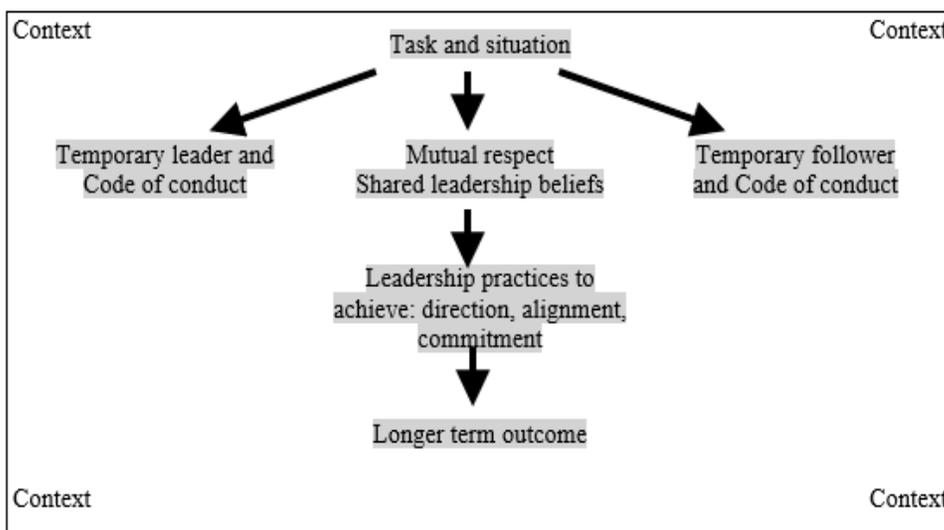
The framework presented in Figure 2 below became the basis for developing the leadership component for the integrated model of leadership and development.

The leadership process used in the integrated model of leadership and management had been developed by the Action Science method in a number of facilitated sessions by the case study management team. Inspired by Sveiby’s approach and taking into consideration their business objectives and challenges, the management team defined a six-stage leadership process and called it Horizontal Leadership. Each attribute of the process (L1-L6 in Table 3) was described in the behavioural dimensions, uniformly understood by all managers.

Tools of the Model

The tools, their source and description, and the sequence of introduction to all managerial levels of the organization are listed in Table 5. Highlighted rows indicate tools included in the research program.

Figure 2. *A Framework for Horizontal Leadership in a Context*



Adapted from “Collective Leadership with Power Symmetry: Lessons from Aboriginal Prehistory” by K. Sveiby, 2011, p. 397.

Table 5. *The Schedule of the Introduction of Tools to Different Management Levels*

Tools of the Integrated model of Leadership and Management				Year of introduction			
	Tool	Source	Nature	N-1	N-2	N-3	N-4
1	Forum	ANK Konsulting	A one-day workshop for a team or department	2014	2014	2015	
2	Forum's projects	the author of this dissertation	The forum's output serves as an input to OGSM	2014	2014	2015	
3	3.1	OGSM (Hoshin-Kanri methodology)	Witcher and Butterworth (2000, p.12)	A two-day workshop for a team or department	2014	2016	2017
	3.2	Goals' fairs	ANK Konsulting	A method of aligning goals between departments by including representatives of all departments together in an OGSM session.	2014	2014	2015
4	Dyads	BMPS	Longer-term work of a pair of employees of the same or various departments to achieve a common goal with the leadership support of their supervisors	2015	2015	2015	
5	Management by Objectives (MBO)	SKF	A method of annual goals setting and performance appraisal of managers	2014	2015	2016	
6	Individual Development Plan (IDP)	SKF	The MBO support method by eliminating the manager's deficits, which may negatively affect the achievement of goals	2014	2015	2016	
7	Talent's management process	BMPS	An assessment method to see the talents during their participation in projects and follow their progress	2014	2015	2015	2015

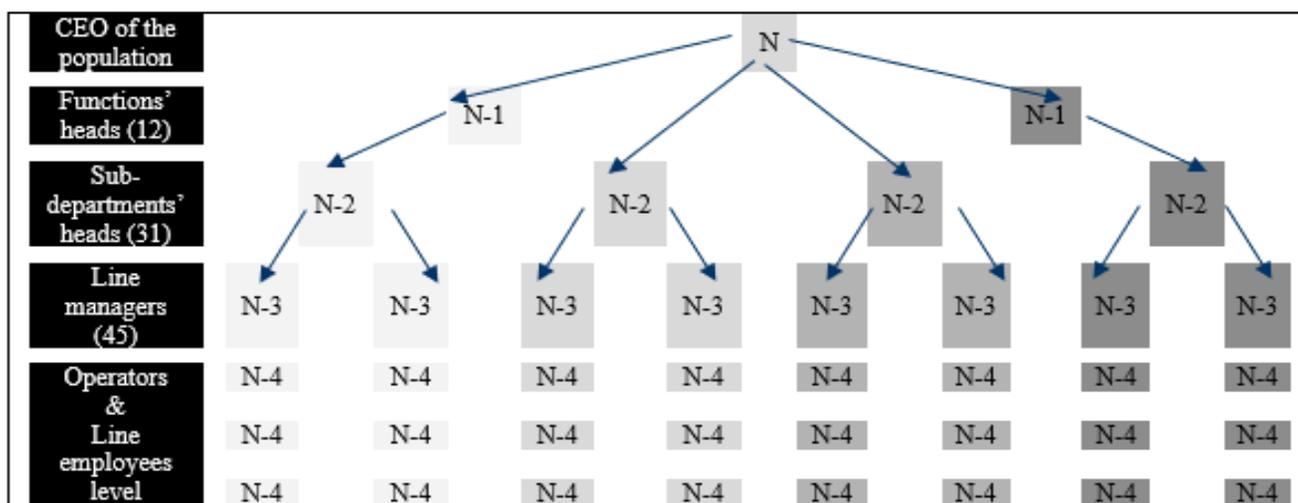
Note: Created from company data and a number of sources indicated in the columns. Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

Organizational Levels of Application of the Integrated Model

Figure 3 illustrates the dependencies between various management levels of the case study organization, commonly used labeling, and the number of managers at each level

Figure 3. *The Schematic Organizational Chart of the Researched Company*

The deployment of the model took four years, beginning with the highest N-1 level consisting of department heads. In the subsequent years the model was introduced to the next management layer using the upper level as teachers and coaches. This approach allowed embedding the leadership and management culture, described in the model (Table 3) and consciously practicing the tools by the entire management of the case study company.



Adapted from the company's historical data.

The Effectiveness of the Integrated Model of Leadership, Areas of Performance

The integrated model of leadership and management was applied in the case study company to

1. The safety process,
2. Work in Dyads,
3. Horizontal leadership development.

In 2015-18 the case study company implemented the safety management process; through forums and OGSM the process was cascaded down to individual managers involved in managing safety in the organization. Therefore the integrated model (Table 3) covered almost the whole company. As a result a number of dyads were formed, mainly either

1. between two managers of two different departments to stimulate the activities in the safety process across the departmental boundaries, or

2. between a manager and a subordinate to formalize the support in the daily practicing of the new safety process.

Then all participants of both types of dyads got their annual targets allocated in the Managing By Objectives (MBO) system, (L2/M4 junction in Table 3), then their Individual Development Plans (IDPs) got adjusted to the goals and challenges each of them had to meet (L2M5 junction in Figure 3). The next step was to continuously support and control the progress using the Talent management tool (L3/M4 junction Table 3). These MBO tasks included both individual work results as well as shared objectives assigned to dyads. In 2017 the MBO tasks of the top management team (N-1) also included goals to develop and improve the level of horizontal leadership attributes.

Area of the Performance of the Managerial Process of Safety

The safety process was based on Heinrich's (1931) research, which revealed that elimination of the root causes of 300 near misses prevents one serious accident.

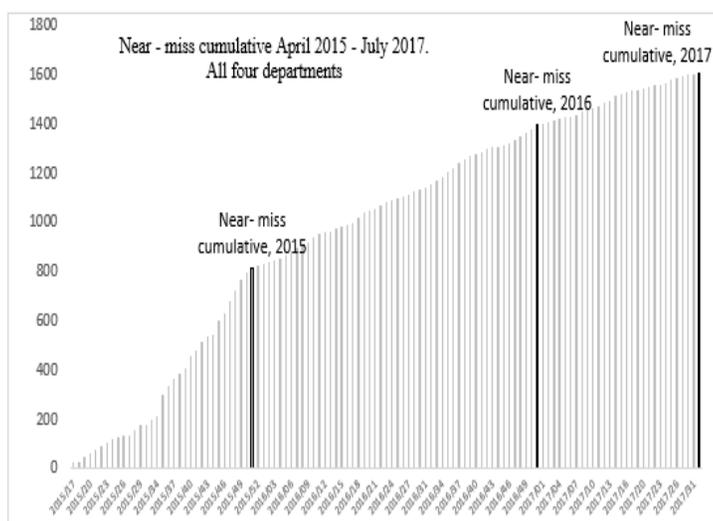
Table 6. *The Schematic Flow of the Safety*

	Near miss reported	Near miss escalated	Near miss in progress	Near miss root-cause eliminated	Recognition and closing of the leadership loop
Phase 1-5 of the process	1	2	3	4	5
A. Activity	Operator fills in the report form of the near miss observed	Operator and supervisor agree on the validity of the report	The manager of the relevant department proposes to the operator and his supervisor the final solution.	After the root cause of the near-miss eliminated the manager provides feedback to the operator and to the supervisor.	Operators who reported the biggest number of near miss is recognized
B. Objective	To collect observations near miss	To make a decision whether to further pursue the near miss solution	To agree on the final solution and begin the improvements.	To confirm that the near miss root cause is eliminated	To praise and to give example to others.
C. Expected results	Operator starts the process & initially proposes the solution	Engaging the operator and the supervisor in the Safety process Dyads	Eliminating the near miss	The confirmation of the operator that the roots cause of the near miss is eliminated. Increasing involvement of the operator to achieve the operator driven change. Increasing performance of the safety process.	Increasing participation rate of the operators
D. Comments to performance tracking	Near-miss observations collected	Near miss in the electronic data base	Near miss in the work-in-progress to eliminate it.	Feedback to the operator	Conscious celebration

Note: Created from empirical-inductive process based on company data.

Adapted from "Integrated Leadership and Management for Performance Increase," by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

Figure 4. Near Misses Reported by Employees of all Four Departments: Absolute Scores

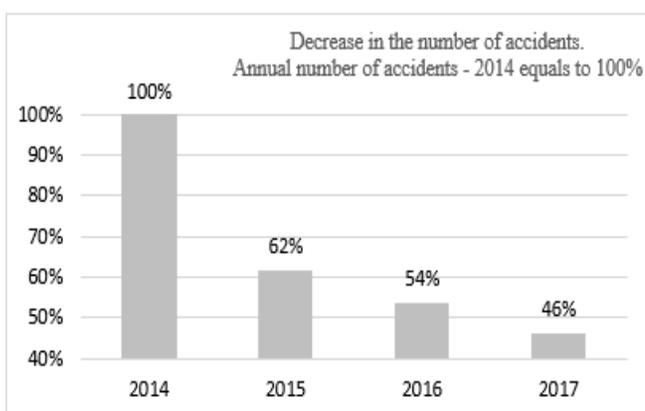


Note: Created from historical company data. Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

The Results Achieved in the Performance Area of Safety

The integrated model of leadership and management covered the managerial process of safety, is what might have resulted in the decrease of the number of accidents per year for the period of 2014-17 (Figure 5).

Figure 5. A Decreasing Trend of Accidents. Combined Results of all Departments



Note: Adapted from the company data.

The results achieved in the performance area of Dyads Table 7 illustrates the extent to which working in dyads helped to change the deficit of cooperation between peers among N-1 and N-2 managers, who

formed two-person teams to meet shared objectives. Their performance was measured by the company’s Personal Performance Appraisal (PPA) system. The first appraisal year of the Dyads performance was 2015. Dyads performance based on the PPA system is discussed in the Statistics section.

In addition, the authors conducted individual interviews with twelve departmental heads (N-1), and the questions as well as results are presented in Table 7.

