

Wal-Mart to the Rescue:

Private Enterprise's Response to Hurricane Katrina

Steven Horwitz
Charles A. Dana Professor of Economics
Affiliated Senior Scholar – Mercatus Center
Department of Economics
Hepburn Hall
St. Lawrence University
Canton, NY 13617
TEL (315) 229 5731
FAX (315) 229 5819
EMAIL sghorwitz@stlawu.edu

Version 2.0
June 2008

I thank participants at the 2008 Association of Private Enterprise Education meetings in Las Vegas, especially Josh Hall, for helpful comments. I also thank the Mercatus Center for their generous support of the original research for this project.

Abstract

The failures of FEMA and other government agencies during Hurricane Katrina have been widely acknowledged in both the popular press and academic literature. However, much less attention has been paid to the successful private sector response during the storm and its aftermath. Wal-Mart and other private retailers played an extraordinarily effective role in the disaster relief process. This paper describes aspects of Wal-Mart's emergency response system and details their actions during the storm. I argue that Wal-Mart's successful response was a product of the incentives, knowledge, and superior organizational routines that emerge through private ownership and competitive markets. Because their effectiveness is a function of that institutional context, policy makers should be wary of trying to import or imitate Wal-Mart's practices in the very different institutional context of the public sector, or assuming that better management, more concern, or additional resources will improve the performance of government agencies.

JEL codes: D2, H5, L3

Keywords: Wal-Mart, Federal Emergency Management Agency, competition, disaster response

In the several years that have passed since Hurricane Katrina struck the Gulf Coast in the late summer of 2005, it has become increasingly clear to many observers that various layers of government were at fault for almost every stage of the sequence of events that turned the passing of a fairly strong hurricane to the east of New Orleans into a catastrophe. From the special interests at work in constructing the elaborate system of pumps, levees, and canals that try to make the city's water go everywhere but where nature wants it, to problems with the actual canal and levee construction by the Army Corps of Engineers, to the botched evacuation plans, to the confusion over which levels of government should respond and how, to the multiple and very visible failures of the Federal Emergency Management Agency (FEMA), to the ongoing inability of various levels of government to rebuild the New Orleans area, government has been, quite appropriately, the target of a great deal of criticism both by local residents and observers elsewhere. Unfortunately, as is often the case when existing government agencies fail to do their assigned task, the response to this government failure has been for many people, and especially the agencies involved, to argue that those failures were due to a lack of will, resources, and/or expertise. As numerous public choice economists and economic historians have documented, this call for more government power is a typical pattern of response to crisis, with the end result being an above-trend growth in the size and scope of government, from which a full retreat is never made.¹

Lost in this increasingly common narrative of Katrina, however, is any discussion of the few institutions that *did* respond effectively in the aftermath of the storm. Not much has been said about the role played by private enterprise in providing necessary resources in the immediate aftermath and helping to return a sense of normalcy in the

days and weeks that followed.² The best example of a successful private sector response was that of Wal-Mart and other “big box” retailers such as Home Depot. The untold story of Katrina is the way in which Wal-Mart in particular responded with speed and effectiveness, often times despite attempts by government relief workers to stymie it, and in the process saved numerous lives and prevented more looting and chaos than actually took place.

A recent study by the Kennedy School of Government (Rosegrant 2007a) carefully documented Wal-Mart’s response from a business process perspective. A short sequel (Rosegrant 2007b) looked at the way in which Wal-Mart has tried to use that success to change the way disaster response takes place, with mixed results. However, what neither study, nor any other yet published, does is to offer a “political economy” of Wal-Mart’s success.³ Wal-Mart’s successful response to Katrina and the failure of FEMA and other government agencies seem to confirm the more general conclusions of modern political economy that private sector institutions are better at mobilizing resources in ways citizens want than are public agencies. To those steeped in the literature of modern Austrian economics, the new institutional economics, property rights economics, and public choice theory, the superior performance of Wal-Mart comes as no surprise. In this paper, I attempt to deploy those theoretical approaches along with recent work in the economics of organizations to offer a political economy narrative of Wal-Mart’s successful response to Katrina. Those successes resulted from Wal-Mart being situated in an institutional environment of competition that both provides the knowledge and incentives necessary to generate a successful response, and is highly conducive to the sorts of organizational learning that promotes the development of effective routines that

can be deployed in new applications. After exploring all of these issues, I conclude with some brief suggestions for improving disaster relief policies.

Wal-Mart to the Rescue

Wal-Mart, as well as other big box retailers, clearly has every reason to protect its own assets in the case of a natural disaster. Major retailers of all sizes are increasingly creating their own in-house departments designed to facilitate their response and recovery to any sort of interruption of their business, whether due to natural disaster, terrorism, or lower-level problems such as a blackout or a fire. Frequently phrased as questions of “business continuity,” these offices monitor all sorts of situations at the retailer’s stores. Wal-Mart has had such an office for a number of years, and each Wal-Mart store has a very tightly scripted protocol for responding to in-store problems as simple as an injured customer or associate and for getting that information to the business continuity director’s office at their headquarters in Bentonville, Arkansas. In most cases, these offices were designed to deal with threats to the company’s own property. However, during Katrina they found themselves broadening their scope of operations by providing needed resources for the communities in which they operated, especially the hard-hit New Orleans area.

Hurricane Katrina made landfall in southeast Louisiana and southwest Mississippi on August 29, 2005. After forming in the Atlantic and crossing Florida as a relatively weak Category 1 storm, Katrina strengthened quickly in the Gulf of Mexico, at one point becoming an extremely powerful Category 5, but weakening to a Category 3 or 4 storm with winds of about 125 mph when it made landfall on the Louisiana coast on the 29th.

