GROWTH FROM PERFORMANCE

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by

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This tremendous period of growth in which the electronic industry now finds itself began about 1950 with the beginning of the Korean crisis. Since that time the United States has emerged as the undisputed leader of the free world and we find ourselves having to support this position by our competence in the development and manufacture of vast numbers of new weapons, nearly all involving electronics to some degree. This impetus from the military program coupled with the growth of the radio and television phase of our industry, together with the successful application of electronic computers to a large variety of jobs, not to mention automation, all of these have combined to make the growth of the electronic industry almost beyond comprehension during the past few years. This growth has provided a real challenge for those firms which went into this period as small business enterprises, for they have found it necessary to run just as fast as possible simply to keep up with the industry.

This has been the problem of the Hewlett-Packard Company since 1950. In that year total production was $2,300,000.00. This year we expect to produce that much every month. In other words, our company has grown twelve times in seven years.

I don't suppose I need to take very much time to tell you people what we do. I am sure most of you are numbered among our customers and, of course, if you're not we think you certainly should be.

As you may suspect, we have encountered many difficult problems having to do with this rapid growth. One of the reasons I think we have been fairly successful in surmounting these problems is because we have guided our program with some rather specific objectives and I thought I might begin tonight by telling you what the objectives of our company have been and what they continue to be.

First, we have directed all of our efforts toward the field of electronic instrumentation. This has made it possible for us to achieve good efficiency in our research and development program. We have been able to build a production organization geared to the specific problems of manufacturing electronic instruments and we have been able to develop a closely knit sales organization concentrating on this one problem.

Our second objective has been to do only those things in which we could make some contribution to the progress of the electronic industry. In some cases this contribution has been in the nature of new developments, new kinds of instruments, new measuring techniques. Our 10 megacycle frequency counter, our low frequency function generator, several of our microwave signal generators — in fact, a large number of our instruments and their application techniques — have contributed some measure to the progress of the electronic industry. We have continually attempted to make some contribution in our manufacturing techniques and manufacturing methods. This is not always so obvious unless you have occasion to look at our production department in detail, but I think the measure of this contribution is best indicated by the fact that very few of our prices have increased during this period even though there have been substantial increases in the cost of our labor and material. And again we have attempted to make some contribution in our sales program. I am sure we are providing much better technical information for our customers, much better service, much better assistance in the field than we were seven years ago.

As a third objective, we have attempted to meet our responsibility in providing security and opportunity for our employees. We have achieved a steady level of employment for all of our people, and in fact we have, on occasion, sacrificed growth because we have not taken on large contracts which would require that we hire a large number of people with the high probability that we would have to let them go when the contract was finished.

As a fourth objective, we have kept in mind that we have a responsibility to the community in which our business exists. We have encouraged our people to participate in community activities. We have given substantial financial support to educational and other institutions in our community. In fact, I some-times think our people spend more time on extra-curricular activities than they do on our business. We have numbered among our employees a member of the local Board of Education, a member of the City Board of Public Works, a member of the Board of Trustees of Stanford University. At the present time our Production Manager is the Mayor of Palo Alto. I think we have had officers in every conceivable professional organization from the Purchasing Agents' organization to the local Toastmasters' Club, not to mention, of course, the West Coast Electronic Manufacturer's Association, and last, but not least, a National President of your Institute of Radio Engineers.

Since I am going to talk more about growth tonight I want to include our objective as to growth. It has been and is our basic policy to grow as rapidly as possible in fulfilling the other objectives which I have mentioned, but to keep this growth at a rate which can be financed from our own profits on a pay-as-you-go basis.

And this comes to our final objective. As a matter of fact, in presenting our objectives to our operating people I always put this objective first. It is to attempt to make a profit of at least 10% on every sales dollar every month and every year. Now this profit is a very important thing for two reasons. First, it makes it possible for us to achieve all of the other objectives which we have set for ourselves, and second, especially because it is the final and absolute measure as to whether we do or do not make a contribution to the industry. As long as we can contribute something to you for the profit you give to us that profit is justified. When we can no longer make a contribution to you we cannot expect you to make one to us.

