4-1-1981

Human Asset Accounting

Richard B. Sorenson

HUMAN ASSET ACCOUNTING

BY

Richard B. Sorenson

B. S. in Business Administration
University of North Dakota
Grand Forks, North Dakota, 1975

An Independent Study

Submitted to the Faculty of the

University of North Dakota

in partial fulfillment of the

requirements for a Degree of

Master of Business Administration

Minot Air Force Base

April 1981

This independent study submitted by Richard B. Sorenson in partial fulfillment of the requirements for the Degree of Master of Business Administration is hereby approved by the Faculty Advisor under whom the work has been done.

Advisor

PERMISSION

Title: Human Asset Accounting

Department: School of Business and Public Administration

Degree: Master of Business Administration

In presenting this independent study in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the library of the AFIT Graduate School shall make it freely available for inspection. I futher agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my independent study work or, in his absence, by the Resident Administrator. It is understood that any copying or publication or other use of this independent study or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my independent study.

Richard B. Sorenson
Signature

20 April 1981
Date

ACKNOWLEDGEMENTS

The author is extremely grateful to Dr. Robert Bertsch, Advisor, for his understanding and support during this undertaking. Thankfulness is also expressed to the Graduate School librarian and staff for their assistance in completing this study.

Most importantly, the author is indebted to his wife, Barb, and his two children who gave up countless hours of family time for this project. Without their support and sacrifices this independent study would never have been completed.

CONTENTS

ILLUSTRATIONS

CHAPTER I

INTRODUCTION

Human asset accounting has just within the past decade become a commonly understood and accepted business term. Whether it is called human asset accounting, human resource accounting, or human capital accounting, its use can be of significant value to the firm's decision makers and to interested outside parties. Often times a firm will call people their greatest asset, human asset accounting attempts to quantify or at least categorize this important asset.

This research will begin by examining the history of human capital briefly, defining human asset accounting, presenting some rationale pro and con human asset accounting, and surveying several possible applications. The next chapter will deal with economic methods of human asset accounting followed by a chapter on behavioral methods. The fourth chapter will cover actual applications of human asset accounting in the real world. The final chapter will include a generalized procedure for design and implementation of a human asset accounting system and some concluding remarks.

History of Human Capital

The concept of human assets or of human capital formation is not a new one. Economists have long held that human assets are an important factor in productivity and that the acquisition and maintenance of human assets are genuine expenses and promise future returns. The first attempt to measure the monetary value of an entire population was made by Sir William Petty in 1691. Petty, a public financier, was attempting to value the entire population to demonstrate the power and prestige of England. To accomplish this value measurement he capitalized the current wage payments to perpetuity. Eventually he used the derived value to determine the economic effects of migration and the economic losses from war and death.

Dublin and Lotka wanted some value of an individual for insurance purposes. They felt that if they knew an individual's worth they could determine the amount of life insurance he should have. Adam Smith in The Wealth of Nations included as fixed capital the acquired and useful abilities of all the members of the society. J. R. McCulloch stated that human beings are the most important of all machines. He asserted that an investment in a human being should yield a rate of return consistent with other investments and be sufficient to replace the original investment plus yield a normal rate of return, as determined by the market interest rate, during the probable lifetime of the individual in

whom they have invested.[1] The concept of return on investment is vital to human asset accounting.

Definition of Human Asset Accounting

Before human asset accounting can be defined a workable definition of the term asset should be specified. An asset must have three fundamental characteristics: (1) there must exist the expectation of future economic benefits, (2) the entity reporting the asset must possess the right to receive the benefits, and (3) the benefits must be measureable. R. M. Lall in his article "An Inquiry into the Nature of Assets," has defined assets as follows:

> Assets may be defined as embodiments of present or future economic benefits or service potentials measureable in terms of monetary units, accruing to an enterprise as the results of economic events, the enjoyment of which is secured by law.[2]

This definition will suffice so that human asset accounting can be defined.

Human asset accounting is an attempt to apply accounting techniques to new areas of managerial concern and to use the specialized abilities of the accountant to help discharge new responsibilities concerning human asset retention, development, and performance. Anthony F. Jurkus defined

---

[1] Billy F. Kiker,"The Concept of Human Capital in the History of Economic Thought" (Ph.D. dissertation, Tulane University, 1965), pp. 142-93.

[2] R. M. Lall,"An Inquiry into the Nature of Assets," The New York Certified Public Accountant, November 1968, p. 793.

human asset accounting as "...the assignment of asset status to human resources in accounting statements. It is a developing tool in human resource management and a logical development in organizational environments characterized by an increasing need for accountability."[1] The American Accounting Association has defined human resource accounting as the process of identifying and measuring data about human resources and communicating this information to interested parties. Note that this definition does not exclude non-monetary measures. Some non-monetary measures will be covered in chapter three of this research. From these definitions one can discern the nature of human asset accounting.

Rationale Pro and Con

In the early seventies stockholders demanded management to pay for performance when it compensated the firm's employees. But how can management do this when it has no idea of how much of the firm's resources are invested in an employee? Sizeable amounts of money are spent for recruiting, training, and developing human assets yet these amounts are often expensed in the current financial period instead of being capitalized for the future benefits these expenditures will bring. The relationship between productivity and changes in the value of human assets is a prominent issue in human asset accounting. Conventional accounting

---

[1]Anthony F. Jurkus,"The Uncertainty Factor in Human Resource Accounting," Personnel 56 (November-December 1979): 72-75.

measures do not adequately reflect the impact of changing the total value of the firm's human assets and thus long term effects of personnel policies are ignored and concealed. Three major problems arise from the conventional treatment of human assets: (1) the firm's assets are undervalued because human asset investments are expensed instead of capitalized, (2) the firm's earnings are understated in some periods and overstated in others due to the expensing of human asset expenditures, and (3) management and investors are unable to evaluate the efficiency of human asset programs due to a lack of data. The end result is conventional accounting measures penalize the manager who plans for the future. Human asset accounting would correct these deficiencies. It would resolve some productivity problems at the individual and organizational levels. Human asset accounting would significantly help the firm's management and interested outside parties. The proponents of human asset accounting reason that a specific need exists, feasible means exist to meet the need, and the value of meeting the need exceeds the cost of doing so.

The opponents of human asset accounting hold several items against implementation of human asset accounting systems. Some accountants question whether human assets constitute the legal right to receive future economic benefits, that is whether the idea of human assets meets the criteria of accounting assets as defined in conventional accounting theory. The proponents of human asset accounting counter

that the costs incurred to develop human assets possess the requisite characteristics of unexpired costs and should be treated in a manner comparable to physical assets. Another argument against human asset accounting is human beings are politically and morally beyond valuation--how can you value a human life? The proponents contend you are valuing a set of services or potential services through human asset accounting usage and this value is necessary for a myriad of uses.