Table 7. The Results of the Interviews on the Dyads’ Role of N-1 Managers

Question	2015. 32 Dyads	2016. 39 Dyads	Change '16 – '15
1 How many dyads were created in 2014-2015 and 2015-2016? <i>Note: Not every dyad created in 2014 (15) survived in 2015 (16)</i>	2014: 20, 2015: 12	2014: 19, 2016: 20	“Younger” dyads increased from 12 to 20 by 67%
2 Do you rate that more dyads solved the challenges inside or across the silo walls?	Silo: 20, Across: 12	Silo: 16, Across: 23	The number of the dyads working across silos increased by 92%
3 Do you rate that more dyads were communicated informally or through the HR forms?	Informal: 20, Formal: 12	Informal: 12, Formal: 27	Dyads that worked formally increased More than 200%
4 Do you rate that more dyads represented the change in the field of behaviors or in performance?	Performance: 16, Behaviors: 16	Performance: 20, Behaviors: 20	Every interview indicated the equal share of the performance and behavioral change caused by the dyads
5 Do you rate that more dyads made the change possible through empowerment or through coordination?	Coordination: 15, Empowerment: 17	Coordination: 13, Empowerment: 24	The percentage of the dyads which indicated empowerment as the change method increased by 41%
6 Do you rate that the dyads represented the change in performance as more beneficial to a supervisor or a subordinate?	Subordinate: 14, Supervisor: 18	Subordinate: 22, Supervisor: 18	Change in performance was more beneficial to a subordinate in the second interview by 57%
7 Do you rate that the dyads represented the change in behaviors as more beneficial to a supervisor or a subordinate?	Subordinate: 14, Supervisor: 18	Subordinate: 21, Supervisor: 18	Change in behaviors was more beneficial to a subordinate in the second interview by 50%

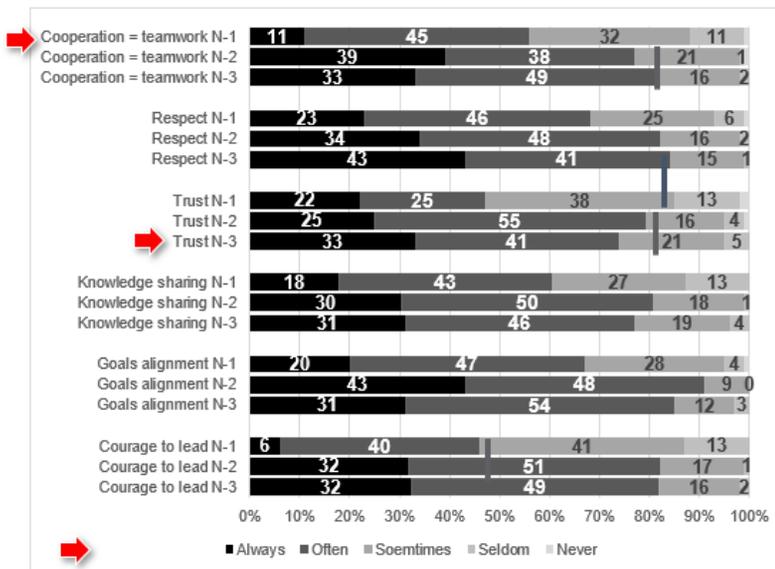
Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

As shown in Table 7, working in dyads led to performance increase indicated by several parameters. It is worth mentioning that after two full years of working in dyads the managers solved more problems across the silo’s borders than inside the silos, and changed their leadership style from cooperation to empowerment focused.

The Area of Performance of Horizontal leadership

To measure the performance of horizontal leadership the authors developed a questionnaire and tested the population of twelve top managers and 70 second and third layer managers (N-1, N-2, and N-3 in Figure 3 respectively)¹. The raw scores of all attributes of horizontal leadership are presented in Figure 6. The scores of the top-level managers are significantly lower than the scores of their subordinates, i.e. the subordinates implemented the horizontal leadership attributes in every day managing faster and fuller than their bosses. In case of the N-1 managers all attributes except Respect required further development.

Figure 6. *The Questionnaire Results of Horizontal Leadership by Management Levels*



Note: Created from company's historical data. Adapted from "Integrated Leadership and Management for Performance Increase," by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

Research Program

Research Hypotheses

Three null and three alternative hypotheses refer to the relation between the application of the integrated model of leadership and management and performance in the managerial process of safety, working in dyads, and horizontal leadership. The choice of these areas corresponds to the performance deficits the case study company had to address: work safety,

lack of cooperation between individuals, and among team members, and between teams.

Null Hypothesis Ho #1

- Null hypothesis Ho #1 states that:

There is no relationship among the performance of different departments in regard to the safety management process if the safety management process is implemented in these departments using the integrated model of leadership and management.

- Alternative hypothesis Ho #1 states that:

There is a relationship among the performance of different departments in regard to the safety management process if the safety management process is implemented in these departments using the integrated model of leadership and management.

Null Hypothesis Ho #2

- Null hypothesis Ho #2 states that:

There is no difference in performance between the employees of the same department who work in dyads and the employees who do not, when the dyads' work implements the integrated model of leadership and management.

- Alternative hypothesis Ho #2 states that:

There is a difference in performance between the employees of the same department who work in dyads and the employees who do not, when the integrated model of leadership and management implements the dyads work.

Null Hypothesis Ho #3

- Null hypothesis Ho #3 states that:

The implementation of the integrated leadership and management model does not affect the increase of the horizontal leadership level.

- Alternative hypothesis Ho #3 states that:

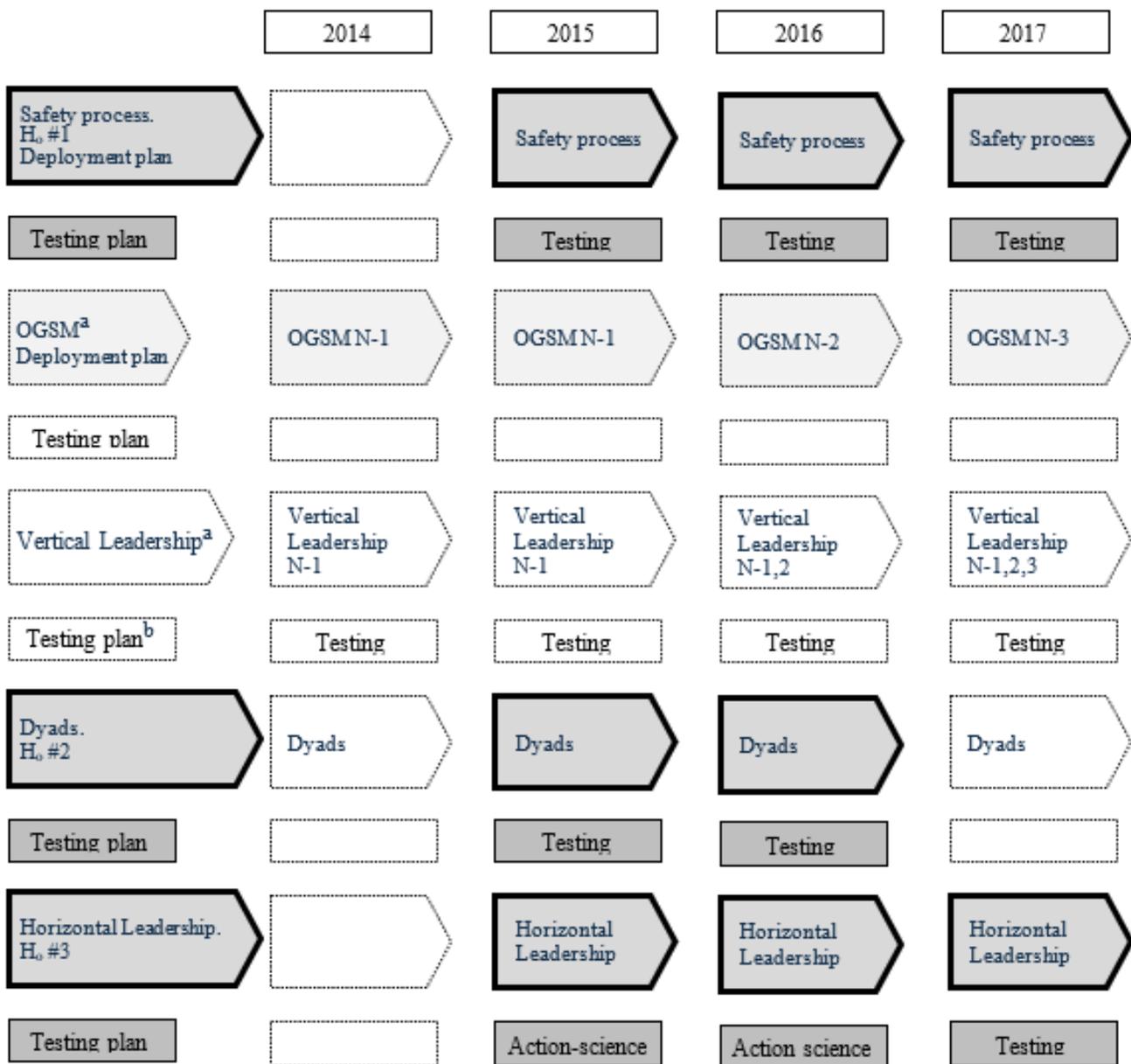
The implementation of the integrated leadership and management model affects the increase of the horizontal leadership level.

Research Flow

The research flow of three hypotheses represents a longitudinal application of the selected tools of the integrated model.

¹ The questionnaire and the results of the statistical inference can be requested directly from the authors as separate PDF document

Figure 7. The Map of Implementation of Tools and Tests Covered by the Research



Note: ^aThe vertical leadership and OGSM were deployed as tools but were not included in the research. ^bThe testing plan of vertical leadership was deployed yet its results are not included in the research. Adapted from historical company data.

Research Design Overview

The three-year longitudinal research program, based on a case study design (Yin, 2014) is presented in Figure 8. It consists of two components: an Embedded multiple Unit Of Analysis (EUOA) and a Single-case design.

Figure 8. *The Design of the Case for Testing Three Null Hypotheses*

Holistic single-unit of analysis	Context				Context	Context	Context	Context
	CASE				CASE	CASE	CASE	CASE
Embedded multiple-unit of analysis	Context				Context	Context	Context	Context
	CASE	CASE	CASE	CASE	CASE	CASE	CASE	CASE
	EUOA#1 Grinding	EUOA#2 Turning	EUOA#3 Forging	EUOA#4 Rollers	EUOA#1	EUOA#1	EUOA#1	EUOA#1
				EUOA#2	EUOA#2	EUOA#2	EUOA#2	

Adapted from “Case Study Research. Design and Methods”, by R.K. Yin, 2014, Figure 2.4.

Research Design of Ho #1 in the Safety Area of Performance

Figure 8 illustrates both the general research design of the case study and the design for testing Ho #1 in the safety area of performance. Four EUOAs recall four production departments, Grinding, Turning, Forging, and Rollers, in which Ho #1 hypothesis was tested using the Managerial Process of Safety shown in Table 6.

Research Design of all Three Hypotheses Ho #1, Ho #2, and Ho #3

Figure 9 presents the architecture to test three null hypotheses: Ho #1 in the safety area of performance, Ho #2 in the dyads area of performance, and Ho #3 in the horizontal leadership area of performance.

Figure 9. *The Architecture to Test Three Null Hypotheses*

The architecture of the case study research to test three null hypotheses of the research							
Context: Relation between application of Integrated model of leadership and management and performance.							
Case: Managerial process of Safety				Case: Working in dyads		Case: Working according to the attributes of horizontal leadership	
EUOA #1 Grinding 120 operators	EUOA #2 Turning 120 operators	EUOA #3 Rollers 140 Operators	EUOA #4 Forging 80 operators	EUOA #5 70 Managers and specialists working in dyads	EUOA #6 100 Managers and specialists NOT working in dyads	EUOA #7 12 Managers of the Company's departments of N-1	EUOA #8 78 Managers of N-2 and N-3 levels
Case testing approach to H ₀ #1	Safety process	Safety process	Safety process	Safety process			
Case testing approach to H ₀ #2				Dyads	Dyads		
Case testing approach to H ₀ #3						Horizontal leadership	Horizontal leadership

Adapted from Research Flow, Figure 7.

Table 8. *The Population and Sample. Data Collection Methods*

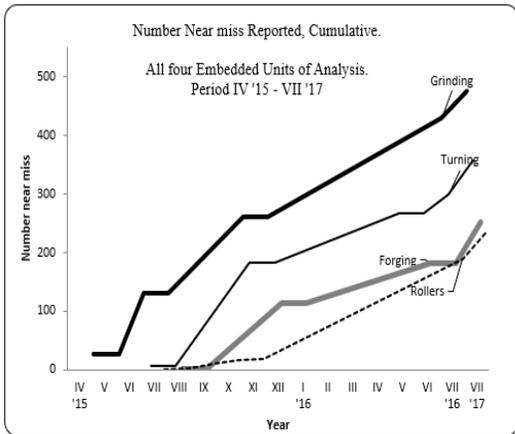
Tested null hypotheses Ho below	Level below	Embedded Units of Analysis (EUOA)								
		Embedded unit of analysis #1	Embedded unit of analysis #2	Embedded unit of analysis #3	Embedded unit of analysis #4	Embedded unit of analysis #5	Embedded unit of analysis #6	Embedded unit of analysis #7	Embedded unit of analysis #8	
H ₀ #1	N-4	120 Operators of the department #1	120 Operators of the department #2	140 Operators of the department #3	80 Operators of the department #4					
H ₀ #2	N-2,3					70 Managers and specialists working in dyads	100 Reference sample of not working in dyads			
H ₀ #3	N-2,3								70 Managers and specialists	
	N-1							12 Managers of the departments		
Area of performance increase		Safety Process				Dyads	No dyads	Horizontal leadership		
Statistical methods		ANOVA				t-test		chi-square test		
Population		120	120	140	80	100	100	12	70	
Sam-ple		120	120	140	80	70	100	12	70	
Sampling		The historical performance records of the managerial process KPIs				The historical personal performance appraisal records of Human Resources (HR) department of the company		All managers in the population	All managers in the population	
Data collection methods		The withdrawing of the raw data from the electronic database of the process performance.				The HR electronic database. The withdrawing of the historical raw data of employees' performance		Survey questionnaire	Survey questionnaire	

Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

Statistics

Four distributions of scores of near miss reported by the operators of four Embedded Units Of Analysis (EUOA) are shown in Figure 10.

