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Cost Accounting for the Motion-picture Industry

BY WILLIAM S. HOLMAN

The motion-picture industry is divided broadly into three phases: the producing, distributing and exhibiting—corresponding to the manufacturing, wholesaling and retailing branches of the ordinary industry. This article will attempt to treat of the accounting features of the producing end only.

Many of the larger organizations engage in both the producing and distributing phases of the industry, and a less number in all three. In such cases the distributing and exhibiting phases are usually carried on by subsidiary or controlled companies, or the producing company is itself a subsidiary of a large distributing company.

Producing companies fall largely into two classifications: first, the company which produces pictures and distributes them either itself or through a subsidiary company and, secondly, the company, commonly termed an independent producer, which either makes a picture and then disposes of it outright to a distributing company or produces for a distributing company, under contract, one or a series of pictures. In this latter instance, the distributing company ordinarily advances to the producer a fixed sum to cover the cost of production, and then takes over the exploitation and distributing of the picture, the proceeds thereof, after recouping the advance, to be shared by the producer and distributor on a predetermined basis.

Another distinction that might be made in the case of producing companies is that between the company which is engaged upon the production of more than one picture, and in many cases a large number of pictures at the same time, and the company which produces one picture at a time. Under the latter classification will fall the companies formed for the purpose of producing pictures featuring one particular star, as well as a number of smaller producing units. A number of the best-known stars have their own companies and make only one picture at a time, and in some cases only three or four pictures a year. In this case not

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many accounting problems will be presented and no very involved cost system will be required. All production costs will be charged against the one picture in process, and fixed charges for the year will be distributed over the pictures made within that year on the basis of time spent upon the production of each or upon the basis of the direct cost of each picture.

Costs are not the subject of as great concern in the motion-picture industry as they are in many others, and in most cases it is doubtful if comparative costs of different pictures are very closely scrutinized. However, in the cases of companies engaged in the production of a number of pictures at the same time costs of particular pictures are a matter of considerable concern, and this is also the case where pictures are made for distributing companies on the "cost plus" basis above mentioned. The benefits derived from having accurate and trustworthy records as to the cost of individual jobs in this industry as well as in any other are too obvious to require mention, but it is, undoubtedly, a fact that accurate costs have not always been obtained.

Direct costs for particular pictures are gathered in much the same way as in the manufacture of other articles, by purchase records, time and labor reports and reports of materials used.

Wages, because of the salaries customarily paid actors and directors, constitute the heaviest item of expense, followed by the cost of "sets," a large part of which is also made up of wages because of the labor involved therein.

It might be well to take up at this time the various items of direct cost in the order of their occurrence.

First comes the cost of the story used in the picture. Pictures are now to a great extent based on a published short story, novel or play. In other cases scenarios are purchased from outside sources. The cost of acquiring the motion-picture rights to these, oftentimes amounting to a considerable sum, is the initial cost of a picture. To this should be added charges covering salaries of continuity writers who adapt the story to the screen and work it up into the script used by the director of the picture. To this might be added a portion of scenario department expense based on the time given over to the various stories. Again the story may be written by a member of the scenario department. Here also salary charges and a proportion of scenario department

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expense would be direct costs. These costs would be gathered from time reports submitted by the scenario department.

Next come the actual production charges. Antedating these, however, may come other salary costs, since the director is usually assigned to a picture some time before production commences. His salary should be charged to the picture from the date of this assignment, as he will be engaged in the preliminary work of becoming familiar with his script, helping plan his sets, etc. Salaries of actors should also be charged to the picture from the time they are assigned to it—unless actually working in another picture—especially if engaged for the particular production.

At the end of each week the production manager will report to the office the directors, assistants and cameramen and assistants assigned to each picture, which will be made the basis of salary distribution on the payroll. Each day the assistant director will report the actors and actresses engaged for or assigned to his picture, or the casting director at the end of the week will submit a report of the days worked in each picture by each actor. These reports will similarly be made the basis of salary distribution by pictures. The salary of any of the staff or talent not engaged in or assigned to any picture will be charged to an account called "salary of idle staff and talent," which will be one of the indirect expense accounts discussed later.

