not be any limitations to the questionnaire and personal investigation methods, but where there are limitations, they are in satisfying completely the second portion of our definition. The greatest thing that can be said about a market analysis is that it gives you the answer, that it forces upon you irresistibly the action which will bring about increased sales. That can be done absolutely through our third method and that is, through the use of carefully chosen statistics.

In order to understand this method, we will have to reason it out from an altogether different angle. Let us get a mutual understanding of what we mean by "the market." When the term is mentioned we immediately think of the entire United States. Instead of doing that in this instance, let us think of one unit of territory, knowing that what we may learn about it will serve us in learning about the whole country.

In this territory you have a salesman. In this territory you have prospective buyers. The prospects—good, bad and indifferent; good pay and poor pay; big buyers and small buyers; slow and fast; intelligent and seemingly non-intelligent—constitute your market. Here they are, a great assembly of conundrums—the "will-buys" and the "won't-buys"; the progressive and the reactionary; the conservatives and the reservatives.

Facing this regiment of unbelievers in this unit of territory is a salesman, the average salesman—sometimes up, sometimes down; sometimes enthusiastic, sometimes pepless; a man today, a child tomorrow; energetic this morning, dejected this afternoon; working hard this week, taking things easy next. Consistency cannot be attributed to him.

The point I want to make is this: there are two sides to your market problem—the prospect's side and the salesman's side—and you must study both to make a true market analysis. Suppose you were going to plow a field, would you say, after noting the number of acres and examining the soil, that you could plow the field in eight hours? No, you'd take into consideration the kind of motive power you had available. If you had a Fordson tractor you would make one estimate; if you had horses, you'd specify another amount of time. *Your* market varies with the power of *your* selling structure.

This being the case, let us think a little about your salesman. What are the significant things that he is doing? From his activities what can you deduce about your market?

We can uncover many fundamental facts about a business by keeping a few essential records, such as:

Sales by salesmen
Sales by counties, or cities
Sales by styles, or classes of merchandise
Sales by lines of business sold, or kinds or classifications of buyers.

These are what you need most. Each one will give you the status of a major activity of your business. The scope of these may be amplified, for instance—sales by salesmen may be extended to show sales by styles by salesmen, or sales by lines of business by salesmen. Showing not only what a man sells, but what classes of buyers he is selling to and which of your products he is selling to these buyers. Sales by lines of business may be extended to show sales by styles by lines of business which will give you the kinds of products each type of buyer you have buys.

These records are to the sales department what production charts and figures are to the factory. Each salesman is a part of the machinery which is operating to produce sales. He should be watched with the same degree of watchfulness that the factory superintendent gives to a piece of productive machinery.

The efficiency of all your salesmen is of great importance to you. You may think that a salesman is worth what he brings in in orders. This is true of a particular salesman; but, when you have a number of men, you must have some sense of what the average man is able to do.

You have good salesmen and you have poor salesmen. You wish, together with all other manufacturers, for more super-salesmen. More of them would, of course, increase your business, but the competition for good salesmen is keen and the supply none too great. It becomes necessary to deal with a situation as it stands, and when you base your sales policies on what the average salesman can do, as disclosed by these figures, the fact that you haven't all the super-salesmen in the country will not stand in your way to increased business.

Not many concerns keep such records as these. One reason is that they haven't any ideal to match these performances against. In the factory, the superintendent knows what his machinery is capable of and compares his output with what he knows to be maximum production. When he runs behind, his charts tell him which particular unit needs attention.

The absence of an ideal figure to check against is what has caused many executives to say that statistics

are an unnecessary expense. That ideal figure, gentlemen, is Quota—quota by salesmen; quota by counties; quota by styles, and quota by lines of business.

Now that we are headed toward quota, have we forgotten about market analysis? I think not. You remember that, when we drew the first lines of this market picture, we said it had two sides—the salesman's side and the prospect's side. We have talked about the salesman's side; now we are going to think about the prospect. As incorrigible as we like to think he is, we have to give him space. We need him—need him in our business, and we need to know some very important things about him.

How many prospective buyers have you in Kent County, Michigan?

I can liken the number of prospects a salesman has to the number of chances a player has playing a game of baseball. We figure the player's skill by the number of chances he accepts. If he fumbles the ball or lets it run through his legs—that's one against him. Some balls, like the salesman's prospects, are so far away that he doesn't even try for them. Some are too fast, "nasty" ones and he doesn't go near them; some he misjudges and they go over his head.

After the game is over, the manager figures the per cent of efficiency of his team—so many chances, so many accepted, so much per cent. How can you tell what speed your company is fielding at unless you know how many chances you have to do business, how many you are muffing, and how many you accept?

If you do not know how many prospects each salesman has, you may be making *this* mistake. On the east side of New York, within the boundaries of one salesman's territory, it was found through analysis, there were 5000 possible buyers of the company's product—good, bad, and indifferent. If a salesman is really selling his product, he does not average more than about six calls per day. Therefore, if a salesman is allowed 1200 prospects when business is normal, he has all he can handle; and this man had 5000. After this analysis was made, four men were placed in this territory and it supported them.

There are over 20,000 business enterprises above 110th Street in New York City! When this startling fact was made known the number of men working the territory for one firm was increased from three to six and the business doubled.

It took more than merely knowing the number of prospects to warrant taking such decisive action. Some of these prospects were manufacturers; some wholesalers; some retailers. A wholesaler represents a different type and class of buyer than a manufacturer or retailer. They bought in differing quantities, so each was of a different value to the concern. Worked out on a mathematical basis, a wholesaler rated \$10,000 and over was valued at \$90; a retailer rated over \$10,000 was valued at \$18; and a manufacturer with a rating over \$10,000 was worth \$32. Now this concern hasn't any product which sells at \$90.00 or \$18.00 or \$32.00. Their orders average around \$300. These values of \$90, \$18, and \$32 are what each prospect represents of potential value with all of them, good, bad and indifferent, thrown into the calculation. If in a county there are 100 wholesalers and the value per wholesaler is \$90, then the salesman handling that county must bring in 100 x \$90 or \$9,000 worth of business. If another salesman has nothing but retailers to work on and has 1200 of them, at \$18 each, his annual business should run \$21,600. A county which has 1500 manufacturers, at \$32 each, represents a quota of \$48,000 and it will take more than one man to get it.

How are these values secured? By combining the information we have on both sides of our market picture. By taking these figures on selling performance and relating them to the number of prospects we have.

Table 1 shown herewith illustrates how the statistical data may be tabulated to arrive at values per prospect. In this instance the concern sold to all types of business enterprises. They classified their sales into eight major groups: banks, financial concerns, government offices, public service institutions, manufacturers, wholesalers, retailers and general concerns. For years they have kept a very careful record of their sales to each of these major groups. The chart shows four years' sales. You can see that during these years there was a very substantial increase. The percentage figures on this chart are the most important. Look them over carefully. Notice that during the four years the percentage of the total business of the company which was sold to banks did not vary over $2\frac{1}{2}$ per cent. The first year shows they sold 33.3 per cent of their business to banks; in the second year, 31.2 per cent; in the third year, 30.9 per cent; in the fourth year, 30.9 per cent. It is rather amazing to find one part of one's market taking such a consistently close percentage of its sales. This condition is not by any means peculiar to this concern, however. Similar calculations for other concerns