

# **COST REDUCTION POTENTIAL OF ETHIOPIAN AIRLINES**



**A PROJECT REPORT**

**SUBMITTED IN PARTIAL FULFILLMENT FOR THE**

**REQUIREMENT OF**

**DEGREE OF MASTERS IN BUSINESS ADMINISTRATION**

**BY: ASHENAFI WOUBNEH BEZABIH**

**ADVISOR: ZEWDIE SHIBRIE (DR.)**

**ADDIS ABABA UNIVERSITY**

**FACULTY OF BUSINESS AND ECONOMICS**

**MBA PROGRAM**

**JUNE 2008**



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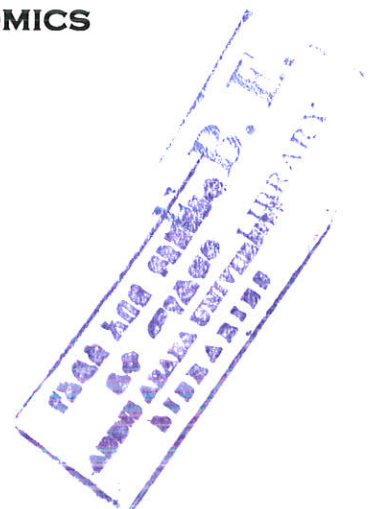
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“I can do all things through him who gives me strength”. Phil.4:13 Thank  
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# Table of Contents

Acknowledgements.....	ii
List of Tables.....	v
List of Figures.....	v
List of Appendices.....	vi
Acronyms.....	vii
Abstract.....	viii
<b>CHAPTER 1 – Introduction .....</b>	<b>1</b>
1.1 Background of the Study.....	1
1.2 Background Information of the Company.....	3
1.3 Statement of the Problem.....	6
1.4 Objectives of the Study.....	7
1.5 Significance of the Study.....	8
1.6 Scope and Limitations of the Study.....	8
1.7 Research Methodology.....	9
1.8 Organization of the Paper.....	12
<b>CHAPTER 2 - Review of Related Literature.....</b>	<b>13</b>
2.1 Overview.....	13
2.2 Airline Costs.....	15
2.3 Importance of Cost Reduction.....	21
2.4 Considerations in Cost Reduction.....	23
2.5 Sources of Cost Reduction.....	25
2.6 Cost Reduction Program.....	30

**CHAPTER 3 - Data Presentation, Analysis and Interpretation.....32**

3.1 Characteristics of Respondents.....33

3.2 General Cost Reduction Issues.....37

3.3 Efforts toward Cost Reduction.....51

3.4 Causes for Cost increases and Unnecessary Costs.....54

**CHAPTER 4 – Conclusions and Recommendations.....63**

**Bibliography**

**Appendices**

## **List of Tables**

Table 1 – Age distribution of Respondents.....	33
Table 2 – Gender Ratio.....	33
Table 3 – Education level of Respondents.....	34
Table 4 – Work experience of Respondents.....	35
Table 5 – Respondents by Departments.....	36
Table 6 – Employees’ involvement in cost reduction.....	38
Table 7 – Consolidation of activities.....	39
Table 8 – Barriers to Specialization.....	43
Table 9 – Additional cost incurrence.....	46
Table 10 – Level of Efficiency.....	48
Table 11 – Idleness of Equipment and/or Manpower.....	49
Table 12 – EAL’s Potential of cost reduction.....	51
Table 13 – Denied Boarding and Delayed Flight Compensation data.....	55

## **List of Figures**

Figure 1 – Overall Efficiency.....	49
Figure 2 – Quarterly Denied Boarding and Delayed Flight Compensation data.....	56
Figure 3 – Quarterly cost data on Lost or Damaged Baggage Claim.....	56

## List of Appendices

Appendix 1 – Corporate Organization Structure

Appendix 2 – Questionnaire and Interview questions

Appendix 3 – Former structure of Purchasing and Materials Management

Appendix 4 – Current structure of Purchasing and Materials Management

Appendix 5 – CEO's letter to employees



## Acronyms

ACE – Achieving Competitive Excellence  
DBC - Denied Boarding Compensation  
EAL - Ethiopian Airlines  
EMIS - Executive Management Information System  
FAA – Federal Aviation Administration  
IATA – International Air Transport Association  
IOCC – Integrated Operations Control Center  
IT – Information Technology  
KLM – short for Royal Dutch Airlines  
US – United States  
USA – United States of America



## **Abstract**

Ethiopian Airlines, just like many other Airlines around the world, is suffering from the black footprints of the skyrocketing fuel price. The existing fierce competition among rival airlines makes the situation aggravated. Hence, unless otherwise it tries to keep costs as low as possible, the situation can result in significant financial losses and going into bankruptcy.

In this study, it is tried to assess whether Ethiopian Airlines has the potential to reduce its costs. Questionnaires had been distributed to selected employees and interviews had been conducted with selected department managers to collect the relevant data. Observations have also been made.

Flight delays & cancellations, denied boardings, poor baggage handling system, operating dissimilar aircraft family, unconsolidated and uncoordinated purchases, personal consumption of excess meal, beverages & hygienic items, expiration of purchased chemicals, and increase in the number of Aircraft components sent for foreign repair are found to be the major findings of the study that take part in the increased costs of the Airline.

The study shows that there is a potential for reduction in costs. The study also forwards some recommendations that can be used to mitigate the problem and prevent any negative consequences on the present and future performance of the company.

## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background of the Study**

In the prevailing turbulent and highly competitive environment, it is not easy to survive and stay profitable. Rising prices, shifting fuel rates, global competition...etc. have made cost control and reduction a moving target. Business organizations strive to stay in business through devising different strategies. Increasing costs drive profits down to negatives or they offset the profit that could have been earned. Previous studies confirmed that cost is the major determinant in pricing the Airline product. (Wells, 1994: p.337)

Customers have now more choices than ever before and they do have the opportunity to get instant and timely information about these choices. There are too many banks, too many retail stores, too many Airlines flying to the same place...etc. Hence, they will have no sufficient reason to continue doing business with the organization unless otherwise it remains competitive and satisfy their needs. Business organizations, therefore, compete on the basis of so many dimensions to survive.

The two challenges – competition and ever-increasing costs – endanger the survival of most business organizations. Those that can't come up with defensive mechanisms to these challenges would be earning below the average profit. Hill and Jones said that international businesses often face pressures for cost reductions and a firm must try to lower the costs of value



creation to respond to these pressures. (Hill & Jones, 2007: p.277). It is obvious that the internal environment is more controllable than the external one. Thus, it is apparent from this that the necessity of assessing the internal environment (activities, processes ...etc) and trying to reduce costs is not disputable.

In recent years, for example, SouthWest Airlines has been by far the most successful American Airline, probably the most successful international Airline. In 2002, it was almost the only profitable Airline in the USA. Its capitalization is as great as the three major American Airlines combined. It has come through the crisis of recession and the terrorist attacks of September 11, 2001, avoiding the serious fall into deficit which has afflicted the other Airlines. It has achieved its strong position by a strategy of cost minimization and, following from low costs, price leadership. (White, 2004: p.315)

Finally, studies also show that, lower cost is a significant competitive advantage, other things being equal. The lower its costs, the better able is an enterprise to charge a lower price. One of the basic variables in achieving competitive advantage is price, which in turn rests on costs. It is time to consider a pure strategy of cost leadership. (White, 2004: p.304). Business organizations should, therefore, make sure that they are moving toward operating at the minimum possible cost. Ethiopian Airlines, being a subset of the world of business organizations, should strive to minimize its costs as much as possible.

## **1.2 Background Information of the Company<sup>1</sup>**

Ethiopian Airlines (Ethiopian), Africa's commercial aviation pioneer, made its maiden international flight to Cairo on April 8, 1946. Since then, it has steadily expanded its services across Europe, the USA, Asia, the Middle and Far East. Currently, it is flying to 70 international destinations. The airline operates a modern fleet of 27 jet aircraft.

During the past sixty plus years, Ethiopian has become one of the continent's leading carriers, unrivalled in Africa for efficiency and operational success, turning profits for almost all the years of its existence. Operating at the forefront of technology, it has also become one of Ethiopia's major industries and a veritable institution in Africa. It commands a lion's share of the pan African network including the only daily east-west flight across the continent. Ethiopian serves those international destinations with 157 weekly international departures from Addis Ababa and a total of 410 weekly international departures worldwide.

The experience of more than 60 years has been priceless and has helped make Ethiopian what it is today.

Ethiopian cargo service has been strengthening itself by availing competitive product services which cater to its customers' need. Encouraged by the rapid growth of the national agro-export, the airline has constructed and made

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<sup>1</sup> Data is provided by Public Relations office of Ethiopian Airlines.

fully operational the ultra modern cargo terminal that can handle over 250,000 tones of air cargo per year.

Ethiopian's prestigious Aviation Academy which began in 1960's ensures a steady supply of qualified pilots, cabin crew, maintenance technicians, as well as marketing and finance professionals. Hundreds of overseas maintenance technicians and pilots from over 40 countries around the world have graduated from the Aviation Academy. The airline's B757/B767 and B737 Flight Simulators are truly state-of-the-art equipment which help to prepare Ethiopia's and other carriers' pilots with the higher level of proficiency in their field.

Ethiopian has a US-Federal Aviation Administration (FAA) certified maintenance base, which is fully capable in Airframe maintenance up to D-checks, Engine overhaul, Components repair & overhaul, Light aircraft maintenance, and technical & management assistance for other Airlines. Ethiopian has expanded its maintenance capability by constructing a state-of-the-art maintenance hangar that was commissioned in 2006 and accommodates the biggest Boeing 747-400 aircraft and other medium sized aircraft at any one time. In support of its engine overhaul facility, Ethiopian uses latest facility of 100,000 pound thrust test cell which helps to fully overhaul engines and ensures the acceptability of its engines.



In 2006 and 2007 Ethiopian has earned three different awards from the African Aviation Journal, The African Times/USA, and the Government of Ghana for its best performance in the air transport service.

In the recent past, Ethiopian has availed on-line booking service and has automated its ticketing services by introducing electronic system. It also successfully passed the IATA Operational Safety Audit which reaffirms its fundamental commitment to provide safe and reliable air transport services for passengers and cargo.

These and other similar milestones have given Ethiopian a reason to be proud. And in its commitment to meet the future demand of its passengers, Ethiopian is proud to be the first African airline to have ordered 10 Boeing 787 Dreamliner jets. The first of these Dreamliner jets are due to enter service in 2009. With these exciting developments Ethiopian envisages to remain The New Spirit of Africa.

Ethiopian Airlines has now more than 4000 employees working under its different offices in Ethiopia as well as at outstations. As per the new organization structure (Please refer to Appendix 1), Ethiopian Airlines is comprised of four broad areas – Corporate services, Operations, Strategic Business Units, and Finance & Strategic Planning. These, in turn, have their own subdivisions<sup>2</sup>.

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<sup>2</sup> Retrieved from <http://shala/Neworgm> - this is one of the company's intranet.

### **1.3 Statement of the Problem**

Globalization, as one of the major challenges to developing countries, is increasing its pressure towards them from time to time. It results in stiff competition among firms across borders. The Airline business is not an exception. Airline operators are now competing each other globally to win customers and secure a larger market share.

When we come to the current situation here in Ethiopia, we find the competition to be getting stronger and stronger. For example, global competitors like Emirates and KLM Airlines have launched their services here. Other African Airline operators like South African and Kenyan have been aggressively working in order to be competent. It is clear that the situation will have an impact on the market share of Ethiopian Airlines – the only local Airline operating internationally. The situation can best be described by the existence of a number of Airlines each striving to lure the customers of their competitors.

