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Parking as a Factor in Business

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Preface

It has long been surmised that a relationship exists between the adequacy of parking accommodations and use of the automobile, with concomitant effects upon retail trade and real-estate values. However, little factual information has been available to demonstrate this relationship or to measure the degree and character, either qualitatively or quantitatively. Changes in property valuation, shifts in shopping habit, expansion or reduction in parking facilities, and evaluation of parking demand have been measured and studied independently and in isolated instances. Yet, no fundamental research into causes and effects in this dynamic field had been undertaken prior to this study.

In recognition of the mutual interests in automotive use, parking, and retail trade, the automotive and petroleum industries made funds available to the Automotive Safety Foundation for research. The Highway Research Board was requested to direct the project. The Board, in turn, sought the active assistance of university research staffs to carry out detailed assignments. An Advisory Committee representing business, property owners, government, and transportation was appointed by the Board to provide practical guidance and counsel. A project engineer was loaned by the Bureau of Public Roads.

The first phase of the project involved research into attitudes of shoppers and merchants, changes in property values, shifts in retail activity, and trends in urban transportation. This document contains the detailed reports on the studies conducted at the universities of Michigan, California, and Washington, and Ohio State University, as well as the Foreword (review of major findings) by the project engineer.

The second phase of the project is under way and is scheduled for completion within a year. This includes attitude studies in two additional cities and the analysis of business trends in areas which have added parking accommodations.

Findings in this progress report will be combined with the results of current research in an attempt to determine more-definite relationships among automobile use, parking, retail trade, and property values.

D. GRANT MICKLE, *Chairman*
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Foreword

A Review of Major Findings

Probably the prime result of this study is the relative decline in importance of retailing as a downtown business activity compared with suburban districts. A similar decrease is noted in land valuation. On the other hand, the principal retail movement to the suburbs has concerned convenience goods, while the shopping-goods lines are still strong in the central business district.

Of almost equal importance is the unanimous finding that the central area has reaped the greatest absolute gains in sales of general merchandise, apparel, and furniture and continues to dominate the metropolitan area. Also, real estate and income have shown increases, rising to their former peaks of the 1920's. Other investment and building-cost factors have shared responsibility for a poorer showing in the value of vacant land, but rising property taxes have also influenced the cautious attitude toward downtown investments.

All this time, the transportation picture has been far from stable. Automobile traffic is increasing rapidly with growing registrations and usage. Even in the central business district (where business continues to increase) traffic volume gains come close to matching total registration increases. Although population growth and expansion have been unprecedented, private car ownership has not only kept pace but, in the suburbs, is gaining steadily. The automobile has appeared not only to enable suburban living but to be a necessity for outlying dwellers, who seem to prefer it in spite of the physical limitations of congested areas. Meanwhile, parking spaces in the downtown area have been lost, as a rule, while vehicle registrations and traffic volumes soar. Losses have been critical, particularly since they occur at the most-desirable locations and at the curb, where heavy turnover accounts for maximum usage. New facilities, often on the fringe, cater to worker-parkers rather than shoppers. Under these circumstances one might expect that public mass-transit passengers would become more prevalent. But here is found a pattern of increased fares that has prompted a rapid drop in patronage since 1945. Service has declined, particularly in the outlying areas where new customers are most likely to be found, and it is doubtful that this can be remedied materially, because public transit cannot economically serve these areas.

Attitude plays an important role in this scene—perhaps the lead. The shopper on wheels demands a place to park his car, desires to choose from a wide selection of goods, and prefers to shop near his home. The city must largely rely upon dwindling property taxes or revenue bonds to provide needed downtown parking facilities, and private interests are confronted by the fact that there probably is available more parking space than people admit (they simply balk at paying for it); so little likelihood exists for providing the desired spaces, at least not in the same ratio to sales area as at suburban centers and certainly not on a free basis. The only outlet enabling continued downtown growth would then be in providing an adequate mass-transit system; but as already has been seen, this possible recourse has too frequently been unattainable.

Yet people are continuing to drive downtown in search of the variety of merchandise displayed there, even though greeted by fewer and fewer places to park at what

they consider reasonable rates. In older neighborhood shopping centers, where goods selection is smaller, the parking facilities are likewise proving inadequate. Under these conditions people are certain to turn to something better, and many simply head out for the large, suburban shopping development which is conveniently proximate and provides adequate free parking and maximum selection of goods. Additional parking facilities downtown would enhance its attractiveness; but in view of activities in the outlying areas, there is little likelihood that it could recapture completely its former degree of dominance. Suburban trading centers, with their more-readily provided parking and close proximity to residential concentrations, are destined to become outlets for an increasing share of the shopping-goods market, particularly when their merchandise assortments rival those of the competitive, centrally-located stores.

Department-store executives already have recognized the advantages of intercepting suburban shoppers, not so much because of parking deficiencies in the central city, but rather to regain lost customers or hold potentially redirected ones and, most important, to expand their operation into previously untapped areas. This branch-store development is strongest in the larger cities, where the relative decline in downtown's share of the retail trade has been most noticeable. The trend, however, should not be too alarming but rather expected as a normal growth pattern, since, at any one point in time, smaller downtown proportions of retail business are observed in the larger cities. Continued development of the regional center will accelerate this decentralization of business.

Nevertheless, the central districts of the larger cities have been favored with the more-substantial increases in trade. While physically ill-equipped to continue in the old ratio without afflicting some of its clientele, they are destined to remain the dominant business areas. In addition to those willing to endure the traffic and parking conditions and those who use relatively convenient public transit (since they live on or near a route, don't own a car or can't drive), there is the large daytime population working regularly in the central business district who, more often than not, can walk to the stores. The very expansion of retailing activities to the hinterland may make downtown stores more accessible. Of course, there remain many interrelated financial, business, and civic activities which are better adapted to a central location.

Although limited in some degree, due to the pilot nature of the studies, the following have been developed in this report and proven generally feasible for application in most areas: (1) a method for distinguishing the importance of the several factors which motivate shoppers to procure goods and services at a particular location; (2) a complementary method for determining the relative influence of various factors upon the decision of retailers to establish suburban branch stores; (3) a means of collecting and analyzing detailed census data, revealing the relative business growth in various sections of a metropolitan area; and (4) a technique, unrelated to assessment figures, of collecting historical property-value and income data and of analyzing it in conjunction with certain other influences.

● THE studies which are described in the five major parts of this report are the result of approximately one-year's research into the economic effect of automobile-parking conditions. The researches were of a pilot

nature in four particular urban areas. They were conducted in the schools of business administration (or their equivalent) of universities in those areas.

The objectives of the overall study were basic and

originally included provision of sufficient factual material to enable an evaluation of the impact of the parking problem upon (1) downtown activity and decentralization of retail business, (2) municipal tax structures, and (3) full use of the automobile and its contribution to traffic congestion. Also, it was anticipated at first that the financial aspects of the problem could be explored. Limitations of time and money have precluded inclusion of the financial phase from the overall study, but under the guidance of the advisory committee, it was decided that the former aspects would be studied during the first year of a proposed two-year program.

The basic complexity of the problem and the lack of tested techniques appeared to dictate an exploratory program, attempting in several areas to investigate the existence and availability of relevant data and to establish methods for their collection and appropriate analyses.

Under the terms of the agreement with the Highway Research Board, each study supervisor was granted a considerable degree of latitude. As a result, the reports disclose a variety of data and methods of analysis. It is the purpose of this Foreword to review the study activities and their results.

METHODOLOGY

The Ohio State University study had as a testable hypothesis that people with different personal and family characteristics have different attitudes. To understand why they patronize suburban or downtown retail establishments, a study of the attitudes which motivate such action was necessary. While primarily aimed at the degree to which automobile congestion and the parking problem discourage downtown shopping, the study attempts to discover and position a large variety of the more-important factors which tend to repel or attract different kinds of people to visit one or another location to procure goods and services.