The first production charges will be for the cost of sets built for the picture. Lumber, wall-paper and paint will be charged to stock accounts when purchased. Each day the carpenter and paint foreman will turn in reports as to the various materials used that day. Ordinarily the requisition-on-the-stockroom method of charging materials used would not be practicable. Costs will be computed in the office and at the end of the week the reports summarized by pictures and the total cost of materials used in each picture will be charged by means of journal entries and a credit will be passed to the materials and supplies accounts.

Workmen engaged in the construction of sets will report each day the time spent upon sets for each picture, each picture having a number assigned to it. These reports will be accumulated in the office and preferably worked up each day, so as to show what part of each workman's wage is chargeable to each picture. At the end of the week a summary will be made and the payroll will

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be distributed on the basis of the total amount chargeable to each picture for each workman for the week. (All salaries are usually paid weekly in this industry.)

Next in order will be the cost of properties used in dressing the sets, which with the exception of certain stock articles are ordinarily rented. If, when the purchase or rental order is issued, notation is made thereon of the number of the picture for which the article is secured, the cost or rental charge can be charged direct to the picture through the purchase register, as will be explained later.

Then will come the salaries of property men, drapers, etc., engaged in preparing the sets, and then salaries of property men, electricians and others assigned to each picture during its production. These costs will likewise be gathered by time reports turned in each day, which will be accumulated and summarized at the end of the week so that the total time spent by each man upon the various pictures is known and made the basis of the distribution of the salary paid for the week. There will be salaries for nearly all the classes of labor mentioned above, which are not chargeable to any particular picture. These will be charged to appropriate accounts and distributed in the manner outlined for indirect costs.

The cost for rental of costumes used in the pictures will be handled in the same manner as the cost of properties. If the studio itself maintains any considerable wardrobe and stock properties for use in pictures a charge for such use may be computed on the basis of the estimated useful life of the article, drawn up in schedule form. The picture will then be charged rental for its use from reports as to the time used submitted by the wardrobe and properties departments. The credit would be passed to a special account, which would be an offset to the amount chargeable as depreciation at the end of the year. Such a refinement, however, would hardly be warranted except in the case of highly perishable articles.

The cost of negative film used in the picture can be gathered from the cameraman's daily report as to film used, and the cost of developing and printing film from invoices from the laboratory, the picture number being shown on all invoices. Time reports will cover the cost of cutting and patching film, and the cost of

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titles will be secured from invoices or time reports depending upon whether this is done by the studio or on the outside.

The last item of direct expense will be the cost of labor expended in tearing down sets, which will be gathered, of course, from time reports. If the lumber and other materials used have any salvage value remaining, this value should be passed as a credit to the picture and charged to an account termed, perhaps, "salvaged materials." If subsequently used in another picture the item would be charged out at this value.

The rates for employees' compensation insurance are high in this industry, and since the premiums paid are based on the amount of the payroll they may be computed and charged direct.

Fire and damage insurance is usually carried on each production, and this would also be a direct cost.

An item of cost which sometimes amounts to a considerable sum is that of location expense. The cost of maintaining or renting automobiles used in going to or from location, railroad fares, lunches, fees and similar items would be included in this expense. Such items would ordinarily be paid by an assistant director and be charged to the picture by means of a statement of cash disbursed submitted by him.

Another item which might be treated as a direct charge would be the cost of operating electrical equipment used for lighting effects. The expense for current, depreciation of equipment, etc., might be reduced to an hourly charge for use and so be charged direct. Wages of operatives are, of course, a direct charge, as has previously been mentioned.

Plant overhead, as explained later, may also be reduced to an hourly or daily charge for studio or stage rental and be charged to the picture on the basis of the time occupied by it.

A suggested outline for the classification of ledger accounts for direct costs follows, arranged by primary, secondary and subordinate accounts. Any of these accounts, of course, may be further subdivided, or other accounts may be added whenever desirable. These accounts should be appropriately numbered, as for instance, the control account 50, the secondary accounts 50A, 50B, 50C, etc., and the sub-accounts under each secondary account 50A-1, 50A-2, etc.