On the other hand, the ever-increasing fuel cost, which is uncontrollable to the Airlines, becomes a great challenge today. This situation leaves the Airlines with no option but to control and reduce their costs. Being one of the victims of the challenges from increasing costs and competition, Ethiopian Airlines needs to capitalize on its opportunities that result in cost reduction.

In light of this, the cost reduction potential of Ethiopian Airlines deserves an investigation. Therefore, in carrying out this study, it has been tried to address and seek answers for the following questions.

- What are the specific activities, processes,...etc. that cause inefficiency or increase in costs in Ethiopian Airlines?
- What are the possible causes for such inefficiencies and/or cost increases?
- What are the implications of such inefficiencies?
- What has been done by the company on cost reduction?
- How can efficiency be achieved and costs be reduced?



#### **1.4 Objectives of the Study**

The prime and broad concern of this study is to investigate the cost reduction potential of Ethiopian Airlines. More specifically, the objectives of the study are to:

- Identify the activities, processes,...etc. for which the company is incurring unnecessary costs.
- Identify the causes and implications.
- Identify the alternatives to those activities, processes,...etc. that may reduce costs
- Offer useful suggestions and recommendations.

## **1.5 Significance of the Study**

Competition in the Airline industry has become stronger and stronger. One of the manifestations of the competition is the strong desire of each Airline to win customers of the other to increase its market share. In such a situation, the ability to operate at a low cost will be advantageous. Basically, the effort to reduce costs will be viable when done on the basis of scientific research output. Thus, despite the fact that the scope of the paper is limited and the topic of study requires an in-depth investigation, this study:

- Helps know the cost reduction opportunities available to the company.
- Helps the company reduce costs in such areas if the research output is put into practice.
- Encourages the Airline to reconsider its processes and activities so that efficiency will be achieved.
- Initiates other researchers to conduct a more detailed study.

## **1.6 Scope and Limitations of the Study**

Ethiopian Airlines runs different operational as well as non-operational units. The internal environment is very wide and the size of the operations is vast. However, a preliminary discussion was made with personnel in the Management Audit Department of the Airline and the highly potential areas for cost reduction are determined to be Customer services including catering,

Base services, Maintenance & Engineering, and Flight operations. Therefore, this study has made its focus on the investigation of the potential to reduce costs in these areas while considering the company as a whole for the study.

Power failure was the great constraint that restricts the study from being more profound than it is now.

The results of this study might not be generalized to all other service industries. It will be limited to the Airline service industry.

## **1.7 Research Methodology**

### **( i ) Survey Method**

As the objective of this study is to investigate the potential areas of or opportunities to cost reduction, the method of study employed was Exploratory.

### **( ii ) Subjects for the Study**

In order to achieve the objective of the study, non-management employees and Department Managers from the management group are considered. In addition, the Finance department has been subjected for the study to get primary cost data. Employees had a great contribution to the study since they have the knowledge about every small activity or process that concerns



this study. Department managers were also of help in identifying the cost reduction opportunities especially those that are administrative or systematic. Department managers are selected for the study since they possess a compromising position between Supervisors that are too operational and Directors that tend to be too holistic.

### **(iii ) Sampling**

First, Cluster sampling technique had been employed. That is, the already established subdivisions on the organization structure are taken as clusters. Then, purposefully selected samples of employees are taken from each cluster. As per the data found from the Payroll section of Finance department, the total number of non-management employees who work in Addis Ababa is 3112. A sample size of 100 employees is considered in the study. The sample is taken using the Purposive or Judgment sampling technique. This technique helped in getting those employees who have the experience (For e.g. 3 years or above experience in the Airline). It was assumed here that more experienced employees will have a better contribution to the study.

When we come to the sampling of the Department Managers, six managers are selected from the focus areas using once again the Purposive or Judgment sampling technique and interviews had been conducted with them. This technique helped here in that there will be no inclusion of subjects who perform similar duties in essence. The result has become a

diversified sample that covers a wide area. Note that the total number of Department Managers in the study's focus area is 64.

The researcher doesn't believe that the employment of purposive sampling in the study results in generalizability problems because the study objective is not to conclude about the population rather it tries to investigate the potential cost reduction areas. Therefore, it seems appropriate to select those that are in best position to provide useful data.

#### **( iv ) Data Collection**

Both the primary and secondary sources are used to collect the data needed for the study.

Basically, the primary instruments of data collection for this study were questionnaire and interviews (Please see Appendix 2). Uncontrolled observations had also been employed on areas like maintenance, Aircraft arrival & departure areas, store, and base services. A structured questionnaire had been designed and distributed to the employees. Both open-ended and close-ended questions were included in the questionnaire. Out of the 100 questionnaires distributed, 96 were returned being filled. Semi-structured interviews had been conducted with the selected Department Managers working under different subdivisions. There had also been an interview session with Manager Cost Accounting department.

The Secondary sources of data are comprised of both the published and unpublished sources. Company reports, circulars, company intranets, company website...etc fall under this category of data sources.

#### **( v ) Data presentation and analysis**

The responses to the close-ended questions are systematically tabulated and analyzed using frequencies and percentages followed by verbal interpretations. The responses to the open-ended questions and interview questions are summarized, interpreted, and presented in a narrative form. Finally, conclusions are drawn, and recommendations are forwarded.

### **1.8 Organization of the Paper**

The research paper encompasses a total of four chapters. The introductory part, background information of the company under study, statement of the problem, and scope, limitations & methodology of the study are presented in the first chapter. Review of related literature is covered in the second chapter. Chapter three contains the presentation, analysis, and interpretation of data. Finally, the last chapter-chapter four is for the drawn conclusions and recommendations.

## **CHAPTER 2**

### **REVIEW OF RELATED LITERATURE**

#### **2.1 Overview**

As defined by Chase and co-authors, Cost Reduction or Minimization implies an emphasis on efficiency, high labor productivity, and standardization. (Chase et.al, 2006: p.32)

Hill and Jones questioned why, within a particular industry or market, do some companies outperform others? What is the basis of their (sustained) competitive advantage? The competitive advantage of Dell computer comes from its direct selling business model, which lowers costs and enables the company to respond to customer demands, and also from its focus on efficient supply chain management. Efficiency and customer responsiveness are two of the four main building blocks of competitive advantage. The other two are innovation and the quality of product or service offering. (Hill & Jones, 2007: p.76)

No doubt almost all managers know that profit is determined not only by the revenue a firm generates but also by the costs associated with production of the firm's good or service. Many managers, however, find managing the revenue portion of the profit equation more interesting and exciting than dealing with issues concerning the costs of production. (Thomas & Maurice, 2005: p.310). These authors also added that global competition has



intensified the need for managers to increase productivity and reduce costs in order to satisfy stockholders' desire for greater profitability.

Grant, in his book, states that Michael Porter has defined three generic strategies- Cost Leadership, Differentiation, and Focus and Porter's view that Cost Leadership and Differentiation are mutually exclusive strategies. A firm that attempts to pursue both is "Stuck-in-the-Middle". A firm can achieve a higher rate of profit (or potential profit) over a rival in one of two ways: either it can supply an identical product or service at a lower cost or it can supply a product or service that is differentiated in such a way that the customer is willing to pay a price premium that exceeds the additional cost of the differentiation. In the former case, the firm possesses a cost advantage; in the latter a differentiation advantage. In pursuing cost advantage, the goal of the firm is to become the cost leader in its industry or industry segment. Cost leadership is a unique position in the industry that requires the firm "must find and exploit all sources of cost advantage... [and]...sell a standard, no frills product". (Grant, 2002: pp. 246-247). Seristo argues that costs in the Airline operations have to be reduced for the reason that as consumers are quite accustomed to having fairly low fares available, and because the air transport product is rather difficult to differentiate, it is quite unlikely that Airlines would be able to gain sufficient improvement on the revenue side only. (Seristo, 1996: p.14)

According to David, a successful cost leadership strategy usually permeates the entire firm, as evidenced by high efficiency, low overhead, limited perks,



intolerance of waste, intensive screening of budget requests, wide spans of control, rewards linked to cost containment, and broad employee participation in cost control efforts. Some risks of pursuing cost leadership, as stated by David, are that competitors may imitate the strategy, thus driving overall industry profits down, technological breakthroughs in the industry may make the strategy ineffective, or buyer interest may swing to other differentiating features besides price. (David, 1997: p.61)

Grant argues that the foundation for a cost-reduction strategy must be an understanding of the determinants of a company's costs. It requires analyzing the factors that drive relative unit costs in each of the firm's activities in a systematic and comprehensive manner. Increasingly approaches to cost efficiency are less about incremental efficiencies, and more about fundamentally rethinking the activities undertaken by the firm and the ways in which it organizes them. By focusing on those activities in which the firm possesses a cost advantage and outsourcing others, and by extensively reengineering manufacturing and administrative processes, firms have succeeded in achieving dramatic reduction in operating costs. Careful analysis of existing activities can pinpoint cost-reduction opportunities by lowering input costs, accessing scale economies, and better utilizing capacity. (Grant, 2002: p.277)

## **2.2 Airline Costs**

Wells has clearly identified what costs an Airline would bear in the course of executing its day to day activities. (Wells, 1994: pp.337-343). Broadly

speaking, airline costs can be categorized as operating costs or non-operating costs.

### **2.2.1 Operating Costs**

#### **( i ) Direct Operating Costs**

Direct operating costs are all those expenses associated with and dependent on the type of aircraft being operated, including all flying expenses (e.g., flight crew salaries, fuel and oil), all maintenance and overhaul costs, and all aircraft depreciation expenses.

***Flight Operations:*** The largest category of direct operating costs is for flight operations. It includes the following items.

*Flight crew expense:* Such costs cover not only direct salaries, and traveling expenses but also allowances, pensions, and insurance.

*Fuel and oil:* Fuel consumption varies considerably from route to route in relation to the stage lengths, the aircraft weight, wind conditions, the cruise altitude, and so forth. Thus an hourly fuel cost tends to be even more of an approximation. However, oil consumption is negligible and, rather than trying to calculate it directly for each route, the normal practice is to have an hourly figure for oil consumption for each type of engine.

*Airport and en route charges:* Airlines must pay airport authorities for the use of the runway and terminal facilities. Airport charges normally have two

elements: a landing fee related to the weight of the aircraft, and in some cases a passenger facility charge levied on the number of passengers boarded at that airport. Additionally, if an aircraft stays at an airport beyond a stated time period, it will have to pay parking or hangarage fees. These are relatively small compared to the basic landing and passenger charges.

*Aircraft insurance costs:* The aircraft hull and liability insurance expenses amount to a relatively small part of flight operation costs. The hull premium, is generally calculated as a percentage of the value of the flight equipment and may range from 1 to 2 percent, or lower, depending on the airline, the number of aircraft insured, and the geographical areas in which its aircraft operate. Liability premiums are generally based on the estimated number of revenue passenger miles flown.

*Other flight operations expenses.* Finally, there may be some costs related to flight operations which do not fall into any of the preceding categories like costs of flight crew training and of route development. Some airlines may have to meet rental or lease charges for the hiring or leasing of aircraft or crews from other airlines. These expenses are usually considered as part of flight operations costs.

***Maintenance and Overhaul Costs:*** Total maintenance costs cover a wide range of costs related to different aspects of maintenance and overhaul. Flight equipment maintenance costs are divided into three categories: direct maintenance on the airframe, direct maintenance on the engines, and a

maintenance burden. The maintenance burden is basically the administrative and overhead costs associated with the maintenance function that cannot be attributed directly to a particular airframe or engine but are allocated on a fairly arbitrary basis.