Possible Applications

In a Securities and Exchange Commission (SEC) sponsored survey concerning human asset accounting 54 percent of the respondents thought human asset accounting information would be extremely useful and 28 percent thought it would be moderately helpful. However, 33 percent believed the information was inaccessible and 47 percent did not know how to obtain it.[1] Thus there exists a perceived need for human asset accounting. It would primarily help management by generating reports suitable for aid in planning, acquiring, developing, and managing the firm's human assets. It promises more information for decision making and more data for evaluation of decisions. Human asset accounting promises a better organizational climate for treatment of personnel. Applicable areas

---

[1]Philip M. R. Reckers and A. J. Stagliano,"How Good are Investor's Data Sources," Financial Executive 48 (April 1980): 27.

could be productivity measurement, turnover cost, layoffs, and capital budgeting for human assets. Its inclusion in the firm's financial statements would provide information for predicting and evaluating the firm's earning power. Human asset accounting systems readily lend themselves to firms that are human resource intensive, such as sport franchises, educational institutions, and professional firms like CPA firms. The next chapter deals with economic methods of accounting for human assets that meet the desired objectives of a human asset accounting system.

CHAPTER II

ECONOMIC METHODS

The economic methods for human asset accounting systems derive the value of human assets from the value of the firm. They deal in monetary terms and are conventional in the sense that accountants have little difficulty understanding and applying the terms and concepts involved. The economic methods are historical cost, positional replacement cost, opportunity cost, unpurchased goodwill, and the present value of future earnings.

Historical Cost

The historical cost method is also known as the outlay, acquisition, or original cost method. It consists of recording recruiting, training, and development costs as they occur and then amortizing those costs over the length of expected service of the human asset. The length of expected service is equal to the maximum service length times the probability of continued tenure. The probability of continued tenure is determined by the individual's age, existing tenure, and level of position in the firm. The probability of continued tenure is also affected by the firm's various personnel policies.

The historical cost method is consistent with conventional accounting theory, using the historical costs incurred as an implicit surrogate of value to the firm. Its costs are objective and verifiable. The method is simple in concept, inexpensive to use, and requires a short time period to implement. Its main drawback is the instability of money over time and thus historical cost may bear no relationship to current value, making it not relevant for decision making. This disadvantage leads to the positional replacement cost method.

Positional Replacement Cost

Positional replacement cost refers to the sacrifice a firm undergoes to replace an individual in a specified position with a substitute capable of providing an equivalent set of services in the specified position. It refers only to replacing a set of required services and not the individual per se. Positional replacement cost consists of acquisition costs, learning costs, and separation costs, the latter two comprising the bulk of the positional replacement cost. See figure 1 for Flamholtz's excellent model for measurement of human resource replacement costs. The model includes all the major costs involved under the three cost areas. One should note the separation costs are those incurred to separate the current position holder, not the new individual.

Advocates of positional replacement cost say the method plays a significant role in budgeting manpower

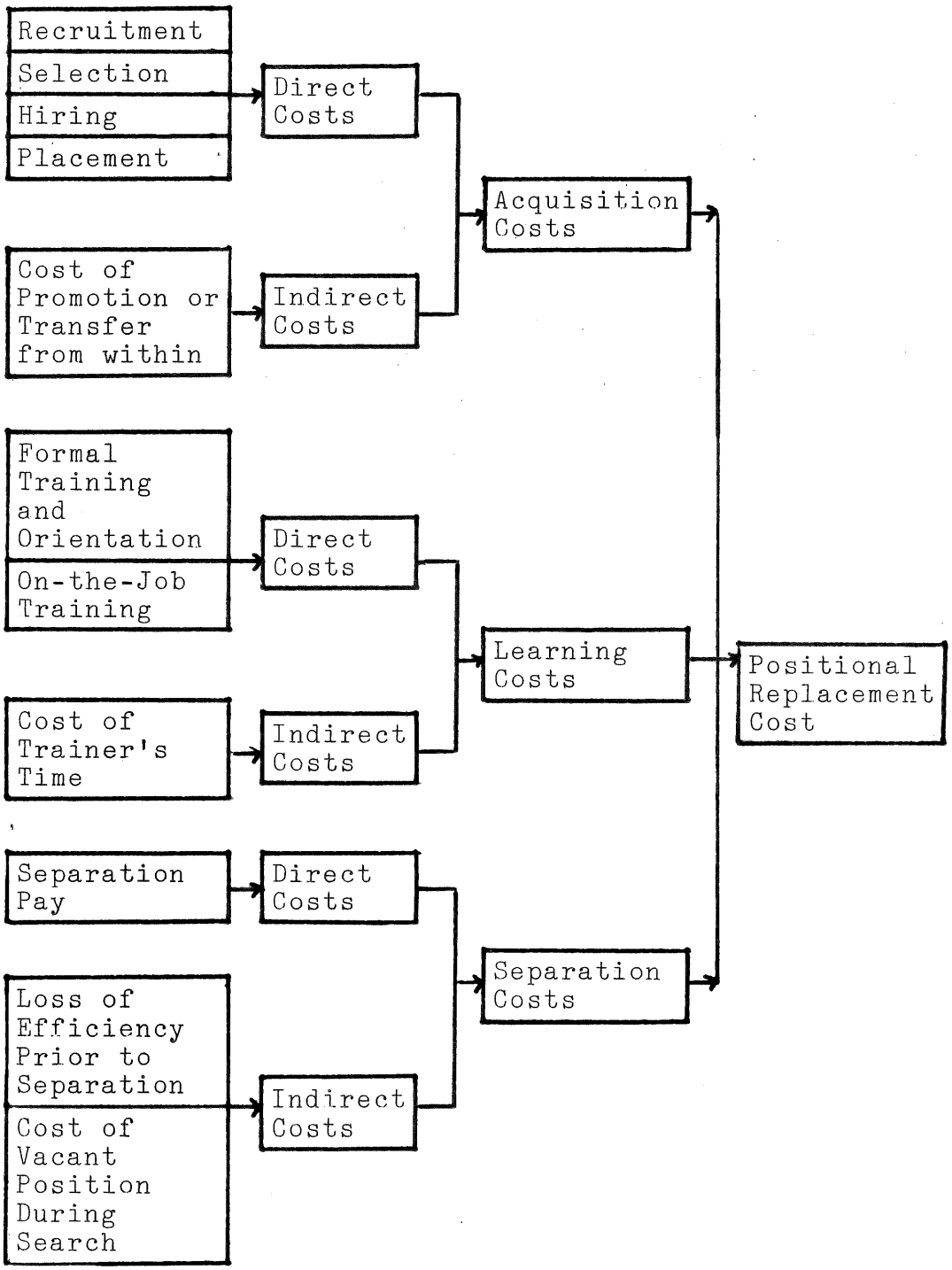


Fig. 1. Model for Measurement of Human Resource Replacement Costs

Source: E. G. Flamholtz,"Human Resource Accounting: Measuring Positional Replacement Costs," Human Resource Management 12 (Spring 1973): 11.

requirements, in determining learning and separation costs, and in evaluating manpower practices and policies. This method is not as verifiable as the historical cost method but is more indicative of value. Barring market imperfections current positional replacement cost equals the current value of the human asset. The main disadvantages are it ignores the synergistic effects of individuals and deals only with replacing a set of services, not the individual capabilities which could be utilized in different capacities within the firm.

