Evaluating the Feasibility of Expanding Direct Marketing Opportunities for Small Producers in Alcorn County, Mississippi

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Objective:
The primary objective of this paper is to evaluate the feasibility of expanding direct marketing opportunities through farmers markets for small producers in Alcorn County, Mississippi. The study seeks to answer two basic questions:
1) Is there sufficient demand (or need) for the additional marketing facility?
2) Can the facility operate on a profitable basis?

Background:
Farmers’ markets, represent one of several direct marketing channels available to small producers and consumers and have a rich history in the development of agriculture in the United States (Thilmany and Thomas, 2009). Establishing farmers’ markets is one rural development strategy that communities are implementing in Mississippi. These facilities provide growers with an established place to sell locally grown produce directly to consumers.

Farmers’ markets are good for local economies, farmers, and consumers. They provide growers with extra income since many farmers and local citizens must work full-time either off the farm or outside the local area to support their families. Farmers’ markets help producers to receive higher prices by removing the broker and selling directly to consumers in the state.

Farmers’ markets provide consumers more outlets to buy fresh produce and create local economic impacts. The communities in which these facilities operate benefit from more money spent in the local economy, creating spending, re-spending, and higher multiplier effects in the area. Besides retail spending by consumers, farmers’ markets help promote business development and expansion in the local area (Myles and Hood, 2009).

Everyone (producers, consumers, and the local economy) benefits where farmers’ markets operate. Producers can make money and have an alternative to row cropping, consumers can get a better product, and farmers’ markets can foster a sense of community. They also are beneficial to the local economy.

Data and Methods:
The primary source of data for the study is based on personal knowledge and observations about customer and vendor traffic for the new marketing facility and on generalized assumptions made by the authors about the project. To accomplish the objectives of this paper, the study will be divided into several key sections for analysis purposes as follows.

Section I will give a brief background and description of the study.
Section II will discuss the market for the study. The market analysis is simply determining if there is sufficient demand to support the facility.

Section III of the study will briefly discuss the competitive advantages of this facility. Some of these could include:
A) Expanded product offerings
B) Improved access and location
B) Better and more efficient service
C) Expanded demand

Section IV of the study will focus on the feasibility, which includes economic and financial analyses. The purpose of this section is to determine if the facility can generate a positive return for local officials and producers in the county. While interest among producers to have a second farmers’ market is strong, the litmus test for the project rests on the financials.

Specifically, we will build an Excel-based business model to determine the project’s forecasted income and costs (Microsoft Excel 2007). The business model will perform a 20-year analysis of the marketing facility in the county. Using the “business model”, the authors will estimate cash flows over the facility’s life to determine break-even revenues (B-E), net present value (NPV), benefit cost ratio (B/C), modified internal rate of return (MIRR), and the payback (PB).

The business model will allow the authors to project necessary revenues to cover the investment costs of establishing a second direct marketing facility in Alcorn County, Mississippi. The model will provide five decision criteria (B-E, NPV, B/C, MIRR, and PB) to help policy makers evaluate the feasibility of this development strategy. If feasible, additional marketing facilities will enhance local efforts to support small producers by providing a place for them to sell fresh fruits and vegetables in the area. Direct marketing facilities such as farmers’ markets will provide consumers in the county more opportunities to purchase locally grown produce.

Farmers Marketing Trends

Trends in the number of farmers markets and sales made directly by producers can help assess the potential role of such channels in agricultural development, especially for small farms or producers in rural and small communities.

The Mississippi Department of Agriculture and Commerce (MDAC) show that since 2006 the number of farmers markets statewide has grown significantly and continues to grow. As of August 2010, the total number of farmers markets in the state was 58, a 123 percent increase from 2006 (Manning, 2010).
Project Background

Alcorn County has operated a farmer's market on Shiloh Road in Corinth, Mississippi for more than 40 years. The property on which the market operates joins and is owned by a local church. The church has been gracious enough for the last several decades to let the county use this property, enabling farmers to sell their produce.

Last year the church did some major renovations on the farmer's market area that prompted some of the participating farmers to inquire about a second site. Local supervisors contacted the MSU Extension Office in Alcorn County and asked what could be done to address the situation. After several telephone calls and days of searching for a site, the Mayor and Board of Alderman in Corinth gave permission to use some property owned by the city for a second farmers’ market.

