Virtonomics Tutorial

by goto64

virtonomics.com

1. Introduction

This is a tutorial for the online browser game <u>Virtonomics</u>.

The tutorial assumes that you have already created an account and selected a realm. When creating the account, you have the choice of accepting a gift from your uncle, or starting with an empty company. This tutorial assumes that you are starting with an empty company. This is not to say that taking the gift is a bad idea. However, the gift can be several different sets of subdivisions so it would be more difficult to write a tutorial based on that. Even if you take the gift, you can probably still use most of the tutorial, but your timing of when to build what will then be different.

Once you have finished creating your account, log in to your chosen realm.

When you start your new company, without taking the uncle's gift, the game will force you to create an office somewhere. This is not optimal, as you really need to do some research before you can decide where to create the office. So just pick whatever location you like, and select the smallest possible size (read section 3.2 if you need help). You can always close the office again, if it turned out to be a bad location.

2. Basic game concepts

2.1. Corporation – Company – Subdivision

I have already used the term subdivision above and you may be wondering what that means exactly. So let us just define a few terms first:

- Company – Every player in the game is the owner of a company. Every player's company has a name which is chosen by the player. However, there are also some companies owned by non-player-characters (NPCs). The NPC companies are typically referred to as "independent suppliers" or "local sellers" and have names like "Independent Ltd."

- Subdivision – A company is divided into a number of subdivisions. A subdivision can for instance be a store, a factory, or a farm. A subdivision is located in a city. Your company can have subdivisions in as many different cities as you like, all over the game world.

- Corporation – Several players can band together and form a corporation. This is similar to guilds in other online games.

2.2. Introduction to the turn-based mechanics

Virtonomics is a turn-based game. Each turn takes one real-world day. In game time, one turn is a week and 52 turns is a year. The turn update takes a couple of hours during which the game will be unavailable (this happens around midnight European time).

Many of the actions you can perform in Virtonomics do not have an instantaneous effect. For instance, when you buy some goods for a store (supply), the goods do not arrive immediately. You are just planning the supply purchase, and then during the turn update the purchase will actually happen. Later we will look in more detail at exactly what happens during the turn update and in what order.

2.3. Game interface basics

The first thing you will see when you log in, is a list of your subdivisions. The list now only contains your office. The screen has other interesting elements though. Let us go through the most important ones.

At the top of the screen you have the main menu bar. When you highlight a main menu item with the mouse, you will see a number of menu sub-items. The menu bar is visible at all times.
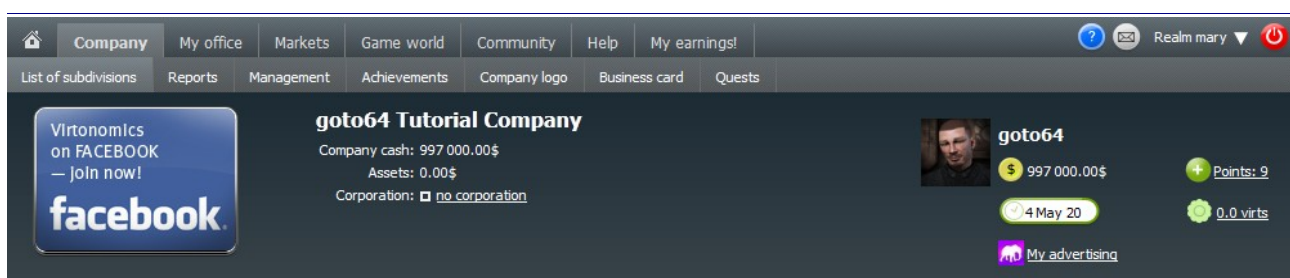

Illustration 1: Menu bar and company information

To the far right of the menu bar, you have three buttons, the most interesting one being the messages button (with the letter icon). When you have unread messages, the button flashes yellow. You can

always click on the icon to see a list of your messages.

Below the menu bar you will see some basic information about your company. "Company cash" is how much money your company has available in cash. You start out with 1 million.

"Assets" shows you the total value of your company. This is the total value of all your cash, buildings, equipment and stock.

To the far right, you can see how many game points and virts that you have. For now, you probably have none of those. Certain types of subdivision and certain game services can only be purchased with game points. You can purchase game points with real money, but it is also possible to obtain them in-game by participating in contests and tenders (more on this later).

Virts are another currency. One virt can be converted into one game point. However, you can also give virts to other players or use them to extract real money from the game. Use of virts will not be covered any further in this tutorial.

2.4. Top manager qualification

Understanding the concept of qualification is very, very important for you to be successful in Virtonomics, so I urge you to read this section thoroughly, even if it is terribly long and boring.

Your game character (often referred to as the top manager) has a number of qualifications and each qualification has a level. Have a look at your current qualifications by selecting "My office" → "Qualification" from the game menu at the top of the screen. To start with, all your qualifications will be at level 1.

Qualification

Depending on his/her qualification level ⬀wiki, the player can manange large and high-tech enterprises.
If a player's qualification level is not high enough, then **enterprises efficiency** will drop, causing expenses to grow and labor productivity to go down. As result, the expenses will grow, labour productivity, on the contrary, will go down.

You can **buy game points** for real money, and convert them into qualification or virtual money.

Points available for converting into qualification: 9

Mining	1 ▲	influences the efficiency of mines and oil wells	0.00%
Livestock	1 ▲	influences the efficiency of stock-farms	0.00%
Marketing (advertising)	1 ▲	influences the efficiency of advertising in offices and stores	0.00%
Science research	1 ▲	influences the efficiency of laboratories	0.00%
Production	1 ▲	influences the efficiency of factories, mills and sawmills	0.00%
Fishing industry	1 ▲	influences the efficiency of fishingbases	0.00%
Agriculture	1 ▲	influences the efficiency of farms and plantations	0.00%
Services sector	1 ▲	influences the efficiency of the enterprises specializing in services	0.00%
Commerce	1 ▲	influences the efficiency of stores	0.00%
Management	1 ▲	influences the efficiency of offices	0.00%

Illustration 2: The qualification page as it looks when you have just started a company

Your qualification determines how many workers you will be able to manage efficiently in subdivisions of different types. The only exception to this rule is the marketing qualification, which instead determines how much advertising you are able to do.

Your qualification does not limit the number of workers you can hire at a subdivision. You can always hire as many as the subdivision has room for. However, your qualification limits how many

you can manage efficiently. If you hire too many workers at a subdivision, then they will work with low efficiency. At manufacturing subdivisions, this means that they produce less goods as well as lower quality goods. At stores it means that the store will sell less goods. Since workers are paid a salary, it can be a costly mistake to hire too many, as you will then have a lot of salary expenses but get very little work done for that money.

It is important to note that how many workers you can manage also depends on the quality of the workers. Higher quality workers put a greater strain on your qualification capacity. In other words, you are able to manage more low quality workers than high quality workers. While your qualification is low, it is probably wise to only hire low quality workers. Later you will be able to handle a higher quality work force.

You also need to know that there is a difference between how many workers you can manage in a single subdivision and how many workers you can manage in total in all subdivisions of that qualification area. As a rule of thumb, you can always manage at least twice as many workers in total, as you can manage in a single subdivision. The game does not tell you exactly how many workers you can handle, but it does give you some hints. More on that in later chapters.

After every turn, you will gain some experience in the qualification areas that you actually make use of. So for instance if the only subdivisions in your company are offices and stores, and you are not doing any advertising, then you will only gain experience in the management and commerce qualifications. If you buy a factory, then you will start gaining experience in production as well, and so forth.

Whenever you have gained 100% experience in a qualification, the level will increase by one (very similar to character progression in some RPGs).

The amount of experience you gain in a turn, depends on how close you are to using your current qualification to the max. So if the number of workers you have hired is very close to the limit of what you can handle, then you will gain a lot of experience. However, you also run a greater risk of going over the edge and losing efficiency. Once you understand the system, it may well pay off to start taking some risks.

You can also increase your qualification levels by spending game points on it.

3. Your first day in Virtonomics

3.1. Doing market research

One of the first things you should do in game is to open a store. A store sells retail goods to consumers in the city where it is placed. Stores are generally considered the easiest way for new players to make a good profit early on.

However, before deciding on what city to open a store in, you really should do some market research. Good market research is essential to success in Virtonomics, but also one of the most time-consuming activities.

