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(TRADE SERIES)

MOTION PICTURE FILMS



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DISTRIBUTION OF MOTION PICTURE FILMS

By THEODORE N. BECKMAN, Ph. D.

INTRODUCTION

This bulletin presents one of the first of a series of trade and economic studies based on statistics derived from the first nation-wide Census of Distribution, which is a part of the Fifteenth Decennial Census of the United States. This study was prepared under the general supervision of Robert J. McFall, chief statistician for distribution. Indebtedness is acknowledged to C. J. North and N. D. Golden, chief and assistant chief, respectively, of the motion picture division of the Bureau of Foreign and Domestic Commerce, who gave of their time and thought when approached for assistance.

The motion-picture industry is one of the 326 industries into which manufacturing and producing establishments have been divided by the census of manufactures. The industry is said to have a capital investment around two billion dollars¹ but produces only .26 per cent of the total volume of goods manufactured in the United States. Yet the motion-picture industry assumes a position of unusual importance, because of —

- (1) The rapidity of its development.
- (2) The swiftness with which radical changes of a technical nature have taken place.
- (3) Its geographic concentration.
- (4) Its far-reaching influence upon social and economic standards and conduct.

For census purposes the motion-picture industry consists of but two divisions—production and distribution. The production division covers all processes and activities involved in the making of motion pictures. It includes the photography of scenes, the development of exposed films, the printing of projection films, and other studio and laboratory work required in the preparation of positive films for use. The distribution division, on the other hand, involves the renting of films to exhibitors, the physical distribution of the films, and the collection of due accounts. It also includes the outright sales of finished films and the sale of advertising and advertising materials. For the purposes of this study the two phases of the industry dealing with the exhibition of films and the facilitating services (which involve the sale, installation and servicing of theater equipment as well as the financing and advertising services) have not been included.

VITAL FACTS ABOUT THE MOTION PICTURE INDUSTRY

The Industry.—In 1929, the last year covered by the Census of Manufactures, the motion-picture industry included 142² establishments producing films valued, on a production cost basis, at \$184,102,419. These producing establishments, commonly known as studios, carried on their pay roll 19,639 people, of whom 37 were proprietors and firm members, 8,818 were salaried officers and employees (including actors) on the pay roll on or about December 14, 1929,

¹ The Motion Picture Almanac, 1931, p. 9. New York, The Quigley Publishing Co.

² Does not include establishments with products under \$5,000 in value. The census is taken on a physical establishment basis. A firm operating five plants may in the trade be regarded as a single studio, but for census purposes it consists of five establishments.

and 10,784 were the average number of wage earners for the year. Of the total pay roll for the year, the salaried officers and employees received \$80,167,520, and the wage earners received \$24,860,092. Thus, salaries constituted 32.68 per cent of the total cost, the largest single item of expense; wages were 13.5 per cent of cost; and materials, fuel, and purchased electric energy amounted to 20.88 per cent of the total cost of production.

What the industry produces.—As indicated in a preceding paragraph, the motion-picture industry made in 1929 products whose cost value amounted to \$184,102,419. Of this amount, \$128,496,710 consisted of negative films, the remainder comprising unfinished productions, the development of positive films, receipts for laboratory work done for others, receipts for use of studio facilities, and other work done for others. No less than 92.39 per cent of the value of all negative films was in theatrical pictures (both feature pictures and short subjects), in which but 13.06 per cent was in silent pictures, the bulk of the production being in sound and dialogue pictures, as shown in Table 1.

TABLE 1.—DISTRIBUTION OF NEGATIVE FILMS BY CLASS AND KIND

CLASS AND KIND	Number of films	Cost of production	Per cent of negative films
Negative films.....		\$128,496,710	100.00
Theatrical.....	1,204	118,716,041	92.39
Sound.....	349	34,866,785	27.13
Dialogue.....	585	67,072,006	52.20
Silent.....	270	16,777,250	13.06
News ¹		6,152,286	4.79
Advertising ¹		3,377,292	2.63
Educational ¹		251,091	.19

¹ Data on number incomplete.

According to authorities on the subject³ the trend since 1929 has been even more pronounced in the direction of sound pictures. It is estimated that during 1930, 99 per cent of all pictures produced were made in sound or were all-talking, while in January, 1931, not a single major studio was producing any feature silent picture.

Growth of the industry.—Comparable and adequate statistics of the motion-picture industry were first gathered by the Bureau of the Census of the Department of Commerce through the census of manufactures in 1921 and every biennium thereafter. These figures show a constant and steady increase in the volume of production, although no appreciable change is to be noted in the total number of studios or plants as shown in Table 2 except for the year 1923, which seemed to be contrary to the trend. This indicates a decided tendency toward larger scale of operation. While the average production per studio in 1927 was \$946,080, it jumped in 1929 to \$1,296,498.

TABLE 2.—GROWTH OF THE MOTION-PICTURE INDUSTRY, 1921 TO 1929

YEAR OR PERIOD	Number of establishments	Per cent of increase	Cost of production	Per cent of increase
1929.....	142		\$184,102,419	37.0
1927.....	142	7.6	134,343,360	43.5
1925.....	132	36.1	93,636,348	8.4
1923.....	97	—23.6	86,418,170	11.7
1921.....	127		77,397,381	

^a Decrease.

Technical developments.—Probably the most significant development in the production of motion pictures in recent years was the transition from silent to sound pictures. This change necessitated almost a complete readjustment of studios, as well as theaters. It also necessitated a new type of personnel to cope with the technical phases of sound mechanisms. Such engineering personnel came primarily from the radio broadcasting field. It further involved a considerable turnover in the personnel among the actors. Among other things, the coming of sound necessitated new equipment in the studios and new reproducing equipment in the theaters. Of the 21,993 theaters in the United States on January 1, 1931, 13,128, or approximately 60 per cent, were wired and equipped for sound.⁴ Of the better types of theaters, however, it is claimed that fully 83 per cent were equipped for sound in the beginning of 1931.⁵

The second important change was the introduction of color cinematography, which was used primarily in 1928 and 1929 in order to combine sound with color, especially for the production of musical comedies which seemed to be so popular at the time. A third development that might be mentioned in passing is in the acoustical treatment, both in the studios and the theaters. It may be said that the success of sound projection in the theater depends to no small degree on the auditorium acoustics.

Among the many improvements that distinguish between sound recording of 1926, when sound was first presented to the public, and that of to-day, is the recent introduction of the new process noiseless recording. This, in fact, is heralded by leaders of the industry as the greatest advance that has been made in talking pictures.⁶ The process is said to eliminate all ground and surface noises, which resemble the scratching of a phonographic needle, thereby freeing a picture from mechanical sounds especially in the intervals between words or dialogue sequences. This, too, necessitates additional equipment in the studios and other changes in order to provide for increased sound sensitivity in recording, since the new process obviates the need for artificial volume formerly resorted to so that the recorded sound might be heard above the surface noises.

Changes have by no means reached their climax. The use of wide films has already been given careful consideration. While a number of films of varying widths have been found to possess distinctive merits, the standards committee of the Society of Motion Picture Engineers is of the opinion that a film having a width of 50 millimeters (instead of the present size film of 35 millimeters) is wide enough to produce a picture satisfactorily on the widest screen available in the majority of the theaters. There are, also, still in the offing experiments in the third-dimension projections which aim to give depth to objects so as to make them real, and further experiments in television which might make possible the direct reproduction in a number of theaters of plays actually enacted on some distant stage, or the simultaneous reproduction in a number of exhibiting places of a master print.

Concentration of production.—One of the unusual features of the motion-picture industry is the extreme concentration of the studios in the State of California. Of the 142 plants covered by the census, 58 are in California, but these plants account for 70.28 per cent of the total annual output in the United States. New York State is next in importance, with 30 plants, producing 23.83 per cent of the value of all the products of the industry. The States of California and New York together account for 94.11 per cent of all production, the remainder being scattered throughout the United States, as shown in Table 3.

⁴ The 1931 Film Daily Year Book of Motion Pictures, p. 706, New York, The Film Daily.

⁵ The Motion Picture Almanac, p. 9.

⁶ Bunn, C. W. Sound Recording, The 1931 Film Daily Year Book, p. 543.

TABLE 3.—LOCATION OF MOTION-PICTURE PLANTS BY STATES¹

STATE	Number of establishments	Per cent of of all plants	Value of products	Per cent of total production
United States.....	142	100.00	\$184,102,419	100.00
California.....	58	40.84	129,391,172	70.28
Illinois.....	8	5.55	1,154,148	.63
Michigan.....	4	2.11	325,416	.18
Missouri.....	4	2.11	115,921	.06
New Jersey.....	6	4.22	4,205,046	2.28
New York.....	30	21.12	43,871,940	23.83
Ohio.....	8	5.55	268,196	.15
Pennsylvania.....	5	3.52	442,890	.21
Other States ²	19	13.31	4,327,600	2.35

¹ Practically all establishments outside of California, New Jersey, and New York are engaged in the production of nontheatrical films—industrial and educational.

