Enterprise Budget Background and Key Assumptions

Restaurant Deliveries Analysis

Background

One way to price a product is to determine what a consumer is willing to pay for that product. Another method is to determine the costs per unit produced (or in this case, costs per unit delivered), which allows an operator to ascertain if he or she can sell that product for a profit. A prospective operator can use an enterprise budget to conduct such an analysis. An enterprise budget allows a user to estimate the costs, revenues and overall profitability of an enterprise. In order to assess the economic feasibility of providing an unprocessed product to restaurants in the Atlanta-area from the vicinity of the Darien/Brunswick area, an enterprise budget is constructed to provide estimates of the weekly and seasonal costs per pound associated with this business activity. The unprocessed product could be whole Individually Quick Frozen (IQF) wild-caught shrimp, live clams, live oysters, live blue crabs or fresh grouper. All species are assumed to be sold on a per pound basis.

The estimation of variable and fixed costs for an enterprise allows one to calculate the breakeven price per pound for the product sold to area restaurants. Breakeven prices imply zero profit because they exactly cover the variable cost or total cost of delivering the product to the market destination. As such, breakeven prices are starting points for a potential operator to begin to understand how much above their wholesale/dockside price they would have to sell their product to Atlanta-area restaurants in order to see a profit. It is important to note that the breakeven prices in this analysis are calculated prior to taxes, which will vary depending on specific characteristics of the operator.

The enterprise budget itself is created in Microsoft Excel, a program that is readily available to most end-users. There are a number of assumptions associated with the projections of costs and revenues for this type of enterprise. The following sections describe the key assumptions. Using the baseline parameters, this report identifies the breakeven prices for a prospective operator under a weekly and seasonal time horizon. In order to allow individual users the ability to tailor this decision making tool to his or her specific circumstances, the user can change many of the key assumptions of this enterprise budget. Any cell that is shaded green can be changed, and the spreadsheet is designed to dynamically update values in subsequent fields via embedded formulas. In order to protect the embedded formulas, the worksheets are password protected. A user can only change the green cells when the worksheet is protected. To disable this feature, go to “Review” and then select the “Unprotect Sheet” button. The password is ‘money’.

General Assumptions

Delivered Weight

The default assumption for the quantity of product purchased at the docks by a prospective operator is 1500 pounds per week (round weight). This variable can be adjusted to any quantity of product sold weekly. In the case of an operator selling directly to restaurants, it is assumed that the delivered product is an unprocessed, whole product, thus no further processing is needed on behalf of the operator. The quantity of pounds per week is further broken down into the quantity of pounds delivered per number of trips from the shore to Atlanta-area restaurants per week. Operators may want to target multiple restaurants across consecutive days and the enterprise budget accounts for both the capacity required to do this (number of coolers, ice and product required per trip) and also the cost of multiple trips, including spending a night in the Atlanta-area per trip.

Number of Trips per Week Desired vs Number of Trips per Week Needed

The user can input the desired number of delivery trips to Atlanta-area restaurants per week. Within the spreadsheet, a calculation is made to ensure that the truck and coolers have the capacity to deliver the desired quantity of product and required pounds of ice per week. The maximum number of pounds of unprocessed product delivered per week is 630. Any amount above that requires an additional trip. The calculation for the number of trips needed per week is shaded in red to help the user identify if he or she can accomplish his or her delivery goals.

Season length

The assumed season length is 28 weeks. This variable can be adjusted up or down depending on the preference and assumptions of the operator. White shrimp landings occur throughout the year, but are greatest during the months of May-December, hence 28 weeks was chosen as the baseline parameter.