This was accomplished through the development of valid and reliable scales (capable of discriminating between downtown and suburban shoppers) which enabled measurement of the behavior and attitudes of different categories and groups of people. The basic data regarding the factors associated with the shopping situation were obtained from questionnaires systematically administered to a selected sample in Columbus, Ohio. The 600 respondents lived in six census tracts; each was chosen with comparable shopping centers as reference points, taking into account accessibility of the downtown area, geographic representation, and a wide range of socio-economic variables. The results, there-

fore, must be carefully related to the individual characteristics of the respondents and their tract of residence; data from no particular area may be considered typical or representative of the entire city. The study is useful in that its methodology and instruments, which associate basic locational and personal characteristics with shopping habits and attitudes, are adaptable to other regions and urban areas.

The universities of Michigan and Washington utilized information gathered in the 1939 and in the 1948 U. S. Census of Business to discover relationships between downtown and suburban areas with regard to the number of retail establishments and the volume of their sales. Trends thus established in each of the major categories of merchandise type were then related to population trends and to transportation trends, as revealed by available existing studies and some new surveys. In this manner, the possible affects of traffic and parking conditions upon retail activities are indicated.

The University of Washington study also reports for the Seattle area business trends as revealed by land-use surveys of front-footage, Federal Reserve Board indices of department-store sales, construction permits, and property assessments. In addition to the central business district, suburban centers in Seattle are analyzed by means of the retail census data.

As one possible adjustment which the downtown merchant can make in the existing retail situation downtown, the University of Michigan investigated the decentralization of merchandizing to suburban branch stores. Questionnaires mailed to a national sample of the largest department stores disclosed the relative influence of parking difficulties, as well as other factors, upon the decision of downtown retail executives to establish branches in the outlying area. Another phase of the Michigan project was carried out through depth interviews and questionnaires directed to businessmen and officials in selected Michigan cities to appraise the activities of merchants in efforts to relieve parking inadequacies in their downtown areas.

The long-term trends in downtown property values were analyzed in one of the University of California studies. Ownership, income, expenses, selling prices, and assessments of a sample of typical properties in the central business districts of San Francisco and Oakland were determined over the 1920-to-1950 period. These value fluctuations were then related generally to urban decentralization patterns.

The companion University of California study drew largely from statistical materials accumulated in the censuses of business and population. These data were

the basis for measuring trends in the decentralization and dispersion of population and economic activities in the six-county San Francisco Bay area. These trends were then analyzed in conjunction with changing transportation patterns as revealed by several existing traffic, transit, and parking studies for San Francisco and Oakland. Numerous other influencing factors were also considered and results of the study of property incomes and valuation were included in the analysis.

FINDINGS

Land Values

San Francisco and Oakland. The University of California study provided appraisals more realistic than assessments, using historical sales prices and net incomes of 31 sample properties in San Francisco and 20 in Oakland. Although these samples were relatively small and the resulting data occasionally incomplete, several significant facts were developed. Foremost perhaps has been the integrity of the central business districts of both cities and their continued compactness within well-defined limits in spite of the opportunities and expectations of a changing pattern.

With remarkable similarity, sales prices on improved properties in San Francisco rose in the 1920's, fell sharply in the early 1930's, and recovered slowly after the depression. Increases during and since World War II have produced values closely approximating the price peaks of the late 1920's, suggesting that these may have been adopted as goals for future sales. This same pattern held for some of the Oakland properties, but the median of sales prices indicates that they may not have rallied as consistently. The lack of office buildings in the Oakland sample may account partly for the less-favorable market performance. Also contributing may have been Oakland's greater degree of real-estate speculation in the 1920's, in contrast to the current conservativeness. In both cities stable market prices were experienced in the heart of the business district; the widest fluctuation of prices characterized vacant properties on the fringe. This reflects not only the stability of improved as compared with vacant property but, again, the extensive optimism of the booming 1920's.

In contrast to the apparent market values of improved property in San Francisco, the trend in land values indicates a slight decrease in front-foot values since the substantial rises between 1870 and 1927. Some important shifts are evident, however: The losses were borne mainly by the fringes of the downtown area, particularly those sections where market expectations were over-optimistic, while the heart of the retail and financial districts at least maintained stability. On the

other hand, some of the more-fashionable fringe properties (which happen to be located near the Union Square Garage) have shown higher land values in the past 25 years, and postwar sales prices of potential parking sites on the fringes are above normal. Interestingly, the changes in assessed land values for the sample properties were of similarly minor proportions, paralleling the trend of the past quarter century for the entire city. Meanwhile, municipal revenues, which are directly dependent upon tax rates, have increased more than 50 percent. Nevertheless, throughout the period studied assessed values were substantially below market values for both land and buildings.

Thus, the recovery of improved property values to their approximate peaks of the mid-1920's was accompanied by relatively small changes in land values. Building-cost data show that the estimated replacement cost of improvements was maintained during this 24-year period, due to a more-rapid rise in building cost than in accumulated physical depreciation. This may be one reason for the maintenance of downtown property values, since old buildings might represent bargains for investors confronted with the alternative of building new suburban structures. Other external influences affecting value trends involve investor's expectations, including capital-gains taxes and depreciation rates.

The trend between 1925 and 1950 indicates that a 50-percent to 100-percent increase in gross incomes was not uncommon in downtown San Francisco. Coupled with this, however, was the doubling of operating expenses for most of the properties, with the result that net incomes varied over the diverse period of depression and war when all business was irregular. The growing importance of local property taxes as an expense factor was conspicuous, often equalling net incomes in later years. It is significant that retail establishments accounted for all of the properties which, in 1950, had not reascended to their net-income peaks of 1925; most office-building earnings have since risen to a comparable or higher crest.

While based upon scantier data, the pattern of income performance in Oakland appears to be a little more favorable than that observed for San Francisco properties. The decline in gross- and net-income multipliers (of sale prices) for Oakland has been unmistakable since the 1920's, reemphasizing the greater caution on the part of today's real-estate investors and earlier heights of speculation in the East Bay area. The accompaniment of substantial gross increases by declines in net earnings again reflects rising expenses, mainly taxes—though business property taxes are noticeably lower in Oakland.

Thus, while incomes have increased for many properties above the 1920 level, sales prices frequently reached only these levels. However, incomes have not been uniform, due to the different leasing policies whereby the fixed-fee terms established in the 1920's frequently were renegotiated to a percentage basis. Sales prices, on the other hand, represent the capitalized values of estimated future returns and, therefore, reflect buyers' anticipations and capitalization rates. As in the case of selling prices, the income experience of the downtown core has been better than that on the fringes.

Some of Wendt's significant interpretations and implications of these findings are:

The improvement of transportation and parking facilities in the vicinity of Union Square since 1937 has undoubtedly contributed to the strength noted in property values in downtown San Francisco. . . .

Assessed values can provide little more than the broadest indication of property value changes over long periods . . . because of wide variations in assessment practices. Assessed values in San Francisco remained stable over the period from 1925 to 1950, a period in which market sales prices fluctuated widely. . . .

One might well ask whether changes in selling prices of downtown real estate over the past quarter century are an accurate reflection of value trends, in view of the depreciation of the dollar. Dorau gave forceful expression to this point in his article in *The Appraisal Journal* for January, 1949: "This price appreciation reflecting merely dollar depreciation is no evidence of the strength of a location or an upward trend". . . . Investors are more interested in knowing whether investments in downtown property have kept pace with . . . alternative investment outlets than in knowing the present value of property investment calculated in dollars of constant purchasing power. . . .

It is difficult to draw conclusions regarding the effects of urban decentralization upon central city property values. . . . Transportation and parking developments may combine with other changes in housing, shopping, and employment patterns to alter the locational decisions of various businesses. Many such changes may occur in an atmosphere of rapid metropolitan growth with no apparently adverse shifts in property values. The loss of some firms is more than offset by gains in others. During the past century this constant movement outward, accompanied by expansion and growth within, has resulted in broad advances in central city values in the San Francisco Bay Area. . . . The data . . . indicate that business expansions and new business formations are the principal factors influencing office building occupancy in San Francisco . . . and . . . that there has probably been a well-sustained demand at rising rental levels for most key retail locations [in both cities]. Findings in this study suggest that there is a considerable gap between the simple proposition that "decentralization hurts downtown values" and the analysis of the effects of complex outward movements and inward expansions experienced by our central cities. . . .

Rising land values, such as were noted in San Francisco and Oakland for the period from 1870 to 1927, reflect the locational advantage of central city property. These advantages developed rapidly while population growth in the metropolitan area was paralleled by improved means of transportation to and from downtown Oakland and San Francisco.