Figure 10. The Distribution of the Near Miss in the Embedded Unit Of Analysis #1, #2, #3, and #4, April 2015 – July 2017



Step two: Conclusions

Step two and its five tests numbered 6-10 were applied exclusively to the Forging department, and their results are presented in Table 10.

Table 10. Results of the Statistical Inference of the Distributions of Near Miss Scores

		Legend: F = Forging.				
Test →		ANOVA test at alfa p.=05	Post-hoc t-test at alfa p.=05	Post-hoc t-test at alfa p.=05	Post-hoc t-test at alfa p.=05	ANOVA test at alfa p.=01
Test nr →		6	7	8	9	10
EUOA covered →		F F F	F F	F F	F F	F F
2015	F	F	F	F	F	F
2016	F	F	F	F	F	F
2017	F	F	F	F	F	F
Ho 1 conclusion		Retained	Rejected	Rejected	Retained	Rejected

Note: Created from company historical data. G = Grinding, T = Turning, R = Rollers, F = Forging, EUOA = Embedded Unit Of Analysis. Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

The results of tests 6 to 9 revealed that three distributions of near misses of the EUOA of Forging do not belong to the same population, with $p = 0.05$.

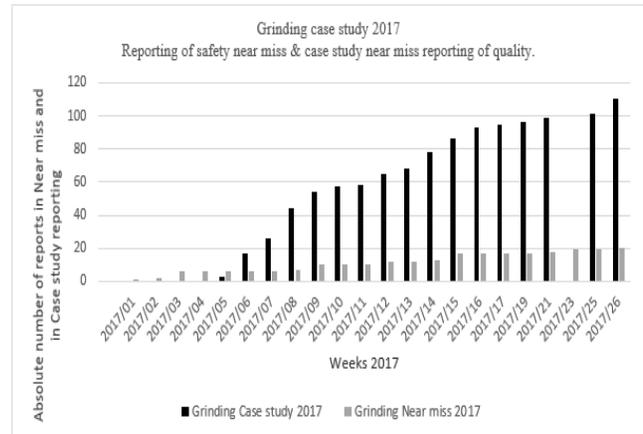
However, based on the results of test 10, which was inferred with $p = 0.01$, it was concluded that $H_0 \#1$ might be rejected, thus there was a relationship between application of the Integrated leadership and management model and the performance of safety in the Forging department. The need to apply $p = 0.01$ was associated to the unstable context (Table 11) of the EUOA of Forging due to changing of its manager both in 2016 and 2017.

Step three: Conclusions.

For business reasons, a quality improvement process based on the same principles as the safety management process (Table 6) has been launched in the EUOA of Grinding in 2017, in parallel to the safety process initiated in 2015. The operators collected scores of failures in the area of quality (similarly to the near misses used in the safety process), thus the EUOA of Grinding became a case study research area. Figure 12 illustrates the distributions of the

near miss scores of the safety process and the scores of the case study quality improvement process in 2017 of the Grinding department.

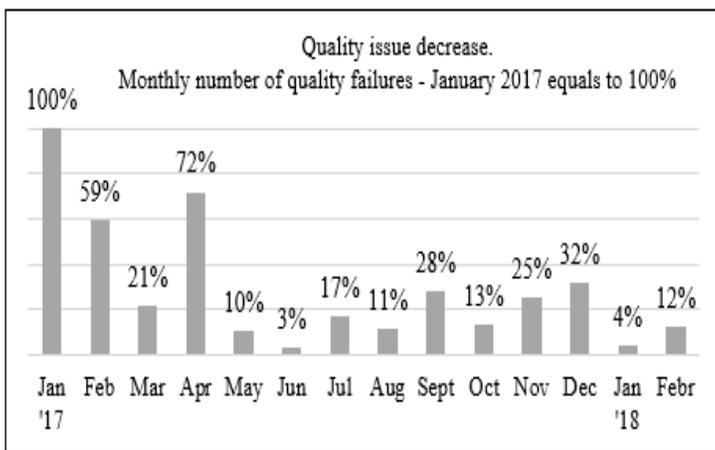
Figure 12. Distribution of Score of Safety and Quality Processes of the EUOA of Grinding in 2017



Note: Adapted from company historical data.

Administering simultaneously two management processes in two different areas (safety and quality) in the same population negatively affected the level of response in one of them. As shown in Figure 12, the number of responses in the safety process significantly decreased in favor of a high response to the quality issues. That brought the improvement of quality, so the new quality process influenced the performance increase as shown in Figure 13. The number of the quality failures significantly decreased during the research period.

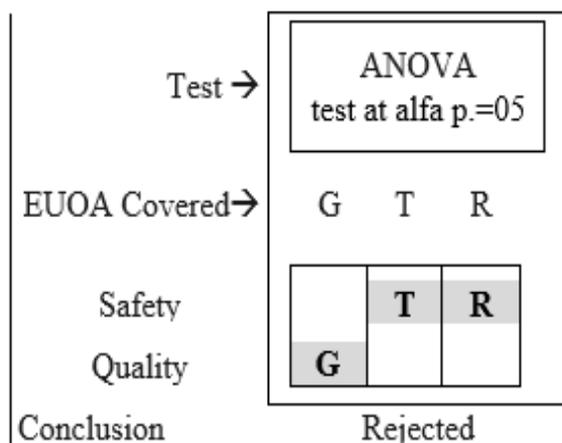
Figure 13. Decreasing Trend of Quality Failures. Result for the Grinding EUOA



Note: Adapted from company data. EUOA = Embedded Unit Of Analysis.

Table 11 presents the design of the ANOVA test and the conclusion of the inferential statistics of step three: the distribution of the safety near misses in the EUOAs of Turning and Rollers, and the quality failure scores of the Grinding case study.

Table 11. Results of the Statistical Inference of the Distributions of Near Miss Safety Scores at the EUOA Turning and Rollers, and Distribution of Quality Scores at the EUOA Grinding



Note: Created from company historical data. G = Grinding, T = Turning, R = Rollers, F = Forging, EUOA = Embedded Unit Of Analysis. Adapted from “Integrated Leadership and Management for Performance Increase,” by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

As visible in Table 11 the null hypothesis was rejected; these three distributions belong to the same population, thus the relationship between performance

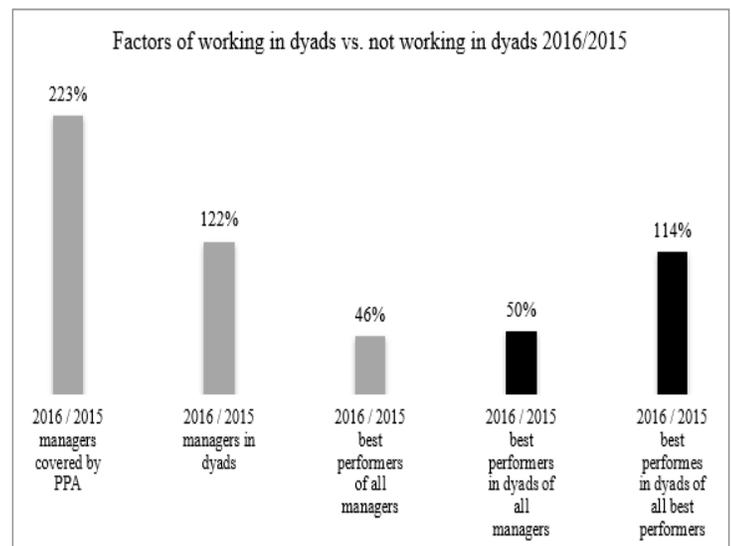
increase and application of the integrated model of leadership and management in the field of quality was revealed.⁴

Ho #2 Statistics

Figure 14 shows that relation exists between the result of annual Personal Performance Appraisal and working in dyads. The proportion of high performers working in dyads to the high performers in total is at least stable high or growing.

In the second year of the research the number of managers covered by the Personal Performance Appraisal (PPA) system was doubled, while the number of managers involved in working in dyads increased by 22%. While the number of best performers as measured by PPA was 46% higher as compared to the previous year, the number of best performers working in dyads was 50% higher. The numbers of best performers in dyads in the second year of the research was 14% higher than in the first year.

Figure 14. Results of 2016 Compared to 2015 of Selected Factors of Working in Dyads



Note: Based on the scores of annual Personal Performance Appraisal pulled from the company’s historical data.

The annual performance review was gradually extended from N-1 population in 2014 to N-2 in 2015 and N-3 in 2016. The following numbers of managers participated in the process:

1. 8 N-1 managers in 2014
2. 41 N-1 and N-2 managers in 2015

⁴ The results of statistical inference can be requested directly from the authors as separate PDF document

3. 94 N-1, N-2, and N-3 managers in 2016.

To explore the null hypothesis Ho #2 the t-test was applied.⁵

The discussion concerning the test allows concluding that P value of two-tail statistical inference equals 0.07, which is larger than the rejection criteria of 0.05. The difference between the means of these two distributions is 5.7 %. The relationship between these two distributions is significant. The performance means (M= 4,21 and M=3.96) are close, ($t [135] = 1,8171 < t \text{ crit} = 1,977, p > 0.05$).

Therefore, the application of integrated leadership and management in 2015 and in 2016 returns a similar influence on employees' performance. This leads to a conclusion that there is a relationship between the application of integrated leadership and management and the performance level of the dyads.

Ho #3 Statistics

Research Program Description

Questionnaires were administered to the population of managers of four production departments and twelve supporting/functional departments. The horizontal leadership questionnaire was tested for validity and reliability (Cronbach- alfa test) in the Turning department. The population of the Turning department was excluded from further research.

Table 12. *The Rate of Returned Horizontal Leadership Questionnaires*

		N-1	N-2	N-3	Total
1	Administered	12	31	45	88
2	Returned	10	30	36	76
3	Rate returned	83%	97%	80%	86%
4	Not qualified (errors, not fully filled)	0	2	3	5
5	Qualified	10	28	33	71
6	Rate qualified	83%	90%	73%	80%

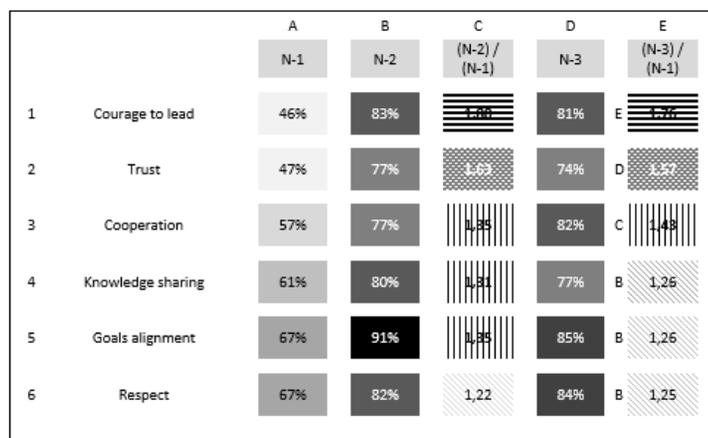
Adapted from historical company data.

Results of Descriptive Statistics. Performance of Horizontal Leadership

The results of the questionnaire (Figure 15) of N-2 and N-3 managers were higher than the results of N-1 managers, from 1.80 in Courage to lead to 1.22 in Respect. Authors propose the possible conclusion that the more stable the exposure to the integrated leadership and management, the higher the scores of

the horizontal leadership. Managers of N-2 and N-3 levels practiced horizontal leadership in the more stable context than their supervisors (N-1), as the fluctuations they experienced were lower (10% vs. 4% vs. 50% respectively, Figure 15).

Figure 15. *Horizontal Leadership Questionnaire's Scores of Always and Often and Fluctuations*



7	Changes on the positions					
8	2014: Number / %	2	-		-	
9	2015	1	1		-	
10	2016	1				
11	2017	2	3		2	
11	Total changes	6	3		2	
12	Questionnaires administered/ returned	12 / 10	31 / 30		45 / 36	
13	Total changes / administered	50%	10%		4%	

Note: Created from company's historical data. Adapted from "Integrated Leadership and Management for Performance Increase," by G. Sobiecki, 2018, [Unpublished doctoral dissertation]. SBS Swiss Business School, Zurich, Switzerland.

Conclusion of the Chi-Square Test of the Horizontal Leadership

The chi-square test had been chosen to examine the non-parametric distribution, especially in case of a new theory to be checked. (Spatz, 2011).

The value of the chi-square calculated of 4. 1455 is lower than 18.307 found in Table E (Spatz, 2011, p.393). According to Spatz, "to be significant, the X² obtained from the data must be equal or greater than [emphasized by Spatz] the value shown in the table", (2011, p.393).

^{5,6} The results of the statistical inference can be requested directly from the authors as separate PDF document

Therefore the null hypothesis H_0 #3 must be rejected. The only hypothesis that is left is the alternative hypothesis H_a .

The relationship between the horizontal leadership level measured by the questionnaire scores and the application of integrated leadership and management was confirmed and it is not accidental due to the probability of $p = 0.05$

Conclusions, Recipients of this Article, and Future Research.

