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Modules in Financial Management

The Economy And You!

A set of notes detailing fundamental concepts in economics, career planning and financial management.

Author: SKG.
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Prerequisites

- Designed for Grade 8 students and above.

Preface

The modern economy represents the current state of human understanding on how best to enhance the quality of human life using a set of economic principles. These principles have historically evolved over many generations and experiences. To fully appreciate why and how we do business, we must first understand human motivation and then we must understand the impact of efficiency in production.

To understand human motivation, we simply have to ask ourselves if we desire comforts in life. In general the answer is yes. The human desire for goods and services will always be the primary motivation for business enterprise. Our desire for a comfortable home, abundance in food supply, fine clothing, transportation, entertainment etc. will always sustain business enterprise.

Self-sufficiency at a national level is an ideal that many political leaders of the past have recommended. And self-sufficiency at a personal level is an ideal that many spiritual philosophers have recommended. However, the majority of nations and people have never succeeded in these pursuits for self-sufficiency.

The reason for the failure is the human desire for increased quality and reduced price for goods or services. This can be fulfilled only by focusing our energy on a single or a few items and depending on others for the rest of our needs. This paradigm is referred to as **specialization**. If we as individuals had to build houses, make clothes and grow crops all at the same time, the quality of homes, clothes and food would not be as good as if specialized in just one activity.

In this set of notes on the “The Economy and You!”, we explore the modern economy with an interest in how best to prepare ourselves to become able producers and thoughtful consumers of products and services offered by the modern market.

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1.0 – Fundamental Economics

This section offers a brief, yet broad, understanding of the fundamental elements of the modern economy and how it impacts an individual engaged in it. This understanding will help the reader in better optimizing their economic behaviors by fully appreciating how their individual economic contribution and participation relates to the greater economy. Topics discussed will give an understanding of production and consumption, the need for specialization and role of the currency in the exchange of goods and services.

1.1 – The Need for Goods and Services

Have you ever sat down to think about all the things you need to survive on any given day on this planet?

Assume for a moment that on one fine morning you were just dropped from the sky and you find yourself with nothing but the land, waterways, people, plants and animals around you. You are not exactly sure what you need, but as the day progresses you find a need for water to quench your thirst. You walk up to the lake nearby and fetch some water and take a big gulp of it. You find that it relieves your thirst. By lunch time you are getting a bit tired and hungry. You find a bunch of berry bushes and fruit trees with low hanging fruits. You pluck these fruits and consume them. You feel energetic again. By late afternoon scorching sun rays are making you very uneasy. You find that covering yourself with the leaves around you helps protect you from the sun. By dusk you are getting tired and need to go to sleep. But heavy rains prevent you from sleeping. So you try and find a shelter under the trees and eventually doze off.

Needless to say your first day on this planet was rather rough, but you are a survivor and you got though the day!

By sun rise the next morning you are getting used to your neighbors and they are getting used to you. John, a neighbor who seems well settled, walks up to you and decides to have a chat. You are pleased to meet John. You tell him about being dropped from the skies. He is amazed, but then the conversation quickly sways to your needs. John talks about building a house for you to shield you from the elements. You have seen John's house, so you know what he talking about. As it turns out John is a building contractor. He has a stack of bricks in his yard that he uses to build houses. He hauls them to your site and by the end of the day you have a house to live in. You find the house is way more comfortable than sleeping under the trees. You know you can get used to this quickly. You thank John for building a house for you.

Jack is another neighbor who has a paddy field close by. He comes next to visit you. He introduces you to grains to improve your diet. You seem to like rice and you get used to it rather quickly. And then Teresa, yet another neighbor, has a vegetable garden and introduces you to vegetables. Your diet is getting more elaborate and sumptuous. The other neighbor, Sara, is into sewing and knitting. She brings you a sweater to keep you warm. You are very comfortably settled now.

You know that the generosity of your neighbors will not last forever. Besides now that you have food, clothing and shelter, you find you have spare time on your hands during the day. You are rather bored. You also know that your needs are now too elaborate and diversified that you could not possibly provide all those needs on your own. For one thing, you don't have the talent to make bricks or knit. But you like gardening. And you think you could grow vegetables. Teresa has already told you that she is the only one with a vegetable garden and that there is more demand for vegetables in your neighborhood than she can provide. You have now decided on a career in farming vegetables.

Five months later, you are producing way more vegetables than you could consume yourself. You go over to John's and offer him some of the excess vegetables in exchange for bricks to replace some of the broken bricks in your house. You agree to John's demand that 7 green peppers are worth 1 brick. You then go over to Sara and get yourself a second sweater in exchange for 20 cabbages. You have run out of the rice that Jack brought you the day after you fell from the skies. So you go over to Jack's and get three pounds of rice in exchange for three pounds of carrots.

1.2 – The Need for a Currency of trade

It is now a full year since your, rather abrupt, start on this planet. Things have progressed nicely. You have a comfortable existence and you have found an occupation that allows you to be productive and pay for your other needs. You have come to the conclusion that you are very dependent on other members of your neighborhood for fulfilling your needs. But in turn they are dependent on you for vegetables. So vegetable farming is your **specialization in occupation,** and it pays for your other needs through a form of exchange of goods and services that is known as **barter**.