From the main menu select "Game World" → "Reports". On these pages you can find a lot of information about the current state of the game world. This is where you will probably be doing most of your market research. By default the city retail section is shown. This is exactly what we are interested in right now. You can jump to other reports via the tabs on the page.
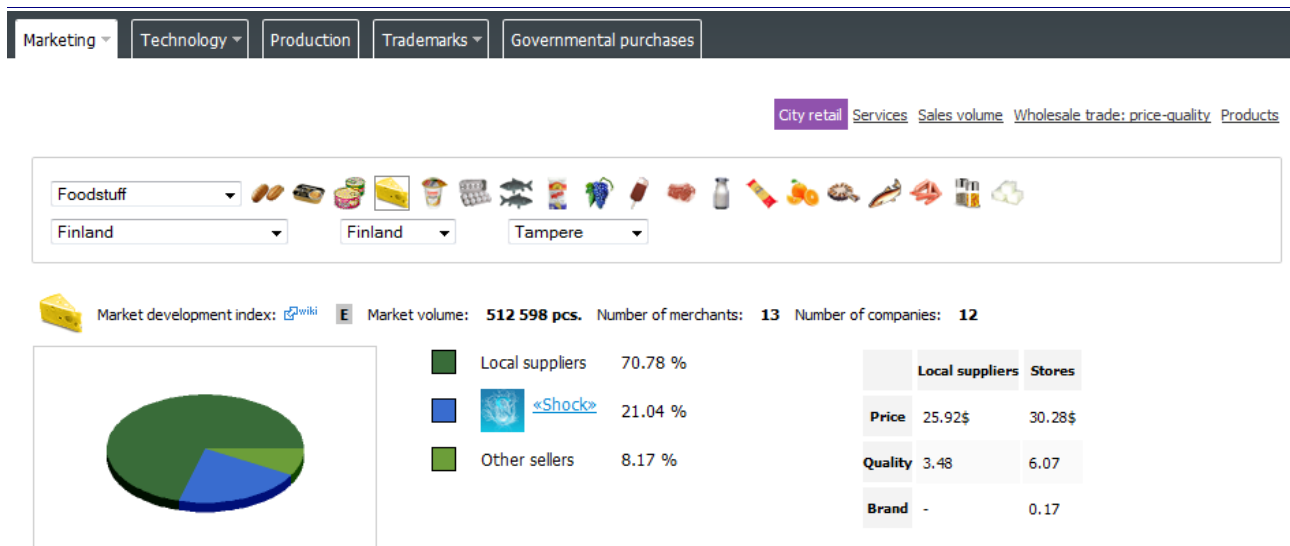

Illustration 3: The retail marketing report for cheese in the city Tampere

On the city retail page, the top-left dropdown box lets you select a product category. If you sell goods from different categories in your store, then each category will have its own department. In a small store (which is what you will be creating) it is probably inefficient to have more than one department. So what you will be looking for now, is a product category that looks like it could be profitable in a specific city. I would recommend that you go for a low-tech category like foodstuff or clothes for your first store, as these tend to be the easiest categories to compete in.

Let us look at a product in a specific city. From the category dropdown select any category, and then to the right select one of the product icons. From the dropdown boxes below the product category, select a country, then a region and finally a city in that region. Now you will see information about the selected product in the selected city.

One of the first things to look at is the market development index. This goes from "E" to "AAA". "E" means that the demand is much higher than the amount supplied by player companies. "A" means that the demand and supply are about equal, while "AA" and "AAA" means that the supply exceeds the demand. In markets that are "A" and above, you will be facing tough competition from other players. So I recommend that you try to find a market where a lot of products in your category

of choice are "B" and below (preferably "E" really).

Use the information above to select a city and a product category for your first store.

3.2. Renting an office

Now that you have chosen a city for your first store, it is time to create your very first subdivision. The first thing you need is an office. An office is placed in a city, but its effect covers an entire region (most regions have more than one city). The office is the administration center for all your other subdivisions in the region. You will not be able to buy any other subdivision in the region until you have an office there.

To rent an office follow these steps:

1. From the main game menu select "Company" → "List of subdivisions".

2. To the far right on this page, click the "New subdivision" link.

3. Click the radio button next to office, and then the "Continue" button.

4. Select the country in which you want the office and click "Continue".

5. Select the region in which you want the office and click "Continue".

6. Now you need to select a city for your office. Your choice will affect the cost of renting the office and the cost of hiring employees for the office. What the best choice is depends on what quality employees you plan on hiring. Since you are new, it will be low quality, so I suggest you pick a city with cheap labor. Then click "Continue".

7. Now you can select the size of your office. Bigger offices can have more employees, but remember you only have qualification level one, so you will not be able to hire very many. Consequently you should select the smallest office size (you can increase the size later when you need to hire more than 10 workers). Then click "Continue".

8. On the final page you get a summary of your choices. If you want, you can type in a name for your office in the text box. Then click "New subdivision".

That is it. You are now renting an office.

An office is a type of subdivision that you rent. This means it is easy to get rid of. If you no longer need it, you can just end the lease.

Now that you have created an office, you should be seeing a page with information about your office.

3.2.1. Buying equipment

Many subdivisions need equipment to operate. For an office, the needed equipment is computers. About half way down the page you can see that you have no computers in your office. So you need to buy some.

Click on the "Equipment" link to the right. This opens a pop-up window with a list of computer suppliers. The suppliers are other player-run companies. Computers come in different qualities. Higher quality equipment requires higher quality employees, so for now you want to buy some computers of low quality (preferably Q1). Before buying, take a good look at the "total" column though. This is the price you will be paying for each computer, cheaper is of course better.

Find a supplier you want to buy from, then click the "Select" link to the right. In the box marked

"Buy equipment units" type in 2 then click "Buy equipment". (Note: If the supplier only had one computer available, select another supplier to buy the second one). The pop-up window will close and the office page will refresh to show that you now own 2 computers.

3.2.2. Hiring employees for the office

Now you need to hire some employees for the office. Every employee needs his own computer, so with 2 computers we should hire at most 2 employees. First we need to check the required quality of employees that we need. You find that under "Qualification of employees". Here it tells you what is required (as mentioned this depends on computer quality). If you bought Q1 computers, the required worker qualification should also be 1.

Now let us hire 2 employees. Click on the link "Employees and salary". This opens a pop-up window. In the box marked "Number of employees" you should type in 2. In the "Salary" box, try typing in different values or move the slider. You should see the values under "Expected level of staff qualification" changing. Find a salary that gives you an expected qualification equal to 1, then click the button "Save changes". The pop-up window will close and the office page will refresh to show that you now have 2 employees.

Look near the top of the page at the label "Number of employees". It should now say "2 (required ~1 wrk.)". This means that we have 2 workers, and the system has calculated that we need approximately one. So why did I tell you to hire 2? First of all, the required number may be rounded down. The actual number of workers could be 1.2. Since you can only hire whole workers, it is always safest to hire one more than required. Secondly, you may recall from previous explanations that stretching your qualification to the limit will gain you more experience. From the experience of other players, it is known that you can gain the most management experience in the first turn, by having 4 offices each with 2 workers of qualification 1.

Note: If you had to buy computers of quality higher than 1, the required qualification of your workers may be more than 1. In that case, set the salary to whatever is needed to hit the required qualification. Qualification up to 2.00 will still give you 100% efficiency as long as you have at most 3 such offices in your company.

When you are done with that, we can do a final check of your expected office efficiency. At the bottom left of the page, click the link "Work efficiency". This opens a pop-up with a lot of numbers, all used to calculate your total efficiency.

Norway Office
Location Baerum

Reference data on new efficiencies

Office size	10 work places
Number of controlled subdivisions	0 (0 wrk.)
Number of employees	2 (required ~1 wrk.)
Qualification of employees	2.00 (city average: 5.00, required 1.00)
Staff efficiency	[████████████████] 100.00 %
The level of administrative load	[ ] 0.00 %

The indicated minimum requirements are necessary, but not enough to achieve the 100% effectiveness of the personnel. The final effectiveness is a function of three indices (number of employees, qualification of employees and quality of computers)and has to correspond with the level of administrative load of the office.

