

## THE DECISION RELEVANCE OF VALUE ADDED REPORTS

*by Prof. K. T. Maunders*

There is evidence of increasing inclusion of value added statements in published accounts, both in the U.K. and Europe generally (see, e.g. Gray and Maunders (1979)\*. In the U.K. such a practice was undoubtedly stimulated (though not initiated) by the publication of the discussion document "The Corporate Report" by the Accounting Standards Committee in 1975. (1) Thus, the annual survey of 300 large companies by the Institute of Chartered Accountants in England and Wales (2), shows the numbers of those companies including value added statements in their published accounts as rising from 14 in 1975/76 to 84 in 1978/79.

It will be remembered that the recommendations of The Corporate Report were based on a general decision relevance approach to the identification of desirable disclosure practices. This approach requires, in principle, a series of steps including specification of user decision models and through them an identification of relevant information (3). These steps, if followed by the authors of The Corporate Report in relation to the value added statement, were not made fully explicit by them. Rather, the rationale for their recommendations in this respect appears to be contained in paragraphs 6.7 and 6.10. i.e.

"6.7 The simplest and most immediate way of putting profit into proper perspective vis-a-vis the whole enterprise as a collective effort by capital, management and employees is by presentation of a statement of value added (that is, sales income less materials and services purchased). Value added is the wealth the reporting entity has been able to create by its own and its employees' efforts. This statement would show how value added has been used to pay those contributing to its creation. It usefully elaborates on the profit and loss account and in time may come to be regarded as a preferable way of describing performance." "6.10. the statement of value added provides a useful measure to help in gauging performance and activity. The figure of value added can be a pointer to the net output of the firm; and by relating other key figures (for example, capital employed and employee costs) significant indicators of performance may be obtained."

Both paragraphs 6.7 and 6.10 thus imply that value added is a decision relevant measure of company performance, capturing the wider (social) effects better than is done by more traditional measures such as profits.

The purpose of the present paper, therefore, is to attempt to articulate more fully than is done in The Corporate Report the decision relevance approach to the value added disclosure argument and hence to arrive at a firmer basis

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\* S. J. Gray/K. T. Maunders, Recent Developments in Value Added Disclosures, Certified Accountant, August 1979, pp. 229-236.

for comment on the potential usefulness of value added statements in corporate reports.

To this end, we shall examine in turn the decision needs of each of the user groups listed in The Corporate Report i.e.: equity investors, loan creditors, employees, analyst-advisers, business contacts, governments and the public. The institutional context assumed for the sake of the arguments is that of the U.K. at present.

### 1. The equity investor group

According to theory, the information needs of equity investors will vary depending on whether or not the market in which their investments are traded is "efficient". In this context, a market "is defined as efficient if: (1) the prices of securities traded in that market act as though they fully reflect all available information and (2) the prices react instantaneously, or nearly so, in an unbiased fashion to new information." (4) There is evidence that the London Stock Exchange may be efficient, at least in a "semi strong" sense (5). Semi strong efficiency means that the current prices of securities on the Stock Exchange reflect all *public* information about companies, including the contents of corporate reports, immediately it is published. In such a situation, it is contended that the investor needs to be able to predict only one aspect of an individual security's behaviour in order to optimise his investment portfolio: the "systematic risk" associated with the returns from investment in that security. (6)

This comes about because, by sufficient diversification, the investor can eliminate effectively all the variability in portfolio return except for that part which relates to the variability of the market as a whole. Thus, from the point of view of its desirability as part of a portfolio, the crucial characteristic of an individual security is the degree to which its potential returns are expected to covary with the market index - its systematic risk. A consequence of investors analysing their investments in this way, according to theory, is that they should end up by holding a mixture of some "risk free" security and an "investment in the index" - i.e. a portfolio containing all other quoted securities in proportion to their total market values. (The exact mixture chosen will depend on the investor's personal risk-return preferences, such that the higher the expected risk he is prepared to accept, the greater the proportionate investment in the market index and the greater the expected return.)

It is hardly necessary to point out that most investors do not diversify to this extreme degree in practice. (The existence of transactions costs is one possibly explanation for this.) But, for whatever reason investors do not "fully" diversify, the implication is that they should then be interested in at least two characteristics of securities in order to optimise their investment decisions: the securities' expected returns and *total* (both systematic and unsystematic) risks. (7)

If we wish to tie value added information to what theory tells us should be the needs of „rational" investors, therefore, it seems value added has to be related to the prediction of either:

a) the systematic risk of an undertaking's securities:

or

b) the expected return and total risk of those securities, depending on the precise view taken on the degree to which the stock market is "efficient". Below, we shall concentrate on the second, more comprehensive set of these information requirements.

It appears plausible to presume that the basic mechanism by which value added could be linked with the returns and the variability of returns (risk) on a company's securities is through the earnings of that company. That is, if we could discover that value added can be useful in predicting company earnings we may deduce that it will also probably be useful in predicting dividends and hence the (rates of) return on the share concerned.