Variable Costs

Transportation Costs

The main variable cost are the transportation costs. The miles driven to and from the coast of Georgia to restaurant destinations are calculated both weekly and for an entire season. There is also an estimate of the number of miles driven within the Atlanta area to capture the miles driven to and from a place of lodging and to and from the area restaurants. The cost per mile driven can be calculated one of two ways, by either using a standard mileage rate or by calculating actual car expenses per mile driven. The standard mileage rate for business use of a vehicle is based on an annual study of the fixed and variable costs of operating an automobile as calculated by the General Services Administration (GSA). For tax purposes, taxpayers always have the option of calculating the actual costs of using their vehicle rather than using the standard mileage rates[1]. If you also use your vehicle for personal use, you must prorate your annual automobile expenses by the amount of your personal use of the vehicle. For this reason, it is more straightforward to use the standard mileage deduction in this enterprise budget to approximate the cost per mile driven. In order to create a more personalized analysis, the actual automobile cost per mile should be estimated and compared to the standard rate. Based on the baseline parameters, the approximate actual vehicle operating costs for a season on a per mile basis were less than the standard deduction rate (32 cents vs 54 cents). In order to provide a more conservative estimate of transportation costs, the higher standard deduction rate per mile was used in this analysis. A separate tab is provided within the spreadsheet to assist operators with estimating actual expenses in order to compare that cost per mile to the standard deduction rate.

Another related transportation expense is the cost of spending a night in the Atlanta area. Given the approximate 600 mile round trip, it isn’t time effective to drive from the coast to the Atlanta area, deliver product, and drive back in the same day. Further, spending a night in the Atlanta area

[1] Source: IRS Publication 463 https://www.irs.gov/publications/p463/ch04.html

allows the operator to sell product at additional restaurants the following day. In order to approximate lodging costs and meals away from the home, the GSA per diem rates for lodging and meals and incidental expenses (M&IE) are used for the Atlanta area which includes the counties of Fulton, Dekalb, and Cobb[2]. The lodging rate is $138 per night and the M&IE is $69 per day, and when prorated by 75%, is $52 per day. As mandated for all federal employees traveling on official business, the first and last calendar day of travel are reimbursed at 75% of the Meals and Incidental Expenses (M&IE) for that area[3]. This proration is used in the enterprise budget calculations. Certainly, an operator can incur costs that are lower than the $138 per night and $52 per day for lodging and M&IE; however these figures provide an upper bound on what would be considered reasonable charges for that particular part of the state as determined by the federal government.

The final component of variable costs is the cost of icing the product. The operator must provide enough ice to preserve the quality of the product and a common assumption is a 60/40 split between the pounds of fish and pounds of ice[4]. Combining the amount of ice required with an estimated cost per pound for the ice gives an estimate of the cost of icing the product.

Fixed Costs

The assumed fixed costs for an operator include a pickup truck with an eight foot cargo bed, a digital scale and coolers to transport the product. The assumed pickup truck is a 2016 Ford F150 with an eight foot cargo bed with a starting MSRP of $26,540. The depreciation, taxes, repairs and maintenance, and fuel costs are not provided because the standard mileage rate is used instead of calculating actual costs per mile. See the discussion above in the Variable Costs sections for more information about the standard mileage rate.

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[2] Source: GSA FY2016 Per Diem Rates for Georgia http://www.gsa.gov/portal/category/100120 and GSA FY2016 Meals and Incidental Expenses (M&IE) Breakdown http://www.gsa.gov/portal/content/101518

[3] Source: GSA FY2016 Meals and Incidental Expenses (M&IE) Breakdown http://www.gsa.gov/portal/content/101518

[4] Riepe, J.R. 1997. Enterprise Budgets for Yellow Perch Production in Cages and Ponds in the North Central Region, 1994/95. Technical Bulletin Series #111. Department of Agricultural Economics, School of Agriculture, Purdue University.

The number of coolers needed for an operator is a function of the number of pounds of product moved per week. Again, based on the assumption of a 60/40 split between pounds of product and pounds of ice, it is further assumed that one pound of ice and product are equal to approximately 1 quart[5]. It is assumed that an operator is purchasing a Coleman 150 quart marine grade cooler(s)[6]. The assumed number of processed pounds delivered per week dictates the number of coolers needed per trip. Given an eight foot cargo bed, it is assumed that at most, seven Coleman coolers could be transported at one time. A digital scale is required to appropriately weight the product at the restaurants. Depreciation for both the scale and cooler(s) is estimated assuming five years of useful life and a zero salvage value. Interest charges are treated as a fixed cost and are included regardless of whether a loan was required to finance the purchase or if the operator's personal funds were used. The reason for this is that operator's funds could have been used in some other use, and thus have an opportunity cost that is reflected by the interest charge. If the purchase was financed via a loan, then the interest charges account for the cost of borrowing that money. The interest on the fixed capital is estimated by taking the initial investment plus the estimated salvage value of the capital items, divided by two.[7] This number is then multiplied by an interest rate, which was assumed to be 4% given current prevailing interest rates in 2016. Product liability insurance for the operator is assumed to be $425 per year.

