|  |  |
| --- | --- |
| **Business Case Development - “Food TRUCK”**  Risk analysis, Sensitivity Analysis and final recommendation on alternatives | “GOOD FOR YOU”  **“Taste on wheels, get a truck and start rolling”.** |

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# **Introduction**

This document will focus on sensitivity analysis, risk analysis, updated MOA, pros and cos of the risks and final recommendation of the best alternatives on basis of high-level risk analysis.

# **Sensitivity Analysis**

A sensitivity analysis determines how different values of an independent variable affect a dependent variable under a given set of assumptions. In other words, sensitivity analyses study how various sources of uncertainty in a mathematical model contribute to the model's overall uncertainty. This technique is used within specific boundaries that depend on one or more input variables.

We choose Margin and revenue as a sensitive variable which directly impact on the NPV, if there will be positive or negative change in the margin and revenue, it will effect on net profit from sales. Following be the changes as a whole

## **Alternative 1: Merger and Acquisition**

This is the calculated scenario from the last deliverable which had assumptions of margin, revenue and discounted rate. So here below is the scenario of changing in the margin and the consequences of it.

In the previous scenario this was the margin set up which calculated the profits and gave the NPV and the payback period was year 3.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Year 1 | Year 2 | Year 3 | Year 4 | Year5 | Total |
| Margin | 28% | 30% | 30% | 32% | 33% |  |
| Revenue | $645,000 | $678,904 | $699,700 | 737900 | 764000 |  |
|  |  |  |  |  |  |  |
| **Benefits** |  |  |  |  |  |  |
| Net Profit from Sales | $180,600 | $203,671 | $209,910 | $236,128 | $252,120 | $1,082,429 |

Conducting sensitivity analysis while changing the margin % will drastically decrease the NPV and increases the payback period.

Here are the affected changes look like.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Year1 | Year2 | Year3 | Year4 | Year5 | Total |
| Margin | 20% | 30% | 20% | 22% | 43% |  |
| Revenue | $645,000 | $678,904 | $699,700 | 737900 | 764000 |  |
| **Benefits** |  |  |  |  |  |  |
| Net Profit from Sales | $129,000 | $203,671 | $139,940 | $162,338 | $328,520 | $963,469 |
|  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NPV** |  |  |  |  |  |  |
|  | Year1 | year2 | year 3 | year 4 | year 5 | Total |
| Cost | $230,700 | $171,100 | $171,100 | $171,100 | $171,100 | $915,100 |
| Benefits | $129,000 | $203,671 | $139,940 | $162,338 | $328,520 | $963,469 |
| Cashflow | -$101,700 | $32,571 | -$31,160 | -$8,762 | $157,420 | $48,369 |
| Cumulative | -$101,700 | -$69,129 | -$100,289 | -$109,051 | $48,369 |  |
| Discounted | 10% | 10% | 10% | 10% | 10% |  |
| Discounted Amount | -$101,598 | $32,506 | -$31,067 | -$8,727 | $156,635 | **$47,749** |
| Cumulative (Discounted) | -$101,598 | -$69,092 | -$100,159 | -$108,886 | $47,749 |  |

NPV

Payback

Decrease in margin is decrease in profit and which also changes the NPV, but payback period increases from 3 year to 5 year.

## **Alternative 2: Marketing and Advertisement**

This is from the calculated scenario from the last deliverable which had assumptions of margin, revenue and discounted rate. So here below is the scenario of changing in the margin and the consequences of it.

The before scenario this was the margin set up which calculated the profits and gave the NPV and the payback period was year 5.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| Margin | 20% | 20% | 22% | 24% | 27% |  |
| Revenue | $110,000 | $260,000 | $280,000 | 295000 | 300000 |  |
|  |  |  |  |  |  |  |
| **Benefits** |  |  |  |  |  |  |
| Net Profit from Sales | $22,000 | $52,000 | $61,600 | $70,800 | $81,000 | **$287,400** |