An extensive literature already exists on the prediction of corporate earnings. (8) The conclusions of one reviewer, Baruch Lev, are that "earnings prediction is not a simple task; the findings concerning the random behaviour of most earnings series cast serious doubts on the usefulness of simple extrapolation models based on past earnings. Improved earnings prediction can probably be achieved by the use of more involved models incorporating both accounting and non-accounting data, and reflecting the firm's specific characteristics as well as industry and economy wide expected events". (9)

In other words "good" predictions of a company's future earnings will probably involve the use of a package of predictive indicators, with the appropriate package varying over time and over companies. For our purposes, therefore, we do not seek, or need, to demonstrate that value added information is sufficient for predicting future company earnings but merely that its disclosure could lead to *better* predictions of those earnings (and through them the securities' returns) than if it were not disclosed.

One reason why value added information might be part of a useful package of predictive indicators is an indirect one. That is, as we shall see in Section 3, value added information can affect the conduct of collective bargaining and hence the company's future labour costs. Unless such changes in labour costs are exactly cancelled by increases in the value of output (an unlikely coincidence), company earnings will also change. So, on the presumption that we are able to show (below) that value added information may affect collective bargaining behaviour, we can also deduce that it is potentially useful to investors for forecasting a company's earnings and, hence, the expected return and total risk associated with its securities.

If, for example, information on the distribution of value added, as we suggest in Section 3, can influence employees', and their bargaining representatives', negotiating aspirations then where these aspirations are not, or cannot be, met the company may become more strike prone. This in turn implies greater potential variability in the company's earnings and, hence, greater risk being attached to the return from its securities. Whether or not value added information will affect behaviour in this way is, of course, contingent on many factors specific to the company and the situations - however, the mere fact that it could, suggests that it should be provided as part of an information "package" potentially useful for predicting the expected return and (total) risk associated with investment in company securities.

Whether or not the *systematic* risk attached to the securities can be linked to value added disclosure in this way is a more difficult question to answer. Insofar as the effects of the disclosure could influence the company's vulnerability to market wide (national) strikes, for example, systematic risk would presumably be affected and value added information could then be claimed to be useful to the investor in an efficient market. Since value added information, as we shall see, appears to be potentially most useful to employees in relation to internal comparisons specific to the company, it is intuitively plausible for its disclosure to be more strongly related to company-specific (unsystematic) rather than systematic risk measures.

As well as making portfolio decisions, the investor may be interested in making decisions concerning the use of his vote at general meetings of the members of the company. An important class of decisions taken there concerns election or re-election of the board of directors. If the directors are to be held responsible for the efficiency with which the company is run, the investor should be interested, *inter alia*, in information relating to the prediction of managerial efficiency. Indeed, replacement of existing management by another set who may be more "efficient" would be one way in which the investor might directly influence the risk-return characteristics of a company's shares and hence his own, as well as other's, investment choices.

The measurement of business efficiency is a notoriously difficult topic on which to arrive at firm conclusions. (10)

As Ball has noted: "It is necessary to measure efficiency in relation to objectives, otherwise it has no meaning". (11) Within the framework of the modern theory of the firm, represented as a coalition of interest groups ("stakeholders"), it is possible to argue that value added - as representing distributions to a number of stakeholder groups (including employees as well as providers of capital) - gives a better measure of the achievement of what company objectives *should be* than profits alone. (12) Thus, in macro-economic terms a company's social contribution (to National Income, Gross Domestic Product etc.) has long been computed in terms of its value added ("net output"). From an individual investor's point of view, however, unless he has a direct interest in other stakeholders welfare, profits will presumably still be of primary importance as a measure of managerial achievement on his behalf.

As already mentioned, the prediction of profits (earnings) may be best carried out with the aid of a whole battery of indicators - including, perhaps, some of the ratios traditionally calculated from company accounts. One possible justification for using *ratios* in this way, rather than absolute figures, is that the scale factor can thus be eliminated, so that companies which vary in size can be more meaningfully compared.

There are, of course, a number of different measures of "size" which could be used for this purpose - e.g. Sales, Net Assets etc. - and which one may be most usefully incorporated in ratio analysis for predictive purposes is essentially an empirical question to which no general answer is offered here. In comparison with sales (gross output) however, it can be argued that value added (net output) - as a measure of the work done within the particular company - could be a more logical deflator for "size". In support of this, it may be noted that the use of value added information has been adopted by

professional investment analysts in Continental Europe and especially in France - presumably on the grounds of demonstrated usefulness. (13)

## **2. The loan creditor group**

For quoted loan stock and debentures, both theory and empirical evidence suggest the same analysis applies as for equities i.e., assuming an efficient market, information on the systematic risk of the security concerned should be sufficient for investors to optimise their decisions. For other members of this group, we must first make some assumption about their objectives. The assumption usually made in modern financial theory is that individuals attempt to maximise their utility and that individual utilities are, in turn, a function of two variables - the expected return and the (total) risk attached to the return from any investment. In this event, although the specific measures of expected return and risk will differ, the information requirements of loan creditors can be seen to be essentially the same as that for incompletely diversified equity investors. This comes about once again, by assuming that the company's earnings are the fundamental determinant of its ability to pay debt holders interest and capital. In this case, if we argue, as in Section 1, that value added can be useful for predicting earnings, then it should also be useful for meeting this user group's fundamental information requirements - to predict the expected return and risk attached to their debt holdings.