Opportunity Cost

The opportunity cost method attempts to obtain the value of a human asset in its best alternative use. Its usage depends upon the knowledge of the marginal productivity of individuals in various capacities, which is difficult if not impossible to discern for most individuals. Competitive bidding is an opportunity cost system in which each manager must bid for the individuals he wants. Each manager's bid reflects the level of value expected from the individual.

Unpurchased Goodwill

The unpurchased goodwill method attributes differential earnings of a firm to its human assets. Differential earnings are found by comparing the firm's current rate of return to the average rate of return for its industry or field. The earnings in excess of the average rate of return are attributed to the firm's human assets. This amount enters

the human asset account and the amounts are compared from period to period to determine the value of the human assets.

. Present Value of Future Earnings

The present value of future earnings method measures the money value of service potentials by the discounted present value of expected revenue flows from an asset. To do this the expected tenure of the individual is estimated and his possible service positions are identified. The value the firm gets from the individual in each position is appraised and combined with the probability of the individual occupying each position at a future time. This amount is then discounted to arrive at the present value of future earnings for the individual. The following formula[1] expresses this procedure:

$$V_{\tau} = \sum_{t=\tau}^{T} \frac{I^*(t)}{(1+r)^{t-\tau}}$$

where

V_{τ} = the human capital of a person τ years old

$I(t)$ = the person's annual earnings up to retirement

$I^*(t)$ = estimate of $I(t)$

r = discount rate specific to the person

T = retirement age

Lev and Schwartz conducted a study using income tax returns and mortality tables to determine the present value

---

[1] Baruch Lev and Aba Schwartz, "On the Use of the Economic Concept of Human Capital in Financial Statements," The Accounting Review 46 (January 1971): 106.

of future earnings. They concluded the data was reliable only for large groups and they rejected the method due to low correlation between a man's salary and his value.[1] Others concur that the results obtained by this method may not correspond to the individual's actual value or his current performance. The next chapter will deal with behavioral methods of human asset accounting.

---

[1]Geoffrey M. N. Baker,"The Feasibility and Utility of HRA," California Management Review 16 (Summer 1974): 17-23.

CHAPTER III

BEHAVIORAL METHODS

Human behavior is the foundation for many of the approaches to human asset accounting. In fact the proponents of these methods contend human behavior is the critical factor in determining the utility of a human asset accounting system. The behavioral methods attempt to estimate value, or rather the change in value of human assets directly, by analyzing and measuring various behavioral indicators which underlie human value in organizations.

Four methods will be examined. They are Flamholtz's determinants of an individual's value to a formal organization, Myers and Flowers' attitudinal framework, Likert's human organizational measurements, and Eggers' arbitrary points system. Flamholtz's method will be surveyed first.

Determinants of an Individual's Value

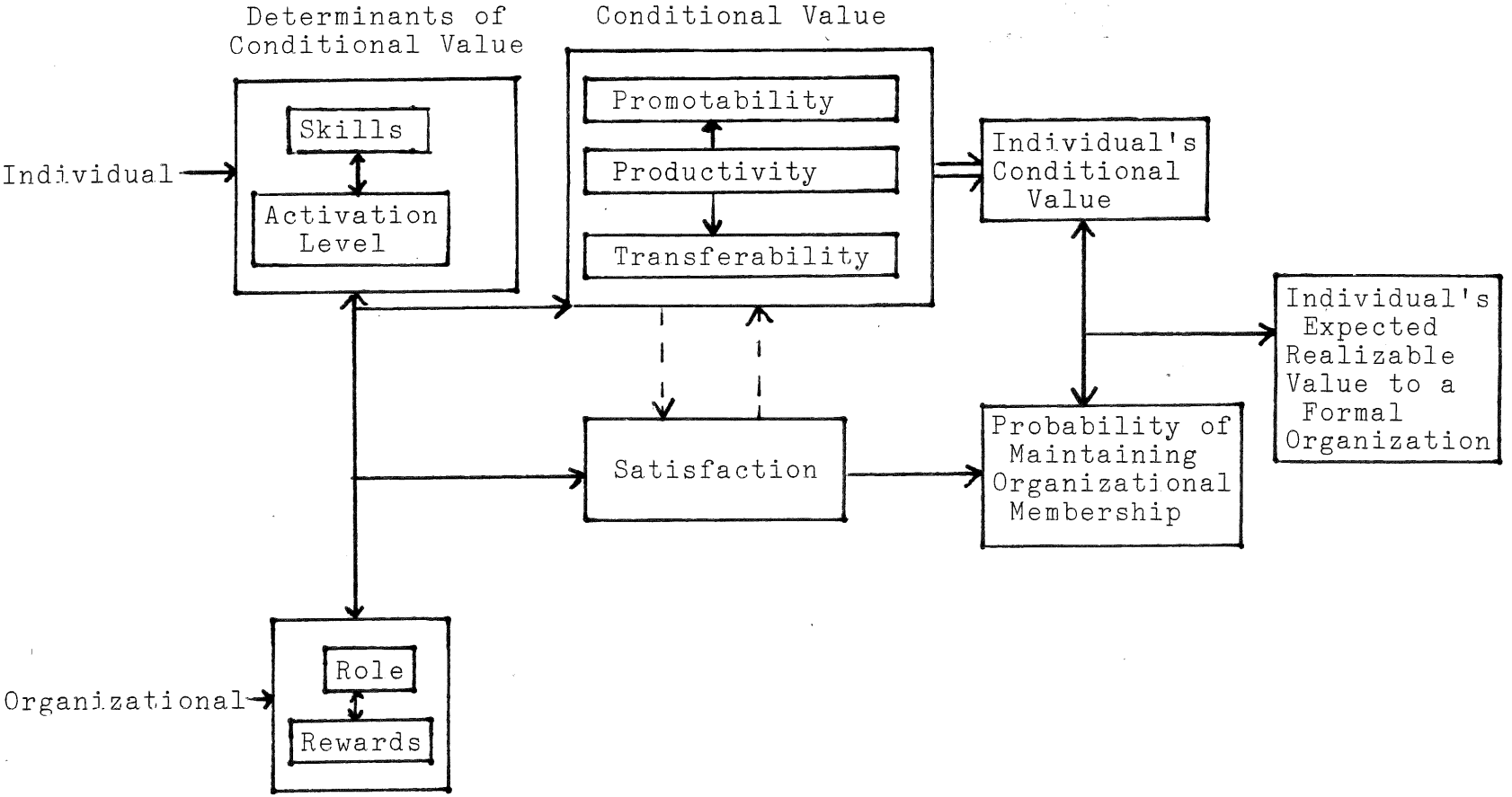
Eric Flamholtz maintains people are resources because they possess some expected future service potential. He further states the individual's value to an organization is the present worth of the set of future service he is expected to provide during his anticipated tenure with the firm. To explain his theory he has designed a model of

the determinants of an individual's value to a formal organization.[1] His model is depicted in figure 2.