Number of computers	2
Computerization level	[████████████████] 100.00 %
Computers quality	1.00
Computers wear and tear	[ ] 0.00 % (0 pcs.)
Equipment efficiency	[████████████████] 100.00 %
Qualification of player	1
Total number of employees on profile qualification	4
Top manager efficiency	[████████████████] 100.00 %
Work efficiency	[████████████████] 100.00 %

Illustration 4: The work efficiency page for an office

Look for "Work efficiency" at the bottom. This is the expected efficiency of your office. Hopefully this now says 100%. If it is not at least 90+, you are probably best off firing a worker. Note that this page is cached by the web server. This means that if you make changes to your office and click the "Work efficiency" link again, you may just get the cached page (so you will not see the effect of your changes). This is really annoying, but the only solution is to wait about 15 minutes for the cache to clear, then click the link again.

Until you start to get a feel for the system, I suggest that you frequently check the work efficiency page to check on your expected efficiency. However, be aware that this is only an expected value and not a sure thing. Certain things happen during the turn update that can affect efficiency, for instance equipment wear. Those factors are simply not known until the turn update is executed.

3.3. *Opening your first store*

Now that you have an office, you are able to create other subdivisions in the region where you placed your office. You have already done some market research to find a good location for a store, so now it is time to actually rent some store space.

To rent a store follow these steps:

1. From the main game menu select "Company" → "List of subdivisions".

2. To the far right on this page, click the "New subdivision" link.

3. Click the radio button next to store, and then the "Continue" button.

4. Select the country in which you placed your office and click "Continue".

5. Select the region in which you placed your office and click "Continue".

6. Select the city that your market research determined to be a good place for a retail store. Then click "Continue".

7. Now you need to select a district. In districts with a high wealth index, people will be more concerned about the quality of goods than their price. In districts with low wealth index, people will be happy to buy low quality goods, as long as they are cheap. Perhaps most importantly, the city center has the most people, so that is where you tend to get the most visitors. I recommend that you select the city center for your store. Later you can experiment with stores in other districts. Make your choice, then click "Continue".

8. Now you can select the size of your store. Large stores can handle more customers and therefore have greater earning potential. Large stores also have enough room for multiple departments, while sticking with one department tends to work best in small stores. However the expense of running a large store is also higher. Anyway, until you raise your commerce qualification you will be limited to maximum 1000 m^2. For your first store, I would recommend that you select a size of 500 m^2. Make your choice, then click "Continue".

9. On the final page you get a summary of your choices. If you want you can type in a name for your store in the text box. Then click "New subdivision".

3.3.1. Ordering supplies

Now you have a store, but the store is empty. It has no goods to sell. So the first thing you need to do is order some supply. On the store page, select the "Supply" tab. From the dropdown box select the product category that you would like to sell in your store (hopefully your earlier market research gave you some idea on which category to select). When you select a category, you get a list of icons, one for each of the products in that category.

Illustration 5: The store supply page when no suppliers have been selected

To order one of those products, select one of the radio buttons next to the product icon, the click the "Add supplier" button. This opens a new pop-up window with a list of all the suppliers of that

product. In some rare cases there may be no suppliers at all. If you hit such a product, just close the pop-up and try another product.

By default the suppliers are listed in order by total price (what you have to pay for the product), with the cheapest on top. The column "All" tells you how many units the supplier currently has in stock. The column "Available" shows you how many or those units that are not yet ordered by anyone. You normally want to select a supplier that actually has units available (otherwise your order is unlikely to be filled).

Most of the cheapest suppliers usually have no units available. Fortunately there is an easy way to reduce the list to only show the suppliers that actually have units available. In the top left corner, click on the link "Advanced filter". This reveals a number of checkboxes. Check the one called "Available" and make sure the "from" field contains the number 1. Then click the "Filter" button. Now you get a reduced list showing only the suppliers with units available.

The other columns on this page are:
- Unit – Shows the price the supplier is asking for one unit.
- Delivery – The transport cost for one unit to get from the supplier's subdivision to your store (depends on where in the game world the supplier is located compared to your store).
- Customs – The customs that have to be paid to get the product exported from the supplier's country and imported into your store's country. This will be 0 if the supplier is in the same country.
- Total – The total price that you have to pay for the product (unit + delivery + customs).
- Quality – The quality of the offered goods.
- Brand – The supplier's brand value. The higher the brand, the higher the maximum sales volume. We will take a closer look at brand later. For now, it is of little importance, just know that higher is better.

Now you need to look for a supplier with an attractive offer. This will get a lot easier once you have more experience with the game. For now, take a look at the top right corner of the window where it says "Average value in city stores". This gives you a good idea about the typical price and quality level of the goods already being sold in this city. You will want to look for a supplier whose price is either a good deal below the city average or whose quality is well above city average. As city retail prices vary greatly, you will not always be able to find a supplier with an attractive offer. In that case, forget about retailing this product. Try a different product.

Illustration 6: Ordering 1000 units of milk from a supplier

If you do find something that looks like a good deal, then click "Select" on that supplier, and type in the number of units that you want to order. You can order more than what is available if you want, but you are unlikely to get more than what is available. Since this is your first turn, be conservative. Just order a small number of units. The total value of your order should probably be around $10,000- $30,000, depending on how many different products are available in your chosen category. Once placed, your order will be recurring every turn until you or the supplier cancels it. Optionally you can set a price and quality limit that the supplier has to stay within. The system will automatically halt your order if the supplier is no longer within those limits. When you are happy with your order, click the "Place an order" link. You can select additional suppliers of the same product if you want, otherwise just close this pop-up window.

The supply page will refresh to show the order you just created. Continue to same way to set up supply orders for other products in the same category. Focus on the products that look like they will fetch a good profit (high market price compared to supplier price / quality).

Make sure that your total supply cost is less than $400,000, or you may not have enough money to buy it all. You can see the total amount at the top right corner of the supply page, next to the label "Estimated cost of current week purchase".

It is important to note that the supply does not arrive immediately (unlike the computers we bought earlier). Supplies are ordered, so your orders will be processed during the turn update. Supply purchase happens after sales. In other words, your store will sell goods from its existing stock, then buy supplies afterwards. This means that during the first turn update, your store will not be selling anything, just buying home supplies. It is not until the second turn update that you will actually sell something and make some money.

3.3.2. Setting the sales price

Although you are not going to sell anything in your first turn, it is probably a good idea to set the sales prices anyway.

Select the "Trade hall" tab. On this page you get an overview of your existing stock, your planned purchases as well as how much you sold last turn (nothing in that column yet). In the rightmost columns you can see the average price and quality values for the city. Finally we have the "Sale price" column, which currently has a lot of zeroes.

Setting the right price is a tricky thing which you will get better at with experience. Basically you need to find the right balance between quality and price, while taking into account the competition on the city market. For now, I suggest you look at what other people are charging for the product. For the first product on your list, click on the product icon. This opens a marketing report in a pop-up window. At the top-right you can see what the local suppliers are charging. At the bottom of the page, you can see what the top sellers (other players) are charging. When comparing with others, do not forget that if they are selling products of a higher quality than you, then your price needs to be lower, while if their quality is lower, then you can charge more.

Note: If experimenting and learning by trial-and-error is not your thing, then try looking around on the official forum. You can probably find a formula that lets you calculate a pretty good sales price.

Go through this procedure for all the goods you are going to sell, setting a sale price for each one. Then click the "Set prices" button to save your values.

Finally you should check that the sales price you have set is actually higher than the price you are going to pay the supplier. If it is not, then you should cancel your supply order, as there is no point in selling with a loss. To cancel an order, go to the supply tab and locate the order. Click the red box

with the white X to cancel the order.

3.3.3. Advertising the store

The more people that visit your store, the more goods you can potentially sell. You can increase the number of visitors by advertising. This will build up reputation over time, so you may as well start advertising straight away.

Select the "Store" tab. On the right side of the page, click the "Marketing & Advertising" link. Here you can select a media to advertise in as well as how much money you want to spend on it. Your media choices are Internet, Press, Outdoor, Radio or TV. Internet has the lowest minimum expense, but the highest cost per contact. TV has the highest minimum expense, but the lowest cost per contact.

To the best of my understanding, the number of contacts is the number of people who will see one instance of the ad. The number of contacts can be higher than the number of people in the city, which then means that the same people are seeing the ad multiple times.

That TV advertising has the lowest cost per contact, means that with TV advertising you get the most reputation for your money, but you are also forced to spend a lot of money on it. You may remember from the qualification talk at the start of the tutorial that your top manager has a marketing qualification. That limits how much money you can spend on advertising and still get 100% efficiency. If you set your advertising budget higher than your marketing qualification can handle, then you are pretty much throwing money out the window.