Both markets are operating and are doing well. The Alcorn County Board of Supervisors and Extension Service desire to build a permanent structure on the second farmers’ market site. This facility would provide producers and customers with a second location that would be more conducive to selling vegetables in the summer (i.e. a shaded area). The county is thinking about constructing a building with an open span and roof with a concrete floor. The county will seek funding for this project through the local USDA agency.

The Alcorn County Supervisors would like to know the economic impact of the farmer's market in the county. Getting information from participants at the market was difficult. Thus, some generalized assumptions were made based on personal knowledge and observations about customer and vendor traffic at the market.
Selected Facts\(^1\) and Data for Alcorn County Farmer’s Market

1. About 65 producers participate in the market yearly. About 45 producers participate in the original market and 20 producers sell at the second location in the county.
2. Each producer at the farmer’s market sells vegetables an average of two days per week.
3. Sales average between $150 and $200 for each producer each.
4. Cost of restroom facilities (port-a-jons) is $600 annually.
5. The cost of building an open-air covered building with a concrete floor is about $20,000.
6. Cost of gravel and rocks (121 dump truckloads @ 20 cubic yards per truck) to raise the three-fourth acre site 18 inches is $4,537.
7. Transport cost of hauling 121 loads of gravel and rocks is $4,500.
8. Cost of spreading and packing 121 loads of gravel and rocks is $2,500. Of this, $100 is maintenance expenses, $675 are labor costs, and $1,725 are fuel costs.
9. One county employee at $8,320 ($8.00/hr x 1040 per year) is recommended to provide maintenance and clean up at the two markets during the time they are opened.

With this information, an economic impact of the market could be done to help concerned parties realize the value of the market in the county. However, more important than the economic impact is the question about the feasibility of constructing a covered building with a concrete floor to support the second market location. This analysis provides relevant information to assist local officials in evaluating this project.

Importance of Farmers Markets

“To understand the economic impact of farmers’ markets in the state, Mississippi State University’s Department of Agricultural Economics and MSU’s chapter of the National Agricultural Marketing Association (NAMA) conducted a survey of these facilities in Mississippi in September 2009 (NAMA, 2009). During a 4-week period, NAMA students attempted to contact all 54 farmers’ markets in Mississippi. The students obtained information from 26 facilities in the state.

\(^{1}\) All statistics used in this report (except for the number of loads of gravel and the discount rate) were provided by Mr. Patrick Poindexter with the Alcorn County Extension Service. The loads of gravel were computed based on the size and height of the lot to avoid flooding. Mr. Poindexter said the ¾ acre lot would need to be raised 18 inches to avoid flooding. The 5.5 percent discount rate is what some government projects receive when borrowing money.
The MSU survey revealed that 446 producers sold produce at the 26 farmers’ markets surveyed in the study. Total sales among producers exceeded $1.4 million at these facilities in 2009. Sales by size of the facility were $236,100 for small, $665,781 for medium, and $514,000 for large. Sales at medium-size markets were three times more than at smaller markets and about 130 percent higher than large markets in Mississippi. Sales at large markets were only 77 percent of sales at medium markets but 216 percent of sales at small markets.”

This increase activity in farmers markets produced additional revenues for producers at these facilities, exceeding $1.4 million in 2009. “The average sales per farmers’ market by size in Mississippi were $15,740 for small, $73,976 for medium, and $257,000 for large markets in 2009. Sales per producer at these facilities were $1,859 for small, $3,216 for medium, and $459 for large. These findings suggest that consumers patronize farmers markets more in small- and medium-size communities than in large communities in Mississippi; although sales per vendor were higher among larger markets in the state (Myles and Hood, 2009).”

**Benefits of Farmers’ Markets**

Farmers’ markets provide consumers an opportunity to purchase fresh produce, which is about as close to growing it themselves as they can get. Most produce is grown within 25 miles of the market, and many growers harvest their produce the day before or the morning of the farmers’ market. The money spent at a farmers’ market stays in the community, helping both producers and consumers. Farmers’ markets can give producers the option of selling directly to consumers at retail prices rather than wholesale prices if they are properly set up and manage.

Everyone benefits where farmers’ markets operate. Producers can make money and have an alternative to row cropping, consumers can get a better product, and farmers’ markets can foster a sense of community. They also are beneficial to the local economy.

