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Industry-wide response to terror: a political economy analysis of the owner/operator sector of the U.S. motorcoach industry post 9-11

Cover Page Footnote

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INDUSTRY-WIDE RESPONSE TO TERROR: A POLITICAL ECONOMY ANALYSIS OF THE OWNER/OPERATOR SECTOR OF THE U.S. MOTORCOACH INDUSTRY POST 9-11

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ABSTRACT

The authors develop a political economy framework to study the post- September 11th environmental changes and firm responses in the owner/operator sector of the U.S. motorcoach industry. Based on a comprehensive analysis of both evolutionary and revolutionary changes in the competitive and regulatory environments faced by the firms in this industry, their policy and strategic responses to the terrorist acts of September 11, 2001, on U.S. soil are examined. The industry's response is captured (i.e., collective action response) by surveying 163 firms operating and competing in the owner/operator sector of the U.S. motorcoach industry. Several descriptive statistics are synthesized and analyzed for a structured presentation of the survey findings. In conclusion, contributions and limitations of this study, as well as directions for future research, are outlined.

INTRODUCTION

U.S. transportation sectors adapted promptly to the challenges engendered by the terror attacks on U.S. soil September 11, 2001. Though initially grounded at U.S. borders, motor carriers responded effectively to requests for expedited shipments. Rail faced some slowdowns, but recovered quickly enough for Norfolk Southern to contribute 1,000 rail cars to transport debris free of charge in the World Trade Center cleanup (Morton, Hyland, Aichlmayr, and Freeze 2001). The U.S. air cargo carriers suffered heavy losses when the Federal Aviation Association banned air travel for two days following the attacks on Washington D.C., and New York City (Freeze 2001), but was back to full speed by week's end. Though these short term coordinated efforts returned the nation's transportation and logistics networks to normal and this operational recovery provided some sense of security, much less is known about specific policy and strategic responses to terrorism-induced environmental change faced by specific sectors of the transportation network.

The purpose of this research is to identify the emerging patterns of policy changes to episodic events of terror and systemic strategic responses in emergency preparedness of the owner/operator sector of the motorcoach industry in light of the attacks and subsequent war. The vehicle to explain such reaction is the political economy framework (see Stern and Reve 1980, and Achrol, Reve, and Stern 1983).

This transportation sector's response patterns are analyzed by looking at the actions and intentions of the firms operating and competing in the U.S. motorcoach industry in the months following the terror attacks on New York City and Washington D.C. The focus on the owner/operator sector

of the motorcoach industry as the backdrop is due to this sector's functioning at the boundary of transportation and travel/tourism industries, as both of these industries have been hit hard by terror (Pizam and Fleicher 2002). Before discussing the results of the research, a review of the state of the U.S. motorcoach industry is presented.

THE U.S. MOTORCOACH INDUSTRY: FOCUS ON ITS OWNER/OPERATOR SECTOR

The charter and tour portion of the motorcoach business tend to be family-owned, requiring long hours with much of the charter work occurring on weekends. It involves enormous capital expenditures offset by historical 15-20% profit margins. During the late 1990's many changes occurred which had tremendously negative effects on the industry. Consolidation was a leading threat to many independents. Revenue was flat, new equipment costs were escalating and overcapacity in the market was becoming commonplace. Marketing was a virtually unknown concept with owners adopting an order-taking approach rather than marketing their business. Low entry barriers encouraged small, inexperienced players to join. Lending companies encouraged new entrants and rapid growth with comparatively easy financing terms resulting in increased sales of new equipment. Motorcoach companies were viewed by many customers as undifferentiated, with price as the major distinguishing factor. Therefore, when the new entrants finally realized the total operating costs, these companies could not afford the payments and repossessions became commonplace.

The motorcoach industry is comprised of three major business segments: charter, linehaul, and tour. The largest segment,

charter work, which represents hauling persons from point to point, comprises 72% of the business, yet represents the lowest margin. Line haul (e.g., designated routes from city to city or to airport terminals) represents 18% of all motorcoach business and tour groups comprise 10% of the motorcoach business. During the late 1990's tour groups represented 14% of the business in the industry and line hauls were 15% of the business. The demand for motorcoach tours has fallen while the demand for line hauls has risen, yet few owner/operators are involved in line haul business. Almost 96% of the motorcoach companies are involved in charter operations (i.e., the hiring of a motorcoach for a specific group) and only 12% of the companies are involved in line hauls. Those companies operating routes utilize approximately 8,000 to 10,000 motorcoaches and account for 50 percent of all motorcoach mileage (UMA, 2001).