The model's two main purposes are first to identify a set of variables which purport to explain a person's value to a firm and secondly to discuss the variables' interrelationships. The determinants of conditional value include individual and organizational variables. The individual variables consist of skills and activation level. The activation level is defined by Flamholtz as the extent of release of stored energy of the organism through metabolic activity in the tissues. Even though an individual may have the necessary skills, his conditional value to the organization is dependent on whether or not he uses those skills. The organizational determinants include the individual's role in the organization and the rewards given to him by the organization. The determinants of conditional value result in his conditional value, consisting of his promotability, productivity, transferability, and satisfaction. The first three are possible determinants of the last and vice versa. These factors result in the individual's expected conditional value which is defined as the present worth of earnings over the total expected working life of the individual. When the individual's expected conditional value is combined with the probability

---

[1] Eric G. Flamholtz, "Toward a Theory of Human Resource Value," The Accounting Review 47 (October 1972): 668.



Legend:

Symbol	Meaning
⟶	Hypothesized determinant
⟷	Hypothesized interaction
⟹	A subset
- - - ⟶	Possible determinant

Fig. 2. Model of the Determinants of an Individual's Value to a Formal Organization

Source: Eric G. Flamholtz,"Toward a Theory of Human Resource Value," The Accounting Review 47 (October 1972): 668.

of maintaining organizational membership, the result is the individual's expected realizable value to a formal organization, the amount actually expected given the likelihood of turnover.

Flamholtz's model demonstrates how individual and organizational variables interact to produce the individual's value to the organization. This procedure results in a monetary value that can be established as the human asset value.

Attitudinal Framework

M. Scott Myers and Vincent S. Flowers developed a framework for accounting for human assets.[1] Their framework defines the dimensions of human assets as knowledge, skills, health, availability, attitudes, and job performance. Combining these dimensions results in the following formula:

Knowledge+Skills+Health-Availability-Attitudes-Job Performance

The first four dimensions can be assessed rather easily according to Myers and Flowers. Knowledge simply has to match the job level. Job skills, health, and availability can be evaluated using checklists similar to those shown in figure 3. Myers and Flowers assert attitudes have the greatest potential for directing the first four dimensions and thus a reliable and quantitative measure

---

[1] M. Scott Myers and Vincent S. Flowers,"A Framework for Developing Human Assets," California Management Review 16 (Summer 1974): 5-16.

Job Skills		For Present Job	For More Desirable Job
4	Capable of meeting all practical applications requirements of the job.	()	()
3	Some practical applications competence lacking, but does not seriously impair job effectiveness.	()	()
2	Practical application competence limited, impairing job effectiveness.	()	()
1	Incapable of meeting minimal practical applications requirements of the job.	()	()
0	Skill level unknown.	()	()
Health			
4	Job effectiveness rarely impaired by health problems.	()	()
3	Health problems occasionally impair job effectiveness.	()	()
2	Continual health problems, or periodic lapses, significantly reduces effectiveness.	()	()
1	Severe problems or failing health makes job effectiveness impossible.	()	()
0	Health level unknown.	()	()
Availability			
4	Is always available when needed.	()	()
3	Is occasionally not available when needed.	()	()
2	Frequent unavailability seriously impairs effectiveness.	()	()
1	Seldom available, making effective performance impossible.	()	()
0	Insufficient information.	()	()

Fig. 3. Appraisal Checklists

Source: M. Scott Myers and Vincent S. Flowers, "A Framework for Developing Human Assets," California Management Review 16 (Summer 1974): 9.

of attitudes is probably the best measure of how well human assets are being utilized. Attitude survey results would thus represent a barometer of human effectiveness. Job attitudes are classified as turnovers, turn-offs, turn-ons, and turn-ons plus. Persons with turnover attitudes leave the firm since they do not need to stay for external reasons (for example job market or financial considerations) and they do not like their work. Persons with turn-off attitudes stay with the firm even though they don't like their work because external considerations force them to stay. Those with turn-on attitudes stay because they like their work even though they could leave the firm. Turn-ons plus persons stay because they like their work and they must stay for external reasons. The turn-ons and turn-ons plus result in productive behavior on the job, the turn-offs result in nonproductive behavior, and the turnovers seek employment elsewhere. Myers and Flowers attitudinal framework is summarized by figure 4.

Myers and Flowers contend you can arrive at a system of dollarized attitudes for a human asset accounting system. To do this they convert attitude scores into financial returns on payroll investment. The attitude scores are weighed by job grade and tenure. An attitude index is obtained by dividing the weighted attitude score by the attitude weight. The attitude index multiplied by the annual payroll results in dollarized attitudes. The gain or loss in human assets is determined by the difference between the