The aim of this research was to check how the implementation of the integrated model of leadership and management influences performance increase. To achieve this aim authors built the model of integrated leadership and management with seven tools (Table 3), applied the tools of the model at a real factory in a three-year longitudinal research from 2014-2017, and tested statistical relations between the application of the model and the actual performance increase.

Three performance fields chosen for the research were: safety at work, working in two-members teams – dyads, and application of horizontal leadership. This choice was driven by the need to address the genuine performance gaps of the research company: an excessive number of accidents at work, a low level of cooperation between peers, and the absence of cooperation among teams across boundaries of organizational departments.

The actual number of accidents at work dropped by 40% in the three-year period of the longitudinal research due to implementation of the safety management process, which aimed to continuously collect reports of accidents - near misses from the production staff. The 1750 near misses reported by 460 operators of four production departments allowed for eliminating the root causes. Application of the ANOVA test and several t-tests proved that the distribution of near miss scores of all four departments belong to the same population.

Seventy managers working in dyads achieved higher scores on the annual performance appraisal in two consecutive years as compared to the scores of their 100 peers not working in dyads. By application of the t-test it was revealed that the two distributions of annual performance scores in 2015 and 2016 of the dyads-members statistically belong to the same population.

The scores of the Horizontal Leadership questionnaire returned from 71 managers revealed that the personnel permanence (low fluctuation) at the managerial positions results in better practice of horizontal leadership behaviors amongst various management teams. The chi-square test applied to check the stability of the distribution scores of the questionnaire confirms the findings.

There are two groups of recipients of this research: managers, and researchers in the field of applied business. The authors of this article intended to provide the business management professionals with practical tools, enabling them to improve performance by implementing the integrated leadership and management model, and the researchers with an area worth further investigation.

For the managers the authors propose the following conclusions:

1. Managers who face the challenges of performance increase could use the model of integrated leadership and management in daily practices, introducing the full model and focusing on applying selected tools, most relevant to their specific needs. This research was responding to the intention and the objectives of the case study company to increase performance in work safety, cooperation between individual managers, and cooperation among teams.
2. It was revealed statistically that there is a relationship between the application of the integrated model of leadership and management and performance improvement, though the research has been made in a stable context (Figure 11), i.e. in a defined area of business (e.g. safety and quality processes in the case study company) with invariable contextual dimensions.
3. In case of an unstable context (Table 10) the relationship between the application of the integrated model of leadership and management and performance increase was also found. Alternations in the context, e.g. replacing management staff, revealed that performance improvements still take place although with a lower probability, as in case of the Forging department during the safety process implementation (Table 10), or the performance level can be lower as in N-1 group during the horizontal leadership implementation (Figure 15).

For the fellow researchers the authors revealed a research gap (Table 2), built a research model of integrated leadership and management with seven tools

(Table 3) and tested it in a genuine company to close its performance deficits. Although the authors managed to achieve their own research goals, research continuity is needed to fill in the research gap with results of explorations of the influence of the remaining set of tools of the integrated model of leadership and management on performance increase.

It will be interesting to assess the effectiveness of the integrated model of leadership and management in the research design of multiple cases crossed with embedded multiple-unit of analysis (Figure 8), for example in several companies of various profiles in one country to compare the results among industries in a homogenous culture background, or in companies of the same industry branch in various countries to compare the results among different cultures.

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Dividend Policy Scores Models: Neutral Approach

By

Professor Sergey Krylov

Abstract

The article treats a concept of the formalized modeling of the dividend policy scores and company marketing performance scores derived (stock market position) within neutral dividend policy implementation approach conditions as an instrument of the scores analysis and forecasting. The methodology of the research consists of the Dividend Irrelevance theory, Dividend Policy Significance theory and sustainable company development concept. It has been stated that a formalized approach of the dividend policy implementation presumes a construction of the basic relevant scores models characterizing the company dividend policy and its marketing performance as Dividend Payout, Dividend Cover, expected Share Price, Dividend Yield, Price / Earnings Ratio (common stock price/earnings ratio). The formalized models of the scores mentioned are applicable for a forecast-analytical scores evaluation and their variances as well by estimating an impact of the models defining factors exercised by the appropriate factoring analysis method within the neutral dividend policy implementation approach conditions. The conclusion is drawn, that the formalized models of the dividend policy scores and company marketing performance scores derived, having been developed, are an effective instrument for their forecasting and analysis so that proactive decisions to manage the company dividend policy implementation within neutral approach conditions are ensured.

Key words: Dividend policy, Neutral approach, Analysis, Forecasting, Modeling, Company

JEL codes: G32, G34, G35

Introduction

In the present-day environment a selection of the dividend policy as a complex of decisions dealing with the dividend payout to shareholders is an essential aspect of the Public Limited Company (PLC) operation. The dividend payout decisions are generally referred to financial decisions as dividend payables reduce the company's retained earnings and thereby affect the company's financial position.

The dividend policy significance for the company performance occurs for a few reasons. Firstly, the dividend policy makes an impact on the relationship with prospective and actual investors in equity capital (share capital, first and foremost). The reason is that investors are reluctant to invest in companies reducing dividend payout, associating the latter with the company's financial difficulties. Moreover, certain investors rely on their dividends as a permanent income.

Secondly, the dividend policy influences the company's financial strategy and its capital investment budget. It is an inherent element of the long-term financial policy being, in turn, a financial strategy implementation instrument. The dividend payout presumes the reinvested earnings decrease, a potential long-term financial investment source, correspondingly resulting in capital investment budget reduction.

Thirdly, the dividend payout leads generally to cash outflow resulting in the company's liquidity decline.

Fourthly, the dividend payout results in the retained earnings reduction, mentioned earlier, decreasing the equity capital and company financial stability.

Meanwhile, the dividend policy on the one hand has to ensure the basic financial management goal to be attained, i.e., the maximum shareholders well-being, on the other, take into account all company stake-

holders' interests.

Therefore, an important role is paid to the formalized analysis and forecasting of the scores related to the requirements stated above.

Previous Research (Present-day State of the Problem)

It should be noted, that the issue of dividend policy scores analysis and forecasting has been so far researched and covered in the relevant references, e.g., (Bernstein, 1993; Bernstein et al., 2001; Block et al., 2011; Brealey, 2017; Brigham, 1983; Brigham & Houston, 2015; Brooks, 2014; Helfert, 1994, 2001; Higgins et al., 2016; Knot, 1985; Lee & Finnerty, 1990; McLaney, 1992; Penman, 2004; Shim & Siegel, 2008; Subramanyam, 2014; Van Horne, 1989; Van Horne & Wachowicz, 2009; Watsham & Parramore, 2004).

Generalizing and classifying their views we present the key scores employed to analyze and forecast the company dividend policy as they form a sufficiently important company marketing performance scores subgroup (stock market position) as seen in Table 1:

Table 1. Key Scores of the Company Dividend Policy Analysis and Forecasting

Score	Estimation formula	
	Numerator	Denominator
Dividend Payout (formula 1)	Dividend	Earning per Share
Dividend Payout (formula 2)	Dividends	Net income – Preferred Dividends
Dividend Cover	Earnings per Share	Dividend
Dividend Yield	Dividend	Share Price
Share Price/Dividend	Share Price	Dividend
Equity Profit	Common and Preferred Dividends	Net Income
Preferred Dividend Coverage	Net Income	Preferred Dividends
Common/Preferred Dividend	Dividends	Preferred Dividends

Note: Compiled by the author of this paper

The key scores of the company dividend policy analysis presented in Table 1 may be divided into two groups.

The scores of the first group (Dividend Payout, Dividend Cover, Equity Profit, Preferred Dividend Coverage and Common/Preferred Dividend) characterize exclusively the company dividend policy.

The scores of the second group (Dividend Yield,

Share Price/Dividend) feature both the company dividend policy and their common stock investment attractiveness for potential investors.

Since the company common stock investment attractiveness is set by the company dividend policy so to analyze the dividend policy the scores of the first group are considered to be the basic ones.

The estimated ratio values in Table 1 are analyzed in their dynamics compared with the plan and other issuers. The final analysis concludes the company dividend policy efficiency degree (the most efficient, generally efficient, and non-efficient) and the change causes. Such factors as company growth rate, dividend limitations stipulated by the contract, company performance efficiency, and its income stability, retained control over the company activity, debt-to-equity ratio, external financial sources availability, the company age and its performance scale are referred to as the changing causes.

The ratio values forecasting from Table 1 are executed by the anticipated numerator and denominator values considered as the basic factors setting the ratios values.

Furthermore, the analysis and forecasting by the relevant determined factoring models construction enables one to determine the dividend policy scores impact on the basic company performance scores, foremost, Price / Earnings Ratio.

Price / Earnings Ratio is a certain common stock demand indicator featuring investment attractiveness, to be used in inter-business comparisons in contrast to Earnings per Share. Generally known, the Earning per Share gain gives rise to the Share Price. The optimum is the situation when the Share Price increase exceeds its Earnings per Share, the Price / Earnings Ratio growing. That is why the score significance lies finally in the attainment of the basic company financial management (public limited company) goal – maximum increase of Share Price.

A factoring model of Price / Earnings Ratio is constructed as follows:

$$P/E = \frac{P}{E} = \frac{P}{D} * \frac{D}{E} = \frac{DP}{DY} = \frac{CD}{\frac{NP-PD}{DY}} = \frac{\frac{CD}{\frac{NP-PD}{DY}}}{DY} = \frac{DCD}{(CPD-1)*DY}$$

(1)

where P/E – Price / Earnings Ratio;

DCD – Common/Preferred Dividend;

CPD – Preferred Dividend Coverage;

DP – Dividend Payout;

DY – Dividend Yield;

P – Share Price;

E – Earnings per Share;

D – Dividend;

CD – Dividends;

PD – Preferred Dividends;

NP – Net Income.

The factoring model bears a certain economic sense. Formula 1 reflects a sufficiently complex dependence of the company common stock investment attractiveness upon its basic dividend policy scores evaluation: Common /Preferred Dividend, Preferred Dividend Coverage and Dividend Yield. Obviously the first ratio growth comes to the company common stock investment attractiveness and Price / Earnings Ratio rise correspondingly. As for the second ratio it should be considered as a certain restraining factor of the Price / Earnings Ratio growth. However, the latter is needed since Preferred Dividend Coverage, characterizing company ability to pay dividends out and its decrease, may cause market Preferred Share Price decline affecting, in turn, Share Price. The third ratio falling down involves paradoxically common stock investment attractiveness rise and Price / Earnings Ratio going up correspondingly. When the Dividend Yield reduction results from the exceeding Share Price growth compared with the Dividend Payout the company common stock investment attractiveness increases. To estimate the factors causing the changes of the Price / Earnings Ratio variances the relevant factoring analysis method is applied.

The factoring Price / Earnings Ratio model serves as its forecasting value instrument based on the anticipated values of the defining ratio factors.

Relying on the company dividend policy analysis and forecasting results the management decisions are worked out. It should be noted that the dividend policy involves generally the common stock since the preferred dividend yield is most often (although not always) fixed.

The main kinds (methods) of dividend policy refer (Block et al., 2011; Brealey et al., 2017; Brigham, 1983; Brigham & Houston, 2015; Knot, 1985; Lee & Finnerty, 1990; McLaney, 1992; Shim & Siegel, 2008; Van Horne, 1989; Van Horne & Wachowicz, 2009):

1. A stable dividend policy assumes regular long-term unaltered dividend payout furthered by an increase in case of successful company performance. The dividend policy of the kind approved by most investors facilitates maximum Share Price demonstrating the stable company financial position. In addition most investors rely on the stable dividend as a permanent income.
2. A permanent dividend payout policy provides unaltered value for a longer period of time. That dividend policy is not approved by investors and does not promote maximum Share Price because the Earnings per Share decline come from the dividend falling down. Moreover, if the company lacks net income dividends are not paid out.
3. A compromising dividend policy (between the previous two) anticipates a permanent small dividend payout with an increase during better years in terms of income. The dividend policy is not totally approved by investors and does not ensure maximum Share Price since the dividend volume uncertainty is continued.
4. A residual dividend policy presumes dividend payout, and the company investment requirements to have been satisfied. The dividend policy is approved by investors should essential Share Price occurs due to likely profitable investment projects implementation.

Having generalized the views of the previous researches covering a present-day state of the problem considered in the article we transfer to the methodology of the research.

Methodology of Research

The methodology of the research, the results being presented in the paper, is based on the following concepts:

- 1) Dividend Irrelevance theory;
- 2) Dividend Policy Significance theory;
- 3) Sustainable company development concept.

The “corner stone” of the dividend policy defining its kinds (methods) is, in the end, the ratio between common stock dividend and earnings per share (Dividend and Net Income and Preferred Dividend net) that makes Dividend Payout (or Dividend Cover in inverse proportion to it) the most important score for the dividend policy analysis.

The value estimation results depend, for the most part, on the dividend policy implementation approach selected: passive or active (Van Horne, 1989; Van Horne & Wachowicz, 2009).

A passive dividend policy implementation approach or Dividend Irrelevance theory developed by Miller and Modigliani (1961), implies, the Dividend Payout, with the set investment decisions choice, being a mere part of a general picture of no impact on the investors' well-being. Miller and Modigliani (1961) consider a company value to be defined exclusively by its assets yield or its investment policy rather than Equity Profit and retained earnings.