## **3. The employee group**

Like members of the two previous groups, employees - at least in theory - need to take decisions continuously about their relationships with the company. That is, they must decide whether to take up, or remain in, its employ, and also how much, as well as what kind of work effort to input in exchange for returns from employment. Co-determination of the structure of the effort-return relationship, through individual or collective bargaining, is another decision situation which periodically confronts the employee.

Adopting the type of normative decision analysis referred to earlier, we shall first assume that the employee is a utility maximiser, and that utility is determined by expected returns from employment and the risk attached to these. But the question then is raised as to what might constitute "returns" from employment? There is a good deal of evidence to suggest that for many, though not necessarily all, employees a variety of non-pecuniary factors associated with work can enter into their utility evaluations.

Let us for the moment, however, concentrate on the financial returns to employees - which are presumably always at least partially relevant in employment decisions. (14) The characteristics of financial returns which we need to examine, according to our assumptions, are the expected income from employment and the risk attached to this income (as reflected in stability of earnings and job security).

Turning first to the expected income: an employee's income can be classified in a number of ways, but for present purposes it is convenient to consider it in two sections:

- (a) that part which is determined (directly or indirectly) by the outcome of negotiations between employee representatives and management
- (b) that part which is determined by the employee's own work activities, partly in response to the benefit-cost structure set by negotiations. (15)

From this it can be seen that, in general, the employees decision information needs at least partly (16) relate to the prediction of the outcomes of collective bargaining. The relevant collective negotiations can, in turn, occur at one or more "levels" i.e. plant, company, industry or "national" level. Let us assume, for simplicity (at least to begin with), that we are dealing with negotiations whose scope coincides with the accounting entity i.e. that specifically, the (value added) information whose potential relevance we are considering relates to the bargaining unit.

We need to consider how this value added information could be related to the determination of bargaining outcomes. Unfortunately, the question of how precisely negotiating outcomes are determined is very much an unresolved issue, both in theory and practice. For example, a number of competing "models" of collective bargaining are on offer, (17) none of which seems wholly satisfactory, for our purposes.

One reason for this conclusion is that "information" appears to be used in a variety of complex ways in wage negotiations (e.g. to assist in tactics such as persuasion, rationalisation, education, threat and bluff) and its effects are thus likely to vary according to the circumstances and timing of its use. Any model which is going to be useful for our purposes, therefore, is likely to be itself complex. But the more complex the "model" in general, the less likely it is to be useful for making precise (quantifiable) predictions - because, for example, of the problems of specifying and measuring all the necessary variables. As a "second best", therefore, we shall here make use of a model which is complex enough to be useful for examining the possible effects of information on bargaining, yet which is necessarily basically descriptive in nature rather than predictive. Any conclusions from it must therefore be regarded as tentative at this stage.

The model which we shall use as a framework for analysis is that due to Walton and McKersie. (18) According to them:

"Labor negotiations, as an instance of social negotiations, is comprised of four systems of activity, each with its own function for the interacting parties, its own internal logics, and its own identifiable set of instrumental acts or tactics. We shall refer to each of the distinguishable systems of activities as a *subprocess*. The first subprocess is *distributive bargaining*; its function is to resolve pure conflicts of interest. The second, *integrative bargaining*, functions to find common or complementary interests and solve problems confronting both parties. The third subprocess is *attitudinal structuring*, and its functions are to influence the attitudes of the participants toward each other and to affect the basic bonds which relate the two parties they represent. A fourth subprocess, *intra-organisational bargaining*, has the function of achieving consensus within each of the interacting groups."

In a distributive bargaining situation, the two parties ("labour" and "management") are basically assumed to be in competition, in the sense that whenever one party gains the other must necessarily lose. Representing the

utilities of management and labour as  $U_m$  and  $U_l$  respectively, we can therefore characterise a distributive bargaining process in terms of movement along a joint utility frontier such as LM in Figure 1.

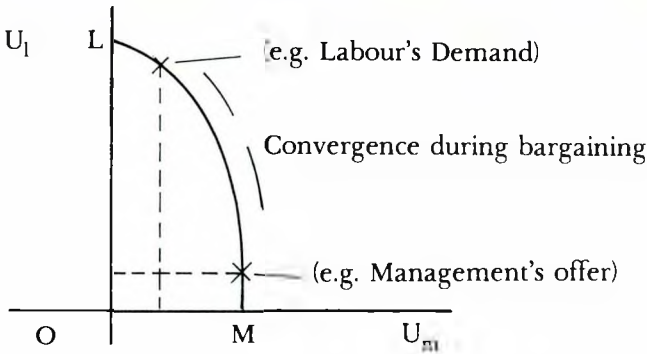
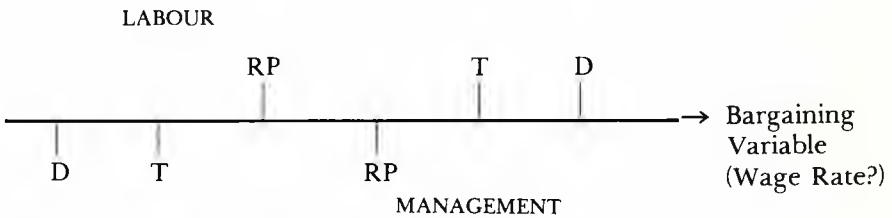