Conducting sensitivity analysis while changing the margin % will drastically increase the NPV and decreases the payback period. Here are the affected changes look like.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Margin | 22% | 25% | 27% | 28% | 30% | Total |
| Revenue | $110,000 | $260,000 | $280,000 | 295000 | 300000 |  |
| **Benefits** |  |  |  |  |  |  |
| Net Profit from Sales | $24,200 | $65,000 | $75,600 | $82,600 | $90,000 | **$337,400** |

NPV

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **NPV** |  |  |  |  |  |  |
|  | **year1** | **year2** | **year 3** | **year 4** | **year 5** | **Total** |
| Cost | $122,400 | $28,080 | $28,080 | $28,080 | $28,080 | $234,720 |
| Benefits | $24,200 | $65,000 | $75,600 | $82,600 | $90,000 | $337,400 |
| Cash Flow | -$98,200 | $36,920 | $47,520 | $54,520 | $61,920 | $102,680 |
| Cumulative | -$98,200 | -$61,280 | -$13,760 | $40,760 | $102,680 |  |
| Discounted | 12% | 12% | 12% | 12% | 12% |  |
| Discounted Amount | -$98,082 | $36,832 | $47,349 | $54,259 | $61,550 | **$101,907** |
| Cumulative (Discounted) | -$98,082 | -$61,251 | -$13,901 | $40,358 | $101,907 |  |

Payback Period

In this case, increase in the margin is increase in the net profit and which also changes the NPV, and payback period decreases from 5 year to 4 year

## **Alternative 3: Sole Proprietorship**

In sole proprietorship, risk will impact the financial bank balance of owner. To mitigate and prepared for the risk, we have done the sensitivity analysis. Recalling to our cost-benefit analysis, we have estimated our Net profit value will be $142,512 based on our assumed margin value. We assumed margin value after doing depth market research analysis and value will be close enough to the reality.

However, considering the high risk which is less likely to happen can impact our margin value in next year. For this, we kept our margin considerably low to have rough estimate of net profit value in worse case scenarios.

Estimated net profit from sales based on our revenue assumption for 5 years:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Benefits** | | | | | | |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Total** |
| Margin | 20% | 25% | 30% | 35% | 33% |  |
| Revenue | $500,000 | $650,000 | $750,000 | $900,000 | $940,000 |  |
| Net Profit from Sales | $100,000 | $162,500 | $225,000 | $315,000 | $310,200 | $1,112,700 |

Estimated net profit from sales after taking high risk in consideration which will lower our revenue value at year 3 and 4 are shown in below tabular format. In year 5, We will mitigate the risk keeping margin at 40%. Now estimated value be:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Benefits** | | | | | | |
|  | Year 1 | Year 2 | Year 3 | Year 4 | **Year 5** | Total |
| Margin | 20% | 25% | 30% | 35% | 40% |  |
| Revenue | $500,000 | $650,000 | $630,000 | $640,000 | $780,000 |  |
| Net Profit from Sales | $100,000 | $162,500 | $189,000 | $224,000 | $312,000 | $987,500 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Net profit value** | | | | | | |
|  | **Year 1** | **Year 2** | **year 3** | **year 4** | **year 5** | **Total** |
| Cost | $268,680 | $175,080 | $175,080 | $175,080 | $175,080 | $969,000 |
| Benefits | $100,000 | $162,500 | $189,000 | $224,000 | $312,000 | $987,500 |
| Cashflow | -$168,680 | -$12,580 | $13,920 | $48,920 | $136,920 | $18,500 |
| Cumulative | -$168,680 | -$181,260 | -$167,340 | -$118,420 | $18,500 |  |
| Discounted | 10% | 10% | 10% | 10% | 10% |  |
| Discounted Amount | -$168,511 | -$12,555 | $13,878 | $48,725 | $136,237 | $17,774 |
| Cumulative (Discounted) | -$168,511 | -$181,066 | -$167,188 | -$118,463 | $17,774 |  |

NPV

Payback Period

The new estimated NPV value is at $17,774. This is positive value but comparatively low then our previous estimated value and payback period is increasing from year 3 to year 5.