In other words the dividend payout presents a “passive balance” left after the company investment projects funding. The dividend payout value changes periodically in accordance with the variation of the investment projects number acceptable by the company management. Should the company run a huge number of beneficial projects then the dividend payout would likely equal zero. Vice versa, a lack of profitable investment opportunities would drive the dividend payout to 1. The dividend payout value would fall from 0 to 1 for any intermediate situation (Van Horne, 1989). The shareholders seem to be indifferent to the factor of their well-being improvement either dividend or fair value rise owing to the company investment projects implementation.

A formalized picture of the passive dividend policy approach is the James E. Walter model (Walter, 1956) considered to be the first, and favorable in terms of its simplicity and visualization:

$$P = \frac{D + \frac{r}{\rho} * (E - D)}{\rho}$$

(2)

where P – forecast Share Price,

D – Dividend,

E – Earnings per Share,

r – Investment company profitability,

ρ – market capitalization level (an average market discount rate employed to determine expected cash flows).

Under the active dividend policy approach or Dividend Policy Significance theory proposed by Gordon (1963) and Lintner (1962) the dividend payout decisions play an essentially active role. The thing is that in conditions of uncertainty inherent in practically any company activity in market environment it does matter for the investors whether they obtain their income in the form of dividends or Share Price rise. The dividend payout provides a sense of certainty to the shareholders since the dividends are referred to current income rather than capital gain in the future. That is why the investors are concerned about the factors improving their well-being: dividend or Share Price gain due to the company investment projects implementation. Moreover, if potential investors prefer earlier uncertainty settlement they will be prepared to pay a higher Share Price entitling higher dividend (Van Horne, 1989).

The formalized reason in favor of the active dividend policy implementation is the economic growth model by Gordon (1959):

$$P_0 = \frac{D_1}{k-g} = \frac{D_0 * (1+g)}{k-g}$$

(3)

where P₀ – forecast current (theoretical) share value at zero moment,

D₁ – expected future period Dividend,

D₀ – present period Dividend,

k – acceptable discount rate (Equity Profit stipulated by investors),

g – Dividend growth rate (taken as constant in time).

The previous models (2) and (3) are considered as formalized instruments of the dividend policy forecasting and management within active and passive implementation approaches defining the relevant criteria (Van Horne, 1989; Van Horne & Wachowicz, 2009).

The following criteria provide a sufficiently distinct definition of the passive dividend policy:

- 1) A need for accounting of the company financial requirements and financial budget accuracy;
- 2) A necessity for the required company liquidity to be retained;
- 3) A consideration of the opportunity for debt capital employment at beneficial terms;
- 4) A research of the dividend payout change impact on other share prices in the industry;
- 5) A need for taking into account potential investors expectations;
- 6) A necessity for retaining control over the company;
- 7) A need for taking into account dividend limitations stipulated by the contracts.

The active dividend policy is to presume a kind of confidence on the part of shareholders towards the company anticipating a part of the dividend to be reinvested at their free-will. It should be taken into account that the company dividend policy is to provide both maximum shareholders well-being and its stakeholders' interests (suppliers, customers, employees, government) so that a sustainable company development is ensured in the long run providing a long-term company value (Dunphy et al., 2007; Freeman, 2010; Friedman & Miles, 2006).

The sustainable company development implies its efficient long-term continued performance capability defined by the availability of effectively utilized appropriate resources and is featured by:

- 1) A stable output and sales growth (products, services);
- 2) A continued company investment activity;
- 3) A steady innovative company activity.

It is important that a problem of the sustainable

company development is to be solved by means of the appropriate software to be developed. The researches are being run internationally to develop recommendations for compiling integrated reports about sustainable company development, the most complete are GRI standards (Global Reporting Initiative), aimed at the “triple outcome”(Triple Bottom Line): company economy, environmentally safe production and social responsibility (Global Reporting Initiative (GRI), 2013).

Having briefly described the methodology of the research, the results being presented in the article, the author comes to its detailed discussion.

Results

The postulated previous statement that the dividend policy is to facilitate the achievement of the basic financial management goal – maximum shareholders well-being, on the one hand, take into account other company stakeholders on the other, so that a sustainable company development is ensured in the long run. The balance is to be attained between passive and active approaches within the so-called neutral dividend policy implementation approach that considers both the need of the financially beneficial investment projects and dividend payout to company shareholders (non-residual principle) driving its common stock to maximum Share Price.

Formalization of the neutral dividend policy implementation approach assumes appropriate models construction of Dividend Payout, Dividend Cover and Expected Share Price.

To construct the models of the Dividend Payout, Dividend Cover let us set the Expected Share Price estimated under D. E. Walter's model (2), equal to that determined under M. Gordon's model for the economic growth (3) of the forecast current (theoretical) Share Price gain at zero moment; anticipating that a current expected dividend complies with its Share Price (Van Horne) essential for the Stock Market condition:

$$P=P_0 \quad ,$$

(4)

entering a common symbol for a Dividend as D ($D = D_0$).

We obtain the following equation:

$$\frac{D + \frac{r}{\rho} * (E - D)}{\rho} = \frac{D * (1 + g)}{k - g}$$

(5)

By a number of transformations in formula (5) we get the Dividend Payout (DP) and Dividend Cover (DC) models:

$$DP = \frac{D}{E} = \frac{\frac{r}{\rho}}{\frac{\rho * (1 + g)}{k - g} + \frac{r}{\rho} - 1}$$

(6)

$$DC = \frac{E}{D} = \left(\frac{\rho * (1 + g)}{k - g} - 1 \right) * \frac{\rho}{r} + 1$$

(7)

The formulae (6) and (7) demonstrate that in the neutral dividend policy implementation conditions the Dividend Payout and Dividend Cover are influenced by the following factors: investment company profitability, market capitalization level, Equity Profit required by investors and Dividend gain rate taken as constant in time. The Dividend Payout growth and Dividend Cover decrease correspondingly would be facilitated by the increase of the investment company profitability and Equity Profit required by investors, Dividend gain rate and market capitalization level fall as well. And vice versa the Dividend Payout decline and Dividend Cover rise would result from the decrease of the investment company profitability and Equity Profit required by investors, Dividend gain rate and market capitalization level drop. The estimation of the defining factors impact on the outcome scores variances in the models (6) and (7) is exercised with the relevant factoring analysis methods.

The Dividend Payout (formula 6) and Dividend Cover (formula 7) models having been construct-

ed by the author of the article might be applied for the forecasting-analytical ratios values estimation within the neutral dividend policy implementation conditions. Other dividend policy scores analysis (e.g, common stock profitability (Dividend Yield)) and company market performance (e.g. Share Price) might be estimated with the models as well.

To construct a Share Price model let us express Dividends from D.E.Walter model (formula 2) and present-day period Dividend from the economic growth model by M.Gordon (formula 3) as follows:

$$D = \frac{\rho * P - \frac{r}{\rho} * E}{1 - \frac{r}{\rho}}$$

(8)

$$D_0 = \frac{P_0 * (k - g)}{1 + g}$$

(9)

Then let us make Dividend from the D.E.Walter model (formula (8)) equal to the present-day period Dividend from the economic growth model by M.Gordon (formula (9)):

$$D = D_0 \quad ,$$

(10)

entering a common symbol for a Share Price expected, i.e., balanced to a specific investor position as P (P = P₀).

Thus we get an equation:

$$\frac{\rho * P - \frac{r}{\rho} * E}{1 - \frac{r}{\rho}} = \frac{P * (k - g)}{1 + g}$$

(11)

obtaining the expected Share Price model:

$$P = \frac{\frac{r}{\rho} * E}{\rho - (k - g) * \frac{1 - \frac{r}{\rho}}{1 + g}}$$

(12)

Under formula (12) within the neutral dividend policy implementation conditions the expected Share Price is impacted by the following factors: the investment company profitability, market capitalization level, Dividend, Equity Profit required by investors and Dividend gain rate taken constant in time. The expected Share Price gain would be facilitated by the increase of the investment company profitability, Equity Profit required by investors, Dividend and slower Dividend gain rate and market capitalization level growth. Vice versa, the expected Share Price drop would result from the decline of the investment company profitability, Equity Profit required by investors and the rise of the Dividend gain rate and market capitalization level growth. The estimation of the defining factors impact on the outcome scores variances in the model (12) is exercised with relevant factoring analysis methods.

The expected Share Price model (formula 12) obtained by the author might be employed for the forecasting-analytical estimation of the company's market performance and investment attractiveness ratios values within the neutral dividend policy implementation conditions. Other dividend policy scores analysis (e.g. Dividend Yield) and company market performance (e.g. Price / Earnings Ratio) might be estimated with the models as well.

Thus within the neutral dividend policy implementation conditions and based on the prior entered

conventional symbols the following Dividend Yield and Price / Earnings Ratio models might be formed:

$$DY = \frac{D * \rho - (k - g) * \frac{1 - \frac{r}{\rho}}{1 + g}}{\frac{r}{\rho} * E} = \frac{DP * \rho - (k - g) * \frac{1 - \frac{r}{\rho}}{1 + g}}{\frac{r}{\rho}}$$

(13)

$$P/E = \frac{DCD * \frac{r}{\rho} * E}{(CPD - 1) * D * \rho - (k - g) * \frac{1 - \frac{r}{\rho}}{1 + g}} = \frac{DC * DCD * \frac{r}{\rho}}{(CPD - 1) * \rho - (k - g) * \frac{1 - \frac{r}{\rho}}{1 + g}}$$

(14)

According to formula (13) within the neutral dividend policy implementation conditions the Dividend Yield is defined by the following factors: the Dividend Payout (i.e., Dividend and Earnings per Share ratio), market capitalization level, Equity Profit required by investors and Dividend gain rate taken constant in time. The Dividend Yield gain is ensured by the increase of the Dividend Payout (i.e., Dividend and Earnings per Share ratio), market capitalization level, Dividend gain and the drop of the investment company profitability and Equity Profit required by investors. The Dividend Yield decline is caused by the fall of the Dividend Payout (i.e., Dividend and Earnings per Share ratio), market capitalization level, Dividend gain and the rise of the company investment profitability and Equity Profit required by investors. The estimation of the defining factors impact on the outcome scores variances in the model (13) is exercised with corresponding factoring analysis methods.

The Dividend Yield model (formula 13) formed by the author of the article might be applied for the forecasting-analytical ratios values estimation within the neutral dividend policy implementation conditions and some other company market performance scores (e.g., Share Value) estimated with the model as well.

Under the formula (14) within the neutral dividend policy implementation conditions the Price / Earnings Ratio depends on such factors as Dividend Cover (i.e., Dividend and Earnings per Share ratio),

Common/Preferred Dividend, investment company profitability, market capitalization level, Preferred Dividend Coverage, Equity Profit required by investors and Dividend gain rate taken constant in time. The Price / Earnings Ratio is encouraged by the increase of the Dividend Cover (i.e., Earnings per Share and Dividend ratio), Common /Preferred Dividend, the company investment profitability and Equity Profit required by investors and the decrease of the company market performance level, Preferred Dividend Coverage and Dividend gain rate. The Price / Earnings Ratio decline is driven by the fall of the Dividend Cover (i.e., Earnings per Share and Dividend ratio), Common/Preferred Dividend ratio, company investment profitability, Equity Profit required by investors and the growth of the market capitalization level, Preferred Dividend Coverage and Dividend gain rate. The estimation of the defining factors impact on the outcome scores variances in the model (14) is exercised with the relevant factoring analysis methods.

The Price / Earnings Ratio model (formula 14) under the author of the paper might be employed for the forecasting-analytical ratio values estimation characterizing the company market performance within the neutral dividend policy implementation conditions depending in the key scores.

The forecast values of the company dividend policy and market performance scores obtained above with the formulae (6), (7), (12), (13) and (14) might be analyzed by specific stakeholders interested in the sustainable company development, the results presenting a forecasting evaluation of the dividend policy management efficiency level (large, significant, essential, or fairly small).

A practical application example of the models (6), (7), (12), (13) and (14) developed by the author presents forecasting of the corresponding annual data of Gamma PLC within the neutral dividend policy implementation conditions, the company name having been changed.

Model (6). Gamma PLC last year-end data are as follows: $r=0.239$, i.e. 23.9%; " $\rho=0.153$ ", i.e. 15.3%; $k=0.12$, i.e. 12%; $g=0.05$, i.e. 5%, then in the conditions $DP=0,547$, i.e. 54.7%. Hence within the neutral company dividend policy approach conditions at year-end data the Dividend Payout is expedient to be set at the level of 54.7%. Today under Gamma PLC dividend policy its Dividend Payout equals 25%.

Model (7). The last year Gamma PLC bottom line data were measured as: $r=0.239$, i.e. 23.9%; " $\rho=0.153$ ", i.e. 15.3%; $k=0.12$, i.e. 12%; $g=0.05$, i.e. 5%, then in the conditions $DC=1.829$. The estimations show that within the neutral dividend policy approach conditions at year-end company data the Dividend Cover is needed to be set at the level 1.829. Currently under Gamma PLC dividend policy its Dividend Cover equals 4.