The motorcoach provision market is made up of two core groups: independents and consolidators. While the independents represent small and mid-size companies and a handful of large companies, the recent trend toward consolidation has emphasized the negative state that the industry faces. Consolidation by the three largest players (CoachUSA, Laidlaw and VEC Tours) was at first envisioned to develop economies of scale due to vastness in size and characterized by centralized management and operating efficiencies. However, the resulting overall financial performance has not been superior to the independent operators and regionally managed consolidators have not best served the interests of customers in developing on-going relationships.

In a 2000 Survey conducted by R. L. Banks & Associates, the motorcoach industry was estimated to be comprised of roughly 4,000 firms and about 10 percent of those are based

in Canada (Schulz 2001). These companies operate approximately 44,000 buses. The companies in the industry range from very small (those companies with less than five coaches) to the largest consolidator that has almost 3700 coaches. About ninety percent of the industry is comprised of small businesses operating fewer than 25 coaches. These companies run about 19,000 buses or slightly more than two-fifths (40 percent) of the total fleet and account for almost two-fifths of the total industry mileage. It is estimated that almost 2000 companies operate with fewer than 5 coaches and 65% of the companies are operating with fewer than 10 buses (ABA, 2000). Yet, the industry provides jobs for almost 200,000 workers and generates approximately \$7.4 billion in business.

The mid-sized segment is comprised of approximately 320 firms that operate between 25 and 99 buses each. These companies run about 14,000 buses or almost one-third (31 percent) of the fleet and account for about one-third of the industry mileage (ABA, 2000).

The large segment in the industry is comprised of 50 firms that operate 100 or more buses (UMA, 2001). The top 50 firms had total buses in 2001 of 19,047 but the total had fallen to 14,007 by the beginning of 2002 (Starcic, 2002). The largest companies operate about 11,000 buses or about one-fourth (25%) of the fleet and drive 30 percent of the total industry mileage (ABA, 2000).

Each motorcoach carries over 20,000 passengers per year on average, although there are wide variations between firms, with larger operations and scheduled service companies reporting higher average ridership. Larger carriers, those operating 100 or more buses, carry an average of 26,000 passengers per bus annually. The mid-size companies range between 9,000 to

18,000 passengers per bus. Smaller companies with fewer than 24 buses carry about 9,000 passengers per bus annually (ABA, 2000).

A fully loaded motorcoach (i.e., 46 passengers on average) on a charter or tour making an overnight stay contributes an average of \$5,000 to \$7,500 per day to the local economy in expenditures including meals, lodging, shopping, admission fees, souvenirs and local taxes (ABA, 2000). The 1996 direct economic impact of the group tour business in North America was more than \$11.6 billion. In Washington, D. C. alone, 23.4 percent of 21 million annual visitors arrive by motorcoach. If only half of those visitors came as part of an overnight tour, \$424 million flows into those local businesses (George Washington University, 2001).

Three consolidators are key players in the industry. Coach USA has 3,685 motorcoaches and is comprised of 188 companies representing 10% of the industry. Laidlaw Greyhound owns 2775 motorcoaches and is predominantly a line haul company with less than 1% of their business generated by tours and charters. VEC Tours has 870 motorcoaches and represents 1% of the business with 16 companies (Starcic, 2002). In U.S. Bankruptcy Courts, VEC filed for Chapter Eleven bankruptcy protection from creditors as business plummeted as a result of the terrorist acts of September 11, 2001. Though motorcoach carriage represents a mere 2% of overall passenger transport in the U.S., motorcoach carriers transport more passengers in two weeks than Amtrak transports in an entire year. Thus, how this industry responds to terror may offer insight into other transport sectors and to business in general.

THE STUDY

For the development of the analytical framework to guide the study, it was important to distinguish between two emerging constructs in the extant literature, emergency preparedness and homeland security. Emergency preparedness is related to the proactive groundwork laid by firms in their contingency preparation for potential acts of terrorism. On the one hand, terrorism by its very nature is episodic. On the other hand, homeland security is systemic. That is, homeland security is the operating foundation/force of a firm's emergency preparedness policy. In other words, it is not a matter of choice, but rather it has to be considered an imperative in light of the episodes of terror or threats of terror. As a result, it has become an integral part of a firm's decision making context for risk management.