The broad wind field of the storm subjected much of the Gulf Coast to a long period of hurricane force winds, causing significant damage. In addition, storm surges were estimated at anywhere from 15 to 20 to 25 feet, but reliable data are not available. The result of the surge was major flooding all over the Gulf Coast.

In the New Orleans area, the wind damage was also significant, but the surge caused multiple failures in the city's levees, which later reports have indicated were improperly built and/or maintained (Independent Levee Investigating Team 2006). The resulting flooding left approximately 80% of the city under water, in some places as much as 8 or 10 or even 20 feet of water. The combination of wind and water damage left numerous buildings uninhabitable and destroyed supplies and machinery as well as forcing from their homes those who did not evacuate and causing the death of almost 2000 people. Thousands of residents had to be rescued from their own homes. The flooding also closed almost all of the major access roads in and out of the city, making it challenging to get people out or supplies in. Finally, many of those who stayed behind and were flooded out of their homes ended up at the Superdome or at the city's convention center, where supplies were also very limited and conditions were physically uncomfortable. This was the situation that faced various organizations attempting to engage in relief and rescue operations.

Wal-Mart arrived in the New Orleans area long before FEMA and had the supplies that the community needed. Both President Aaron Broussard and Sheriff Harry Lee of Jefferson Parish in suburban New Orleans lauded Wal-Mart's work. In an appearance on *Meet the Press*, Broussard noted the speed with which Wal-Mart had brought trucks of water to his area and then quoted Lee as saying, "if [the] American

government would have responded like Wal-Mart has responded, we wouldn't be in this crisis.”⁴ Phillip Capitano, mayor of the New Orleans suburb of Kenner, reported that, “the only lifeline in Kenner was the Wal-Mart stores. We didn't have looting on a mass scale because Wal-Mart showed up with food and water so our people could survive.” Other community leaders in the New Orleans area and cities along the rest of the Gulf Coast also praised Wal-Mart's quick and effective response to the storm (Leonard 2005). Wal-Mart was not alone in providing much needed resources to the stricken areas, as other big box retailers such as Home Depot and Lowe's also responded in similar ways. However, Wal-Mart's response was the largest and, based on local reports, the most effective.

In the three weeks following landfall, Wal-Mart shipped almost 2,500 truckloads of merchandise to the affected areas and had drivers and trucks in place to ship relief supplies to community members and organizations wishing to help (http://www.walmartfacts.com/FactSheets/8302006_Katrina_Relief.pdf). Home Depot provided more than 800 truckloads worth of supplies to the hard-hit areas and also used buses to transport 1,000 employees from other areas into the region (Bond 2005). In addition to what they sold as a result of quickly re-opening their stores, Wal-Mart also provided a large amount of free merchandise, including prescription drugs, to those in the worst-hit areas of the Gulf Coast. For example, several truckloads of free items went to New Orleans evacuees staying at the Astrodome and the Brown Convention Center in Houston. Most importantly, Wal-Mart was able to get this assistance to the disaster areas almost immediately after the storm had passed, in comparison to the days—in some cases weeks—that residents waited for government agencies to provide relief.

The incentives for private firms to protect their own capital led them to begin preparing for the storm days before landfall. Three days ahead of landfall on the Gulf, Home Depot activated its “war room” at its Atlanta headquarters, negotiating with various vendors to get needed supplies staged to move into the hurricane zone (Ward 2005). Wal-Mart’s response began slightly earlier. The company’s emergency command center, which is run by Jason Jackson, their Director of Business Continuity, is normally staffed by six to ten employees who respond to the variety of routine incidents faced by stores across the country. Faced with larger-scale problems such as a hurricane, “the staff is joined by senior representatives from each of the company’s functional areas.” With the possibility of widespread damage to multiple stores in an urban area, such as in the case of a major hurricane like Katrina, the command center might include as many as 60 employees. The easily expandable structure of Wal-Mart’s emergency response protocols “drives the ability to be agile and flexible” (Worthen 2005). The company also uses its own hurricane tracking software and has contracts with private forecasters for the latest information on storms. By Wednesday, August 24, five days ahead of Katrina’s eventual landfall on the Gulf Coast, the command center had gone into planning mode, and two days later, when Katrina struck Florida, the complement of personnel in the command center was over 50 (Zimmerman and Bauerlein 2005).

Given the frequency of damaging hurricanes along the Gulf Coast and in Florida, and given the large number of stores Wal-Mart has in that area, the company has a well-rehearsed process for dealing with threatening storms. Central to that the process is passing information down from the senior management level to regional, district, and store managers. The company’s goal is to respond in ways that are “uniform across the

company” (Rosegrant 2007a, p. 3). As it became clear with Katrina’s move into the Gulf that New Orleans and other large cities were under threat, Wal-Mart invoked those protocols. They moved emergency supplies such as generators, dry ice, and bottled water from their current warehouse locations “to designated staging areas so that company stores would be able to open quickly” (Zimmerman and Bauerlein 2005, p. B1). Those staging areas were set up just outside the likely worst-hit areas to facilitate a quick response with minimal danger of damage; for example, a distribution center in Brookhaven, Mississippi had 45 trucks in place before Katrina’s landfall (Barbaro and Gillis 2005).

Once the storm itself had passed, the protocol directed district and store managers to relay information about store conditions back up the chain of command to the emergency operations center. Katrina had knocked out the company’s computerized inventory-management system, not to mention much of the local phone infrastructure, so Wal-Mart associates and managers relied mostly on satellite cell phones that its own loss prevention teams brought in as early as Tuesday, the day after the storm. Those teams in New Orleans were supplemented by the regional vice-president, Ronny Hayes, and Deb Hoover, the regional manager for Wal-Mart’s One-Hour Photo group (Rosegrant 2007a). With all of its key players in the emergency operations center’s command room receiving on-the-spot information from two senior managers in New Orleans, Wal-Mart was able to quickly get a good sense of the dimensions of the disaster and make adjustments to the supplies its stores and the community would need. For example, when it became clear that a number of stores had suffered damage and that homes and other businesses were facing severe flooding, Jason Jackson had his replenishment staff order more mops,

bleach, and similar products into the affected areas. Wal-Mart trucks were rolling into New Orleans on the day after the storm with the relief supplies noted at the outset.