A few years pass and then one day when you go to exchange cabbages for a sweater, you find that Sara no longer eats cabbages. She has a lost the taste for vegetables. But you have not lost your need for sweaters. Sara does need bricks however, and John still needs your peppers. So you could go over to Johns' and pick up a few bricks in exchange for peppers and then bring the bricks over to Sara and get your new sweater. It does become rather cumbersome and time consuming. You would much rather be able to pick up the sweater directly from Sara.

One evening John, Jack, Sara, Teresa and you got together for a social event. During the conversations you find out that all of you had a liking for a certain precious stone. In fact this stone is rather limited in supply and all five of you had a hobby of collecting this stone. Further you found out that all of you had about an equal amount of these precious stones and that none of you have had any luck in finding any more of these lately. It is almost as if nature has run out of these stones. So we now have a commodity with the following properties;

1) It is in limited supply and yet not too limited. Everyone has an adequate amount.
2) It is impossible to artificially manufacture (counterfeit) this stone. It can be only acquired from one source (in this case nature).
3) It is easy to divide this commodity equally. Each stone is a small enough unit.
4) It is easy to carry around. A few stones could fit in your sweater pocket.
5) There is no difference between one stone and another. At least hypothetically you all agree that each stone is as good as the other and so you assign equal value to all stones.

As it turns out this precious stone is just what we need to eliminate trade by barter. It allows us to put an absolute value on our products instead of always having to define the value of the product with respect to what we are exchanging it for. It also now allows other producers to do the same. Suddenly you have the flexibility to buy whatever you want from John, Jack, Sara or Teresa irrespective of their need for your produce, assuming of course that one or some of them will always want your vegetables and the number of stones they are willing to trade for your vegetables is enough for you to buy the products of others. This stone now becomes the **currency** of trade or what is commonly referred to as **money**.

Over the years different societies have come up with different commodities for currency. Precious metals like gold and silver have historically been commonly used for this purpose. But some societies have also used goats and camels as currency. The modern paper currency has its roots in the gold standard. The paper currency was originally a token to avoid carrying gold around. It was a promissory note that allowed the recipient to exchange it for gold at any time. By 1937 almost all countries had left the gold standard and the paper tokens took on the role of currency without any backing from precious metals.

1.3 – The History of Money

Now that we know the benefit of money compared to trading by barter, let us briefly look at how the current paper money came into being.

While almost all societies recognized the benefit of a currency in the exchange of goods and services or in other words not having to barter, not all agreed on what resources could be used as money. A primary requirement for the choice for money is that it had to be made out of something that is rare. The reason for this constraint is that it is hard to define a value for a commodity with a resource that of itself is not of any value. For example if you decided to use sand as a currency, Sara may offer 1 cup of sand for a pound of carrots, but Jack will go to the beach and get you 2 cups of sand. When John realizes this, he may get you a truck load of sand for a pound of carrots. Basically you could ask for as much sand as you want and people would be willing to pay the price because sand is freely available. The increase in price based on decrease in the value of the currency is commonly referred to as **inflation**.

What if you came up with a resource that is too rare? Let us say that the precious stones in your neighborhood are in extremely short supply. Let us say there is only 1 of them and John had it right now. Now it does not matter how many pounds of carrots you produce or how many sweaters Sara makes, neither of you will be able to sell your produce, unless John wants to buy it. And you could only charge 1 stone for all your sales because there is only 1 stone! This is the inverse of inflation and is called **deflation**. Another problem when you have a very limited supply of currency is that you become dependent on those who have the limited supply. If they decide to hoard the currency, then you are forced to reduce or stop your production. This state of the economy is referred to as a **recession**. A very severe and extended recession is referred to as a **depression**.

So ideally the amount of a currency should be neither too much nor too little. What this optimal amount is can only be determined in the context of a particular economy, because it has to take into consideration the amount of production and the amount of consumption. The appropriate amount now becomes a function of the economic activity at any given time. This understanding of the requirement for adjustment in the amount of money is relatively new in economics. It was introduced by the British economist **John Maynard Keynes** in the early 20th century and is often referred to as the **Keynesian theory** of economics and is the most prevalent and accepted economic system in the world today. Based on this theory a regulatory body (the Federal Reserve in the United States) watches the market for inflationary or deflationary pressures and controls the money supply accordingly. The onus of making a currency of trade that meets the criteria of being rare and yet not too rare falls on this regulatory body and they have the sole authority to print the currency of trade.

If you look at the five properties of a currency discussed in the previous chapter, you can now see why those five conditions can be better satisfied, if we had a way to control the supply of money. If money is tied to a commodity in nature (like the precious stones or gold), then we will be forced to constrain our business activity (production and consumption) to the extent of the availability of this natural commodity. And yet there is no real relation between the amount of business activity that is desired by a society and availability of the natural commodity that we choose for a currency. This artificially imposed constraint can and has historically proved to be an impediment in economic theories of the past.