The progressive shift since the 1920's from the reliance upon mass transit to automotive transportation has decreased

the relative advantage of central locations for many types of businesses, particularly those catering to the needs of shoppers located at a considerable distance from central cities. In spite of these fundamental shifts, gross and net incomes from central city properties and property values have continued to rise during the past decade . . . influenced by rising population, employment, and incomes. . . .

Cities have a direct and vital concern in the trend in real estate values and income from central city property, since these are key influences upon municipal income. The implications of this study may be that Oakland and San Francisco can no longer rely upon a constant rising business property tax base. The cities are faced with a dilemma, since most plans for improving transportation and parking facilities and otherwise modernizing downtown areas require large public investment. This would probably result in further increases in taxes and possibly in declines in values. Nevertheless, the welfare of the central areas of Oakland and San Francisco appears to be closely tied in with improved mass transit facilities, since there is serious question whether auto transportation and parking facilities in central cities will ever equal the attractions to motorists of outlying shopping centers. Further, there is also a question whether extensive development of parking facilities in the heart of downtown areas contributed to the attractiveness of the central city for shoppers. . . .

Seattle (Assessed Valuations). The assessed valuation of land and improvements within the entire city of Seattle dropped rapidly during the depression and recovered gradually until the end of World War II. Sharp postwar increases are due largely to new construction and reassessments. Assessed property values in the business section of a long-established suburban commercial center (the university district) experienced similar, though slightly more erratic, fluctuations and are now nearly 65 percent higher than in 1939, most of the increase occurring since 1946. Meanwhile, central-business-district assessments fell harder and are rising much more slowly, so that in 1952 they were less than 14 percent above their 1939 level. This is even lower than the 1929 assessment. Thus the proportion of total assessed values located in the central business district declined from 29 percent in 1929 to 16 percent in 1953, being nearly 25 percent in 1939. Even the retail core of the downtown area is not up to the 1929 level of assessment; though it has risen almost 22 percent above the 1939 figure, it still has increased less than a third as much as the entire city over the past 14 years. A major part of this increase is due to new construction and expansion of retail structures, rather than office buildings. Important factors in the relatively greater increase in assessed property values outside of the downtown area have been the large amount of residential (as well as commercial) construction in the outlying areas and the steady decline in importance of secondary retail areas on the fringe of the central district. Also, the feeling that suburban commercial properties had been undervalued has promoted a changed assessment policy

since the war, which has tended to increase the relative value of these properties.

Comparison of San Francisco-Oakland and Seattle. It is interesting to note at this point certain similarities between the findings of the study in San Francisco and Oakland of sales price and income and the Seattle study of assessed valuations. There exists a marked similarity in the historical patterns of depression decrease, gradual rise till 1946, and rapid postwar increase. Some favorable comparison may also be made between assessed values of the central business district of Seattle or its downtown core and the actual prices and incomes of improved property in downtown San Francisco and Oakland; each has approximately ascended to the 1929 peak. In addition, the total assessed-property valuation of each city has increased above the peaks of the 1920's.

Although only one of Seattle's suburban shopping districts was considered, corresponding leaps in the valuation of similar and (more important) newer outlying areas have doubtless contributed in large measure to the diminishing position of downtown. If the apparent similarity between the two studies is real, then increased values among outlying centers and smaller cities in the San Francisco Bay area may have influenced a relative decline in the central city.

Parking, Traffic, and Mass Transit

Columbus. Since the turn of the century, Columbus has been characterized by the usual pattern of business concentration strengthened by mass transit radiating from the central business district. As elsewhere, this has been followed by greater use of the automobile, an increasing and expanding population, and resulting development of secondary, string-type shopping areas. Passenger-car registration has expanded about 12 percent in the Columbus area. The city population increased from 309,087 to 375,901 between 1940 and 1950. In 1951 some 30,000 desired to park downtown between 8 A.M. and 5 P.M. in the 10,424 spaces legally available for only 1-hour periods. The result was that only 25,000 could park in the central area. The average length of parking was almost 3 hours, while many others parked illegally in prohibited zones. The most-serious deficiency is indicated by the 15,246 cars destined to the concentrated retail area where less than half could find legal spaces.

Seattle. Vehicle-registration increases since 1945 have averaged better than 6 percent annually in the City of Seattle and more than 8 percent in King County. The population between 1940 and 1950 rose from 368,302 to 467,591. During this period the north-south

traffic into the central business district of this hour-glass-shaped city likewise increased about 30 percent. Subsequent to the wartime peak in 1945 there has been a rapid decrease in passengers carried by the Seattle transit system. As indicated in Figure 1, the annual rides per capita currently are only about half those of the 1945 peak. By 1947 mass transit accounted for only 43 percent of the shopping trips to the central business district. These trends create great pressure on parking facilities in the city. But between 1947 and 1952, net parking spaces in the central business district have decreased nearly 13 percent (2,016 spaces) despite additional garage facilities. In Figure 2 this decline is related to increased registration. This loss has occurred principally at the curb and in the core of the business area, where a shortage of approximately 2,400 spaces already was existing in 1947. This deficiency was emphasized during peak hours when demand was more than three times the supply. Considering turnover and the preponderance of space lost at the curb, this decrease in reality represents a loss in supply of over 11,400 parkings. It is interesting to note that, at that time, only 18 percent of the parkers in the downtown business area were there to shop, while 66 percent had work or business purposes. The capacity occupancy of lots while garages are only three-fourths filled may be an example of a more-universal tendency, indicating unwillingness to pay the higher rates prevailing at garage facilities.

Even in the university district, an older, ribbon-type development, there are parking problems irritated by the university students and residents of the area, who preempt many spaces normally available for shoppers. Still, 65 percent of those shopping in this district drive their car. They occupy 60 to 75 percent of the metered curb spaces. However, Shoppers' Lot, located some 1½ blocks away and requiring ticket validation by local merchants, remains nearly 50 percent vacant. But existing structures and high land values make provision of new, well-located, off-street facilities unlikely in these older areas. They can probably never compete with the parking provided by newer suburban centers, such as Northgate, where convenient and attractive parking fields are provided in the ratio of nearly three to one, compared with retail floor space.

Detroit. Between 1936 and 1944 automobile registration in Detroit increased by almost 8 percent, while off-street parking spaces decreased more than 22 percent (see Fig. 2). Furthermore, the existing facilities are generally unplanned, unstable, and often confined to private use. The shortage of spaces has been estimated at 2,900 in 1944, 6,900 in 1948, and 9,000 in

1952. Also, between 1940 and 1950, despite tremendous population increases, registrations were up to a point where continued advances in ownership had been recorded in the county and in outlying cities; even in Detroit the ratio of persons to vehicles had not declined.

Detroit's transit-riding experience is similar to Seattle's in that there has been a rapid decrease since 1945 (see Fig. 1). In 1945 the figure was about twice that of 1939, but in 1951 was only 11 percent over the latter year. Meanwhile, annual revenue rides per capita in 1950 were little more than half of 1945 and

The latter deficiency is accentuated by the marked residential decentralization not only beyond the city limits but to more distant tracts within the city as well. While the population of the central core decreased 5 percent during the 1940-1950 decade, the balance of the city increased almost 52 percent, netting a total city gain of 14 percent. A growth of more than 50 percent was enjoyed by the suburbs.

