8 key insights from Managerial Economics

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There are several seminal concepts in Managerial Economics that feed into the entire field of management. Terms such as "incentive", "value", and "profit" are used by economists and non-economists alike, and sometimes they are being endorsed and sometimes denigrated. But are we using these terms in the same way? What do they mean? Let's consider 8 key insights:

1. Appreciate the power of incentives

Imagine that you are trying to decide whether to wear a cycle helmet. The conventional wisdom is that helmets are a good safety device because they save lives. Indeed, if you fall off a bicycle you would want to be wearing a helmet. Because helmets reduce the severity of a head injury. But it is important to recognize that the risk of injury is a cost of riding a bicycle. And if the helmet is reducing that cost then it is encouraging you to take more risks. This leads to the counter intuitive claim that wearing helmets might increase head injuries.

This is an empirical question – is the increase in risk taking offset by the extra protection? Does the greater prevalence of accidents outweigh the reduced seriousness of each accident?

You might question whether cycling accidents are caused by the cyclist, or if other road users are to blame. But then the question becomes how does wearing a helmet affect *their* incentives? By wearing a helmet you are reducing the driver's costs of causing an accident. So you shouldn't be surprised if drivers are more reckless around cyclists with helmets, compared to those without. Once again, incentives matter.

We cannot always predict in advance exactly how behavior will change when incentives do. In 1998 an Israeli day care decided to start charging a fine to parents that arrived late. By increasing the cost of being late, they were expecting to deter it. In fact, the number of late pickups doubled. This doesn't mean that incentives do not matter, because the fine did generate a change in behavior. The issue is how it affected incentives. It is conceivable that there was an existing norm that means parents felt guilty if they were late. The introduction of the fine may have removed that feeling of guilt, and might have therefore reduced the overall cost of being late. Perhaps this shows that incentives are not always financial. Perhaps it shows that the fine was set too low, and the daycare should increase it. What it clearly shows is that people respond predictably to incentives as they conceive them.

Few of us are motivated solely by money. As a simple exercise imagine offering your employees a choice between the following rewards:

a. Time off
b. Social recognition and praise
c. Cash
d. Promotion

You can then try to work out how much of each is worth relative to the others. Money isn't the only motivation, and in many cases it isn't even a major one. Providing autonomy, camaraderie or status can be more important but it is precisely because we are all motivated by different things that it is important to find

"Once again, incentives matter"

common ground. And even if people aren't weighing up monetary considerations, they will be weighing up benefits and costs. This is why to change behavior you need to change what is in people's own interests to pursue – you need to change their incentives.

Activity: What motivates you?

What are some examples of how you have incentivized risky behavior?

2. Develop a knowledge process

One of the reasons Charles Dickens wrote such lengthy books was because he was being paid based on how many pages he wrote. His actions shouldn't come as a surprise, because he was simply responding to incentives. But why was he being incentivized to write lots of pages? The reason is because it can be difficult to measure performance. How can we tell whether an author is doing a good job or a bad job? A relatively easy was is to find an objective way to measure the output. Number of pages written is easy to count. The problem is that it doesn't necessarily lead to better quality writing. Whenever we assign a metric, we are incentivizing the achievement of that metric. It therefore becomes very important to question whether the metric is an appropriate indicator of what we are actually interested in.

> "For commercial enterprises profitability provides this metric"

For commercial enterprises profitability provides this metric. There is a danger that the profit may be driven by unsustainable activities, or that the accounting is incorrect. But in principle at least you are directly measuring whether you are creating value. As we move further away from a commercial venture it can become harder to find such a measure. However we can think about some implications for what an effect knowledge process would achieve:

- Ensure that knowledge is effectively acquired
- Measure productivity where possible.
- Share knowledge with peers through constructive dialogue.