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- Direct charges (control account)
 - Cost of story (secondary account)
 - Scenario purchase (sub-account)
 - Scenario and continuity salaries
 - Scenario and continuity expense
 - Salaries and wages
 - Cast (actors carried on regular payroll)
 - Talent (extras engaged for picture)
 - Staff (directors, assistants and cameraman and assistants)
 - Technical (property men, electricians, etc.)
 - Sets
 - Materials and supplies
 - Labor (carpenters, painters, paperhangers, etc.)
 - Properties
 - Rental
 - Purchase and damage
 - Wardrobe
 - Rental
 - Purchase and damage
 - Wardrobe and property room expense
 - Rental of equipment
 - Location expense
 - Film
 - Negative
 - Developing
 - Printing
 - Cutting and patching
 - Titles
 - Expense
 - Insurance
 - Proportion of indirect expense and plant overhead (to be discussed later).

The control account in this case is direct charges. Now, if picture cost sheets were ruled so as to provide a total column and a column for each of the expense sub-accounts above given, each picture having assigned to it a separate sheet, many advantages which will be pointed out would result.

First, to obtain the full benefit of these advantages and to

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effect a large saving in time and labor the picture costs sheets, which should be kept in a loose-leaf ledger controlled by the account direct charges, should be posted from the same media as the ledger accounts. This can be done readily by providing in the purchase or voucher register, payroll, cashbook and journal a special column for showing the picture number in the case of all items going into these picture cost expense accounts, which could also be carried out into one special column.

When this column is summarized at the end of the week for posting to the individual direct cost expense accounts above shown, it should also be summarized so as to show the total of each sub-account for each picture. The totals for each account would then be posted to the proper general ledger accounts and the total for each picture of each class of expense would be posted in the corresponding column of the picture cost sheets. By this procedure the interlocking of cost records with the general accounts is automatic. The control account direct charges also controls the picture cost ledger, and the accuracy of the total cost of each picture is not only absolutely assured, but the correctness of the detailed expenses is proven, since the total of charges to all pictures contained in the picture cost ledger for any one classification of expense must agree with the total for that expense as shown by its general ledger sub-account.

When the total costs of any picture have been gathered, a credit should be passed to the direct charges account for the cost; and this amount should be charged to the account "completed pictures." Care should be taken to see that each secondary and sub-account is credited with the proper portion of this total expense as disclosed by the corresponding columns in the picture cost sheet. The picture cost sheet in the ledger should then be removed so as to maintain the balance between this ledger and the control account, direct charges, and be filed in a transfer binder for completed pictures. At the end of the year or when sales are made the account completed pictures would be credited with the cost price, as shown by the respective picture cost sheets, of pictures sold.

The account direct charges is then a control account of work in process and the account completed pictures is an inventory account of pictures on hand, supported by the detailed information found in the transfer binder for completed pictures.

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As in most cost systems, the problem of distributing overhead equitably over product is here the most difficult one. A common practice in manufacturing cost systems is to lump all manufacturing costs other than direct charges under the general heading "indirect expenses" or "overhead," and to distribute all the many different items making up this total over product on one and the same basis. Many times these items are not properly distributable in the same proportion or on the same basis, and it is believed that a useful purpose will be served by distinguishing between different kinds of indirect or overhead expenses.

For the purposes of this article an attempt will be made to segregate these various costs into two classifications, since it is believed that greater accuracy will be obtained by so doing, inasmuch as they form two more or less distinct classes of expense, which are assignable to specific pictures on entirely different bases.

If the total cost of product is to be determined before the end of the year it is necessary to estimate in advance the aggregate amount of indirect expenses for the year. Now, one type of these costs can be accurately estimated in advance, while the other type cannot be estimated with any degree of accuracy at all. This is the chief point of distinction between the two, and the advantage to be gained by so distinguishing between them is that total costs can be determined for each picture to a high degree of accuracy within a short time after the picture is completed. By assembling in one group those expenses which vary from time to time and are applicable only to the period in which incurred, they may be distributed at short intervals, and the product will be charged with the actual amount of these expenses and not with an estimate or guess as to what they will or should be.

These expenses fall broadly into two classifications: first, those variable expenses which can not be assigned to any particular picture, but are more or less dependent upon the number of pictures produced, that is, the amount of production. These expenses will be termed here "indirect production costs."

