Rules for Running a Business (v1.0)

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# 1 Introduction

Fundamentally, the ability to make money in D&D 3.5e is a little whacked. For example, a lv1 wizard can make up to 12.5gp per scroll he sells. Even if you assume he can only scribe one a day for 200 work days a year, that’s 2500gp/yr! (There is also an XP cost of 200xp over the course of the year). This means that if you wanted to hire a lv1 wizard, he would want a yearly wage of somewhere in the 1-3k range (and his wealth is supposed to be less than 900gp!).

Conversely, a lv1 fighter doesn’t have many skills that a random grunt doesn’t have, so it’s hard to see him garnering more than the basic wages listed for hirelings. For example, a mercenary leader is listed at 6sp/day, or 120gp/yr if you assume the same number of work days as above.

Overall, the existence of magic items is what blows the system up. Why would powerful merchant lords bother carting rugs across the world when easy-to-manufacture magic items like rings of protection sell for thousands of gold? Additionally, character wealth does not track their value to an employer at all (except for maybe a wizard). Some basic extrapolations show that character wealth is proportional to roughly level^2.5! Yet, for 90% of characters, their value on the open market should probably track their skill checks in the relevant areas, which scale approximately linearly with character level.

The only solution is suspension of disbelief: We can’t devalue magic items because they’re an important part of character balance – they need to be that expensive because they add so much power to PCs and NPCs alike. So, we have a world where single characters walk around with armor and weapons worth more than the wealthiest nobles’ estates or mansions. We just have to accept the discrepancy.

In terms of running a business, it should probably fall in the more realistic economy model, not the extravagant magic item model, which means that PCs will probably not find it a worthwhile investment of their resources. In other words, why would a PC invest 3k to buy some farmland that makes them 100gp/yr when they could buy a +1 ring of protection and +1 cloak of resistance, sack a dungeon, and make far more than 100gp in a single day? These rules are supposed to represent the backdrop of a basic economy; they are not intended to be an integral part of the role playing.

For more interesting or risky business, like running a thieves guild, these rules should probably NOT be used. That should be a central part of the role playing experience, and thus follow the more lucrative “extravagant magic item” model. This is not entirely inconsistent – the PCs cannot simply roll some dice to run their guild, they have to role play the individual jobs, make decisions, perform negotiations, and risk their own necks going on quests. At this point, it’s less running a business and more of a story arc.

However, these rules might still provide for some interesting role playing experiences when introduced in the right way. F or example, the PCs running a thieves guild might choose to send some of the apprentices on smaller jobs that the PCs are not actively involved in role playing. These rules could be used as a model for some of these sub-businesses. Returns on money invested would be intended more as background flavor than as a true motivating factor.

# 2 Goals

Since it’s established that these rules are merely supposed to reflect the basic market economy of our medieval world (suspending disbelief with regards to magic items), there are four basic goals:

1. The key metric is ROI
2. Higher risk endeavors should have higher potential returns
3. Higher risk endeavors should require more skill to make money
4. Market value of worker should be based on his/her skill check

Not surprisingly, it turns out to be nearly impossible to come up with a reasonable system without the presence of borrowing: There will always be people with money who are willing to invest it in someone else’s talent, and there will always be people with talent who have the ability to make lots of money but do not have the necessary capital to get started. Even without an explicit ruleset, borrowing would automatically fall out of the system, and so would the fifth goal, which is not so much a goal as a requirement:

1. It makes more sense for those with higher skill checks to leverage

(The more talented you are, the more it makes sense to borrow)

Inherently, this means low-skill individuals running low-risk businesses will be better off fronting their own money, while high-skill individuals will want to borrow as much as possible because it boosts their ROI. Since the cost of money is based more or less on the average ability of those in the society to turn investment into profit, those with above-average skills have an ability to generate profit that’s greater than the cost of money, and will be motivated to exploit that surplus value to its greatest extent.

# 3 Basics

The DMG2 rules for running a business are used as the basic foundation, with the following modifications to accomplish the 4 goals outlined above.

## 3.1 Mechanism and Example

Each business venture has a fixed risk level associated with it. This is also referred to as the “break even” skill check. For a given risk level, there’s an associated profit multiplier and capital investment. In addition, each business has a primary skill associated with it.

An individual must pay the capital investment to “purchase” the business. Each month, that individual rolls a profit check:

 *Profit check = 1d20 + primary skill check + [modifiers]*

The profit that month is equal to the profit multiplier times the difference between the profit check and the risk level. It’s important to note that the business owner can take a 10 on this check.