² Colorado, 1 establishment; Connecticut, 2; Georgia, 1; Iowa, 1; Kansas, 1; Louisiana, 2; Massachusetts, 3; Minnesota, 2; Oregon, 2; Rhode Island, 1; Texas, 2; Washington, 1.

Where the market lies.—While the production of motion pictures is highly concentrated, the market for the products of the industry is widespread and scattered throughout the world. The market for theatrical and news films, for example, consists of all exhibiting theaters in the United States and in foreign countries, of which there were in 1929, 57,743, distributed as follows:⁷

United States.....	20,500	Canada.....	1,100
Europe.....	27,379	Africa.....	755
Latin America.....	3,981	Near East.....	52
Far East.....	3,976		

Furthermore, the theaters in the United States were distributed throughout the 48 States and the District of Columbia, with no special tendency toward any high degree of concentration.

Distribution a vital problem.—Because of the concentration of production on the one hand, and the wide market for motion pictures on the part of exhibiting theaters on the other, the problem of distribution in the industry is indeed a vital one. It involves an organization carefully branched out in order to reach economically all parts of the market, and to give each territory the necessary cultivation. Again, there is a difference in the dealings with each type of exhibitor. Theaters may be divided for such purposes into large chains, small chains, individual first-run houses, and small theaters, each requiring separate treatment. Furthermore, some of the theater chains are owned by producers, while other theaters are not integrated with either the production or distribution phases of the business. The distribution problem is further complicated by the fact that motion pictures, unlike other commodities, are seldom sold, nor are they in reality leased or rented, although the term "rental" is used. What actually happens is that the distributor or producer who holds the copyright to a picture grants the exhibitor a license which gives him the right to show the picture and supplies him with the positive print in order that the right may be exercised by the licensee. Such right is normally confined to a certain location and to a certain specified time. Income from rentals exceeded 95 per cent of the total, as shown in Table 4.

The price charged for films may be in the form of a flat rate rental or a percentage of box-office receipts, or a combination of the two. Rental prices are largely a matter of trading and bargaining between the distributor and exhibitor. Price is governed primarily by the exhibitor's ability to pay, which in turn

⁷ The Motion Picture Division, Bureau of Foreign and Domestic Commerce.

depends upon the theater's seating capacity, number of performances per day, price of admission, prestige of the house, and above all the pulling power of the picture or the actors starring in it. When the films are rented on a percentage of box-office receipts, the problem arises of checking the theater receipts, which in itself has developed so many difficulties that a separate organization, the Ross Federal Service (Inc.), was formed with branches in key cities throughout the United States, so that its large corps of checking field representatives (about 3,000) may perform the function of determining the exact number of ticket sales and theater receipts where pictures are played on a percentage basis.

Furthermore, distribution of a film must be effected promptly. It is said that fully 50 per cent of the receipts from most feature pictures are collected within 90 days from the date they have been released for distribution. The public seems to be more eager to see a picture immediately after its release than at a later date. Effective planning for distribution thus becomes a prime prerequisite.

SUMMARY OF FILM DISTRIBUTION

Some motion-picture films are no doubt sold or rented directly from the producing studios, especially to the larger theater chains, for which no distribution census reports were required. The bulk of the production of the industry, however, is being distributed through various wholesale organizations, known and to be designated hereinafter as exchanges.⁸ The exchanges may be owned by the producing companies or may be operated as independent distributing establishments. Either of these two types may be operated as individual units but more often form a part of a chain organization.

For the purposes of the census of distribution, a separate report was required for each establishment or exchange engaged in the distribution of motion-picture films, so long as such establishment had a separate physical existence from that of the studio or studios whose products it distributed. It is probable that a number of the small independent exchanges were not canvassed, because they maintain no established place of business or were not in operation when the census was taken, and partly because they also engaged in studio work at the same place or were concerned entirely with industrial and advertising films. In other instances some of the exchanges were difficult to locate because of their extremely small size of business and intermittent operations. On the whole, it is believed that the figures represent as complete a coverage of the field as is normally possible to secure.

All together, 540 such exchanges were in business at the end of 1929, reporting total income from rentals and sales of motion-picture films (including sales of advertising) for the year of \$220,740,675. This income or volume of business was made up of the items shown in Table 4 below.

TABLE 4.—ANALYSIS OF BUSINESS BY COMMODITIES AND TYPE OF INCOME

TYPE OF INCOME	Amount	Per cent
Total volume of business.....	\$220, 740, 675	-----
Reported by commodities *.....	220, 316, 620	100.00
Commodity coverage (per cent of total).....	99.81	100.00
Film rentals.....	209, 512, 207	95.10
Exposed-film sales.....	1, 038, 817	.47
Sales of advertising and advertising material.....	6, 553, 917	2.92
All other sales.....	4, 211, 688	1.91

* Some exchanges reported only their total income and did not show how much of it was received in rentals and how much from sales of various items, hence the amount reported in detail by commodities is less than the total volume of business shown above.

⁸ The exchanges are regarded as wholesale organizations, as contrasted with retail establishments, because they do not deal with individual ultimate consumers but with theaters who in turn sell amusement to the public.

Domestic and foreign markets.—Of the total volume of business reported by the exchanges, the exchanges dealing primarily with the domestic market reported 96.9 per cent. The balance consists of exports by exchanges specializing in supplying foreign countries with motion-picture films, and does not include exports of films made by exchanges that operated primarily in the domestic market. The above figures do not include exports of films made directly from the producing studios without going through any exchange in this country. When the last two items are included, the declared ^o value of the exports of films during 1929 amounted to \$7,622,316, consisting of 273,772,283 linear feet of positive film valued at \$6,501,714, and 8,443,197 feet of negative motion pictures valued at \$1,120,602. The geographic distribution of these exports by major divisions and the respective amounts absorbed are shown in Table 5, below:

TABLE 5.—DECLARED VALUE OF EXPORTS OF FILMS IN 1929 ¹

GEOGRAPHIC DIVISION	Amount	Per cent
Total.....	² \$7,622,316	100.0
Europe.....	3,841,435	49.8
Latin America.....	1,020,551	28.3
Far East.....	1,338,083	18.2
Canada.....	600,695	0.1
South Africa.....	130,394	1.7
Other countries.....	144,358	1.9

¹ Motion Picture Division, Department of Commerce.

² See footnote 9, p. 8.

Some high lights.—Of the 540 exchanges covered in the canvass, 7 exchanges submitted inadequate data, hence they were not included in the various analyses in this study. One of the seven exchanges was located in Pueblo, Colo., and the other six in Philadelphia, Pa. Together, the seven exchanges reported a net volume of business of \$135,329.

To accomplish the distribution task and to perform all necessary functions incident thereto, the 533 exchanges employed 9,342 people, paying them \$17,978,258 in salaries and wages. They incurred a total expense of \$34,630,281, and carried at the end of the year a stock of goods costing \$3,275,061. (See Table 6.)

TABLE 6.—SUMMARY OF WHOLESALE DISTRIBUTION OF MOTION-PICTURE FILMS

ITEM	Amount	ITEM	Amount
Number of exchanges.....	533	Salaries and wages.....	\$17,978,258
Volume of business.....	\$220,606,346	Total expenses.....	34,630,281
Total employees.....	9,342	Stocks on hand.....	3,275,061

^o It is important to bear in mind that the declared value has no relation to the amount of revenue derived from a film. The amount put down by a shipper of films on his export declaration usually reflects the cost of the film to the exporter and may be nominal as compared with the amount of income received from its showings, which can not be determined (except when sold outright which is rare indeed) until a later time. It is estimated that the gross revenue to distributors from the exhibition of American pictures abroad is probably considerably more than the amount declared, or approximately 30 per cent of the total revenues of the various companies.

FUNCTIONS, TYPES, AGE, AND LOCATION OF EXCHANGES

Functions and types of exchanges.—Exchanges probably derived their name from their main function, which consists in supplying exhibitors with a constant change of films. This work involves selling the picture, either individually or in a group or block; setting bookings which will result in most desirable playdates and not conflict with previous booking arrangements made by exhibitors; furnishing the necessary number of prints to exhibitors at the proper time without carrying undue stocks; and inspecting and repairing returned prints after the showing prior to further circulation.