***Depreciation and Amortization:*** Depreciation of flight equipment is the third component of direct operating costs. Airlines tend to use straight-line depreciation over a given number of years, with a residual value of 0-15 percent. Depreciation periods can vary by aircraft, with the period for wide-body jets in the area from 14 to 16 years. For smaller short-haul aircraft, depreciation periods are shorter, generally 8-10 years. The annual depreciation charge or cost of a particular aircraft in an airline's fleet depends on the depreciation period adopted and the residual value assumed. If an airline chooses a shorter depreciation period, then the annual depreciation cost will rise.<sup>3</sup>

#### **( ii ) Indirect Operating Costs**

Wells defined Indirect operating costs as all those costs that will remain unaffected by a change of aircraft type because they are not directly dependent on aircraft operations, including expenses that are passenger related rather than aircraft related (such as passenger service costs, costs of

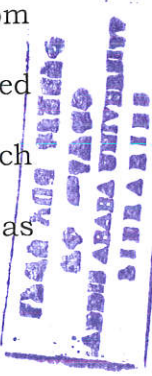
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<sup>3</sup> The hourly depreciation cost of each aircraft in anyone year can be established by dividing its annual depreciation cost by the aircraft's annual utilization, that is, the number of blockspeed hours flown in that year.

ticketing and sales, and station and ground costs) as well as general administrative costs.

**Station and Ground Expenses:** are all those expenses incurred in providing an airline's services at an airport other than the cost of landing fees and other airport charges. Such costs include the salaries and expenses of all airline staff located at the airport and engaged in the handling and servicing of aircraft, passengers, or freight.

**Passenger Service Costs:** The largest single element of costs arising from passenger services is the payroll, allowances, and other expenses related directly to aircraft cabin staff and other passenger service personnel. Such expenses include hotel and other costs associated with overnight stops as well as the training costs of cabin staff, where these are not amortized.



A second category of passenger service costs, according to Wells, are those directly related to the passengers. They include the costs of in-flight catering, the meals and other facilities provided on the ground for the comfort of passengers, and expenses incurred as a result of delayed or cancelled flights.

**Reservations, Sales, and Promotion Costs:** All costs associated with reservations, sales, and promotion activities, as well as all office and accommodation costs arising from these activities, are included in this category. Staff expenses at retail ticket offices, whether at home or abroad, would be included.

The costs of all advertising and any other form of promotion, such as familiarization flights for journalists or travel agents, would fall under this heading. Finally, commissions or fees paid to travel agencies for ticket sales would normally be included.

**General and administrative costs:** general and administrative costs should only include those cost elements that are truly general to the airline or that cannot readily be allocated to a particular activity.

### **2.2.2 Non-operating Costs and Revenues**

Wells regarded those expenses and revenues not directly related to the operation of an airline's own air transportation services as Non-operating costs and revenues. Major non-operating costs and revenues include the following.

- Gains or losses arising from the retirement of property or equipment, both aeronautical and non-aeronautical. Such gains or losses arise when there is a difference between the depreciated book value of a particular item and the value that is realized when that item is retired or sold off.
- Interest paid on loans, as well as any interest received from bank or other deposits. For some costing purposes, some carriers include interest paid on aircraft-related loans as an operating cost.

- All profits or losses arising from an airline's affiliated companies, some of which may be directly involved in air transportation, such as an owned commuter carrier.
- A wide range of other items that do not fall into the preceding three categories, such as losses or gains arising from foreign exchange transactions or from sales of shares or securities.
- Direct government subsidies or other government payments.

### **2.3 Importance of Cost Reduction**

The importance of cost reduction as suggested by cost reduction consultants is presented below.<sup>4</sup> Companies that are losing money, need to increase profits, or must become more competitive need to cut expenses in order to succeed. Knowing how to implement effective cost reduction strategies can be the determining factor in the survival of a business.

**Keeping a Competitive Advantage:** A good manager understands the importance of cost reduction to the health of a company. Bloated expense accounts can eat up profits quickly. A cost reduction plan is one that focuses on lowering costs in every business activity. The activities vary by type of business but the concept of cost reduction does not vary.

The importance of cost reduction plans is related to the most common reasons why expenses must be cut in a business. These are Need for increased profits, improved competitive standing, Preserve company resources, reduced waste, and improved productivity.

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<sup>4</sup> Retrieved from <http://www.the-cost-reduction-consultant.com/importanceofCostReduction.html>

It is not easy to compete in the market today. Rising prices, shifting fuel rates, global competition, varying labor rates around the world, and spiraling health insurance costs have made cost control a moving target. Sometimes it seems that a company gets one set of expenses under control, and in the meantime, another area of the company begins experiencing cost overruns. It is a never ending battle to maintain company profitability.

**Razor Sharp:** Keeping the competitive edge means keeping the company razor sharp. There is no room for laxness which dulls the ability of a company to be responsive to market trends. Changes can occur rapidly, and a company that cannot respond with new methods, new material usage, service efficiency changes, or technological adaptability will be quickly outperformed by other businesses. The importance of cost reduction strategies lies in its contribution to a company's honing of performance.

Cost reductions can be achieved utilizing different approaches. A company can reduce existing expenses, eliminate unnecessary expenses, modify business strategies which affect the types of business expenses, or replace higher expenses with lower expenses for same items.

When a company must generate more cash as fast as possible, management will have to decide which costs can be most effectively reduced. If the reduction is needed quickly, expenses cut first will normally be those that are not fixed or directly tied to production. It is not a good idea to drastically reduce expenses that produce the company product or service without careful evaluation.

If a company understands the importance of cost reduction as a tool to increase profitability, the company will have a much better chance of remaining profitable no matter what stage of the economic cycle is occurring. That is because cost reduction is an effective tool that can be responsive to a company's need. Managing expenses is just as important as managing revenue.

A regular review of costs can prevent a company from wasting money resulting from 'bad habits'. No matter whether it is good times or bad, the importance of cost reduction strategies never changes.

Moreover, the cost reduction consultants put the purpose of cost reduction in their web as follows. They believe that the purpose of expense reduction is to help the company towards long term survival. According to them, purposes of expense reduction include:

- Create cash for reinvest in research and development
- Reduce operating costs to stay competitive
- Reduce costs as a nonprofit so able to serve more people
- Lower costs of service in order to provide additional services
- To become more efficient
- To prevent employee lay-offs
- To prevent reduction in employee benefits

## **2.4 Considerations in Cost Reduction**

Before attempting to reduce costs in a business, the company should lay some ground work. Any effort made without a prior plan has the highest

probability of making the whole company out of plan. Therefore, companies should try to have a clear picture, in advance, of what is to be done before getting into action.

The other consideration is to make sure that managers or business leaders are not using methods that damage the well-being of the company. In trying to keep costs below those of rivals, managers must take care to include features and services that buyers consider essential – a product offering that is too Spartan weakens rather than strengthens a firm's competitiveness. Pursuing cost reduction in a manner that sabotages the attractiveness of the company's product offering turns buyers off. (Thompson, 2001:p.151) Ron Kutrus, in his writing, has regarded downsizing, reducing customer services, and cutting corners in production methods as negative methods of cost reduction<sup>5</sup>. Brief discussion of each follows now.

***Downsizing:*** Some company leaders feel they can reduce costs by simply downsizing or reducing the number of workers or middle managers. Unfortunately, most companies that downsize do so without really knowing the impact on the company's operations. One of the biggest effects of downsizing to reduce costs is that the good employees quickly leave the company for greener pastures. Thus the company is left with the deadwood employees, who are supposed to do twice the work as before.

***Reducing customer service:*** Customer service can be a nuisance and is often expensive. Sometimes companies will reduce or eliminate the service

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<sup>5</sup> Retrieved from <http://www.school-for-champions.com/business/reducecosts.htm>

they give to the customers. Unfortunately, a neglected customer is an ex-customer.

**Cutting corners:** A quick way to cut costs is by cutting corners in production or service methods. Some company leaders feel that by using cheaper materials and labor, and by eliminating part and steps, they can cut costs and save money.

It is true that costs may be cut in the short run, but often the product or service is of such a low quality that repairs and rework costs go through the roof. Also customers may become unhappy with the low quality and move on to another supplier.

## **2.5 Sources of Cost Reduction**

There are broad ranges of particular ways in which an enterprise can drive down costs. White identifies seven significant sources of cost reduction, which can be distinguished as cost drivers. (White, 2004:pp. 306-313). The first four are associated with reductions in cost resulting from greater experience, or learning, usually linked with greater output. The seven sources of cost reductions identified by White are discussed below.

### **2.5.1 Economies of Scale or Scope**

Economies of scale and scope reflect the existence of some fixed and some shared costs. Economies of scale are when the reduction in average unit costs reflects the spreading of costs over the larger output of a particular product, and economies of scope is the spreading of fixed costs between

different products in a multi-business enterprise. In an article about Southwest and Ryanair performance, it states that savings come from lower maintenance through using one kind of Aircraft, having one class of passenger, more seats, no newspapers and no food. (Binggeli and Pompeo, 2003: p. 30)

### **2.5.2 Economies of Learning**

Learning by doing is very important in almost all industries. White says that Economies of learning arise mainly from two sources:

*Increased dexterity* – this has diminished in importance as production in most industries has been increasingly automated. It is like a factory lacking in mechanization, although the breakdown of production into different tasks and their careful definition allowed the development of machinery able to perform the task.

*Incremental improvement in organization* – in the contemporary world this is increasingly important. It is a continuing process which often does not require any additional investment.

### **2.5.3 Improved Production Techniques**

This improvement is manifested in three particular ways.

*Mechanization and automation* – there is a substitution of capital for labor, which reduces the necessary labor input. Over the last few

centuries labor has tended to rise in price, relative to the price of capital and other inputs.

*Improved efficiency in the use of raw materials* – This is a universal phenomenon which explains the tendency for the demand for raw materials to run behind supply and for raw material prices to continue to decline in real terms.

*Improved quality control* – this involves greater precision in the specifications of the component inputs and fewer defects in both inputs and outputs.

#### **2.5.4 Improved Product Design**

Improved product design may assist in either production or use. It can encourage other cost drivers, for example aiding the mechanization or automation of production and helping an enterprise to economize on the costs of material input. The number of necessary component inputs may be vastly reduced, or the number of separate stages in production may be reduced. Often, improved quality is associated with this reduction in the number of component inputs or stages of production, both of which enable a further reduction in costs.

### **2.5.5 Reduced Input Costs**

There are four sources:

*Location* – an enterprise can locate itself close to low-cost sources of necessary inputs, for example close to sources of raw materials or energy, or close to enterprises producing low-cost components.

*Ownership* – an enterprise can take ownership of the sources of low-cost inputs, thus ensuring supply at a reasonable cost and preventing others from monopolizing the exploitation of the supply.

*Bargaining strength* – the enterprise can develop and use its own bargaining power to drive down costs, if it is large enough and in a position to do so. It can also work closely with the supplier to improve the costs of supply.

*Cooperation* – the enterprise can enter into cooperative agreements with other purchasers to lower the costs of particular inputs.

### **2.5.6 Increased Capacity Utilization**

Van der Burgt says that an increase in efficiency generally leads to a reduction in equipment cost<sup>6</sup>.

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<sup>6</sup> Retrieved from [http://www.gasification.org/ Docs/1998\\_papers/gtc9815.pdf](http://www.gasification.org/Docs/1998_papers/gtc9815.pdf)

White also states that it is important to keep capacity utilization high especially where the ratio of fixed to variable costs is high in order to realize the economies of scale which are built into the planned size of plant and the costs already envisaged.

### **2.5.7 Increasing Residual Operational Efficiency or Reducing Slack**

No enterprise can operate at full intensity for long periods of time. Briefly it may be able to lift the intensity of its operational effectiveness in order to meet a temporary need. Normally every organization operates with a considerable amount of organizational slack which has all sorts of advantages during the life of that organization, while appearing to raise costs. There are good reasons for operating in this way. In an ideal world, any department head prefers to have resources which can be regarded as surplus to requirements, but which give the department flexibility and ability to cope with any unforeseen crisis. Under certain conditions the slack might be removed and costs lowered, but it usually re-emerges when the pressure for urgent cost reduction is removed.

