

Venturing Your Concept

Forecasting Results, Pro Formas 4

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Forecasting is the heart and soul of successful innovations. Such guidance for innovations is critical when one begins a venture, when it is vital to do the right thing by setting a viable price. It is also critical later when it is equally important to do things right when going after market share. A mentality shift is needed to cross that divide, but the same forecasting technique applies either way.

There are many factors to consider. Demographic, technological, economic, social and political trends are each favored by some. I will not focus on these. Rather I will assume that the society we are venturing in is stable and that our intent is to create capital, not inflated stock values. And I will illustrate how to integrate a forecast into a pro forma—a fancy word used for summaries of sales and profits expected over some future time.

First, a word about capital. Capital comes in three forms: human, material, and an exchange medium between the two—money. I include intellectual capital in the human part of the equation. As an individual, I have two ways I can labor, physically and mentally. I can create things like mouse traps, books, ideas, music, and potato salads. Each of these things has value to someone else as evidenced by their willingness to adopt or pay for them. What the other person will pay depends upon his/her need for the product(s) of my labor. If I get paid to produce an item, not just a service, then capital has been created and the central bank can print a like amount of new money for circulation. This illustration is grossly oversimplified, but this simplified concept is useful to me in dealing with the market economy we live and compete in.

What follows is intended to be illustrative only and educational. I strongly recommend that anyone venturing retain a professional accountant to create the pro forma. A pro forma can have as many forms as there are situations that need to be fit. I will illustrate a simple example.

What the other person will pay for an item or a service needs thinking about. What people will pay for an item or a service varies for many legitimate reasons. For salable items, the lower the price, the more items we can sell. This relationship is price elasticity. Effective forecasting includes price elasticity as I will illustrate.

All products are subject to price elasticity. That is, if we charge too much, sales will not cover costs, and if we charge too little there is no profit. Only if the price is right can there be capital formation. And that will only happen if our innovation is wanted by others having the ability to pay us a fair price for our product. Ed Zimmer (<http://www.tenonline.org/>) is right on here—it is all in the market. The closer we can get to the pulse of our customers, the better we can forecast the market potential.

In my experience, the most successful forecasting strategies are those that calculate consumption by determining what each end-user is likely to pay for one or more items and multiply that by the number of consumers or users and their levels of consumption. For established businesses that do their homework regularly and thoroughly, this procedure can accurately forecast sales within a few percentage points. I did just that for years forecasting the usage of titanium by the aerospace industry. Ross Stander at Tensor Metrix uses an improved version of the same basic technique to forecast consumption of electronic grade metals world wide. Historical consumption records are necessary to provide the starting point.

This technique is not infallible because it is not often possible to predict when buyers will build or draw down their inventory positions or when they err in their own forecasting. Nevertheless, the method is basically sound. So how can we use consumption forecasting in venturing an innovation? One basic method is to integrate our forecast into a pro forma, a spreadsheet of cash in and out over a period of time into the future with cash or income balances on the bottom line.

By calling our prospective customers and getting their current and expected future purchase rates, we can estimate consumption. Not all buyers will cooperate on first contact. But it is in their interest to do so since they need assured supplies of product at lowest price. We need to establish our credibility and ensure that what they tell us does not leak to their competition. This takes time, but, in my experience, once I earn a buyer's trust, s/he cooperates.

