"THE EMERGENCE OF PREDICTION MARKETS WITHIN BUSINESS FIRMS: A SKEPTICAL PERSPECTIVE FROM AN INTRIGUED ACADEMIC."

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Learning about the recent emergence of prediction markets within business firms has been fascinating and a bit confusing. As an economist who works on historical political stock markets, I believe this intriguing endeavor will be a road worth traveling but one littered with potholes and rocks at unexpected places. Perhaps my sense that employing prediction markets within firms will be a jarring experience comes from the impression formed by my first exposure to the idea: where higher-ups at Microsoft created a small-stakes market for the programming team designing internal-company software about whether their project manager's deadline would be met. I could readily see why the higher-ups wanted this insider information, but creating such a market seemed entirely at odds with employing hierarchal authority (bosses) or scheduling plans (artificial deadlines) in the first place. Perhaps this sense that prediction markets and business firms do not naturally coexist comes from my professional training.

As an economist, I am taught to think about the operation of markets and the ways of the Invisible Hand. I am less equipped to understand firms and the authority relations associated with the Visible Hand. D. H. Robertson famously said firms were "islands of conscious power in this ocean of unconscious co-operation like lumps of butter coagulating in a pail of buttermilk." Ronald Coase won the 1991 Nobel Economics Prize in part for his early work on the theory of the firm. Economics is just coming to grips with the existence of firms, operating within markets. Imagine the challenge of trying to understand the emergence of prediction markets within firms.

There would seem to be an inherent tension between markets and organizations such as business firms with hierarchal authority. Of course, firms have long often had internal markets and market-like allocation systems. In vertically integrated firms, outside supply prices influence the "shadow" prices used in the "make-or-buy" decision. The external cost of capital helps

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¹ Dennis H. Robertson, *The Control of Industry* (New York: Harcourt-Brace, 1923), p. 85.

² Ronald H. Coase, "The Nature of the Firm," *Economica*, 4 ns (1937), pp. 386-405.

solve the capital-allocation problem for internal investment projects. And large firms have long utilized internal labor markets, with job promotion occurring within the hierarchy. So the idea of adding internal information markets is not completely novel or out-of-left-field.

In many ways, tapping of the wisdom of crowds within the firm is intended to overcome the information barriers created by the bureaucracy. It is obvious that the upper management might want better access to selected information available down the organizational ladder, to stop having to listen to the self-serving lies of middle management. But it seems to me, the individuals in an organization derive their power from the information under their exclusive control and will not easily give up this monopoly position. What models we economists have about hierarchies largely concern controlling information flows, both up and down the organization. This includes both having the higher-ups monopolize the firms' secrets and strategies and preventing them from being overwhelmed by the day-to-day minutia.

With internal prediction markets, key questions include who will set the agenda, who decides what questions will be answered and how? It seems authority matters in whether this is done in a top-down or bottom-up manner. If the question is what is the best forecast for demand growth, will this deadline be met, or how will the product rank in quality tests, it is clear that upper management, the "deciders," would be happy to learn from the collective wisdom of employees in contact with customers or doing the design work. If the questions posed address how long before the company president is fired, whether this product is found defective and has to be recalled, or when the mass layoffs will begin, then upper management will be unhappy.

Prediction markets provide more information, but they do so in a public way. What prevents competitors from spying, from gaining access to company secrets? Besides making private information common knowledge, prediction markets undermined the mystique, the information monopoly of those in charge. It is an old idea, but remains powerful: markets tend to dissolve traditional relationships of authority. The notion that the wisdom of the crowd is smarter than the smartest person in the room, or the most senior, or most highly-paid may not sit so well with that person. The only way for that person to "win" would be to beat the market. Where will this lead? to better decisions? to riskier behavior? (Business Mag Profile of a Dumb-Luck Winner: everyone thought X but this business hero proved his superiority by doing Y)? to more second guessing? to more shareholder lawsuits? Only experience will tell. Using prediction markets within firms is a road worth traveling but the ride is likely to be rough.