An effective knowledge process contains an inbuilt feedback mechanism, both in terms of visible metrics and interpersonal communication. When we talk about how organizations "share knowledge" this can give the impression that a knowledge process is one where information is being shared effectively. This is important, and demonstrates why open communication channels are crucial for an organization to learn and improve. Ideally there will be an open-minded approach to benchmarking and a willingness to challenge procedures regardless of hierarchy. One tool to boost the power of communication is the "Five Why's". When a problem is discovered the first question should be "why?" The first answer will typically provide more detail about the problem without necessarily helping the understanding of it. So it should be followed up by an additional "why?" By the time you get to the fifth "why" you should have been able to get to the root cause of the problem. It should lead to the identification of a process that can be improved, and could identify a managerial oversight or error. But it may well reveal that the obvious source of the error is simply a symptom of a more important, fundamental problem.

However there is a danger in relying on communication since this rests on human interaction and suffers from the personality clashes and behavioral traits that often accompany interpersonal situations. An effective knowledge process goes beyond trying to improve communication flows, by setting up systems. Where possible, this can incorporate the price system via internal markets and the creation of profit centers. Often, it will rely on the identification of suitable metrics.

Even if an appropriate metric has been found it can be hard to attribute success or failure to individual decisions. One option is cohort analysis. This involves splitting up customers into separate groups (a "cohort") that independently comes into conduct with your product. Instead of looking at how many sales you make overall (which is a gross metric), you may wish to see how many sales you made to customers that arrived at your website from Twitter (cohort 1), Facebook (cohort 2), etc. Another option is to use split-test experiments. This is where customers are split into two random groups and a slightly differentiated product is offered to each. If you want to see whether a new feature is valued offer it to 50% of customers and offer the original version to the other 50%. Statistical tests will help to establish whether there is a significant change in demand.

Activity: How do you track performance? What incentive does this generate? Is it appropriate?

Think of a problem. Is it a special problem or a systemic problem? Is the solution to get people to follow the process, or to improve the process?

Think of a bad outcome. Identify the decision maker. Did they have the information they needed? Did they have the right incentive? How can you improve the knowledge processes or incentive systems to prevent such errors from happening again?

Can you conduct cohort analysis? Can you conduct any split-test experiments?

We can also look at how the activities of the organization interact with the wider community. When the value being created by an organization is greater than the cost of the resources used, it is creating profit. This "profit" could be a financial profit – it could be monetized and captured by the firm. Or it could be more of a social profit that dissipates amongst the community that utilizes it. Whilst the idealized "free" markets that reside in textbooks provide clear signals as to what constitutes a profit, in the real world that signal can be distorted and is sometimes absent altogether. Nevertheless, it is still necessary to ensure that value is greater than costs, and this requires a firm understanding of how value is created and where to find costs.

3. Focus on value creation

Economics tells us that value is subjective and stems from the alleviation of pressing needs. Since we all have different needs, we all value things differently. It is therefore very important to deny a distinction between "products" and "services". The value of a product derives from the service being provided, not the product itself. Therefore focus on service provision.

For example, think about the value being created by McDonalds. You might think it is a Big Mac, which is the product that they sell. But the service being provided is the alleviation of hunger. We value the Big Mac because it alleviates hunger. It satisfies a need. And given our needs are diverse, some of us will value the Big Mac more than others. If you are a vegetarian, you may not value it at all. But there is a deeper point here. In 2004 I spent the summer in Bucharest and used McDonalds regularly because it was one of the few places that accepted large denominated bank notes.