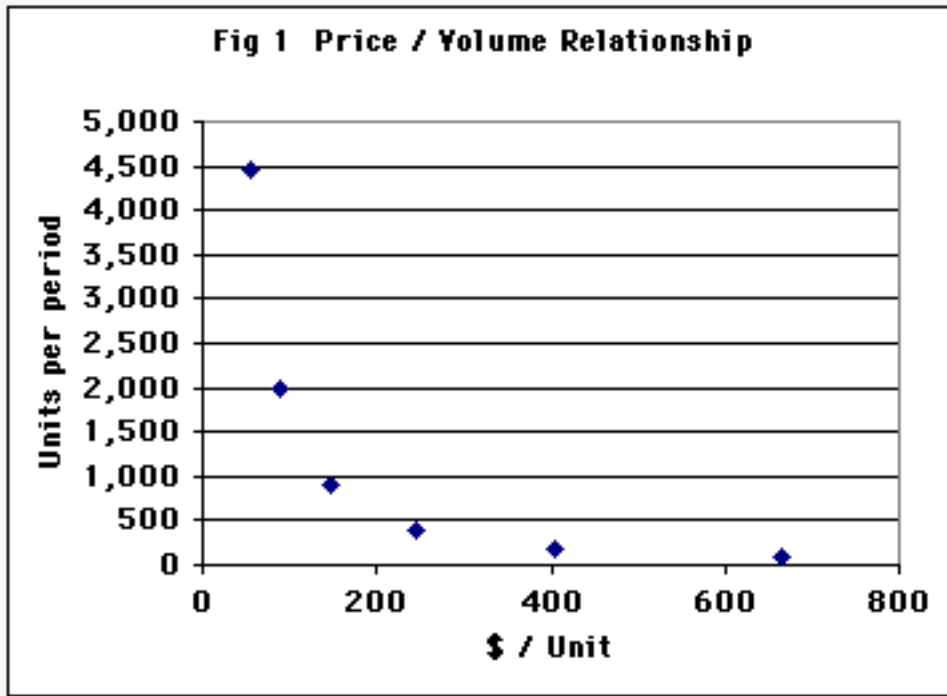
To illustrate, consider the forecast of consumption shown in Table 1. Note there is an up-tick in period one. (Optimism is in the air because the economy is expanding.) Since sales are expected to grow, now is a great time to get into this business. Three distributors comprise our customer base and two already anticipate increasing sales.

Table 1 Consumption Forecast

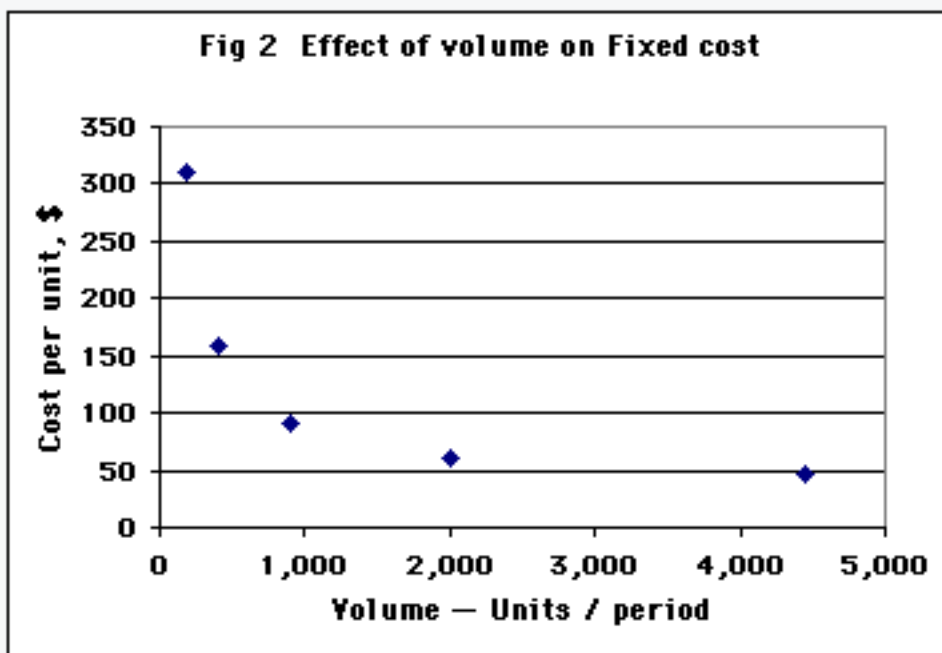
Period Customer	Historical Era					Consumption Forecast					
	-5	-4	-3	-2	-1	0	1	2	3	4	5
1	180	180	180	180	180	180	185	190	195	200	205
2	225	225	225	225	225	225	225	225	225	225	225
3	600	600	600	600	600	600	640	680	720	760	800
Total	1005	1005	1005	1005	1005	1005	1050	1095	1140	1185	1230

To complete a preliminary pro forma, we need to estimate what share of this market we can take at what price. This is where price elasticity comes in. If we already know how unit sales volume relates to price, we are home free. We plug those numbers into our pro forma and find the price that best fits our short and long-term abilities and goals. But venturing is rarely so simple; we have no experience yet with price elasticity for our product.