# **Risk Analysis**

Risk analysis is the process which will help business to identify and manage the potential problems. Following could be the reasons when we can use the risk analysis in the business

1. To anticipate the problem while planning
2. To improve safety and managing potential risk in the business.
3. When business is planning for changes such as new competitors in the market or change in the government policy

Risk analysis is about identified risk with the consequences and taking potential counter measures. In addition to it there is the priority order given which let us know which are more risk in nature than others.

* High – indicates that it affects more.
* Medium: - indicates that the situation is moderate.
* Low: -indicates that it affects less.

Thereafter, there is how this risk will behave in the other options apart from Merger and Acquisition. There is detail description of their affecting condition on the risks described.

* Yes: - indicates that the option is affecting the risk described.
* Similar: - indicates that the options are similar in the compare with what option we have chosen for.
* No: - indicates that the option is not all affected by the risk described.

## **Alternative 1: Merger and Acquisition**

Below is the table describing the risk with consequences , measures to prevent , priority and impact on other to options.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Identified Risk** | **Consequences** | **Potential Counter Measure (mitigation strategies)** | **Priority** | **Impact on Sole proprietorship** | **Impact on Marketing and Advertising** |
| Location | Cannot be targeted profit can be changed accordingly | 1)Can make a fix spot.  2)Have interesting and good food quality which attracts customer to anywhere | High | SIMILAR  It will be having the similar effect as the M&A because the location will remote in both situations | YES  It has impact because it really matters were you advertise your banners and brochures which can increase the sales. |
| Vehicle broken/ damaged | Profit decrement as saving more money for damaging or services | 1)Make sure like 2-3 staff members know how to drive and as well as inspecting & fixing.  2)Inspect every time before and after operation. | Low | SIMILAR  It has similar impact as the vehicle can be broken or damage in M&A also. | NO  It really does not matter in this because the advertising and marketing do not need physical food truck to be shown. |
| Unpredictable Weather | Loss of market during rainy or snowy climate | 1)Look for weather predication and update the customer for bringing umbrella or properly covered with jackets  2)Have preparation on canopy tent, so customer can enjoy food especially in rainy & bit snowy weather. | Medium | SIMILAR  The weather will impact as it will in merger and acquisition as if anything goes wrong it will affect both the deliverables (i.e., sole proprietorship and Merger & Acquisition) | YES & NO both  1)If there is not good whether a lot of people will not move out and cannot see the hoardings and banners.  2)They can send pamphlet in flyers which can also make aware of the food truck. |
| Limited growth due to more competitors in future | Cause reduction in sales | 1)Infused more flavors, new techniques in cooking or service  2) According to change in market absorb new ideas and inculcate more varieties to attract customers. | High | YES  It will have major impact on this option because if there will be increase in competition the market will slow down until and unless you get innovation and not stick to one menu. | YES  It will because the market is growing so fast that people will try to get more attraction by attractive advertising and fancy things which can increase competition. |
| Changes in legal services | Can take away the licensing permit which can shut the business. | 1)Keep the eye on the update of the licensing services.  2)Keep eye on renewal policies of the permits. | Medium | SIMILAR  If any changes applicable will be in any situation of food truck owned, so overall will be same. But will be more hustle because it’s just one party who must suffer loss. | NO  Any changes in legal services does not have any impact on this option. |
| Integration Issues in both Merger and Acquisition | Cannot be predictable about the sales which cannot lead to any decisions | 1)Taking precautions during signing off the agreements.  2)Read off the agreement carefully in order to remove the liabilities during the process | High | NO  As it is one party company it really does not matter | NO  This option is all about the digital stuff, so it does not have any impact if anything goes wrong with it. |
| Miscalculation in evaluation of assets | Fight between the parties which can lead to disclosure in contract. | 1)Keep check of the records of sales every time to avoid disruption.  2)Hiring a non- basis accountant which handles the record and informs everything to both parties and offer shares accordingly. | High | NO  As it is only own by one part if there are miscalculations, still the money is in his pocket so it’s all good | YES  It is also equally impacted as merger and acquisition as it is also separate department the budget will change if there is mistake with calculations. |
| Transparency & Focus | Cause strategies show to the competitors which can be loss | 1)Maintain the writing record of every decision made.  2)Focus on the business with new techniques and plans | Medium | NO  Does not impact as, it is just one party there is no disclosures of strategies. | YES  It will be impacted because will their strategies get revealed, there can be loss of less sales as the other companies can follow first, before it is implemented by the company who invented it. |