Since most producers work full time off the farm, farmers’ markets give them an alternative to row cropping and an opportunity to sell their produce directly to consumers. Farmers’ markets are ideal for growers who can’t produce enough to meet the large demands of supermarkets.
Feasibility Analysis

Alcorn County Supervisors are expected to invest about $31,537\(^2\) in developing a second farmers’ market to accommodate 20 more than producers. The second market would generate sales of $72,000\(^3\) ($150 x 20 x 24 wks) per year over the building’s useful life of 20 years. The annual cash operating cost of the second market is about $9,235. The annual depreciation expense would be $315 (using straight-line depreciation and a 10% salvage value).

To perform the feasibility analysis, the author made a few assumptions. First, estimated sales and number of producers would continue over the life of the project (20 years). Second, all producers would be required to buy a certificate to sale at each market. Third, the producer certificate-fee would rise to $20 per year to help offset the construction, materials, site preparation and development costs. This would create a revenue stream of $650 per year to help offset some of the costs associated with this project.

Using these data, a business model was set up to perform a 20-year analysis of the second market. The “business model” estimated cash flows over the project’s life to determine the payback (PB), net present value (NPV), benefit cost ratio (B/C), and the modified internal rate of return (MIRR).

Results

If the estimated cash flows and costs are accurate, then acceptance of this project would increase producers’ wealth (NPV) by $766,996 (Table 1) during the first 20 years of the second farmers’ market operation. The NPV represents the benefit to producers and indirectly stakeholders from developing the project. In this case, the positive NPV indicates an attractive investment.

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\(^2\) This includes $20,000 for building construction; $4,537 for gravel and rocks; $4,500 to haul 121 loads of gravel and rocks; and $2,500 to spread and pack gravel and rocks.

\(^3\) This figure reflects sales of $150 per week x 20 producers x 24 weeks (the number of weeks the market is opened during the year).
Table 2. Feasibility Analysis of Farmers’ Market # 2

<table>
<thead>
<tr>
<th>Investment Criteria</th>
<th>Project life</th>
<th>County</th>
<th>Acceptance Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>20</td>
<td>Alcorn</td>
<td>NPV &gt; 0</td>
</tr>
<tr>
<td>NPV (cumulative)</td>
<td>$766,996</td>
<td></td>
<td>B/C &gt; 1</td>
</tr>
<tr>
<td>B/C ratio</td>
<td>5.51</td>
<td></td>
<td>Shortest time possible</td>
</tr>
<tr>
<td>PBP (years)</td>
<td>.43</td>
<td></td>
<td>MIRR &gt; Cost of Capital</td>
</tr>
<tr>
<td>Excel MIRR</td>
<td>21.85%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examining the benefit cost ratio (B/C) suggests the project should be accepted because B/C (5.51) is greater than 1. This suggests that for every dollar invested (expense) in the second farmers’ market it will return $5.51 in revenues to producers during the first 20 years of operation in the county.

The MIRR is the rate of return from the second farmers’ market. If MIRR (21.85%) greater than the cost of capital (5.5%) to finance the market, then the project should be accepted as is the case here.

Payback period (PB) is often calculated for investment projects, but it should not be used by itself to make accept/reject decisions. PB does not indicate whether the project should be accepted or rejected. PB is simply the length of time required to recover the cost of an investment in a project.

However, the authors recommend that NPV, IRR, and B/C ratio should all be used when making decisions about capital investments. Uncertainty about the future cash flow estimates (Table 2) is problematic in this type of analysis, but it is the best method available to analysts.
Table 2. Present Value Analysis of Farmers' Market #2

<table>
<thead>
<tr>
<th>Years</th>
<th>Current Value</th>
<th>Cumulative Value</th>
<th>DNPV</th>
<th>Cumulative DNPV</th>
<th>Cumulative Dis-Costs</th>
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<td></td>
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<tr>
<td>1</td>
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<td>36,465</td>
<td>526,062</td>
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<td>24,498</td>
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</tr>
<tr>
<td>20</td>
<td>44,640</td>
<td>1,166,400</td>
<td>16,141</td>
<td>766,996</td>
<td>139,245</td>
</tr>
</tbody>
</table>

**Recommendation**

The business model projected revenues (for the years to pay the investment costs) that suggest the second farmers’ market could operate successfully in Alcorn County. With a payback period of .43 years, a net present value of $766,996, a benefit cost ratio of 5.51, and a modified internal rate of return of 21.85%, the second farmers’ market seems to be feasible. This will enhance Alcorn County’s efforts to support small producers by providing them with a second market to sell fresh fruits and vegetables in the area.
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