

# **INTERNATIONAL MARKETING AND TERRORISM PREPAREDNESS**

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## INTERNATIONAL MARKETING AND TERRORISM PREPAREDNESS

Mr. Chairman, members of the Committee: It is a great honor to be invited to testify before you today on the important topic of terrorism and international marketing. Firms in the United States and around the globe have been exposed to the vicissitudes of terrorism which, more often than not, aims to disrupt the flow of supply and demand and to destroy our way of life. With a group of colleagues in the U.S. and abroad \*, I have therefore undertaken research over the past years to investigate the effect of terrorism on companies and to find the possible steps which might help these companies better prepare for terrorist incidents. Just like our research team, our research approach is global, in full recognition that terrorism is a threat to everyone and requires vigilance and preparation by all of us. Nonetheless I will focus today specifically on steps that can be undertaken by the United States Congress in order to encourage and improve the preparedness of firms to cope with disruptions caused by terrorism.

Our past research has consisted of in-depth interviews with managers of both multinational corporations as well as small and medium sized firms, in the United States and abroad, followed up by the administration of a survey questionnaire. In conducting the survey, I have been supported by two major trade associations: The American Management Association, which has been providing management development and educational services to individuals and firms worldwide since 1923; and the American Marketing Association, which, with its more than 38,000 members worldwide has been, for over six decades, the leading source for information, knowledge sharing and development in the marketing profession.

(\*) Of particular note are the ongoing collaborative research activities of Professor Gary Knight, Florida State University, Professor Gabriele Suder of Ceram Sophia Antipolis in France, Professors John Steen and Peter Liesch of the University of Queensland in Australia, and Shahed Amanullah of Georgetown University.

## DEFINING THE ISSUES AND CONCERNS

We define international terrorism as “the systematic threat or use of violence across national borders to attain a political goal or communicate a political message through fear, coercion or intimidation of non-combatant persons or the general public.” Terrorism is a human imposed disaster which purposefully aims at maximum random destruction and which is planned to systematically circumvent preventive measures. The potential targets for terrorism are far too numerous to be consistently protected. Even small terrorist groups with minimal resources have the ability to achieve major effects. Typically, the cost-effectiveness equation is in favor of the terrorist and against the target. The cost of protecting ourselves and averting terrorist acts is many billions of dollars, while the terrorists’ costs are in the millions or less.

Terrorists direct their attacks against business far more than any other target. In addition, the need for businesses to remain easily accessible to the outside and to conduct transactions with many persons with whom no prior interaction had taken place, introduces a level of vulnerability which is not typically encountered by government offices or individuals. Terrorists intend to affect supply and demand in order to precipitate deleterious effects on existing economic systems. There are two key types of effects which take place: direct and indirect. The direct effects of terrorism comprise the immediate business consequences as experienced by individual firms. For example, some firms located in the World Trade Center lost most of their employees and operations. While the harm is clearly tragic for individually affected people and firms, from a societal perspective the direct effects of terrorism tend to be smaller than the indirect effects. The latter accumulate and often become recognizable only over time and include long term changes such as a decline in buyer demand; shifts or interruptions in value and supply chains; new policies, regulations and laws which have intended and unintended effects; as well as changes in international relations and perceptions that affect trade and investment. These indirect effects pose the greatest potential threat to the activities of firms. For example, interruptions in the supply of needed inputs to one industry can lead to shortages of parts and components which serve as crucial input for other economic sectors. Policy measures intended to increase security may lessen the efficiency of global transportation and logistical systems. The unintended consequences of such actions may

increase market imperfections and raise business costs further, and may alter the environment in ways more harmful to business interests than the terrorist events that provoked them.

From a global perspective, these effects are present for many firms, even those who see themselves as quite remote from any location affected by terrorism. Today's climate of global commerce involves extensive interaction with countless distributors and customers. Producers and marketers rely on suppliers and suppliers' suppliers to obtain goods and components. Such extensive networks increase the exposure of firms to events that take place at a far distance. Even firms perceived as having little international involvement may depend on the receipt of imported goods and are therefore subject to shortages or delays of inputs and the disruption of company operations.