In addition, Johnson has identified in his book that continuous improvement can be a source of cost reduction. He states that continuous improvement is essential to organizational survival and is a process with intentions like to reduce costs, to improve the match between the operation and the goals of the organization, to increase efficiency, to reduce or eliminate waste, and to increase job satisfaction. (Johnson, 2000: p.160)

## **2.6 Cost Reduction Program**

According to the cost reduction consultants, a cost reduction program is expected to achieve results that flow to the bottom line of the financial statement without causing damage to the organization itself. A good cost reduction program is as much about damage control as it is about cutting costs<sup>7</sup>. They believe that thoughtful planning with a succeeding effective implementation can lead to successful cost reduction program.

### ***Thoughtful Planning***

Many companies seem to believe that sending out a memo to all employees ordering budget cuts is all it takes to reduce expenses. Unfortunately, such an approach usually causes a lot of internal harm in terms of lowered employee morale. Employees are left feeling that their efforts are unappreciated and their work too costly for the product produced. To make matters worse, a cost reduction program instituted in this manner is usually reflective of lack of planning. Instead of identifying the specific areas that need to be cut to improve company performance, a blanket reduction in expenses is ordered.

A well-conceived cost reduction strategy enables managers to capture maximum value in the form of direct savings and the installment of a culture of efficiency while minimizing the destruction of value because of cutting too much from core business activities<sup>8</sup>. An effective cost reduction program

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<sup>7</sup> Retrieved from <http://www.the-cost-reduction-consultant.com/CostReductionProgram.html>

<sup>8</sup> Retrieved from [http://www.wipro.in/Services/Consulting/scost\\_reduction.htm](http://www.wipro.in/Services/Consulting/scost_reduction.htm)

should result from management planning, a thorough understanding of company expenses, a vision of the future, and the desire to continue to satisfy customers. The process of reducing costs is not about making journal entries in the accounting system. It should be the implementation of a thoughtful plan of action with employees that are involved in the process.

### ***Effective Implementation***

There are several options for reducing costs in a non-traditional manner such as Employee Involvement with Idea Generation Meetings, Revise current structure of production or service delivery, Create new processes, Blend current and new techniques in-house, and Form cooperative arrangements with other industry members.

Of course, a company can approach a cost reduction program with more traditional approaches such as cutting travel expenses or finding new production materials. Whichever approach is taken the same principles apply. An effective cost reduction plan should be tailored to the company's purpose and long-term goals.

A cost reduction program is really about improving profitability. By reducing expenses, profits are increased without even addressing sales program enhancements. If the cost reduction plan is matched with a sales increase program, it doubles the results. It is just one more reason why a cost reduction program must be an integrated plan that is results-oriented. A structured plan will put a company on track to achieve maximum profitability.

## **CHAPTER 3**

### **DATA PRESENTATION, ANALYSIS AND INTERPRETATION**

In this chapter, data collected through questionnaire, Interview, and observation are presented. It also includes the Analysis and interpretation of the data collected.

Questionnaires were distributed to 100 employees who are purposefully selected from among those who serve the Airline for at least the last three years. Out of this much questionnaires, 96% were filled and returned and 4% were found to be uncollectible. Interviews were conducted with six department managers from different areas. Department managers from Flight Operations, Finance, Catering, Purchasing & Materials Management, Maintenance, and Base Services were interviewed. Moreover, observations were made on selected areas like maintenance areas, Aircraft arrival and departure areas, Base Services, and Stores.

### 3.1 Characteristics of Respondents

Table 1 – Age distribution of Respondents

	Nomenclature	Frequency	Percent	Cumulative percent
<b>Age group</b>	20-27	20	20.83	<b>20.83</b>
	28-35	65	67.71	<b>88.54</b>
	36-43	8	8.33	<b>96.88</b>
	44+	3	3.13	<b>100.00</b>
	<b>Total</b>	<b>96</b>	<b>100</b>	

Source: Questionnaire

The age distribution shows that the majority of the respondents fall in the age group of 28-35. Thus, the Mode is going to be the age group of 28-35. About 89% of the respondents are at or below the age of 35.

Table 2 – Gender Ratio

	Nomenclature	Frequency	Percent	Cumulative percent
<b>Gender</b>	Male	67	69.79	<b>69.79</b>
	Female	29	30.21	<b>100.00</b>
	<b>Total</b>	<b>96</b>	<b>100</b>	

Source: Questionnaire

Out of the total number of respondents, the number of female employees, as shown in the table, is 29 and represents around 30%. This imbalance is also reflected in the total population with the ratio of male to female employees being 3:1.<sup>9</sup>

*Table 3 – Education level of Respondents*

	<b>Nomenclature</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
<b>Education Level</b>	Completed 12 <sup>th</sup> grade	2	2.08	<b>2.08</b>
	Certificate	6	6.25	<b>8.33</b>
	Diploma	42	43.75	<b>52.08</b>
	Degree	45	46.88	<b>98.96</b>
	Above Degree	1	1.04	<b>100.00</b>
	<b>Total</b>	<b>96</b>	<b>100.00</b>	

*Source: Questionnaire*

In an international business organization like Ethiopian Airlines, educational level of employees is obviously tends to be high. Accordingly, more than 91% of the respondents are at least diploma holders. i.e. 8.33% of the respondents do not have diploma. It is also observed that most of the diploma holders are upgrading their educational level through being enrolled into various universities and university colleges. Hence, it is likely that EAL will have more intellectuals in the near future.

<sup>9</sup> Data is taken from summarized table prepared by Public Relations office.

Table 4 – Work experience of Respondents

Number of years served	In the Airline			In current Department		
	Frequency	Percent	Cumulative percent	Frequency	Percent	Cumulative percent
1-2	0	0	0	18	18.75	18.75
3-5	35	36.46	36.46	43	44.79	63.54
6-8	33	34.38	70.83	24	25.00	88.54
9-11	17	17.71	88.54	6	6.25	94.79
11+	11	11.46	100.00	5	5.21	100.00
<b>Total</b>	<b>96</b>	<b>100</b>		<b>96</b>	<b>100</b>	

Source: Questionnaire

As shown in the table above, all the respondents are those who serve the Airline for at least 3 years. But this was deliberate rather than a simple outcome of the research. It was a purposive or judgment sampling technique employed in the research to get a useful data from experienced employees. However, the number of years that respondent employees work in their current department can take any figure and 81.25% of the respondents work for at least 3 years in their current department which is helpful for this research.

Table 5 – Respondents by Departments

	<b>Nomenclature</b>	<b>Frequency</b>	<b>Percent</b>	<b>Cumulative percent</b>
<b>Department or Division</b>	Flight Operations	11	11.46	<b>11.46</b>
	Maintenance & Engineering	27	28.13	<b>39.58</b>
	Customer Services	17	17.71	<b>57.29</b>
	Catering	9	9.38	<b>66.67</b>
	Base Services	10	10.42	<b>77.08</b>
	Marketing or Commercial	7	7.29	<b>84.38</b>
	Internal Audit	5	5.21	<b>89.58</b>
	Human Resources	4	4.17	<b>93.75</b>
	Information System	3	3.13	<b>96.88</b>
	Finance	3	3.13	<b>100.00</b>
	<b>Total</b>	<b>96</b>	<b>100</b>	

Source: Questionnaire

The focal areas of this study, as already stated in chapter 1, are Flight Operations, Maintenance & Engineering, Customer services including Catering, and Base Services divisions of the Airline though it is conducted in the Airline as a whole. Thus, it is tried to achieve this objective by considering above 75% of the respondents from these areas.

To clarify, Flight Operations has three sub-divisions; namely – Flying & Training, Flight Operations Administration, and Integrated Operation

Control Center. The subdivisions under Maintenance & Engineering are Capacity Development, Planning & Engineering, Total Quality Management, Purchasing & Materials Management, Aircraft Maintenance, Component Maintenance, and Engine Maintenance. Ground Operations, In-flight Services, and Service Quality Management are under Customer Services division. The basic activities in Base Services Department are all maintenance, repair, overhaul, modification of ground support equipment, vehicle, construction of company buildings, domestic airfields which EAL is responsible for, installation of new electrical cables, plumbing, air-conditioning, refrigeration units and their maintenance and providing ground transport services for the company.

### **3.2 General Cost Reduction Issues**

Table 6 tells us about employee participation in cost reduction efforts in general. In particular, it shows the degree to which the management give chances to employees to come up with ideas that they believe useful in reducing costs; it also gives us an indication that whether employees have developed a culture of suggesting cost reduction ideas; and finally this table bears data on the company's management level of acceptance of ideas generated by employees.



Table 6 – Employees' involvement in cost reduction

Item #	Item Description	Response	Frequency	Percent
1	Have you ever been asked by management as to how the company can reduce costs?	Yes	42	43.75
		No	54	56.25
		<b>Total</b>	<b>96</b>	<b>100.00</b>
2	Have you ever suggested an efficient way of doing something?	Yes	66	68.75
		No	30	31.25
		<b>Total</b>	<b>96</b>	<b>100.00</b>
3	If your answer to the above is 'Yes', is the management willing to hear from you when suggesting efficient ways of doing something?	Yes	31	46.97
		No	35	53.03
		<b>Total</b>	<b>66</b>	<b>100.00</b>

Source: Questionnaire

The data collected shows that there is an encouraging situation in soliciting cost reduction ideas from employees. Accordingly, close to 44% of the respondents have witnessed that the management asks them to bring ideas useful for cost reduction.

When we proceed to item # 2 of the above table, we find that most employees give suggestions for cost reduction measures even though there is a problem to accept or implement such ideas from the management side. Item # 3 of the same table shows that from among those respondents who claim to have suggested ideas, about 53% said that the management lacks willingness to listen to their ideas.

Table 7 – Consolidation of activities

Item #	Item Description	Response	Frequency	Percent
1	Are there instances in which activities, processes,...etc. are handled on a piece-meal basis while it is possible to make it in mass?	Yes	62	64.58
		No	34	35.42
		<b>Total</b>	<b>96</b>	<b>100.00</b>

Source: Questionnaire

Here, it is tried to know about if activities in the company are being performed in such a way that it can achieve economies of scale. As explained earlier, economies of scale helps in reducing the average unit cost by spreading fixed costs over a large output. Hence, a company operating on a piece-meal basis will not be benefited from this opportunity to cost reduction.

When we come to our case, 64.58% of the respondents said that there are activities carried out on a piece-meal basis. These respondents were, then, asked to list the activities performed in this manner. Since this concept is usually related to production and purchasing activities, most of the responses focus on these areas.

**i. Unconsolidated Purchase**

(a) *Aircraft spares and piece-parts*: this means that Aircraft spares or piece-parts are purchased against spontaneous requests by user departments regardless of how frequent the spares are needed.

The major cause that is attributed to this situation is the present structure of the Purchasing and Materials Management division. As one can see from Appendix 3, the former structure or division of work among the different sections under this division was based on the various unique systems of the Aircraft. But if you see Appendix 4, for the present structure, you will find that the basis of division of work to be user departments.

So, how can the present structure be a cause of unconsolidated purchase? To answer this question, let us take an example. Consider that an engine piece-part is requested by Line & Dispatch maintenance department. This request is, then, going to be handled by a buyer under Purchasing – Line & Dispatch Maintenance section. The same part may be requested by Hangar department during the Aircraft's scheduled maintenance and now the responsibility is of Purchasing – Hangar Maintenance section and handled by another buyer. Again, a

request for the same item may arise from Engine Maintenance department and this one goes to Purchasing – Engine Maintenance section for another piece-meal purchase. This may be true even in cases where all the three user departments in our example request the part on the same date because there is no cross-sectional coordination between the sections in the division due to the structure. This situation is aggravated when the part is not a stock item. i.e. it is purchased only whenever need arises.