Prior to the Keynesian theory, most countries used some form of naturally available resource as currency, much like the precious stones in your neighborhood. Gold was a common currency. And since gold was hard to carry around, banks provided a service whereby you could store your gold with the bank and in exchange they provided a paper token which you could use in trade. Such paper tokens are referred to as **commodity money**, because they are backed by commodities like gold. Over time, the banks realized that they were sitting on gold that the owners seldom came to collect. The gold owners were happy to simply trade with the paper tokens. So the banks decided to print new tokens against the gold reserves and offer them as loans. The banks profited by collecting interest on these loans and the loan recipients profited by having money to start their new business activity. This form of banking is called **fractional reserve banking** and the paper tokens thus issued are called **fiduciary money**. The word fiduciary comes from the Latin word for trust, and the bank is effectively *trusted* to have adequate amount of gold should you want to collect your gold with the fiduciary money.

During war times in the 1800s however, governments found it difficult to fund the war with just fiduciary money. Even though fiduciary money allowed the creation of paper tokens for gold that was not solely allotted to that token, there are still statistical limits on how many paper tokens can be issued against the same gold, based on how many people were likely to come to claim their gold at any given time. So the government would replace fiduciary money with what is called **fiat money** or money whose value is determined by the authority (or fiat) of the government.

Economists had taken notice that the issuance of fiat money had a way of generating economic activity that other forms of money tied to the gold standard were not able to, but the prevalent understanding remained that money backed by gold was “real money”. In 1821, Britain became the first nation to switch to a full gold standard. In the 1870s the rest of Europe and the United States also switched to a full gold standard. This lasted until 1914 and is referred to as the **Gilded age**. In 1914 the 1st World War gave way to fiat money again.

During the half a century or so of the Gilded age, there was tremendous controversy on the use of the gold standard. Those who had gold effectively controlled the economy. If they so chose, they could bring the economy to a grinding halt by simply not engaging in trade. This had a domino effect whereby paper token holders wanted to get their gold back all at the same time, often referred to as the **bank panic**. This would cause a banking catastrophe in the fractional reserve banking system.

Yet in the absence of an alternative, by 1928 the gold standard was established yet again after the 1st world war. But by 1933 when President Franklin Rooselvelt took office, the unemployment rate had reached 25%, a bank panic was underway and America was in the middle of a depression! The time was ripe to do away with the gold standard. By 1937 not a single country subscribed to the gold standard. The United States went back to the gold standard after the 2nd World War, for international trade, but that too ended in 1971. That was the last of the gold standard.

The most common form of currency today is money printed by a government in accordance with the Keynesian theory of economics. However, this new system puts a lot of pressure on the government to constantly monitor market activity to determine the amount of money production to avoid inflationary and deflationary pressures.

The primary benefit of the Keynesian system is the ability to avoid depressions by having a tool at the governments’ disposal to generate economic activity. To give credence to this theory, it must be noted that prior to the introduction of the Keynesian system, the United States had eight recessions that degenerated into depressions (1807, 1837, 1873, 1882, 1893, 1920, 1933 and 1937), where as subsequent to the introduction of the Keynesian system, the United States has had nine recessions, none of which have degenerated into a depression (1945, 1949, 1954, 1956, 1960, 1970, 1974, 1980 and 1990).

A disadvantage of the Keynesian system is that money can no longer be perceived as an entity that has a naturally maintainable inherent value. This is a distinguishing factor that must be borne in mind when considering investment options. Money under the Keynesian system is merely an instrument in trade, whose value is dictated and altered from time to time by the government. Hence by its very definition, it cannot be expected to maintain a fixed value over time.

1.4 – Human Action

Over the years you have become settled in your new neighborhood and you get along well with John, Jack, Teresa and Sara. Your vegetable garden is more stable now and requires less effort on your part because you have optimized your production techniques. You have some extra time to ponder about economics and how and why economics is a major aspect of human civilization. Your experience thus far provides a solid foundation for understanding the need for and the process by which the wheels of economies churn.

As you think back to your first day on this planet after being dropped from the sky, you realize that your current standard of living is far better than on that first day. You have your neighbors to thank for providing you with certain goods and services that made an impact on your standard of living. In turn you would hope that they have you to thank for eliminating the scarcity of vegetables.

You now recognize that you have become dependent on your neighbors. What would happen if John left the neighborhood? You would have no one to go and buy bricks from. And if John was the only one buying your vegetables, then you would find yourself in an even worse situation. The dependency that you have developed has its obvious risks. And yet you don't seem to think twice about it, because you recognize that the comfort provided by the bricks in your house is worth taking a risk on John's existence. The same applies to the dependency on Jack and Sara.

What about the dependency that John, Jack, Sara and Teresa have on you? Yes it is true that they were living happily long before you jumped out of the skies. But now they have gotten used to a greater variety of vegetables at a cheaper cost. Teresa can no longer charge what she likes, because you are willing to sell your vegetables for less than hers. John, Jack and Sara would always want to reduce the number of precious stones that they have to give in exchange for vegetables or anything else for that matter. Your presence in competition with Teresa allows them a better deal for vegetables. So you have made yourself a valuable, if not indispensable, member of the society and people are now dependent on you, much like you are dependent on them.

Like science, economics is based on logical derivation from established facts. Economics however has an advantage over science in that it easier to conceive of, and relate to, the established facts because we have the ability to fully appreciate and understand the nature of the human being through introspection. We don't need to hypothesize as to how a human being will act under a certain circumstance. We simply have to ask ourselves what we would do under those circumstances. Of course there will be a few rare individuals who don't fit into the general mould, who will act differently from the common person. But those rare individuals will seldom be the driving forces behind the economy and their anomalies will not impact our judgment on cause and effect.