Figure 1

Underlying labours' and managements' explicit demands and offers, Walton and McKersie conclude, are subjective aspiration ranges, bounded by optimistic aspiration levels (targets) and pessimistic aspiration levels (resistance points). The relationship between these levels might be as shown in Figure 2.



where D = demand or offer (explicit)  
 T = target  
 RP = resistance point (implicit)

Figure 2

Settlement can only logically be expected to occur in the overlap between the two resistance points, i.e. at a level which is at least minimally acceptable to labour and management. Tactics such as persuasion, threats etc. are used by the two sides in distributive bargaining in order to try to move the opponents aspiration range, and hence the likely outcome in a particular direction. In order to relate the effects of value added information to collective bargaining outcomes, therefore (at least from the point of view of distributive bargaining), it is necessary to consider how it might affect the negotiating sides' aspirations and their resistance points in particular.

Concentrating on the labour side (since we are considering the use of information by employees) it has first to be recognised that the goals and aspirations of labour (union) representatives could be radically different from those of their constituents - they could for instance take a wider view of the probable effects of a particular settlement level, relating it to other negotiations in which the union was engaged. Nevertheless, it can be assumed that the aspirations of members of the union (the employees) influence (at least

through acting as constraints) the negotiators' minimum aspiration level in relation to bargaining outcomes - if only because, ultimately, the membership has to approve any settlement reached.

How, then, could value added information influence employees' (and hence their negotiating representatives') aspirations?

To answer this, we can refer to evidence that employees' attitudes to payment levels appear to be significantly influenced by notions of "fairness", in addition to traditional economic factors such as the level of unemployment, and alternative opportunities. (19) Whilst this most clearly applies in relation to comparisons with the rewards received by other (reference groups of) employees, modern theories of the firm suggest that the relative rewards received by other groups of "stakeholders" in the enterprise can - and perhaps should - also be relevant. One sign that comparisons of this sort are, in fact, made is the reference to the level of dividends paid to shareholders which has often occurred (and perhaps more often been feared) in labour-management bargaining.

This is relevant to our later analysis and so is worth more detailed attention. Modern ("behavioural") theories of the firm, as indicated above, in contrast with traditional economic theory, explicitly recognise the fact that in practice a firm continues to exist because it satisfies a number of disparate interests. The interest groups involved participate to different extents, and in different ways, in the firm's overall function of transforming inputs into outputs. Insofar as this transformation involves delay for these groups between the time at which a sacrifice is made and the corresponding benefit received they may be regarded as having a "stake" in the firm. Hence the term "stakeholder" - which is intended to cover groups such as shareholders, creditors, employees etc. The firm then, in human terms, is a coalition of stakeholder groups whose costs and benefits arising from their relationship with the firms are interdependent.

According to traditional economic theory the relationship between costs and benefits for each group depends on conditions of supply and demand which the group itself cannot determine. This would indeed apply if all the relevant markets were "perfect" (in the economic theory sense). However, in practice imperfections exist in capital, product and employment markets, so that the relative benefit/cost terms expected and received by each of the stakeholders are not strictly determined by market factors alone. This provides scope for the existence of a possible negotiating range in relation to payments to employees. It also gives rise to the possibility that questions of "fairness" or "relative equity" can influence the actual outcome of negotiations over payments to labour.

It is, in fact, as an indicator of "relative equity", in relation to other stakeholder groups, that it is here being suggested that the value added statement may be useful. This is because such a statement reveals (or should reveal) the comparative shares of each of the stakeholder groups in the firm's net output for a given period. For this purpose compared with, say, the profit and loss account, it has the advantage that it shows explicitly what relative share each group takes. It should be noted, however, that its usefulness in this respect will be dependent on both its coverage and classification of group rewards.



Returning to Walton and McKersie's model, what has been suggested above is that employee's (and through them their negotiating representatives) aspirations may be influenced by considerations of relative equity vis-a-vis other stakeholder groups. As an indicator of relative equity this, it is suggested, gives relevance to the value added statement from the labour negotiators point of view. Another possible use of value added by labour negotiators in practice (for which there is observational evidence) is as an indicator of "ability to pay". It is fairly easy to understand the tactical reasoning behind such usage, since value added is clearly a "grosser" measure of the amount supposedly available for labour payments than is any concept of profit (the more traditional measure of ability to pay). However, it is clearly deficient as a theoretical measure of ability to pay insofar as (in its aggregate form) it does not take account of the necessity to reward factors of production other than labour (so as for instance, to ensure continued access to sources of finance). (20)

To envisage a perhaps more justifiable role for total value added in connection with "ability to pay" we have to turn to the second of Walton and McKersie's subprocesses - integrative bargaining. According to W and M, "pure" integrative bargaining involves successive increases in utility for both bargaining as a movement outwards along Path II in Figure 3. It is fairly easy to see that, in fact, it must represent the locus of points on a succession of LM curves. Thus in productivity bargaining, for instance, joint problem solving may establish scope for increased payoffs to both parties by more efficient working practices. However, at the same time as a higher utility curve is located in this way, the question of how the benefits should be shared is simultaneously raised. This means that all so called integrative bargaining must involve, if only implicitly, a distributive phase. In fact, one influential bargaining model (21), based on observational evidence, suggests that *all* successful negotiations go through both distributive and integrative phases as a matter of course.