The service being provided was banking. And when I visit my parent's house in France I visit their local McDonalds every two days. This is because it is the only place in a 3 mile radius that has free wifi. The service being provided was internet access. When I use my local McDonalds in England it is to get coffee from the Drive Thru. The service being provided is the ability to get caffeine without having to stop the car and get my two young children out. McDonalds are satisfying a diverse collection of my pressing needs through a variety of different services. Entrepreneurship is about anticipating those bundles of services that satisfy multiple needs. And since we rarely even understand ourselves what are pressing needs are, entrepreneurship is about anticipating unarticulated needs! According to Eric Reis, “we must learn what customers really want, not what they say they want or what we think they should want”.[1] But this doesn’t mean that you should follow customers blindly:

> “our job was to find a synthesis between our vision and what customers would accept; it wasn’t to capitulate to what customers thought they wanted or to tell customers what they ought to want” [2]

Thinking in terms of providing services for customers/clients rather than products has implication in terms of innovation, marketing, and strategy. If you think in terms of products then innovation means improving that product. But the danger of this is that you end up making minor adjustments to something that nobody wants anymore. If you think in terms of services,

[1] Reis, p.38
[2] Reis, p.50

you will ask yourself "how can I do any even better job at satisfying my customers needs?" Instead of tinkering with an additional gherkin, or a different type of cheese, you will recognize that customers want to satisfy their hunger whilst simultaneously checking their emails. So you innovate by adding free wifi. Similarly, if you think in terms of products then marketing means explaining the features. If you think in terms of services you will lead on benefits, instead. Don't describe the physical product, explain how the product will satisfy customers needs. In many cases these may be needs that the customer didn't even realize they had.

Finally, if you think in terms of products then your competitors are companies that make a similar product. In the case of McDonalds, that is Burger King. But if you think in terms of services then you will realize that your competitors are all the companies that are attempting to satisfy the same needs that you are. For McDonalds, that means they compete with Societie Generale, the local internet café, and the petrol station.

Activity: Write a list of what your organization produces. What services do they provide (i.e. what is the pressing need being satisfied)?

How can you innovate? How can you market them? Who are your competitors? Where are potential sources of competition?

4. Tailor the offer to the customer

Since all customers have different needs, they will place different values on the services you provide. Perfect price discrimination occurs when a company charges a unique price to each customer. The aim is to generate as much revenue as possible, by extracting the maximum that the customer is willing to pay. Even if you have a non-commercial venture, you are likely to be receiving something in exchange for your efforts. You will also encounter pricing techniques when dealing with suppliers and other organizations. So they're important to understand. The problem with perfect price discrimination is that we never know how much someone is willing to pay, and interpersonal negotiation can be time consuming. One alternative is to split customers into different groups (for example a group that has a high willingness to pay, and a group that has a low willingness to pay), and charge different prices to the two groups. Humayun's Tomb is a palace in India and charges 20 rupees for Indian citizens, and 300 rupees for foreigners. This is sensible because the nationality of the visitor is a

"You will also encounter pricing techniques when dealing with suppliers and other organizations."

reasonable approximation of their willingness to pay. If the Tomb charged 300 rupees to everyone, they would lose Indian visitors. If they charged 20 rupees to everyone, they would miss out on the extra revenue from tourists. Another way to think about this is that the locals have a greater price elasticity – i.e. their demand for tickets is more responsive to price changes than the tourists. Provided the groups are easy to categorize (other groups that are easy to verify are students, the elderly, etc) and cannot engage in resale (i.e. you don't want locals to be able to buy tickets and then sell them on to foreigners), this "direct" price discrimination is an effective technique. It is one of the reasons why air travel has become so affordable and accessible. Previously airlines would charge a single price per ticket and many people on low incomes found it too expensive. Now, however, various forms of price discrimination mean that people who are price sensitive can pay less than those who are not.

If it is difficult to separate customers into groups, firms can still utilize indirect price discrimination. This occurs when it is possible for customers with a high willingness to pay to get the product for the cheaper price, but you impose a small cost to discourage them from doing so. A technique as simple as using a sign that says "ask us about our special offers!" can be a low enough hurdle to encourage price sensitive people to reveal themselves, but high enough that price insensitive pay the full price because they don't even ask.

Activity: Do you charge a price for your services? Is it the same price for all customers? How could you charge different prices to different customers for the same service?