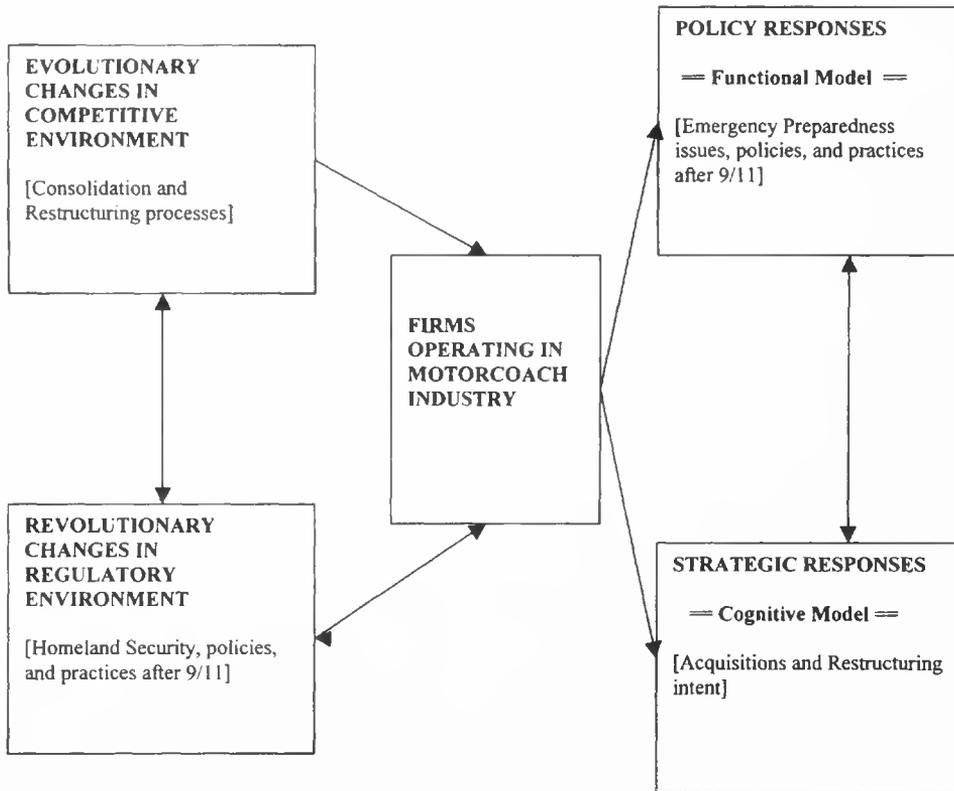
Following the foundational work by Stern and Reve (1980) and Achrol, Reve, and Stern (1983), the model for empirical examination of industry-wide response to terror in the motorcoach industry is a political economy framework. The political economy framework adapted for the post-9/11 motorcoach industry environment is capsulated in Figure 1. As indicated, there are two primary driving forces: (1) evolutionary changes in the competitive environment (e.g., consolidation and restructuring processes), and (2) revolutionary changes in the regulatory environment (e.g., homeland security, policies, and practices after September 11th). Both drivers have mutually interacting economy components and a polity. These forces then influence the operating environments of the firms competing in the motorcoach industry, eliciting their policy

responses (e.g., emergency preparedness) and strategic responses (e.g., acquisitions and restructuring intentions).

Grounded in the model of a political economy-adapted framework of post-9/11 environmental change in the motorcoach industry (See Figure 1), the study seeks to make a significant contribution to emerging arena of research examining how homeland security changes are mapped onto emergency preparedness as a firm's proactive approach to the threat of episodic terror events, often mandated through regulatory intervention.

An additional unique contribution of this research is the unit of analysis. The members for the sample frame are owner/operators. Owner/operators have received very little attention in transportation and tourism travel research, as the most common sampling is done at the customer or passenger level. In our study, we queried owner/operators in order to assess firm-level responses and intentions in a post-9/11 marketplace.