What then, is the potential role of value added in integrative bargaining? To

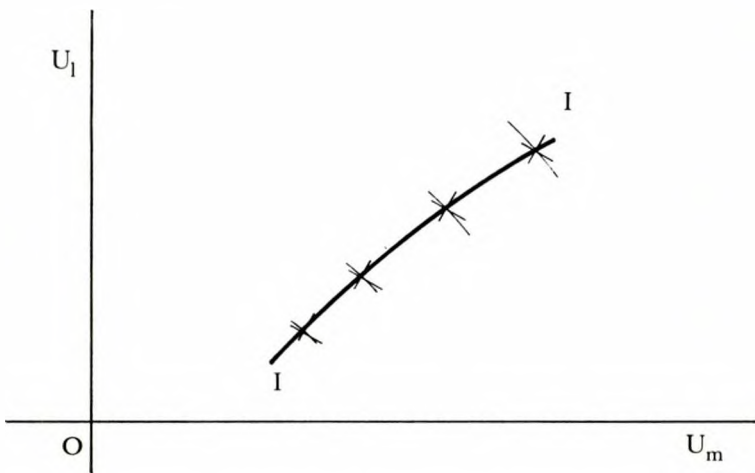


Figure 3

see this, we need to look at perhaps the closest analogy to Walton and McKersies' "pure" integrative bargaining - "true" productivity bargaining. Here, management and labour engage in a joint problem solving activity designed to locate opportunities for increasing some measure of the firm's output in relation to its inputs. Where this results in greater utility from both the management and labour points of view, it is clearly an example of integrative bargaining.

Like all problem solving processes, a number of stages can be identified which appear to be necessary if it is to realise maximum benefits. One possible listing of these is:

1. Collect information on the present position.
2. Evaluate this in terms of apparent strengths and weaknesses.
3. Search for alternatives.
4. Investigate the implications of implementing any alternatives.
5. Choose the preferred solution (on the basis of the payoffs to the parties involved).

As Walton and McKersie point out, the fuller the relevant information which is available to both parties, the more successful (in terms of the ultimate utility frontier reached) is likely to be the outcome of integrative bargaining.

In integrative (productivity) bargaining this means that - according to step 1 above - information on current and future expected productivity achievements within the firm is necessary. When we turn to the question of how productivity *should be* measured for this purpose, however, we get little help from theory. From the point of view of measurement of performance, it is, of course, always possible to get an overall measure of productivity for the firm in terms of the value of its outputs in comparison to the value of its inputs. But this begs the question of how we should "value" outputs and inputs. In addition, some indication of the constituents of the overall productivity measure may be required for diagnostic purposes (stage 2 above). In the present context, for example it would presumably be desirable to relate the (value of) outputs to *labour* input i.e. to measure *labour* productivity in order to both diagnose opportunities for mutual gains and evaluate the implications of alternative suggestions in the context of labour-management negotiations.

But this runs into an insuperable conceptual problem - that outputs are the result of the *joint* application of factors of production (including labour) in practice - and there is no theoretically "correct" way of attributing outputs to those individual factors. (22) Despite this, labour productivity is measured in practice (albeit necessarily arbitrarily) and value added seems to be becoming a popular tool for this purpose - in terms of value added/employee or valued added/labour cost.

One reason for this may be the relative attraction of value added as a basis for a *total* productivity measure as compared with, say, sales or profit. The argument goes that value added, as a measure of net output of the firm is superior to sales revenue since it excludes the value of work done outside the firm (in the form of the cost of material and services "bought in"). In comparison with profits, on the other hand, it includes e.g. the rewards paid to labour, as well as capital and so gives a better "match" with the denominator of the total productivity measure (output ÷ total inputs).

From a “stakeholder” view of the firm, if we exclude suppliers from the stakeholder list, the use of value added in this way can also be justified in terms of giving an appropriate measure of the total output “due” to the firms contributors. It is in this sense that value added, in prospect, could presumably be viewed as a potential measure of “ability to pay” by labour negotiators since a projected increase in value added could be regarded by them as available for distribution in the form of payments to labour.

As we have already indicated, however, there is no way in which such an increase in net output (whether or not accompanied by a change in particular inputs) can be attributed to the sole efforts of one out of a number of interacting resources. Thus, even if labour costs were reduced, *ceteris paribus*, and value added consequently increased (or output increased for the same labour costs), this increase cannot theoretically be assigned to labour alone (any more than the total net output of the firm can be claimed to be “due” to labour - rather than another factor of production - on the grounds that it would be zero if labour were removed). Nevertheless, because the returns to factors of production are not necessarily strictly determined as in economic theory, the prospect of an increased value added gives rise to possibilities for bargaining as to its distribution between stakeholders. As an indicator of the possibilities for utility gain through integrative bargaining, therefore, value added information may be claimed to be more relevant than measures such as sales or profits (from the point of view of employees and their negotiators).

The relative equity of outcomes of integrative bargaining (in terms of the relative shares of increases in net output going to each stakeholder group) may in practice be “justified” by reference to *marginal* productivity indicators, such as value added/number of employees, value added/capital employed etc. But this is mere propaganda, and whilst it could perhaps influence the outcome - as part of the tactical package available to negotiators - since no marginal productivity index can be shown to be a “true” index of productivity, none can be claimed to be normatively relevant to the prediction of negotiating outcomes.