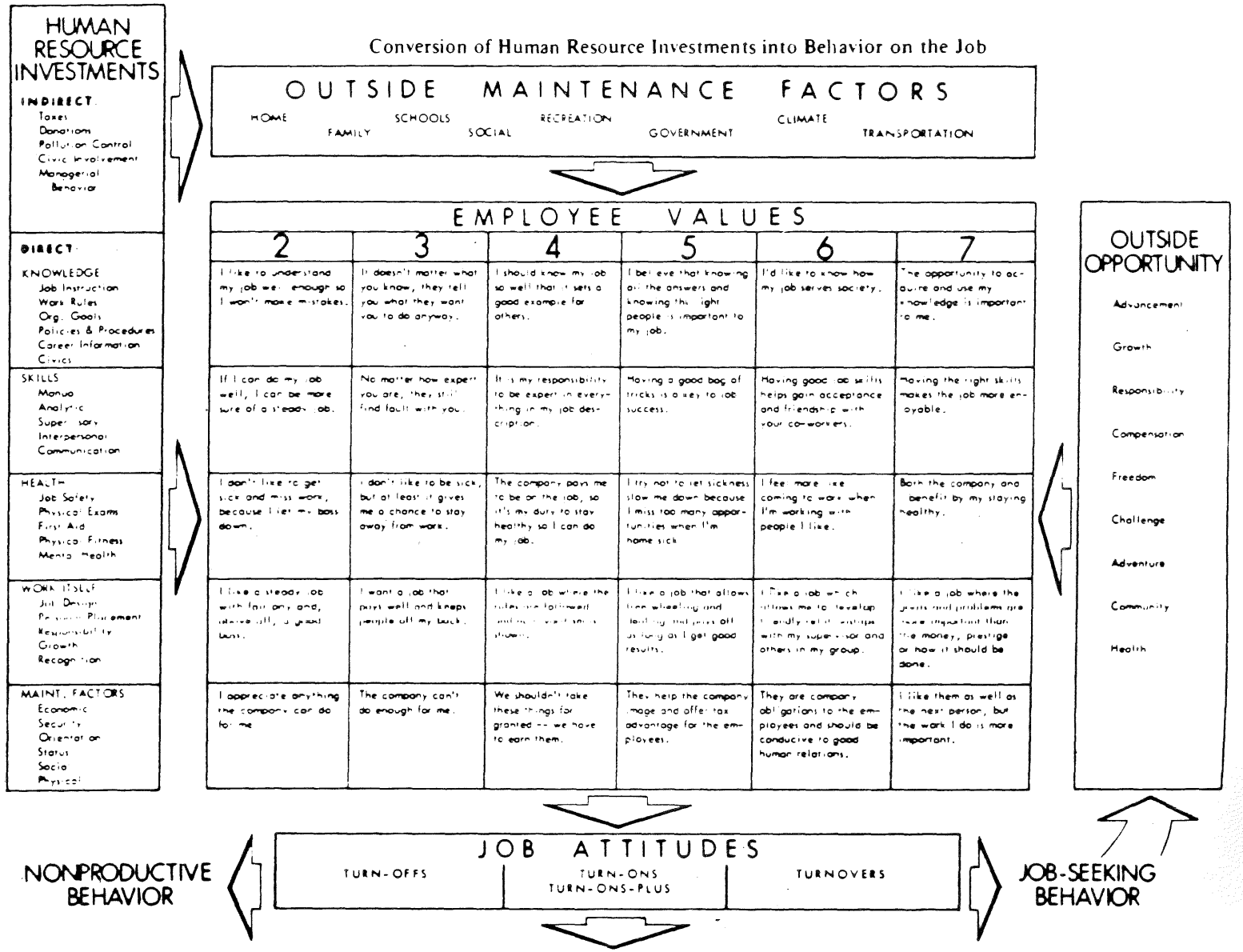


Fig. 4.

Source: M. Scott Myers and Vincent S. Flowers, "A Framework for Developing Human Assets," California Management Review 16 (Summer 1974): 14.

total payroll and the dollarized attitude amount.

Myers and Flowers have proposed a human asset accounting method based on attitudes since they feel attitudes are the most important measure of how well human assets are being utilized. Their method agrees with the behavioral school of thought on human asset accounting.

Human Organizational Measurements

Rensis Likert believes measurements of the state of the human organization reveal the extent to which an organization is capable of performing in a highly efficient, productive manner. He also holds these measurements are objective, impartial, and replicable. They can be used to:

1. Reveal the extent to which the organization as a whole and each administrator are using managerial principles and practices which yield the best performance

2. Provide evidence concerning the condition of such key variables as communication, decision making, attitudes, and committment to the organizational success.

3. Increase lead time concerning awareness of performance problems caused by deterioration of the human organization and its productive capacity.

4. Reveal the extent to which greater productivity represents true improvement, in contrast to that achieved by costly liquidation of the human organization.

5. Establish a basis for managerial compensation by

providing data concerning managerial effectiveness

6. Improve labor relations through early recognition and correction of problems

7. Detect at an early stage good innovative changes and implement throughout the organization.[1]

The aforementioned advantages overcome deficiencies of systems like Planning, Programming, Budgeting (PPB) which are only effective in situations where objectives and progress toward their achievement can be expressed in quantitative dimensions. Operations such as those of the military or educational institutions find it difficult, if not impossible, to state the organizational objectives quantitatively. By shifting the emphasis from end result variables to those variables dealing with human organizations, the organization will achieve its end result variables, providing the organization is functioning well, as indicated by its human organizational variables. This system may demonstrate that a proposed cost reduction plan could achieve its short term objective but the accompanying liquidation of the human organization would be a grave, long term consequence of the program.

Likert defines six key variables, broken into three classes. The first two variable are managerial leadership behavior and the organizational climate.

---

[1]Rensis Likert,"Human Organizational Measurements: Key to Financial Success," Michigan Business Review 23 (May 1971): 2.

These are causal variables in the human organization. The next three variables are subordinate (peer) leadership behavior, group processes, and satisfaction. These are intervening variables in the human organization. The last key variable is total productive efficiency, the end result variable. Favorable scores on the causal variables are associated with favorable scores on the intervening variables and, in turn, favorable scores on the end result variable.

Likert developed a model, shown in figure 5, to generate a dollar estimate of the change in value of productive capability from one reporting period to another. This dollar estimate can then be capitalized to reflect the change that occurred in human asset value. The total productive efficiency variable stands for the combined data on several performance dimensions such as productivity, costs, and earnings. The width of each arrow denotes the magnitude of the relationship between the variables and the numerical values are the statistical correlations between the variables. The measurement of the key variables is accomplished through a questionnaire.

This model can be used for accounting for the firm's human assets. Likert believes the closer the causal and intervening variables are to science based management style, the more favorable will be the end results, as contrasted with an exploitative-authoritative management style. The organization possessing high levels of key organizational variables will have a greater quantity of human assets and