Illustration 7: Setting up a press advertising campaign with a cost of $14000 per turn

With your low starting qualification and limited amount of money, you are probably best off with either press or outdoor advertising. Select one of those by marking the check box next to it. The field "Expenses per week" will be filled out with the minimum possible spending. You can leave it at the minimum, or increase the value if you feel like spending a bit more. Note that you should never set the expense to more than the minimum amount of the next level of media. Instead you should select a higher level of media, as that will get you more reputation for the same money. When you are happy with your choices, click the "Start advertising" button.

It is possible to select multiple media at the same time, but as far as I know, going with just the highest possible media type is always more cost effective.

3.3.4. Hiring employees for the store

Finally you should hire some employees for the store. If you are not already there, then click on the "Store" tab. Next to the label "Qualification of employees" it should tell you what the required minimum qualification of your employees is. Exactly how that is determined is not quite clear to me, but it seems to have something to do with the general education level in the city, as well as what products you are selling in your store (things like motor-car goods and electronics require a more educated staff that foodstuff).

Since all you do in the first round is buy supplies, you actually do not really need staff in your store. However, hiring some anyway will give you experience growth in your commerce qualification. Exactly how many you can hire with your current qualification of 1 depends on the qualification of your employees.

Tomorrow I would like to teach you about a hint that the game gives you about how many workers you can handle. For the sake of the continued tutorial, I therefore ask you to hire less workers than the optimal this time.

So click on the "Employees and salary" link to the right. This opens a pop-up window. For a newly built store, the game does not tell you the required qualification, but it does not matter much until next turn anyway. For now, just try tweaking the salary so that the "Expected level of staff qualification" is around 3.00. Hire 3 workers now. We will hire some more tomorrow.

City district wiki	City centre	
Trade area wiki	500 m^2	
Rent expenses	9 808.44$ per week	⊟ Store location
Number of departments wiki	1	
Number of employees	3 (required ~ 1)	
Salary of one employee	266.00$ per week (city average 326.95$)	⊟ Employees and salary
Salary expenses	798.00$ per week	⊟ Employees training
Qualification of employees	2.98 (city average 4.50, required 0.00)	☐ On Holiday
Staff efficiency wiki	0.00 % (at the moment of update)	
Store reputation wiki	0.00	
Advertising expenses	14 000.00$ per week	☐ Marketing & Advertising
Advertising efficiency	0.00 %	
Number of visitors	0 per week	
Visitors wealth index wiki	560	
Unknown		
Products		⊟ Add supplier

Illustration 8: The store should now be set up more or less like this

3.3.5. Office administrative load

Finally you should go back to your office and click the "Work efficiency" link once more (make sure 15 minutes have passed since last time). Have a look at your expected "level of administrative load". Any advertising you do in the region will increase the administrative load of the office. You should make sure that the load does not exceed 100%. If it does, then your office efficiency will

suffer. If it turns out to be more than 100%, then go back to your store and reduce the advertising spending until your office administrative load shows less than 100%.

3.4. Doing it all again

As mentioned earlier, the total workforce that you can have in your entire company, within one qualification area, is at least twice as high as the limit for a single subdivision. So even though we have maxed out the workforce limits in your office, you are actually able to handle up to three more offices and at least one more store.

If you are happy with the location of the office you rented when you created your company, then just keep that one. Otherwise close it (by clicking the link "Close enterprise" on the office main page, top right corner), and rent an office in another region.

You should then also rent a store somewhere in the region of your second office. This time, try to go through the steps without looking too much at this document. See if you can remember everything that has to be done.

At the end you should have at least two offices (maximum four), each with 2 qualification 1 workers, and 2 stores each with 3 qualification 3 workers.

3.5. Waiting for the next turn

When you have at least two offices and two stores, you should be pretty well set. Now you just have to wait for the turn-update. When the server downtime is over and you are ready to do some more work on your company, you can continue to the next chapter.

4. Your second day in Virtonomics

After the update, log back in to your chosen realm.

First you should have a look at the qualification page. From the main menu select "My office" → "Qualification". It looks a little different today. You should see some percentages on the right side, as well as some vertical bars that are a graphical representation of the percentages. The percentages show how much experience you have gained towards the next level of qualification. You should see growth in management, commerce and marketing while everything else will be 0% since you have not made use of your qualification in those other areas. If you actually rented four offices, and everything went perfectly, you will have gained 100% experience in management and are now at qualification level 2. If not, then do not worry about it. You will get there eventually.

Mining	1	influences the efficiency of mines and oil wells	0.00%
Livestock	1	influences the efficiency of stock-farms	0.00%
Marketing (advertising)	1	influences the efficiency of advertising in offices and stores	93.33% +93.3%
Science research	1	influences the efficiency of laboratories	0.00%
Production	1	influences the efficiency of factories, mills and sawmills	0.00%
Fishing industry	1	influences the efficiency of fishingbases	0.00%
Agriculture	1	influences the efficiency of farms and plantations	0.00%
Services sector	1	influences the efficiency of the enterprises specializing in services	0.00%
Commerce	1	influences the efficiency of stores	32.43% +32.4%
Management	1	influences the efficiency of offices	59.16% +59.2%

Illustration 9: The qualification page after some experience has been earned

Secondly you should have a look at your stores. From the main menu select "Company" → "List of subdivisions". From the list, select one of your stores.

On the store page, look at "Store reputation". Last turn this was at 0, but due to your advertising of the store this number should now have increased a bit. Click on the "Marketing & Advertising" link to open the marketing page. At the top you will see a message that tells you what is the minimum number of contacts needed to keep your current reputation level. If you reduce your advertising spending so much that you only get this number of contacts, then your reputation will stay exactly the same next turn. If you spend less than the minimum, then your reputation will drop. If you spend more than the minimum, your reputation will grow. Right now you do not have to do anything, but you should remember this for later. Eventually you will need to increase your marketing budget if you want your reputation to keep growing.

4.1. Store service level

On the store main page, around half way down, you will find "Number of visitors". This is the number of customers that visited your store last turn. If you continue advertising, you should see this number increasing. The more visitors, the more goods you can sell.

Shortly below that line, you should see a greenish box where is says something like "Normal" or "High", followed by a couple more lines of text. This is an indication of the current service level of your store. If you have too few employees in your store, or if their qualification is too low, then your service level will suffer. With a low service level, you will get less visitors, and you will sell

less to the visitors that do come (because the store assistants do not have time to serve them all). Consequently you should make sure that your service level is always at least "Normal".

Number of visitors	147 per week
Visitors wealth index 🔗wiki	560

Very high
Customers particularly like your spacious trade hall.

Illustration 10: The number of visitors and the service level (very high in this case)

It is important to understand that the required workers to maintain a certain service level depends on the number of visitors at the store. The more visitors, the more workers (or higher qualification workers) are required to maintain the same service level. So if you are advertising to bring more visitors, be aware that you will also have to slowly increase your worker count as the visitor number increases.

In most cases it pays off to have a high service level (maximum is elite), but this is always a trade-off as maintaining a high service level will increase your salary expense. Note that you also have the option of raising the qualification of your employees by training them. In the long run this is cheaper than just increasing their salary, since training is a one time expense while salary is a recurring expense. You can access the training window via the "Employees training" link. A detailed guide to training is outside the scope of this tutorial. Seek more information on the forum.

4.2. The safety factor hint

As mentioned in the previous chapter, we should hire some more employees for your stores today, to increase your commerce experience and perhaps also raise the service level. Today the game will actually show you what the required qualification is for your store workers. To start with you should adjust their salary so that their qualification is at least the required. Then you may want to hire some extra as well.

However, using the work efficiency page to check your efficiency is cumbersome due to the 15 minute delay every time. Fortunately there is an easier way to at least get a rough hint. Take a look near the bottom of the store's main page where it says "Qualification of player". To the right of this label it shows the number 1, possibly followed by a green text that is something like "standard safety factor". For some reason unknown to me, the safety factor text is not always displayed in the first few turns for a new company, so it is possible you cannot see it yet. If not, then have a look at it again next turn (you will have to use the work efficiency page instead, until the safety factor hint is available).

Office efficiency	||||||||||||||||||| 100.00 % (at the moment of update)
Qualification of player	2 standard safety factor
Total number of employees on profile qualification	15

Illustration 11: The safety factor hint

Anyway, when it is visible, this "safety factor" text is a hint that the game gives you about how much of your top manager qualification you are using (the commerce one, in the case of a store).