For example, let’s say a particular business has a risk level of 18, which has an associated profit multiplier of 6gp/month and a capital investment of 5790gp. An individual must pay 5790gp to purchase that business. Then, each month they roll a profit check. If the result of that check is 20, they make 12gp that month. If the result is 25, they make 42gp, and so on. Conversely, it’s possible to lose money as well: If the business owner rolls a 16, they lose 12gp. If they roll a 10, they lose 48gp. It should be clear why the risk level is also called the “break even” skill check.

 *Monthly profit = profit multiplier \* (1d20 + primary skill check + [modifiers] - risk level)*

OR

 *Monthly profit = profit multiplier \* (10 + primary skill check + [modifiers] - risk level)*

## 3.2 Comparison to DMG2

There are several notable differences from the ruleset presented in the DMG2. Most of the changes were in the spirit of simplification: In order to make the overall system more sophisticated and robust, the number of moving parts was reduced.

1. Capital and resources are not separated. In this system, all of the capital is recoverable, although there is a transaction fee (see “Selling a Business” below).
2. No Specialists – There is no longer a provision to hire specialists. This is built implicitly into the risk table: It is assumed that large, risky business ***must*** have specialists on staff, and the expense is part of the large monthly operating costs.

## 3.3 Conceptual Descriptions

Capital represents all money required to fund a business. It could include land, vehicles, tools, buildings, or even relationships. It does not represent recurring costs such as paying employees or the cost of raw materials.

The risk level more or less indicates the size of the business. Since it counts ***against*** profit, it includes items such as payroll, recurring bribes, and raw materials. Think of it this way: In order to make the big bucks, one has to invest in a large operation with many expenses (and take lots of risks on a monthly basis, not just in terms of the initial investment). The bigger the operation gets, the harder it is to hold it all together, and the more successful one must be to make a profit. Only the most skilled individuals can run large businesses with hundreds of employees. One misstep and the business could go from a profit to an enormous loss in a single month. In addition, such large business might be heavily leveraged beyond just borrowing money: Their revenues and expenses may be many times larger than profits, meaning that small changes in one or the other could spell disaster. This is yet another way in which a large, high risk endeavor requires a skillful individual to keep it running smoothly.

# 4 Rules

## 4.1 Designing a Business

There are two things that must be decided for any given business: Its risk level and associated skill checks. These are permanent decisions, with a few exceptions (see section on Additional Investments).

The risk level can be fairly arbitrary for any given business. In fact, the name and type of business is really just color text; the risk level determines all the mechanics. That being said, an effort should be made to match the risk level and investment to a believable role playing experience. For example, a poor farm should not have a risk level of 60, and a major global shipping company should not have a risk of 10. Within reason, the risk level can be chosen to suit the character’s desired investment – if they want to open a shop, there’s a wide range of sizes and types of shops that could span a large range of risk levels.

The second thing that must be chosen are the associated skill checks for the business – one primary skill and two secondary skills. These decisions are also fairly arbitrary, although they should be chosen because they make sense for the business, ***not*** because they are convenient for the proprietor. For example, although a farmer does interact with buyers to sell his crops, it would be hard to argue that bluff and sense motive are more important skills than handle animal or knowledge(nature). The primary skill for a great number of business is profession(X).

The DMG2 contains lots of good examples of skill combinations for a variety of businesses, and is a good reference since this part of the system was ported directly.