5. Look for hidden costs

Imagine that I have three banknotes:

- 100 Lei
- 50 Lei
- 10 Lei

What is the cost of taking the 50 Lei? You might think that it is 0, because you were given the choice for free. But economics tells us that the cost of an action is not the price that we have to pay, but the value of the action that we have to forego. In this case your Next Best Alternative (NBA) is the 100 Lei note. What appears to be a profitable situation (i.e. generating an income of 50 Lei without any expenditure) is, in fact, a loss of 50 Lei (i.e. the difference between the revenue and the cost). If this is a profit seeking corporation then it will appear that they have made a profit and they will pay taxes on a "profit". But in economic terms they have made a loss. They have not used their resources as efficiently as they should. Companies can spend a long time picking up the 50 Lei notes and congratulating themselves on their achievements. But if you want to increase the resources at your disposal, and be able to utilize them as effectively as possible, you need to look for hidden costs. You need to say "wait! Why are you leaving 100 Lei on the table!"

Some organizations focus their knowledge processes on trying to uncover these hidden costs. They will constantly ask what the NBA is for any action, and utilize internal markets to uncover them. It is possibly easier to uncover hidden costs in a commercial venture because they are already used to market systems. But it is even more necessary for non-profits to look for hidden costs. If they are not discovered they suck up resources and prevent you from fulfilling your mission.

One of the biggest problems that an organization can face is keeping their focus on their most productive activities. And members of the organization need to remain vigilante about the opportunity cost of distractions. Being able to turn down opportunities and say “no” is an important skill (especially after you’ve already said yes). Stay focused and beware of attention thieves. This is even more important in the early stages of a venture where you are still trying to learn about the value of the services being provided. Bill Butler, the boss of construction company W.L. Butler Construction says that he “went from taking every job to questioning every job.”[3] Activity can be the enemy of productivity.

We often spend lots of time in meetings and they can often appear to be unproductive. But this is because we rarely confront the costs. It is difficult to know what the NBA is to a meeting, and what employees would otherwise be doing with their time. But a simple way to estimate the value of their time is their salary. There is an iPhone application that allows you to input the salaries of all of the attendees of a meeting, and it then keeps a running track of the implicit "cost". It is hard to know whether a meeting is creating more value than it costs if we have no idea what those costs are. In Pelisor Castle, Sinaia you can view the room where King Ferdinand I used to work. He had a standing desk because he hated meetings and knew that if he conducted them standing up they would be over quicker. By making the costs more tangible the decision-making can be improved.

Organizations often talk about wanting to "cut costs" but this can be a mistake. Costs are important signals that help us to see where there are resource scarcities. The aim should be to uncover costs and then optimize them. What you need to eliminate is *waste*.

[3] Burlingham, p.29.

Activity: Create a list of activities that your organization has done recently. What was the NBA? Did you direct your energies in the most valuable direction?

Are you "achieving failure"? Are you successfully pursuing the wrong plan?

6. Plan the right horizon

It seems obvious that a business should only open if it's revenues will exceed their costs. However this isn't quite true. In the short run some of the costs that an organization faces will be fixed. Therefore they will have to be covered whether they are generating revenue or not. The decision about whether to be open should be made by comparing revenues with *variable* costs (i.e. the costs that vary with the level of output.) A restaurant in a ski resort is likely to have high fixed costs during the summer, and their revenues will be too low to deliver a profit. However as long as their revenues are greater than their *variable* costs, it would still make sense to be open for business. It is better to cover some of your fixed costs, than none at all.

Over time, however, those fixed costs become variable. We can renegotiate utility contracts and make different staffing decisions. The restaurant could invest in a larger capacity. Therefore a crucial aspect of management is making decisions that are appropriate for the right time horizon. There are two fundamental questions to ask: (i) what is the optimal scale given my current resources? And (ii) what is the optimal scale?