What if the former structure had been effective? Had there been the former structure, all the above purchase requests would have gone to one specialized buyer under engine parts purchase section and consolidating them would have been possible. This, in turn, would have the following cost effects.

- Quantity discounts (Price discount due to larger quantity)
- Minimized ordering cost (Quotation or search, order placement, follow-up costs... etc)
- Minimized shipping cost
- Minimized receiving or order processing cost and the like.

Moreover, the whole process from searching the part in the market through its delivery at EAL premises will be expedited since the buyer is a specialized one.

(b) *Petty cash purchases*: The Company's Management Policy and Procedure Manual states that departments can request for local purchase of items whose value not exceeding 300 birr<sup>10</sup>. This is allowed for non-stock items. Items purchased through this procedure are usually stationeries.

The problem here is again the requests are handled individually rather than in a consolidated manner. But, the cause is found to be systematic. The requests are distributed to the local buyers on a daily basis so that the buyer might have the possibility to purchase the same item on a daily basis. Why does the department prefer to do this way while it is possible and easier to process at least requests for two or three days? But, urgent matters could be given priority. This results in losing the quantity discounts that the company could have got. In addition, since these items are delivered to the EAL receiving section using the company's own transportation, there is also a fuel cost issue here.

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<sup>10</sup> Retrieved from <http://shala/mppm> - the company's intranet.

**ii. Other Unconsolidated Activities**

- Recurrent printing of manuals and other standard office forms at printing shop of the company
- Ground transport service; especially pickups of flight crew members from and to the Airport.
- Preparing individual payment checks for the same supplier or vendor against different invoices while it is possible to include more invoices on one check.

Table 8 – Barriers to Specialization

Item #	Item Description	Response	Frequency	Percent
1	Are there situations that hinder an employee from being specialized in an area of work?	Yes	71	73.96
		No	25	26.04
		<b>Total</b>	<b>96</b>	<b>100.00</b>

Source: Questionnaire

It is obvious that the productivity of an employee increases as he/she becomes more specialized in an area. Production or service delivery time, wastages, reworks, duplication of effort...etc can be minimized which in



effect results in reduced cost. Contrary to this, we find in the table that there are barriers to an employee to specialize in his/her areas of work. Around 74% of the respondents do agree on this fact.

In connection to this, employees/respondents were asked to state the reasons that might have their own impact on work specialization. The following are the major some among the many.

- *Lack of recurrent training*: this is mentioned by many as a cause for failure to specialize on an area of work. However, there is a department which is responsible for in-house as well as external trainings in the company. The management at maintenance operations believes that the company can reduce costs through enhancing employees' skills by giving trainings and making them more productive and efficient.
- *Management's discretion to assign any job to an employee*: this is the second most mentioned reason. According to the respondents, the management wants the employees to work on any assignment. Sometimes, this situation emerges from shortage of manpower. But, it is very dangerous to the effort toward creating a favorable working environment that employees may enjoy it.
- *Absence of uniform work procedure and division of labor*.

- *Frequent transfer of employees from one department to another due to both positive and negative factors. Positive factors might include transfers like promotions while lateral transfers due to job dissatisfaction can be stated as negative ones.*
- *Employees at maintenance hangars are currently expected to work on almost all parts of the Aircraft. Previously, there is a possibility of being a specialist in one or some sub-systems of an Aircraft like Avionics. Avionics is short for “Aviation Electronics”. It comprises electronic systems for use on Aircraft<sup>11</sup>.*
- *Employees at Purchasing and Materials Management division state the repetitive restructuring of the division as one barrier to specialization. As explained earlier, buyers buy any type of Aircraft spare upon users’ request rather than letting the division of work on Aircraft systems or spares category and specializing. Note that vendors are also, most of the time, specialists on the various systems of an Aircraft.*

The next issue was about additional costs that EAL is incurring for the same output. As shown below, 62.5% of the respondents agree that EAL has now more costs than before.

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<sup>11</sup> Retrieved from <http://en.wikipedia.org/wiki/Avionics>

Table 9 – Additional cost incurrence

Item #	Item Description	Response	Frequency	Percent
1	Do you know any instance whereby Ethiopian Airlines is incurring more costs than before for the same output?	Yes	60	62.50
		No	36	37.50
		<b>Total</b>	<b>96</b>	<b>100.00</b>

Source: Questionnaire

Respondents have tried to mention the reasons why and the following are the major ones.

→ Until some time ago, the catering department of EAL used to serve Transit & Cloud-9 (First class) passengers with some refreshment stuffs during their stay in the Airport. This activity was carried out in its Cloud-9 & Transit lounges in the Airport building. Now, this service is outsourced and given to London Café and Restaurant. EAL is now expected to pay 20 dollars per every passenger served in this restaurant.

→ Costs associated with losing experienced maintenance personnel: it is observed that there is a high turnover of maintenance employees. Most

migrate to the Middle East countries like Abu Dhabi in which large Aircraft maintenance bases are recruiting people. The related costs are:

- Training cost to fill the vacant positions
- Payroll cost i.e. the company is forced to make a major salary increase for Aircraft technicians so as to retain the remaining.
- Rework costs: this is evidenced by a case where inefficient technical ability leads to defective maintenance. One of the customers of EAL returns back its engine after maintenance as a warranty and it costs EAL more than \$15000.

→ There are some other mentioned by respondents like fuel cost, and increases in employees' salary. However, these are more attached to external factors and are uncontrollable in general.

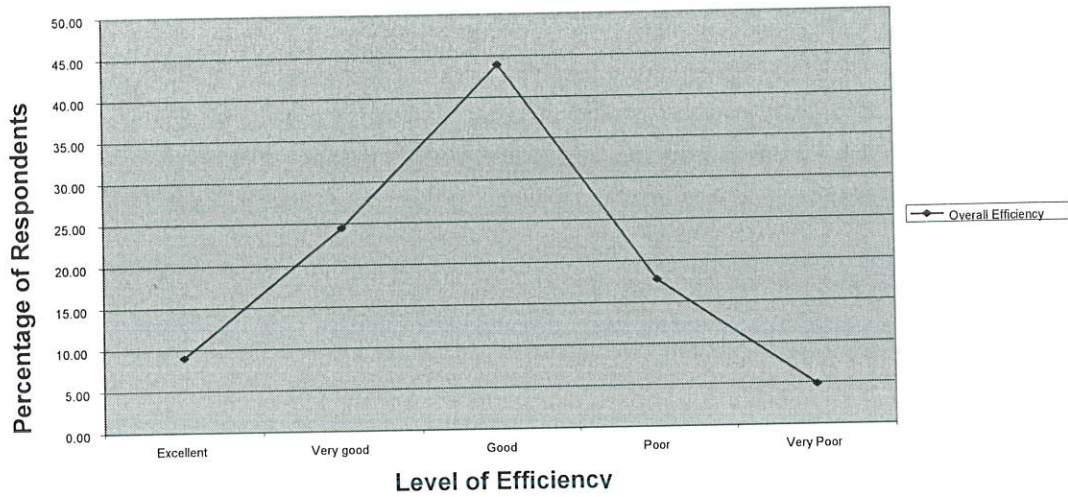
Table 10 – Level of Efficiency

Item #	Item Description	Responses					Total
		Excellent	Very Good	Good	Poor	Very Poor	
1	Capital	7	30	43	13	3	96
	Equipment	7.29	31.25	44.79	13.54	3.13	100.00
2	Human	8	18	32	34	4	96
	Resources	8.33	18.75	33.33	35.42	4.17	100.00
3	Electric	12	28	44	9	3	96
	Power	12.50	29.17	45.83	9.38	3.13	100.00
4	Telephone	15	30	35	12	4	96
		15.63	31.25	36.46	12.50	4.17	100.00
5	Supplies	6	23	43	19	5	96
		6.25	23.96	44.79	19.79	5.21	100.00
6	Budget	4	12	56	15	9	96
		4.17	12.50	58.33	15.63	9.38	100.00
	Overall	52	141	253	102	28	576.00
		9.03	24.48	43.92	17.71	4.86	100.00

Source: Questionnaire

The summarized table above reveals the efficiency level of EAL in utilizing the different inputs and overheads. The distribution for almost all of the factor evaluations tends to be normal except for the Human Resources of which is relatively skewed to the right. i.e. the company is not utilizing its human resources as efficiently as the others in the eyes of the respondents.

Figure 1 – Overall Efficiency



Source: Table 10

Generally, the ability of the company to efficiently use resources can be said moderate. However, as can be seen from the table, there are some slack resources which need to be more utilized or otherwise reduced if they are known to be not useful. In relation to this, table 11 exhibits that about 42% of the respondents believe in the existence of idle equipment and manpower.

Table 11 – Idleness of Equipment and/or Manpower

Item #	Item Description	Response	Frequency	Percent
1	Is there any idleness of equipment or manpower in your working area?	Yes	56	58.33
		No	40	41.67
		<b>Total</b>	<b>96</b>	<b>100.00</b>

Source: Questionnaire



Some of the respondents have tried to give evidences and it is presented below.

- A networked Identification Card (ID Card) sensing or checking system was installed at all gates few years ago and it has not yet been functional since installed.
- Some employees become idle due to uneven workload. There are also employees working under capacity as a result of a mismatch between the job and the employee's skill level. This is the responsibility of leads or supervisors to consider factors like the employee's skill, the difficulty of each job, and the like when assigning jobs to employees.
- It is observed that so many equipments are left without any use at various departments in the Airline. Tools, test equipments, and other equipment found at Base Services, Engine Maintenance, and at the Aircraft components repair shops can be cited as examples.

Surprisingly, almost all respondents believe that there is the potential for cost reduction in EAL. (Refer Table 12). This is interesting! This shows that employees do have so many ideas useful for the cost reduction effort. What is remaining is encouraging employees and involving them in decisions and coordination. The problem was had they not believed that there is the potential.

*Table 12 – EAL’s Potential of cost reduction*

<b>Item #</b>	<b>Item Description</b>	<b>Response</b>	<b>Frequency</b>	<b>Percent</b>
<b>1</b>	Do you believe that Ethiopian Airlines has the potential to reduce costs?	Yes	94	<b>97.92</b>
		No	2	<b>2.08</b>
		<b>Total</b>	<b>96</b>	<b>100.00</b>

*Source: Questionnaire*

In addition, it is possible to implement Cost Reduction programs in almost all areas of the company. According to the respondents, there is cost reduction potentials in so many departments.

### **3.3 Efforts toward Cost Reduction**

The following are efforts made and being made towards cost reduction. These findings are collected through questionnaire, interviews, and observation.

→ The first and the most important one is that the management is now very much concerned about cost and its reduction. Nowadays, there are superfluous pressures on business organizations forcing them to look after their costs and take appropriate measures. The ever-increasing fuel cost can be mentioned as the major one. Hence, the management forms a committee which is concerned about cost reduction this fiscal

year. It also releases some reminders to employees on this issue. (Please see Appendix 5)

- During an interview conducted with Flight operations officer, particularly with the management of the IOCC (Integrated Operations Control Center), it has been noted that there is an effort to reduce fuel expenditure by optimizing the fuel quantity to be uplifted and the location from which it is to be uplifted. This is done through using software which takes inputs like destination and departure points, fuel prices at different stations, and the total load of the aircraft at departure<sup>12</sup>.
  
- Though it is at its infant stage, the implementation of ACE (Achieving Competitive Excellence) program helps in increasing employees' productivity by shortening long processes and eliminating those that do not add value. It also facilitates in the creation of safe and better working environment.
  
- Information Technology (IT) security and In-house development of software are also among the efforts towards cost reduction. The IT policy and practice in EAL is now strict enough to the extent that no one can download any program on computers unless authorized. Internet access is allowed only when it is found necessary and approved by the respective higher level management. Restrictions on accessing e-mail

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<sup>12</sup> Example could be a fuel cost saving of about USD 21000 that has been made from one route on the interview date.

websites to only non-working hours, and filtration of some sites like job search, entertainment ...etc. help in reducing unproductive hours of employees.