FIGURE 1
POLITICAL ECONOMY FRAMEWORK OF POST-9/11 ENVIRONMENTAL CHANGE IN THE MOTORCOACH INDUSTRY



Note, in Figure 1, the role of government (i.e., federal, state, local) has been omitted from the equation (i.e., model) of environmental change in the motorcoach industry. In contrast to the bailing out of the airline industry by federal mandates, the motorcoach industry was forced to absorb the cost of change. In general, it is crucial to define the concepts, related issues, policies, and practices of homeland security and emergency preparedness at governmental, firm, and emerging industry levels in order to explain how the interaction between changes in regulatory and competitive environments influence the outcomes and interactions of motorcoach firms' policy and strategic responses.

RESEARCH METHODOLOGY

Owner/operators of motorcoach firms in the U.S. were chosen as key informants in order to capture the most robust data available. Respondents filled out a detailed questionnaire at one of two national conventions in January and February, 2002. Data were recorded and analyzed in the spring and summer of 2002. This sample represents owner/operators that try to proactively shape collective strategies within the two associations that face a radically changing political economy environment and act on behalf of the entire sectorial membership.

Population and Sampling Issues

The population of interest in this research was all motorcoach operators in the U.S. as of September 11, 2001. The sample frame of interest consisted of all those owner/operators in attendance at one of two national conventions: Indianapolis in January 2002, and Orlando in February 2002.

Following Campbell (1955), key informants were asked to fill out questionnaires. Key informants are identified as owner/operators of motorcoaches in U.S. markets. Key informant bias may exist in the context of gathering information in the form of questionnaires (Phillips, 1982), and may create measurement bias. However, Campbell (1955) and Anderson (1985) demonstrate that key informants provide highly accurate data when they are knowledgeable and communicate with the social scientist. Campbell (1955) suggests that questions be direct, specific, and in the language of the informant. An expert in the industry was engaged in an effort to ensure the data collection method used here met the criteria set forth by Campbell. Questions were designed to achieve clear, specific responses, confined to issues the respondents likely knew and were expressed in their terms. Respondents were assured of anonymity (Jobber and O'Reilly, 1998) in order to receive unbiased responses.

Sample Frame

Motorcoach operators were surveyed at two national conventions. The first convention was the United Motorcoach Association (UMA) Convention held in Indianapolis in January 2002. There were approximately 250 operators in attendance and survey responses were collected from 100 of the operators attending the conference. Additional surveys were collected at the American Bus Association (ABA) Convention. This meeting was held in February 2002 in Orlando. This meeting brought together a specific group of motorcoach owner/operators that sell tours to meet with convention bureaus, restaurants, hotels and destination representatives. At this meeting, an additional 63 surveys were

collected. Only motorcoach owner/operators were surveyed. Some owner/operators attended both meetings. If they had previously completed the survey at the UMA, they did not complete the survey again at the ABA. In all, 163 owner/operators completed the questionnaire. Respondents were asked to fill out the survey on site and were encouraged to fill out the survey in its entirety.

Data Analysis

The data were recorded and analyzed using SPSS 10.1 software. One hundred sixty three useable responses were included in the primary database.

From Table 1 note that all major geographical areas in the U.S. are represented. Thirty-nine percent of the sample was from the Midwest, 38% from the Eastern Seaboard, 14% from the South and 9% from the West Coast. Approximately 90% of the sample was involved in family owned businesses and 38% operated from more than one location. In the motorcoach business, it is common for many owner/operators to have related businesses that supplement their motorcoach business. In the sample, 35% of the owner/operators responding indicated that they were also involved in school bus operations.

Nearly one-third of the respondents operated in 2000 with annual sales between one and three million dollars, while 11% showed sales of greater than \$5 million. Twenty-seven percent of the companies have annual gross sales of less than \$500,000, with 15% having gross sales of equal to or less than \$250,000. Only 5% of the companies fall within the \$500,001-\$750,000 range and

17% of the respondents fall within the \$750,001-\$1,000,000 range. The largest group in the sample, 31%, falls within the \$1,000,000-\$3,000,000 range. Eight percent of the respondents indicated that their gross sales were in the \$3,000,000-\$5,000,000 range and 11% of the respondents indicated that they had gross sales greater than \$5,000,000.