Aside from having provided supplies to hard-hit areas several days ahead of FEMA, additional evidence of the effectiveness of the private sector's response was the speed with which Wal-Mart re-opened stores closed by the storm. At the peak of the storm, 126 stores and two distribution centers were closed. Of these closed stores, "more than half ended up losing power, some were flooded, and 89 . . . reported damage" (Zimmerman and Bauerlein 2005, p. B1). By 10 days after landfall, all but 15 of its stores were open and the 15 still closed were ones that had suffered major flooding or severe structural damage.

Another element of Wal-Mart's successful response was the great degree of discretion that the company gave to district and store managers. Despite the perception many have of Wal-Mart as "top-heavy" and authoritarian, in fact, store managers have sufficient authority to make decisions based on local information and immediate needs. As Katrina approached, Wal-Mart CEO Lee Scott gave a message directly to his senior staff and told them to pass it down to regional, district, and store managers: "A lot of you are going to have to make decisions above your level. Make the best decision that you can with the information that's available to you at the time, and, above all, do the right thing" (Rosegrant 2007a, p. 5). In the aftermath of Katrina, the commitment of senior management to this principle was put to the test multiple times. In several cases, store managers allowed either emergency personnel or local residents to take store supplies as needed. A Kenner, Louisiana, employee used a forklift to knock open a warehouse door to get water for a local retirement home. In Marrero, Louisiana, employees allowed local

police officers to use the store as a headquarters and a sleeping place, as many had lost their homes. They did not feel the need to get pre-approval from supervisors to take these actions, and supervisors later praised them for their good on-the-spot decision making.

The Waveland, Mississippi Wal-Mart was severely damaged by the wind and flooding. Assistant manager Jessica Lewis, who was unable to reach her superiors to get permission, decided to run a bulldozer through the ruins of her store to scoop up basics that were not water-damaged, which she then plowed into a pile in the parking lot and gave away to residents. Lewis also broke into the store's locked pharmacy to supply critical drugs to a local hospital. Wal-Mart's Jason Jackson praised both of her actions: "What Jessica did is a good example of autonomy" (Rosegrant 2007a, pp. 9-10). Given the breadth of Wal-Mart's reach and the variety of local conditions and cultures in which it operates, it makes sense to allow local managers significant discretion in their day-to-day operations. That sense of empowerment is particularly useful when unusual local conditions such as a natural disaster require agility and improvisation.⁵ Wal-Mart's life-saving response during Katrina demonstrates the wisdom of that strategy, and contrasts with the more rigid and hierarchical structure typical of government agencies such as FEMA.

Knowledge and Incentives in Economic Theory

Put next to FEMA's well-documented failures (about which more below), Wal-Mart's successes are even more dramatic. Given the generally negative press that Wal-Mart gets, especially from local politicians who tend to want to make Wal-Mart responsible for every problem their communities face, the almost universal praise the

company received for their response to Katrina is stunning. It is also no surprise that the public sector has tried to learn from Wal-Mart's successes. It is yet again no surprise, for reasons to be discussed below, that their attempts to do so have largely failed. To understand Wal-Mart's successes (and, by implication, FEMA's failures) and why it is unlikely that government agencies can replicate those successes without relying much more extensively on the private sector, we need to explore the political economy of markets and politics. Specifically, we need to understand the ways in which the institutional arrangements of the market provide the incentives and knowledge necessary for the private sector to be in a position to respond in the ways it did during Katrina.

The conventional argument in favor of markets is that private ownership of the means of production provides the right incentives for owners to produce the kinds of goods people want and to do so as efficiently as possible. Because the private owners have their own wealth at stake, they will be responsible stewards of those resources. More important, private ownership's ability to capture the future stream of potential profits in the current net worth of the firm, especially in the form of a stock price, gives the current owners the incentive to take a long-run perspective on the firm's performance. There is little to be gained by running the firm into the ground today because that will only destroy the value of the firm. Making decisions that properly balance current profit possibilities with strategies for longer-run success maximize the present value of the firm, which can always be transferred to future owners through exchange. More narrowly, private owners are dependent for their profitability on continuing to please their customers over time, assuming there is rivalry among multiple producers. In such an environment, firms that alienate their customers by whatever means will quickly be

punished by those customers, as they take their business elsewhere. The gains from proper stewardship and the risk of losses from customer “exit” suffice to provide the incentives necessary for efficiency under private ownership.

As strong as these incentives are, they are only half the story at most. Critics of markets have long wondered whether the same, or better, results might hold without the need for private ownership if only humans would be less self-interested and thereby not require “incentives” to engage in rational economic behavior. Marxian calls for comprehensive economic planning rather than markets, as well as less radical versions of economic planning that percolated throughout the first few decades of the 20th century, all argued that although private ownership’s incentive structure did generate some good results, it came at the cost of “wasteful” competition. If production could be rationally coordinated *ex ante* through collective planning processes, we could have the efficiency of the market, but without the wastes of competition (where the appropriateness of resource allocation decisions are only known through *ex post* signals of profit and loss) and the inequalities of wealth and power that the planners saw resulting from private ownership. Embedded in the rhetoric of science and rationality, these calls for planning at least attempted to counter the claim that the incentives of private ownership were necessary for efficient resource allocation.