## 4.2 Risk Table

This is the main table upon which the entire ruleset is based. Profit Multiplier is a monthly amount, in gold pieces. Capital Investment is also given in gold pieces.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RiskLevel | ProfitMultiplier | CapitalInvestment | RiskLevel | ProfitMultiplier | CapitalInvestment |
| 10 | 1.7 | 1,830 | 35 | 93.1 | 67,000 |
| 11 | 1.9 | 2,110 | 36 | 109.0 | 77,400 |
| 12 | 2.3 | 2,440 | 37 | 129.0 | 89,400 |
| 13 | 2.7 | 2,820 | 38 | 151.0 | 103,000 |
| 14 | 3.2 | 3,250 | 39 | 177.0 | 119,000 |
| 15 | 3.7 | 3,760 | 40 | 209.0 | 138,000 |
| 16 | 4.4 | 4,340 | 41 | 245.0 | 159,000 |
| 17 | 5.1 | 5,010 | 42 | 288.0 | 184,000 |
| 18 | 6.0 | 5,790 | 43 | 338.0 | 212,000 |
| 19 | 7.1 | 6,680 | 44 | 397.0 | 245,000 |
| 20 | 8.3 | 7,720 | 45 | 467.0 | 283,000 |
| 21 | 9.7 | 8,920 | 46 | 549.0 | 327,000 |
| 22 | 11.4 | 10,300 | 47 | 645.0 | 378,000 |
| 23 | 13.4 | 11,900 | 48 | 758.0 | 436,000 |
| 24 | 15.8 | 13,700 | 49 | 890.0 | 504,000 |
| 25 | 18.6 | 15,900 | 50 | 1,050.0 | 582,000 |
| 26 | 21.8 | 18,300 | 51 | 1,230.0 | 672,000 |
| 27 | 25.6 | 21,200 | 52 | 1,440.0 | 777,000 |
| 28 | 30.1 | 24,400 | 53 | 1,700.0 | 897,000 |
| 29 | 35.4 | 28,200 | 54 | 1,990.0 | 1,040,000 |
| 30 | 41.6 | 32,600 | 55 | 2,340.0 | 1,200,000 |
| 31 | 48.8 | 37,700 | 56 | 2,750.0 | 1,380,000 |
| 32 | 57.4 | 43,500 | 57 | 3,230.0 | 1,600,000 |
| 33 | 67.4 | 50,300 | 58 | 3,800.0 | 1,840,000 |
| 34 | 79.2 | 58,000 | 59 | 4,470.0 | 2,130,000 |
| 35 | 93.1 | 67,000 | 60 | 5,250.0 | 2,460,000 |

### 4.2.1 Employees and Buildings

TBD

If necessary, one could come up with a relationship between the amount of capital required and the implied number of employees and buildings of operation. For now, it suffices to say that these are all built into the capital cost and risk level.

## 4.3 Modifiers and Descriptions

|  |  |  |
| --- | --- | --- |
| Modifier | Cost | Description |
| +1 |  | 5 ranks in two secondary skills OR 10 ranks in one secondary skill |
| +2 |  | 10 ranks in two secondary skills OR 20 ranks in one secondary skill |
| +3 |  | 15 ranks in two secondary skills |
| +4 |  | 20 ranks in two secondary skills |
| -8 | -35% Cap | Location = Wilderness |
| -4 | 0% Cap | Location = Rural |
| 0 | 35% Cap | Location = Town |
| +2 | 70% Cap | Location = City |
| +4 | 100% Cap | Location = Metropolis |
| +1 | 15% Prof | Member of a local trade guild |
| +2 | 35% Prof | Member of a major (possibly global) trade guild or standards organization |
| +2 |  | Business Savvy feat |

*X% Cap means “X% increase in capital investment”; X% Prof means “Lose X% of total profit each month”*

Use location definitions from DMG2. Note the business owner must increase capital investment by ***at least*** 35% to avoid taking a penalty on the profit check.

The trade guild dues are a function of ***gross*** monthly profit, before taking out the cost of loan payments or NPCs. For example, if a business owner makes 100gp on a profit check, but also owes 20gp/mo in loan interest and 30gp/mo in NPC wages (for running the business for him), he takes the trade guild dues out of the 100gp gross, NOT the 50gp net. In this case, if he was a member of a local trade guild, he would net 35gp (100gp minus 20gp for loan, minus 30gp to pay the NPC, minus 15gp trade guild dues).

### 4.3.1 Important Notes on Modifiers

1. No masterwork tools – This is built into the capital investment. It’s assumed that nobody in their right mind would spend thousands of gold pieces to buy farmland and not invest the few hundred gold pieces for a masterwork plow.

## 4.4 Hiring an NPC Business Manager

As with the original DMG2 rules, a business owner is free to hire an NPC to make the checks for them. The cost of hiring that NPC depends on their skill check, although other arrangements could be made. However, even a hireling, cohort, or henchman will expect to be paid ***something***.

As a general rule, use the following wage rates for NPCs. When the NPC in question has a skill check different than the one expected in the table below, look up their wage based on the skill check, NOT the level (it’s the skill check that determines their market value, not the level). For skill checks that lie in between entries in the table, simply extrapolate.

|  |  |  |
| --- | --- | --- |
| NPCLevel | ExpectedSkill Check | DesiredWage |
| 1 | 8 | 4.7 |
| 2 | 10 | 6.4 |
| 3 | 12 | 8.9 |
| 4 | 14 | 12.2 |
| 5 | 16 | 16.9 |
| 6 | 18 | 23.3 |
| 7 | 20 | 32.2 |
| 8 | 22 | 44.5 |
| 9 | 24 | 61.4 |
| 10 | 26 | 84.9 |
| 11 | 29 | 137.0 |
| 12 | 31 | 190.0 |
| 13 | 33 | 263.0 |
| 14 | 35 | 361.0 |
| 15 | 37 | 500.0 |
| 16 | 39 | 690.0 |
| 17 | 41 | 953.0 |
| 18 | 43 | 1320.0 |
| 19 | 45 | 1820.0 |
| 20 | 47 | 2510.0 |