Understanding and analyzing human action is an important and indispensable tool in economic matters. Whether you are in the market looking for a job, or you are in the market to sell a product, an appreciation for why someone will prefer to interact with you over someone else will allow you to tune yourself to meet the needs of that person.

1.5 – Supply and Demand

Now that you have established yourself in the neighborhood economic eco-system, it is time to try and see if it is possible to get more precious stones for your vegetables today than you got yesterday. There are two obvious way to fulfill this desire. The first would be as simple as increasing the number of stones that you demand John, Jack and Sara give you in exchange for your vegetables. The other would be to try and produce more vegetables than you are producing right now and hope that John, Jack and Sara will buy more than they currently do if you had more on your shelves.

It turns out the obvious options you thought about would work as long as no one else was selling vegetables, but since Teresa is also in the market selling vegetables, your options are not that easy. Let us use an example to demonstrate the problem;

Assume John is willing to trade no more than 5 stones for 10 pounds of carrots.
Assume Jack is willing to trade no more than 10 stones for 10 pounds of carrots.
Assume Sara is willing to trade no more than 15 stones for 10 pounds of carrots.

Assume Teresa is willing to sell 10 pounds of carrots for no less than 10 stones.
Assume you are willing to sell 10 pounds of carrots for no less than 5 stones.

Let us now draw a graph of the price against quantity for the buyers and then for the sellers.

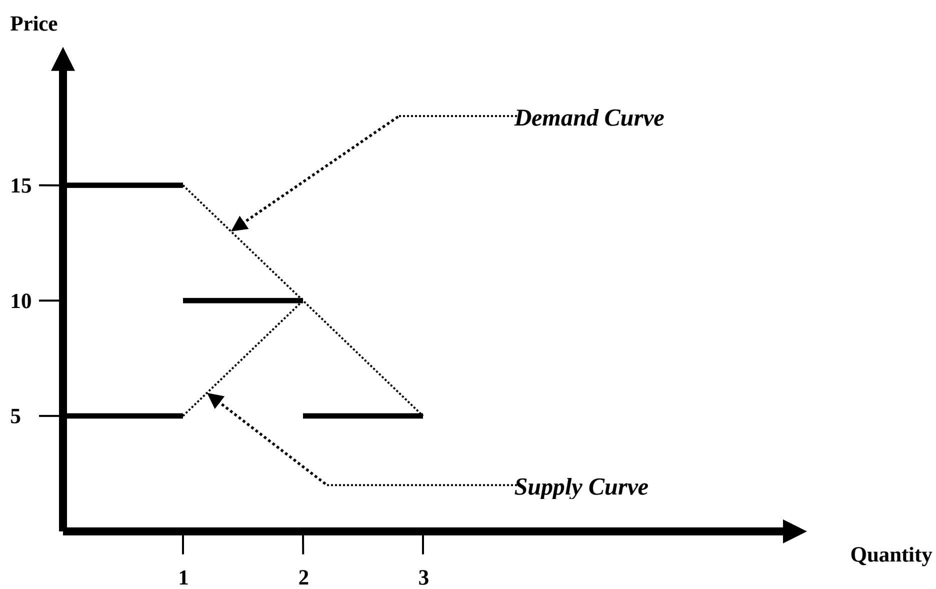

Fig 1.5.1 – Supply and Demand Curve

There is only 1 buyer willing to pay 15 stones (Sara). There are 2 buyers willing to pay 10 stones (Sara and Jack). And there are 3 buyers willing to pay 5 stones (Sara, Jack and John). These 3 data points constitute the ***demand curve*** below.

There is one seller willing to sell for 5 stones (yourself) and there are 2 sellers willing to sell for 10 stones (Teresa and yourself). These 2 data points constitute the ***supply curve*** below. Where the 2 graphs meet will dictate what should be the price for 10 pounds of carrot.

So it looks like the sale price is going to be 10 stones for 10 pounds of carrot. Even though you were willing to sell for 5 stones, the market allows you to sell for 10 stones. And John will have 2 options – don't buy carrots or pay twice more than he was originally willing to.

It must be noted that while the supply and demand graph in determining price is widely accepted in economic circles, there are those who dispute this theory. One alternative theory is that the price of a commodity is determined by the cost of production and the demand only determines if the commodity can be sold. Nevertheless, the application of the supply demand curve for price estimation is a ubiquitous technique.

1.6 – Mechanization to increase productivity

Now that you have determined that you can get 10 stones for 10 pounds of carrot, you are happy that you can get twice as much as you were expecting. This is because the demand for carrots exceeded the supply. But you recognize that your old friend, John, who helped you with a house when you first fell from the sky, has to live without carrots because he simply can't afford the price. This disturbs you. After all you owe a lot to John for his generosity. You consider offering carrots in charity to John. But John refuses to accept your charity. He thinks it is just not right to take carrots for free from you. What is your option now?

You could increase the supply of carrots. At the moment Teresa and you produce only 30 pounds of carrots each. If you could triple your production to 90 pounds of carrots, then it would be the equivalent of two new suppliers in the market producing the same amount as Teresa and yourself currently do. The supply-demand graph in fig. 1.4.1 would then intersect at 5 stones, and your old pal John would actually be able to afford carrots after all.