San Francisco and Oakland. The number of curb parking spaces had dwindled steadily in the San Francisco central business district: from 2,000 in 1927 to

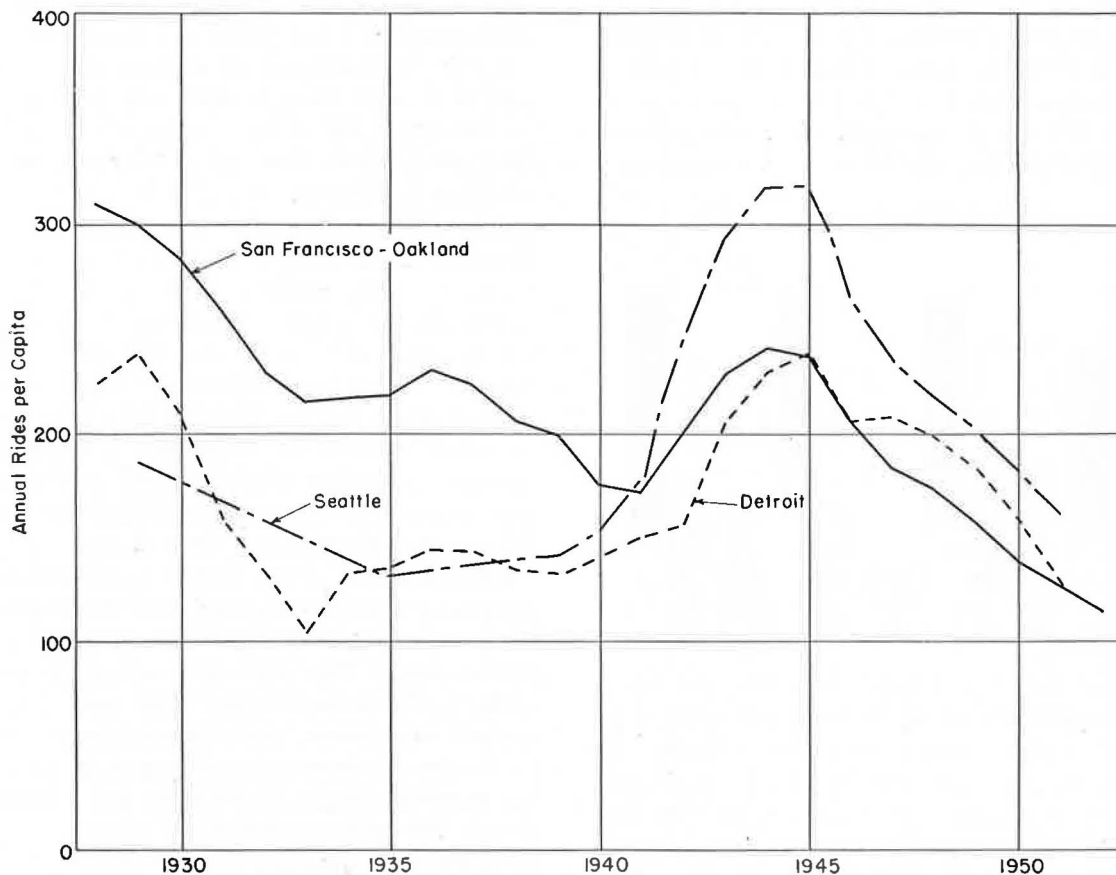


Figure 1. Annual mass-transit rides per capita.

had already dropped below the 1939-1940 levels, though still above the 1933 low. It is noteworthy that the 1929 and 1945 peaks were identical, the pattern paralleling the curve of national economic activity during the 1928-1946 period. However, since 1947 the trend boldly contrasts that of most other industries, particularly passenger-car output and travel. As elsewhere, this anomalous trend has been provoked by increasing costs of operation and resulting rate increases, labor strikes, and the lack of rapid-transit service to the suburban areas.

1,400 in 1937 to but 300 legal spaces by 1948. Meantime, the number of off-street spaces did not offset these decreases. Lot and garage spaces actually dropped nearly 20 percent between 1927 and 1937, though increasing slightly above the earlier figure by 1948 (influenced largely by the Union Square facility). Again, the loss of curb spaces is particularly significant, due to their relatively higher rate of turnover. Further restrictions are evidenced by the rising cost of parking, including the metering of curb spaces.

In Oakland there was relatively no change in the

number of parking spaces between 1946 and 1949. There are actually more spaces than in San Francisco, both in absolute numbers and relative to the downtown vehicle accumulations, thus affording a much-better balance between supply and demand. In addition, the off-street turnover is higher, probably reflecting greater use of the merchant-sponsored lots. But as shown in Figure 2, the ratio of registrations to spaces has declined in both areas.

In spite of the steady decreases in automobile terminal facilities in San Francisco, local mass-transit passenger travel has fallen below 1941 and well under the 1933 slump. Between 1947 and 1950 the number of motor-bus and trackless-trolley riders rose slightly—but at the expense of heavier losses in streetcar travel. Decreases in the average speeds of transit vehicles have accompanied, if not prompted, the drop in patronage.

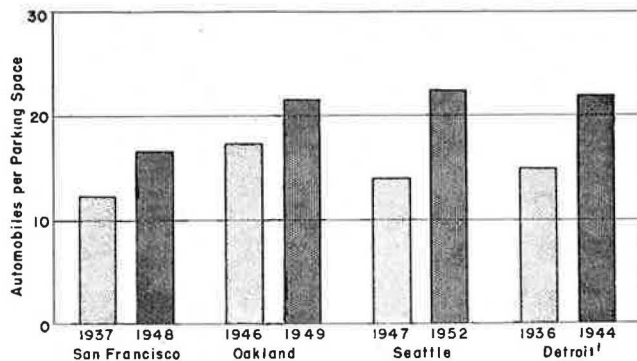


Figure 2. Trends in ratio of automobiles to downtown parking spaces. Number of automobiles is based on county registrations. Only off-street spaces are included for Detroit.

While Oakland's local transit traffic has not fallen to that of either the 1940 low or the dip of 1933, it is, nevertheless, rapidly approaching these figures. In addition, trans-bay mass-transit travel has experienced sharp declines in acquiescence to the automobile. The area's per-capita use of public-transportation facilities is among the lowest to be found in the country. The now-familiar spiral of fewer passengers, increased fares, and reduced service is evident. Figure 1 reveals the combined transit-riding habit for both San Francisco and Oakland.

It is interesting to note that the only service maintaining passenger volumes is the peninsula's Southern Pacific commuter line. These trains have maintained average speeds and qualify as rapid-transit facilities.

Retail Trends

Columbus. Despite increased automobile usage and a slight relative decline in importance, Columbus' central city remained overwhelmingly dominant.

Between 1940 and 1950 the proportion of the entire city's shopping-goods trade handled by the central business district dropped from 94 percent to a little less than 90 percent.

It is important to note that the 4-percent relative increase enjoyed by secondary shopping centers was entirely at the expense of the northern section of downtown. The stronger "downtown-south" experienced an increase nearly as great as the outlying districts. However, the modern type of suburban shopping center did not enter the scene until 1949, and the increases indicated in these areas were due largely to improved economic conditions and population expansion.

Detroit. The patterns of number of establishments and retail sales between 1939 and 1948 are revealed for the total City of Detroit, its central business district, the balance of the city, and an aggregate of five neighboring corporate areas. Throughout the city the number of stores is down 8 percent, but this is due to decreases in the food (-24 percent), gasoline-service-station (-26 percent), and general-merchandise (-16 percent) groups. Relatively large increases in the furniture and appliance (+68 percent) and automobile (+40 percent) groups and a 2-percent gain in apparel stores has enabled the GAF group* to show an actual increase of 13 percent. Total sales in the city have more than tripled with all categories up more than double, automotive up over four times, and GAF 207 percent more than the 1939 sales.

Establishments in the central business district have dropped a sixth in number, with every group down except furniture and appliances, which registered a 2-percent gain. The standout loser was the automotive group (-70 percent) while GAF stores dropped 19 percent. Meanwhile, every group except automotive (-55 percent) showed a gain in sales, the total increasing nearly 2½ times. The lumber and hardware surge of over 700 percent (with fewer stores) is noteworthy. Average GAF sales are up 147 percent, despite the loss of establishments.

The number of stores in the balance of the city, meanwhile, was down less than 8 percent, and though the general-merchandise group had dropped 16 percent, GAF stores increased by 20 percent. Furniture and appliances and automotive rose 75 percent and 42 percent respectively, but food stores lost 24 percent, exceeding even their 11-percent shrinkage in the downtown area. Total sales, on the other hand, were more than three times greater in 1948, furniture and appliances leading the way; GAF sales rose 272 percent.