## **Alternative 2: Marketing and Advertisement**

Below is the table describing the risk with consequences , measures to prevent , priority and impact on other to options.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Identified Risk** | **Consequence** | **Potential Counter Measure (mitigation strategies)** | **Priority** | **Impact on Sole proprietorship** | **Impact on Merger and acquisition** |
| Research and development | Targeting the wrong type of customer and missing out on more profitable market segment | 1) need to use multiple type of research and multiple studies to ensure the reliability in results.  2) alignment of research with desired features and benefits | High | Yes  Without proper research and development company can be in the hot water.  Both the alternative needs proper research to commence the business. | |
| Promotion | Selecting wrong media to reach to audience with the desired impact | 1)Make sure to convey company and product benefit to targeted customer  2) can also take a help of marketing agency | High | Yes  A big part of marketing strategy is collecting information on the potential customers, to market their needs. | |
| Branding | Lack of trust issues because of launching something new in the market. People need to trust and recognize the brand | 1)Estimate marketing plan properly  2) put extra efforts and time on marketing and promotional activities to build trust and value with prospects | Medium | Yes  plan needs to include methods for tracking the success of the marketing strategies.  The tracking system needs to assess why sales go up or down and which strategies and promotions work best which will help to build the trust on the brand. | |
| Trends and regulations | Not keeping eye on industry trends to stay competitive if plan does not include method of identifying and assessing trends can lead company’s bottom line at risk. | 1)SWOT analysis  2) Porters Five force Analysis  3) consumer preference  4) adapting latest technology  5) Competitive advantage | High | Similar  Both the alternative will have similar impacts if they are not following the trends in the market.  They also need to keep track of economic factors that may affect the company. | |
| Advertising | False, misleading or inaccurate advertising can lead company in loss. | 1)Keep the eye on customer preference  2) make sure no misleading or unethical advertising practices are used  3) maintain public trust | Medium | Similar  Monitoring the sales, loyal customer by determining market segments through advertising strategy. | |

## **Alternative 3: Sole Proprietorship**

Below is the table describing the risk with consequences , measures to prevent , priority and impact on other to options.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Identified Risk** | **Consequence** | **Priority** | **Impact on Merger and Acquisition** | **Impact on Marketing and Advertising** | **Potential Counter Measure (mitigation strategies)** |
| Unpredictable Weather | Customer may not come to store due to bad weather like heavy snow and rain. This will impact revenue negatively | Medium | Similar | No | A home delivery service will be established at moderately rain or snow weather conditions |
| Personal liability | Sole proprietors are individually liable for the debts of their business. A business creditor who sues successfully for nonpayment may be awarded the proprietor's personal assets | High | No. As in merger there will be more than one partner. So financial burden can be transferred to other partner for running business | Yes. If marketing is funded by owner. | Complete credit check of owner should be done. Investment to another source of income should be done |
| Personal Injury | The sole proprietor typically makes all the decisions and runs the entire business operation. If he becomes ill or disabled, there may be nobody else who can step in and keep the business going, resulting in its possible collapse. Running a business single-handedly can also pose a risk to the physical or emotional health of the owner over time due to the heavy burden | Medium | Yes and NO. It may impact the employer satisfaction rate. Injury at work can reduce the productivity of employee | NO. As injury to marketing workers can not impact the productivity of kitchen or guest service employee | Proper safety training should be done to reduce the possibilities of hazards at workplace |

# **Updated Multiple Objective Analysis**

## **Alternative 1: Merger and Acquisition**

The risk which came is noticed that will be affecting the situation we found to be:

1)Integration

2)Weather

3)Transparency

Here below is the Multiple Objective Analysis with updated risks.