The safety factor will either be minimal, standard, good or excellent. Minimal means that you are very close to the limit of your qualification, while excellent means that you can manage plenty more. The text can also disappear completely. That means you are either over the limit, or pretty much hovering on it.

Try hiring additional workers for the store one at a time, and notice the changes in the safety factor text after each one. Keep hiring until the safety factor text disappears. Now you should be right below the limit, or just over it. At this point, click the "Work efficiency" and check your expected efficiency at the bottom. If it says 100%, then you are done. If it is less than 99%, then fire one worker or slightly lower their salary. That should bring you up to 100%.

This safety factor text is your best tool for quickly finding the optimal number of workers in a subdivision. Unfortunately it is not shown on subdivisions that have just been created. You have to wait one turn for it to appear. In most cases this is however not a big problem as stores, factories and livestock farms do not need workers the first turn of existence (since they are just waiting for supply).

4.3. Understanding supply priority

Now select the "Trade hall" tab. Have a look at the "Purchase volume" column. The number shown as a link is the amount you are currently ordering. The number shown in []-parenthesis next to it is the amount that was actually purchased during the turn update. You may be surprised to find that in some cases your actual purchase is less than your order.

Sometimes you may not receive the supply that you have ordered, even though the supplier had enough units available when you made the order.

This can be because:

• An existing buyer with higher supply priority has increased his order volume.

• The supplier has lowered your supply priority after you made the order.

Basically what you need to know is that the supplier has a prioritized list of of all the contracts that have been made with buyers. Whenever a new order is made, that order is given lowest priority by default.

If a buyer makes a change to his existing order, it will not change the priority. So if someone had made an order before you, and therefore has higher priority, that other buyer may have increased the amount on his order some time after you made your order. This could result in no units being available for you.

The supplier can also go and change the priority however he likes. If someone has made an order later than you, and is therefore below you in priority, the supplier can choose to go and change the priority, and bump you down below the guy who ordered later. This may be because the supplier has a special arrangement with the new buyer.

If not receiving your ordered goods makes you unhappy, then this is one of those times where you have to remember that this is a multiplayer game. Just like in real life, it can be advantageous to try and connect to other people and build yourself a network. If you do something for your supplier, then your supplier will probably be willing to increase your supply priority in return. You may even be granted access to higher quality goods or goods that are hard to obtain on the open market.

4.4. Checking subdivision efficiency

You should also have a look at how you did in terms of overall subdivision efficiency. Go to "Company" → "List of subdivisions". In the rightmost column labeled "Eff." you can see the efficiency of each subdivision. Hopefully all of the offices are 100%. Since we did not do much to secure store efficiency, that could very well be below 100% though.

If the efficiency of a subdivision is less than 100%, then it will produce less. Stores will sell less goods, while production facilities will produce less and also their products will be of reduced quality. Low efficiency at an office is particularly bad. An office manages all the subdivisions in the region, so low efficiency at the office will have a negative impact on every subdivision you have in the region.

Reduced efficiency can be caused by several different things:

- You have hired more workers than you can handle at your current qualification level.

- You have hired workers whose qualification is below what is required.

- Some of the equipment in your subdivision is broken.

- Your equipment is of too low quality compared to what is required by the technology level of the subdivision (production and laboratory subdivisions only).

At this point, any reduced efficiency you see will be caused by either the first or the second of those reasons. If any of your subdivisions have low efficiency, you should now go and adjust the worker count or qualification level.

4.5. Activities in the second turn

So far we have mostly been looking at what happened during the turn update. That is because you really do not need to do much during turn two, except a bit of tweaking.

If some of your supply orders did not result in any purchase, then you should see if you can find a different supplier for that product.

Also, if your management qualification hit level 2, then you can buy more computers and hire more staff at your offices, in order to try and maximize the qualification growth next turn as well.

5. Your third day in Virtonomics

When the game has updated once again and you are on your third turn, things are more interesting. This time your stores have hopefully sold something.

After logging in, let us first get a general overview of how you did last turn. From the main menu select "Company" → "Reports". The default report page gives you an overview of how your company has performed during the last four turns. Amongst other things you can see how much profit (or loss) you made, and at the bottom you can see a breakdown of your different expenses.

The first turn you made no profit, as you were not selling anything. With a bit of luck you have made a profit during turn two though. If you are not making a profit, it may be because your stores are selling much less than they are purchasing in supply.

If you select "Financial report" → "By subdivisions" from the report tabs you can see the profit or loss at your individual subdivisions. Your offices will always be losing money, but your stores should be turning a profit. If one or both of your stores are losing money, then you need to go and tweak the sale price or the amount of supply you are buying. Maybe you set some of the prices too high or too low, or you are just buying more supply than your potential sales volume.

If your stores are already profitable, then do not just be content with that. Try tweaking them to be even more profitable. Raise the price on items that you think could sell for more and buy additional supply of the most profitable products. Also try to get a high service level at your store by training employees or raising their salary.

Stores need tweaking almost every day because the market changes every day. Your competitors as well as the local sellers will be changing their prices all the time, so you need to react to that.

5.1. Contest for managers

At this point you should start to pay attention to how you are doing in the contest for managers. All new players are automatically entered into this contest. The contest runs for 30 turns and you will be competing against other players who created their company on the same day as you. Most of the people who start playing Virtonomics decide to quit again pretty fast, so if you just stick with it and use what this tutorial teaches you, then you should have a really good chance at winning some prices in this contest.

The most attractive price is game points. The contest is divided into 5 different categories. The top 3 players in each category gets game points, with 10 points awarded to the winner. You can only win game points in one category, so the maximum total price is 10 points. However, the winner in each category gets a badge which gives a permanent bonus to qualification. The badges are also visible to everyone and displayed on your forum profile, so they do help make you look good.

To check the rules for the contest, select "My earnings!" → "Contest rules" from the main menu. The rules are fairly well described, so I will not go through them here. Except one that is. The very, very important rule to note is that in order to win a prize in the contest, your management qualification has to be at least 10 when the contest ends. This is not an easy feat. You need to constantly push the limit of your management qualification by hiring the right number of workers in your offices. If near the end of the contest period you can see that you are going to win, but you have not achieved management level 10, then you may want to consider buying some game points and using those to increase your qualification. Buying one level of qualification costs 1 game point for levels 2-9, and 2 game points for levels 10-19, etc.

To see the current standings in the contest, select "Company" → "List of subdivisions" from the

main menu. Then click the Contests tab on that page.

5.2. Quests

Another thing you should have a look at is quests. These are small assignments that will give you a reward in cash and experience when you complete them. These rewards can be quite helpful for a new company.

To see the available quests, select "Company" → "Quests" from the main menu. For now, only the first level quests are available to you. The second level quests will become available when you have completed the corresponding level 1 quests, and have reached qualification level 3 in the field that each quest is related to.

The most important quest to do is probably the one called "SuperManager". When completed, it gives you a +2 bonus to all of your qualifications for 10 days. All you have to do to complete it is to achieve 100% efficiency in all of your subdivisions. The fewer subdivisions you have, the easier this is to do, so try to complete this one as early as possible.

To start any of the available quests, just click on the "Execute" link next to it. You have two attempts at each quests, so you are allowed to fail once.

5.3. The next few turns

During the next few turns you should continue to tweak your stores to optimize your profits. As you get more money, you can order a greater number of items in supply and thereby increase your sales. Also, as your qualification increases, you can rent a few more stores. Keep an eyes on the service level in your stores as well. Try to keep it high.

You can also consider expanding one or several of your stores if they are generally doing well. To increase the size of a store, go to the main screen of the store and click the "Store location" link. This opens a pop-up window where you can select a different store size. Once you have gained one or two levels in the commerce qualification, you should be in good shape to handle a 1000 m^2 store. If you a unhappy with the district you chose for your store, then that can also be changed in this window.

Give it a few turns. Then when you are making a steady profit on your stores and you feel like you have enough cash to make some new investments, you can continue to the next chapter of the tutorial.

6. Going into livestock farming

Now that you are making good money on your stores, it would be a good time to start going into production. Selling other people's goods in your stores is fine and all, but you can make even more money by supplying the retail goods yourself.