The socialist calculation debate of the interwar years offered a second explanation for the superiority of private ownership that did not rely solely on incentive effects. Ludwig von Mises (1920) argued that rational resource allocation was impossible without the aid of genuine market prices because only prices that emerged out of monetary exchange in a free market could provide the basis for calculating how resources should

best be allocated. Producers would not only need to know the prices of possible outputs they might create so as to know which were more valuable, they would more crucially need to know the prices of the various inputs they might use to make those outputs so as to produce with as least waste as possible. Specifically, where capital goods and labor have multiple but not infinite uses, we require some way of comparing their value in those alternative uses. Mises argued that market prices and only market prices provided this value comparison because such prices all resulted from exchange against the same good - money. Monetary exchange provided the process by which the economic value of all goods and services could be reckoned. If planners attempted to allocate resources in the absence of market prices they would have no way of knowing either *ex ante* what capital combinations and possible outputs would appear to be the most rational or *ex post* whether the chosen combinations and outputs were in fact rational uses of resources. In effect, Mises turned the “waste of competition” argument on its head by demonstrating that in *comparative terms* planning would be far more wasteful than the market.

Hayek (1940, 1945) extended the Misesian arguments by situating them more clearly in the context of knowledge. He argued that what the price system does is to communicate knowledge among economic actors. Prices serve as surrogates for the combined knowledge of market participants. When we buy and sell, or refrain from either, we make our knowledge available to others through our contribution, however small, to the combined effects that push prices up and down. Hayek further added that much of the relevant knowledge in economic interaction is contextual and/or tacit. Contextual knowledge refers to what Hayek (1945, p. 80) called the “knowledge of time and place.” By virtue of their “location” within the ecology of the economy, and often

due to their accumulated experience, producers are able to know their customers and suppliers in ways that are specific to that context and would not exist were it not for that context. Re-locating the same producer to a planning bureau would destroy that contextual knowledge. The related concept of tacit knowledge refers to knowledge held by both producers and consumers that cannot be easily put into words or numbers. There is much that we know that we cannot necessarily articulate, such as how to keep our balance on bicycle. In the market, experience, context, and skill all can lead individuals to know things about their environment and about how to react to it that cannot be communicated except through the choices they make in the marketplace. Hayek, and later writers such as Lavoie (1985), argued that government planners and agencies cannot get access to this contextual and tacit knowledge, preventing them from duplicating the success of private owners operating in a genuine market.

Knowledge and Incentives in Wal-Mart's Response to Katrina

The key roles of knowledge and incentives in explaining the success of Wal-Mart can best be seen by comparing their performance to the failures of FEMA. FEMA lacks both the knowledge and incentives necessary to meet the demands of citizens. Not only does it lack the market signals to guide learning, it faces problematic incentives inside the political process. Its main task is framed as the “coordination” of other agencies, levels of government, resources, and private actors. “Coordination” by itself is really a second-order output, with the results of such coordination being what ultimately matters. Thus “coordination” as a mission is problematic because, as an output, it is largely unobservable, therefore it becomes difficult to know how much its “coordination”

activities contributed to the final outcomes. All else constant, how easily could FEMA know if it was succeeding or failing if “coordination” is its primary mandate? The first problem plaguing FEMA’s ability to be effective is that it is largely operating in the dark with respect to whether it is meeting its main task. Without clear feedback, its ability to learn from its mistakes is compromised, and its ability to blame others for its failings increases as a result.

By contrast, private sector organizations such as Wal-Mart have a much clearer, though by no means unambiguous, signal of whether they are getting the job done right or wrong – changes in prices and profits/losses.⁶ Admittedly during a crisis such as Katrina, where a good deal of what Wal-Mart did was to donate relief supplies, market signals do not as clearly provide immediate feedback about the appropriateness of the firm’s choices. However, it is those market signals that have helped to inform Wal-Mart about how best to manage their supply chain and optimize their inventories during normal business situations. Those lessons can be transferred over to crisis situations with reasonable assurance that the same techniques will work, and the market signals generated by the price of their stock in response to their handling of similar situations in the past provides that assurance. In fact, this is precisely what Wal-Mart did during Katrina. Their long-honed skills with logistics, informed by years of market signals, enabled them to be effective. In addition, their strong performance during Katrina will likely lead to increased profits down the road both through their speed in getting up and running again and by creating additional customer loyalty through their assistance to the community. Those increased profits provide knowledge about what to do, and there is no comparable signal for FEMA.

Beyond the knowledge signals of prices and profits, private sector firms are often very effective at acquiring knowledge of local conditions that can be extremely useful in a crisis. At the most basic level, operating in the marketplace demands that firms selling physical goods or personal services locate where the demand is. For large retailers like Wal-Mart, this means it has a presence across the United States as its stores generally track the population distribution of the US (Hicks 2007). However, Wal-Mart is particularly known for locating in smaller towns and suburban/exurban areas. The company is also known for getting involved with the local community in a variety of ways, not to mention often serving as a node of social interaction for both customers and associates. As a result of this decentralization of resources that is inherent in the market, firms such as Wal-Mart are very likely to have supplies and human capital near where disasters occur, and they are also likely to have knowledge of the particular communities in which they operate as well as connections with community leaders. Because their employees, both managers and associates, are drawn from the local community and because they are a daily presence in the lives of residents, they have contextual and tacit knowledge that can be, and during Katrina was, very useful in a crisis. These relationships also built mutual trust that can be called upon during a crisis.

By contrast, FEMA does not have offices in each and every small town nor the knowledge gained by ongoing daily interaction with residents. FEMA employees are more likely to be based in Washington or a state capital and, as professionals, are more likely to be relatively new to an area should they be located where a disaster strikes. They would lack the local knowledge necessary to know where help was needed.⁷ Because Wal-Mart draws its employees from the same socio-economic groups that were

hit hardest by Katrina, those employees were especially well-positioned to draw upon contextual, cultural, and tacit knowledge in knowing what needed to be done. The same is much less likely to be true of FEMA employees. Add to that a more hierarchical and less decentralized organizational structure and it is not surprising that FEMA was largely at a loss how to respond, while firms like Wal-Mart were already addressing community needs.