In the early stages of the industry, before distributors or exchanges made their appearance, the exhibitor bought pictures from the producer which he used as long as it was profitable and then purchased new subjects. In a short time the exhibitor had many pictures on his hands which, while valuable in other communities, were of little or no value in his own territory. To meet this situation, theater men would often buy several pictures and travel with them from place to place. "Black tent" shows had thus come into existence for it was cheaper to move the show from town to town than to use films in a single community until the entertainment value of the film was exhausted in that community, which was long before the film was worn out. The establishment of some sort of a distributing system, about 1904-05,¹⁰ changed matters considerably. It enabled exhibitors to obtain new subjects on a rental basis and allowed producers to sell in quantities to the distributors.

Exchanges now operating in the domestic market have been classified for census purposes into two general types: (1) Those that are in business for themselves and are independent in ownership of any producers and (2) exchanges that are owned by the producers. These two types of exchanges are to be designated hereinafter as independent exchanges and producers' exchanges, respectively. In the early stages of development, independent exchanges or distributors occupied the most prominent position. These agencies, frequently referred to as "State right" exchanges or "State right" distributors, are granted by producers the exclusive right to sell certain pictures in their respective territories, which often correspond with the boundaries of a State. Sometimes they contract to distribute the entire output of one or more producers, particularly when they operate a chain of exchanges located in key cities.

But with the development of large chain theaters, the decrease in the number of producers, the vertical integration of producers with theater chains, and the growing financial strength of producing companies, the independent distributor became of less significance. This resulted in producers either integrating with existing distributors but more often establishing their own district and branch exchanges, so that in 1929 producers' exchanges were 444 in number and accounted for \$208,856,892 worth of business. The volume of film distribution accomplished through such exchanges was 94.67 per cent of the total volume of business reported by all exchanges. Furthermore, 4 of the 14 exchanges engaged in the exporting of films were also owned by producers, doing an additional \$5,318,308 worth of business.

While producers' exchanges are used primarily for the distribution of films of their owners, not infrequently they are also utilized for the distribution of films made by other producers. This latter method of distribution, however, has often proven unsatisfactory, for it is but human nature to give preference to one's own products or to allocate a smaller portion of a joint sale contract (when several pictures are booked jointly as a block), than might be justified by the merits of

¹⁰ Unpublished doctoral dissertation by R. L. Cassady, jr., submitted to the University of California.

another producer's picture which forms part of the block. In fact, a producer often keeps members of his own staff in the distributor's office to see that his product is being pushed energetically.

Summary of film distribution by type of exchange.—As pointed out previously, exchanges owned by producers occupied a dominant position in the distribution of motion-picture films, accounting for 94.67 per cent of the total, as shown in Table 7. Export exchanges¹¹ were next in importance with 3.10 per cent of the total volume, and independent exchanges contributed the remainder, or 2.22 per cent. Producers' exchanges carried an inventory at the end of the year amounting to a cost value of \$699,118; independent exchanges had an inventory of \$595,780; while the inventory of the export exchanges was \$1,980,163. Of the total number of employees exclusive of proprietors and firm members, producers' exchanges reported 8,797 or 94.17 per cent; independent exchanges employed 303 or 4.20 per cent of the total; and export exchanges accounted for the remaining 152 employees or 1.63 per cent of the total.

TABLE 7.—FILM DISTRIBUTION BY TYPE OF EXCHANGE

ITEM	PRODUCERS' EXCHANGES		INDEPENDENT EXCHANGES		EXPORT EXCHANGES ¹	
	Amount	Per cent of total	Amount	Per cent of total	Amount	Per cent of total
Number of exchanges.....	444	83.30	75	14.07	14	2.63
Volume of business.....	\$208,856,892	94.67	\$4,904,517	2.22	\$1,843,037	3.10
Total employees.....	8,797	94.17	303	4.20	152	1.63
Salaries and wages.....	\$16,562,826	92.13	\$854,033	4.75	\$561,399	3.12
Total expenses.....	\$31,684,015	91.38	\$1,624,570	4.69	\$1,360,687	3.93
Stocks on hand.....	699,118	21.35	595,780	18.19	1,980,163	60.46

¹ See footnote 11, below.

Among the interesting facts disclosed in Table 7 is the variation in the percentages of the total costs of distributing films as between the different types of exchanges. Producers' exchanges did 94.67 per cent of the total volume of business, but contributed only 91.38 per cent of the expenses. Export exchanges, which did 3.10 per cent of the business, shared 3.93 per cent of the expense. Independent exchanges, on the other hand, shared 4.69 per cent of the expense on a volume of but 2.22 per cent of the total, over twice the proportionate share of expense.

The explanation for this difference in burden of expense lies in part in differences in salaries and wages. While producers' exchanges employed 94.17 per cent of the people, they paid out but 92.13 per cent of all salaries and wages. Export exchanges paid a larger proportion to their employees, probably on account of the extra skill involved in export operations. Export exchanges carried on their pay roll but 1.63 per cent of all employees, but paid them 3.12 per cent of the total salaries and wages. Independent exchanges employed 4.20 per cent of all persons covered in this study, but paid out 4.75 per cent of the salaries and wages, so that the item of salaries and wages accounted for but a part of the difference in costs between the two types of exchanges.

¹¹ Of the 14 export exchanges, 4 were owned by producers and 10 operated as independent exchanges.

Age of the exchanges.—The greatest growth in the number of exchanges took place in the decade between 1914 and 1924, during which time approximately 72 per cent of all exchanges existing at the end of 1929 came into being. The first exchange with national distribution was organized in 1914. It is impossible from census statistics to determine how many exchanges came into being and went out of business during the period covered by the table. In other words, no mortality figures or data can be shown in this study. It was impossible to count "ghosts," or concerns not in existence at the time the census was taken. It is possible, however, to show the age of the establishments that were in existence when the enumerators called. This in a way points to the probable longevity of exchanges, and that in a very imperfect manner.

TABLE 8.—EXCHANGES, BY DATE OF ESTABLISHMENT AND AGE

DATE ESTABLISHED	Age (years)	Number	Per cent of total
Total.....		533	100.00
1929.....	1	5	.94
1928.....	2	40	7.50
1927.....	3	18	3.38
1926.....	4	9	1.69
1925.....	5	86	16.14
Prior to 1924 but unknown.....	Over 5	91	17.07
1920-1924.....	6-10	114	21.39
1914-1919.....	11-16	156	29.27
1900-1913.....	17-30	13	2.44
Prior to 1900.....	Over 30	1	.18

Of the 533 establishments covered in Table 8 only 1 had an existence of over 30 years. It is presumed that this exchange was engaged in a different type of activity during its early life, or that it handled imported films, since the first feature picture produced in the United States was not until 1903 (*The Great Train Robbery*). Thirteen exchanges were from 17 to 30 years old, 156 from 11 to 16 years, and 114 from 6 to 10 years. On the other hand, 158 exchanges, or 29.65 per cent of the total, were still in their infancy or youth, being less than 5 years old. The year 1925 stands out as an important period in the establishment of exchanges, 16.14 per cent of all exchanges in operation at the end of 1929 having been established in 1925. The rate of growth since that time decreased, although 1928 showed a substantial increase in the number over the preceding two years.

Continuity and age of present ownership.—Of the 533 exchanges for which statistics are presented in Table 9, 460, or 86.3 per cent, were under the same ownership since their establishment. Of the 5 exchanges established in 1929, none changed hands during the year. Of the 40 established in 1928, 38 remained under the same ownership and 2 changed hands. Of the 18 exchanges established in 1927, 16 remained under the same ownership and but 2 changed hands, 1 in 1928 and 1 in 1929. Even of the 156 exchanges established during the 1914-1919 period, 149 remained under the same ownership through 1929, while 3 changed hands in the period of 1920-1924, 2 in 1928, and 2 in 1929. *This shows a rather remarkable continuity in ownership and considerable stability of the distributing phase of the motion-picture industry.*

TABLE 9.—CHANGES IN THE OWNERSHIP OF EXCHANGES IN RELATION TO DATE OF ESTABLISHMENT

DATE OF ESTABLISHMENT	Total	DATE OF PRESENT OWNERSHIP									
		Prior to 1900	1900 to 1913	1914 to 1919	1920 to 1924	Prior to 1924 but unknown	1925	1926	1927	1928	1929
Total.....	533		10	150	88	91	61	10	47	42	31
1929.....	5										5
1928.....	40									38	2
1927.....	18								10	1	1
1926.....	9							8			
1925.....	80						61		1	1	24
Prior to 1924 but unknown.....	91					91					
1920-1924.....	114				82			2	30		
1914-1919.....	150			149	3					2	3
1900-1913.....	13		10		3						
Prior to 1900.....	1			1							

It is notable that only 13.7 per cent of the exchanges have changed hands, such changes having taken place largely since 1927 when producers apparently began even more to distribute through their own outlets, mergers accounting for many of these changes. In fact, 87.6 per cent of all changes in ownership during the entire period took place in the years 1927, 1928, and 1929, the first and last of the years mentioned being the most prominent in this respect.