Growth can be important, but the activities that lead to growth are even more important. A company could spend their entire advertising budget on a publicity stunt that generates a lot of attention but only for a short period of time. A non-profit could respond to a short term funding opportunity and then collapse when that runs dry. According to Eric Reis there are four main sources of sustainable growth.[4] The first is word of mouth – relying on users to tell other people about your activity. The second is a side effect of product usage – when people drive cars and wear clothing labels they become billboards. The third is through funded advertising, but this must be cost effective. If each unit of paid-for advertising doesn't bring in more revenue than it costs, it is unsustainable. The fourth source of sustainable growth is through repeat purchase/use – for example subscription services or customer habits. Thinking of growth in these terms leads to some specific metrics that will be helpful:

- If you need to build a long-term relationship with the customer, make sure that the rate of new customer acquisition exceeds the drop out rate. For example, a start up being advised by

[4] See Reis, pp. 207-218.

Reis reported a retention rate of 61% and a 39% growth rate of new customers. This creates a net growth rate of 0.02%. In order to boost this rate they need to decide whether to focus efforts on reducing the proportion of customers that leave, or increase the numbers of new ones.

- If you rely on person-to-person contact to drive growth, make sure that each new customer is leading to as many new customers as possible. For example, if for every 100 Facebook users then 10 of their friends will sign up, the viral coefficient is 0.1. Or, more simply, each new user will lead to 0.1 additional users. If this coefficient is above 1 then growth will be exponential. If it is lower than 1 it will fizzle out.
- If you are using paid advertising then make sure that you are paying less money to acquire new customers than they will be worth to you. The customer lifetime value (LTV) is the revenue you expect to generate after variable costs have been deducted. The cost per acquisition (CPA) is how much you have to spend to get that customer. If CPA is lowever than the LTV you will grow.

Growth isn't good for its own sake. It can lead to variable costs growing at a faster rate than revenues, can undermine your capacity to deliver quality services, and as Elizabeth Conlin has said, "in the bureaucracy of growth, you lose your distinctiveness".[5] Whilst larger companies can benefit from economies of scale (i.e. spreading their fixed costs over a larger range of output), they can lose their authenticity, innovativeness and ability to interact with their local community. They can lose the opportunity to learn from their customers in genuine person-to-person interaction. So don't grow for the sake of it, and take care over expansion plans.

Activity: Where should your priorities lie based on your current resources? What would you ultimately like to achieve? How do you acquire those resources and over what timescale?

7. Use profit as a guide

In January 2008 Exxon Mobil announced profits of $40bn. Such profits serve as an incentive – they are a reward for entrepreneurial discovery. When journalists covered the story they focused on this and questioned whether the profit was "excessive". We can wonder how entrepreneurial those investors were, and whether their reward was a due to luck, or a result of unfair subsidies. We can discuss the importance and problems with using profit as a

[5] Burlingham, p.156

motivational tool. But profits have another function – they are a signal to mobilise resources. This profit is the markets way of telling consumers to use less oil, and for producers to find new sources of oil or new substitutes for oil. This knowledge function is very important because without it consumers might continue using oil and producers fail to find alternatives.

Profit is not a dirty word. It can be tempting to think that there is a trade off between profit and other goals. However profit is a necessary foundation upon which other goals can be sought. According to Jay Goltz, of The Goltz Group,

> "You should feel really worried if you're not profitable.. If you have an established company and you don't have profits, you're doing something wrong. Profits are not optional in business. If you don't have them, you're dangerously close to going broke. It's not responsible to your employees. They might not have a job. As the guy in charge, it's your duty to make sure you have a profit"[6]

Profit, growth and financial returns are often by-products of a well-run business. When you sell equity to shareholders you gain resources but lose some control. You will owe them a return on their investment and therefore that will become more of a goal. Investment from public authorities will also add competing goals. But it is better to think of profit as something that follows the creation of value, and a guidepost to help discover where that is, rather than being the primary goal.