In relation to integrative bargaining, then, added value can be claimed to have potential relevance as an indicator of total productivity, when it is related to total inputs. As a constituent part of marginal productivity measure, added value *may* be relevant in predicting bargaining behaviour but it has no normative role to play in that respect. (23)

Moving on to Walton and McKersie’s third subprocess - attitudinal structuring - it might appear that potentially the most significant role for value added information could be here. This is because any effective use of it in relation to attitudinal structuring could affect the “atmosphere” of future management-labour negotiations, and hence influence their outcomes over a long period. Basically, Walton and McKersie characterise management-labour relations as falling along a spectrum ranging from antithetical and competitive attitudes at one end to collusive relations at the other. The vast majority of relationships may be expected to fall at an intermediate point, with labour and management having a number of interests in common (e.g. the survival of the firm) as well as a number in opposition (e.g. the distribution of net output).

It has been suggested elsewhere (24) that information disclosure in general

may be a significant attitudinal structuring tool from management's point of view, in that voluntary provision of information to employees and their negotiating representatives may help towards more positive attitudes towards management. Value added information might be a particularly valuable constituent of this kind of disclosure initiative from management's point of view, insofar as it can serve to draw attention to the interdependence of employees and other stakeholder groups contributions to the firm's activities. From the point of view of employees, however, unless we are prepared to argue that they *should* be influenced in this way, value added information would appear to have no *direct* relevance in relation to attitudinal structuring - except insofar as its use by management could provide an indicator that the latter may be trying to influence attitudes in a direction favourable to management! To suggest that it might prove predictively useful in this way, however, would seem tenuous in the extreme - in the light of all the other possible influences on bargaining attitudes and behaviour.

A similar kind of inference can be drawn in relation to intra-organisational bargaining (Walton and McKersies fourth subprocess). Thus, it is possible to conceive in principle of the actions of labour negotiators being affected by changes in the internal bargaining processes of their organisation as a result of value added disclosure. This might come about, for example, if such disclosure influenced the attitudes of shop stewards and other employees towards the stakeholder view of the firm. The process of formulating guidelines for the negotiators, or approving their decisions, could hence be affected. However, once again there are so many other variables which influence such political processes that it would appear far-fetched to regard value added as predictively useful to employees in this respect. This is not to say, of course, that value added disclosure could not prove, in the long run, to have had a significant effect on bargaining behaviour through both attitudinal structuring and intra-organisational bargaining but rather that prediction of its effects (from an employee's point of view) would appear to be practically impossible.

We have seen so far, then, that value added information would appear to be potentially relevant for employees in predicting collective bargaining outcomes (through distributive and integrative bargaining activities in particular). When we turn to the element of employee's income which is not directly determined through the bargaining process, it seems that the usefulness of value added is dependent on the type of payment scheme in operation within the firm. For example, a number of firms now operate a bonus scheme which is based on value added achievements in relation to a group of employees (which may be the whole of the U.K. employees of the firm, as, for example, in the "profit" sharing scheme recently introduced by I.C.I. Limited). Again, employee rewards may be geared to individual performance as measured on a value added basis. It is in relation to the first type of scheme that published value added information obviously gains relevance. Whilst it may be presumed that the figures on which bonuses are computed will be systematically disclosed as an integral part of the scheme, the knowledge that corresponding figures are part of the firm's published information may lend credibility to the bonus scheme computations as well as

interest to the published figures. We may therefore say that value added information, as part of published accounts, is relevant to employees as a basis for checking payments made to them as well as for predicting the future level of those payments.

When we turn to the use of value added in predicting the risk attached to rewards from employment, much of what we have said already is again relevant here. That is, if value added information can be useful in predicting the level of future income from employment, it will presumably also be useful in predicting the pattern (i.e. variability) of that income - and insofar as variability (non stability) of income is regarded as undesirable by employees, this information should be relevant to their decision making. Perhaps more important than forecasting the stability of future earnings, as represented by variations in future payments as a result of collective bargaining for example, will be forecasting future continuity of employment. Clearly these two are related, insofar as the quantity of employment in a firm is a function of the price of labour (at least in the long run). However, a more direct indicator for this purpose may be the financial performance of the firm and of the sub unit within the firm of which the employee is part. It would obviously be possible to develop an argument here that future financial performance could be predicted with the aid of past, and current, value added information. We shall not develop this argument because, equally obviously, other current financial indicators may be more directly useful in this way - this is essentially an unresolved empirical question - as was indicated at the end of Section 1.

One final issue remains for this Section - the question of whether value added information may be useful in relation to predicting the non-pecuniary factors associated with employment, where these are relevant to employee's decisions. Certain of the non-pecuniary factors - coming under the headings of conditions of work, fringe benefits, holiday entitlements etc. will be a matter for collective bargaining and, as such, may be linked to value added information, in the way suggested earlier in the Section (e.g. ability to pay may be regarded as available to cover the costs of increased financial returns to employees and/or increased non-pecuniary rewards). However, another, albeit somewhat tenuous, way in which value added may influence employees' evaluations of employment choices may be through feelings about the "social performance" of the firm, but we shall leave discussion of this point until Section 7.