Model (12). Under the last year-end bottom line data Gamma PLC reported the following: $r=0.239$, i.e. 23.9%; " $\rho=0.153$ ", i.e. 15.3%; $k=0.12$, i.e. 12%; $g=0.05$, i.e. 5%; $E=157.48$ rubles then in the conditions $P=1294.73$ rubles. According to the estimation in the neutral dividend policy approach conditions the company has to reach the Share Price up to 1294.73 rubles. At present the Share Price of Gamma PLC equals around 1019-1039 rubles.

Model (13). Gamma PLC reported the following last year data: $r=0,239$, i.e. 23.9%; " $\rho=0.153$ ", i.e. 15.3%; $k=0.12$, i.e. 12%; $g=0.05$, i.e. 5%; $DP=0.547$, then in the conditions $DY=0.077$, i.e. 7.7%.

The estimation clarifies that within the neutral dividend policy approach conditions under the year-end figures the company is to attain the Dividend Yield at the level of 7.7%. Today the Dividend Yield for Gamma PLC measures 6.5%.

Model (14). Gamma PLC last year-end data are as follows: $r=0.239$, i.e. 23.9%; " $\rho=0.153$ ", i.e. 15.3%; $k=0.12$, i.e. 12%; $g=0.05$, i.e. 5%; $DC=1.829$, $DCD=23$, $CPD=60$, then in the conditions $P/E=7.250$. According to the estimation in the neutral dividend policy approach conditions the company has to reach the Price / Earnings Ratio at the level of 7.250. The actual present figure of it by the year-end data equals 6.3.

Thus the neutral dividend policy approach discussed above as a practical application example in Gamma PLC presumes that the company exercises certain score value changes and market performance ones derived (stock market position) as well; the author believes the move is certain to improve Public Limited Company attractiveness for all stakeholders interested with a view to ensure its long-term sustainable development.

Having treated the results of the research the author considers necessary to compare them with those discussed in relevant references for the problem.

Discussion

The results of the research, undertaken to develop the formalized model of the dividend policy scores and company marketing performance scores derived employed for their forecasting and analysis to ensure effective dividend policy implementation management in the neutral approach conditions, carry no analogy and are considered as a fundamentally new knowledge of the problem.

Let us compare the results of the author's research obtained with those of the well-known scientists and specialists in the field discussed above in the sections "Previous Research (Present-day State of the Problem) and Methodology of Research concerning formalized models application for dividend policy forecasting analysis as a whole and within active and passive implementation approach.

The comparison has stated the following:

- the neutral dividend policy implementation approach proposed by the author is distinct from the dividend irrelevance theory and dividend policy significance theory enabling to a much greater extent consideration of all company stakeholders' interests ensuring thereby its sustainable development in the long run;
- the formalized (mathematical) models of the most significant dividend policy scores and those of the company marketing performance derived developed within the neutral dividend policy approach are more detailed and representative since they reflect the scores dependence upon a greater number of the defining factors compared with the existing models;
- the most significant dividend policy scores and those of the company marketing performance derived available in the author's models as well as a greater number of the defining factors permit carrying out a more detailed factoring analysis of the scores by the relevant methods and their forecasting based on the anticipated defining factor values, the whole of these improving a decision making process in the field of the company dividend policy management.

Meanwhile the formalized models (proposed by the author) of the most significant dividend policy scores and those of the company marketing performance derived aimed at the permanent dividend gain and high stock market efficiency bear certain restrictions. The restrictions to be overcome imply a problem for future research.

Conclusions

Having completed the treatment of the formalized models to analyze and forecast the dividend policy scores and company marketing performance scores derived within neutral approach conditions of the company dividend policy implementation having been developed by the author the following conclusions are drawn:

- the neutral approach conditions of the company dividend policy implementation enables taking into account all company stakeholders' interest ensuring its sustainable development in the long run;
- the methodology of the neutral dividend policy implementation approach research is based on the concepts of the Dividend Irrelevance theory, Dividend Policy Significance theory and Sustainable company development concept;
- the formalized statement of the neutral approach conditions of the dividend policy implementation implies the corresponding formalized models construction of the most significant dividend policy scores and company marketing performance scores derived: Dividend Payout, Dividend Cover, expected Share Price, Dividend Yield and Price / Earnings Ratio;
- the formalized models of the most significant dividend policy scores and company marketing performance scores derived developed within the neutral dividend policy implementation approach reflect the score dependence upon a great number of the defining factors;
- the factoring analysis execution of the most significant dividend policy scores and company marketing performance scores derived by corresponding methods due to the formalized models principles permits finding out the basic reasons of their changes within the neutral dividend policy implementation approach;
- the formalized models of the most significant dividend policy scores and company marketing performance scores derived might be applied for their forecasting proceeding from the anticipated defining factors value that allows one to improve and streamline the proactive management decision making within the neutral dividend policy implementation approach.

Implications for Future Research

The conceptual base of the formalized modeling of the most significant dividend policy scores and company marketing performance scores derived as their analysis and forecasting instrument in the neutral dividend policy implementation approach conditions, discussed above, define some general contours for a new research and performance leads. They provide a theoretical basis for the further analysis and forecasting development of the dividend policy scores in the neutral dividend policy implementation approach conditions and company marketing performance scores derived in terms of its practical application aspect.

The implications for the future is for further analysis and forecasting development of the dividend policy in the neutral dividend policy implementation approach conditions as follows:

- development of the formalized models of the most significant dividend policy scores and company marketing performance scores derived at the changing Dividend Yield gain rate;
- detailed and specific methodology development in terms of the dividend policy scores analysis and forecasting and company marketing performance scores derived in the neutral dividend policy implementation approach conditions extended to its other life cycles;
- refinement of the techniques of the dividend policy scores analysis and forecasting and company marketing performance scores derived in the neutral dividend policy implementation approach conditions for individual companies in different industries;
- development of economic-mathematical models and computer programs enabling application of the dividend policy scores analysis and forecasting and company marketing performance scores derived in the neutral dividend policy implementation approach conditions in practice for the process of its management.

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The Assessment of Micro and Small Enterprises Performance and Challenges in Addis Ababa, Ethiopia

By

Jemal Abagissa, PhD

Abstract

A growing urban population due to migration and natural population growth resulted in unemployment and poverty in most urban centres in Ethiopia. Prompted by these challenges, the government has taken initiatives to mitigate the problems. One of these initiatives is the MSE development strategy adopted in 1997. The policy envisages not only reducing poverty in urban areas but also nurturing entrepreneurship and laying the foundation for industrial development. The strategy was revised in 2011 with renewed interests and more ambitious targets on employment and number of entrepreneurs transiting to a medium level. The purpose of this study is to assess the implementation of the strategy and the challenges encountered in Addis Ababa with particular reference to Lideta sub-city. Data were collected from both primary and secondary sources. The primary sources were collected from the MSE operators in the sub-city, while secondary data were collected from Lideta sub-city MSEs Development Agency's annual reports and the performance report of the Growth and Transformation Plan. The study shows that positive results were achieved in terms of employment creation, savings, enterprise growth, and business ownership. The survey reveals that government support has been provided in different forms to help MSEs grow. However, a range of problems persist, including poor management skills of MSE operators, lack of capital, lack of land, and high competition due to an overcrowded market. When seen in terms of business types, trade dominates the MSE with little involvement in the manufacturing sector, which is the priority area of the national MSE development strategy. The researcher observed that the growth of the MSE requires a concerted effort of the stakeholders, mainly the government and MSE owners and operators. The city government should identify growth-oriented MSEs based on their potential for job creation, poverty reduction, local raw material utilization and ease of transformation to medium and large-scale businesses in a short period. Then relevant training must be provided and to this effect, TVET colleges need to be enhanced to play the role.

Key words: Micro and small enterprises, Employment creation, MSE strategy

Introduction

Enterprises are the most important components of the economy representing organizations which consist of two or more persons, and which, by economic means, perform activities whose goal is to make profit. MSEs are part of these enterprises with unique characteristics and roles.

MSE is an acronym that stands for micro and small enterprises. Though these enterprises play a vital role in many nations' economic growth and development, there is no generally accepted definition. Different countries, agencies and institutions have defined MSEs differently to suit their own concepts and operations.

The importance of the micro and small enterprises sector in Ethiopia is evident from their relatively large presence, share in employment, and small capital requirement. Thus, at the level of strategy and policy, these roles of MSEs have received recognition. They are seen as a means of providing employment, alleviating poverty, ensuring food security, and private sector development (Gebrehiwot & Wolday, 2006).

The MSEs Sector is the second largest employment-generating sector in Ethiopia, following agriculture. A national survey conducted by the Ethiopian Central Statistical Authority (CSA, 2005) in 48 major towns indicates that nearly 585,000 and 3,000 operators are engaged in micro and small scale manufacturing industries respectively, which comprise

about 740,000 laborers. Accordingly, the labor force engaged in the micro enterprises and small scale manufacturing industries is more than eight-fold (740,000 persons) that of the medium and large-scale manufacturing industries (90,000 persons).

Urban unemployment in Ethiopia still stands high. The uncontrolled migration from rural to urban areas, and the huge demand for job opportunity is a pressing problem in the Ethiopian urban centres. Tens of thousands of young people migrate to the cities as agriculture failed to feed and sustain rural populations due to a high rate of population growth, poor technology, lack of capital accumulation, and unfavorable climatic conditions. Hence, the role of MSEs in alleviating the problem in urban unemployment is touted as indispensable. With this in mind, the government prepared a Micro and Small Enterprise Development Strategy in 1997 (later modified in 2011). MSEs development agencies were established at the federal and regional levels to give support and follow up the MSEs operation.

Similarly, Addis Ababa City's MSEs Development Agency was established to develop, support and coordinate the MSEs in the city. There are also MSEs development agencies within the ten sub-cities. Each woreda (district) within the sub-cities also has its own MSEs development branch. Lideta sub-city is one of the sub-cities of the Addis Ababa City Administration. This research will assess the performance and challenges of MSEs in Lideta sub-city with respect to job creation, market linkages, savings and MSE's growth levels.

A Review of MSEs Development Strategies in Ethiopia

The first MSE development strategy was developed in 1997. This strategy had the objectives of facilitating growth and equitable development, creating long-term jobs, strengthening cooperation amongst MSEs, establishing a basis for growth to medium and large enterprises, and export promotion. The strategy identified priority sectors including food production, textiles and clothing, metalwork and crafts, agro-businesses, small-scale farming and fishing, small builders and contractors, small exporters, small scale tourism, and start-up and expansion firms. Following the publication of the strategy document, the federal government set up the Federal

Micro and Small Enterprise Development Agency (FeMSEDA) in 2008. The regional states have also developed similar strategies based on their context and in tandem with the FeMSEDA, to facilitate the implementation of these strategies.

FeMSEDA has become the nodal agency and was mandated to formulate policies and coordinate their implementation. The agency also provides training of trainers, disseminates developed prototypes, provides information and consultancy, facilitates marketing avenues, develops a technology database to be used by regional agencies or designated organs and other concerned institutions.

In order to promote MSEs, the agency is also responsible for establishing a coordinated working relationship with regional government organs, regional agencies responsible for MSE development, NGOs and the private sector.

The Definition of MSEs in Ethiopia

In Ethiopia, until 2011, there was a lack of a uniform definition at the national level to have a common understanding of the MSEs sector. While the definition by the Ministry of Trade and Industry (MoTI) used capital investment, the Central Statistics Authority (CSA) used employment as a yardstick. According to the MoTI (2004):

Micro enterprises are those business enterprises in the formal and informal sector, with a paid up capital not exceeding Birr 20,000 and excluding high tech consultancy firms and other high tech establishments. On the other hand, CSA (2004) categorizes enterprises into different scales of operation on the size of employment and the nature of equipment. According to CSA (2004):

Establishments employing less than ten persons and using motor operated equipment are considered as small-scale manufacturing enterprises.

According to CSA (2004), enterprises in the micro enterprise category are subdivided into informal sector operations and cottage industries. Cottage and handicraft industries are those establishments performing their activities by hand and using non-power driven machines. The informal sector is defined as household type establishments or activities, which

are non-registered companies and cooperatives operating with less than 10 persons. All enterprises employing ten or more workers are considered as medium and large enterprises.

The definition given in the 1997 strategy document was also based only on paid capital or capital investment as most businesses were confined to family manpower and lack of availability of manpower information of the sector. An enterprise is categorized as micro if its paid up capital is less than or equal to 20,000 ETB (Ethiopian Birr). Similarly, an enterprise is considered small when its paid up capital is less than or equal to 500,000 ETB.

The limitation of this definition is that it does not provide information on job creation, size and asset base. This is because employment and asset ownership are not part of the definition. Secondly, the definition does not differentiate between the manufacturing (industry) and services. This gap prompted the government to revise the definition of MSE in the later years of the sector's development. The revised definition of 2011 considers human capital and asset as the main measures. It addresses the limitations of the 1997 definition and specifies minimum asset requirement for services and industry differently.

According to the strategy, textile, garment, leather production, food and beverage processing, metal works, metal engineering, wood works and agro-processing are given priority attention under the manufacturing sector. Likewise the strategy clearly names sub-contracting, building material provision, traditional mining, cobblestones, and infrastructure subcontracting under the construction sector.