Table 10 shows the age of the present ownership. According to the statistics presented therein, 10 exchanges were under the same ownership from 17 to 30 years; 159 exchanges, over 10 years; and 332 exchanges remained under the same ownership for more than 5 years. These statistics show in a somewhat different manner the remarkable stability of the distributing part of the industry already pointed out in connection with data presented in Table 9.

TABLE 10.—AGE OF PRESENT OWNERSHIP OF EXCHANGES REMAINING UNDER THE SAME OWNERSHIP SINCE THEIR ESTABLISHMENT

DATE OF PRESENT OWNERSHIP	Age of present ownership	Number of exchanges	Per cent
Total.....		460	100.00
1929.....	1	5	1.09
1928.....	2	38	8.26
1927.....	3	16	3.48
1926.....	4	8	1.74
1925.....	5	61	13.26
Prior to 1924 but unknown.....	Over 5	91	19.78
1920-1924.....	6-10	32	7.81
1914-1919.....	11-16	149	32.39
1900-1913.....	17-30	10	2.17
Prior to 1900.....	Over 30		

Location of exchanges.—Table 11 shows the distribution of the 533 exchanges, by States, giving the number of exchanges located in each State, by type of exchange, the volume of business contributed by all exchanges in a given State, and the percentage of the total. The States are ranked in the last column of the table according to volume of business.

TABLE II.—NUMBER OF EXCHANGES AND VOLUME OF BUSINESS BY STATES

STATE	NUMBER OF EXCHANGES			VOLUME OF BUSINESS		Rank in vol- ume
	Total	Pro- ducers'	Inde- pend- ent	Amount	Per cent of total	
Total.....	1 533	448	85	\$220,605,346	100.00	-----
Alabama.....	1		1			34
Arkansas.....	1	1				35
California.....	36	32	4	16,056,557	7.28	3
Colorado.....	17	15	2	3,237,642	1.47	18
Connecticut.....	12	12		4,019,735	1.82	16
District of Columbia.....						
Florida.....	14	14		6,609,066	3.00	10
Georgia.....	4	3	1	811,244	.37	26
Illinois.....	16	15	1	5,437,070	2.46	11
Indiana.....	21	16	5	14,962,297	6.78	4
Iowa.....	15	14	1	4,891,594	2.22	13
Kansas.....	10	10		2,475,942	1.12	23
Kentucky.....	1	1				33
Louisiana.....	1	1				30
Maine.....	15	14	1	2,908,506	1.32	21
Maryland.....	2	2				27
Massachusetts.....	4		4	29,700	.01	31
Michigan.....	23	13	10	13,232,553	6.02	6
Minnesota.....	17	14	3	9,012,805	4.09	8
Missouri.....	19	15	4	5,034,604	2.28	12
Montana.....	28	28		9,759,120	4.42	7
Nebraska.....	1	1				29
New York.....	16	13	3	3,021,606	1.37	19
North Carolina.....	85	75	10	451,580,940	23.38	1
Ohio.....	14	13	1	2,713,286	1.23	22
Oklahoma.....	26	20		13,326,426	6.04	5
Oregon.....	14	14		3,818,097	1.73	17
Pennsylvania.....	10	9	1	1,959,293	.89	24
South Dakota.....	34	29	5	525,096,779	11.38	2
Tennessee.....	3	3		384,610	.17	28
Texas.....	8	8		1,432,016	.67	26
Utah.....	18	17	1	6,614,653	3.00	9
Washington.....	15	14	1	2,976,957	1.35	20
West Virginia.....	15	15		4,039,740	1.83	15
Wisconsin.....	1		1			32
.....	16	13	3	4,341,245	.97	14

1 Includes 14 export exchanges shown for the State of New York
 2 Includes 4 export exchanges owned by producers.
 3 Includes 10 independent export exchanges.
 4 Includes \$6,843,937 of business done by the 14 export exchanges.
 5 Does not include 6 exchanges with business of \$123,263, which were omitted because of inadequate data.

New York is far in the lead, ahead of all the other States, with 23.38 per cent of the total. Pennsylvania is second with 11.38 per cent of the total, while California is third with 7.28 per cent of film distribution. Illinois is fourth with 6.78 per cent, Ohio is fifth with 6.04 per cent, and Massachusetts is sixth with 6.02 per cent. These six States together account for the distribution of over 60 per cent of the films (including exports reported by the 14 export exchanges located in New York City), although they contain but 37.64 per cent of the population of the United States.

Index to film distribution.—Film distribution, as measured from the reports made by the exchanges, does not necessarily coincide with the location of the theaters in which the films are shown. It shows, instead, the location of the business of renting films based upon the geographic position of the exchange which disposes of exhibiting privileges rather than upon the location of the theaters which secure such privileges. For this reason the question of film distribution as measured by the income therefrom must be considered on the basis

of wide areas. Many individual cities have no distributing exchanges, and the lessor and lessee of films are frequently located in different States. When whole geographic divisions of a sectional nature are taken together, however, the distribution data based upon the location of the exchanges approximate closely to the location of the places in which the films are exhibited.

As shown in Table 12 and Chart I, there does not seem to be any direct relationship between the number of theaters and film distribution as described above. Some geographic divisions with a large number of theaters show a small per capita film distribution, while other geographic divisions having a relatively small number of theaters show a relatively large per capita film distribution. Even the number of theaters in relation to population, as given in the column headed "Theaters per 10,000 population," fails to show a positive correlation with the revenue derived from the distribution of films within the respective geographic divisions. Neither does the seating capacity of the theaters, which is indicative of their size, bear any direct relationship to income from film distribution by exchanges. It is probable that the class of theaters, indicative of their quality, and their seating capacity, plus the number of showings per day or per week would furnish a better index of possible film consumption, from the standpoint of income derived by distributors.

TABLE 12.—PER CAPITA FILM DISTRIBUTION, BY GEOGRAPHIC DIVISIONS,¹ THROUGH EXCHANGES LOCATED THEREIN, IN RELATION TO THE NUMBER OF THEATERS, SEATING CAPACITY, AND PER CAPITA RETAIL SALES

GEOGRAPHIC DIVISION	Per capita film distribution	Total ² number of theaters	Theaters per 10,000 population	Total ² seating capacity	Seating ³ capacity per 1,000 population	Retail store sales per capita
United States.....	\$1.74	21,098	1.8	10,843,694	88	\$407
New England.....	2.18	1,445	1.8	1,012,051	123	468
Middle Atlantic.....	2.92	3,560	1.4	2,714,806	103	500
East North Central.....	1.75	4,605	1.8	2,298,251	90	452
West North Central.....	1.20	4,120	3.1	1,326,963	99	468
South Atlantic.....	.93	2,206	1.4	897,070	59	268
East South Central.....	.16	1,287	1.3	422,891	42	220
West South Central.....	1.02	1,994	1.6	826,873	68	307
Mountain.....	1.71	1,289	3.4	418,406	113	424
Pacific.....	2.95	1,537	1.9	916,384	111	549

¹ The States included in the respective divisions are as follows:

New England—Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.

Middle Atlantic—New York, New Jersey, Pennsylvania.

East North Central—Ohio, Indiana, Illinois, Michigan, Wisconsin.

West North Central—Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.

South Atlantic—Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina,

South Carolina, Georgia, Florida.

East South Central—Kentucky, Tennessee, Alabama, Mississippi.

West South Central—Arkansas, Louisiana, Oklahoma, Texas.

Mountain—Colorado, Arizona, Idaho, Montana, Wyoming, New Mexico, Utah, Nevada.

Pacific—California, Oregon, Washington.

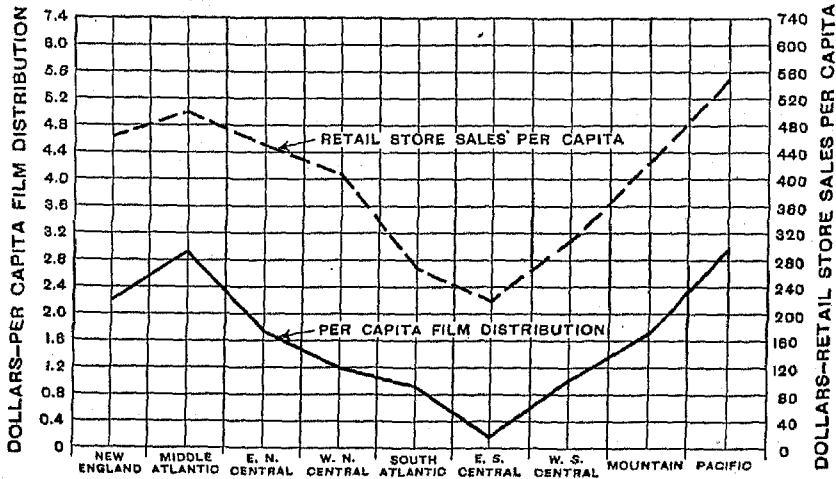
As of January, 1930. The 1931 Film Daily Year Book of Motion Pictures.