In adjacent towns the number of establishments

* The combined general merchandise, apparel, and furniture-furnishings-appliance categories.

has grown 16 percent, furniture-and-appliance stores again showing the major gain. The GAF group was up 62 percent and retail food outlets were down 11 percent, though representing about a third of the total. Total sales jumped four times, all groups accounting for three times the earlier figure. The furniture-and-appliance group was again on top of the list, though GAF sales rose 404 percent.*

It is evident that, although both the central business district and the balance of Detroit had fewer stores in 1948 than in 1939, the central business district lost a greater percentage. The suburban communities actually gained by 16 percent. With regard to the number of GAF retail establishments, the balance of the city and the surrounding towns were increasing by 20 percent and 62 percent respectively while downtown was losing 19 percent. Meanwhile, total sales were going up in the downtown area, the rest of Detroit, and the contiguous cities by 145 percent, 237 percent, and 304 percent, in that order; simultaneous GAF increases were 147 percent, 272 percent, and 404 percent in the same sequence. It is evident that the central business district is not increasing its retail sales in the same degree as are the suburban areas.

This latter observation is confirmed by a comparison of the proportion of total sales by the central business district stores and that of the remainder of the city. Between 1939 and 1948, the total sales attributable to downtown decreased from 26.1 percent to 20.4 percent of the total sales for the entire city. The automotive group has been virtually eliminated from the central business district, having dropped from 1.5 percent to but 0.2 percent of the total city's sales. On the other hand, the food and lumber-and-hardware groups currently reveal a stronger position downtown. The central business district's proportion of the important GAF group has fallen from 63.6 percent to 53.6 percent of the whole city, but this loss has occurred mainly in furniture and appliances, which fell to 17.4 percent from its previous 37.3 percent. In other words, while the GAF sales in the central business district were formerly 75 percent higher than those of the balance of the city, they are now only 16 percent greater. But the continued downtown dominance is noted when the furniture-and-appliance group is excluded, leaving the general-merchandise and apparel groups, which, though more than double the rest of the city at the earlier date, were still half again as large in 1948.

* In order to place these and subsequent figures in nation-wide perspective, it should be noted that the volume of trade in retail stores throughout the United States in 1948 was more than three times (210 percent) the 1939 volume. Adjusting for the difference in retail prices between these years, the physical volume of goods sold through retail outlets in 1948 had increased 62 percent over the 1939 figures. The number of stores was about the same.

The trend in downtown's position relative to the metropolitan area appears in Figure 3.

Seattle. In 1952 a consumer analysis by a Seattle newspaper indicated that 45 percent of the local households traded regularly downtown, with the remainder split among numerous outlying centers. There was noticeable overlapping of the smaller centers by the larger ones having a greater variety of stores.

When the Federal Reserve index of department stores (almost all in the central city) is compared with Seattle's total retail sales, similar trends are noted until the early 1940's. But by 1948, the department-store group exceeded its 1929 level by 176 percent, while the total had risen only 143 percent. This would

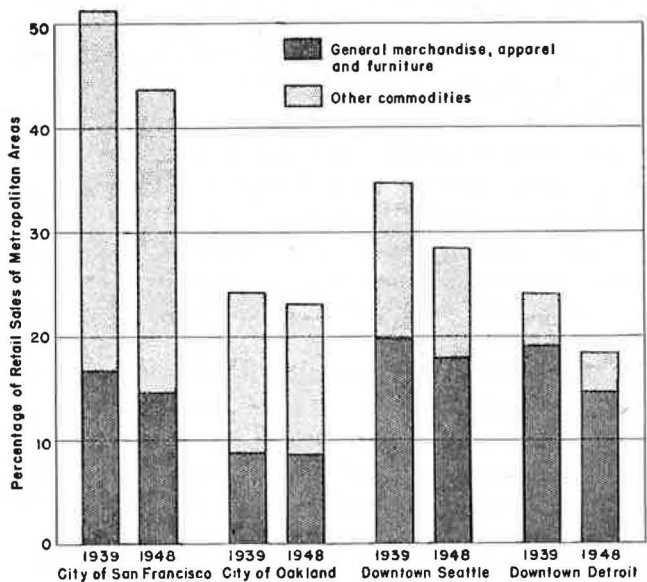


Figure 3. Trend in downtown retail sales in metropolitan areas. For San Francisco and Oakland the entire city is compared with the metropolitan area.

seem to indicate that, at least in regard to shopping goods, which are the predominant lines carried by general-merchandise stores, large selection of merchandise is preëminent, and the downtown area is not declining relative to the suburbs. It will be seen later that this is confirmed by the retail-sales figure for the general-merchandise and apparel groups.

By looking first at the city's construction trends, however, a relative decrease is observed in office building in the central business district compared with the entire city. Retail-store construction, on the other hand, is increasing in the central area, where recently almost half of such building took place. This is accounted for mainly by modernization and expansion of downtown department stores and indicates confi-

dence, at least in this category. But it should be recognized that the suburbs beyond the corporate limits are not represented in these construction figures, though the value of recently erected retail stores in these areas exceeds that of the city, excluding the central business district.

Measurements of the front-footage of retail establishments reveal an increase in 1930 over 1909 of 245 percent in downtown and 752 percent in suburban areas. In other words, the central business district front-footage dropped from 59 percent to 37 percent of the city's total. It should be noted, however, that multiple-level floor space, predominant in the central district, is not represented in these figures. Another interesting point is the genuine loss in convenience-goods and furniture stores, while the other shopping-goods stores, not requiring as much display space, remain predominantly downtown.

Total retail sales for the county are similar to the Federal Reserve indices (for department stores only) in the downtown area, the former having risen 171 percent over the 1929 level by 1940. Remembering that the city figure had increased by a lesser percentage, its relative proportion of the county total is found to have decreased steadily between 1929 and 1948 from 91 percent to 81 percent. But during a similar period (1930-1950) the city dropped from 79 percent of the county's total population to 63 percent, so that retail sales per capita for the city, while declining somewhat, are still more than double those of the balance of the county. Expressed in other terms, the considerable retail purchases by residents of the county outside of the city are indicated by this fact: while the city's relative proportion of the total county population dropped 20 percent, its proportion of sales fell only 10 percent. Of course, the ratio of total county sales accounted for by the city remains higher than its ratio of the population. By merchandise categories, the city's greatest strength is found in the comparison-shopping or GAF lines (86 to 95 percent) and least in the convenience-goods sales (69 to 71 percent). Rather than selection, nearness to home and cheap and adequate storage and parking areas appear to be essential factors for the latter.

Between 1939 and 1948 the city population increased 25 percent. During this period the total number of stores decreased 12 percent in the entire city and 24 percent in the central business district. The greatest declines were in the food and other convenience-goods groups, in each case more so for the central area than the city as a whole. The furniture-furnishings-appliance and automotive groups were up about a third in the

city but down a similar amount downtown. Though general-merchandise stores increased nearly in proportion with the population, thereby bringing the GAF total up 9 percent, substantial losses in the more numerous apparel stores brought the GAF groups down 22 percent in the central business district. In proportions of the city total, the central business district dropped from 27 percent of the total retail establishments in 1939 to 23 percent in 1948, with the greatest proportionate losses in the furniture-furnishings-appliance (39 percent to 20 percent) and automotive groups (5 percent to 2 percent); GAF stores fell from 53 percent of the total to 38 percent.

The sales pattern between these years of constantly decreasing purchasing power of the dollar was one of many-fold increases. Total city sales were up 195 percent, with the furniture and hardware groups leading the way; GAF sales jumped 223 percent. In the central business district, sales rose 160 percent, led by the hardware and general merchandise groups, which were up more than 220 percent. Furniture-appliance and automotive sales showed the least rises (around 70 percent), but GAF still climbed 185 percent. As a percentage of the total-city sales, then, downtown fell from 40 percent to 35 percent, with losses in virtually all categories. Mostly, however, they were convenience-goods groups and furniture and appliances (65 percent to 32 percent). The combined GAF groups' downtown share was down from 69 percent to 63 percent, but if the furniture-group sales are excluded, there is practically no change. However, it may be recalled that, in the Detroit central business district, even these groups important in soft-goods lines (general merchandise and apparel) fell from 68 percent of that city's total to 61 percent.

Noteworthy is one further comparison: the central district's proportion of the entire county's sales. This percentage declined from 35 percent in 1939 to 28 percent in 1948. As in the case above, the central business district's relative status fell in nearly all categories but, in this instance, significantly more so in the convenience-item groups (see Fig. 3). As mentioned earlier, this would appear to be indicative of the importance of shopping for these goods near home, so far as the increasing suburban population is concerned.