**Step 1**: Assigning the priorities according to assign criteria

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-Financial Variables** | **Brand** | **Staffing** | **Food Traffic** | **Demographic** | **Get Running** | **Integration** | **Weather** | **Transparency** |
| Goodwill | High | Moderate | Medium | Older | 6 months | Difficult | Low | High |
| Customer Satisfaction | High | Easy | High | Younger | 4 months | Difficult | Medium | High |
| Innovation | Medium | Difficult | Low | Younger | 2 months | Moderate | Low | Low |
| Employee Productivity | Low | Easy | High | Older | 1 month | Difficult | Medium | Medium |

**Step 2**: Changing priorities into number

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-Financial Variables** | **Brand** | **Staffing** | **Food Traffic** | **Demographic** | **Get running** | **Integration** | **Weather** | **Transparency** |
| Goodwill | 1 | 0.5 | 0.6 | 0.5 | 0.2 | 1 | 0.2 | 0.8 |
| Customer Satisfaction | 0.9 | 0.8 | 0.9 | 0.9 | 0.5 | 0.9 | 0.2 | 0.7 |
| Innovation | 0.4 | 0.3 | 0.4 | 0.7 | 0.7 | 0.5 | 0.4 | 0.1 |
| Employee Productivity | 0.1 | 0.8 | 0.8 | 0.3 | 0.9 | 0.8 | 0.1 | 0.4 |

**Step 3**: Assigning weights with respect to criteria

|  |  |  |
| --- | --- | --- |
| **Assigning Weights** |  |  |
| Criteria | Worst | Best |
| Brand | Low | High |
| Staffing | Difficult | Easy |
| Food Traffic | Low | High |
| Demographic | Older | Younger |
| Get running | 6 months | 1 month |
| Integration | Difficult | Easy |
| Weather | Low | High |
|  | Low | High |

**Step 4:** Assigning value 100 as the base and priority number in descending order with the priority list. Once assigned just add everything.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Worst** | **Best** | **Assigned Values** |
| Integration | Difficult | Easy | 100 |
| Food Traffic | Low | High | 90 |
| Transparency | Low | High | 75 |
| Demographic | Older | Younger | 70 |
| Brand | Low | High | 50 |
| Staffing | Difficult | Easy | 30 |
| Weather | Low | High | 20 |
| Get running | 6 months | 1 month | 10 |
| **Total** |  |  | **445** |

**Step 5**: Assigning value 10 as the base and priority number in ascending order with the priority list. Once assigned just add everything.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Worst** | **Best** | **Assigned Values** |
| Get running | 6 months | 1 month | 7 |
| Weather | Low | High | 13 |
| Staffing | Difficult | Easy | 25 |
| Brand | Low | High | 40 |
| Demographic | Older | Younger | 55 |
| Transparency | Low | High | 80 |
| Food Traffic | Low | High | 90 |
| Integration | Difficult | Easy | 100 |
| **Total** |  |  | **410** |

**Step 6**: Calculate Average of weights

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **High level** | **Low-level** | **Avg** |
| Integration | 0.23 | 0.24 | 0.24 |
| Food Traffic | 0.20 | 0.22 | 0.21 |
| Transparency | 0.17 | 0.20 | 0.19 |
| Demographic | 0.16 | 0.13 | 0.15 |
| Brand | 0.11 | 0.10 | 0.11 |
| Staffing | 0.07 | 0.06 | 0.07 |
| Weather | 0.05 | 0.03 | 0.04 |
| Get running | 0.02 | 0.02 | 0.02 |

**Step 7:** Multiply the weights to the number assigned in step 2 and add all the total.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **Avg weight** | **Good will** | **Customer satisfaction** | **Innovation** | **Employee productivity** |
| Integration | 0.24 | 0.24 | 0.216 | 0.12 | 0.192 |
| Food Traffic | 0.21 | 0.126 | 0.189 | 0.084 | 0.168 |
| Transparency | 0.19 | 0.152 | 0.133 | 0.019 | 0.076 |
| Demographic | 0.15 | 0.075 | 0.135 | 0.105 | 0.045 |
| Brand | 0.11 | 0.011 | 0.099 | 0.044 | 0.011 |
| Staffing | 0.07 | 0.035 | 0.056 | 0.021 | 0.056 |
| Weather | 0.04 | 0.008 | 0.008 | 0.016 | 0.04 |
| Get running | 0.02 | 0.004 | 0.01 | 0.014 | 0.018 |
|  |  |  |  |  |  |
| **Total** | 1 | 0.651 | **0.846** | 0.423 | 0.606 |

According to calculated scenario the Customer satisfaction has the highest number with the comparison to 1 (i.e. the total of the weights). So, from this, **Customer Satisfaction** is the non-financial variable we are focused on and than other. But the strange thing is there was drastic increase in good will when MOA was updated. So, apart from Customer satisfaction the Goodwill will be the other thing we will focus on.