Aside from the limitations on their knowledge, FEMA also does not have the incentives necessary to respond appropriately. Like all public-sector organizations, they do not have the incentive of profits and losses to ensure that they meet their mission. As public choice theory argues and has demonstrated empirically, government agencies are much more likely to be concerned with augmenting their budgets or pleasing key political actors as those represent access to additional resources.⁸ One way of justifying additional funding is to claim that a lack of such funds explains the agency's failures. This is one form of perverse incentives faced by the public sector. Another identified by Sobel and Leeson (2006a, pp. 6-7) is that government agencies have an incentive to avoid "Type 1" errors (errors of commission) and therefore are more likely to make "Type 2" errors (errors of omission). That is, government agencies are likely to take more cautious and conservative strategies than less cautious ones, even if the net benefit to the less cautious one is greater. This suggests that FEMA's tendency to be conservative and rule-bound is endemic to its very environment and that expecting a level of agility and flexibility even close to the private sector from it is probably hopeless. The reason for its greater willingness to tolerate Type 1 errors is that overt, visible errors tend to be punished more strongly than less visible ones. In addition, errors of omission form a

more plausible basis for arguing that the agency in question needs more power and resources in order to be able to act. Errors of commission look more clearly like “mistakes” than a lack of resources.

Private sector firms such as Wal-Mart have much more incentive to undertake reasonable risks and have no differential incentive to avoid errors of omission. Unlike government agencies where mistakes of all sorts are costly but getting the job done right has no specific payoff to decision makers, private sector firms can profit by taking on risky projects successfully. The reward and punishment systems of the market process are largely immediate and powerful – if they get it right they profit, if they do not, they face losses. Because owners themselves will gain economically from success as will managers in a way bureaucrats do not, the incentive structure of the market leads firms like Wal-Mart to calculate carefully the prospective net benefits of the options in front of them. Errors of commission mean absolute losses and errors of omission mean lost profit opportunities, both of which they have essentially equal incentive to avoid, especially in the extremely competitive retail sector. Because private sectors firms have owners who are residual claimants and who therefore gain and lose in step with the firm as a whole, they face much stronger incentives to meet the needs of customers and the community. Wal-Mart’s superior performance in Katrina illustrates this nicely.

Certainly part of Wal-Mart’s motivation for engaging the relief effort in a comprehensive way was the long-term payoff for the profitability and their reputation. This longer-term perspective is not available for government agencies like FEMA, which suffers from the short-sightedness endemic to the political process. The planning horizon of the political process is often as short as the two-year cycle of House elections

and certainly no longer than the four of the presidency.⁹ Agencies are always under the constant threat of new leadership, new priorities, reorganization, reassignment, or outright abolition every two years. FEMA's history of changing missions and being bounced around the bureaucracy have made it difficult to engage in long-term planning as well as making it hard to retain any organizational learning that it might acquire.

Profit-seeking firms are often criticized for supposedly being interested only in short-term gains, but private ownership and capital and equity markets assure that they have to take longer-term interests into account. This was clear during Katrina as the big box stores quite intentionally chose to give up some potential short-run profits in order to gain in the long run and, in so doing, better serve the community. A Home Depot executive commented that whatever it loses in profits in the short term are more than compensated by increased customer loyalty: "If we can be there when a customer needs us most, we can win that customer for life" (Ward 2005, p. 18). Jason Jackson of Wal-Mart noted that what ultimately matters for its own financial health is that "we will have a community to go back to in the end." Long-run interests also worked against the possibility of so-called "price-gouging." As another Home Depot executive put it, "I can't think of a quicker way to lose customers than price-gouging" (Langford 2007). In fact, since 2004, Wal-Mart has had a corporate policy of instituting region-wide price freezes when hurricanes approach so as to avoid any accusations of price-gouging. They recognize that their long-run profitability and relationship with the community depends on skillfully navigating between their narrow short-run financial interest and their larger reputation in the community.

Operating in the marketplace also gives Wal-Mart an additional advantage over other organizations involved in the disaster relief process. Relief organizations, whether governmental or non-profits, do not operate in a competitive market context where they have to deal directly with their customers/clients on a daily basis, so they have no need to create a large number of appropriately sized physical locations for any supplies they might wish to stock. In addition, on a day-to-day basis, they require only a small number of employees to take care of administrative duties. It is only when disaster strikes that supplies and workers need to get to the affected areas. Private-sector firms, especially big-box retailers such as Wal-Mart with numerous locations in highly-populated areas, will already be present. Attempts by non-profits or government agencies to mimic this strategy would be seen, rightly, as highly wasteful if they attempt to do so by keeping all kinds of supplies and employees sitting in multiple warehouses “just in case.” Such choices would be good examples of the sort of Type 1 error that they would wish to avoid, as idle workers or supplies that are spoiled, outdated, or just plain sitting there would be much more visible than the errors of arriving after the fact. For private-sector firms, their daily operations in the market lead them to have precisely the kinds of resources needed in place to be converted to disaster relief if the situation arises.

In fact, this is precisely what happened during the 2006 hurricane season. Rosegrant (2007b, p. 3) reports on FEMA’s attempt to match Wal-Mart’s performance by stockpiling food and ice in anticipation of a busy 2006 season in the Gulf, without ever coordinating with private sector firms. When the predicted busy season failed to materialize, FEMA had to “throw out some 279 truckloads of food worth about \$43 million.” Add to that the \$85 million worth of unused Katrina supplies they were forced

to give away in June of 2008, and it is unlikely that FEMA will engage in strategies that risk such visible errors of commission again. By contrast, Wal-Mart *always* has resources at the ready because it needs them available for its day-to-day business. With ongoing markets to serve, rather than discrete events that call for their involvement, private retailers have the incentive and knowledge to have a constantly replenished stock of goods on hand that might serve as vital resources in a time of crisis. Giving the private sector a larger role in disaster relief would eliminate the sort of waste FEMA created in 2006.