One way to do that is to buy a livestock farm. Production facilities, unlike offices and stores, are not rented but bought. When you buy a building the standard way, it needs to be built first. Building it takes at least one turn, so it will not become available instantly as you have been used to with the subdivisions you have created so far.

First let us have a look at what livestock farms can actually produce. From the main menu select "Game world" → "Production". This gives you a long list of all the subdivision types that are available in the game. Find the section that has the headline "Agriculture". Here you will find the four types of livestock farms: cowshed, pig farm, poultry farm and sheep farm. Click the link for each one in turn to have a look at their production capabilities.

Specialization				
Specialization	**Livestock**	**Forage**	**Products**	**Quality modifier**
Poultry farm		7.5 pcs.	1.0 pcs. 2.5 pcs.	
Chicken breeding		7.5 pcs.	1/10 pcs.	
Broiler poultry farm		7.5 pcs.	1.2 pcs.	+ 20.00 %
Egg farm (grain)		7.5 pcs.	5.0 pcs.	+ 10.00 %

Illustration 12: Specializations available for a poultry farm

You will see that each farm type has a number of different specializations. Once you have your farm, you will have to choose a specialization for it. The specialization determines what product(s) the farm will produce, as well as what type of feed your animals will be needing. There are two types of feed: grain and soy-bean[1] forage. At the time of writing, grain is available from an independent supplier at quality one, while soy-bean forage is harder to obtain.

Every farm has a breeding specialization. Choosing this will allow you to breed additional livestock units which you can then use to expand the population on your own farms, or sell to other players. Breeding your own livestock is a slow but cost effective way to expand your farm production.

6.1. Building your first farm

Once you have looked through your four options, decide on what type of livestock farm you would like to have.

To buy a livestock farm, follow these steps:

1. From the main game menu select "Company" → "List of subdivisions".

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1   Soy beans exist on Lien realm, but are not part of the Mary realm game world

2. To the far right on this page, click the "New subdivision" link.

3. Click the radio button next to animal farm, and then the "Continue" button.

4. Click the radio button next to your chosen type of farm, and then the "Continue" button.

5. Select a country where you have an office and click "Continue".

6. Select a region with an office and click "Continue".

7. Select a city and click "Continue".

8. Now you have to pick a specialization. I suggest you stay away from breeding at this point. Also, you should choose a specialization that has grain as forage.

9. For size, with your starting qualification of 1, you will only be able to handle a small farm, so pick "1 building" and click "Continue".

10. Now you have to select a technology level. This is one of the factors that will determine the quality of your produce. It also sets the maximum quality that you can achieve. Technology is expensive to buy, so you should just select level 1 for now. Then click "Continue".

11. Finally you can name your farm. Then click "New subdivision" to start building it.

Since you are building a small farm with just one building, the construction time will be one turn, so it will become available to you after the update.

Remember, whenever you add a subdivision, the required number of workers at the regional office will increase. Apparently this is also a cached value though, so you have to wait about 15 minutes for your office page to update to show the required number of workers. If you do not want to wait, you can usually assume that a small subdivision requires around 2 workers extra at the office (depends on computer quality though). Go check your office, and make sure it has enough workers to handle the load of the extra subdivision.

Now you should wait for the turn update before continuing with the tutorial.

6.2. Buying supply for your farm

After the turn update, you should be getting an in-game mail from the system telling you that your building has been completed. Go to the list of subdivisions, and you should see your newly built livestock farm.

As already mentioned, your animals will require forage. It is important to note that just like with equipment, livestock purchases are immediate. However, forage purchase works the same way as when you buy supply for your stores, i.e. you have to wait one turn for it to arrive. The supply purchase will happen at the end of the turn update, after the animals have consumed forage. Therefore it would be a bad idea to buy animals already now, as they would not have anything to eat during the next update. Some of them would then die from starvation.

So, the smart thing to do is to buy supply now, and then wait until next turn before buying any animals. First however, we need to figure out how much forage you need. From the menu select "Game world" → "Production". Find the type of farm that you built, and click on the link. Hopefully you remember this page with production information. Under specializations you can see how much forage you need for each animal. For instance pigs need 16 grain each every turn.

Secondly you need to figure out how many animals you can handle. This depends on how many workers you can manage. Look at the production specifications section. Here you can see the maximum number of animals and workers in a farm of size 1. For instance a pig farm can have 20

workers and 200 animals. Divide animals by workers, to find the number of animals that one worker can take care of. In the case of a pig farm it would be 200/20 = 10.

Production specifications							
Size	Number of workplaces	Max. animals	Building duration (weeks)	Production volume			
				Pig farm		Pigs breeding	Dried ham (jamón)
1 building	20	200	1	80	500	20 pcs./week	400 pcs./week

Illustration 13: Production specifications for a small pig farm

As with everything else, the number of workers you can handle depends on your qualification as well as the qualification of the workers. In livestock farms, the required worker qualification is determined by the technology level. With a technology level 1 farm, you need qualification 1 workers.

To make it easy for you this time, I will tell you that at tech level 1 you can currently handle 20 workers in your farm (or 13 at tech level 3. In the future you have to figure this out yourself the usual way, or search the forums). So to find the total amount of feed needed, you should calculate:

`Forage needed = Number-of-animals-per-worker * 20 workers * forage-per-animal.`

So for a pig farm it would be 10 * 20 * 16 = 3200 grain.

Now go to the list of subdivisions and select your farm. On the farm page, go to the "Supply" tab. Click the green truck icon to open a pop-up window with a list of available suppliers. This works the same way as when you select suppliers for stores, so you should be very familiar with this by now. You can probably only get quality 1.00 at a reasonable price. That is also fine for now, so just select the cheapest supplier with quality 1.00 and order at least the required amount that you just calculated.

6.3. More on technology

Technology is very important and valuable as it has a great impact on the quality of the products you produce. For livestock farms, the quality of the output is determined primarily by technology, but livestock quality and forage quality have an impact on output quality as well.

Also, the technology level puts an upper limit on the output quality that you can achieve. At technology level 1, the maximum output quality is 1 no matter how high your livestock and forage quality is. At level 2 the limit is quality 2.46. To actually achieve this output quality, you would need Q2.46 forage and livestock as well. You can see all the upper limits for different technology levels on the technologies tab of the farm (the column labeled "Max. Product quality").

You can increase the technology level of a subdivision by:

- Buying the technology from another player (usually very expensive). The technology can then be applied to any of your subdivisions of the same type.

- Buying a technology license from another player. A license can be used to increase the technology of a single subdivision.

- Researching the technology yourself at a laboratory subdivision (cheapest solution, but takes a long time).

To research technologies, you have to buy a laboratory subdivision.

When you created the subdivision, you had the option of buying a technology at step 10. However, they were probably all too expensive for you at the moment. Anyway, in many cases you will only want to have one subdivision of a certain type. In that case, you are much better off just buying a license, as they tend to be significantly cheaper, especially the low level ones.

Let us have a look at the license market. Select the "Technologies" tab on your farm, then click the "Buy a license" button. This opens a new pop-up window. From the "Level" dropdown box you can select the technology level you are interested in purchasing a license for. Select 3 for now, there are usually some of those for sale. On the bottom right side, you can see how many licenses are offered for sale under "Supply", "Total" column. From the graph above, you can see approximately what prices the licenses are offered at (green lines), and if anyone has already made a purchase order for a license (red lines). The graph is a bit hard to read, but you can get a rough idea about the prices.

Illustration 14: Making a competitive offer of $15000 for a level 3 poultry farm license

If you want to, you can try to make an offer for a level 2 or 3 technology license (I would recommend not going any higher at this point). To make an offer, you have two choices:

1. You can select the "Competitive" radio button, and type in a maximum price that you are willing to pay (look at the chart to get an idea of the price level). With this choice, you will never be paying more for the license than the maximum you typed in. You may get it even cheaper though. However if no one is offering one below your set maximum, then you will not be getting a license.

2. You can select the "Not competitive" radio button. With this choice you will be paying whatever is considered the market value of the license (presumably calculated as an average of what others are buying it for, but the details are not known to me).

If you make a competitive offer and tick the "Transient" checkbox, then the system will first try make the purchase with method one, but if that fails, it will attempt to process the order with method two. Making a transient order should maximize your chance of actually getting a license.

If you decide to make an order (this is optional), then choose one of those methods and click the

"Apply" button. The order will be processed during the turn update, so if it is successful then your subdivision will have been upgraded to a higher technology level after the turn update.