The trade sector has also been designed to accommodate wholesalers and retailers of domestic and raw materials supply as a key engagement area. Rural transport, cafés, storage, tourism, managerial advisory, beauty salons, electronics, software development, and internet cafés are some of the areas identified under the service sector.

Similarly areas of engagement like beekeeping, poultry, modern irrigation, and production of vegetables and fruits are mentioned as key, and are given due attention in order to attain the strategic goals set by the government.

This shows that both micro and small-scale enterprises are categorized into the industrial sector and service sector. Under the industry sector (manufacturing, construction and mining) micro enterprises are defined as an enterprise that operates with five people including the owner and/or their total asset does not exceed Birr 100,000.

Under the service sector (retailer, transport, hotel and tourism, ICT and maintenance service) micro enterprises are defined as enterprises that operate with five persons including the owner of the enterprise and/or the values of total asset does not exceed Birr 50,000. Under the industry sector (manufacturing, construction and mining) small enterprises are defined as operating with 6-30 persons and/or with a paid up capital of total asset Birr 100,000 and not exceeding Birr 1.5 million.

Table 1. *The Classification of MSEs*

Type of Enterprises	Sector	Man power	Total asset
Micro Enterprise	Industry	< 5	< Birr 100,000
	Service	< 5	< Birr 50,000
Small Enterprise	Industry	6 to 30	< Birr 1.5 million
	Service	6 to 30	< Birr 500,000

Adapted from “Federal Micro and Small Enterprises Development Agency Establishment Council of Ministers Regulation No. 201/2011,” *Federal Negarit Gazeta, March 24, No. 24, 17th year, p. 5766.* Addis Ababa, Ethiopia.

When ambiguity is encountered between manpower and total assets as explained above, total asset is taken as the primary yardstick in the identification of the sector (FeMSEDA, 2011).

MSE Support Packages in Ethiopia

The country adopted a layered policy support in which MSEs are categorized into three different stages namely, startups, growing, and mature. *Start-up* stage enterprises refer to those enterprises found at their establishment stage and comprises a group or individual entrepreneurs that seek various supports to make their enterprise operational. The basic challenges at this stage include lack of initial and working capital, poor knowledge of business management and entrepreneurship, and lack of know-how about the different government policies and directives related to the sector. In order to mitigate these challenges, FeMSEDA has designed a strategy that

focuses on facilitating access to initial capital, supporting MSEs in the formalization and legalization process and provision of training in business management, entrepreneurship and production technique.

Growing stage enterprises refer to those that are competent in the market in terms of price and quality and successfully utilize the various government support packages and are profitable in their business. However, enterprises at this stage also suffer from different challenges like financial constraint, lack of appropriate technology and technical skill, and absence of sufficient working and sales premises.

Enterprises are considered to have reached the *maternity stage* when they are fully profitable and engaged in further expansion and investments in the sector. At this stage, FeMSEDA has a strategy that aims to strengthen enterprises in terms of productivity and product quality. Moreover, knowledge of international standards and better production technology are disseminated to enterprises.

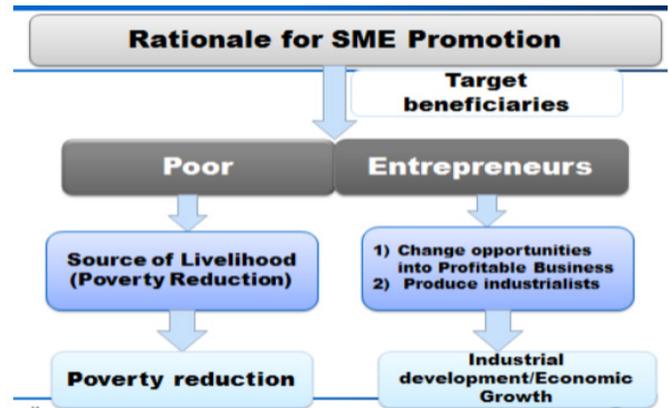
It can be concluded from the strategy document that the kind of supports provided to the MSEs depends on their level of development. Supports given at the *start-up stage* are business development services like the provision of start-up capital, motivation to and facilitation for the enterprises to legally register, BDS (business development services), entrepreneurial capacity building and technical trainings are provided.

MSEs at the *growth stage* are supported in finance, skill and technology capacity, linkage and market opportunity, diversification and provision of production and market centres.

Finally, *mature* MSEs are given support to enhance their competency; provision of tools and material lease that can help them transfer from a small to medium enterprise; recognize and certify those transitioned to medium enterprises. By providing these supports, the agency aims to achieve the following national development goals.

- Facilitate economic growth and bring about equitable development
- Create long-term job opportunities
- Provide the basis for medium and large scale enterprises

Figure 1. Beneficiaries of MSE Promotion and Development



Adapted from “Identifying Key Success Factors and Constraints of Ethiopia’s MSE Development: An Exploratory Research,” by B. Assefa, A. Zerfu, and B. Tekle , 2014, *Ethiopian Development Research Institute Report* 18, p. 3(<https://doi.org/10.13140/RG.2.11572.4963>)

Research Methodology

A mixed approach was selected as an appropriate research design in this study. Quantitative data were collected from performance reports of the MSEs and supported by qualitative data gathered and narrated from the interviews and secondary sources. This study is mainly a descriptive cross sectional in nature, which aims at analyzing and explaining how MSEs are performing and the challenges encountered.

Secondary data were collected from Lideta sub-city MSEs Development Agency’s annual reports and the first GTP (Growth and Transformation Plan) performance report of the agency.

Data Type, Sources and Collection Tools

For the realization of the research objectives, qualitative and quantitative types of data were collected. The primary data were gathered by means of structured questionnaires from selected members of MSEs operators. The structured questionnaires were translated into Amharic for ease of communication. Interviews with two officers from selected *wereda* (districts) MSEs development offices, and one officer from Lideta sub-city MSEs development agency were conducted.

Data gathered through the survey were

analyzed using descriptive statistics. Alternatively, information obtained through key informant interviews was analyzed qualitatively. Furthermore, data collected from secondary sources was analyzed quantitatively and qualitatively to substantiate the results of primary data.

Description of the Study Area

This study was conducted in Addis Ababa, the capital city of the Federal Democratic Republic of Ethiopia. Addis Ababa is also a seat of international organizations such as the African Union (AU) and the United Nations Economic Commission for Africa (UNECA). Consequently, it has become a centre to many people coming from all corners of the country looking for employment opportunities. Hence, with rapid natural population growth and a high rate of rural-urban migration, Addis Ababa is one of the fastest growing cities in Africa. This creates critical problems such as unemployment and congestion.

For administrative purposes, the city is divided into ten sub-cities. The sub-cities are further sub-divided into weredas (neighborhoods), which are the third and smallest organizational units in the city. There are 116 weredas in the city administration (Wodajo, 2016).

Table 2. The Sub-cities, Their Population Size and Areas in sq km

Ser No	Sub-city	Population	Area in Sq. Km
1.	AkakiKaliti	205,385	118.08
2.	Nifas silk lafto	358,359	68.30
3.	KolfeKeranio	485,952	61.25
4.	Gulele	303,226	30.18
5.	Lideta	228,547	9.18
6.	Kirkos	250,665	14.62
7.	Arada	239,638	9.91
8.	Addis ketema	289,344	7.41
9.	Yeka	392,781	85.98
10.	Bole	350,102	122.08

Adapted from “Population Estimation of Ethiopia for All regions at Wereda Level from 2014-2017,” 2013, Central Statistics Agency, Addis Ababa, Ethiopia.

Lideta is located in the central part of Addis Ababa. As per the 2007 national census report of the Central Statistical Agency (CSA), the sub-city has a total population of 201,713 out of which 96,272 (47.7%) are male and 105,441 (52.3%) are female. It consists of 10 *woredas* (districts).

Figure 2. The Map of Addis Ababa and Lideta sub-city



Adapted from “Mapping of plantation forest in the upper catchment of Addis Ababa,” by M. A. Desta and F. D. Tulu, 2015, *International Journal of Environmental Sciences* 4(3), p. 160. [www.researchgate.net > publication > 281460707](http://www.researchgate.net/publication/281460707). Accessed in January 2019.

Sampling Technique

Since 2011, there were 2052 MSEs in the sub-city with 16,821 operators established in the areas of manufacturing, construction, urban agriculture, service, trade and cobblestone. For the purpose of this research, however, MSEs which were established in 2014/15 were included in the study. Within the selected time framework, 635 MSEs with 2,218 operators had been established in the 10 *woredas* of the sub-city. There are 63 MSEs on average in each *woreda*. Three MSEs were selected from each *woreda* using purposive sampling to include all the business sectors. Five MSEs from each business area namely, manufacturing, construction, urban agriculture, service, trade and cobblestone were selected using purposive sampling and a total of 30 MSEs were selected. Finally, two members from each selected MSEs were contacted using purposive sampling method. Furthermore, interviews were conducted with selected officers based on purposive sampling method because they were found indispensable and resourceful in the area.

Sample Size

Questionnaires were distributed to the 60 members who were selected; two from each of the selected 30 MSEs. A total of 60 respondents 5 from each activity and 6 from each woreda became the final sample size of the research. Three experts were interviewed to collect primary data in addition to the 60 respondents. A total of 53 respondents returned the questionnaire.

Profile of the Respondents(MSE operators)

Table 3. Respondents' Sex and Age

Variable	Number	Percent
Sex		
Male	31	58.5%
Female	22	41.5%
Total	53	100%
Age		
15-30	34	64.1%
31-45	17	32.1%
>45	2	3.8%
Total	53	100%

Table 3 shows that the majority of the respondents, 58.5%, are male while 41.5% of them are female.

Table 4. Educational Status of the Respondents

Variable	Number	Percent
Educational Status		
Illiterate	-	-
Write and read	4	7.5%
1- 4 grades	5	9.4%
5- 9 grades	12	22.7%
10 th grade complete	16	30.2%
TVET graduates	13	24.5%
>1 st degree	3	5.7%
TOTAL	53	100%

The majority of the respondents did not complete secondary school. This means that 69.8% of the respondents are not technical and vocational education training (TVET) graduates. It is only 24.5% of the respondents who are graduates of TVET. This is contrary to the national MSEs development strategy which requires MSEs to be run mainly by TVET graduates (MSEs strategy, 2011). Among the respondents, 5.7 % are first-degree holders. Applied Biology and History, their fields of specialization, are not relevant to their current job.

The National Technical and Vocational Education and Training (TVET) Strategy (2008), integrates MSEs into the formal educational system of the country. The overall objective of the National TVET Strategy is to create a competent, motivated, adaptable and innovative workforce in Ethiopia contributing to poverty reduction and socio-economic development by facilitating demand-driven, high quality technical and vocational education relevant to all sectors of the economy.

Data Presentation and Analysis

The Addis Ababa City Administration established the MSEs Development Agency which deals with the organization, support and follow-up of the city's MSEs in line with the national MSEs strategy. Each sub-city and every *woreda* within them also established its own MSEs development agency to have a close supervision of the activity of MSEs within its respective jurisdiction.

The Profile of the Target MSEs in the Lideta sub city in Terms of Business Category

Table 5 indicates the number of MSE operators in different business types.

Table 5. MSEs Organized in 2014/2015 with Their Respective Sector

Major Sectors	Number of MSEs organized	
	No	%
Manufacturing	63	9.9
Construction	100	15.7
Urban Agriculture	9	1.4
Service	46	7.2
Trade	393	61.8
Cobblestone	24	4
Total	635	100

Adapted from "Lideta sub city MSEs Development Agency GTP I Performance Report," 2015, Addis Ababa, Ethiopia

Table 5 shows that trade takes the lion's share of the established MSEs with 61.8%. Whereas only 1.4% of the newly established MSEs are engaged in urban agriculture. On the other hand, though the national MSEs strategy gives high attention to the manufacturing sector, only 9.9% of the MSEs are engaged in the sector. It can be concluded from this that there is a need by the city government and stakeholders to promote the manufacturing sector in the sub-city.

Jobs Created by the MSEs

The fundamental reason for creating and supporting MSEs is to alleviate youth unemployment in a city whose demography is dominated by young people. Job creation is the prominent objective of all MSEs in Ethiopia.

Table 6. Jobs Created by the MSEs in the Sub-city Under Major MSE Categories

Business Sectors	Number of Jobs Created		Total	
	Permanent	Temporary	No	%
Manufacturing	2593	823	3416	16.4%
Construction	4957	2722	7679	36.7%
Urban Agriculture	482	134	616	2.9%
Service	5181	1231	6412	30.6%
Trade	1818	241	2059	9.8%
Cobblestone	-	748	748	3.6%
Total	15,031	5899	20930	100%

Adapted from “Lideta sub city MSEs Development Agency GTP I Performance Report,” 2015, Addis Ababa, Ethiopia.

The construction sector created 36.7% of the total jobs and the service sector takes second place by creating 30.6% of total jobs. Manufacturing which is the focus of MSEs policy and strategy ranks third creating only 16.4 % of the jobs created during the period specified. Urban agriculture takes last place with 2.9%. It can be concluded that though greater focus and support is given to the manufacturing sector, it is lagging behind the other sectors in creating jobs in the sub-city.