In the meantime, the number of stores in the neighborhood-type university district, though down 5 percent in the absolute, registered an increase from 3.2 percent to 3.5 percent of the city's total. Gains were noted in several groups, however, with the largest increases among the apparel and furniture-furnishings-appliance stores. Regarding the important sales pat-

tern, these latter groups, as well as the automotive (though lower in number of establishments), showed five- and six-fold advances. In these same groups the districts' relative proportion of the total city sales has more than doubled. The automotive sales here actually were larger than those in the central business district in 1948. Total sales are up 258 percent, meaning an overall increase of from 3.0 percent to 3.7 percent of the city's total. It is well to note the area's importance as a shopping-goods center, as revealed by the apparel and furniture-appliance figures, even though the lack of a large department store has caused general-merchandise sales to be of least consequence here from a city-wide viewpoint. Also, though undetermined at this time, speculation may be warranted as to the proportion of trade recently drawn from the downtown area (as well as from such older, outlying centers) as population increases rapidly expand the suburban markets.

San Francisco and Oakland. It is necessary to note at the outset that the study of economic activities in the San Francisco Bay area emphasizes the inter-county and intercity aspects of centralization, decentralization, and dispersion. In the case of this large and complex area, however, there is a marked similarity between comparing, say, San Francisco with the entire bay area and the central business district of a smaller city with its metropolitan area.

Before examining the changes in the geographic distribution of retail trade, it will be helpful to note areal population trends. The population in the six-county metropolitan area has increased over four times that of 1900. The larger cities have accounted for the bulk of the total net gain over the entire period (and to a lesser degree between 1940 and 1950). Moreover, these additions have occurred in both old and new outlying sections of the key cities in recent years. But analysis of the percentage distribution of population indicates movement away principally from San Francisco. In terms of county distribution, Alameda has had a small decline since 1930, after increasing significantly in relative importance between 1900 and the later year. The other counties in the area are experiencing relative gains, most sharply in the larger ones.

Half of the important cities have grown relatively from 1900 to 1950, mostly in the under-50,000 class. The medium-sized cities show mixed trends, and San Francisco has consistently declined in relative importance. The largest gains in unincorporated areas are revealed in those townships surrounding the larger incorporated cities. San Francisco and Oakland com-

bined have fallen between 1930 and 1950 from 68 percent of the area's total to 52 percent.

Turning now to economic activities, the trends are in the same direction as for population but to a notably smaller degree. In terms of value added by manufacturers, the big cities continue to show the greatest absolute gains, though the total is more dispersed. Between 1929 and 1948 the cities of San Francisco and Oakland combined dropped from 67 percent of the area total to 58 percent. Sales on the wholesale market likewise rose mainly in the larger cities, but relatively, San Francisco dropped from 90 percent to 80 percent since 1929. Although Oakland and Alameda County were gaining relative to the whole area with regard to both absolute sales and number of wholesale establishments, the combined San Francisco and Oakland sales importance dropped from 97 percent to 94 percent over the period. It can be seen, nevertheless, that these two cities continue to dominate the wholesale trade activity of the metropolitan area.

The retail-business picture is similar, though somewhat more severe. San Francisco County suffered the only sharp decline in relative importance of retail sales between 1929 and 1948. Alameda County shows the greatest gains, but Oakland and Berkeley have lost some ground since 1935. San Francisco and Oakland together accounted for 84 percent of the retail sales in 1929 and 67 percent in 1948. However, these two cities realized 63 percent of the area's absolute increases since 1939. Meanwhile, department-store sales in the area had a better showing than total retail sales. Between 1939 and 1948, San Francisco's share of the area's total sales dropped from 51 percent to 44 percent (see Fig. 3), with decreases in all groups, but general merchandise fell only from 51 percent to 47 percent. In Oakland the total decline was only one percent (from 24 to 23) in total sales, while the general-merchandise group rose from 35 percent to 36 percent. Of course, all the smaller cities were up in all categories.

In summary, it is well to note that, while some decentralization has definitely taken place, the larger cities have contributed the greatest absolute sales increases. More important, perhaps, is the fact that they have maintained the retail-sales-to-population ratio. And in terms of value added by manufacturers and wholesale-trade sales, they have actually increased their relative standing compared with population. While the proportion of business accounted for by these cities has become smaller, an even-greater percentage of the population has dispersed. Nevertheless the urban centers also provide a predominant portion of the absolute increases in population as well.

It is desirable to mention some of the factors in addition to transportation, congestion, and parking requirements, which Revzan considers to be influencing this physical realignment or realization of expanding spatial requirements evidenced above. They are: changing functions of a metropolitan area, technological factors, population residence desires, management location practices, marketing changes, growth factors, changes in economic and governmental activities, and the effect of World War II. Though hypothesizing "that the broadening base of urban economic activity, on the one hand, and of population on the other, are the underlying causes of shifts in location of metropolitan area economic activities and thus in the changing importance of cities in the metropolitan area," Revzan nevertheless concludes that "a downtown area will suffer in attracting economic activities, especially retail trade, if there is a deterioration of urban transportation. . . . The avoidance of congestion, poor parking, inadequate mass-transit facilities, and high transportation costs have been instrumental, together with other factors, in spreading the geographic base of economic activities in the bay area."

Intercity Correlations. From a retail-sales standpoint, decreases in the relative position of the central business district, as compared with the entire city, become greater as the city size increases. This is exemplified by the 5-percent drop in Columbus (from 94 percent to 89 percent), Seattle's decline of 8.7 percent (69 percent to 63 percent), and the Detroit dip of nearly 16 percent (63.6 percent down to 53.6 percent) in the GAF-sales categories between 1939 and 1948. However, this trend was greatly influenced by downtown's tremendous relative losses in the furniture-furnishings-appliance group, which was cut in half in both Seattle and Detroit (from 65 percent to 32 percent and 37 percent to 17 percent, respectively). The central city's proportionate losses in general-merchandise and apparel sales were much less in these cities, Seattle actually increasing in general-merchandise lines.

To consider total sales, in which the central business district has a smaller relative share (than GAF), the decreases in downtown's proportion were somewhat greater, being 12.5 percent in Seattle (40 percent to 35 percent) and 22 percent for Detroit (26 percent to 20 percent). This is probably due largely to the predominance of retail shopping for convenience goods in the suburban areas, though the virtual extinguishment of the automotive category also has been noted in the business center.

This general trend is also reflected in the greater proportionate decrease in the position of Seattle's

central business district relative to the entire metropolitan area (King County). Here the drop is from 35 percent to 28 percent, or 20 percent. Further support of the trend is evidenced by retail-sales patterns in the selected towns around Detroit, which displayed a 1948-GAF-sales total more than five times that of 1939—led as usual by the furniture-and-appliance group.

But in absolute terms, Seattle's downtown accounted for over 60 percent of the GAF increase experienced by the whole city in 1948. Even in Detroit—where the central-business-district GAF sales rose only 147 percent compared to the 272-percent increase in the balance of the city—the central district accounted for nearly 49 percent of the total gain. In each case continued increases are noted in the downtown area, which remains dominant in GAF sales: 89 percent in Columbus, 63 percent in Seattle, and about 54 percent in Detroit. The degree of selection desirable in these categories is stressed, whereas the convenience-goods and furniture-group increases in the suburbs reflect less selectivity, more and cheaper display space, and the growth in importance of hard goods and brand names.

Another comparison is between total sales and population in Seattle proper versus the metropolitan area. Considerable retail purchases within the city by residents outside of the city are indicated by the fact that, while the city's ratio of population was decreasing 20 percent (from 79 percent to 63 percent), its sales ratio declined only 10 percent (91 percent to 81 percent). The greatest strength of retail sales downtown is in the GAF rather than the convenience-goods groups. Nevertheless, it is found that retail sales per capita in the balance of the county are increasing at a greater rate than in the city, so that between 1939 and 1948 this ratio has fallen (relatively) in the city from 2.6 to 2.2 times that for the remainder of the county.

Other Seattle indications (retail front-footage, construction values, consumer analyses, and number of stores) reveal a similar trend toward decreasing import of the central business district. But still another source points to the continued firm position of general-merchandise and apparel sales in downtown Seattle. That is the Federal Reserve index of department stores, which indicates that these predominantly centralized establishments have increased their sales (relative to earlier years) more than total sales have risen in the city as a whole.