At this point, you need to wait for next turn once again, so that you get your forage supply, and perhaps a technology license as well. Once the turn update is complete, you can continue to the next section of the tutorial.

6.4. Buying livestock for your farm

After the update, your farm has hopefully received a supply of forage. Now you can buy some livestock.

There is a special rule for livestock which you have to take into account when you purchase some. Livestock requires forage of a quality no less that half the quality of the livestock. So livestock of quality 4 requires at least forage of quality 2, otherwise some animals will become sick and have to be replaced.

Even if you did not invest in a technology license yet, you probably will in the near future, so you may as well prepare for that by buying animals of a quality higher than 1. If all you could get is quality 1 forage, then you should aim for quality 2 animals, as this is the maximum quality that the forage can support.

From the list of subdivisions, select your farm. The click the "Livestock" link on the right side. This opens a pop-up window, similar to the equipment purchase window you probably remember from your offices. If you are lucky, you can find a supplier that sells exactly the quality of animals that you need. Otherwise, you can mix animals of different quality. For instance if you need 100 animals of quality 2, you can alternatively get that by buying 50 quality 1 and 50 quality 3. You will need to do a bit of math here probably, but try to get as close as possible to your target quality, without exceeding the limit imposed by your forage. Recall how we calculated the number of animals that you can handle yesterday, and buy the necessary number. Then close the pop-up window.

The main page of the livestock farm should then update to show you that the purchased number of animals are now present in your farm.

Next to the label "Qualification of employees" you can now also see what the required quality of employees are (this depends solely on the technology level of the farm). Next to "Number of workers" you can see how many workers you need (this depends on the number of animals). So all you need now is hire the workers. As you have now done many times before, click the link "Employees and salary", hire the right number of workers and set the salary level to reach at least the required worker qualification.

Your farm is now ready to operate, so now you just need to wait for the next turn update.

6.5. Selling your farm product

After the update, select you farm again and go to the "Sale" tab. Here you can see what your farm produced last turn (in the "Ouput" column). The "Prime cost" is the total cost of producing one item. In order to make a profit, you need to sell your output at a price that is higher than the prime cost.

First you should consider who you want to sell your products to. You can choose between:

- Only to my company – Only subdivisions that are part of your company will be able to buy.

- Only to certain companies – You can pick a list of companies that can buy the product. This

is useful if you only want to sell to specific business partners or friends.

- Only to member of the corporation – Only companies who are in the same corporation as you will be able to buy. Only useful when you are actually in a corporation.

- To any customer – Any other company can buy the product. Select this is you are only going to use part of your production in your own subdivisions.

Make your choice of who to sell to. The setting is not permanent, you can always change it again later.

In the "Price" column you can set the sale price for your product. By default it will be set to 0. As long as it is 0, no one can buy from your farm, not even yourself. So you have to set some price. If you only want to sell to your own subdivisions, what price you set is not so important. However, due to taxes it can sometimes be advantageous to sell at prime cost or below (for details, see the section below on taxes).

If you want to sell to other companies than your own, you have to figure out what people would be willing to pay. If you click on the name of the product, next to the product icon, it will open a list that shows all the other sellers. You really only need to look at those that have items available. Find the cheapest supplier who sells a quality about the same as yours. If you set your price just under his, you should have a good chance of selling something.

Once you have typed in your price and selected your sale policy, click the "Save changes" button.

If your farm is producing a retail product (meat, egg or milk) then you can now go to one of your stores, select that product and click add suppliers. You should then see your own farm in the list of suppliers, highlighted in yellow. If you click on the "Mine" link in the top right corner, it will show only your own subdivisions. This makes it even easier to find your own farm. You can add your farm as a supplier, if you want to sell the product in your own store.

6.6. Changing supply priority

When you or someone else creates a supply order from the farm, then the contract will be displayed at the bottom of the "Sale" page. The contracts will be displayed in prioritized order, with the highest priority first. If the total amount of items ordered exceeds the amount available, then only the top priority contracts will be fulfilled.

You can change the priority of any order, if you want. Usually you will at least want to make sure that your own subdivisions are at the top. To change the priority of a contract, click one of the little arrow up/down symbols to the right of the contract. This will move that contracts priority. When you are done moving things around, click the "Change supply priority" button to save the changes.

7. Additional guidelines

At this point, I will leave it to you to decide how you want to continue expanding your company. This final chapter is a collection of different tips and guidelines that you may find useful as you continue playing Virtonomics.

Also, remember to check out the forums, especially the FAQ section which has a lot of useful tips.

7.1. Taxes, customs and transport costs

A wise man once said: "...in this world nothing can be said to be certain, except death and taxes". Well, in the world of Virtonomics no one ever dies, so only taxes are certain. Your company's earnings is to some degree affected by taxes and customs, so when you start to become a more advanced player it is good to know how the system works.

Let us start with customs. By now you are producing some product at a livestock farm. If you are selling this to another subdivision, then a transport fee has to be paid. If the subdivision you are selling it to is in another country, then customs may also have to be paid.

From the main menu, select "Game world" → "World map". Then select the "Transport" tab. Use the drop-down boxes on the page to select the city in which your farm is located. Once the page refreshes (takes a few seconds), select the icon for the product that you are producing at your farm. Wait for the page to refresh again.

Agricultural products											
Finland			Finland		Espoo						

Information on the city		Name	Exp.	Imp.	IP
Espoo		Яйца	10 %	30 %	1.00$

Information on the city	Deliver one ▲▼	Export, not less		Import, not less	
		customs ▲▼	total ▲▼	customs ▲▼	total ▲▼
Espoo	0.26$		0.26$		0.26$
Helsinki	0.27$		0.27$		0.27$
Tallinn	0.34$	0.10$	0.44$	0.35$	0.69$
Turku	0.39$		0.39$		0.39$
Tampere	0.41$		0.41$		0.41$
Narva	0.41$	0.10$	0.51$	0.35$	0.76$
Tartu	0.42$	0.10$	0.52$	0.35$	0.77$
Liepaja	0.60$	0.10$	0.70$	0.35$	0.95$
Riga	0.63$	0.10$	0.73$	0.35$	0.98$
Daugavpils	0.64$	0.10$	0.74$	0.35$	0.99$

Illustration 15: Looking at the customs and transport costs for eggs from/to Espoo

In the top part of the displayed information, under "Information on the city", you can now see the import and export customs for the selected city (Exp. and Imp. Columns). For instance for eggs in the city Espoo, the export customs is 10% of the sales price. That means if you sell eggs for $10 a unit, it costs $1 to export from Finland. The destination city may also have an import customs that has to be paid as well. The column IP shows the indicative price for the selected product. If you are selling a product for less than the IP, then customs will be charged based on the IP rather than the real sales price. For eggs the IP is $1, so minimum possible export customs from Finland is $0.1.

The columns on the lower part of the page, shows the different costs of transporting one unit of the selected product from your selected city to all other cities in the game world. The "Deliver one" column shows the transport cost, while the "Export, not less" columns show the minimum export + import customs for one unit (under "customs"), as well as the sum of customs and transport (under "total"). The "Import, not less" columns show how much it costs to import something from other cities in the world to your selected city.

Customs and transport costs are something you should take into account when you decide on where to place subdivisions that have to trade. For instance if you have a farm producing meat, and you want to build a sausage factory that uses the meat to make sausages, then having the two in the same city will minimize your transport costs. Ultimately you probably want to sell those sausages in one or more store, so you should also think of how much it will cost to transport the sausages to the stores. Maybe having your factory close to the stores but far from the livestock farm is actually the better solution. You will need to do a bit of math to figure it out.

7.1.1. Profit tax

Now let us have a look at profit tax. From the main menu select "Game world" → "World map". At the bottom of this page is a list of all the countries in the world. Click on one of the countries.

This opens up a page with basic information about the country. At the bottom you will find a number of columns, including one called "Rate of profit tax". This column shows the profit tax for each region in the country (it is the same for all cities in the region).

When your subdivisions are making a profit, they have to pay profit tax. The taxable profit is calculated as sale price minus prime cost. So if the profit tax is 20%, and you produce a product at a prime cost of $10 and sell it for $15, then you have to pay (15 - 10) * 0.2 = $1 in profit tax for each sold item.

Note that due to this method of calculating, your subdivisions can be running with a loss and still have to pay profit tax. This happens if the overall loss is due to buying more supply than needed, or due to not selling everything that is produced.