- Efforts toward developing Repair & Overhaul capability of shops.
  
- Trainings on on-time performance for frontline employees (Marketing agents) to bring about more productivity.
  
- Building own cargo terminal so that the associated cost can be eliminated or reduced.
  
- Other findings are on minimizing unnecessary overtime payments, assigning employees in staggered day offs and shifts, reusing piece-parts of condemned items, using back side of used papers with in an office, toner refilling instead of purchasing new, replacing the normal ticket paper by blank A4 paper for e-tickets issued to employees, incorporating educational refunds on the monthly salary checks instead of preparing separate checks, and the like.

### **3.4 Causes for Cost increases and Unnecessary costs**

#### **3.4.1 Major Causes**

- i. Flight delays, cancellations, misconnections, and other operational irregularities: The Airline will incur costs like hotel accommodation costs and Denied Boarding Compensation (DBC) costs whenever there is flight cancellation or when passengers are offloaded from the flight they had already booked to. The Denial Boarding Compensation, as its name implies, is the payment made to those passengers that couldn't get seat due to overbooking made by the Airline's reservation section. These are the explicit ones. There are also implicit costs like dissatisfaction of customers to the extent of losing them which surely have a great deal of impact on the company.

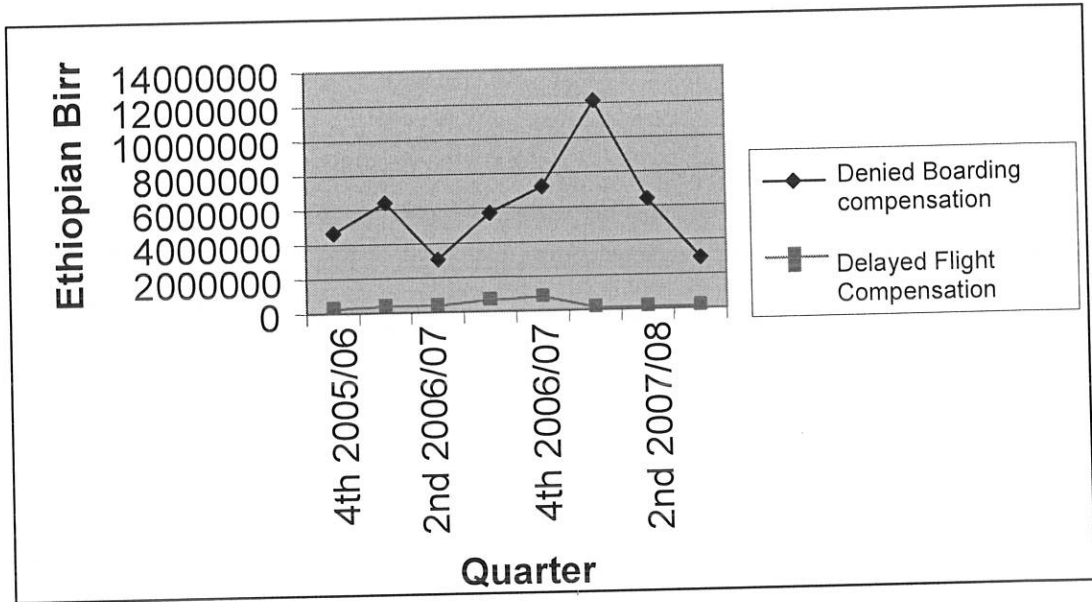
Table 13 and Figure 2 show the quarterly cost of the Airline incurred for Delayed flights and Denied Boardings.

Table 13 – Denied Boarding and Delayed Flight Compensation data

Item #	Item Description	QUARTER							
		4th 2005/06	1st 2006/07	2nd 2006/07	3rd 2006/07	4th 2006/07	1st 2007/08	2nd 2007/08	3rd 2007/08
1	Denied Boarding compensation	4630053.44	6444716.6	3102712.88	5795098.65	7209683.75	12067759.06	6351031.82	2913830.51
2	Delayed Flight Compensation	270586.56	399988.06	400734.31	646223.28	733670.51	172245.75	151816.95	164524.64
	<b>Total</b>	4900640.00	6844704.66	3503447.19	6441321.93	7943354.26	12240004.81	6502848.77	3078355.15
	<b>Cumulative Total</b>	4900640.00	11745344.66	15248791.85	21690113.78	29633468.04	41873472.85	48376321.62	51454676.77

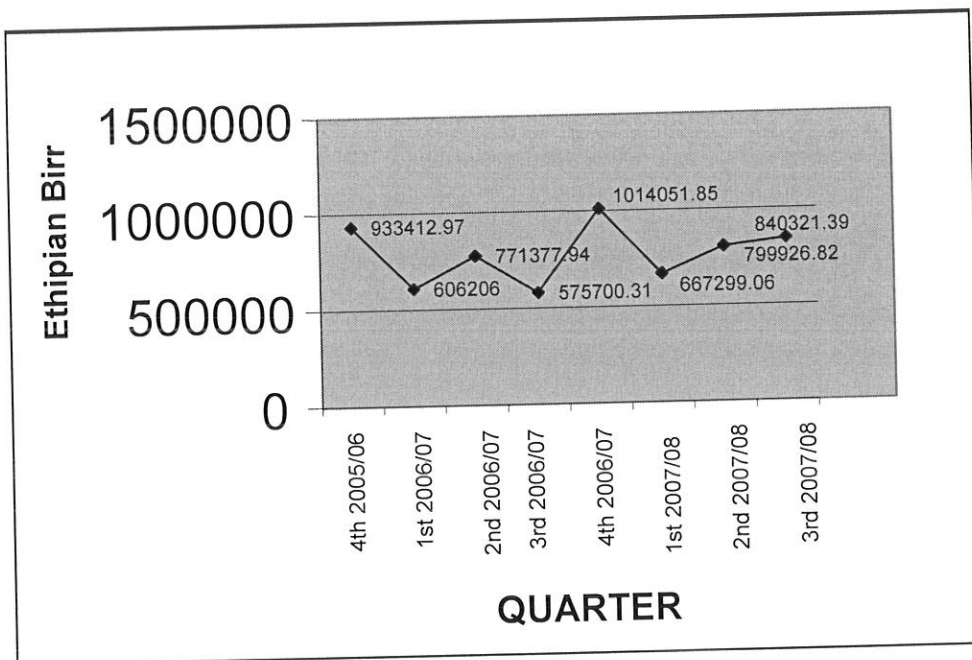
Source: Cost data compiled by Management Accounting Department of EAL, April 2008

Figure 2 – Quarterly Denied Boarding and Delayed Flight Compensation data



Source: Table 13

Figure 3 – Quarterly cost data on Lost or Damaged Baggage Claim



Source: Cost data compiled by Management Accounting Department of EAL, April 2008

- ii. Unsecured and poor baggage handling: The existing baggage handling practice is not dependable and secured. There are so many cases where baggages are lost being dislocated or stolen. Consequently, the Airline will pay compensation to passengers which is avoidable had the baggages been handled systematically and in a secured way. Figure 3 (above) shows the quarterly cost that EAL incurs for lost or damaged baggages.
  
- iii. Lease of Aircraft whose features not similar with the existing fleet: this decision has multidimensional effects. From the maintenance point of view, it takes longer time to carryout maintenance activities for this unique Aircraft until the technicians become familiar enough. From the Purchasing and Materials Management angle, it will be indispensable to purchase another category of spares and piece-parts applicable to only this Aircraft. Sometimes, a piece-part or spare is purchased on an urgent basis for which the payment may reach up to double the original price. Also, parts will be sent abroad for repair due to repair capability problems of the component repair shops.

These irregularities, in turn, will have negative effects like Aircraft shortage (which is one of the causes for flight delays and cancellations), capital tied-up, and ultimately increased costs. An example can be the case where one of the dissimilar leased aircraft is grounded for 15 days for one of its unique engines becomes unserviceable and waiting until

an engine is imported from abroad. Note, however, that there are serviceable engines of other types at EAL's facility at that time.

- iv. Personal consumption of excess food and beverages loaded on Aircraft upon its arrival by both employees and those who are not: This problem arises simply from the failure of Catering department to collect the excess upon the arrival of the Aircraft and from the weakness of the Airport security. There are some respondents who pointed out that the amount of food and beverages loaded on a flight, most of the time, doesn't consider the number of passengers booked on that flight. Other items like paper towel and disposable cups are also not collected on time from the arriving Aircraft. As one of the respondents said, attention is mostly given to duty free items like cigarettes, whiskies, perfumes...etc. At the time of interview, one of the catering management staff confirmed that the problem is real. The catering management believes in loading some extra meal and beverage as contingency and this is done considering the number of booked passengers. The root cause, as explained by him, is the failure of cabin crew members to lock the meal and beverage carts. He also added that discussions are being made with the cabin crew administration on this issue.

For the question – “Has EAL ever considered to reduce meal & beverage served to passengers with an aim of cost saving?” – he replied that since this will have impacts on the company's image, EAL prefers not to do

that. However, he mentioned that there are a lot of ways to reduce costs like the above one before going into this decision.

- v. Expiration of purchased chemicals: It is observed at chemical store that there are so many chemicals ready to be disposed due to expiration cases. During a dialogue with employees working there, the reasons are found to be short shelf life time at reception, and purchasing in large quantities without considering the usage rate. The cost here is not only the cost of the item or the carrying cost but also there is a huge cost of disposal. The company has now been requested by foreign companies to pay millions of birr for the disposal of accumulated expired chemicals as told by a department manager in Purchasing & Materials Management division.
- vi. Increase in the number of Aircraft components sent for foreign repair: This is caused by different reasons. One is incapability<sup>13</sup> of component repair shops to repair or overhaul units though there is now the initiative to develop capabilities for those units that EAL hasn't yet developed for. Another reason can be purchase or lease of aircraft whose components are somehow different from those for which EAL has developed capability. And yet another reason can be when the testers found at the repair shops become out of service.

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<sup>13</sup> Incapability means not being authorized to repair or overhaul a unit. The authorization is given by different concerned parties inside and outside the nation.

### **3.4.2 Other Causes**

- i. Internal accidents and incidents are also among the causes of cost increases. According to the safety office, 55 accidents happened during the first three quarters of 2007/08 fiscal year. There are times you may find a ground vehicle colliding with a stationary Aircraft. Lack of familiarization with the ground support equipment or vehicle and failure to control those that operate vehicles without the license which is issued by the Airline have their own contributions to this loss.
- ii. Ground support equipments like Ground Power Units<sup>14</sup> are utilized improperly. One may find this equipment running even when the power is no more needed on the Aircraft.
- iii. Brain Drain – losing qualified and well-experienced employees which obviously has its own negative consequences on the company's performance. This is true for both operational and support staff though it becomes serious in the first case.
- iv. High costs incurred for executives' vehicles purchase and fuel allowances. It is observed that vehicles are still being purchased for executives.

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<sup>14</sup> Ground Power Unit is an electric-generating equipment taking fuel as an input and used to supply power for an Aircraft while on ground and its engines are shut off.

- v. Punishment of the Airline by immigration authorities of other countries as a result of insufficient or forged travel documents of passengers. The front-line marketing agents say that useful tools that help in checking the genuineness of visa and passports like inspection lights and magnifying lenses are not provided.
  
- vi. Purchase of variety of vehicles from different manufacturers creates problems such as the need for purchase of new types of spare parts and maintaining tools, inability to maintain or overhaul the vehicles and the like.
  
- vii. High amount of oil and fuel consumption by old vehicles operating in the compound since there is no limit set on the life of a vehicle. When discussing with the base service management, it has been learned that the department is planning to dispose some of the very old vehicles with such type of problems.
  
- viii. Wastage and misuse of materials (inputs) at Aircraft maintenance areas and catering areas.
  