You are already cultivating as much land as is humanly possible. Though tripling production is a grand idea, it seems impractical. Well, at least until you meet Bob from the village next door. Bob makes tractors for a living. And one evening he comes over with one and shows you that his machine can do what you do in a full day, within an hour. This means that if you could use Bob's tractor for three hours everyday, you can triple your production and thus meet your goals of making carrots affordable for John. But how much would it cost to buy the tractor?

You negotiate with Bob for a good deal. Unfortunately Bob wants a 1000 stones for his tractor. He is not willing to sell it for any less. And you don't have a 1000 stones to spare. But Bob comes up with an idea – He will give you the tractor on 3 hour lease for 2 stones. You go back home and work out that you could still afford to sell carrots for 5 stones for a 10 pound bag even if you had to pay Bob 2 stones everyday. You walk up to Bob's place and call it a deal!

A couple of months later you start going to the market with 90 pounds of carrot each day instead of 30 pounds. You mark down your price from 10 stones to 5 stones to accommodate your pal John. Up until now Sara bought 30 pounds of carrot from Teresa and Jack bought 30 pounds from you. But when Jack comes to your store after you mark down your price, he is pleasantly surprised. He can't contain his excitement. He rushes over to John and Sara and share the great news – carrots at half price! Sara gives up on Teresa and gets her 30 pounds from you instead and John buys the remaining 30 pounds.

Well you managed to help John. But now Teresa can no longer compete in the carrot market. She does not have the production efficiency that you have. She has to either sell for 5 stones to win Sara back or she has to close shop and do something else. If her production costs exceed 5 stones, then she has no option but to close shop and do something else.

When you combine these production efficiencies with markets without borders (free trade between countries), what you have is a situation where people are forced to change their occupations to survive. Those in favor of deregulation, free market economies and production efficiencies argue that those who cannot compete will inevitably find other activities in which they can be more efficient than others. Those opposed to production efficiencies and free markets, point to the unsustainable effects of industrialization and automation such as global warming and pollution.

1.7 – Generating capital and growing a business

Now that your desire to ensure that John was able to afford carrots has effectively eliminated Teresa as a competitor, you have suddenly become a monopoly in the carrot business. Teresa could go to Bob and see if she can also hire his tractor and bring the prices even lower than 5 stones, but she may be of the belief that the pollution created by the tractor will be too hazardous to the environment and so on moral grounds she may refrain from employing your techniques in mass production and hence not engage in competition with you. She may decide to take up writing short stories as a career instead. After all that is an area where mechanization will never likely throw her out of business, but she will still need carrots for her consumption and she will have no alternative but to come to you for them, since you are the monopoly in carrot production at the moment.

It suddenly dawns on you that you can produce 10 times more carrots than you are producing right now if you had the tractor all day instead of the 3 hour lease that you signed up for with Bob. Leasing the tractor for longer hours is too expensive. You would much rather buy it outright from Bob. But you need 1000 stones to do this. That is the first problem. The second part of the puzzle is that the demand for carrots is saturated in your neighborhood. If you were producing 10 times the number of carrots you are producing right now, you will have to find a new market for these carrots. Bob, the tractor vendor, had mentioned to you that the supply for carrots in his neighborhood was far less than the demand. Perhaps you could penetrate his neighborhood. But then you will have to invest in trucks to transport your carrots. That will require even more stones.

You have an epiphany! What if you formed a partnership with John, Jack, Sara and Teresa and started a private company. You can give ownership of the company to each of them to the extent of their individual contributions in precious stones. This is referred to as **private investment**. It is a common way for generating funds for small start up companies. If each of you invested 500 stones in the company, you will have 2500 stones. That should allow you the tractor and the truck with a few stones to spare for future incidentals. An investment company often referred to as a **venture capitalist** may also recognize that you are more efficient at growing carrots than most others and decide to invest in your company in exchange for part ownership. They, like your neighbors, are expecting that the company will make a ton of precious stones over time and that as part owners of the company, they stand to benefit from the company's future success.

Over the next few years your production grows in proportion to the capital investments from your neighbors and the venture capitalist. But you recognize that there is even more growth potential. You see that you have access to markets that still have a shortage of carrots, but you need even more capital to grow. You need to buy more land, more tractors, more trucks, invest in remote office space and the like. At this point you can make the company a **publicly traded company**. Ownership in a company is often measured in the number of **shares** that an individual owns. The company will allow a certain number of shares to be floated on the stock exchange for public ownership. Individuals who have been following your success in the carrot industry might decide to buy your shares since they believe in your product, in your production efficiencies and your management style. They have faith that by buying your shares, your carrot company will generate more revenue and in turn the share prices will go up. Share trading is governed by the same rules of supply and demand. If the demand for a stock is high, the stock price is high.

Another way for a company to generate capital is to issue bonds. **Bonds** are a form of debt where the issuer promises to repay the bond purchaser after a specified length of time along with a specified amount of interest. Bond holders have priority over shareholders (meaning bond holders get paid first and whatever remains will go to shareholders) to claims on the company's assets should the company liquidate prior to repaying the bonds.