It is interesting to observe the close relationship existing between retail sales per capita and the per capita film distribution by exchanges. Without exception, high retail sales per capita (sales by retail stores divided by the population) go with high per capita film distribution, and vice versa. Not only that, but as the per capita sales increase, the per capita film distribution increases more than

proportionately. Thus, in the East South Central States where the per capita retail sales were lowest the per capita film distribution was also lowest. The South Atlantic States show the next higher per capita retail sales and the per capita film distribution was materially higher. The same observation applies to the different geographic divisions of the country in varying degree. This tends to point to the possibility of determining the potential market for films by the volume of retail business. It also suggests that theater attendance is still regarded as a luxury which is being indulged in, in increasing ratio, as the income increases as judged by expenditures made in retail stores.

Key cities.—Table 13, listing key cities for domestic distribution of films, shows how each major territory contributed in 1929 to the volume of business reported by the 519 exchanges. For the purposes of this particular analysis export exchanges have been excluded. New York City ranks first with 16.34 per cent;

FIGURE 1.—RELATION OF PER CAPITA FILM DISTRIBUTION TO RETAIL STORE SALES PER CAPITA



Philadelphia is second, with 7.92 per cent; Chicago is third, with 7 per cent; Boston is fourth, with 6.21 per cent; Los Angeles is fifth, with 4.35 per cent; Detroit is sixth, with 4.22 per cent; and Pittsburgh is seventh, with 3.82 per cent. The seven cities together accounted for one-half of the total domestic film distribution (49.86 per cent).

No less than 9 of the 13 cities having a population of over 500,000 are located in the six States that account for 60 per cent of the film distribution. While the combined population of the six States is but 37.64 per cent of the total for the United States, a larger proportion of it is urban in character than is true for the entire country, with a correspondingly larger proportion of the leisure, pleasure-seeking class and a larger proportion of people with high enough incomes to justify expenditures for amusements. Furthermore, the large cities attract considerable tourist or transient trade, particularly in the amusement field.

TABLE 13.—KEY CITIES FOR DOMESTIC FILM DISTRIBUTION

CITY	NUMBER OF EXCHANGES		VOLUME OF BUSINESS.		Rank by volume
	Producers'	Independent	Amount	Per cent of total	
Total.....	444	75	\$213,761,609	100.00	-----
Albany, N. Y.....	13	-----	3,680,872	1.73	23
Atlanta, Ga.....	15	1	5,437,670	2.54	14
Boston, Mass.....	13	10	13,282,553	6.21	4
Buffalo, N. Y.....	14	-----	6,127,076	2.87	11
Charlotte, N. C.....	13	1	2,718,286	1.27	28
Chicago, Ill.....	16	5	14,962,297	7.00	3
Cincinnati, Ohio.....	12	-----	5,434,981	2.54	15
Cleveland, Ohio.....	13	-----	7,105,025	3.32	8
Dallas, Tex.....	15	-----	5,891,723	2.76	12
Denver, Colo.....	15	2	3,237,642	1.51	24
Des Moines, Iowa.....	10	-----	2,476,942	1.16	29
Detroit, Mich.....	14	3	9,012,805	4.22	6
Indianapolis, Ind.....	14	1	4,891,594	2.29	17
Jacksonville, Fla.....	3	-----	800,154	.37	32
Kansas City, Mo.....	14	-----	5,683,495	2.66	13
Los Angeles, Calif.....	17	2	9,299,892	4.35	5
Memphis, Tenn.....	8	-----	1,482,016	.69	31
Milwaukee, Wis.....	13	3	4,341,245	2.03	18
Minneapolis, Minn.....	15	4	5,034,604	2.36	10
New Haven, Conn.....	12	-----	4,019,735	1.88	21
New Orleans, La.....	14	1	2,908,506	1.36	27
New York, N. Y.....	20	24	34,920,055	16.34	1
Oklahoma City, Okla.....	14	-----	3,818,097	1.79	22
Omaha, Nebr.....	13	3	3,021,606	1.41	26
Philadelphia, Pa.....	15	4	16,925,197	7.92	2
Pittsburgh, Pa.....	14	1	8,171,072	3.82	7
Portland, Oreg.....	9	1	1,959,208	.92	30
San Francisco, Calif.....	15	2	6,756,065	3.16	9
St. Louis, Mo.....	14	-----	4,076,725	1.91	19
Salt Lake City, Utah.....	14	1	2,970,957	1.39	26
Seattle, Wash.....	15	-----	4,039,746	1.89	20
Washington, D. C.....	14	-----	6,609,066	3.09	10
All other cities ¹	14	6	2,655,826	1.24	-----

¹ Does not include 6 exchanges with business of \$128,253 which were omitted because of inadequate data.
² Includes 1 exchange in Birmingham, Ala.; Little Rock, Ark., 1; Tampa, Fla., 1; Kansas City, Kans., 1; Louisville, Ky., 1; Portland, Me., 2; Baltimore, Md., 4; Butte, Mont., 1; Columbus, Ohio, 1; Sioux Falls, S. Dak., 3; San Antonio, Tex., 2; Houston, Tex., 1; and Charleston, W. Va., 1.

It is interesting to note that producers' exchanges were located in each of the 32 key cities, for it is well recognized that the success of a motion picture depends largely upon its showings in first-run houses (downtown theaters which exhibit the film for the first time after it has been released by the producer—usually the largest and most comfortable theaters) in the key cities. In the first place, it is claimed that more than 50 per cent of the receipts of the large distributors are derived from the first-run showings.¹² Secondly, other exhibitors book the picture on the basis of its success in the first-run houses.

With the exception of 3 of the 32 key cities, each city contributed more than 1 per cent of the total, while each of 18 cities contributed more than 2 per cent. On the other hand, the cities other than those listed as key cities made a negligible contribution. All of this indicates a high degree of concentration of exchanges in relatively few large cities geographically distributed so as to serve economically their respective tributary areas. It points to the possibility of securing fair coverage even with a limited number of branches or exchanges, provided that they are properly located. It also furnishes a basis for charting sales quotas by territories and for the ascertainment of changes in trend in years to come.

¹² United States District Court v. Paramount et al, Southern District of New York. Petition, p. 20.

ANALYSIS OF MOTION PICTURE FILM DISTRIBUTION

Table 14 presents a bird's-eye view of what the distribution of motion-picture films consists. It shows the number of exchanges, the gross volume of business, returned goods and allowances, net volume of business, sales to industrial consumers, and goods manufactured in the establishments in which the exchanges were located where the bulk of the business consisted of distribution rather than of manufacturing or production. It might be said at this point, at least parenthetically, that the amount of goods manufactured as shown in the table is so small that it may be entirely disregarded. The same is true of sales to industrial consumers which amounted to but 0.14 per cent of the total. It was a significant item, however, to the independent exchanges where such sales accounted for 6.42 per cent of all their income and probably consisted of sales of advertising and advertising materials.

TABLE 14.—ANALYSIS OF VOLUME OF BUSINESS

	TOTAL		PRODUCERS' EXCHANGES		INDEPENDENT EXCHANGES		EXPORT EXCHANGES	
	Amount	Percent of net volume	Amount	Percent of net volume	Amount	Percent of net volume	Amount	Percent of net volume
Number of exchanges	533	-----	444	-----	75	-----	14	-----
Gross volume of business	\$221,094,942	100.22	\$209,216,170	100.17	\$4,915,164	100.22	\$6,963,608	101.75
Returned goods and allowances	489,596	.22	359,278	.17	10,647	.22	119,671	1.75
Net volume of business	220,605,346	100.00	208,856,892	100.00	4,904,517	100.00	6,843,937	100.00
Sales to industrial consumers	315,045	.14	-----	-----	315,045	6.42	-----	-----
Goods manufactured	6,000	-----	-----	-----	6,000	.12	-----	-----

Returns and allowances.—According to Table 14, returned goods and allowances apparently do not constitute much of a problem in the distribution of motion-picture films. The gross volume of \$221,094,942 consisted of \$220,605,346 in net volume and \$489,596 in goods returned by and allowances made to customers for one reason or another. The returns and allowances were but 0.22 per cent of the net volume, varying from 0.17 per cent for producers' exchanges to 1.75 per cent for export exchanges. The returns and allowances represent largely cancellations and adjustments in prices. A contract may be made with an exhibitor for either all or a certain part of the product a producer proposes to make during the year. The prices are agreed upon at the time the contract is made. It may later happen that a given picture is unsuited to the exhibitor's territory or that it is not of the quality that has been anticipated. Under such circumstances the theater obtains credit. "Miss-outs" (when a picture arrives too late to be played) are another source of credits to exhibitors which go into this item of returned goods and allowances.