#### **4. The analyst - advisor group**

Members of this group may broadly be considered as acting in an agency capacity (though not necessarily in the legal sense) for other user groups. As such, it is not necessary to consider their needs separately, since this has been done, or will be done, in other Sections. Even where their objectives may be distinct from the other users, it is difficult to envisage separate needs for value added information. Thus (e.g.):

Financial analysts - arguments covered in Section 1.

Journalists - either as above, or where concerned with "social issues" - see Section 7.

Economists – value added information may be useful to them as a measure of net output - but in same sense as Government - covered in Section 6.

Statisticians and Researchers - see above.

Trade Unions - see Section 3.

Stockbrokers - see Section 1.

Other Providers of Advisory Services such as Credit Rating Agencies - see Section 2.

#### **5. The business contact group**

This, it will be recalled, covers customers, suppliers, competitors and those interested in mergers etc.

It is difficult to envisage how any of these groups would find a use for value added information which is distinct from those already mentioned (i.e. for forecasting future earnings of the firm and the variability in these).

#### **6. The government**

This heading covers not only central government and its agencies, but also local authorities.

Value added information is already, of course, collected on behalf of the government for use in measurements of the national income, which involves aggregating (amongst other things) the net output (value added) of firms. The reason why value added rather than sales or the sales value of production (both measures of gross output) is used is in order to avoid “double counting” in the aggregation process - since the cost of materials and services which would be included in gross output of one firm will probably already have been included in the gross output measures of its suppliers. Hence national income, if it involved aggregating gross outputs would be a function of the degree of vertical integration in the economy. Thus, value added information from firms forms a useful function in macro-economic measurement and forecasting, from governments point of view. In line with this, therefore, it will presumably be useful to individual economists in constructing and testing explanatory models of the economy.

From governments point of view, however, its needs in this direction can presumably be satisfied in a “privileged user” basis i.e. through compulsory disclosure to its representatives under the Statistics of Trade Act 1947. On the other hand, economic modellers without such access would presumably find the systematic publication of value added information by firms useful to them.

#### **7. The public**

This group heading, on one interpretation, could be taken to refer to all potential users of company level information not included in previous groups. However, *The Corporate Report's* suggestion as to the people involved (taxpayers, ratepayers, consumers etc.) would clearly imply the possibility of including here many having dual group membership. It may be more constructive, therefore,

to identify this group on the basis of a particular focus of interest in company affairs - i.e. concern with aspects of its "social performance".

This, then, will include many members of earlier groups, - e.g.:

- a) government and its agencies;
- b) economists and others concerned with predicting, and prescribing company activities in relation to social welfare;
- c) so called "ethical" investors, creditors, customers, employees etc. - i.e. those whose decisions may be influenced by evaluations of the "social performance" of companies; and
- d) "agents" and advisors for the above groups.

What do we mean by "social performance"? Firstly, we may note that this can diverge from "financial performance" (however measured), insofar as the firms activities give rise to costs and benefits to others which are not reflected in its own transactions - e.g. pollution effects etc. Such effects are called, in the language of welfare economics, "externalities" and may be positive or negative - i.e. rather than polluting the local environment the firm may make it a more attractive place to live (e.g. by providing roads, access to power supplies etc.). Thus, one possible basis for defining social performance is in terms of the *social income* (which) represents the periodic net social contribution of a firm. It is computed as the algebraic sum of the firm's traditionally measured net income, its aggregate social overheads (negative externalities) and its aggregate social returns (positive externalities)". (25) Quite apart from the possibility of externalities (positive or negative) the *net* "social" contribution of a firm is not adequately measured by its "traditionally measured net income" (profit) since part at least of this will represent an exchange for investment opportunities foregone elsewhere and as such, does not mean a net gain for society. We can also extend this analysis to other "stakeholders" - for instance employees sacrifice leisure and/or alternative employment opportunities in return for payment to them. However, it is also clear that such costs and benefits will not, in general, exactly cancel one another out! There are basically two reasons for this:

- a) returns to factors of production in the company under consideration may be higher or lower than their opportunity costs elsewhere, given the real world imperfections in factor markets; and
- b) factor payments (wages, returns on shares etc.) are determined "at the margin" i.e. so as to persuade the *final* (most reluctant) pound of capital or hour of labour which is necessary to be forthcoming. This means that most (non marginal) suppliers of factors of production will obtain "producer surpluses" representing a benefit in financial terms which more than compensates (in their opinions) for the sacrifices involved.

It can be seen, therefore, that the net impact of a company on society will only coincidentally correspond with either profits *or* value added when we add the above effects to whatever externalities are present. In such a situation, perhaps the best solution is to provide as comprehensive a set of information as possible from which users may be able to make their own judgements about externalities and aspects of social performance generally. In this respect, the argument for providing value added information is that it is both more exhaustive than profits in indicating potential impacts and also provides

information of direct interest to those whose decisions may be influenced by notions of “justice” in corporate allocative activities.