## **Alternative 2: Marketing and Advertisement**

The risk which came is noticed that will be affecting the situation we found to be:

1. Research and development
2. Trending and Regulations

Here below is the Multiple Objective Analysis with updated risks.

**Step 1:** Assigning the priorities according to assign criteria

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-Financial Variables** | **Brand** | **Staffing** | **Food Traffic** | **Demographic** | **Get Running** | **Research and Development** | **Trending and regulations** |
| Goodwill | High | Moderate | Medium | Older | 6 months | High | Moderate |
| Public relations | High | Easy | High | Younger | 4 months | High | High |
| Customer Satisfaction | Low | Easy | Low | Younger | 2 months | Moderate | High |
| Innovation | High | Difficult | Medium | Older | 1 month | High | High |
| Employee Productivity Rate | Low | Easy | Medium | Younger | 1 month | Low | Moderate |

**Step 2:** Changing priorities into number

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-Financial Variables** | **Brand** | **Staffing** | **Food Traffic** | **Demographic** | **Get running** | **Research and Development** | **Trending and Regulations** |
| Goodwill | 0.9 | 0.5 | 0.7 | 0.5 | 0.2 | 0.7 | 0.4 |
| Public relations | 1 | 0.6 | 0.9 | 0.9 | 0.5 | 0.1 | 0.9 |
| Customer Satisfaction | 0.1 | 0.3 | 0.4 | 0.7 | 0.7 | 0.3 | 0.8 |
| Innovation | 1 | 0.2 | 0.8 | 0.3 | 0.9 | 0.1 | 1.0 |
| Employee Productivity Rate | 0.2 | 0.5 | 0.3 | 0.4 | 0.3 | 0.1 | 0.2 |

**Step 3:** Assigning weights with respect to criteria

|  |  |  |
| --- | --- | --- |
| **Assigning Weights** |  |  |
| Criteria | Worst | Best |
| Brand | Low | High |
| Staffing | Difficult | Easy |
| Food Traffic | Low | High |
| Demographic | Older | Younger |
| Get running | 6 months | 1 month |
|  |  |  |
| Research and Development | Low | High |
| Trending and regulations | Low | High |

**Step 4:** Assigning value 100 as the base and priority number in descending order with the priority list. Once assigned just add everything.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Worst** | **Best** | **Assigned Values** |
| Food Traffic | Low | High | 100 |
| research and development | Low | High | 90 |
| Brand | Older | Younger | 80 |
| Trending and Regulations | Low | High | 70 |
| Demographic | Difficult | Easy | 75 |
| Staffing | Low | High | 45 |
| Get running | 6 months | 1 month | 30 |
| **Total** |  |  | **490** |

**Step 5:** Assigning value 10 as the base and priority number in ascending order with the priority list. Once assigned just add everything.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Worst** | **Best** | **Assigned Values** |
| Get running | Low | High | 15 |
| Staffing | Low | High | 30 |
| Demographic | Older | Younger | 45 |
| Food Traffic | 6 months | 1 month | 55 |
| Brand | Difficult | Easy | 70 |
| Trending and Regulations | Low | High | 80 |
| research and development | Low | High | 95 |
| **Total** |  |  | **390** |

**Step 6:** Calculate Average of weights

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **High level** | **Low-level** | **Avg** |
| Food Traffic | 0.20 | 0.14 | 0.17 |
| Demographic | 0.15 | 0.12 | 0.13 |
| Staffing | 0.09 | 0.08 | 0.08 |
| Brand | 0.16 | 0.18 | 0.17 |
| Get running | 0.06 | 0.04 | 0.05 |
| Trending and Regulations | 0.14 | 0.21 | 0.17 |
| research and development | 0.18 | 0.24 | 0.21 |
| **Total** |  |  | **1.00** |