OPERATING EXPENSES

Nature of the statistics.—The total expense figures used by the wholesale division of the Census of Distribution comprise five elements:

- (1) Salaries and wages paid.
- (2) Expenses of salesmen paid.
- (3) Rent paid.
- (4) Interest paid.
- (5) All other expenses paid during the year.

The first group is further subdivided into salaries and wages of salesmen, of executives, and of all other employees. In securing information for each of the five items, the enumerators were instructed to get only the actual money outlays for the items included, hence rent was not supposed to be reported for owned premises, nor interest on owned capital. *The "all other expense" item does not include net profits nor cost of the merchandise sold, hence neither of these items is included in "total expense" figures.* Interest paid is not shown separately in this analysis but is included in total expenses. Such items as taxes, insurance, administrative, office, and overhead expense, including maintenance, delivery, stationery and supplies, light, heat, and power are supposed to be included under all other expenses.

Summary of operating costs.—Table 15 shows the cost of distributing films as reported by the various exchanges individually or by their parent organizations. For all types of exchanges the cost was 15.70 per cent of the total volume of business. Salaries and wages constituted the largest single item of expense, amounting to 8.15 per cent, somewhat over one-half of all distribution costs.

TABLE 15.—OPERATING EXPENSES

	Number	Amount	Per cent of volume of business
Number of exchanges.....	533		
Volume of business.....		\$220,605,340	100.00
Total expenses.....		34,680,281	15.70
Salaries and wages.....		17,078,255	8.15
Executives.....	335	2,467,804	1.12
Salesmen.....	1,562	6,253,076	2.83
All other employees.....	7,445	9,257,378	4.20
Expenses of salesmen.....		3,042,403	1.79
Rent.....		12,106,882	.98
All other expenses.....		² 10,551,048	4.78

¹ 16 exchanges reported no rent paid. When computed on proper basis (only for those reporting rent), the rental figure amounts to 1 per cent of net business.

² Includes rent items of the 16 exchanges that did not report rent separately.

The 335 paid executives¹³ received \$2,467,804 in salaries or 1.12 per cent of net volume; the 1,562 salesmen accounted for \$6,253,076 in salaries or 2.83 per cent; and the other employees,¹⁴ 7,445 in number, received salaries and wages of \$9,257,378 or 4.20 per cent of the volume of business. Selling expenses proper, in addi-

¹³ 10 of the independent exchanges operated as single proprietorships and 1 as a partnership, while five of the export exchanges operated as single proprietorships. In such cases the owners themselves occupied executive positions which are not covered under the item "paid executives."

¹⁴ Under this item are included such employees as bookers, shippers, cashiers, contract clerks, film inspectors, projectionists, film cutters, stenographers, typists, telephone operators, statistical clerks, information clerks, file clerks, and all others, like porters and watchmen, normally employed in business.

tion to the 2.83 per cent of net volume paid in the form of salesmen's salaries, included 1.79 per cent consisting of expenses of salesmen (such as traveling and other expenses of a miscellaneous nature incurred by salesmen), making a total sales-force expense, outside of sales supervision, of 4.62 per cent, over 30 per cent of all expenses.

The rent for all establishments amounted to 0.98 per cent of net volume. This figure, however, needs modification, since it includes 16 exchanges which did not report rent paid probably because they owned the premises covered by the reports. If such establishments are excluded the rent figure becomes 1 per cent. All other expenses which include interest paid and such items as taxes, insurance, administration, office and overhead expense, and all other items of expense (except costs of capital investment and costs of goods sold) amounted to 4.78 per cent of the net volume of business.

Operating expenses by type of exchange.—Independent exchanges, as shown in Table 16, with 33.12 per cent, showed the highest operating costs. To these costs must be added, for comparison purposes if for no other reason, the average salaries that would be received by the 21 proprietors and firm members who are not included in this item. The cost of doing business for these exchanges would then be approximately 2 per cent higher, or about 35 per cent. Producers' exchanges, with 15.16 per cent, showed the lowest operating costs and export exchanges had operating expenses of 19.88 per cent.

This difference in cost of doing business is not to be regarded as inherent in the type of exchange but may be accounted for in a number of different ways and does not necessarily indicate lower efficiency on the part of independent exchanges, or higher efficiency on the part of producers' exchanges. As indicated in a previous connection, producers' exchanges frequently distribute to chain theaters owned by and integrated with the producers whose pictures are distributed by the exchanges, thereby reducing selling costs as well as other expenses incident to the cultivation of independent exhibitors. Besides it is likely that independent exchanges deal with a different type of exhibitor. They frequently do not handle the more important feature pictures, nor do they always contact the more important or first-run exhibiting houses. In other words, the differences in costs between the two types of exchanges may be due largely or entirely to differences in markets, types of films handled, and variety and degree of services rendered rather than serve as an indication of relative efficiency.

As shown in a previous connection, the higher costs of independent exchanges are due in some measure to a higher percentage paid in salaries and wages. In fact, salaries and wages actually paid during the year on the part of independent exchanges were 17.41 per cent, as against 7.93 per cent for producers' exchanges. Expenses of salesmen were, however, somewhat lower in the case of independent exchanges, probably because the proprietors themselves did some of the selling; also because of the more direct contact on the part of smaller exchanges with their customers and the smaller territory over which their salesmen travel.

The total sales-force expense of independent exchanges amounted to 5.98 per cent, as against 4.66 per cent for producers' exchanges, there being a tremendous difference in salaries paid to salesmen as between the two types of exchanges, independent exchanges showing as high a cost in this connection as 4.37 per cent, as against 2.81 per cent for producers' exchanges. All other expenses were also considerably higher in the case of independent exchanges.

TABLE 16.—OPERATING EXPENSES BY TYPE OF EXCHANGE

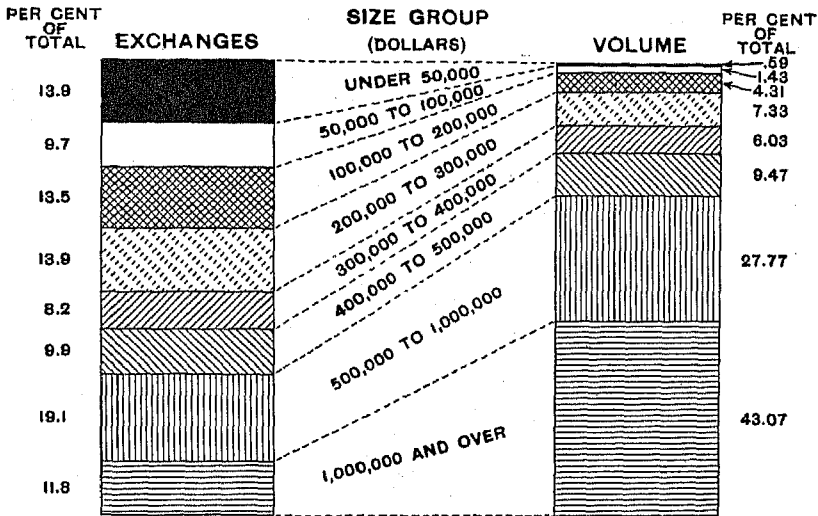
	PRODUCERS' EXCHANGES			INDEPENDENT EXCHANGES			EXPORT EXCHANGES		
	Number	Amount	Per cent of volume of business	Number	Amount	Per cent of volume of business	Number	Amount	Per cent of volume of business
Number of exchanges	444			75			14		
Volume of business		\$208,856,892	100.00		\$4,904,517	100.00		\$6,843,637	100.00
Total expenses		31,654,015	15.16		1,624,570	33.12		1,360,687	19.88
Salaries and wages		10,562,826	7.93		854,033	17.41		561,300	8.20
Executives	280	2,106,826	1.01	46	217,009	4.42	9	143,069	2.10
Salesmen	1,468	5,859,993	2.81	74	214,371	4.37	20	178,712	2.61
All other employees	7,049	8,596,007	4.12	273	422,653	8.62	123	238,718	3.49
Expenses of salesmen		3,857,244	1.85		78,967	1.61		6,282	.69
Rent		1,960,109	.94		120,174	2.45		86,590	1.27
All other expenses		9,273,836	4.44		571,405	11.65		706,407	10.32

It is significant that in all types of exchanges salaries and wages constituted around one-half of the total operating cost. It therefore affords the greatest opportunity for study with a view to reducing costs of doing business. Independent exchanges also showed a rent item that was two and a half times as high as that of producers' exchanges, indicating that fixed charges become increasingly burdensome as the size of the business decreases. (See Table 17, which shows that practically all independent exchanges were operating on a small scale.)