A company may also opt for a **bank loan** against company securities.

2.0 – Career planning

In the previous section we discussed, in broad terms, the concepts of production and consumption in the modern economy along with the role of the government in the issuance of money that can be used as a currency or an instrument of exchange in trade. In this section we will concentrate on topics that will help in identifying what role you can play in being a productive part of the economy. This will include the need to identify your aptitude and interests early in life and how to proceed with gaining further competence in those areas. We will then discuss some of the options in getting into a productive career along with the need and avenues for continuing education throughout your career.

2.1 – Identifying your niche

When you fell from the skies you had considered several possibilities to make a living. You decided on vegetable production for three reasons;

1) You had the skill or aptitude for vegetable farming.
2) You had an interest in producing vegetables.
3) The demand for vegetables exceeded the supply of vegetables.

You could have decided to produce bricks, sweaters or rice and compete with John, Sara and Jack respectively. Instead you chose vegetable farming because it met the above three criteria more than anything else did.

As it turns out the criteria you used are very valuable and applicable to everybody in determining a career path. The skill and interest you have in a particular field will play a significant role in your success in that field. The demand for a particular skill will determine the economic benefits you receive in return for your service in that field.

The modern education system attempts to identify individual aptitudes and interests by offering subjects that form the basis of various fields. If you excel in a particular subject relative to your classmates, then that is usually a sign that you have a relatively better aptitude in that subject than others. Sometimes your interest in a particular subject may motivate you to study that subject a little harder and thus you may gain a better aptitude for it. So interest and aptitude can aid each other, but that is not always the case. Sometimes you may find that you have no aptitude for a subject you are greatly interested in. And other times you may find you have no interest in a subject you have great aptitude for. In my opinion, in consideration of the competitive nature of the market, you will be wise to choose a subject where you have a natural aptitude when deciding on a career path.

In parallel with identifying the subjects you enjoy and excel at the most in school, you should do some market research in finding out the fields that will be in demand into the foreseeable future. The best way to do this is to go to the library and make a list of advertisements for jobs in the local newspapers. Classify these jobs into different fields and find out which field has the most number of job listings. This will tell you the jobs most in demand currently. Then you can read up on the job predication for that field over the next decade or two. This will give you a feel for the market in that field.

Once you have a list of subjects that you excel in and the list of marketable fields, you are now in a position to select that subjects that relate to the marketable fields. Ideally there will be an adequate overlap, so that you have a few options that you can pursue, but if that is not the case, don’t be discouraged. It is not the end of the world. Even if you don’t think you are interested in most of the high school subjects that are offered, it is very likely that over time, you may find that you are interested in the practical applications of a subject. One way to examine this possibility is to negotiate an internship with businesses in your neighborhood.

Narrowing your niche in your high school years will give you a distinct advantage by settling early into a career path. So it is very important to engage in this exercise in your teenage years. Even if you are not fully successful in identifying a niche, the fact that you engaged in attempting to identify one will allow you to eliminate and narrow your focus for the future.

2.2 – Acquiring the relevant skills

Once you decide on your area of specialization, it is time to acquire an advanced level of knowledge, best practices and regulations in that field. Getting formal accreditation from a recognized educational institution as having completed a post-secondary diploma or degree in that field will be almost always essential to getting a job offer. Formal qualifications are also mandated by government regulations for most careers.

In general trade certificates are 2 year programs offered by technical colleges on successfully completing a high school diploma. Government licensing regulations may require further on the job training under the supervision of already licensed trades people. Trade certificates cover professions like plumbers, electricians, carpenters etc.

Professional courses that require more theoretical background are usually offered as 4 year programs from Universities. Government licensing regulations may require on the job training under the supervision of already licensed professionals to get a license. Professional occupations that require university degrees are teaching, engineering, nursing, medicine etc.

While almost all professions that require extended training are regulated, some fields have escaped the notice of regulatory bodies. Individuals without formal training have been able to work in these fields purely on the merits of their knowledge and skill. Computer science is a classic example. It is a relatively new profession and so far has not been regulated by any government or society. There is a move to regulate computer programmers by the engineering bodies, but so far this has been unsuccessful. The primary problem with regulating this field is that computer programmers are involved in a variety of fields. A programmer writing a program for the banking industry is better regulated by the banks, whereas a programmer writing a program for a control system is better regulated by the engineering society.

In general however, it is safe to assume that the profession you choose will be regulated and formal qualifications will be required to meet regulatory standards.

Gaining formal qualifications can be expensive. If you are under financial constraints the following alternatives should be considered;

1. **Scholarships** - Most educational institutions have scholarship programs for students without access to financial support. If you meet the prerequisites to enter a college or university but cannot accept an offer on financial grounds, then you must approach the institution and pursue scholarship options.

2. **Student Loans** - Another option is accept a student loan given by the government. These are loans that can be repaid after you complete your education.

3. **Private Study** - Yet another option is to study the course materials privately and appear at the formal exams that the educational institutions offer its regular students. This can be substantially cheaper than enrolling for the classes in the educational institution. The course material text books can be purchased from your local bookstore. The internet will be an invaluable source of reference and study. The Accelerated Learning Series (www.alearn.net) is primarily designed for individuals who wish to pursue this path.