POST 9/11 RESPONSES TO TERROR IN THE U. S. MOTORCOACH INDUSTRY

Operational Responses

September 11 has had a profound effect on the travel industry. The motorcoach industry is an important niche in the travel arena. Motorcoaches in the U.S. and Canada carried an estimated 860 million passengers in 1999.

Sixty-one percent of the owner/operators responding to the survey indicated that their customers are now requesting shorter trips (Table 2). Customers have indicated their unwillingness to travel to larger cities (Table 3), particularly along the Eastern Seaboard, and owner/operators have responded with creative and interesting destinations closer to their homes. If the days traveled and distances vary considerably, the operator will generate less revenue on average. Increased business will be required to offset the loss. This is further compounded when it is noted that 68% of owner operators indicated that some of their customers had been ordered not to travel (Table 4). Many school districts across the country have been ordered not to travel or, if they do travel on school sponsored activities, they must avoid larger cities.

TABLE 1
ANNUAL GROSS SALES

Annual Sales	Frequency	Percent of Total
<\$250,000	22	13.5
\$250,000 - \$500,000	17	11.8
\$500,001 - \$750,000	7	4.9
\$750,001 - \$1,000,000	25	17.4
\$1,000,001 - \$3,000,000	45	31.3
\$3,000,001 - \$5,000,000	12	8.3
> \$5,000,000	16	11.1
Missing	9	
TOTALS	163	100.0%

TABLE 2
CUSTOMERS REQUESTING SHORTER TRIPS

Requesting shorter trips?	Frequency	Percent of Total
YES	97	60.6
NO	63	39.4
TOTALS	160	100.0%

TABLE 3
TRIP DEMAND PROXIMITY TO HOME

Requesting trips closer to home?	Frequency	Percent of Total
YES	98	61.3
NO	62	38.7
TOTALS	160	100.0%

TABLE 4
CUSTOMERS ORDERED NOT TO TRAVEL

Ordered not to travel?	Frequency	Percent of Total
YES	106	67.5
NO	50	31.8
TOTALS	156	99.3%

Nearly 60% of owner/operators indicate their customers are requesting shorter trips. Similarly, 61% are demanding motorcoach trips closer to their place of residence. One hundred and six respondents report that previous customers have been ordered not to travel.

A mainstay of the charter industry, casino charters, has seen some movement as one quarter of owner/operators report that casino demand has decreased since 9/11, and another 15% has seen demand rise (Table 5).

These results indicate that, under the diffuse effects of political-institutional factors, the owner/operators perceive that radical environmental change will likely require a higher level of operational effectiveness within a more localized scope of operations.

Emergency Preparedness Responses

The data indicate that nearly 47% of owner/operators have developed a security plan for their company since 9/11. Thirty six firms have sent statements to customers regarding those measures (See Table 6). Importantly, the line-haul segment would most likely be interested with particular security measures. Line-haul is simply moving passengers from point to point, with low likelihood the driver gets to know the

passenger, as opposed to charter or tour where the driver spends a significant amount of time with the same set of passengers on their excursions.

An analysis of the emergency preparedness variables indicates a mixed response to terror by owner/operators in the sample. For instance, one would expect greater attention to security measures for equipment, drivers, and passengers. Indeed, results indicate that some of these measures are being taken. Forty six percent of respondents have issued identification tags for drivers. Additionally, nearly 81% of respondents indicate that they are vigilantly keeping equipment and baggage service areas locked while not in use. Seventy percent of respondents noted they had installed phones in the coaches, and an additional 49% installed two-way radios. Communication tools allow tours to operate smoothly and allows for coordination.

However, some results appear to be counter-intuitive. Only 17 % of respondents indicate they issue security labels for all baggage. Less than 9% have installed plexi-glass designed to protect the driver of the coach. And only 8% have plans to install cameras aboard their coaches.

Interestingly, only 20 firms responded that they are checking all baggage before loading and merely 43 have increased security equipment in their garage.