## 4.5 Borrowing Money

Characters can borrow up to a certain percentage of the capital from a moneylender. There are only two rules for this mechanic, the maximum leverage ratio and the interest rate. Everything else is really just roleplaying – for example who lent the money, whether they periodically drop in to see how their investment is doing, how big the moneylender is, what they will do if the business owner doesn’t pay, etc.

|  |
| --- |
| Borrowing Money |
| Maximum Leverage % | 75% |
| Yearly Interest Rate | 7.5% |

The maximum leverage percentage is the maximum percent of the capital investment that the lender will supply. For example, a risk level 17 venture requires about 5000gp of capital. A lender (or combination of lenders) would be willing to supply up to 3750gp, although the business owner could choose to borrow less. No matter how a character arranges the financing, they always have to supply at least 25% out of their own pocket.

The yearly interest rate is paid as simple interest – it does not reduce the amount of the loan. It is paid on a monthly basis, so it actually comes out to 0.625% per month. It is paid only on the amount of capital the lender supplied.

In the level 17 risk example mentioned above, the lender supplies 3750gp, so the business owner will be required to pay the lender 281gp/yr in interest (7.5%), or roughly 23.4gp/mo. This continues as long as the loan is outstanding. Someone can choose to pay off all or part of the loan at any time.

## 4.6 Additional Investments

The business owner can choose to make additional investments to increase the risk level (and therefore profitability) of the business. This is a nice way for a PC to “level up” his business as his skills increase. Any amount of additional investment is allowed, so long as it makes sense within the context of the game. For example, a farmer could buy additional farmland to increase the size of his operation, and maybe one day build it into a large farming corporation. However, there is a limit – the farm could never become risk level 50, it just doesn’t make sense.

The mechanic for additional investment is simple: Just pay the difference between the current risk level and the new risk level. Note this must include the appropriate modifier for location. It is also possible to sell off part of a business, although this incurs the normal penalty (and time delays) associated with selling a business. This practice should also be discouraged by the DM – it is simply less practical to break businesses up into tiny pieces that can be sold off one at a time than it is to add pieces one at a time.

Example

The owner of a level 11 business wants to make additional investments to bring his risk level up to 13. The business is located in a town (35% capital increase). His old capital level was roughly 2850gp (2110x1.35). The new required capital is 3810gp (2820\*1.35). He must pay the difference (960gp) to make this upgrade. He has the option to roll this additional investment into his original loan. If he had financed 75% of the capital, then the loan amount increases from 2140gp to 2860gp, and his out-of-pocket amount increases from 710gp to 950gp. Of course, his monthly expenses will now also go up because he has to pay interest on a larger loan amount.

## 4.7 Selling a Business

In theory, a business owner could choose to sell his business at any time and recover his capital investment. In reality, such transactions entail additional cost and require time to execute. The faster a business owner wants to liquidate the assets, the greater the transaction cost as a percentage of ***total*** capital (including loan amount – this means someone who is 75% leveraged would not even be able to make a fire sale without the lender’s permission).

|  |  |  |
| --- | --- | --- |
| Type of Sale | TransactionCost | RequiredTime |
| Fire Sale | 40% | 1d20+20 | Days |
| Distressed Sale | 25% | 1d4+2 | Months |
| Expedited Sale | 15% | 1d6+6 | Months |
| Normal Sale | 8% | 1d3 | Years |

Some of these costs are simply part of the transaction. The new owner will want to know the relevant authorities have approved the transaction, which may require paying fees to (or paying off) the appropriate officials. One or more banks might get involved to broker the exchange of money and to see the old lender paid off, and agents will almost certainly be used to connect buyers and sellers.

For a normal sale, the process takes years due to the many steps involved. Simply finding an interested buyer could take a long time, and that buyer will want to inspect the business, study the books, and understand what he’s purchasing. Even then, there are negotiations to be done, and the first interested buyer may not actually purchase the business. Of course, this process can be expedited for a fee, bringing the time down to less than a year. Anything faster is basically a distressed sale, and shortcuts will have to be taken to get a deal done. Of course, the owner could also choose to engage in a “fire sale” – there is always someone, somewhere in the world that is willing to buy if the discount is large enough.