An important consideration is the fact that individual assessment of vulnerability to an occurrence changes based on our information, experience and perception of the event. Over time these impressions shift, which can result in faulty managerial decisions. For example, during the days following a terrorist event or right after a natural disaster such as the flooding of New Orleans by hurricane Katrina, there is typically the feeling of "but for the grace of God, it could have been me." However, over time, this feeling is likely to give way to a perception of "this was an aberration and cannot happen to me." While such a shift is instrumental to restore human confidence and encourage the resumption of "normal" activities, it may also lead to a wide spread underestimation of the likelihood of future exposures to new risks and terrorism. For many firms concern about possible damage from terrorism has assumed a back seat. Ignorance and apathy may lead to managers resting comfortably on the belief that any future attack will not affect their firm or lead to personal repercussions.

It is also important to understand that in today's business climate of global competition and rapid response, firms no longer have the luxury of just aiming for "survival" in case of a terror attack. Much rather firms need to be flexible in order to be able to withstand shocks. They must offer assured continuity to their suppliers, their clients, their employees and other stakeholders in order to inspire confidence in the relationship. Flexible firms will recover more quickly and can more readily sustain performance in the aftermath of terrorism's direct and indirect

consequences. Firms need to develop continuity plans to deal with crises. Such plans may, for example, facilitate a shift of production to different regions of the world in the wake of unanticipated disruptive events. Particularly for firms that engage in massive outsourcing, the reliance on a single or even limited number of suppliers, or on suppliers concentrated in a limited range of locations, is very risky. Renewed and ongoing business relationships need to be a principal goal of any firm following a terrorist attack. Quite apart from the importance of such an achievement for the viability of the firm, business continuity is also a major step in denying terrorists their achievements.

Particular attention needs to be paid to the marketing function within corporations when it comes to a response to terrorism. Even though all corporate areas are likely to be affected by sudden shifts triggered by terrorist activity, the marketing field, which constitutes the key corporate liaison with the world outside of the firm, is likely to be under most pressure. When properly prepared, marketers can be the most capable in delivering corporate responses to such an event. Key reasons are that the field of marketing deals most closely with consumers and markets, in direct linkage to the activities of supply and demand, which terrorists aim to destroy. This proximity makes marketers the first responders to business disruption. Within industry, marketers deal with imports and exports, as well as distribution and logistics. Marketers tend to have the clearest understanding of the mutual corporate dependence so critical for effective planning. For example, when determining the need for specific emergency inputs, marketers will not only look for the source of such inputs. They will also be able to analyze the existing relationships and networks and devise incentives to ensure that the supplier will actually provide goods and services to the firm. Dry runs and simulations can then be used by marketers to develop expectations about long-term effects and to see whether the system works as planned. Without such considerations, a plan for input contingency is akin to identifying the location of gas stations as the principal remedy for a fuel shortage, without keeping in mind that the station needs to be re-supplied itself, be open, and be willing to provide the gasoline needed to the car pulling into the station.

On the supply side, marketers deal with communication with customers and suppliers, devise campaigns to present information, provide direction and alter any misperceptions. Marketers

are the experts who implement steps to address imbalances and create new incentives by changing corporate pricing, packaging or sizing. Goods or services whose price is strongly affected by changing information flows and perceptions of risk are highly susceptible to the indirect consequences of terrorism. Insurance coverage is an example. Actual or perceived terrorist threats tend to create upward pressure on the pricing of particularly vulnerable offerings. Prices may also experience a certain “stickiness”, that is, under conditions of inability to predict the occurrence of terrorism or its indirect effects, once raised, prices may not be decreased. Conversely, firms in certain industries may feel pressure to lower prices in order to induce reluctant buyers to maintain or increase their buying activities. Through their actions, marketers can reverse an emerging softness in demand, rally joint responses and avoid the occurrence of unintended consequences. With their understanding of the long term repercussions of terrorism, marketers can also be instrumental in formulating alternative corporate strategies – say the design of a shift from an investment based foreign market expansion to an export based one.

The continuing efforts of marketers to understand cultural issues are also highly useful for devising terminology and persuasive encouragement. Studies tell us that there are major cultural differences between and even within nations. International marketing, through its linkages via goods, services, ideas and communications, can achieve important assimilations of value systems. Marketers know that culture and values are learned, not genetically implanted. As life’s experiences grow more international and more similar, so do values. Therefore, every time international marketing forges a new linkage in thinking and provides for new exchanges of goods or services, new progress is made in shaping a greater global commonality in values. It may well be that international marketing’s ability to align global values and the subsequent greater ease of countries, companies and individuals to build bridges between themselves, may eventually become the field’s greatest gift to the world.