Competition and Organizational Learning

In addition to knowledge and incentives more narrowly, a broader explanation of Wal-Mart's effective response to Katrina is that it operates in an extraordinarily competitive marketplace and this environment is largely responsible for the way in which it has developed its resources, formed behaviors and developed routines that combine those resources and behaviors. Recent work in the strategic management literature has characterized the firm as a set of *resources*, a group of *activities* that the firm engages in, and a collection of *routines* that link the resources to the activities (Mathews 2006, p. 75).¹⁰ Routines are the various rules, procedures, behavioral patterns and the like that define how a firm operates. As the name suggests, they grow from repetition, and can become increasingly effective as the firm evolves. Effective routines allow the firm to engage in increasingly complex tasks by, essentially, increasing their capabilities, understood as their potential embodied in their resources. Rather than just seeing the firm's resources as a static collection of things, the emphasis on routines provides a

“dynamic capabilities” perspective on the firm’s behavior (Teece, Pisano, and Shuen 1997). The firm is not just a collection of resources, but an institution that can learn to improve its own operation so as to enhance the productivity of those resources. Such organizational learning is much more likely to take place in a highly competitive environment where the organization is subject to constant pressure to improve its short-run efficiency and long-run capabilities. Organizations under competitive pressure will also be more entrepreneurial as they will be better able to apply their resources and routines to novel contexts.

Constant exposure to just this sort of highly competitive environment has led Wal-Mart to develop a set of organizational practices that are honed to be efficient. Perhaps more important, the routines they have developed are so tightly matched to their resources and behaviors that they are very easily deployed in novel situations. The competitive pressure of the retail market has helped Wal-Mart develop organizational routines that are efficient at a point in time, while also ensuring that, as an organization, it can learn from novel situations and incorporate that learning into dynamically efficient meta-routines. It not only knows how to act effectively, it also knows how to learn how to act effectively. Its routines effectively embody its capabilities.

Wal-Mart’s successes during Katrina were not only the result of learning from its previous responses to hurricanes, but also from the everyday demands on its supply chain and distribution network to get goods to stores that need them. The firm’s whole inventory-relevant technological infrastructure is geared around the quick movement of goods to stores and within them.¹¹ Several authors have argued that its innovations in these areas are a key causal variable in the increased productivity of the US economy in

the late 1990s, and might explain more than half of the productivity gains in the retail sector from 1987 to 1995 (Johnson 2002; see also Vedder and Cox 2006, pp. 128-134).

Much of this efficiency has been developed through the “learning by doing” that is associated with the competitive marketplace. Just as individuals learn by being put in situations of novelty that require the application of existing resources and capabilities to new activities and where there is a clear metric of success, so do firms learn to develop routines to bridge their resources and activities in the competitive environment of the market. Environment matters because even if an organization has clearly defined activities and a set of resources to bring to bear on them, it will not be likely to develop the linkages between them if it is not faced with genuine pressure to perform and innovate. Put differently, the more competitive the environment, the more likely it is that organizations will behave entrepreneurially, with respect to both the world outside of the organization and its internal structures. Wal-Mart’s history in a very competitive industry has enabled it to be alert to the unexpected and able to learn from its mistakes, both of which are key elements of effective disaster response.¹² It has honed just the sort of agility and responsiveness that disaster experts would love to inculcate in FEMA and other government agencies. Unfortunately, those characteristics are a product of the competitive market environment in which Wal-Mart operates, not its organizational structure or the quality of its leadership per se.

Wal-Mart also demonstrated a willingness to trust its lower-level employees to take its well-honed routines and apply them to novel situations. As noted at the outset, Wal-Mart managers and associates are given a fair degree of discretion and during Katrina were instructed and expected to make decisions “above their level” without prior

approval. How is it possible for Wal-Mart to trust in the quality of those decisions? The answer is two-fold. First, it has organizational routines that its employees are used to deploying and know are successful and it also has a demonstrated capacity to learn from its own behavior. Second, it has a very powerful corporate culture in which its core philosophical ideas are inculcated in managers and associates from day one.¹³ The combination of known organizational routines, a capacity to learn, and a powerful corporate culture means that lower-level employees can be trusted to apply known protocols to novel situations in ways that are consistent with the overall vision of the organization. In giving lower-level employees such autonomy, Wal-Mart made it possible for them to act on their tacit knowledge. Because tacit knowledge is, by definition, uncommunicable through ordinary language, acting on it requires that its possessor have a significant degree of autonomy.¹⁴ Had Wal-Mart employees been held to very tightly scripted protocols, they would not have been able to improvise based on their tacit and contextual knowledge in the effective ways that they did. Issues of organizational structure are not independent from those involving how well such organizations can make use of their employees' tacit knowledge.

That combination of factors that enabled Wal-Mart to trust its lower-level employees and for them to use that autonomy so well is most effectively produced in an environment of competition, which also explains why it was virtually absent from FEMA.¹⁵ Many of the stories of FEMA's failures involved their inability to "think on their feet" and trust in the decision-making of lower-level bureaucrats. Wal-Mart's ability to respond to the unexpected, deliver to the community, and trust in the choices of its

lower-level employees are the result of it being a profit-seeking firm operating in a highly competitive marketplace and are nearly impossible to duplicate outside of that context.

