Economics of Information in Developing Country Agriculture: Evidence from South India

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1. INTRODUCTION

Agriculture in developing countries is increasingly becoming knowledge-intensive. Farmers need access to reliable, timely, and relevant information. Developing appropriate farmer educational and marketing strategies will depend on how farmers differ in their information search behavior, segmentation of farmers is crucial for designing effective extension and advisory services. Understanding what information farmers need, how they source and access it, and what sources they prefer for accessing information, and how much they are willing to pay for such information can help in designing effective extension programs.

2. OBJECTIVES

This study has two tasks. First, we develop a conceptual framework to analyze information search among farmers. Second, we present some basic evidence testing the implications of this framework by analyzing information needs of farmers and differences in needs across the farming households in 2 districts of south India. It was a farm level survey of 570 farmers and 27 focus group discussions to examine farmers’ information search and use behavior. Specifically 4 farmers’ information needs, the sources of their information, their preferences, factors affecting their information search, and their willingness to pay for information. The key questions this study seeks to answer are: What information do farmers need now and where do they search for information? What factors determine their search behavior? And how much are they willing to pay for their information?

3. CONCEPTUAL FRAMEWORK

The study examines farmer information search behaviors in two districts of the Indian state Tamil Nadu, Thanjavur and Tiruvarur (Figure 1). Farmers were randomly sampled. From each village, 3 blocks were randomly selected and from each block, 15 farmers were randomly selected from the farm household list maintained by the village administrative officer. In total, 570 farmers were interviewed, which was complemented with 27 focus group discussions in 8 randomly selected villages, from 2 randomly selected blocks in each district. Survey data collection and focus group discussions were carried out between March and May 2011.

4. STUDY AREA AND METHOD

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5. RESULTS

Table 1. Summary statistics for the four variables used in the information search indices

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Search</td>
<td>1.00</td>
<td>0.16</td>
<td>0.82</td>
<td>1.20</td>
</tr>
<tr>
<td>Medium Search</td>
<td>2.00</td>
<td>0.16</td>
<td>1.80</td>
<td>2.20</td>
</tr>
<tr>
<td>High Search</td>
<td>3.00</td>
<td>0.16</td>
<td>0.00</td>
<td>3.20</td>
</tr>
</tbody>
</table>

6. DISCUSSION

This study confirms the heterogeneity within farming communities of information search behaviors. The potential for improving the effectiveness of information dissemination in the area was not as high as expected, and the area was segmented into four types of farmers. The heterogeneity within farming communities, the high search farmers already use newspapers, and TV is a key source of information for all the farmers, including low searchers. Newer technologies, like internet and mobile phones are currently under-utilized to access information. The contingent valuation exercise showed that fee-based delivery of information via mobile phone is not in high demand. Information needs (inappropriate or poor quality information) could be a hindrance to farmers’ use of information sources. The major constraints to information access are poor availability, poor reliability, lack of awareness of information sources available and uncertain provision of information. Improving the organizational performance of extension and advisory services is an important need in India.

7. CONCLUSIONS

In the recent decades, the rural farmers place on information has increased considerably as the agricultural systems in developing countries become knowledge-intensive. Access to and use of current information is critical for the financial success of farmers. Yet, farmers are rarely consulted before the planning, design, and development of extension services, and their needs and preferences. Surveys and use of information sources, their agricultural information needs, and the factors that influence this behavior, programs disseminating agricultural information could better target farmers. The findings from this study have important implications for agricultural information dissemination. The public extension system and other programs carry out in developing countries. Targeting need holder farmers, with low agricultural income, is important they need for information. These farmers may lack motivation and interest in agriculture, so enhancing the timely delivery and reliability of information will be necessary to encourage them to search for information. Extension services could improve their information search strategies and consequently their farm outcomes. Information needs of farmers could be targeted according to the farmer characteristics, and changes in the agricultural system could be reflected in their preferred information search behavior. Further research is needed to explore the organizational performance challenges in the extension approaches that are restrictive, and evaluate the effectiveness of different delivery methods for information to farmers. In addition, gather more information about the differences in farmer information strategies across region and farming systems is needed in developing countries.