2.3 – Entrepreneurship vs. Employment

When you first fell from the skies, you had decided to take up vegetable farming as an occupation and you decided to do this by starting your own vegetable garden. This meant that you had to go look for a piece of land that was rich enough for vegetable growth. You also had to buy all the tools needed to cultivate. And when the harvest was finally ready, you were also responsible for marketing.

There was an alternative that you could have considered. Teresa was already in the farming business. You could have worked for her for a daily wage. This is referred to as being **employed** by an employer. By doing so, you would help double her productivity and get a fixed **wage** in return and you would save yourself the burden of looking for land and having to find the market for your vegetables.

The option you chose turns out to be more difficult than working for Teresa. It requires more initiative on your part and you are also susceptible to more risk. What if the land you chose for vegetable farming turned out to be really bad for carrots? You would end up loosing all the money you used to set up your business. But if you are successful then the returns you get for your efforts would be far greater than the daily wage Teresa offered you.

Starting your own business, like you did, makes you an **entrepreneur**. Being an entrepreneur has tremendous risks, but the benefits can also be substantial if you are successful. While I would not want to discourage anyone from attempting to be entrepreneurial, I must warn you of the difficult path ahead. If you work in your trade of choice for a while and then decide to start your own business, then at least you have less to worry about. For one thing, you know the work and you only need to pick up the business aspects of investment and marketing.

Generally it is recommended that if you decide to start a business, you start at a pace where the risks are measured and manageable and then grow as your business grows. For example if you take up plumbing as a career, you could print business cards with your home phone number and advertise at the local community centre for free. In this case you will not require an office space and you don’t incur any charges for advertisement. As more and more people get to know how good you are at plumbing, the number of phone calls to your house would become unmanageable. At this point you might consider getting a second phone line and maybe a secretary to monitor the phone and book appointments. As business grows even more, you may want to hire other plumbers. And now you will need an office. Notice how you are growing with the business.

The approach I have just discussed is vastly different from getting a huge bank loan and getting office space all ready, in anticipation of a business growth. If you assumed a huge bank loan, then you have to worry about paying the interest on that loan. Besides you are wasting all the office space up until the point that you have a need for other plumbers. And it may turn out that the volume of business you have in your neighborhood does not warrant additional plumbers.

2.4 – Continuing Education

Once you settle into the workforce as an entrepreneur or as an employee you will still need to continue keeping yourself abreast of changes and new technology related to your area of expertise. Failure to do this will make you less marketable in a competitive environment. Customers are not obliged to stay loyal to you especially if they can get someone else to provide the same service more reliably and at a cheaper cost.

There are many avenues that you can use to pursue continuing education. Enrolling for an evening course at the local educational institute will force you to be disciplined about completing the course work. But these courses can be expensive. You may decide that you prefer a self-study approach. This will require more discipline on your part, but will work out substantially cheaper.

The internet is now becoming an unparalleled repository of knowledge and information. Using a search engine, you could search for articles on any topic and chances are you will find the most current thoughts on the subject. Most public libraries are now providing free internet access to its members. Utilizing this service and dedicating a certain amount of time each day for this study can offer substantial rewards without having to spend a substantial amount of your savings. The internet also provides several discussion groups on various topics. This can be an interactive experience where you can actually discuss an issue with people who are well versed in the subject.

While it is true that the internet is more efficient in disseminating and accessing information, spending time at the library still has its merits. The local library continues to provide an atmosphere that is conducive for learning, which may be difficult to have at home or at work.

Subscribing to journals in your field is another way to keep in touch with developments in your field. Subscriptions can be expensive though. If there are others in the community who are interested in the same journal, you could approach the local library and request that they subscribe to it.

3.0 – Financial Management

In the first section we discussed concepts in production and consumption in the modern economy. In the second section we discussed how you can be productive in the economy. In this section we will discuss strategies to tune your consumption patterns such that you can ensure, as far as is humanly possible, that the returns you get from your productive ventures will sustain your lifestyle until the very end of your life. Concepts you have already studied in the previous two sections have prepared you to better understand this section.

3.1 – The Need for Savings

These days the economy is many millions of times bigger than when you first fell from the skies. In those days, the only things you could buy were sweaters, rice, vegetables and bricks. But now if you go to a supermarket you will see that there many aisles filled with all kinds of things that you could potentially buy with your money. You were actually instrumental in this growth of the economy. Remember when Teresa decided to take up story writing as a career because you displaced her out of vegetable production by being more efficient in your ways of production? Well, now there are many more people on this planet and mechanization has displaced them from traditional occupations and they have now taken up other trades and they are producing new commodities that you couldn't even have imagined in the past, much like how Teresa is now selling story books.

You can buy so many things now. Your only limitation is the amount of money you make selling carrots. If you so desire, you can spend every penny you make in the modern markets. No one would prevent you from doing this. In fact all the people who have a product to sell will encourage you to spend your money. Besides, you like these new products. You are very tempted to buy them. So why should you restrain yourself?

Remember that now you are really used to the house that John built for you. You will definitely need that house for the rest of your life. Remember also that rice has become a staple diet for you and you will need that too for the rest of your life. The clothing that Sara has been providing for you is also something you will need for the rest of your life.