#### THE GENERAL BENEFIT OF PREPAREDNESS

Even though the focus today is on corporate preparedness for the impact of terrorism, it is important to consider that in most instances, corporate preparedness per se is of key importance

to any firm. As the vagaries of the 2005 hurricane season have shown us up close, natural disasters can have a major impact. But even relatively small and local events can cause major dislocations for firms. For a corporation to simply assume that it never will be exposed to disruptions and substantial sudden shifts in supply or demand is a high risk strategy. Suppliers can go out of business or have their facilities burn to the ground. Employees may be struck by illness or a labor dispute may ground shipments. Rumors about product quality may dissuade loyal customers from buying. If managers intend to safeguard the investment of shareholders and assure the viability of their firm, it is of utmost importance to prepare contingency plans and operational alternatives which respond to a sudden shock or dislocation. Firms which have not devoted efforts and resources to systematically prepare an ability to respond flexibly to changes will risk falling drastically behind their competitors who have engaged in such thinking and planning. We therefore believe that corporate preparation for the repercussions of terrorism is likely to be of general value to society and of use to the operations of the firm. Preparation reduces the risk, surprise and punch of the system shock exerted by sudden change.

#### SOME BACKGROUND ON OUR DATA

There has been some public discussion of what the current response by managers and corporations to terrorism should be. There has also been much speculation as to how firms perceive different dimensions of guarding against terrorism and how these perceptions might be interpreted and affected. However, there has been precious little insight based on specific and systematic research with corporations and their managers. The danger of relying primarily on anecdotal information consists of coming up with unnecessary or non-functional solutions and assistance measures. To get the facts right, we conducted research with corporations to determine the actual thinking of managers with regards to terrorism. The plan was also to find out more details and specific corporate actions already undertaken to thwart terrorism and the steps taken to prepare for the effects of inimical activities. Based on the facts, we can then attempt to develop and recommend supportive and effective policy actions.

The information and thoughts presented here today are based on a systematic data collection effort. In-depth interviews have been conducted with 37 corporate executives of internationally

active companies. Subsequently, we conducted a survey of firms, both from the United States and abroad. There were 1,488 visitors to our research web site. With 642 actual participants in the questionnaire, we can report a response rate of 43 percent. Of all the respondents, 41 percent are manufacturers, and 59 percent service firms. The company headquarters are mainly in the United States (83 percent) with the rest in Europe (10 percent) and elsewhere. The managers of 27 percent of firms indicated that their company was national or regional, while 73 percent saw their firm's orientation to be international or global. The annual sales of about half of responding firms were less than \$100 million, while the other half reported sales above that level. Regarding international business experience, seven percent of companies were about to enter the international market, one third had been active for up to 10 years, while more than 60 percent had been internationalists for more than 10 years. Fifty-five percent of firms made up to 20 percent of their sales internationally, while for 45 percent international sales had a larger share .

#### SELECTED RESEARCH RESULTS

We asked firms about their key concerns in international business. Three major issues emerged: Increases in energy cost, volatility of exchange rates and terrorism. Measured on a relative scale, energy rated a 10; exchange rates rated 8.5 and terrorism 5.4. We then inquired about corporate responses to terrorism and found that many firms were opposed to spending funds on terrorism preparation. The vast majority of respondents felt that there had not been a specific terrorism threat against their business, even though many more believed that their firm might be directly affected by a terrorist attack in the next 10 years. Corporate supply chain cost had risen since the 9/11 attacks but prices had declined.

Throughout the responses, we were struck by the bi-modal responses of managers. Typically, just as many firms were telling us that they were actively taking steps to prepare for terrorism as those who were indifferent. To some extent this reaction appeared to be a function of varying perceptions of responsibility. Headquarters of firms often told us that they believed terrorism preparation to be an issue for the on site managers at the local level. Subsidiaries, in turn, often believed that the problem was one for headquarters to respond to. We also found

that non-U.S. firms often believed terrorism to be an American problem – about which they, as foreigners, did not have to worry. But most important was the clearly emerging bifurcation of corporate orientations: Many firms were telling us that they were taking action to prepare for terrorism. But many also were reporting that they did not believe this issue to warrant much effort. In essence, consistent with a report issued by the Council on Foreign Relations, many firms are still unprepared for the impact of terrorism.