Operating expenses in relation to size of the exchange.—As shown in Table 17 and figure 2, the 62 producers' exchanges doing business each under \$50,000 a year accounted for a little more than one-half of 1 per cent of the net volume of business of all the producers' exchanges. Another 43 of the exchanges doing a business of \$50,000 to \$100,000 a year added another 1.43 per cent. Thus, 23.64 per cent of all producers' exchanges contributed no more than 2.02 per cent of the business reported by the entire group. On the other hand, the 85 exchanges with \$500,000 to \$1,000,000 per annum accounted for 27.77 per cent of the business and the 52 exchanges with \$1,000,000 and over accounted for 43.07 per cent. These two groups together, comprising 137 exchanges or 30.85 per cent of the producers' exchanges, contributed 70.84 per cent of the business. Just what determined the volume of business secured by any one exchange is difficult to state. It might have been the total population of the territory covered, the location of the exchange, the type of theaters served, and most of all the income of the people in the area served and its distribution among the masses. But the statistics show a very high concentration of business in the hands of relatively few exchanges.

In the independent exchange group, however, the small exchanges occupied a more important position, but even here 51 of the exchanges (68 per cent of all independent exchanges) contributed but 18.63 per cent of the business reported by the group, while two of the largest independent exchanges were responsible for 36.87 per cent of the group's business. The same observation applies to the export exchanges in which 3 of the 14 exchanges accounted for exactly two-thirds of the business reported by the group.

FIGURE 2.—DISTRIBUTION OF BUSINESS BY EXCHANGE SIZE GROUPS: PRODUCERS' EXCHANGES



Expenses vary with size.—Table 17 further shows a striking correlation between the costs of doing business and the size of the business establishment. Without a single exception, at least in connection with producers' exchanges, the costs are highest for the exchanges having the smallest volume of business and are lowest for the exchanges showing the largest volume of business. Furthermore, the costs seem to be declining in proportion as the business increases in volume per exchange. The 62 producers' exchanges having an annual volume of business under \$50,000 each, showed costs of doing business of 57.47 per cent. The costs were reduced to 48.89 per cent for the 43 exchanges with business of \$50,000 to \$100,000 per annum and down to as low as 8.53 per cent for the 52 exchanges reporting a business each of a million dollars a year and over.

Independent exchanges, on the whole, show a somewhat similar trend. In the case of export exchanges the same correlation is to be noted as in the case of the producers' exchanges, except in one instance, but the number of exchanges was too small to be considered. The costs decreased gradually from 27.81 per cent for the smallest exchanges to 20.61 per cent for the largest of the group. Size of establishment obviously is one of the most important criteria in determining the cost of distributing activities for motion-picture films.

Sales-force expense varies with size of business.—A further analysis of Table 17 reveals the fact that salesmen's salaries have the same general relationship to the size of business as do total expenses and since this item, which makes up the bulk of sales-force expense, looms large in the total expense figures, one is justified in drawing the inference that total expenses are high for smaller establishments, largely because such establishments have higher selling costs, and they are low for the larger establishments because the direct selling costs of such establishments are lower. It is interesting to note that in the case of producers' exchanges salesmen's salaries were as high as 25.51 per cent for the smallest exchanges and were reduced gradually to 1.29 per cent for the exchanges with a million dollars' worth of business per annum and over. The same is true of expenses of salesmen which were as high as 12.31 per cent for the small exchanges and as low as 0.67 per cent for the largest exchanges of the group.

Sales per salesman.—Among the most interesting things revealed in Table 17 and figure 3 is the close and proportionate relationship existing between sales per salesman and total expenses, except in the case of independent exchanges. Table 17 presents these data for all types of exchanges while chart 3 shows graphically the same information for producers' exchanges only. As sales per salesman increase, operating expenses decrease and vice versa. In other words, high sales per salesman are invariably accompanied by low costs of operation. This conclusion is corroborated by figure 4 presented in connection with the size of sales territories. It would seem, therefore, that sales per salesman constitute one of the best indexes to operating efficiency, and that one of the most effective ways of lowering costs of doing business is through increased efficiency on the part of salesmen.

TABLE 17.—EXCHANGES, BY SIZE OF BUSINESS GROUP

SIZE GROUP	1. PRODUCERS' EXCHANGES				2. INDEPENDENT EXCHANGES				3. EXPORT EXCHANGES			
	Number of establishments	VOLUME OF BUSINESS		Total expense as a per cent of volume of business	SALESMEN		Salesmen's salaries as a per cent of volume of business	Expenses of salesmen as a per cent of volume of business	Number	Average sales per salesman	Salesmen's salaries as a per cent of volume of business	Expenses of salesmen as a per cent of volume of business
		Amount	Per cent of total		Number	Average sales per salesman						
Total.....	444	\$208,850,892	100.0	15.16	1,408	\$142,278	2.81	1.85				
Under \$50,000.....	62	1,236,304	.60	67.47	106	11,063	25.51	12.31				
\$50,000-\$100,000.....	43	2,001,583	1.43	48.80	120	24,930	14.88	8.80				
\$100,000-\$200,000.....	60	8,998,282	4.31	34.36	166	67,081	7.47	5.51				
\$200,000-\$300,000.....	62	15,301,693	7.33	26.08	282	65,956	5.25	3.61				
\$300,000-\$400,000.....	36	12,593,460	6.03	21.80	103	122,207	4.11	2.83				
\$400,000-\$500,000.....	44	19,785,717	9.47	17.11	143	138,302	2.82	2.23				
\$500,000-\$1,000,000.....	85	57,988,842	27.77	14.83	336	172,589	2.30	1.70				
\$1,000,000 and over.....	52	89,960,011	43.07	8.58	272	330,735	1.29	.67				
Total.....	75	\$4,904,517	100.0	33.12	74	\$66,277	4.37	1.01				
Under \$50,000.....	51	913,876	18.63	56.76	20	45,694	5.12	1.45				
\$50,000-\$100,000.....	15	1,036,314	21.13	42.00	18	57,573	4.74	2.35				
\$100,000-\$200,000.....	0	855,637	17.45	50.32	10	85,564	3.74	1.14				
\$200,000-\$400,000.....	1	300,000	6.12	17.80	8	37,500	10.07	2.09				
\$400,000-\$1,000,000.....	2	1,798,690	36.67	10.38	18	99,927	3.03	1.18				
Total.....	14	\$6,843,937	100.0	10.88	20	\$342,107	2.61	0.09				
Under \$50,000.....	4	126,144	1.84	27.81								
\$50,000-\$100,000.....	4	283,348	4.20	25.51								
\$100,000-\$300,000.....	1	223,066	3.26	24.21	2	140,674	3.78					
\$300,000-\$1,000,000.....	2	1,652,077	24.14	15.70	2	111,503	3.59					
\$1,000,000 and over.....	3	4,540,362	66.47	20.61	16	284,335	3.51	.14				

Operating expenses in relation to sales territory.—A rather rough relationship seems to exist between the size of the sales territory covered by an exchange and its total operating expenses. (See Table 18.) The 104 producers' exchanges operating within a radius of 75 miles had a cost of but 11.27 per cent as against 12.97 per cent for the 111 exchanges operating within a radius of 76 to 150 miles. The costs were 20.79 per cent, however, for the next group of 104 producers' exchanges selling within a territory of 151 to 250 miles, and the expenses either increased or were generally higher as the sales territory widened. This, again, was due in no small degree to the fact that salesmen's salaries and the ex-

penses of salesmen increased as the sales territory increased in size. This is as may be expected, except when the wider sales territory results in a larger volume of business, more than sufficient to offset the additional selling expenses. The same observations apply broadly to the independent exchanges, but the total expenses of these exchanges do not seem to bear any relationship to sales territory.

There seems to be almost a perfect relationship, however, between the average sales per establishment and the total costs of doing business as was already pointed out in connection with Table 17, and a very close correlation between average sales per salesman and total expenses. (See figure 4.) Table 18 shows that, with the exception of the 18 exchanges operating over a 500-mile radius but not nationwide, as the average sales per salesman increase the per cent of salesmen's salaries as well as the per cent of salesmen's expenses decrease correspondingly, and vice versa, thus showing an inverse correlation. These two items of expense are of sufficient significance to affect total expense figures.