Table 7. Respondents’ Prior Status Before Joining MSEs

Prior Status	Male		Female		Total	
	No	%	No	%	No	%
Jobless	18	34%	16	30.2%	34	64.2%
Doing the same job individually	6	11.3%	2	3.8%	8	15.1%
Was at school	7	13.2%	4	7.5%	11	20.7
Total	31	58.5%	22	41.5%	53	100%

Table 7 shows that 64.2% of respondents were jobless before joining MSEs. A small portion of respondents were doing the same job on their own. Only 20.7% were at school previously. This shows that the number of TVET graduates joining the MSEs sector is very minimal.

The main reason to join micro and small enterprises include self-help and family support. Interview responses indicate that reasons for joining the sectors also include the desire for independence, family/friend advice, loss of previous job opportunity, and getting a better income.

The city has many unemployed youth residents and thus MSEs should target this section of the population.

The unemployment problem in Addis Ababa stands at 16.8% as it is indicated in Table 8.

Table 8. Unemployment Rate in Addis Ababa

	Survey Periods					
	May 2009	May 2010	March 2011	March 2012	April 2014	March 2015
Total	20.4	18.9	18.0	17.5	17.4	16.8
Male	12.2	11.0	11.4	11.4	11.3	10.4
Female	29.6	27.4	25.3	24.2	24.1	23.8

Adapted from “Statistical Report on the 2016 Urban Employment and Unemployment Survey,” by Central Statistical Agency, 2016, CSA Statistical Bulletin 581. Addis Ababa City Administration. Ethiopia. <https://catalog.ihnsn.org/index.php/catalog/7327/download/86773>

Small firms employ people whose labour market characteristics make them most likely to be unemployed and marginalized. SMEs are more likely to employ young job seekers than those in middle age.

Table 9. Rankings of MSEs

Type of MSEs	Rank	Number of MSEs	
		Number	Percent
Micro	Startup	378	79.6%
	Growth	18	3.79%
	Maturity	0	0
Small	Startup	18	3.79%
	Growth	46	9.68%
	Maturity	10	2.11%
	Growth Medium	5	1.05%
Total		475	100%

Adapted from “Lideta sub city MSEs Development Agency GTP I Performance Report,” 2015, Addis Ababa, Ethiopia.

The majority of the MSEs, 79.6%, are ranked at Startup Level. Only 3.79% of MSEs are listed as Growth Level. This means that a larger number of the MSEs remain under the protection of the government against the real competition of the market because at the startup level they demand more support from the government. This large mass of MSEs at startup level narrows the space for the newcomers because in principle, when they graduate to the next level, newcomers will take their place. The support the government provides them would have been used to create other MSEs. In the small enterprises category there is a better scenario as only 3.79% of the small enterprises are at the Startup Level and more enterprises, 9.68%, are at the Growth Level. There are only 2.11% at Maturity Level and 1.05% at Medium Startup Level.

One of the interviewees stated that once an enterprise is promoted to medium level, strict control that requires bookkeeping, submission of audit reports and VAT and paying tax follows. In addition, there is no easy access to credit as before. These made MSEs reluctant to graduate to the medium level.

Table 10. *Number of MSEs Upgraded to Medium Level*

Fiscal Year	2010/2011 (2003 EFY)	2011/2012 (2004 EFY)	2012/2013 (2005 EFY)	2013/2014 (2006 EFY)	2014/2015 (2007 EFY)	Total
No. of Transformed	15	2	24	7	5	53
No. of Organized MSEs	385	420	310	302	635	2052
Percentage of transformed MSEs to the total Number of MSEs	3.8%	0.47%	7.74%	2.32%	0.79%	2.58%

Adapted from “Lideta sub city MSEs Development Agency GTP I Performance Report ,” 2015, Addis Ababa, Ethiopia.

Table 10 depicts that only 2.58 % of MSEs in the sub-city upgraded to medium level enterprises in the past five years. This shows high dependence of the MSEs on the support of the government. Supporting MSEs at their startup stages is important; however, supporting them for the whole of five years and transforming only 53 MSEs to a medium level has never been the intention of the MSEs national strategy. The MSEs will not be competitive on their own in the market if they are not exposed to competition.

The government has provided different business support policies to enhance business performance and to create a conducive business environment for MSE growth. As stated earlier this policy support includes access to: markets, finance, industrial extension, training and technological support.

One of the major challenges that hampers the growth and development of MSEs in Ethiopia is access to a sufficient and sustainable market. To solve this problem, the government is intervening in three ways. First, the government itself buys goods directly from MSEs. Second, the government tries to link MSEs with large and medium enterprises in the market in the form of subcontracting and input suppliers. Third, a number of bazaars and trade exhibition have been organized by MSEs development agencies to promote MSEs’ products and to link them with large and medium enterprises and foreign buyers (Assefa et al., 2014).

Market Development

Creating a market linkage plays a pivotal role in the effectiveness of micro and small enterprises at all levels of their development.

Table 11. *Value of the Market created for MSEs*

Business sectors	Amount in Ethiopian Birr
Manufacturing	51,035,580
Construction	26,969,424
Urban Agriculture	1,173,501
Service	15,237,917
Trade	3,773,299
Cobblestone	38,303,421
Total	136,493,142

Adapted from “Lideta sub city MSEs Development Agency GTP I Performance Report,” 2015, Addis Ababa, Ethiopia.

According to Lideta sub-city MSEs Development Agency a market worth of 1,010,106 Birr was created through bazaars and exhibitions which benefited 3,689 members of MSEs in the sub-city.

Saving

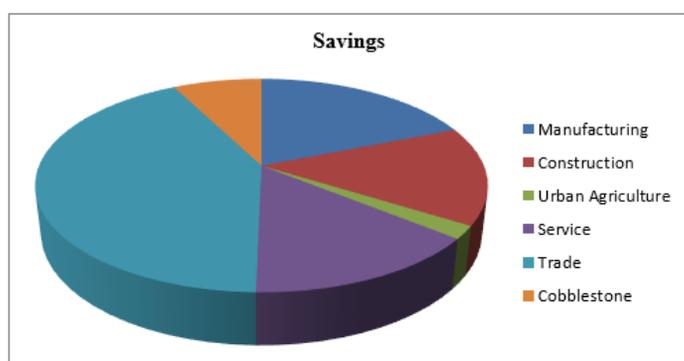
The 2011 MSEs strategy makes saving a precondition for getting loans and running a business. Saving does not only help enterprises to pay loans but to expand their business by re-investing it for long-term survival and viability

Table 12. Savings Made by the MSEs Operators

Business sectors	Amount saved in Ethiopian Birr
Manufacturing	6,257,832
Construction	4,932,512
Urban Agriculture	645,618
Service	4,807,642
Trade	13,916,525
Cobblestone	2,510,346
Total	33,070,475

Adapted from “Lideta sub city MSEs Development Agency GTP I Performance Report,” 2015, Addis Ababa, Ethiopia.

Figure 3. Savings Secured from MSEs in Pie Chart



Adapted from “Lideta sub city MSEs Development Agency GTP I Performance Report,” 2015, Addis Ababa, Ethiopia.

Much of the savings amount is contributed by the trade sector. This is because the sector benefited significantly from government loans to the disadvantage of the other sectors specifically the manufacturing sector. Since savings determines the amount of loan given, the manufacturing sector, which is the priority area, is at a disadvantage compared to the trade sector. From this one can say that it is inevitable that future loans will benefit the trade sector more than the manufacturing.

Challenges Confronting MSEs in the City

Despite their contribution to economic development and job opportunity, micro and small enterprises in Addis Ababa are facing a variety of problems that hinder their growth and development.

In the Lideta sub-city though some achievements were attained, there is still high unemployment within the sub-city, the jobs created by the MSEs could not match demand and the MSEs sector is underperforming with respect to job creation and growth. The major challenges facing this sector are presented in the following section.

Lack of Access to Land

Until recently, MSEs were provided land by the municipality to be used as working space. Lately, it was observed that the provision of land had put high pressure on the land resources of the cities as the number of MSEs grew significantly. There is now a shift from providing land to providing premises for rent. While such strategy is useful to alleviate the pressure on land, it has its own financial implication for MSE operators. Even then, the number of MSE operators seeking the shades (city-built structures to shelter MSE operator and their goods) is much higher than the city can supply.

Low Access to Finance

Shortage of working capital, a high interest rate by lending institutions and complicated loan application procedures were identified as important factors for the performance of enterprises.

Credit services are provided based on MSEs performance and the amount of savings in the preceding six (6) months. After the newly established enterprise is evaluated for its performance and has saved for 6 months, it will get 60% of its savings from microfinance institutions mainly Addis Saving and Credit Association. The enterprises are expected to payback the credit within five years by paying 20% of the loan every year.

Lending rules are strict because MFIs (micro finance institutions) in Ethiopia are regulated, inspected, and gauged against high portfolio quality and financial prudence by the National Bank of Ethiopia (NBE).

As a result, MFIs cannot afford to experiment or cater to clients with weak business prospects or management capacities.

So many respondents stated the problem of financing MSEs is not so much the sources of funds but the accessibility due the stringent conditions set by financial institutions, lack of adequate collateral and cost of accessing funds.

Lack of Trained Work Force and Management Skills

There are operators which start businesses without a sound business plan despite the business development services provided by the MSE agency. Hence business failures result from lack of managerial competence and experience. Lack of essential and required expertise in production, maintenance, marketing and finance can lead to funds misallocation and utilization due to wrong decision-making. Hence, managerial experience among SMEs is important as it will influence the manner in which the SMEs operate and how they are able to interact with the environment.

Training

In most parts of Ethiopia, two types of training are provided for MSEs: technical and business training. Extension workers provide business training while regional or city TVET colleges provide technical training. The duration of the training varies depending on the type undertaken. The first variable considered in assessing the effectiveness of market linkages as institutional support was the BDS. The focus of the BDS was training the workers to develop an effective and efficient business plan for their enterprises and of advising and consultancy. However, in the provision of training there are problems such as non-practical training modules and a passive participation of MSE operators. Hence, it was suggested that the training provided by the city has:

- To be demand driven
- To be supported by practice
- To be sector specific
- Knowledgeable and skilled trainers must be assigned

Stiff Competition

Enterprises tend to compete for the same customers. The magnitude of this hindrance is higher for those concentrated in one area, as they tend to apply a copy-paste strategy and thus produce similar products.

Hence, worthy of attention is the level of competition being faced by MSEs which is mostly from other MSEs operators in the same business, and large and medium enterprises. Long-term observation of the Ethiopian markets clearly shows a lack of product diversity in which similar products overcrowd the markets. Their products have no unique difference from other similar competing enterprises; they do not have a niche market target for their product and they do not use unique technology for their products.

Market Problems

In principle, market linkage is an attempt to create demand for MSE products so that they can sustain their operation. Among the marketing factors that affected the performance of enterprises are: inadequate market, difficulty of searching new markets, poor quality products for the market, lack of establishing a market network and lack of market research. The means of market used so far, include government institutions, exhibitions and bazaars and self-promotion (self-effort) only.

Operators' Problems

No matter how better the support provided to MSEs by the government and the stakeholders is, success depends on MSEs operators personal effort and commitment. There is a saying, which goes "our support without your effort will not bring result". There must be entrepreneurial skill that should drive creativity and growth.

It is important to note that the biggest difficulty in entrepreneurship development is related to the "mindset" or poverty of the mind. This is translated into the following symptoms:

- Poor work culture in public offices, organizations, households and in individual personal lives;

- An attitude of dependency: always expecting the government/donor to come up with packages;
- Apathy, failing to see potentials that are waiting to be tapped;
- Lack of commitment to desired mission.

The study also reveals that inadequate or lack of utilities (electricity, water and telecommunication), transport, business licensing and permits, tax administration and tax rates pose obstacles to firms' operation.

Conclusion

In Ethiopia, the fact that MSEs are small and labor-intensive makes them able to absorb a large mass of less educated or less skilled labor that is abundantly available. The government has recognized the important role that the micro and small-scale enterprises play in the national development particularly, in the creation of employment opportunities and the reduction of poverty. To this effect, the government created an MSE development strategy in 1997 to support and promote the sector. This support includes access to working space (shades), access to markets (linkages), access to finance including guarantee provision, access to industrial extension (various business development services such as market linkages and technical support) and access to training and technology.

This study was conducted to assess the implementation of the strategy and the challenges encountered in Addis Ababa with particular reference to Lideta sub-city. The study shows that some positive results were achieved in terms of employment creation, saving, enterprise growth and business ownership.

Furthermore, the study revealed that MSEs operating in the study area have been confronted with a number of challenges. Most of the MSEs owners complain about the lack of: finance, working space, access to market or absence of linkage to market, managerial skills, and face stiff competition.

The growth of the MSE requires concerted effort of the stakeholders mainly the government and MSE owners and operators. The city government should identify growth-oriented MSEs based on their potential for job creation, poverty reduction, local raw material utilization and ease of transformation to

medium and large-scale businesses in a short period. The effectiveness of government interventions depends on identifying key factors that foster or inhibit growth of MSEs because MSEs are heterogeneous in objective, capability and motivation.

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