In part, one can attribute this to the “how soon they forget” phenomenon, the tendency to put the past behind and to look forward to a new, more optimistic environment. There was also the powerful effect of insufficient economic rewards. Firms, particularly the larger ones, reported to have spent on average about \$ 147,000 on terrorism preparedness and hired about five new employees to deal with the issue. Yet, many corporations were telling us that they did not believe their shareholders would reward investments into terrorism preparations. Also, any such activity would not help in differentiating the firm from the competition – a good reason not to undertake it. Unless shareholders and other stakeholders encourage and appreciate investments aimed at terrorism preparedness, managers may remain unwilling to devote major funding to such efforts.

#### A MODEL OF CORPORATE PREPAREDNESS FOR TERRORISM

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We propose a model which captures the different levels of corporate readiness for international terrorism. This model, which is shown in the figure, indicates the interrelationship among conditions, activities and people, and identifies leverage points which policy makers can use to initiate improvement and change. The model might also be of assistance in evaluating policy approaches to emergency preparedness in general.

Our model starts with the trigger of either terrorist threats or incidents. The consequences are both direct and indirect effects. The direct effects are most keenly felt by those closest to the terrorist activity, while the indirect effect are more likely to cause a severe domino effect over

time. These effects in turn trigger the actions of responders who can be either internal or external to the firm and are typically managers or government officials. These responders interact with and affect directly the information, experience and perception of society and the firm. This linkage is reinforced by media which have the capability to immediately transmit and magnify deleterious news. The consequence is the creation of friction that can reduce the transactional freedom of international business, be it through new regulations, more inspections, or a greater hesitation to become involved in international ventures. Such friction becomes particularly notable when it comes to linkages with stakeholders or the movement of goods, services and people.

Within the firm, the prevailing information, perception, and experience of managers is constrained or assisted by the availability of resources and a corporate willingness to employ them. The result is various levels of preparation for coping with sudden dislocations. We find a sequence of steps or stages of preparation. Managers typically start out totally unprepared for the effects of terrorism on their firms – such contingencies are simply not on the radar screen. At this stage, there is no history or willingness on the part of the firm to undertake any kind of investment or preparatory action. Over time and with sufficient input, managers change their attitude as they become aware of the issue, but are still not ready to take on any activity. The next level represents management which is concerned about terrorism. There begins a search for further input for action. Typically firms prepare by finding or developing checklists and conducting audits as to the preparedness status. As a further step, managers start to plan responses to terrorism, initially at a tactical, eventually at a strategic level, based on the information gathered earlier. Here interaction begins to take place with various stakeholders of the firm, ranging from employees to suppliers, banks, and legislators. Finally, management devotes important efforts to the implementation of preparedness steps in case the firm encounters dislocations triggered by terrorism.

One can easily fathom that at each level of preparedness managers have different needs and concerns. Meeting these is important if one is to move the participants up to a higher plane of preparation. Our research has shown that any outside assistance which delivers insufficient, overwhelming or inappropriate help to firms will be seen as inappropriate and wasteful of both

external and internal resources. A lack of trust in such help will then result in a downward spiral of its acceptance and perceived usefulness.

Depending on their level of preparation, managers and their firms are able to influence the movement inward and outward (including the shelter) of goods, services and people. They can source from or supply multiple partners; they can bring in customers to evaluate products and buy them; hire bright new employees at home or from abroad. To do so effectively, firms need ongoing communication to maintain contact within the company, with suppliers and with the market.

Management also needs to communicate with additional stakeholders in the business process who may be affected by terrorism as well. For example, banks are exposed to a rising regulatory burden in international commerce which drives up fixed costs. The need to create or expand entire departments to deal with compliance issues will influence a bank's willingness to go after new business that requires additional oversight and reporting. Managers will also need to consider the ramifications of their actions. There is the issue of their moral responsibility to protect employees by relocating staff, ensuring that they have employment and that they get paid when the ATMs are down. Access to data will be crucial to continue contact with and service to customers. The benefits of such contingency preparation became quite evident to me at Georgetown University in the recent devastations by hurricane Katrina, when affected students and faculty members from New Orleans were able to find continuity in our classrooms.