And so, as I have indicated, we have grown from a sales level of 2.3 million in 1950 to a rate of 28 million this year, and we have accomplished this growth without any outside capital. In the last few years you have seen hundreds of small businesses acquired by larger businesses because they need capital for growth. Many firms, large and small, are issuing additional stock at favorable price to earnings ratios, and many other financial devices are used to provide the money for growth in this industry. Since we have achieved a reasonable rate of growth without using any of these devices, I thought you might be interested in hearing how we do it.

Now, in spending most of my time talking about the financial aspects of growth, I do not mean to imply that these are in any sense determining. The other things you do determine how fast you grow provided you have the financial resources, and in my opinion, financial resources alone are seldom, if ever, the determining factor for growth. Financial problems limit the rate of growth if everything else is favorable.

The formula for growth from earnings is very simple. It is as follows: The percentage increase in sales which you can finance each year is equal to your percentage of profit after taxes times your capital turnover. Capital turnover is defined as the number of dollars in sales you can produce per year for each dollar of capital you have invested in your business. The formula actually is very simple, and as a limiting case it is just about as valid as ohm's law.

Let's look at it now in a little more detail. The percentage of profit which you produce on your sales dollar is a pretty obvious thing and needs little explanation except to emphasize that your rate of growth is directly proportional to your percentage of profit, other things being equal. The higher you can make it the faster you can grow, provided, of course, you don't lose all your customers in the process. The percentage of profit is, of course, not always completely controllable and it is in any case influenced by a number of complicated factors. If your business is primarily government contracting it is likely to be low; if you have a highly desirable item that everybody has to have, and if you have complete patent protection, and if you have a lot of luck, your percentage of profit may be made very high. For our business we think a figure in the neighborhood of 10% is about right. Our customers seem willing, year in and year out, to give us this kind of a return and with it we can finance an adequate rate of growth.

The second factor, capital turnover, is not always as well understood. Your capital includes working capital (that is the money you use to buy inventory, to finance your accounts receivable, to provide some working cash, etc.) and fixed capital would be the amount of money you have spent to buy facilities, tools and equipment. If most of your money is in working capital you can increase your turnover by keeping your inventory low, by keeping your accounts receivable low, and by always keeping exactly the right amount of cash on hand to just barely be able to pay your bills the day before they are due. You can almost always make your turnover better by having all your money in working capital and *none of it in fixed capital*. But, by having the proper tools, facilities and equipment you can usually produce a better product, keep your costs down and, therefore, your profit up. So, here again there is an inter-related balance involved in adding to your machinery and equipment at a rate which will not unduly reduce your capital turnover, yet which will give you the things necessary to do a good job.

You perhaps have surmised by now that the proper control of these factors is not as simple as it sounded at first, and every element is influenced by opposing forces. Your production people want lots of money tied up in inventory. This must be limited to what they can just barely get by with. Your sales people would like to extend unlimited credit to all your customers. You must convince them this is a job for the banks, not for you. All this requires a high level of performance from your whole management team. Let's take a minute now and see how these factors have applied in our own business during the last seven years.

Our growth during this period has averaged a little over 42% per year. During this same period our profit after taxes has averaged about 10% per year, and our capital turnover has averaged about four and one-half times per year. Thus, using the formula, percentage of growth equals percentage of profit times capital turnover, we should have been able to finance a growth of 45% per year. Since our growth was slightly less than this we have come through this period of growth with improved capital strength.

Now, obviously you cannot control all of these factors on a day-to-day basis or even a year-to-year basis to precisely match this formula, but it does tell you how fast you can grow without changing the ownership pattern of your company, the debt structure, or any of the other basic characteristics of your business. Actually, you can deviate quite widely from this on a year-to-year basis. For example, in our case our profit has varied from 6% to 15%. The turnover has gone as high as seven times per year in years of very rapid growth, and on occasion it has gone below four times. There is, of course, nothing dangerous about a lower turnover. When your turnover gets too high you are likely to be sacrificing in other areas.