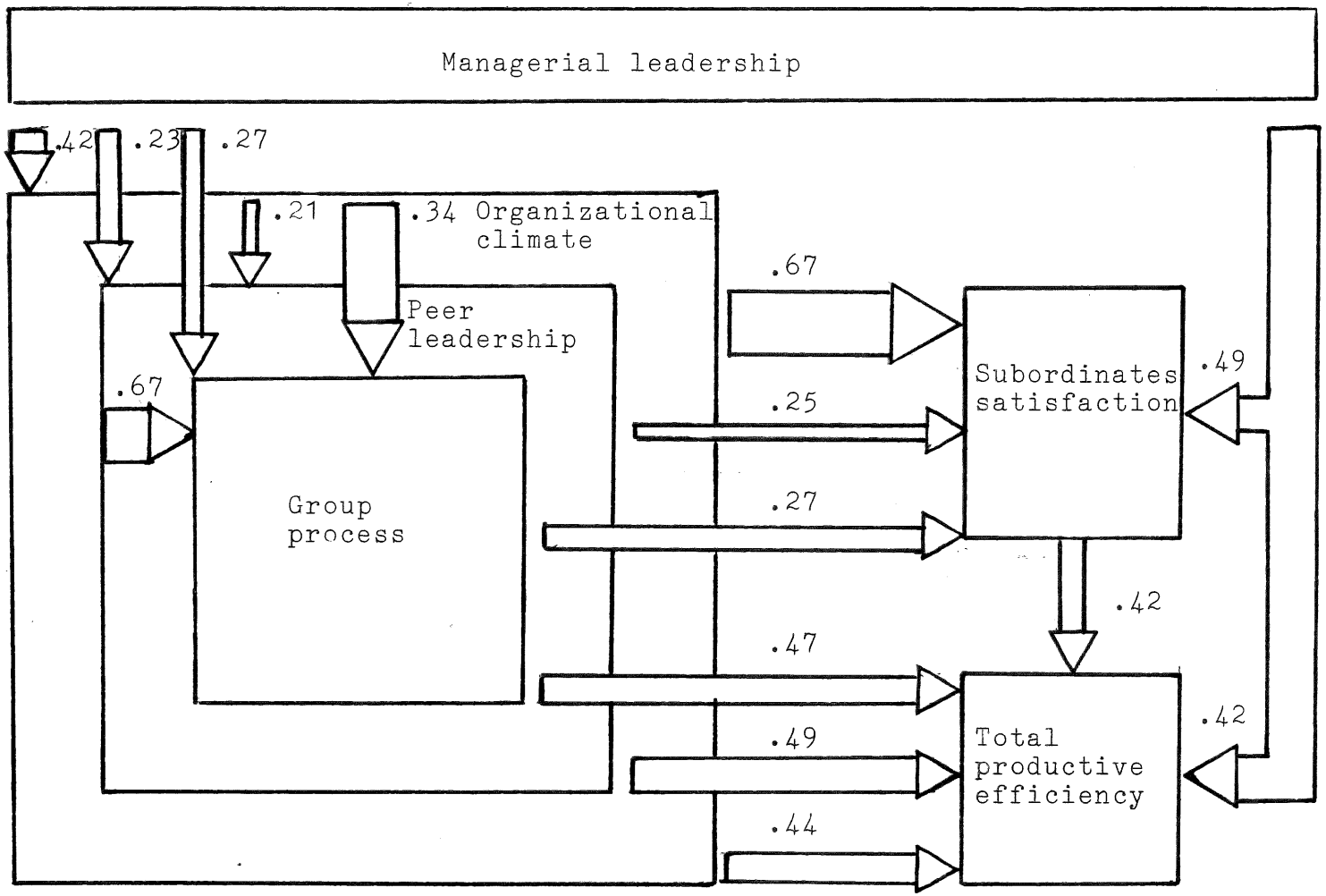


Fig. 5. Relationships among human organizational dimensions and to performance.

Source: Rensis Likert, "Human resource accounting: Building and assessing productive organizations," Personnel, May/June 1973, p. 12.

greater productive efficiency than an organization possessing lower levels of these variables.

Arbitrary Points

H. C. Eggers realized the importance of human assets to the organization and the lack of a suitable system to measure the organization's human assets. He designed a system that uses arbitrary points to evaluate how effectively each position and function is being filled by the current management and to discover company trends and weaknesses which need to be rectified.

Eggers starts with an evaluation of the basic organization. The necessary positions for the organization are identified and a maximum point value is assigned to each position. The individual filling the position is assessed as to his qualifications for the job, personal attributes, and managerial abilities. He is then assigned actual point values based on the weight assigned to the category, potential point value, and the percentage of possible points he is assessed. A summary and comparative statistics table is prepared to show the changes in actual and potential points from one reporting period to another. The organization then possesses a basis for decision making concerning its human assets. Actual applications of human asset accounting will be covered in the next chapter.

CHAPTER IV

ACTUAL APPLICATIONS

Various economic and behavioral methods for the accounting of human assets have been discussed thus far. Now several actual applications of human asset accounting in the business world will be examined. The three firms and one industry surveyed are the R. G. Barry Corporation, AT&T, Electronic Data Systems, and the professional sports industry.

R. G. Barry Corporation

In 1966 the management of the R. G. Barry Corporation and William Pyle initiated a pioneering effort to develop a system of accounting for the firm's investment in its human assets on a current cost (replacement cost) basis. The specific objectives of the program were threefold: (1) to provide Barry managers with specific feedback on their performance in managing the organization's resources, (2) to provide Barry managers with additional information to assist in decision making, and (3) to provide the organization with a more accurate accounting of its return on total resources employed and enable management to analyze how changes in the status of resources employed affect the achievement of corporate objectives.

The system developed by R. G. Barry includes seven investment cost categories: recruiting, acquisition, orientation, training, familiarization, informal development, and formal development. Standard costs were developed for various levels and positions of employees and these standards are continually being updated for inflation and other factors. Figure 6 shows the standard costs, computed on a replacement cost basis, and the initial amortization adjustment Barry made. The amortization reflects expiration of investments (costs) as the expected benefits are realized over time.

Barry corporation originally implemented the system only on its top level managers but it now includes most employees. The data is not included in the firm's formal financial statements but is included under "Total Concept" statements in the firm's annual report. Eventually Barry corporation will include the interaction-influence system on a group basis and on customer relations.

AT&T

In the late sixties AT&T experienced very high telephone operator turnover. To determine the cost of this turnover AT&T's management implemented the "Force-loss" project. Its objectives were to determine the return on human investment the firm received from its telephone operators and derive replacement cost information for the same.

	A first-line supervisor	A middle manager	A high-level manager	85 managers	% of total
Recruiting costs	$ 600	$ 2,000	$ 6,700	$154,100	(16)
Acquisition costs	200	1,700	3,500	103,500	(10)
Formal training and orientation	100	500	1,000	22,300	(2)
On-the-job training	1,000	3,000	5,100	204,100	(21)
Familiarization	1,900	6,800	10,200	399,000	(40)
Development	200	1,400	2,000	103,600	(11)
Total	$4,000	$15,400	$28,500	$986,600	(100)
Initial amortization adjustment				458,300(-)	
"Book value"--January 1, 1968				$528,300	

Fig. 6. Resource acquisition and developmental information of R. G. Barry Corporation

Source: William C. Pyle,"Implementation of Human Resource Accounting in Industry," in Human Resource Accounting: Development and Implementation in Industry (Ann Arbor, Mich.: Foundation for Research on Human Behavior, 1969), p. 45.

To accomplish these objectives the firm accounted for all of the acquisition and on-the-job training costs required to bring a telephone operator to the normal performance standards. These costs were then capitalized and amortized over the expected tenure of the employee. The unamortized investment at the employee's resignation was the firm's turnover loss.

AT&T received much data from this project concerning telephone operator training costs and turnover losses. The "Force-loss" project was deemed a success by AT&T's management.

Electronic Data Systems

Electronic Data Systems (EDS) is in the highly competitive automated data industry. It uses a specialized training course, the Systems Engineering Development Course, for the training of its employees. The skills derived from this course are essential to the firm's success in its field. EDS capitalizes all training costs, including the course costs, until its employees reach full productivity approximately three years after they are initially recruitied. This amount is amortized, using a reverse sum-of-the-years-digits method since the employees are more productive in their later years. EDS has incorporated this data in its financial reports, including the 10K report it must file with the SEC.