There are also the shareholders who may or may not be supportive of preparation for terrorism events and legislators abroad who may engage in negative reciprocity and impede travel through high entrance fees or fingerprinting. All these components will shape the eventual viability of a corporation and determine its ability to engage in further demand centered activity. It is important to appreciate the long-term significance of corporate readiness for international terrorism. Unless firms achieve a minimum level of readiness to ensure their survival and prosperity, they may be the proverbial dead duck in the hunt: Once hit by shotgun pellets they may still be flying but they are destined to crash and perish.

## LEGISLATIVE STEPS TO ENCOURAGE CORPORATE READINESS

Our model indicates key leverage points for possible public policy action. On a general level one could plan for actions which might modify any sequence of events. For example, we know that there is much value to great deliberation before taking legislative action in order to avoid the unintended consequences which could accompany hastily taken decisions. Legislative preparation will therefore be more advantageous than an overly rapid but unexamined response to a current emergency. One could recommend studies to analyze and subsequently guide the indirect repercussions of terrorism. Similarly, one could focus on the long-term unintended consequences of events and search for ways to reduce them. It might also be helpful to have increased insights into the magnification effects which media reports have on the perceived intensity of terrorist actions.

Today, however, the plan is to focus on managers and firms, and to identify how Congressional action can improve their preparedness for international terrorism. There are three particular areas to highlight for such intervention: Information, resources and movement.

### 1. Information

Knowledge is power indeed, and more information will be instrumental in preparing firms. In recognition of this fact, various government efforts provide information to firms. For example, FEMA, the Federal Emergency Management Agency, has produced emergency guides for business and industry. The Small Business Administration (SBA) has prepared a disaster planning toolkit. The Department of Homeland Security (DHS) is offering, in collaboration with the General Services Administration (GSA) and the Office of Personnel Management (OPM), courses in emergency management training. All these efforts are important and worthwhile. To increase their impact several considerations are in order. First off, information is typically provided primarily to those entities which seek it and which have the energy and resources to take advantage of the knowledge provided. We know from past efforts how easily such an approach neglects large portions of one's intended target group. It is insufficient to rely

only on traditional outreach efforts by government agencies or on the proactive search for information on part of individuals and firms.

Our research shows that firms at the uninterested stage are not likely to actively engage in information search for knowledge which they don't think they will need. Also, firms which do not feel threatened by terrorism are, over time, likely to treat the entire issue with benign neglect rather than with concern. The number of these firms is likely to grow rather than shrink. Even managers who are aware of the need to prepare for terrorism often do not know where to turn for more information, or assume that some other corporate division has the lead. Therefore it is imperative to make information dissemination a concentrated effort, with the objective to reach out far beyond current levels.

Such outreach needs to benefit from close collaboration between government and the private sector and should make use of new approaches to the public. Government offices need to systematically touch multipliers who can carry the message onwards. For example, terrorism preparation insights should be provided where taxes are paid or licenses issued. There needs to be an increased development of short seminars and the integration of preparedness materials into university courses, community college training and high school curricula. Publishers and textbooks authors should be helped to integrate terrorism response aspects into their materials. The collection and dissemination of success stories and near misses can be instrumental here. We make sure that our children know how to check for dangerous traffic – why shouldn't they be more informed about terrorism and have a sense of planning embedded? Their preparedness may eventually lead to a national competitive advantage! Information sharing between the public and the private sector should close knowledge gaps crucial for terrorism preparedness. Often the private sector knows more than the public sector does. For example, public agencies know very little about the 85 percent of physical infrastructure in the US that is owned by the private sector – yet such knowledge may be very important to the design of preparedness efforts.

Technology can help to communicate more effectively and to reach new groups. For example, web-based training media allow users to digest materials at their own pace rather than

according to the schedule of an office or trainer. Also, just as there are many late night shows hawking the latest weight reduction breakthroughs, there should be co-opted media time to communicate terrorism preparation activities. It may not be too far-fetched to think of video games and a televised soap opera dealing with concern about and preparedness for terrorism. After all, the impact of terrorism is global and its threat could not be more real than the activities of any reality show.

There is also the issue of information specificity and efficiency. If firms are inundated with materials which they cannot use, their level of trust in the provider of the information and their review of the materials will decrease drastically. Therefore it is important to ensure that the information provided is targeted to the individuals and firms that receive it. To do so, a stage specific information effort is required. For example, a manager who is uninterested in terrorism preparedness will need to receive very different information than one who is already concerned but searching for a checklist. Information needs change even more for a manager who is preparing for a strategic planning task and needs interactive help to develop firm specific scenarios. The more precisely the information provided matches the current needs of its recipients the more useful it will be perceived. This means that information components need to be specific, actionable and differentiated. They can range from an exhortative pamphlet with key bullet points to the development of a terrorism risk index for corporate evaluation of an international expansion strategy.