**Step 7**: Multiply the weights to the number assigned in step 2 and add all the total

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria** | **Avg weight** | **Goodwill** | **Public relations** | **Customer Satisfaction** | **Innovation** | **Employee Productivity Rate** |
| Food Traffic | 0.17 | 0.12 | 0.16 | 0.07 | 0.14 | 0.05 |
| Demographic | 0.13 | 0.07 | 0.12 | 0.09 | 0.04 | 0.05 |
| Staffing | 0.08 | 0.04 | 0.05 | 0.03 | 0.02 | 0.04 |
| Brand | 0.17 | 0.15 | 0.17 | 0.02 | 0.17 | 0.03 |
| Get running | 0.05 | 0.01 | 0.02 | 0.03 | 0.04 | 0.01 |
| Trending and Regulations | 0.17 | 0.07 | 0.16 | 0.14 | 0.17 | 0.03 |
| research and development | 0.21 | 0.15 | 0.21 | 0.06 | 0.21 | 0.02 |
| Total | 1.00 | 0.61 | **0.89** | 0.24 | 0.41 | 0.20 |

According to calculated scenario the Public relation has the highest number with the comparison to 1 (i.e. the total of the weights). So, from this, **Public Relation** is the non-financial variable we are focused on and than, Innovation and Goodwill.

## **Alternative 3: Sole Proprietorship**

We have added our risk in calculation of MAO. Risk factor added to this alternative are:

1. Weather
2. Personal Liabilities
3. Injury Liability

**Step 1: Assigning the priorities according to assign criteria**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-Financial Variables** | **Brand** | **Staffing** | **Food Traffic** | **Demographic** | **Get Running** | **Weather** | **Personal Liability** | **Injury Liability** |
| Goodwill | High | Moderate | Medium | Older | 8 months | Low | Low | Low |
| Customer Satisfaction | High | Easy | High | Younger | 5 months | High | low | low |
| Innovation | Medium | Difficult | Low | Younger | 3 months | Low | High | High |
| Employee Productivity | Low | Easy | High | Older | 1 month | medium | medium | High |

**Step: 2 Changing priorities into number**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Non-Financial Variables** | **Brand** | **Staffing** | **Food Traffic** | **Demographic** | **Get running** | **Weather** | **Personal Liability** | **Injury Liability** |
| Goodwill | 0.5 | 1 | 0.7 | 0.4 | 0.3 | 0.1 | 0.2 | 0.4 |
| Customer Satisfaction | 0.8 | 0.3 | 0.9 | 0.9 | 0.4 | 0.9 | 0.2 | 0.1 |
| Innovation | 0.4 | 0.3 | 0.2 | 0.7 | 0.8 | 0.2 | 0.9 | 0.8 |
| Employee Productivity | 0.1 | 0.8 | 0.8 | 0.3 | 0.9 | 0.8 | 0.4 | 0.6 |

**Step 3:** Assigning weights with respect to criteria

|  |  |  |
| --- | --- | --- |
| Criteria | Worst | Best |
| Brand | Low | High |
| Staffing | Difficult | Easy |
| Food Traffic | Low | High |
| Demographic | Older | Younger |
| Get running | 6 months | 1 month |
| Weather | Low | High |
| Personal Liability | Low | High |
| Injury Liability | Low | High |

**Step 4:** Assigning value 100 as the base and priority number in descending order with the priority list. Once assigned just add everything.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Worst** | **Best** | **Assigned Values** |
| Personal Liability | Low | High | 80 |
| Food Traffic | Low | High | 60 |
| Demographic | Difficult | Easy | 50 |
| Weather | Low | High | 40 |
| Staffing | Low | High | 25 |
| Brand | Older | Younger | 30 |
| Get running | 6 months | 1 month | 20 |
| Injury Liability | Low | High | 10 |
| **Total** |  |  | **315** |