EDS emphasizes the importance of their employees and their training and the matching of revenue with related

expenses in the 10 K report and its other financial statements. EDS has received a clean bill of health from the SEC concerning its inclusion of human asset accounting information in its reports.

Professional Sports Industry

The professional sports industry represents a very real human asset accounting situation since the worth of a sports team is based on its player personnel and the players are the primary source of the team's revenue. The sports team has tangible, depreciable assets--the player contracts.

A survey concerning the use of human asset accounting in the sports industry had some interesting results.[1] Seventy percent of the respondents capitalized contracts with deferred payment plans, 22 percent capitalized multi-year contracts, and 50 percent capitalized bonus contracts on their financial statements. Thus in an industry that is ideally suited to human asset accounting, human asset accounting is being used.

The final chapter will present a generalized procedure for design and implementation of a human asset accounting system and end with some concluding remarks.

---

[1]Linda Wicks Ferguson,"An Accountant Profiles a Sports Franchise," Management Accounting 60 (May 1979): 14.

CHAPTER V

CONCLUSION

Human asset accounting has been introduced, economic and behavioral methods have been examined, and actual applications of human asset accounting in the real world have been discussed. In this conclusion a generalized procedure for design and implementation of a human asset accounting system is introduced and the conclusion ends with a summary of human asset accounting as it exists today.

Design and Implementation

This section covers a generalized procedure for design and implementation of a human asset accounting system for a firm. The first stage requires a thorough analysis of the firm. The best candidates for a human asset accounting system are firms with a scientific management style whose primary assets are its employees, who invest large amounts in training and development programs, or who have a high turnover rate. The least likely firms would be those who practice an exploitative-authoritative management style. A clear understanding of organizational and behavioral elements as they pertain to human asset accounting is required.

The firm must decide if a human asset accounting system will fill any existing or forecast need. If not, then they should proceed no further with the system.

The second stage consists of the actual design and implementation of the system. The system will usually be based initially on historical cost since capitalization of assets is a procedure readily comprehended by managers and accountants. Eventually behavioral factors should be added because of the critical role behavior variables play in any human asset accounting system. The main implementation problem is computation of monetary measures for behavior variables, however non-monetary measures are admissable and pertinent for use.

The amortization schedule should consider three factors: (1) that the value of later years service is much greater than the early years service, (2) that the probability of obtaining later years service is much less than that of early years service, and (3) that the system of amortization must be reliable and meaningful--not requiring frequent adjustment. Two dimensions of uncertainty to be considered are the duration of employment and the skill level reached during various stages of service life.

Eric Flamholtz designed a generalized model for design and implementation of a human asset accounting system, as seen in figure 7. Flamholtz uses human resource accounting (HRA) instead of human asset accounting in his work.

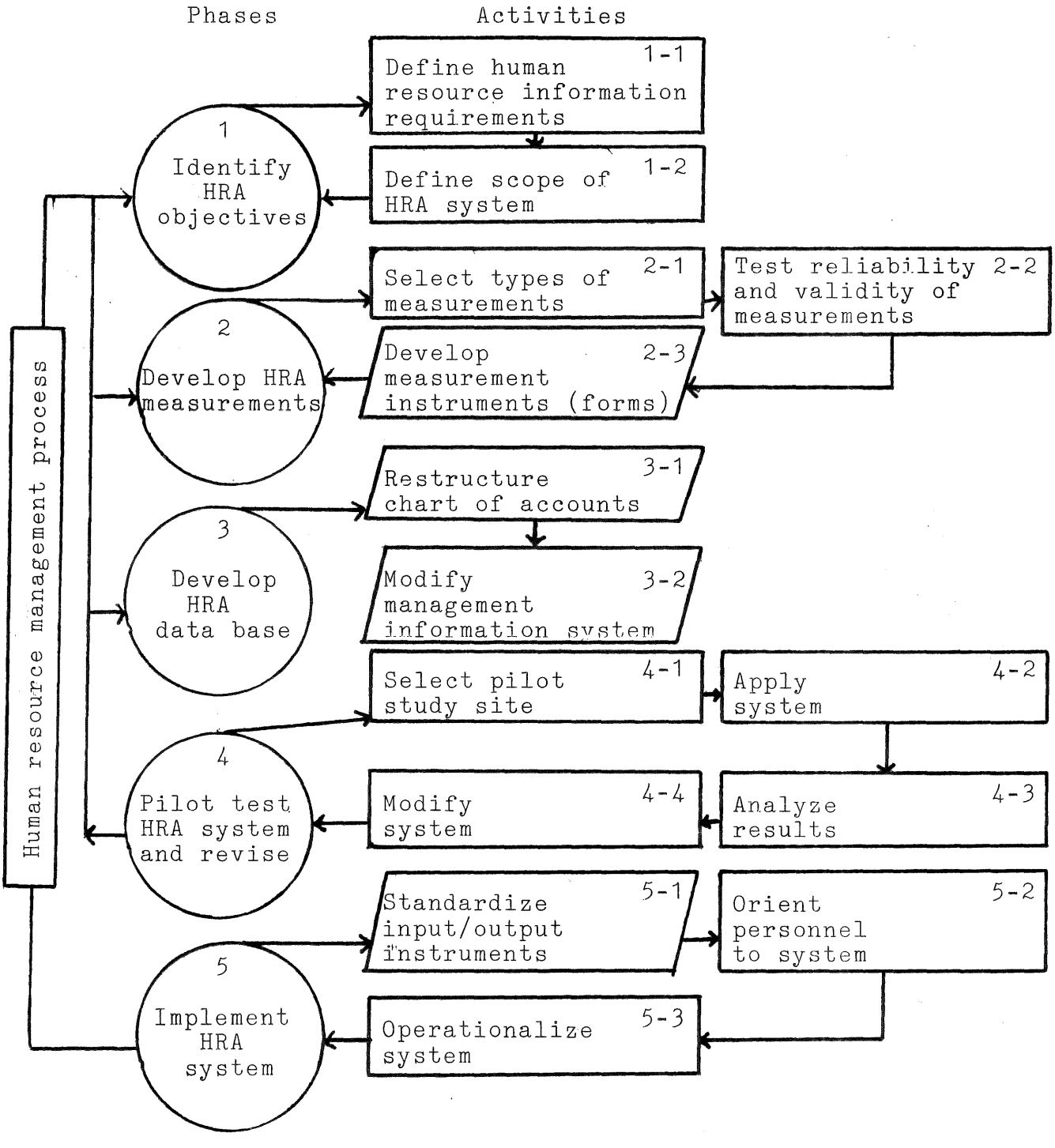


Fig. 7. Model of process design and implementation of a human resource accounting system

Source: Eric Flamholtz, Human Resource Accounting (Encino, Calif.: Dickenson Publishing Co., 1974), p. 278.