Figure 1 shows a typical price elasticity relationship for a product in demand such as a mixer for a home kitchen. This relationship holds for most commodities. Note how quickly sales can appear or disappear, depending on pricing. Most competitive markets adopt prices in the lower left region of the curve, \$100 - \$200 in this example.



The good news here is that we have some real control over our sales. But, if we have R&D, patent, facilities and other costs to recover as quickly as we can, our pricing equation is burdened with a fixed overhead. This feature is illustrated in Figure 2.



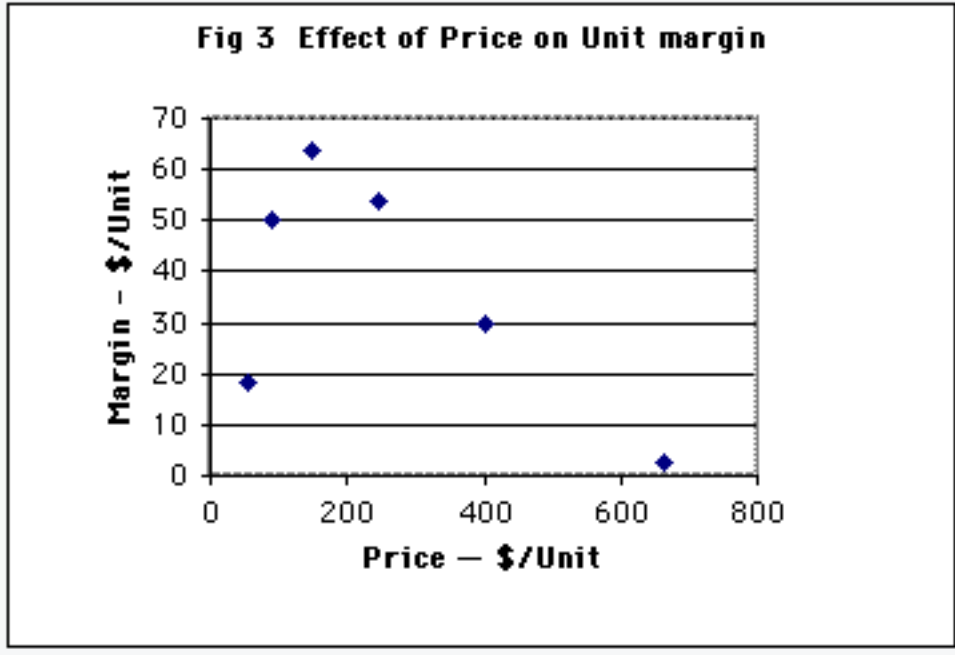


Fig 3 shows the joint effects of price elasticity and fixed cost on profits. Note how steeply margins rise on the low end. It is beyond my scope here, but overall return usually peaks in this area also. Remember, this is how a free market behaves. Cartels and monopolies change these rules in their favor and we might not even know it.

Figure 3 is greatly simplified from real life but is illustrative of the underlying dynamics. If we miss badly on our initial pricing and forecast, we will have a headache. Priced in the knee region of Fig 1, our product should sell, but, if we are too greedy, it may not. And contrary to current dot.com preaching, if we under-price our product, we may shortly be explaining things to our stakeholders or a bankruptcy judge.

Let's just assume that things will be stable and that our potential customers will receive us well at a price of \$150/unit and that our competition will not start a price war and keep us out. If we do not try to take too much of their turf too quickly, we may be able to maintain the present market discipline and pick up the expected growth. Table 2 illustrates a bare bones pro forma representing this idealized situation.

Table 2 Pro Forma Based on Consumption Forecast

Period	0	1	2	3	4	5
Market: Total Units	1005	1050	1095	1140	1185	1230
Market share (Units)	50	100	150	200	250	300
Unit Price	150	150	150	150	150	150
Total Revenue	1500	15000	22500	30000	37500	45000
Net at our price*	3150	6300	9450	12600	15750	18900

*From Fig 3.

The two key lines are the top and bottom. What goes in between should be the work of a competent accountant. Remember also, a pro forma is no better than the information

fed into it. In starting The ALTA Group, we ran through 30 odd pro formas before we broke ground with a model that fit the real world. Between 1986 and 1992, annual sales grew at a rate of 76% per year. Pro formas in this instance paid off through the guidance they provided.

Now that we have a product with real sales potential, it is time to think about protecting our intellectual property—our subject next time.

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