- ix. User departments order parts with incorrect part numbers or specifications resulting in surplus stock or capital tied-up and repurchase of parts by incurring extra cost.



- x. Interruption of projects after some cost has already been expended. The development of Executive Management Information System (EMIS) and the installation of the networked ID card checking equipment can be good examples.
  
- xi. Finally, other costs associated with unplanned and uncoordinated rush decisions, negligence, and lack of awareness about costs are the causes for unnecessary or increased cost of the Airline.

## **CHAPTER 4**

### **CONCLUSIONS AND RECOMMENDATIONS**

Based on the findings of the study presented in Chapter 3, the following conclusions and recommendations are drawn.

- The management is somehow trying to get employees involved in cost reduction issues. Employees also are being concerned with the issue and give suggestions though there are some hindrances from the management side. It is recommendable to strengthen employee participation in cost reduction initiatives so that the company can exploit its potential to cost reduction. There are some positive indications that the company is giving attention to cost reductions like the formation of a cost reduction initiative committee, and the implementation of ACE program. The effort being made to develop repair and overhaul capabilities is also a handy step in achieving cost reduction objectives. These are found to be promising to bring about tremendous cost reductions but if they are supported by both the employees and the management. Therefore, it is appropriate to make sure that these programs are running without constraints but with the required support of employees and the management.
  
- It can be concluded that there are activities from which EAL could have got economies of scale had they been performed in a consolidated way.

There are cost reduction potentials through economies of scale in purchasing, printing, ground transport, and payment check preparation activities. It is recommendable for the Purchasing & Materials Management to change its structure from customer-based to product-based so that the problems associated with the present structure will be alleviated. For the other activities stated above, the problem is more of coordination. Hence, making the sections more coordinated can solve the problem. Coordination is also needed in carrying out local purchase activities which are purchased from petty cash funds.

- As specialization contributes to achieving economies of learning, it is better for the company to work towards employees' specializations as far as it is possible and feasible to implement. Especially, giving trainings to employees, having an effective division of labor, and following a uniform work procedure deserve the most attention.
  
- The cost associated with the refreshment service provided by London Café & Restaurant to transit passengers is found to be high. The purpose of outsourcing the service, as the management said, is to reduce some costs like labor, depreciation...etc. But, this was not done scientifically. Cost-Benefit analysis should have been made before the decision. Therefore, the Cost-Benefit Analysis should, even now, be done and the final decision should rest on the output of the analysis.

- It is highly likely for a project to be unsuccessful if it is not planned well in advance. It can be said here that Ethiopian Airlines is also a victim of such a problem. Some projects can be taken as evidences that they are aborted once some cost has already been incurred like the Aircraft engine balancing equipment purchase and the ID card checking equipment installation. Therefore, EAL needs to have advance planning and coordination to save unnecessary costs.
  
- The compensation that EAL pays to passengers for lost or damaged baggages, flight delays, and denied boardings is extremely high. This situation calls for the need to have a secured and effective baggage handling system and proper flight scheduling and reservations. EAL can save a large amount of money through managing these activities wisely.
  
- Another potential of cost reduction for EAL is in the area of Aircraft lease. It would be less costly for the airline to operate the same or very close family of Airplanes as Southwest Airlines does. Thus, it is advisable to lease a similar aircraft unless otherwise there is a challenging constraint to do so.
  
- If the cost reduction effort is to be fruitful, EAL should increase the level of awareness of employees to be cost-conscious and participate and involve them in decisions pertaining to cost reductions.

→ Moreover, EAL is recommended to:

- Control and timely collect excess meal, beverage, and hygienic items from incoming flights.
- Consider the shelf life time and usage rates while purchasing chemicals and other shelf-life-controlled items to minimize the disposal rate.
- Give trainings to Ground Vehicle operators, apply safety rules and signs at appropriate areas, and control the traffic to reduce the number of accidents.
- Conduct an in-depth study on employees' turnover and take apposite measures etc.

→ Finally, it is proved during the course of the study that EAL has a great potential to reduce costs. Therefore, it is highly advisable that the company make a thorough and detailed study on cost reduction potential.



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- ↓ [http://www.wipro.in/Services/Consulting/scost\\_reduction.htm](http://www.wipro.in/Services/Consulting/scost_reduction.htm)

## Company's Intranet

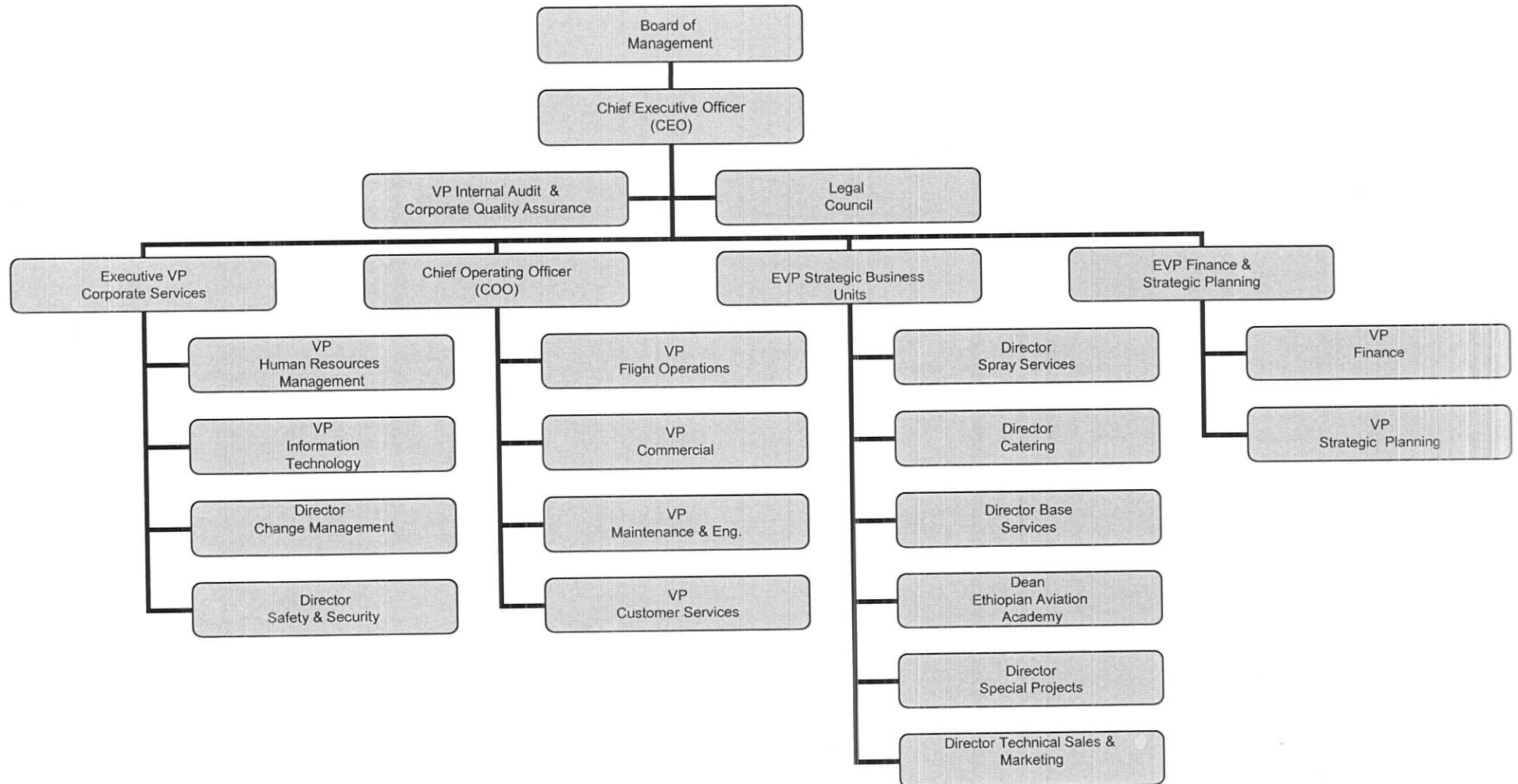
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# APPENDICES



# **Appendix 1**

# Corporate organization structure



# **Appendix 2**

## **QUESTIONNAIRE TO BE FILLED BY EMPLOYEES**

This questionnaire is designed to collect relevant data for senior paper in partial fulfillment of the requirement for MBA at Addis Abeba University. The research topic is Cost Reduction Potential of Ethiopian Airlines. Please take a few minutes of your time to complete this questionnaire. Your frank and honest response will have a positive contribution to the success of the research. I kindly request you to fill and return it as soon as possible. I thank you in advance for your cooperation.

### **Note:**

- ⬇ There is no need of writing name
- ⬇ Your responses will be kept strictly confidential
- ⬇ Do not hesitate to write any relevant information.

### **Reminder:**

Any Cost Reduction effort should not, in any way, result in compromised quality or, in general, compromised processing or output. It should rather result in Efficiency. Efficiency can be thought of as either making more output with the same input or making the same output with less input. Therefore, please bear this in mind while filling this questionnaire.

# Part 1

## 1.1 Personal information

### 1.1.1 Age

20-27

28-35

36-43

44 and above

### 1.1.2 Gender

Male

Female

### 1.1.3 Education

Below 12<sup>th</sup> grade

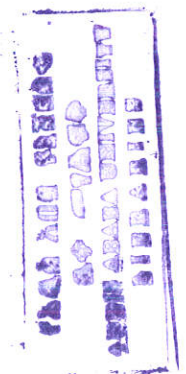
12<sup>th</sup> grade complete

Certificate holder

Diploma holder

Degree holder

Above Degree holder



1.1.4 Number of years worked in Ethiopian Airlines \_\_\_\_\_

1.1.5 Number of years worked in your current department \_\_\_\_\_

1.1.6 Positions you held in the Airline so far (Please list them)

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## Part 2

2.1 Have you ever been asked by management as to how the company can reduce costs?

Yes

No

2.2 Have you ever suggested an efficient way of doing something?

Yes

No

2.3 If the answer to the above is 'Yes', is the management willing to hear from you when suggesting efficient ways of doing something?

Yes

No

2.4 Are there instances in which activities, processes,...etc. are handled on a piece-meal basis while it is possible to make it in mass?

Yes

No

2.5 If your answer in question 2.4 above is 'Yes', please state.

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2.6 Are there situations that hinder an employee from being specialized in an area of work?

Yes

No

2.7 If your answer in question 2.6 above is 'Yes', please state.

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2.8 Do you know any instance that Ethiopian Airlines is incurring more costs than before for the same output?

Yes

No

2.9 If your answer in question 2.8 above is 'Yes', please state.

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2.10 Would you explain efforts that already resulted in reduction of costs around your working area?

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2.11 How do you judge your department in efficiently using the following?

	<b>Excellent</b>	<b>Very good</b>	<b>Good</b>	<b>Poor</b>	<b>Very poor</b>
Capital equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Human resource	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Electric power	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Telephone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Office supplies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.12 Do you believe that Ethiopian Airlines has the potential to reduce costs?

Yes

No

2.13 In what/which areas of operation do you think there is a potential for cost reduction without affecting or reducing the quantity and/or quality of service and/or output?

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2.14 Is there any idleness of equipment or manpower in your working area? If any, please state.

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2.15 Please fill the following table.

<b>I/N</b>	<b>Any reason that resulted in increase in costs or unnecessary costs</b>	<b>What do you recommend?</b>
1		
2		
3		

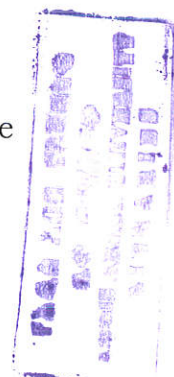
4		
5		
6		



## Interview Questions

### **Common Questions**

1. Do you believe that reducing costs is a demanding strategy now?  
Why?
2. Are there any cost reduction opportunities available to Ethiopian Airlines as a whole? In your department?
3. What has been done in order to exploit these opportunities?
4. If there are problems to exploit them, what are they?
5. What efforts have been made to reduce costs other than simple budget cuts?
6. Are there instances whereby unnecessary costs are incurred?