Results

The culmination of this analysis is a set of breakeven prices per pound of product delivered to the market destination per week. The baseline assumptions underlying the results presented below include the cost of transporting the product to and from the coast to Atlanta and the ice and coolers necessary to transport the product. Additionally, the breakeven prices are calculated assuming that 10% of the product goes unsold.

As the quantity of delivered product increases (or also as the season length increases), the breakeven prices decrease, as the variable and fixed costs are spread over more pounds of product.

[5] Source: Louisiana Direct Seafood Handbook http://louisianadirectseafood.com/handbook
[6] Source: http://www.coleman.com/150-quart-white-marine-cooler/3000001525.html
[7] Carkner, R. 2000. Using Enterprise Budgets to Make Decisions about Your Farm. Farming West of the Cascades. Publication PNW0535. Washington State University.

As stated at the outset, the enterprise budget framework is designed to help individuals evaluate the tradeoffs associated with different levels of production and assumed costs of production. The enterprise budget is designed to allow individual users the ability to tailor this decision making tool to his or her specific circumstances. The breakeven prices are starting points for a potential operator to begin to understand how much above their wholesale/dockside price they would have to sell their product to Atlanta-area restaurants in order to see a profit.

Total Sold Product Per Week (based on 10% shrink of processed product)	**225lbs**	**450lbs***	**900lbs***
Breakeven Price per pound (to cover variable costs)	$3.17	$1.73	$1.01
Breakeven Price per pound (to cover fixed costs)	$0.21	$0.11	$0.06
Breakeven Price per pound (to cover total cost)	$3.38	$1.84	$1.07

* Requires two trips per week to deliver this quantity weekly

Appendix:
FARMERS MARKET VENDOR FEES

Snellville:

Number of Weeks	Booth Fee	Booth Fee with Electricity
Full Season (17 weeks)	$180 ($10.59 per week)	$214 (2.00 per week for elec.)
10 weeks	$120 ($12 per week)	$140 (2.00 per week for elec.)
4 weeks	$60 ($15 per week)	$68 (2.00 per week for elec.)

Roswell:

Vendor Category	Rate/week	Pre-payment required	Details
Annual	$20	½ or full season	Commit to entire season
Seasonal	$25	Month	Commit to product season
Interval	$25	Month	Commit to scheduled times

$5.00 fee for using electricity each week
Beginning 2017, all NEW applicants must pay one-time registration fee of $25.00

Clarkston:

Product Type	Rate/Week	Upfront Payment for the Month	Upfront Payment for the Season
Produce Vendors	$15	$50	$300
Prepared Foods	$20		$10-25/month
Craft Vendors	$25		$120

Truly Living Well:
Location 1- East Point: $15 per week with an additional ONE TIME fee of $30
Location 2- Westside Provisions Farmers Market:

Vendor Type	Rate/Week
Returning Vendor	$25.00
New Vendor	$100 for week one, then +$50/week (week 2-$150, week 3-$200, week 4-$250, etc.)

Freedom Farmers Market:

Vendor Space	Rate/Week	Monthly Prepay	Full Season Prepay
10x10	$25	$23/week	$20/week (total: $820)
10x20	$50	$46/week	$40/week (total: $1640)

Grant Park:

Payment option one:

Vendor Type	Rate/Week
Returning Vendor	$25.00
New Vendor	$100 for week one, then +$50/week (week 2-$150, week 3-$200, week 4-$250, etc.)

Payment option two: (if accepted to vend with Community Farmers Markets)

Market	Rate/Week for farmer	Full Season Prepay for farmer	Rate/Week for non-farmer	Full Season Prepay for non-farmer
Grant Park	$25	$532	$35	$931

Peachtree:

Annual Peachtree Farmers market fee is $150 (non-refundable). The payment can be made in 2 installments.

Additional one time $75 application fee

Athens:

Vendor Type	Rate/Week
Full Season Vendor	$600 for 37 weeks (payment plan available)
Associate Vendor	$25 per week (must designate weeks)

Morningside:

Vendor Space	Rate/Week
10x10	$25
10x15	$50 (MUST commit to entire year)

One time $30 application fee

$30 annual membership fee