But can you produce and sell carrots for the rest of your life? As you get older you will find that is harder to work all day at the farm. Your health will become weak and you will not be as productive as you used to be. This means you have to save for your old age. No body will be there to provide for you if you don't have any money for their services when you are old. In the past generations, parents counted on their children to provide for them. But nowadays, that expectation is no longer entertained. There is an expectation now that the government will provide a pension to her citizens in old age. But by the time you are old, there is a very good chance that the government will have no money in her pension funds to support you. So it is up to you to start saving for your retirement as early as possible.

3.2 – Budgeting Expenses

The first step towards saving requires that you budget your expenses. This involves identifying what things you will definitely need every month and how much you are willing to spend on these needs. The table below gives an idea on how you can come up with a list of items you need every month and how much you intend to spend on these items.

	Week 1	**Week 2**	**Week 3**	**Week 4**	**Total**	**Budget**
Rent						$600.00
Food						$200.00
Clothing						$50.00
Transport						$100.00
Education						$100.00
Telephone						$50.00
Entertainment						$100.00
Miscellaneous						$50.00
Charity						$300.00
TOTALS						**$1550.00**

Fig 3.2.1

Hopefully you are earning more than your basic requirements. If that is not the case, you will definitely have to either increase your production or decrease your consumption. There is no alternative to either of these options. Living on borrowed money is not sustainable and should never be entertained as means of sustaining basic requirements.

The next step involves monitoring your compliance to the budget you have allotted for yourself. This requires a substantial amount of discipline. Every week you will have to categorize your expenses and fill out the table above. This practice will give you a good idea on whether your initial budget allocations are realistic for you. If your estimations were unrealistic, it should be self-evident within a few months.

The difference between your income and your budgeted expenses becomes your savings. A fundamental rule in personal financial management is that your expenses should not be a function of your income. Your expenses should be a function of only your needs. If you abide by this rule, you will find that saving money is not a particularly difficult task.

Over the span of year or so, you will have an accurate idea on what is required to sustain your needs in any given month. At that point you can avoid the bookkeeping labor above and instead opt to simply transfer your anticipated monthly savings into your savings account and only keep you budgeted allowance in the account you use for your monthly expenses.

You can always optimize the technique suggested here to be more appropriate to your needs and circumstances. But the fundamental rules of savings should never be abandoned. The first rule is that you stick to your budget. The second rule is that your budget is a function of your expenses and not your income.

3.3 – Investments Strategies

Now that you have mastered the art of saving your money, what do you do with the money you have saved? There are numerous options available to you to invest your money in the modern economy. In this chapter we discuss some of the common options.

Please note the hypothetical figures used in the discussion are purely for illustration purposes. They are NOT meant to reflect true market movements!

This first thing to remember when it comes to investing is that you are trying to maintain or increase the buying power of your savings over time. For example if you managed to save $50,000, at today's market value, that will probably buy you a small plot of land in your neighborhood.

If you keep the $50,000 dollars in your house for the next 20 years and then decide to buy the same plot of land, you will very likely find that you can no longer afford to do so, because the plot of land has appreciated many times in its value. For illustration purposes let us say in 20 years the value of the same plot of land is $200,000. So the only way you could have maintained your buying power is if you had some way to convert your $50,000 over a 20 year period to become $200,000. This process is the essence of investing.

One option is the keep your money in a bank as a term deposit and earn a nominal compound interest over the next 20 years. The formula used to calculate compound interest is $(P*((1+R/100)^N)$ – where P is your investment amount also known as "principal", R is the rate of return as a percentage and N is the number of years you keep the deposit with the bank. So if we kept $50,000 for 20 years at an average interest of 5%, at the end of 20 years our investment will be worth $132,664. This is still less that the amount required by the plot of land. But it is certainly better than holding on to the cash. Note also that the government places a tax on interest from your savings. So your actual balance would be less than $132,664.

The Bond market is yet another conservative option. As discussed in section 1.7, Bonds are much like Bank investment certificates, but they tend to offer slightly better rate of returns than banks to account for the grater risks associated with the bond issuer.

Yet another option is to invest your money in the stock market. The problem with this option is that it a difficult task to know which stock is worth investing in. The market is so full of speculation (or traders guessing on which stock has greater potential in value rise than others). The major stock companies now offer stocks that represent entire market sectors. These are sometimes called index stocks. These are safer bets for a conservative investor and have a better chance of maintaining or bettering the buying power of your savings.

Precious metals (eg. Gold, Silver etc.) and other commodities have also been known to maintain buying power over extended periods.

Investing in land is also a good option. After all you already know that you will always need a place to live. So ensuring you have a plot of land where you can build your house is a good investment.

Ideally you will want to diversify your investments into the sectors discussed above and others that you think are bound to rise in the future. You should also put percentage weights in this diversification that reflects your confidence in a particular sector.

4.0 – Conclusion

The “Economy and You!” was designed to offer an understanding of the modern economy and how an individual’s participation impacts the individual and others in the economy. The motivation and necessity of participation in the economy lies in the merits of specialization. We cannot practically satisfy all our needs individually. We need the products and services of others. And to pay for these products and services, we must be able to offer one or more products or services in return. By understanding the dynamics of this enterprise, one can better appreciate the obligation and goal of being a participant in the economy.