The second classification consists of those expenses which are fixed and invariable to a great extent, and go on irrespective of the amount of production and, in fact, even if production activities entirely cease. These expenses will be termed "overhead charges" or "plant overhead." An outline of accounts for the first

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class of expense mentioned, which is intended to be illustrative only and not comprehensive, follows :

- Indirect production costs (control account)
- Salaries and wages not chargeable direct (secondary account)
- Indirect labor (sub-account)
- Wardrobe and property room salaries
- Art department salaries
- Supervision salaries
- Unassigned staff and talent
- Employment department expense
- Wardrobe, property room and cutting room expense
- Still and art room expense
- Auto maintenance
- Materials and supplies
- Light and power (if not charged direct as above outlined)
- Indemnity insurance (if not charged direct)

Since these and similar expenses largely arise because of the pictures made within the period in which they are incurred and also vary with the amount of production, it is proper that the pictures made within this period should bear the expense. They can therefore be closed into picture costs at frequent intervals, say every four weeks or monthly. The basis of this distribution would depend upon the conditions obtaining at each particular studio, but it is believed that a distribution in proportion to the total direct charges would be as satisfactory as any other, if from the total of direct there were excluded the salaries of talent, which fluctuate violently, according to whether a highly paid star or stars or a more modestly salaried cast is employed. This basis for the distribution of indirect expense has been severely criticised as being illogical and arbitrary, but these expenses will usually be found to vary with and be largely dependent upon direct costs if salaries of cast are omitted.

At the end of each month the total for indirect expense as shown by its control account would be charged to direct costs, the charge going also to the sub-account entitled "proportion of indirect production expense and plant overhead," and also into the same column in the picture cost sheets for the pictures affected.

For purpose of analysis it can also be ascertained for each picture of what detailed expenses this total charge for proportion

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of indirect expense is made up by taking the same percentage of the different expense sub-accounts as was taken of the total expense for that picture. Examples of the type of expense termed overhead charges, which would be classed under the group of accounts controlled by plant overhead, are:

Plant overhead	(control account)
Watchmen's and janitor's wages	(secondary account)
Rent	
Insurance	(fire—plant and equipment)
General property taxes	(on plant and equipment)
Repairs to plant and equipment	
Depreciation (plant and equipment)	
Proportion of administrative expenses	

These and similar expenses are more or less fixed, and it is possible to determine in advance to a fair degree of accuracy the exact sum to which they will amount in the course of a year or the average amount per annum over a period of years. Unlike the other type of expense, these expenses are not entirely applicable to the period in which they are incurred, but must be averaged over a longer period. Insurance is usually paid in advance for a year or several years; taxes are paid once or twice a year; repairs the cost of which is equally applicable to various periods will be made in one period; rent may be paid in advance. Any extraordinary expense incurred in one year may be averaged over several years by means of suspense accounts so as to maintain an equitable average. It is necessary, therefore, to know in advance to what these expenses will amount for any period, and this is easy of ascertainment in the case of these fixed charges.

In the case of expansions, additional ground rented or new buildings erected, the additional costs applicable to these extensions can also be determined in advance for the remainder of the year, which is all that is necessary, as product complete theretofore should not be charged with these additional costs.

It is true that the factors of depreciation and repairs on plant and equipment will vary to a certain extent with use, but in this industry at least this variation would be slight and the rate may be fixed so as to cover the normal average use.

Having ascertained the total of overhead charges for the ensuing year—and nearly every one of these expenses is exactly

ascertainable—it is a simple matter to allocate this total over the plant so as to determine a daily or hourly rental for each stage or lot, excluding, of course, the portion of these charges applicable to space occupied by administrative buildings, which will form a part of administrative expense.

When a picture is completed a charge at the determined hourly or daily rate will be made against it for the space or stages occupied. This charge will go into the control account for direct charges and also into the direct expense of sub-account, termed "proportion of indirect production costs and plant overhead." It will also go into the corresponding column in the picture cost sheet, which will then contain two items: one for proportion of indirect production costs and one for proportion of plant overhead. The contra credit should not go direct to plant overhead but into an intermediary account until the end of the year, for the reason that, unless all spaces or stages to which the total plant overhead was allocated are occupied constantly, which is improbable, not all of the plant overhead for the year will be distributed over product. This discrepancy between the amount distributed to pictures and the total of plant overhead may be handled by means of the supplemental rate advocated by A. Hamilton Church, in his discussion of the machine-rate plan of distributing indirect expense.