While on a somewhat different basis, the relationships between San Francisco and Oakland and the entire bay area are not unlike those existing between

the central business districts and the entirety of the other cities studied. Though Oakland's proportion of the area's GAF sales fell but one percent (from 30.3 percent to 30.0 percent), between 1939 and 1948, the San Francisco portion dropped over 17 percent (from 57.4 percent to 47.6 percent). Relative losses in the furniture-and-appliance group were less than 4 percent in Oakland and almost 18 percent in San Francisco. The general-merchandise and apparel groups were firmer, Oakland actually increasing its share of general-merchandise sales from 35 to 37 percent of the area total, while San Francisco lost from 52 percent to 47 percent.

Inclusion of many suburban retail outlets in the entire-city analysis causes the decline in San Francisco's proportion of total retail sales to be slightly less severe than the relative GAF-sales slump. Oakland's share dropped only from 24.2 percent to 23.2 percent. The dominance of these two cities is indicated by their joint accountability for over 94 percent of the bay area's total GAF-sales increase between 1939 and 1948. Their continued per-capita performance relative to the remainder of the area is significant.

Attitudes

Michigan Retailers. This investigation of the less-extreme adjustments (not relocation), which merchants in smaller cities might make to relieve parking inadequacies, revealed few cooperative ventures. Those attempted were typically among proprietors of GAF stores. Though somewhat more extensive (than group actions), most individual adjustments were considered ineffective. These included provision of parking spaces for customers, mail and phone ordering, delivery service, and refunding of parking fees. Most group activity regarding night openings was directed toward customer service. Actually, competition between evening shoppers and theater goers made the parking situation more serious after dark. There was little cooperation toward encouraging mass-transit trips. The primary activity involved donations of time and money to parking studies, which usually suggested city-operated facilities and recommended further study.

In general, parking rates were believed to be high, more cheap spaces needed. But in citing high land values downtown and the resulting taxes, compared with the relative cost of public services in this area, the merchants displayed a growing popularity toward recourse to municipal assistance.

Department-Store Executives. Premised upon the likelihood of their importance due to the large financial investment involved, a careful appraisal was made of

the conditions which prompted retailers to establish branch stores. This was not a survey of consumers' choices but, rather, a measure of the influence of downtown parking conditions upon the decisions of department-store management.

Of the 36 stores reportedly operating branches, 86 percent were in the first two quintiles (grouped by decreasing population size)* and these same stores had 93 percent of the total existing branches. This confirms prior indications that the suburban-branch movement has been a predominantly large-city phenomenon and compares with the previously noted trend of increased decentralization of retail trade as city size increases. However, evidence of a growing, outward spread by stores in smaller cities is observed by the fact that the last three quintiles comprise 32 percent of the establishments planning to build branches, in contrast to the 14 percent which had already made the move. Also, 28 percent of the total planned branches are to be established by stores in these less-populous cities.

The weighted reasons for opening suburban branches were predominantly (69 percent) of an expansive nature: 27 percent were to reach areas of potential customers who were previously *not* purchasing most of their merchandise from the downtown store; 24 percent were due to growth in population of the area where the branch is located, public transportation to the main store from this area being inadequate; 18 percent were to expand the store's total operations, additions to the main store being too costly. Insufficient parking space at the downtown-store location was only the fourth choice (10 percent) of the total weighted causes.

The reasons are essentially proportional by size of city, but there is a slightly heavier weighting in the second quintile of the purpose "to regain customers who had always lived in the area of your suburban branch but who began to patronize other stores in this area." This does not concern people who moved into the suburbs, and it probably reflects earlier migration to the area by other stores or increased competition by modern local shops. This same cause was also disproportionately strong among the reasons for stores planning suburban branches. While expanding purposes remained paramount with these stores, regaining former customers even ranked ahead of the question directly concerning inadequate parking spaces downtown. There were no significant differences among department stores with branches, planning branches,

* The 245 samples consisted of department stores in each of the country's 75 largest cities. In 1950 the approximate urbanized-area population of the last city in each of the quintiles was as follows: 800,000; 450,000; 275,000; 200,000; and 165,000.

or without branches with regard to their current provision of downtown parking facilities.

It may be concluded then, that the primary consideration for establishment of suburban branches is the potential market rather than regaining lost customers—though the latter is important. The predominance of branches in the larger cities indicates the necessity for a relatively large market in outlying areas before the decision is made to establish them. This is in spite of the parking problem's apparent disregard of city size. In the light of prevailing population decentralization, the fourth-place rank of the influences of parking conditions could mean that the primary affect of increased automobile use is to allow suburban activity rather than to curtail business downtown. Particular emphasis on the defensive aspect (to regain lost customers) by downtown stores planning suburban branches may reflect the fear or actual presence of crippling competition. The pervading feeling among the larger merchants was that suburban markets have grown to a size where additional profit opportunities warrant the establishment of suburban branches. Parking conditions in the central business district apparently are not the major cause for this decentralization; it is expansiveness rather than a readjustment.

Seattle Shoppers. The portion of the Seattle study devoted to attitudes was a pilot effort. But some results may be generalized tentatively, if only for comparative purposes. The three major reasons for shopping in the central business district, in declining order of preference, were: (1) larger selection, (2) convenience to work, and (3) better public transportation. Similarly listed, the reasons for preferring suburban-center shopping were: (1) convenience to home, (2) larger selection than smaller neighborhood districts, and (3) less congestion and better parking facilities. The prime importance of selectivity available downtown correlates favorably with the retail-sales trends previously indicating continued strength of the central area in shopping goods, such as general merchandise and apparel. The appreciable influence of factors other than parking and traffic congestion is again noted for shopping for other than convenience items. With the exception of proximity to work as a major factor in downtown shopping, it will be seen that these causes for shopping preference closely follow those observed in Columbus as the result of a broader survey.

The principal items purchased at the suburban centers were convenience goods, such as groceries, bakery products, drugs and hardware. Next in volume were shopping trips for children's, women's and men's clothing, followed by banking. The principal goods

bought downtown were women's, men's, and children's apparel; men's and women's shoes; convenience goods; yardage; and services. Here, factually, are data pointing to the desire to shop for convenience items near home. But the further indication is that other business is generated due to proximity. For instance, apparel-goods shopping is secondary to convenience goods in the suburban center, while the reverse is true downtown. It may be inferred that in the outlying centers the shopping-goods stores are "turning the tables" and are, in effect, parasitic upon the shops selling everyday supplies—whereas in the central business district, these smaller stores have, for a long time, thrived upon the trade attracted by the larger retail establishments.

The modes of travel to the suburban centers were split, 58 percent by automobile and 18 percent by public transit, while a not-to-be-overlooked 24 percent walked. Meanwhile, 40 percent of the downtown trips were in cars, the better-than-average transit service to the particular area surveyed somewhat accounting for the 60 percent who used trolleys and busses. The downtown automobile drivers parked as follows: 61 percent at paid facilities, 8 percent at free lots, 20 percent at curb spaces, and the remaining 11 percent cruised or didn't remember what they did.

Observed were some interesting district preferences as they relate to family or personal characteristics of the shoppers. A higher percentage of families with children tend to prefer suburban areas than those without children or with two or more adults over 60 years of age. Also, suburban shopping centers appear more popular with middle-income groups. There existed a strong preference for downtown by low-income families (to whom lower prices, better credit, or delivery service may have been important) and a slight preference for downtown by those with high income (who may have been more interested in the large selection).

Columbus Shoppers. Valid and reliable scales were developed which enabled measurement of the relative importance of factors influencing a shopper to be downtown-prone or to prefer suburban centers. In other words, there was determined the discriminative power of several motivating factors, including parking conditions, to attract or repel shoppers to or from a particular retail area.

Analyses of those attitudes on a purely percentage basis reveals, on the whole, a significant majority favoring the central business district over suburban shopping centers. Downtown was preferred for the following reasons in descending degree of relative importance: (1) greater variety of merchandise; (2)

better place to meet friends for group shopping; (3) more bargain sales; (4) better place to eat lunch; (4) easier to combine different kinds of shopping and perform other errands; and (5) more-convenient public transportation. The suburban centers were preferred because: (1) less time to get there (closer to home); (2) less tiring; (3) less walking required; (4) open more convenient hours; and (5) lower cost of transportation. All but the last item are highly discriminatory, particularly the ability to combine several errands downtown, its better eating places, the predominance of bargain sales, the greater variety of selection there, and the suburban centers' more-convenient hours.

