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Using Behavioral Economic Insights to Improve Program Design

Market Report	Year Ago	4 Wks Ago	11-6-15
Livestock and Products, Weekly Average			
Nebraska Slaughter Steers, 35-65% Choice, Live Weight.	168.00	126.88	135.00
Nebraska Feeder Steers, Med. & Large Frame, 550-600 lb.	281.60	212.77	213.52
Nebraska Feeder Steers, Med. & Large Frame 750-800 lb.	237.73	196.33	183.32
Choice Boxed Beef, 600-750 lb. Carcass.	250.35	203.67	218.53
Western Corn Belt Base Hog Price Carcass, Negotiated.	86.53	71.15	53.26
Pork Carcass Cutout, 185 lb. Carcass 51-52% Lean.	95.41	87.02	75.49
Slaughter Lambs, wooled and shorn, 135-165 lb. National.	163.00	159.30	155.02
National Carcass Lamb Cutout FOB.	377.03	358.99	360.61
Crops, Daily Spot Prices			
Wheat, No. 1, H.W. Imperial, bu.	5.01	4.20	3.94
Corn, No. 2, Yellow Nebraska City, bu.	3.20	3.48	3.39
Soybeans, No. 1, Yellow Nebraska City, bu.	9.55	8.16	8.06
Grain Sorghum, No.2, Yellow Dorchester, cwt.	6.39	5.95	5.66
Oats, No. 2, Heavy Minneapolis, Mn, bu.	3.45	2.60	2.57
Feed			
Alfalfa, Large Square Bales, Good to Premium, RFV 160-185 Northeast Nebraska, ton.	189.00	180.00	185.00
Alfalfa, Large Rounds, Good Platte Valley, ton.	85.00	75.00	75.00
Grass Hay, Large Rounds, Good Nebraska, ton.	85.00	77.50	77.50
Dried Distillers Grains, 10% Moisture Nebraska Average.	113.50	116.25	125.25
Wet Distillers Grains, 65-70% Moisture Nebraska Average.	43.50	49.50	51.13
* No Market			

The field of behavioral economics has added important tools and insights to economics that can be used to increase the effectiveness of interventions or research in diverse settings ranging from the United States to East Africa. In this article, we briefly contrast traditional economic tools and newer behavioral economic approaches before providing examples of how insights from behavioral economics into individual behavior can be used to improve the design of programs.

Prior to the development of behavioral economic methods, economic tools to influence individual behavior were limited to relatively blunt instruments—e.g., taxes—that have at times been used to dissuade behavior thought to be particularly unhealthy, such as smoking. Recently, inspired by concern about rising rates of obesity and related health problems, some governments and public health officials have pushed to implement taxes on sugary drinks or other foods thought to contribute to obesity. Because such a tax impinges on everyone who consumes sugary drinks equally, regardless of whether or not they are overweight and/or care about their weight status, there has been significant pushback against these efforts (and relatively few instances of implementation). The tools derived from behavioral economics, on the other hand, do not limit individuals' choices; rather, they use environmental cues or changes in default options

to promote the healthier choice. For instance, schools have successfully encouraged schoolchildren to increase white milk consumption, and decrease consumption of chocolate milk, by placing the white milk in the front of the cooler and increasing the ratio of white to chocolate milk.

While governments and even private entities have begun to make use of behavioral economic principles, much of what has been put into practice is a direct adoption of research projects. Given the relative youth of the field, however, other behavioral economic research findings offer an opportunity to build features into programs to deal with forces known to influence decision making. The policies or programs, from the local to international level, that have the greatest likelihood of success incorporate a deep understanding of not only the issue being addressed by the policy but also of the targeted group and any *behavioral* influences that may affect their decision making. Whether a program is aimed at senior citizens in the United States or female livestock-keepers in East Africa, appropriate program design can mean the difference between success and failure. We now highlight forces driving each of these examples to illustrate how accounting for behavioral forces can influence the design of policies or projects.

Excessive Choices and Medicare Part D

Over the past fifteen years, research spanning economics, psychology, and marketing has found evidence that facing too many choices can have some unanticipated negative consequences. The consequence of too many choices manifests in a variety of ways. People may be less likely to make any choice or they may be less satisfied with a choice they have made. Researchers have even found that an excess of choices may systematically shift people's decisions.

When Medicare Part D, also known as the Medicare prescription drug benefit, went into effect in 2006, seniors suddenly had to choose among numerous competing prescription drug plans offered by private providers (ranging in that first year from 27 to 52, depending on region of the country). The plans differed in multiple dimensions, making direct comparisons among them complicated. Analysts warned that the complexity of the choice setting would make it difficult for consumers to make optimal choices and initial findings from research seem to have supported those concerns. An article arguing that significant evidence indicates that consumer learning quickly reduced the negative results of excessive choices found that in a sample which did not include low income individuals, consumers overspent by hundreds of dollars per year ($547 in 2006 and $251 in 2007 on average) compared to the optimal plan for them. Based on the demographic characteristics of seniors who decreased their overspending the most in Year 2—seniors over 85 years of age or starting on medication for Alzheimer's Disease, it seems that some of the decrease was likely driven by help from others in navigating the options for these groups.

Poultry, Newcastle Disease Vaccines, and Female Livestock-keepers

International bodies, non-governmental organizations, and universities frequently implement interventions meant to improve aspects of individuals' lives in developing countries. Though well intentioned, these projects at times overlook important factors that decrease their probability of success. A good example of this is attempts to bolster women's incomes in developing countries through projects to increase poultry production. A significant amount of research on income and gender in developing countries indicates that men and women direct resources they control to different uses. Women tend to employ resources they control to ends that are more *pro-household* than men, such as school fees for children, medicines for family members, or supplementary foods. Therefore, interventions targeted to women have the ability to improve the well being of the entire household.

Newcastle Disease is a major killer of chickens in developing countries, even though vaccines—including a heat-stable version that allows implementation in rural areas without electricity—are available. Many projects have been conducted to provide access to Newcastle vaccines, and while some show significant success while the project is active, rates of vaccination usually drop after the

end of the projects. In rural Tanzania, pastoralist women—female livestock-keepers—involved in a study conducted by one of the authors use income they receive from raising chickens, selling milk, and producing cultural items to pay for school fees, increase the amount of food available for their families, and improve the health of their family members and livestock. However, even though a Newcastle Vaccine program was implemented in the study villages a few years ago to jumpstart vaccination, Newcastle killed approximately half of the birds owned by the 196 households in our study, and only one household reported vaccinating their chickens. Human capital is a likely barrier to consistent vaccination. Newcastle vaccines are administered in a series of doses every few months, and the purchased product constitutes multiple doses that must be diluted. Only 13 percent of the women in our study are able to sign their names; it is likely that functional literacy and numeracy are even lower, rendering a vaccination process that requires following written instructions and keeping tracking of time-sensitive application of doses over fairly long periods of time very difficult.

Solutions

Technology offers pathways to improve the design of policies in both developed and developing country settings. Websites that allow seniors to compare the total costs of different plans for anticipated prescription drug use (past usage could be a proxy because future use of prescription drugs has been found to be highly correlated with past use) can help them more easily select the plan that minimizes their likely costs. Sites that do this for health insurance selection have been found to significantly decrease overspending. Technology even offers an opportunity to help with livestock health interventions. Households in our study own, on average, one cell phone each. Though most of these phones are fairly basic, they can support simple programs that could help households track the timing of vaccination and estimate doses per chicken, and as the price of more advanced phones decreases even more help could be offered.

Further Reading

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