At the end of a three-months' period, for instance, so as not to delay the final determination of costs for too long a time, or even at the end of a month, the total amount charged to pictures for studio or stage rental, as shown by the credits to the intermediary account referred to, should be compared with the pre-determined total of plant overhead applicable to that period. The difference can then be allocated to pictures made within the period as a supplemental charge for plant overhead, although this will have the effect of penalizing such pictures because of failure during that time properly to utilize all available space. Since this difference is an indication of waste in not keeping up production, it will serve a very useful purpose by showing this fact, and it should not perhaps be charged to particular pictures at all, but be closed out at the end of the year as a loss. Of course, if the organization is given over to the production of a certain picture so much that other production has to be neglected, it is proper that this picture should bear the loss occasioned thereby.

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Administrative expenses should, of course, be kept under a separate classification. The proportion of administrative expense to be borne by the producing end of the business will need to be determined in each instance by the conditions obtaining. This proportion should form a part of plant overhead. In the case of a company which produces only and maintains no selling nor distributing organization, the whole of administrative expenses would be included in plant overhead.

Interest on the firm's own capital invested in plant and equipment has not been shown as a production cost because of the writer's opinion on that subject. It is also thought that interest paid on possible mortgages on plant should be considered as a deduction from income rather than as a manufacturing expense.

In closing, it might be pertinent to mention one or two income-tax problems that are probably somewhat peculiar to this industry.

It is understood that the internal revenue bureau in several instances has raised questions as to the tax liability of producers who have deducted each year as expenses the total costs of production without taking into consideration pictures on hand at the end of the year and pictures in process. It seems quite clear that income cannot be correctly reflected unless the inventory method of determining income is used. This basis was, undoubtedly, not used in many instances because of failure to keep accurate cost records.

A tax problem which frequently arises is that presented in the case of a producer who distributes his pictures on a state rights basis. The United States is divided into various territories for this purpose and a value is set upon each territory. That is, the total selling price of the picture is fixed, and each territory is assigned a certain percentage of this total. The producer then sells to exchanges in the different territories the right to exhibit or sell exhibiting rights in their districts. At the end of an accounting period a portion only of the total territory for a certain picture may have been sold. What is the inventory value of this picture? Although the legal title to the negative film still remains with the producer, its value is diminished as territorial rights are sold.

Inasmuch as the total amount to be realized is known with a

fair degree of certainty, it would seem just to assume that the same proportion of the cost of a picture remains on hand as the proportion of the amount yet to be realized is of the total selling price. If a material discrepancy later develops, an amended return may be filed. (Since the question of the value of foreign rights so complicates this question and the following one, it has been ignored here because of lack of space in which adequately to discuss it.)

Another problem frequently encountered occurs when a producer has contracted with a distributing company to produce one or a series of pictures for it. The distributor does not buy the picture outright but advances the producer, against the cost of a picture, a certain amount for the exclusive right to exploit and exhibit the picture for a period of years. Title remains with the producer, and any amounts realized on the distribution of the picture over and above the advance to cover cost of production, which usually involves a profit for the producer, is shared between them on an agreed basis. If at the end of an accounting period the producer has made and delivered to the distributor such a picture and received his advance thereon, should the picture be included in his inventory, and, if so, at what figure?

In view of the fact that the earnings from a picture in this case are a matter of conjecture and the producer does not know that he will ever receive anything more than the advance, it would seem permissible to consider the picture as disposed of, although it is not known what the position of internal revenue officers would be in such a case. In this case any excess of the advance over the cost of making the picture would be net income for the year of its receipt and any future earnings would be accounted for as net income when received.

The motion-picture field is too broad and conditions at different plants are too varied to give anything like a comprehensive outline of a cost system for it in an article of this length. What has been given here has been only an attempt at sketching a way of securing accurate costs under ordinary conditions. Many companies maintain their own laboratories, machine shops, garages, etc., which would complicate the problems somewhat, but such cases could be handled in much the same manner as herein outlined by keeping separate cost of service rendered, as an outside business would do, eliminating, of course, the element of profit.