**TABLE 5
CASINO BUSINESS**

Casino demand since 9/11	Frequency	Percent of Total
Increased	25	15.6
Decreased	40	25
No Change	95	59.4
TOTALS	160	100%

**TABLE 6
EMERGENCY PREPAREDNESS**

Emergency Preparedness Items	Yes	No
Developed a Security Plan	73	84
Notified customers of security plans	36	121
Issued ID tags for drivers	73	84
Issue security labels for all baggage	27	131
Baggage and service areas kept locked	128	31
Installed plexi-glass to shield driver compartment	14	143
Installed phones in motorcoach	108	46
Installed cameras in motorcoach	12	144
Installed 2-way radios in motorcoach	76	80
Increased driver training on handling aggressive passengers	66	91
Increased driver training on awareness of surroundings and safety	111	46
Increased security equipment for garage	43	113
Checking baggage before loading	20	137
Security issues are a major concern	49	108

The nature of line-haul and charter or tour business may explain the disparity in the data. Security issues and measures appear to be far different to line-haul operators because of the unknown passenger construct. That is, it seems logical an unknown passenger, or unfamiliar one, would pose more of a threat from the driver's perspective, than a known one, or one whom the driver is able to establish a level of

rapport with during an extended excursion. The level of risk varies across groups of passengers. For example, groups of students and teachers or groups of senior citizen passengers pose far less of a concern than autonomous, non-group passengers.

Evidently, owner/operators have different mental models of policy demands in the post 9/11 political economy. In other words, due

to the radical and systemic scope of environmental change, there is a lot of ambiguity in this industry sector of how the regulatory and competitive components of the anticipated institutional change will eventually interact. These results indicate the need for trade associations to build collective representation of the anticipated institutional change in order to build a collective capacity to influence public policies.

Recently, the Over-the-Road Bus Security and Safety Act of 2001 (H.R. 3429) and a companion bill in the Senate, S. 1739, generated much discussion in the bus industry. This bill was the first ever designed to provide aid to the private bus industry. It seeks to establish a \$200 million competitive grant program administered by the Secretary of Transportation to upgrade security for buses, drivers, and facilities. The two major associations representing the motorcoach industry were at odds over this bill. The ABA was instrumental in the creation of the bill. However, the UMA was opposed to the financing source (Kane, 2002). The bill requires all commercial bus operators to pay 25 cents per passenger to fund the program. Secretary of Transportation Norman Y. Mineta could begin making grants after a year of collection.

In April 2002, the U.S. Senate Committee on Commerce, Science, and Transportation approved legislation that would provide \$400 million in security grants to private motorcoach operators. Under this bill, operators could apply for grants to help protect their drivers, implement passenger-screening programs, construct or modify existing terminals, train employees in threat

assessment, hire security officers, and install video surveillance and communications equipment (ABA, 2002). The House bill seeks \$600 million.

Strategic Responses

Several items captured strategic imperatives or initiatives in the survey. Strategic responses refer to long-term planning and intent vis-à-vis acquisitions, restructuring, and future markets in which to compete. Only 10 percent of our respondents were considering selling their business as a result of the events on September 11th (Table 7). Twenty-two firms, in fact, are considering expansion via buying out competitors. Only two firms were actively seeking a consolidator (e.g., one of the major three consolidators) to purchase their operations and assets, while nine firms indicate willingness to merge with another firm.

Greater than one-third, however, indicate their intention to restructure their operations as a result of the terrorist acts. Additionally, 54% have seen their tour business change, 60% have seen charter business change and nearly one-fourth have seen their bus operations change. This change in traditional operations necessitates a strategic response.

These results indicate that the owner/operator responses vary on the tactics-strategy continuum. Evidently, they perceive differentially how the relationship between institutional processes (i.e., cognitive beliefs about the power dynamics in the sector) and direct state actions (i.e., regulatory or coercive mechanisms) will eventually impact the competitive structure of their sector.

TABLE 7
STRATEGIC RESPONSES TO TERRORISM

Strategic Issue	Affirmative	Negative
Considering selling business	16	144
Considering purchasing competitor	22	138
Seeking consolidator to buy out	2	156
Considering restructuring	54	100
Changing school bus operations	36	114
Changing tour operations	86	73
Changing charter operations	96	63
Considering strategic merger	9	150

Perceived Overall Impact on the Motorcoach Industry

General perceptions of the impact of episodic events of terror and resultant strategies and policies on homeland security were also captured in the data. One hundred and eleven respondents indicated their belief that the terror acts have impacted the overall industry negatively (Table 8).