So now you are thinking: "Ha! Benjamin Franklin was wrong. All I have to do to avoid taxes is not make a profit". Well, unfortunately you do not get off that easily. The evil government of Virtonomics has created something called "Common tax for imputed earnings" or CTIE. You can see this as a minimum profit tax. If your profit tax is lower than the CTIE, then you have to pay the CTIE in profit tax. So even when you are running at a deficit you will be charged profit tax.

While you are on the country information page, try clicking on one of the regions. This opens a region information page. At the top-right of this page, click the "CTIE rates" link. This page explains the calculation of CTIE and shows the CTIE rates for each product. CTIE is calculated based on the prime cost of the product, so profit does not matter in the CTIE calculation. The CTIE rate is a percentage of the profit tax, so for example:

If regional profit tax rate is 20% and CTIE rate for a product is 10%, then CTIE is 10% of 20% = 2% of the prime cost of the product. So if the prime cost for the subdivision total production is $10000, then CTIE is $200. If the profit of the subdivision is less than $1000, then profit tax will be less than $200. In that case CTIE has to be paid instead of profit tax.

7.1.2. What it all means

So what does this all mean? Well, as I hinted at earlier in the tutorial, when you are selling products from one of your own subdivisions to another, it is advantageous to make most of the profit at the subdivision that has to pay the lowest profit tax percentage. However, due to CTIE, some profit should be made at the other subdivision as well. This is probably best explained by an example:

A sausage factory in one region produces sausages.
```
Prime cost: $20.
Profit tax: 25%
CTIE: 2%
```

A store in another region buys the sausages and retails them:
```
Retail price: $100.
Profit tax: 15%
CTIE: 1.5%
```

Transport and custom costs between the subdivisions:
```
Transport cost: $0.5
Export customs: 5%
Import customs: 0%
```

First let us try to set the sale price to $20 at the factory:
```
Customs cost for store: 20 * 0.05 = 1
Sausage prime cost for store: 0.5 + 20 + 1 = 21.5
Sausage profit: 100 − 21.5 = 78.5
Profit tax at store: 78.5 * 0.15 = 11.775.
CTIE at factory: 20 * 0.02 = 0.4.
Total tax and customs paid: 1 + 11.775 + 0.4 = 13.175
```

The let us try to set the sale price to $21.6 at the factory:
```
Customs cost for store: 21.6 * 0.05 = 1.08
Sausage prime cost for store: 0.5 + 21.6 + 1.08 = 23.18
Sausage profit: 100 − 23.18 = 76.82
Profit tax at store: 76.82 * 0.15 = 11.523.
Profit tax at factory: (21.6 - 20) * 0.25 = 0.4.
Total tax and customs paid: 1.08 + 11.523 + 0.4 = 13.003
```

So making a little profit at the factory actually reduced the total tax payment and allowed you to make more money overall. However, the saving in this example was marginal, and so it will usually also be in real cases.

7.2. Warehousing tricks

A warehouse is a type of subdivision that can just buy goods and sell them again. It has a large storage capacity, so you can use it to buy up a large stock of products all at once, and then use them slowly over time. This way the warehouse can act as a buffer for your other subdivisions. This is useful when you are buying your supply from other companies. If the supply suddenly drops, it is nice to have enough buffer for at least a few turns, so you have time to find a new supplier.

Also, a warehouse can simplify your supply network. For instance say you have 5 stores that all sell the same product. If each store buys its supply from another company than yours, then if the supplier suddenly cancels the supply you will have to go to each of the 5 stores and create new orders. Instead you can let your warehouse buy from the supplier, and have the stores buy from the warehouse. Then when the supplier cancels, you only need to create one new order at a single point: the warehouse.

Warehouses can also sometimes be used to reduce tax expenses. You can do this by placing your warehouse in a region with low profit tax, and then arranging it so that most of your profit is made at the warehouse (instead of at production facilities and stores in high tax areas). However, when doing this you of course also have to think about customs and transport costs to and from the warehouse. Those expenses could easily eat up your profit tax savings.

7.3. Branding your own retail products

When you are manufacturing retail products yourself, you have the option of branding them. Branding your product will increase its maximum potential sales volume at retail stores. In simple terms, the customers are more likely to buy a branded product than an unbranded one. This helps any retail store that sells your product, not just those belonging to your company. So even when you are selling your production to other companies, branding will give you a competitive advantage.

Branding is done at your office and will only affect cities in the region that the office covers. So you may have to set up brand campaigns for the same product in several offices.

To start a brand campaign, select one of your offices:

1. From the main office page, click on the "Advertising" link. This opens a new page with a list of all the retail products that you are manufacturing.

2. Click on the product that you want to brand. This opens a page similar to the one you know from store advertising.

3. On the right side of the page, click on the checkbox next to the media you want to advertise in, and enter the amount of money you want to spend on it per week (same as with store advertising).

4. On the left side of the page, check the cities that you want to brand your product in (mainly you will want to choose the cities in which you have stores selling the product). You can also choose to advertise in the whole region. Branding in the whole region gives you a small bonus to efficiency, but selecting this only pays off if most of the region's population lives in the major cities. Basically look in the population column. If the sum of the population in the cities is at least 90% of the total regional population, then advertising in the whole region can be worth it (but of course only if you want to brand your product in all the cities).

5. When you are happy with your choices, click the "Start advertising" button.

As with store advertising, branding affects the administrative load at the office. So when you are done setting up your ad campaigns, you should click on the "Work efficiency" link and check the load. If the load is over 100%, you need to lower your advertising spending or hire more workers at the office or buy better computers.

7.4. Replacing worn out equipment

The equipment you have at offices, laboratories and factories will wear down over time and start to break. This means you have to buy replacement units regularly, otherwise your subdivisions will start to drop in efficiency.

You can replace equipment from the "Equipment" link on the subdivision's main page. However, this is quite cumbersome when you have many subdivisions, so fortunately there is an easy way.

From the main menu select "Company" → "Management". Select the equipment tab (should be selected by default). Here you get a list off all the subdivisions that have equipment. In the "wear

and tear" column you can see the percentage of wear on the equipment. You can also see how many pieces of equipment are completely broken. This is indicated by the numbers in parenthesis (X + 1) means X pieces of broken equipment, and one partially broken.

Illustration 16: Overview of the equipment status for all subdivisions

To perform a replacement, check the subdivision(s) with broken equipment and click the "Repair" button. Note that you can check multiple subdivisions at a time to speed things up. However, since the quality of your replacement equipment will affect the overall quality of your equipment, you should only check subdivisions that use the same type and quality of equipment (look at the "quality" column).

Clicking the repair button opens the equipment purchase window you should know well by now. The quantity field will be pre-filled for you with the number of pieces that need replacing. So all you need to do is select a supplier that offers a quality close to the one you need. Of course you cannot always get replacement equipment of exactly the right quality, so if the choice of replacements increases your average equipment quality, you may have to also increase the worker salary at the subdivision to compensate (for subdivisions like the office, where required worker qualification depends on equipment quality).

Replacing equipment is a boring task, but it has to be done frequently.

7.5. Participating in tenders

When you reach management qualification level 10, you can participate in tenders. Tenders are small competitions in which you compete against other players and can win various prices such as game points and experience. New tenders become available every day.

Tenders are posted 7 days before they complete, so you only need to be quick when setting your company up for one. The evaluation to find the winner takes place either during the last 3 days of the tender period, or during the very last day. This depends on the type of the tender. So it only matters how well you perform during those last day(s) of the tender period.

To see the list of currently available tenders, select "Game world" → "Contests" from the main menu. The tenders will be shown in chronological order. The top ones with 0 updates left are the ones that completed during the last update. So if you click on those you can see who won.

Tenders have a level range that you need to be within to be a qualified participant. For instance if it says "1-15 / Production" it means that your production qualification has to be between 1 and 15 in order for you to be qualified to participate in the tender.

If you click on a tender that is not yet complete you will get a page that explains the rules of the tender. If you are qualified for the tender, then on this page you will also see an "Apply" button. To participate in the tender, click the apply button. You can participate in as many tenders as you like.

Illustration 17: The page detailing a tender

Note that you can win a tender without participating in it, however you will only get a price if you participate. This means that if you participate in a tender and get second place, while the person who won it did not participate, then neither of you will get the price.

For more details about the rules of tenders, select "My earnings!" → "Rules of tenders" from the main menu.