This method of growth is no different than living within your income in your personal affairs as opposed to buying everything on credit. In the one case you pay for everything out of your current income. In the other case you buy everything on credit to the limit that your total income is used to keep up your monthly payments. As a matter of fact, you can do better than this in business because you can live on credit and use your total income only to pay interest or in the case of stock, dividends on the capital you borrow. In this manner, of course, if you wish to sell your stock to the public you can get a great deal more money to use as capital if you choose to use all of your profits to pay dividends instead of to re-invest in the business. As a matter of fact, at the present time you can sell electronic stocks often at 30 or 40 times earnings even coupled with a statement that you do not intend to pay any dividends for a number of years. This, however, simply means that people are willing to give you money now in anticipation that you can grow rapidly enough to pay them a satisfactory dividend sometime in the future. This is a perfectly valid procedure and is used by many business firms. Often, however, people forget that this multiplying factor in obtaining capital can properly be used only once and that sooner or later profits will have to be increased to the point where the stock is supported on the basis of 10 or 15 times earnings, and when that point is reached your growth will be determined fundamentally by how rapidly you can increase your profits year-by-year.

Perhaps I have spent more time on the financial aspects of growth than is justified because there are many other factors which are equally important, but I felt since the trend seems to be otherwise that many of you would be interested in knowing that relatively rapid growth is possible without public stock issues and without merger or acquisition techniques.

But, as I have already said, growth by this conservative formula we use requires a high level of performance from the operating team. As a matter of fact, it is most effective when you obtain a high level of performance from all of your people. We use in our business most of the organizational procedures and most of the scientific management methods. Although these things are helpful, I think we get the best performance by giving our people as much freedom and as much incentive as possible to work together as a team toward the achievements of our objectives. We try to give them this freedom by maintaining flexible organizational methods. We try to give them incentive by a very specific device which we call our Group Incentive Plan.

Shortly after we organized the business, Mr. Hewlett and I felt that such success as we might be able to acheive would be determined not only by our own work and ability, but equally by the contribution of all of our employees toward our objectives. In order to encourage their contribution, we set up this Group Incentive system which has been in effect since 1941. At that time we said to them, "We are now spending 30¢ out of every sales dollar for salaries and wages. If you can bring in more sales dollars by your extra efforts we will continue to give you 30¢ out of each dollar that is received." This philosophy is accomplished by this method. Every month we add up the total number of dollars which we have spent in wages and salaries. We relate this to the total number of dollars worth of equipment which we have produced during the same period. If this ratio is less than 30% it means in effect that our people have done a better job, and in the following month we add an amount to everybody's salary which will tend to bring this ratio back up toward 30%. Likewise, if this ratio gets higher we reduce the bonus which is added to their base pay, so as to bring the percentage back toward 30%. Everyone, from Mr. Hewlett and myself to the janitors, participate in proportion to our base salaries. In general, we have attempted to keep our base rates at about the industry average. This month everybody will receive 32% above their base rate through the operation of this incentive system. The percentage will vary up and down from month to month, but the trend has been continually upward. Now, of course, people cannot simply work harder every month and so this raises the question: "How can there be continual improvement?". Improvement is accomplished by better methods, better techniques, better machinery and equipment (we give the employees the benefits which result from better equipment), and our people are continually finding better ways to do each of their jobs and to work together as a team. I suppose the reaction of some of you will be to say that we must have been awfully inefficient to begin with if we can continue to make such improvement, and I suppose perhaps we were. I don't know whether our formula would work well in a business which had a high level of production and in which things were well standardized, but we are not in that kind of a business. We make over 200 different instruments. Many are made in small quantities. They require close technical supervision and great care in their manufacture. Fortunately, there has been in the past and I think there will continue to be in the future a great opportunity for all of us to do a better job. I am convinced, at least, that I will never see the day when there is not yet room for improvement.

And so, in selecting the title "Growth From Performance" I really had in mind that we have been able to achieve a fairly substantial rate of growth first by setting and adhering to some rather specific objectives, second by demanding a high level of performance from our management group, from our engineers and in fact from all of our employees. I see great opportunity for us ahead to grow with you people in the electronic industry as long as we can continue the high standards of performance which our people have achieved in the past seven years.