TABLE 18.—EXCHANGES, BY SALES TERRITORY COVERED REGULARLY
1. PRODUCERS' EXCHANGES

SALES TERRITORY (MILE RADIUS)	Number of establishments	Volume of business	Average sales per establishment	Total expense as a per cent of volume of business	SALESMEN			
					Number	Average sales per salesman	Salaries as a per cent of volume of business	Expenses as a per cent of volume of business
Total.....	444	\$208,856,892	\$470,398	15.16	1,468	\$142,273	2.81	1.85
75 or under.....	104	63,412,515	609,739	11.27	286	221,722	2.14	1.38
76-150.....	111	67,399,369	607,202	12.97	377	178,778	2.26	1.52
151-250.....	104	35,831,735	344,536	20.79	340	105,387	3.90	2.46
251-500.....	60	18,112,318	262,497	22.06	208	87,078	4.35	3.38
Over 500 but not nation-wide.....	18	7,444,165	413,665	20.05	126	59,061	3.51	1.64
National.....	34	15,832,224	465,654	16.64	119	133,044	3.13	1.95
United States and Canada.....	4	824,566	206,142	23.52	12	68,714	4.84	3.85

2. INDEPENDENT EXCHANGES

Total.....	75	\$4,904,517	\$65,304	33.12	74	\$66,277	4.37	1.61
75 or under.....	40	2,151,274	53,782	23.07	22	97,785	2.86	.81
76-150.....	5	125,893	25,179	72.55	5	25,179	11.15	4.14
151-250.....	13	1,718,999	132,231	33.55	40	42,975	6.97	2.77
251-500.....	4	110,737	27,684	50.06	1	110,737	1.83	1.64
National.....	10	615,909	61,691	43.18	6	102,652	1.21	.40
United States and other foreign countries (not classified above).....	2	151,100	75,550	64.57				
World-wide.....	1	30,605	30,605	92.48				

3. EXPORT EXCHANGES

Total.....	14	\$6,843,937	\$188,853	19.88	20	\$342,197	2.61	0.09
South America.....	2	983,014	491,507	10.64				
Europe.....	1	39,611	39,611	21.21				
Miscellaneous foreign combination.....	6	455,565	75,928	28.36	4	113,891	4.19	
World-wide.....	5	5,365,747	1,073,149	20.85	16	335,359	2.97	.12

It is notable that the 18 producers' exchanges referred to above showed the lowest average sales per salesman in the group (\$59,081), although these exchanges were medium-sized, having average sales per establishment of \$413,565. Normally, however, the large sales per salesman were accompanied by large-sized exchanges and the smaller exchanges seemed to have smaller sales per salesman.

FIGURE 3.—RELATION BETWEEN SALES PER SALESMAN AND TOTAL EXPENSES; PRODUCERS' EXCHANGES

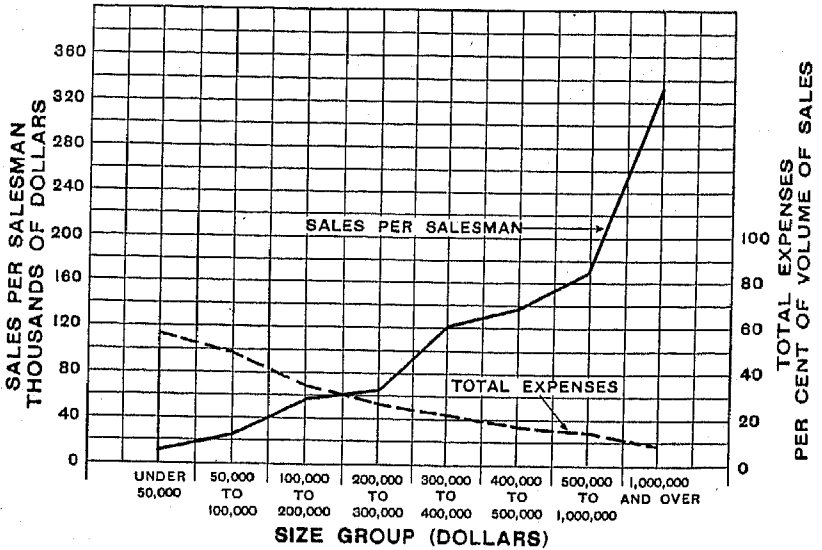
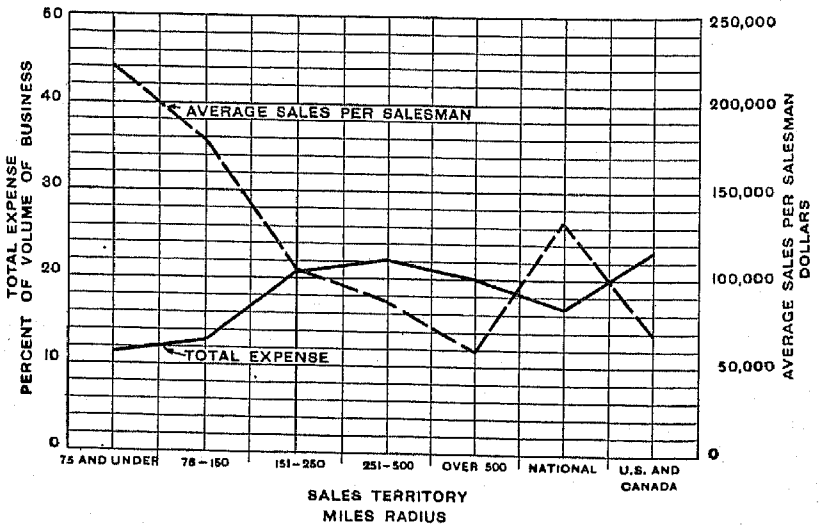


FIGURE 4.—COMPARISON OF TOTAL EXPENSE TO AVERAGE SALES PER SALESMAN; PRODUCERS' EXCHANGES



Producers' exchanges with average sales per salesman of \$221,722 showed operating expenses of 11.27 per cent. In the next group the sales per salesman dropped to \$178,778 and the expenses rose to 12.97 per cent. The third group showed a drop in sales per salesman over the second (\$105,387 per salesman) and the expenses increased to 20.79 per cent. In the next group sales per salesman dropped almost precipitously to \$87,078 and the expenses rose from 20.79 per cent to 22.06 per cent. The sixth group, on the other hand, showed the lowest sales per salesman (\$59,081), but expenses dropped from 22.06 per cent to 20.05 per cent. This, however, is exceptional. The last two groups show the same relationship as the other groups. The number of establishments operating as independent exchanges is not sufficiently large to justify drawing definite conclusions on this score.

The chain principle in the distribution of films.—All of the 444 producers' exchanges were of the multi-unit type. It may therefore be said that producers' exchanges were conducted and operated on the chain principle. This was not true of the independent exchanges (see Table 19), where 60 of the 75 exchanges were operated as single-unit establishments. Of the 14 export exchanges, 10 operated as single-unit establishments and 4, all of which were maintained by producers, were of the multi-unit type.

TABLE 19.—EXCHANGES BY THE NUMBER OF UNITS OPERATED UNDER SINGLE OWNERSHIP

1. PRODUCERS' EXCHANGES

NUMBER OF UNITS	Number of establishments	Total volume of business	TOTAL EXPENSES	
			Amount	Per cent of volume of business
Total.....	444	\$208,856,892	\$31,654,015	15.16
2-5 establishments.....	8	4,120,706	1,116,771	27.04
11-25 establishments.....	86	23,930,804	3,583,540	14.97
26-50 establishments.....	348	180,796,382	26,953,695	14.91

2. INDEPENDENT EXCHANGES

Total.....	75	\$4,904,517	\$1,024,579	33.12
Single units.....	60	4,035,704	1,106,888	27.43
2 or more units.....	15	868,813	517,691	59.59

3. EXPORT EXCHANGES

Total.....	14	\$6,843,937	\$1,360,687	19.88
Single units.....	10	1,525,029	254,929	16.71
11-50 units.....	4	5,318,908	1,105,758	20.79

Not only did producers' exchanges operate on the chain principle, but most of them (348) belonged to large groups, probably because producers who did their own distributing established exchanges in all important distributing centers or key cities. The exchanges belonging to the larger groups had a slightly lower cost of doing business, 14.91 per cent as against 14.97 per cent for the 88 exchanges in the group of 11-25 units. The 2-5 producers' exchanges had the

highest costs of the group. The single-unit establishments among the independent exchanges showed the lowest cost in that group, which may indicate that efficiency is not necessarily inherent in chain operation as far as the distribution of motion-picture films is concerned. Other factors, apparently, such as size of the establishment, sales territory covered, sales per salesman, stocks on hand, credit extended, and location of the exchanges, seem to have a more important bearing on efficiency than large chain operation with its superior management ability, which may normally be expected from a larger business enterprise.