## 8. Summary

By examining each of the user groups identified in the Corporate Report discussion paper, a number of possible direct uses of value added information have been identified. These are:

- a) For predicting “managerial efficiency” (Section 1);
- b) For evaluating “relative equity” amongst stakeholders within companies (Section 3);
- c) As an indicator of “ability to pay” in relation to productivity bargaining (Section 3);
- d) As a basis for evaluating the “social performance” of a company (Sections 6 and 7).

In addition, we have seen that value added could be of indirect usefulness in predicting the expected earnings of a company and the risk attached to these, through its possible impact on union and employee behaviour (Sections 1 and 3).

At the same time as identifying the directions of possible relevance for value added statements, however, we have uncovered a number of potentially serious qualifications to their usefulness. In relation to the use of value added as a measure of the social performance of an entity, for example, the exclusion of externalities *and* measurement in monetary terms means that it is an inadequate indicator. As such, its use to measure managerial efficiency, relative equity and productivity in a societal sense is also questionable. Yet a further drawback is its reflection of performance with respect to an arbitrarily defined group of stakeholders (excluding suppliers).

Such issues all relate to the normative question of whether value added *should* be relevant to users of corporate reports. The empirical issue of whether it *is* relevant has not been directly tackled here and awaits further research. However, as regards employees at least the prospect of finding “positive” relevance appears bleak insofar as there is little evidence either of other stakeholders having been significant “equitable comparison” referents in past negotiations or of group cohesiveness on a company wide basis being affected by instruments such as value added disclosure.



## References

1. Accounting Standards (Steering) Committee, *The Corporate Report: A Discussion Paper* (July 1975).
2. The following figures are taken from: Survey of Published Accounts 1979 (Institute of Chartered Accountants in England and Wales, London, 1980).
3. See, for a fuller list of the necessary theoretical steps: B. V. Carsberg, J. Arnold and A. Hope, *Predictive Value: A Criterion for Choice of Accounting Method*, in W. T. Baxter and S. Davidson, *Studies in Accounting* (3rd. ed.) (Institute of Chartered Accountants in England and Wales, London, 1977).
4. Dyckman, T. R., Downes, D. H., and Magee, R. P., *Efficient Capital Markets and Accounting: A Critical Analysis* (Prentice-Hall: Englewood Cliffs, 1975) p. 4.
5. See, for example, Henfrey, A. W., Albrecht, B. and Richards, P., "The U.K. Stockmarket and the Efficient Market Model", *The Investment Analyst* (September 1977), pp. 5-24.
6. Lev, B., *Financial Statement Analysis: A New Approach* (Prentice-Hall: Englewood Cliffs, 1974), Ch. 12.
7. This arises directly from the conventional assumption that investors have a two parameter utility function, being (normally) averse to more risk and preferring more expected returns (*ceteris paribus*).
8. Foster, G., *Financial Statement Analysis* (Prentice-Hall: Englewood Cliffs, 1978).
9. Lev, B. *Op. cit.*, p. 132.
10. For some of the difficulties involved see Arney, L. R., *The Measurement of Business Efficiency* (Allen and Unwin 1969) *passim*.
11. Ball, R. J., "The Use of Value Added in Measuring Managerial Efficiency", *Business Ratios* (Summer 1968), pp. 5-11.
12. For a contrary view, see Beattie, D. M., "Value Added and return on Capital as measures of managerial efficiency", *Journal of Business Finance* (Summer 1970), pp. 22-28.
13. See Gray, S. J., "European Investment Analysis", *Accountancy* (October 1977) pp. 92-101; also interview with Alain Moullé, Director, DAFSA Analyse, Paris.
14. For example as "hygiene" factors - see Herzberg, F., *Work and the Nature of Man* (Staples Press, London, 1968).
15. It may be difficult, or indeed impossible, to separate these two elements in practice - the separation here is only for discursive purposes.
16. This part could conceivably be zero in some cases.
17. For one review, see Foley, B. J. and Maunders, K. T., *Accounting Information Disclosure and Collective Bargaining* (Macmillan: London, 1977).
18. Walton, R. E. and McKersie, R. B., *A Behavioural Theory of Labor Negotiations* (McGraw Hill: New York, 1965), p. 4.
19. Wood, A., *A Theory of Pay* (Cambridge University Press, 1978.)
20. Without the expectation of future dividends, new equity capital could not be raised and, depending on how value added is measured, without this, operating capacity (and employment levels) may not be maintained. Contractual obligations for interest to loan creditors would, in any event, presumably need to be met, but without anticipated dividends the consequent drastic fall in share prices could be expected to have "spillover" effects on the availability, and cost, of both long and short term loan finance.
21. Douglas A., *Industrial Peacemaking* (Columbia University Press, New York, 1962).
22. See, for example, Thomas, Arthur L., *The Allocation Problem: Part Two* (American Accounting Association, Studies in Accounting Research No. 9, 1974).
23. For a critical evaluation of the use of value added information in productivity measurement, see Chua, K. C., "The Use of Added Value in Productivity Measurement", in *Productivity - Measurement and Achievement*, Proceedings of Accountancy Seminar, Victoria University of Wellington (November 1977).
24. Foley, B. J. and Maunders, K. T., *Op. cit.*
25. Ramanathan, K. V. "Towards a Theory of Corporate Social Accounting", *The Accounting Review* (July 1976) p. 522.