Conclusion

The tale of Hurricane Katrina as a massive failure of government at multiple levels is a widely accepted one, even among people normally not inclined to point the finger of blame at government. However, the lesson that many draw is that it was a failure of will, resources and/or expertise by government that created the catastrophe that was Katrina. What is much less often argued is that these failures were endemic to the institutional environment of the political process, which is unable to provide the knowledge and incentives necessary for effective resource allocation in the way that the private sector can. When placed next to FEMA's failures, the largely untold but very clear story of Wal-Mart's success illustrates the advantages the private sector has in managing the logistical challenge of resource allocation during a natural disaster.¹⁶ The incentive provided by private ownership and the knowledge provided by market signals such as prices and profits, all set in an environment of competition, create firms like Wal-Mart that are able to respond with agility and improvisation to a crisis like Katrina, and to do so with results far superior to almost all government agencies. A political economy perspective on Wal-Mart's heroic performance strongly challenges the belief that with more will, resources, or expertise, government could ever respond effectively to a major disaster. The flip side of government's massive failures during Katrina is the notable successes of the private sector. Disaster policy makers who ignore the other half of the

story do so not only at their own peril, but also at the peril of millions of Americans who could be the next victims of another disastrous government disaster relief effort.

Notes

¹ On the so-called “ratchet effect” on the size of government in the wake of crisis, see Higgs (1987).

² The one government agency generally acknowledged to have performed well during Katrina was the U. S. Coast Guard. One explanation for its success is that it has had both independence from the political process and a decentralized organizational structure, much like Wal-Mart. It also had a fairly clear and visible “output” (i.e., saving lives through rescues). Despite the Coast Guard not having the ability to rely on profit and loss for knowledge and incentives, it at least could take advantage of local knowledge through its decentralized organizational structure as well as its long-standing powerful organizational culture of agility and independence.

³ Sobel and Leeson (2006b) and Shughart (2006) both note the positive role played by Wal-Mart, but neither makes an exploration of its success a central theme.

⁴ *Meet the Press*, September 4, 2005, transcript available online at <http://www.msnbc.com/id/9179790>.

⁵ The story of the Waveland, Mississippi store is of interest for another reason, as it demonstrates further the improvisational skills of the private sector. The store was so severely damaged that the structure could not be reopened right away. Realizing that the community needed the supplies that Wal-Mart had, they improvised by first setting up a 16,000 square foot tent in the parking lot immediately after the storm to at least offer the basics, including pharmacy services. Later, they did some slight repairs to a portion of the physical structure that was salvageable and opened a 57,000 square foot “Wal-Mart Express.” What is of note is that this was an innovation in response to this storm; Wal-

Mart Expresses did not previously exist. The 57,000 square feet were still about a fourth of the original store. About a year after the storm, the Waveland SuperCenter was fully renovated and reopened.

⁶ It is important to note that the quality of the market signals that private enterprise gets also depends on the stability of the political environment in which it operates. Political uncertainty can create “signal noise” that makes it more difficult for the individuals, firms, and communities to interpret market signals correctly, which thereby undermines their ability to form accurate expectations and plan for the future. Chamlee-Wright (2007) explores the way in which such politically-generated signal noise has made recovery from Katrina more difficult than it could have been.

⁷ Some evidence for this claim can be found in news reports from June 2008 that FEMA was forced to give away to other government agencies \$85 million in supplies intended for Katrina victims because they did not know there was still a need for them and could no longer afford to store them. This was despite the fact that FEMA was referring people looking for housing and supplies to the very local agencies who would have gladly made use of those supplies had they only known of their existence. FEMA’s lack of local, contextual knowledge was at the root of this problem. The contrast between FEMA stocking its warehouses with goods that went unused while Wal-Mart and others were emptying their warehouses and getting supplies to residents could not make the argument of this paper more clear.

⁸ A nice overview of these sorts of public choice considerations is Mitchell and Simmons (1994). On this particular issue, see pp. 58-62.

⁹ In a discussion of the lack of incentives facing governments to promote disaster mitigation rather than just attempting to clean up afterward, Mileti (1999, p. 160) notes that “the costs of mitigation are immediate while the benefits are uncertain, may not occur during the tenure of the elected officials, and are not visible (like roads or a new library).” Sobel and Leeson (2006a) address some of these issues as well.

¹⁰ The concept of “routines” comes from the work of Nelson and Winter (1982).

¹¹ Wal-Mart is widely recognized as an innovator in inventory management and has recently become one of the first large retailers to use Radio Frequency ID to manage inventory flow at distribution centers and retail stores. One of their goals is to be able to track in-store sales with a degree of accuracy that prevents them from ever running out of merchandise on store shelves and adjust the merchandise mix to changes in their customer base as quickly as possible.

¹² Comfort (2005) considers the discovery and correction of error to be one of five critical criteria for an effective disaster response system and criticizes specifically “the inability to identify and correct errors as the event evolved” as one of the great failures in the response to Katrina. In her call for designing systems that avoid that failure, she herself fails to take into consideration whether structural and institutional features of the public and non-profit sector might make such learning problematic and, conversely, whether the different features of the private sector make it more likely. It is worth noting that the “discovery and correction of error” is precisely the role that Kirzner (1973) assigns to the entrepreneur and offers reasons why the context of the market is more likely to generate such entrepreneurship than would other institutional arrangements.

¹³ Wal-Mart has long been known for its attempts to create a consistent and powerful corporate culture. It devotes a whole section of its website to issues of corporate culture, including everything from its “Three Basic Beliefs” to Sam Walton’s “Ten Rules for Building Business” to the “Wal-Mart Cheer.” The Wal-Mart corporate culture also includes the “Ten Foot Rule,” which means that associates should approach any customer within ten feet of them to see if they need help, and their website includes a description of the “Saturday Morning Meetings,” which take place at corporate headquarters in Bentonville, Arkansas and provide a forum for explaining and debating core issues facing the firm as well as celebrating the successes of employees.