**Step 5**: Assigning value 10 as the base and priority number in ascending order with the priority list. Once assigned just add everything.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Worst** | **Best** | **Assigned Values** |
| Injury Liability | Low | High | 4 |
| Get running | Low | High | 10 |
| Brand | Difficult | Easy | 60 |
| Staffing | Low | High | 70 |
| Weather | Low | High | 75 |
| Demographic | Older | Younger | 80 |
| Food Traffic | 6 months | 1 month | 85 |
| Personal Liability | Low | High | 100 |
| Total |  |  | 484 |

**Step 6**: Calculate Average of weights

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **High level** | **Low-level** | **Avg** |
| Food Traffic | 0.22 | 0.18 | 0.20 |
| Demographic | 0.19 | 0.17 | 0.18 |
| Staffing | 0.07 | 0.14 | 0.11 |
| Brand | 0.04 | 0.12 | 0.08 |
| Get running | 0.02 | 0.02 | 0.02 |
| Personal Liability | 0.30 | 0.21 | 0.25 |
| Injury Liability | 0.01 | 0.01 | 0.01 |
| Weather | 0.15 | 0.15 | 0.15 |

**Step 7**: Multiply the weights to the number assigned in step 2 and add all the total

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Criteria** | **Avg weight** | **Good will** | **Customer satisfaction** | **Innovation** | **Employee productivity** |
| Food Traffic | 0.20 | 0.14 | 0.14 | 0.04 | 0.16 |
| Demographic | 0.18 | 0.07 | 0.16 | 0.12 | 0.05 |
| Staffing | 0.11 | 0.11 | 0.03 | 0.03 | 0.09 |
| Brand | 0.08 | 0.04 | 0.06 | 0.03 | 0.01 |
| Get running | 0.02 | 0.01 | 0.01 | 0.02 | 0.02 |
| Weather | 0.15 | 0.02 | 0.14 | 0.03 | 0.12 |
| Personal Liability | 0.25 | 0.05 | 0.05 | 0.23 | 0.10 |
| Injury Liability | 0.01 | 0.005 | 0.001 | 0.01 | 0.01 |
|  |  |  |  |  |  |
| Total | 1.0 | 0.445 | **0.591** | 0.51 | 0.55 |

# **Pros and cons**

## **Alternative 1: Merger and Acquisition**

Advantages

* This will allow to increase value of the new entity and helps in cost savings.
* Change in economies by sharing the resources and services.

Disadvantages

* Changing to M&A, employees of small firm might need to develop some more skills
* Company may have to face major difficulties thanks to friction and internal competition
* The return of the share of company that may cause buyouts of other company was less than the return of sector as a whole

## **Alternative 2: Marketing and Advertisement**

Advantages

* Low investment. Product can be advertised on social media at considerably low price.
* Increasing brand value.

Disadvantages

* Advertisement may reach to our customer, but probability of customer to have dine-in at our restaurant place is low which ultimately will he negligible impact at revenue.
* Tough competition with higher brand value restaurant

## **Alternative 3: Sole Proprietorship**

Advantages

* Owners can instantly establish, and it is cost effective.
* They have very little formalities and may mix their business freely.

Disadvantages

* Owners rarely survive debts if they have completely lost the business.
* Owners are subjected to personal liability for risks and debts

# **Final Recommendation**

According to above scenarios we came to final recommendation is: **“Merger & Acquisition”**

Because it we have lot of common things for sole proprietorship and merger & Acquisition but following reason makes us select Merger & Acquisition.

1. Initial Investment is distributed, so less capital investment
2. . Legal services are already done by other party in acquisition, so much less time and money spent on it.
3. Experienced staff already, money and time is less spent compare to sole proprietorship. If there is any loss, it is not only on one party, it can be divided.

Adding the skills of two companies can get competition in market and which can increase sales and eventually increase profit.

In comparison to Merger & Acquisition with Marketing and Advertising. The following are the reasons:

1. Though the initial investment of Marketing and Advertising is very less comparative than Merger & Acquisition, but it will apply after the food truck is established.
2. It needs more employees because it has more work digitally and that can increase cost later.
3. It can be taken as a major variable in both Sole proprietorship and Merger & Acquisition but cannot be as Solo performer for developing food truck.