### **Purchasing & Materials Management**

- ⬇ What do you say about the chemicals purchase and their expiration and disposal?

### **Maintenance**

- ⬇ Is it possible to reduce costs of maintenance without affecting the quality? How?

## **Catering**

- ✚ Was there any effort made to reduce the quantity of in-flight meal with the aim of reducing costs? If not, why?
- ✚ What motivates EAL to outsource the refreshment service provided to Transit passengers?

## **Base Services**

- ✚ What is the plan of Base Service with respect to old vehicles which consume high amount of oil and fuel?

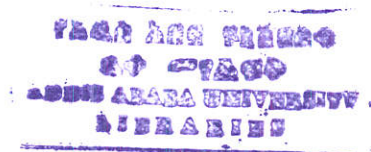
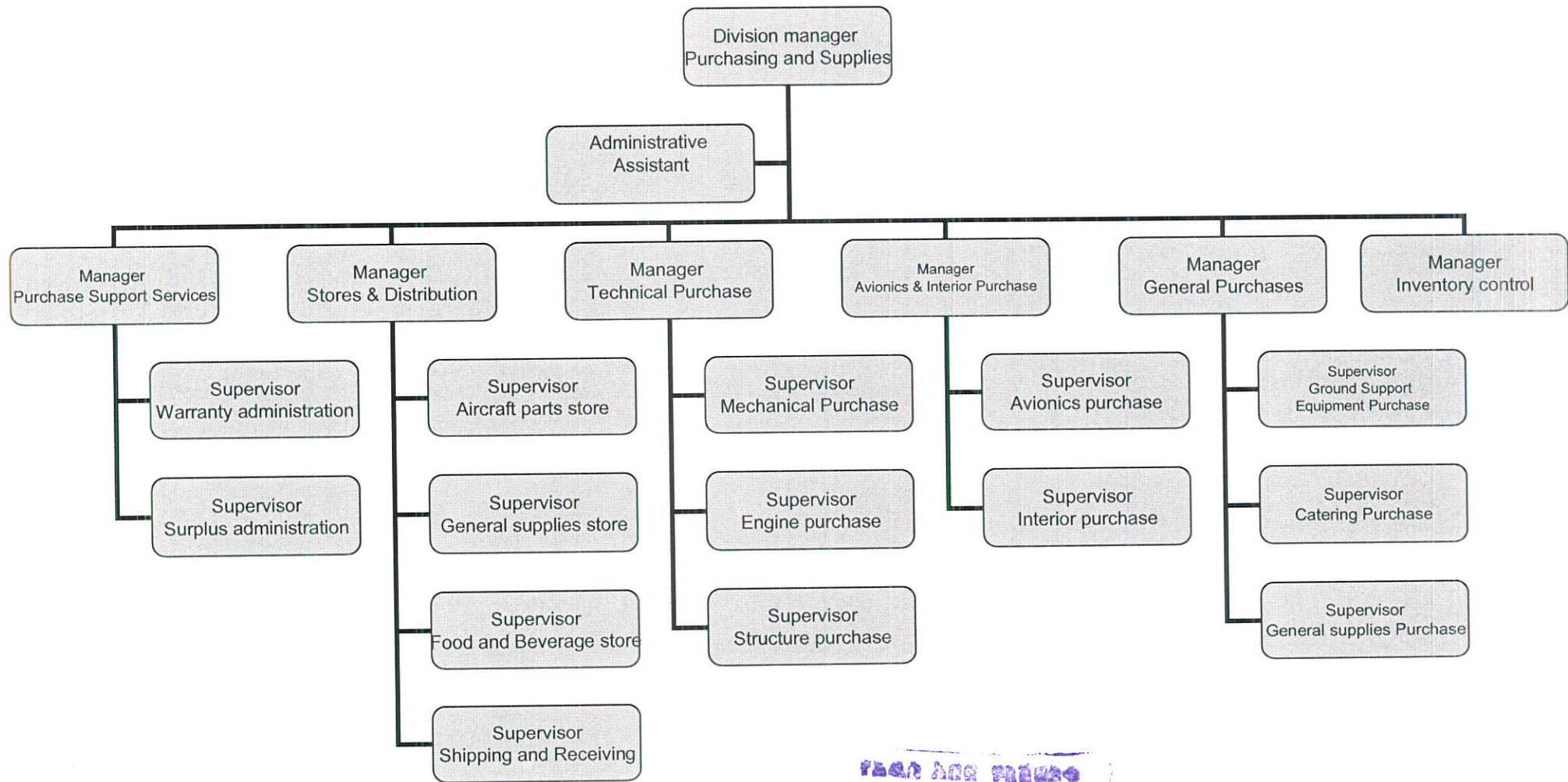
## **Flight Operations**

- ✚ Are there any efforts made or being made in order to reduce flight-related costs of the Airline?

# Appendix 3



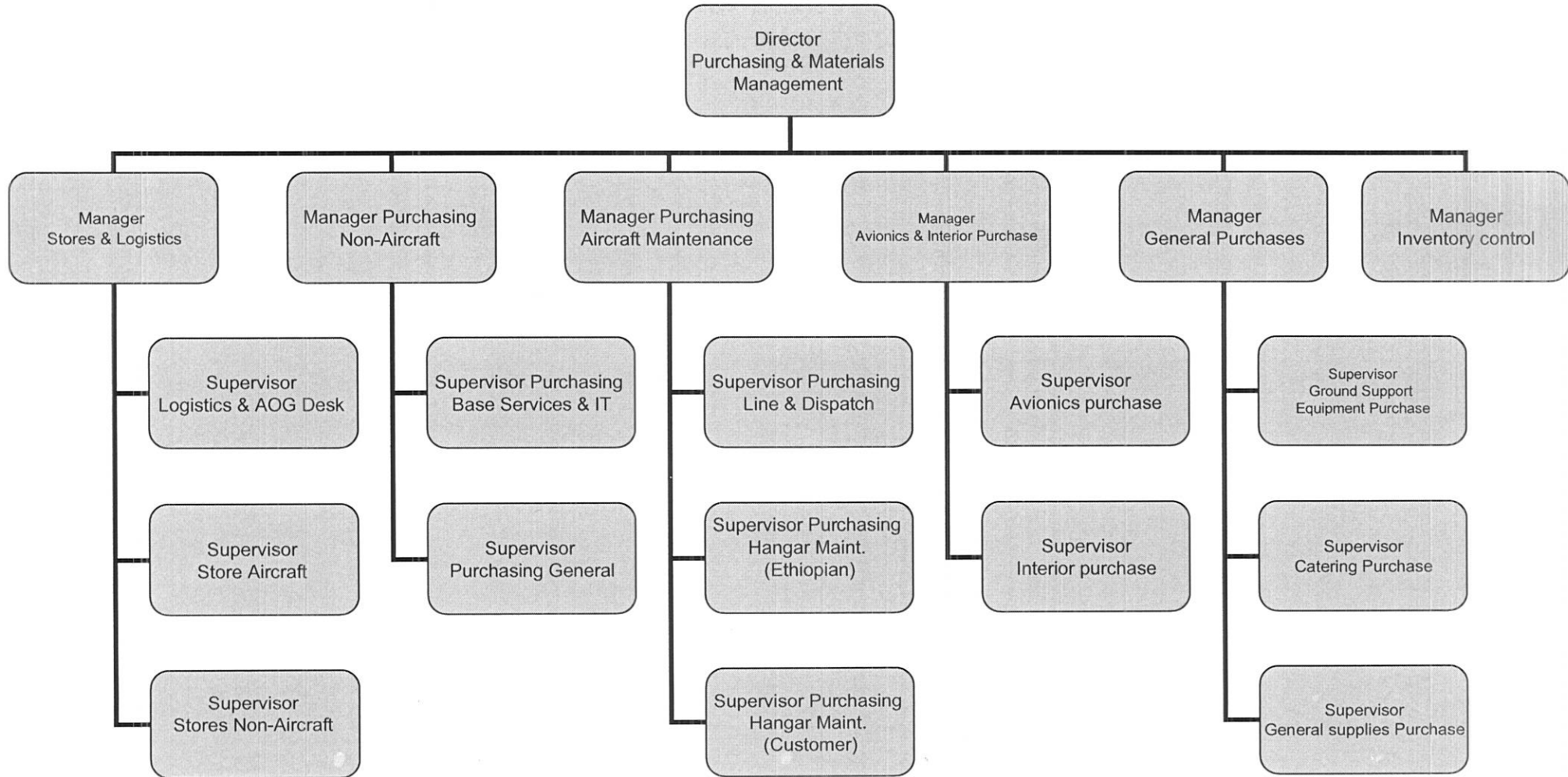
# Old structure of Purchasing and Materials Management



# Appendix 4



# Current structure of Purchasing and Materials Management



# Appendix 5

YAMA HACHI PRESS  
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ADAMS ANZA UNIVERSITY  
SINGAPORE

INTEROFFICE  
CORRESPONDENCE



Ethiopian  
የኢትዮጵያ

AFRICA'S WORLD CLASS AIRLINE

TO: All Employees

FROM: Chief Executive Officer

DATE: May 22, 2008

**Subject: Fasten your seat belt, the Airplane is flying through a turbulent weather**

As we all know the airline industry is passing through the most difficult and challenging time in its history.

We are all tuned to the international media and we know that more than six airlines have declared bankruptcy in the USA during the last four months. Many more are taking drastic cost saving measures like scaling down operations, lay-off employees and other review of their cost structures and revenue enhancement avenues.

Although oil prices are still sky-rocketing and hitting new records at an alarming rate with no end-insight, even the current price level is unmanageable and can't be sustained.


Thus far, despite the very high fuel price, we have managed to register historical record-breaking profitability in the current fiscal year. However, further increase in oil price is posing perhaps the most challenging time in our 62 years of successful and proud history as an airline. Yet, we are also confident in our wealth of experience in managing and coming out strong from similar challenges in the past and as a result we have no doubt that we will carefully manage the daunting challenge ahead of us and, as usual, we will come out even stronger.

In the past, Ethiopian has managed to survive and even thrive in the midst of long civil war, famine and stagnant domestic economy. The central and pivotal element which enabled Ethiopian to manage the past challenges was the dedication, can-do attitude, unreserved energy and continuous innovation and creativity in cost saving efforts by its employees at all levels.

Once again, we are challenged to repeat history; and let us stand together to search all avenues of cost saving, revenue enhancement and productivity increase to withstand the turbulent time ahead of us and emerge as a winner as always.

This is, therefore, to request the engagement of each and every employee in continuous improvement of our day-to-day activities to enable our airline continue with its growth strategy and achieve its objectives in this rather difficult time. I also request all employees to cooperate and participate in our cost saving initiatives.


Thank you.

  
For/ Girma Wake

የኢትዮጵያ አየር ወይን  
የአዲስ አበባ አየር ማዕከል  
የሰው ሀብት ኮርፖሬሽን  
የሰው ሀብት ኮርፖሬሽን

## Declaration

I, Ashenafi Woubneh Bezabih, assert that this study entitled "Cost Reduction Potential of Ethiopian Airlines" is my own original work that has not been presented for a degree in any other university and all sources of material used in the study have been duly acknowledged.

Signature  Ashenafi W. Bezabih Date June 2008

## Approval

This is to certify that Ato Ashenafi Woubneh Bezabih has completed the research paper entitled "Cost Reduction Potential of Ethiopian Airlines" under my guidance and followup. I also approve that his work is appropriate enough to be submitted as a fulfillment for the requirement of the Degree in Masters of Business Administration.

Signature \_\_\_\_\_ Date \_\_\_\_\_