For new ventures, Eric Reis points out that there can be an incentive to delay getting feedback because if the numbers are low this is worse than having no data and being able to imagine or project big ones.[7] He refers to this concept as the "audacity of zero", and explains why it is a problem,

> "delays have the unfortunate effect of increasing the amount of wasted work, decreasing essential feedback, and dramatically increasing the risk that a startup will build something no one wants."[8]

It can therefore be very useful to expose yourself to a market test as soon as possible. According to Reis this means "low-quality early prototype, charging customers from day one, and using low revenue quality targets as a way to drive accountability".[9] This is known as a Minimum Viable Product (MVP), and allows an organization to go through a full turn of the "Build-Measure-Learn" loop very quickly. The

[6] Burlingham, p.132

[7] Reis, p.52

[8] Reis, p.53

[9] Reis, p.54

idea is that you do not really know what creates value until you have received feedback from customers, and it is wasteful to spend time to fully develop a product with an uncertain value. It is tempting to argue that you should wait until you have a “high quality product”, but this is a function of the specific needs of the customer, and as Reis says, “if we do not know who the customer is, we do not know what quality is”. [10] It is also tempting to resist a market test on the grounds that you’re worried that a rival will copy your idea. But again this is ill founded. According to Reis the challenge for organizations is not to have “good ideas”, but to be able to prioritize them and then execute them.[11] Time away from the market and away from customers will not provide a head start.

Too many new enterprises delude themselves into thinking that a MVP would cheapen their grand vision. But it won’t. It helps to accelerate it and will provide you with more control over the long term because you will need less money from outside investors. The best way to maintain a strong equity stake in your business is to establish an MVP from the outset.

[10] Reis, p.107
[11] Reis, p.111

Activity: Look at the companies around your organization (this could be customers, partners, suppliers, etc). Are they making a profit, or a loss? What is driving that profit/loss? What is the impact on your organization?

Can you create a MVP? Do you have anything in the pipeline that could be brought to market sooner?

8. Liquidate mistakes

All entrepreneurs make mistakes and direct scarce resources to the wrong activities. If you have an effective knowledge process this should revel some of those mistakes, and offer you a choice. You can either confront the mistake, and try to correct it, or you can ignore it. Correcting a mistake can be difficult because it draws attention to it. But it is better to take a loss on an asset then to continue to direct it to unproductive ends. The UK government spent £789m to build the “Millennium Dome” an exhibition space that served as the focal point for the Millennium celebrations. Disappointing visitor numbers revealed that it didn’t create as much value as they’d hoped. In 2005 they sold the shell to Anschutz Entertainment Group who refitted it and turned it into an entertainment complex (it became known as the O2 arena following a sponsorship deal). Some of the original assets were sold (for example the branded waste bins were sold to theme parks), but for much less than they were worth as part of the Millennium Dome. Some of the original assets were simply discarded (such as staff uniforms). Compared to the initial use, this appears to be a loss. But compared to the next best alternative, it is a profit. This liquidation process contains an important entrepreneurial element. Are these resources worthless (i.e. should they be throw away) or can they be reconfigured into a new plan? They may not be worth as much in the new plan as you thought they were worth in the old plan, but that doesn't matter. The liquidation process merely reveals errors, it doesn't cause them. It is the best response and an important part of ensuring resources move to where they are valued the most.

Activity: Create a list of assets that your organization owns. What are they worth to someone else? Should you liquidate them?

To summarize, we can consider that Managerial Economics is predominantly concerned by two things: **incentive systems** and **knowledge processes**. We can look at how these relate to the internal management of the organization, in terms of motivating employees and gathering information. We can also look at how the external environment offers incentives and delivers knowledge. The price system is one way of generating incentives and knowledge, and social entrepreneurs can use it as a tool for guidance. If we ignore prices then we are like the blind man groping in the dark. Incorporating the price system into decision making will not turn night into day, but the denser the fog the more important the light.

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