Flamholtz designates five major steps with their corresponding actions. The first step is to identify HRA objectives. This includes defining human resource information requirements and establishing the scope of the HRA system. The second step is to develop HRA measurements. This entails selecting the types of measurements to be used, testing them for reliability and validity, and finally developing the forms for recording the measurements. The third step is to develop the HRA data base, which includes a restructuring of accounts and modifying the firm's management information system. The fourth step is the pilot program and revision if required. Management must select the test site, apply the system, analyze the results, and modify as necessary. The final step is to implement the system throughout the firm, which includes an orientation of personnel to the system.

Flamholtz's model can be used as a starting point for any firm desiring to implement a human asset accounting system. It covers the vital steps required in a general manner.

Concluding Remarks

Modern organizational and managerial concepts imply the human asset accounting system to aid management in the pursuit of organizational objectives. The accomplishment of organizational objectives is attributed to successful management of the organization's human assets, which is greatly benefited through a human asset accounting system.

Many firms are now working on a second level of planning that interfaces some human issues with the strategic planning process. The purpose of human asset planning at this level is to insure that the firm has sufficient human assets to meet its financial objectives and minimize personnel costs. A few firms, such as R. G. Barry, are experimenting with a third level of integration of human issues into strategic planning that involves the assessment of the impact of the business climate and human asset challenges on the future position of the firm. Human asset accounting systems provide the essential information required for this level of integration.

Human asset accounting can achieve a critical view of management needs for strategic planning of human assets. It can highlight the weaknesses of the organization and of individuals. It aids to determine the firm's training needs and personnel policies concerning layoffs, turnover, and promotions.

Human asset information has several properties. First, it takes time to develop human assets in a firm. Reports must consider long term effects. Secondly, human asset changes do not have an immediate effect on organizational performance. Costs and benefits several years apart must be matched in order to be meaningful. Thirdly, human asset information will not lend itself to a single set of statistics, a set of statistics will more adequately reflect a human asset

accounting system. Finally, quantitative measures expressed in non-monetary terms will be significant, especially when considering the long term effect of human asset management.

Why don't more firms use human asset accounting? according to H. C. Eggers, many firms fail to realize the importance and value of human assets. Secondly those who do realize the importance have not thought to try to quantify human assets. Finally those who have thought to try, have not found the courage to do so.[1]

Flamholtz wrote:

> If the aim of human resource management is seen as the optimization of human resource value, then task design, appraisal, and compensation are not merely a set of service functions to be performed, rather, they are a set of available strategies that can be adopted to change the value of human assets, and, in turn, the value of the organization as a whole.[2]

Therein lies the substance of human asset accounting.

---

[1]H. C. Eggers,"The Evaluation of Human Assets," Management Accounting 52 (November 1971): 36.

[2]Eric Flamholtz,"A Model for Human Resource Valuation," The Accounting Review 46 (April 1971): 258.

SELECTED BIBLIOGRAPHY

Baker, Geoffrey M. N. "The Feasibility and Utility of Human Resource Accounting." California Management Review 16 (Summer 1974): 17-23.

Black, Thomas G. "Human Resource Accounting in Banking." The Bankers Magazine 163 (July-August 1980): 78-81.

Cornwall, Deborah J. "Human Resource Programs: Blue Sky or Operating Priority?" Business Horizons 23 (April 1980): 49-55.

Eggers, H. C. "The Evaluation of Human Assets." Management Accounting 52 (November 1971): 35-40.

Ferguson, Linda Wicks. "An Accountant Profiles a Sports Franchise." Management Accounting 60 (May 1979): 13-18.

Flamholtz, Eric G. "A Model for Human Resource Valuation." The Accounting Review 46 (April 1971): 253-58.

_____. "Toward a Theory of Human Resource Value." The Accounting Review 47 (October 1972): 666-78.

_____. "Human Resource Accounting: Measuring Positional Replacement Costs." Human Resource Management 12 (Spring 1973): 8-16.

Freidman, Abraham and Lev, Baruch. "A Surrogate Measure for the Firm's Investment in Human Resources." Journal of Accounting Research 12 (Autumn 1974): 235-50.

Hing-Ling Lau, Amy and Hon-Shiang Lau. "Some Proposed Approaches for Writing off Capitalized Human Resource Assets." Journal of Accounting Research 16 (Spring 1978): 80-102.

Jurkus, Anthony F. "The Uncertainty Factor in Human Resource Accounting." Personnel 56 (November-December 1979): 72-75.

Kiker, Billy F. "The Concept of Human Capital in the History of Economic Thought." Ph. D. dissertation, Tulane University, 1965.

Landekich, Stephen. "Accounting for Human Resources and Social Costs." In Modern Accountant's Handbook, pp. 529-58. Edited by James Don Edwards and Homer A. Black. Homewood, Ill: Dow-Jones Irwin, 1976.

Lev, Baruch and Schwartz, Aba. "On the Use of the Economic Concept of Human Capital in Financial Statements." The Accounting Review 46 (January 1971): 103-12.

Liberman, Joseph. "Human Capital and the Financial Capital Market." The Journal of Business 53 (April 1980): 165-90.

Likert, Rensis. "Human Organizational Measurements: Key to Financial Success." Michigan Business Review 23 (May 1971): 1-5.

Meyer, Philip E. "Human Asset Accounting in the Professional Sports Industry." The CPA Journal 43 (May 1973): 417-19.

Mills, D. Quinn. "Human Resources in the 1980's." Harvard Business Review 57 (July-August 1979): 154-62.

Mruk, Edwin S. and Giardina, James A. "Executive Compensation: 1980 Update." Financial Executive 48 (October 1980): 42-44.

Myers, M. Scott and Flowers, Vincent S. "A Framework for Developing Human Assets." California Management Review 16 (Summer 1974): 5-16.

Patter, Thomas H. Jr. "Productivity of Human Resources in Government." Human Resource Management 19 (Spring 1980): 3-8.

Reckers, Phillip M. R. and Stagliano, A. J. "How Good are Investor's Data Sources." Financial Executive 48 (April 1980): 26-32.

Tomassini, Lawrence A. "Assessing the Impact of Human Resource Accounting: An Experimental Study of Managerial Decision Preferences." The Accounting Review 52 (October 1977): 904-14.

Weiss, Marvin. "Human Capital: Asset or Libility?" Financial Executive 43 (September 1975): 30-39.

Williams, Joseph T. "Uncertainty and the Accumulation of Human Capital over the Life Cycle." Journal of Business 52 (October 1979): 521-48.

PROPERTY OF THE U.S. AIR FORCE
Air Force Institute of Technology
Library
Minot Air Force Base