The availability of information must be seamless between agencies. We know that different agencies have different constituencies and therefore a variation in focus. Nonetheless, internal organizational reasons should not lead to limitations in information flow. From a customer perspective, the flow of information should be easy and direct. This means that even though the SBA produces some materials on terrorism preparedness and the GSA and DHS produces others, the curious customer will never need to know that fact as long as all three parties do their utmost to keep the customer informed. Firms should only see and remember a one-stop-shop in learning how to prepare, respond and recover from a disaster.

## 2. Resources

Preparing and planning requires the dedication of resources. We have found that many firms are either not willing or unable to commit such resources, and their shareholders are not supportive of spending on terrorism related tasks. If more firms are to engage in preparedness activities, they need a resource incentive to do so. Support can either ease compliance with governmental rules, help the firm plan and prepare for the repercussions of terrorism, or enhance the firms' global competitive position. For example, the cost of database management in order to determine whether one's customers and contacts are on the prohibited persons list can be several thousand dollars a year. The expense of conducting a basic vulnerability and security assessment can easily run into the tens of thousands, with big firms spending upwards of a quarter million dollars on an in-depth plan. Restructuring one's strategy by, for example, ensuring multiple global suppliers or designing flexibility into ones production schedule, can have very high changeover costs.

These activities can be encouraged by providing either special funding or other fiscal measures. In order to encourage firms to prepare and plan, particularly the smaller ones need help. Of course one would not expect the public sector to carry all such expenses – but the enlightened self-interest of firms should be encouraged by such support. Though public support will not deliver to firms the Rolls Royce of plans, it would bring them closer to the KIA. Tax credits in the range of \$ 3,500 – \$ 5,000 could go a long way to help small firms with a template based plan, which includes a risk assessment, a needs specification and an evaluation of direct and indirect problems. Public support of research on cumulative long-term change factors could help provide a vision for many managers. Having such a plan would encourage the firm to get involved in the implementation of business alternatives. Therefore a subsidization of planning can move the firm and its managers along the preparatory stages in our model. Such public support is also likely to hearten other stakeholders. For example, shareholders may become more willing to prod their firms to plan for terrorism triggered contingencies. Similarly, a reduction of compliance expenses incurred due to onerous requirements imposed upon the financial sector may encourage more banks to offer international business support services.

### 3. Movements

International marketers have to move **goods and services**. Although a great portion of international transactions can today be conducted via e-mail or on the web, products still need to get to where the customers are. Companies require that movement and storage of products takes place with the fewest impediments.

Security measures have introduced greater friction into international marketing. We know that increased inspections of containers used in international shipping, new security programs to protect ports, and various other new protective policies are decreasing the efficiency and effectiveness of international shipping and logistics. In consequence, the costs of value chain and supply chain activities have increased substantially. Our survey respondents tell us that due to greater transportation delays their international shipments now take an average of three days longer to arrive. Time is crucial when it comes to international competitiveness, merchandise shelf life, product quality and payment receipt. The new delays are evaluated to be the equivalent of a 2.4 percent tariff rate on goods, which is as large as the current overall level of protective tariffs imposed by Japan.

The process of movement has also become more expensive due to the greater need to supervise movement activities in order to avoid pernicious inimical intervention. Such scrutiny applies to both imports and exports. International business threats do not consist solely of inward smuggling of, say, a dirty nuclear bomb. U.S. exporters also need to be able to track their merchandise as it is leaving the country in order to prevent terrorists from contaminating their shipments with the goal of destroying foreign markets together with the reputations of U.S. firms. If preparedness leads to additional storage requirements, say due to higher inventory safety stocks, firms will encounter an increase in inventory carrying costs and sometimes even inventory taxes.