¹⁴ I thank Josh Hall for this observation.

¹⁵ As noted earlier, the U. S. Coast Guard was able to capture some of this combination, especially the powerful organizational culture, in its long history which enabled it to respond to Katrina more like Wal-Mart than FEMA.

¹⁶ The record may be clear, but it is not well known. In multiple presentations of the underlying research of this paper to undergraduate audiences, I have asked them at the end how many had previously heard of Wal-Mart’s positive performance. In most cases, no hands go up at all. Even in a talk at a college in New Orleans, only two or three of a class of 25 or so had heard any of this before. The media have been very effective in covering FEMA’s failures but not nearly as good about Wal-Mart’s successes.

References

- Barbaro, Michael and Justin Gillis. 2005. "Wal-Mart at Forefront of Hurricane Relief," *Washington Post*, September 6, p. D01, available at: <http://www.washingtonpost.com/wp-dyn/content/article/2005/09/05/AR2005090501598.html>.
- Bond, Patti. 2005. "Home Depot: As Experience Grows, Big Orange Refines Script for Storm Response," *Atlanta Journal-Constitution*, Sept. 4, p. 1C.
- Chamlee-Wright, Emily. 2007. "The Long Road Back: Signal Noise in the Post-Katrina Context," *The Independent Review* 12, pp. 235-59.
- Comfort, Louise K. 2005. "Fragility in Disaster Response: Hurricane Katrina, 29 August 2005," *The Forum*, 3, no. 3. Available at: <http://www.bepress.com/forum/vol3/iss3/art1>
- Hayek, F. A. 1940. "The Competitive Solution," in *Individualism and Economic Order*, Chicago: The University of Chicago Press, 1948, pp. 181-208.
- _____. 1945. "The Use of Knowledge in Society," in *Individualism and Economic Order*, Chicago: The University of Chicago Press, 1948, pp. 77-91.
- Hicks, Michael J. 2007. *The Local Economic Impact of Wal-Mart*, Youngstown, NY: Cambria Press.
- Higgs, Robert. 1987. *Crisis and Leviathan: Critical Episodes in the Growth of American Government*, New York: Oxford University Press.
- Independent Levee Investigating Team. 2006. *Investigation of the Performance of the New Orleans Flood Protection Systems in Hurricane Katrina on August 29, 2005*. Available at: http://www.ce.berkeley.edu/~new_orleans/report/VOL_1.pdf .
- Johnson, Bradford. 2002. "Retail: The Wal-Mart Effect," *The McKinsey Quarterly* 2002, no.1, pp. 40-43.
- Kirzner, Israel M.. 1973. *Competition and Entrepreneurship*, Chicago: The University of Chicago Press.
- Langford, Terri. 2007 "Disaster Plan Teams State and Retailers," *Houston Chronicle*, July 15, available at: <http://www.chron.com/disp/story.mpl/hurricane/4967735.html>.
- Lavoie, Donald C. 1985. *National Economic Planning: What is Left?*, Cambridge, Mass.: Ballinger Publishing Company.

- Leonard, Devin. 2005. "The Only Lifeline was the Wal-Mart," *Fortune* 152, 7, October 3, pp. 74-80.
- Mathews, John A. 2006. *Strategizing, Disequilibrium, and Profit*, Stanford: Stanford Business Books.
- Mileti, Dennis S. 1999. *Disasters by Design*, Washington, DC: Joseph Henry Press.
- Mises, Ludwig von. 1920. "Economic Calculation in the Socialist Commonwealth," in *Collectivist Economic Planning*, F. A. Hayek, ed., Clifton, N.J.: Augustus M. Kelley, 1935, pp. 87-130.
- Mitchell, William C. and Randy T. Simmon. 1994. *Beyond Politics: Markets, Welfare, and the Failure of Bureaucracy*, Boulder: Westview Press.
- Nelson, Richard and Sidney Winter. 1982. *An Evolutionary Theory of Economic Change*, Cambridge, MA: Belknap Press.
- Rosegrant, Susan. 2007a. *Wal-Mart's Response to Hurricane Katrina: Striving for a Public-Private Partnership*, The Kennedy School of Government Case Program C16-07-1876.0, Cambridge, MA: Kennedy School of Government Case Studies in Public Policy & Management.
- _____. 2007b. *Wal-Mart's Response to Hurricane Katrina: Striving for a Public-Private Partnership (Sequel)*, The Kennedy School of Government Case Program C16-07-1876.1, Cambridge, MA: Kennedy School of Government Case Studies in Public Policy & Management.
- Shughart, William F. 2006. "Katrinanomics: The Politics and Economics of Disaster Relief," *Public Choice* 127 (April), pp. 31-53.
- Sobel, Russell and Peter Leeson. 2006a. "Flirting with Disaster: The Inherent Problems with FEMA," *Policy Analysis* 573, Washington DC: Cato Institute.
- _____. 2006b. "The Use of Knowledge in Disaster-Relief Management," *The Independent Review* 11, pp. 519-32.
- Teece, D. J., G. Pisano, & A. Shuen. 1997. "Dynamic Capabilities and Strategic Management," *Strategic Management Journal* 18, pp. 509-33.
- Vedder, Richard and Wendell Cox. 2006. *The Wal-Mart Revolution*, Washington, DC: AEI Press.
- Ward, Andrew. 2005. "Home Depot Prepares for Katrina," *Financial Times*, August 29, p. 18

Worthen, Ben. 2005. "How Wal-Mart Beat the Feds to New Orleans," *CIO Magazine*, November 1. Available at http://www.cio.com/article/13532/How_Wal_Mart_Beat_Feds_to_New_Orleans

Zimmerman, Ann and Valerie Bauerlein. 2005. "At Wal-Mart, Emergency Plan Has Big Payoff," *Wall Street Journal*, September 12, p. B1.