Of the attitudes relating to traffic and parking conditions, finding a place to park downtown was the most dissatisfying, followed by concern for the cost of parking and traffic difficulties. Regardless, the majority drive their cars to shop in the central business district rather than use mass transit. Even though almost 90 percent found parking at least fairly difficult, 80 percent considered traffic fairly difficult or worse, and 71 percent were concerned about the cost of parking, still less than 10 percent allowed these deterrents to prevent them constantly from driving downtown to shop. There are other indications, however, that satisfaction with downtown generally increases as parking and traffic conditions become better there.

In spite of the fact that a significant majority prefers downtown, nearly half of the shoppers dislike its crowds and hustle and bustle, and 63 percent claimed that they went there only when it was unavoidable. On the other hand, only 8 percent disagreed that downtown shopping was a pleasant change from the everyday routine, and a minority disliked the idea of dressing up to shop in the central district (though 87 percent of the respondents were women).

The ranking of advantages and disadvantages of shopping in the central district or at suburban centers is important. The greatest advantage for downtown was that this section had the largest selection of goods. Next was the ability to perform several errands there at one time. The advantages ranking third and fourth were cheaper prices and convenient public transportation. The disadvantage deemed of prime importance in downtown shopping was difficult parking. The next-most-important disadvantage was that it was too crowded there. The third- and fourth-most-important disadvantages were traffic congestion and travel distance.

The primary advantage of the suburban shopping center was its nearness to home. The second-most-important advantage was easy parking. More-conven-

ient hours and fewer crowds were the third and fourth choices. The number-one disadvantage for suburban shopping was the lack of a large selection; second was the fact that not all kinds of business were represented there; the third and fourth disadvantages were listed as high prices and poor public transportation.

It is noteworthy that those who found no advantages downtown exceeded those who felt there were no disadvantages there. Meanwhile, over three times as many declared the suburban shopping center to be without disadvantage than considered them without advantage. Also, nearly a quarter of the respondents failed to specify a second disadvantage, and half failed to indicate a third-choice suburban-shopping disadvantage. In most cases the advantages for one are the disadvantages for the other and vice-versa, with one notable exception: the advantage of nearness to place of residence, which ranks first for the suburban shopping center. This factor disrupts the pattern in an apparently significant manner, again reflecting the suburban center's dependence upon an expanding market rather than downtown's inability to satisfactorily handle the trade.

Many of the observed differences in shopping satisfaction may be related to personal or family characteristics. This is validated by the close correspondence between actual shopping behavior and the attitudes which are assumed to motivate these habits:

1. No significant differences are observed among grammar-school, highschool, and college-educated groups when correlating the whole applicable sample. But when area is held constant, downtown tends to attract the college group more strongly than the high-school group.

2. An analysis of the entire sample by family-income groups also presents an inconsistent pattern. Again, however, keeping area constant, downtown-shopping satisfaction was highest for the highest income group. This was noticed when two areas similar in all other respects were compared; the one which possessed the higher socio-economic status scored significantly higher in downtown attraction. Further confirmation of this trend is provided by the lack of statistical difference (relative to downtown versus suburban preference) between areas that were alike in all significant characteristics.

3. Although significant differences appeared in the degree of downtown satisfaction afforded persons residing in areas at varying distances, there were similar differences between areas equidistant from a modern suburban shopping center and from downtown. These facts led to the determination that income was the

essential factor, since people were segregated areally on that basis. Although somewhat paradoxical, further evidence indicated that location, travel time, distance, and cost of transportation are relatively unimportant factors—particularly when a Columbus shopper is in search of clothing. In other words, the suburban dweller—of characteristically higher socio-economic status—found greater satisfaction downtown and actually shopped there despite the greater travel distances. Distance apparently assumes greater importance as socio-economic status declines, since high downtown satisfaction is recorded among less-educated and lower-income groups, who usually live nearer the central district and relatively distant from suburban centers.

4. No analyses revealed significant relationships between age groups and downtown-shopping satisfaction.

5. All types of analysis supported the hypothesis that persons with an urban or a metropolitan background are more-strongly attracted (or less repelled) to downtown than those who have lived most of their lives in small towns and rural communities.

6. Women apparently experience greater shopping satisfaction downtown than men.

With this background, some of the probable causes for differences in shopping satisfaction were rationalized. A much-larger proportion of the high-income group than of the low- or medium-income groups, chose larger selection of goods as the most-important advantage for downtown. This is supported by the greater percentage of high-income shoppers, who indicated that lack of large selection was the greatest disadvantage of suburban shopping centers. These trends were confirmed by their consistency, even when other influencing factors were eliminated.

When asked to choose from a number of downtown disadvantages, the higher-income group indicated in greater proportion than did the lower that difficult parking is the most-important disadvantage for downtown shopping. This may be explained partially by the more-frequent use of automobiles by the former. However, when asked to react to parking, traffic, and parking costs, the middle-income group was found to be that most dissatisfied. Here the relative satisfaction by the high-income group may reflect their greater ability to pay for off-street parking. There was some indication of greater concern of parking difficulties and less concern of parking costs by men, while neither sex was more perturbed by traffic difficulties. With regard to all of these factors, those with urban backgrounds were less troubled than those who had a rural past.

"It would seem, therefore," Jonassen concludes. "that the answer to the question of why different cate-

gories of people evidence different degrees of shopping satisfaction for a given place is that a given physical fact or condition does not carry the same weight for persons having different environmental backgrounds."

Greater downtown-shopping satisfaction was found to exist among the higher-educational classes, higher-income groups, more-urbanized persons, and women. No age differences were noted. Distance or location was usually unimportant. But large selection of goods was most important downtown and most disadvantageous in suburban centers to the upper economic classes, whereas parking in the central business district was found to be the most-important disadvantage for more-educated men of rural background in the upper-income brackets. Since a majority was attracted downtown, however, the advantages must outweigh the disadvantages there. Thus, the high socio-economic group (with more income and education) is particularly attracted to downtown and the larger selection of goods, even though more concerned with traffic and parking conditions. Nonetheless, men and those of rural background are more attracted to suburban centers, partly due to their dissatisfaction with downtown parking. Improvement of this deterring factor should increase the number of persons who will shop downtown.

CURRENT AND FUTURE RESEARCH

Although the methods developed in this research project have been indispensable in arriving at the results thus far attained, further techniques must be explored and developed in order to illustrate and substantiate some of the tentative conclusions and to approach more nearly that measure of retail trade directly attributable to parking. However, consumer attitude studies of the Columbus type are being continued this year in Seattle and Houston so that speculation regarding the application of observed trends to other areas might be either confirmed or nullified.

The additional research is expected to involve case studies (of individual stores as well as entire cities) to determine and analyze the relative increases in new or generated business which are effected when new and adequate parking facilities are provided. Other studies will be made of the changing pattern of trips to the central business district and to suburban shopping centers by distance and mode of travel. The results of these several researches will be incorporated with the current findings to comprise an integrated report of the overall project. This, it is hoped, will answer many queries regarding parking and trade and prompt judicious action.

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Contents

PREFACE.....	vii
FOREWORD.....	ix
PART 1: ATTITUDES TOWARD PARKING AND RELATED CONDITIONS IN CO- LUMBUS.....	1
C. T. JONASSEN	
PART 2: ECONOMIC RELATIONSHIPS OF PARKING TO BUSINESS IN SEATTLE METROPOLITAN AREA.....	51
LOUIS C. WAGNER	
PART 3: RELATIONSHIPS BETWEEN DOWNTOWN AUTOMOBILE-PARKING CONDITIONS AND RETAIL-BUSINESS DECENTRALIZATION.....	91
WILLIAM J. WATKINS	
PART 4: CENTRAL CITY PROPERTY VALUES IN SAN FRANCISCO AND OAK- LAND.....	115
PAUL F. WENDT	
PART 5: TRENDS IN ECONOMIC ACTIVITY AND TRANSPORTATION IN SAN FRANCISCO BAY AREA.....	159
DAVID A. REVZAN	