Policy makers can address these cost increases. In order to plan for problems, firms must first have a good understanding of what they can reasonably expect their environment and their government(s) to provide. Such understanding requires ongoing, repeated and broad based

advance planning exercises and collaboration between the public and the private sector. This way firms do not just wait passively for outside rescue but can be ready to take remedial steps themselves. A better understanding of available transport alternatives may make all the difference in the world. If firms need to make investments into maintaining such alternatives, public support for them should be considered. At the same time, it is important to gain early recognition of problem areas where existing rules could present obstacles to creative responses. Advance provisions need to be made for exemptions or waivers from these rules in times of response to terrorism. We need an improved understanding of the cost of delays so that new security systems can intelligently consider trade-offs. Encouragement of radio frequency identification (RFID) technology could help provide tracking devices for both imports and exports. Also, if new contingency planning leads to higher storage requirements, policy makers might help ensure that such preparatory measures do not result in outside cost increases for the firm. The inventory tax, still in use in many location, should be abandoned in order to encourage firms to stock up.

Movement also concerns **people**. On an individual level firms can safeguard such movement by working on the physical protection of managers abroad. Training, equipment and guards may help reduce the likelihood of executive kidnappings, while insurance may reduce the corporate financial exposure.

But the new friction resulting from policy actions has also led to major inhibitions of people flows. For example, new rules have dissuaded a large number of international travelers from coming to the US. Tighter restrictions on the international flow of students and faculty have caused major problems in the education sector. Some universities have lost important pillars of instruction, research assistance and funding by not being able to attract higher international enrollments. The emergence of newly competing teaching and training facilities abroad which do not have to suffer from onerous visa restrictions deprives U.S. institutions of income and growth. New rules now require private schools to send their international teaching staff home after six or even three years, leading to key institutional difficulties in building a faculty of excellence and making a longer term career investment by individuals virtually impossible. Visa delays or refusals also lead routinely to the inability of business visitors to come and

attend trade shows, visit factories, or make purchases. For example the International Manufacturing Technology Show in Chicago, which you, Mr. Chairman attended last year, lost almost one third of its invited Chinese customers due to visa difficulties. In consequence, there is a loss of competitiveness, a loss of jobs, a reduced flow of orders, and less tax income.

The visa process can be improved. Though we are granting a favor to people by permitting their entry into the US, they also support us by wanting to come here. More resources need to be made available for the processing of visas. Delay benchmarks need to be established and improved upon. Options such as the development of a trusted travelers program need to be explored in greater detail. Trusted shippers and, perhaps, trusted payers should benefit from reduced bureaucratic interference. Paperwork should contain as few complications as possible so that small businesses can afford to be players. Naturally, when a specially bestowed trust is violated, some high profile punishment should be in the offing.

Improvements are also necessary to ensure the ongoing flow of **communication**. We have seen how first responders do not have sufficient communications ability, how different systems are non-compatible, and how there is a crowding out syndrome in emergency conditions. We also know that there is a substantial untapped capability of technology, such as satellite communication, which can be instrumental not just for the authorities but also for businesses. Unless a firm is able to stay in touch with its stakeholders in order to communicate, for example, to its employees where and how to proceed for operational continuity, the likelihood of corporate survival is in great jeopardy.

Congressional action can address the communication infrastructure. Special tax treatment can support research and development in the communications sector and investment by firms into communications security. The national pre-positioning of individual communication devices ready for distribution could be considered.

Some brief comments to the issue of cost. Some of the remedies proposed here require more planning rather than funding, such as agency coordination, personnel cross training and materials exchanges. In many instances more public private sector interaction may not require

new money. I have seen at STAT-USA in the Commerce Department how good collaboration by itself can lead to excellent progress. Yet, there will also be cost associated with achieving increased preparedness. Just like with inoculations, the benefit of early prevention is high when compared to its cost. The speedier and more capable response which prepared firms can deliver when faced with disaster will be of benefit to the public purse. If public order and processes fall apart, the government will have to set things right at great expense. Firms which stay in business, retain their employees and serve their customers can make a great difference to societal continuity. Therefore, assistance provided today for the planning of such response would appear to be a justified investment. As the old saying goes – you can either pay now or pay later.

Mr. Chairman, members of the Committee, the key purpose of my testimony was to provide structure to the many complex interactions which are needed to ensure corporate readiness for international terrorism. By understanding the links and processes involved, it becomes easier to see where policy levers can be used to systematically increase preparedness levels. There are many alternatives for future action by Congress and, naturally, tradeoffs and resource assessments will play an important role in determining what steps to take. However we do know that action is needed if we are to ensure the continued competitiveness and viability of our corporations. Standing still will only leave our firms in a position of great vulnerability.

Thank you for your attention and I will be pleased to answer any questions you may have.