Many respondents (60%) indicate that many of their competitors have gone out of business (Table 9). Furthermore, competitive proximity seems to be expanding in response to the uncertainty and shakeup in the industry since September 11th, as 102 respondents specify their geographic market expanding as a result of the changes since September 11th. Ninety three respondents indicate their belief that the industry will improve by these changes.

In the three months following the terrorist attacks, most motorcoach carriers lost business (Table 10). While 13 respondents reported business revenue actually jumped in the three months following the attacks, most reported losses. Nearly 65% reported

losses for fourth quarter 2001 between \$5000 and \$100,000.

The central argument here is that during the short time period of the post 9/11 transformation of the political economy faced by this sector, the influences of institutional change vary in their impacts on owner/operators' cognitive model reflecting their future competitive posture.

FURTHER INTERPRETATION AND DISCUSSION

Interpreting these descriptive statistics leads to insight into an industry's response to terror, both in the short-term shore-up type activities and in long-term, strategic quests.

The research results indicate that, while many customers have been ordered not to travel, those that are traveling are demanding shorter trips and trips that are closer to home. It would appear that these clients are not intimidated by the terrorism, yet are cautious, staying closer to home in case the need arises to return quickly.

**TABLE 8
INDUSTRY HAS BEEN NEGATIVELY AFFECTED**

Overall [-] Affect?	YES	NO
	111	40

**TABLE 9
COMPETITIVE RESPONSE**

Competitive Items	Affirmative	Negative
Competitors have gone out of business	94	64
Competitors expanding proximity	102	54
Business will improve from changes in industry	93	60

**TABLE 10
LOST BUSINESS IN 4TH QUARTER, 2001**

\$ Revenue lost	Frequency	Percent	Cumulative %
<\$5000	17	11.5	11.5
\$5001 - \$20000	30	20.3	31.8
\$20001 - \$50000	35	23.6	55.4
\$50001 - \$100000	31	20.9	76.4
\$100001 - \$200000	6	4.1	80.4
>\$200000	16	10.8	91.2
Business increased	13	8.8	100.0

Similarly, demand for casino business seems to indicate that passengers are not canceling scheduled trips, rather reallocating their desired destinations.

Emergency preparedness has recently received attention in the public administration literature. Nearly half of the owner operators in the survey indicate that new

security plans had been developed in the wake of the September 11th terror attacks and their aftermath. This indicates a proactive approach to emergency preparation, rather than reactive strategies. Interestingly, a small fraction (22.9%) of the respondents actually communicate that strategy and emergency preparedness to customers. This represents an incredible

marketing opportunity, as relaying these efforts may decrease customer's dissonance and increase confidence in ridership.

Another opportunity for owner/operators to relieve fear of travel would be to implement tagging procedures, an activity only 17 % of the sample has adopted. Further, the half of the sample that has not yet issued identification tags for their drivers may be wise to do so.

It appears other actions toward emergency preparedness (e.g., installation of plexiglass, installation of phones, two-way radios, cameras and other communications equipment) is a step in the right direction toward safety and emergency preparation. Driver training (for greater awareness of passengers and surroundings) is another step in emergency preparation hailed by this industry. Though the handling of aggressive passengers is nondescript, it appears that greater training and preparation would be in order.

Strategic responses were also captured in the research. Only 16 firms reported their intent to sell given the aftermath of terrorism on the industry. More likely to be seen is not a restructuring of the industry on a macro level, but rather strategic restructuring of individual firms within the industry. Of the three major segments (e.g., charter, tour, and school), the greatest impact was seen in charter operations. This indicates that strategic initiatives in the industry in the short-term to mid-term will likely involve segmentation initiatives.

By a 3-to-2 margin, respondents reported that direct competitors have gone out of business as a result of 9/11. It seems far more likely that a motor carrier will see competitive pressure from motorcoach carriers from further and further away from its base

operation than to see those carriers go out of business. Nevertheless, carriers must concentrate on shoring up their own business by offering closer-to-home and more frequent excursions.

While a vast majority of the sample respondents reported lost revenue (only 13 of 163 reported increased revenues), the lasting effect is uncertain. Is this lost revenue canceled business or merely postponed business? It could prove insightful to determine the answer. Clearly, the business that was education related was canceled entirely, as service-oriented business is time-dependent. In other words, if that business was scheduled for a particular date, then canceled, it is a lost opportunity and is non-recoverable (academic years and athletic seasons conclude). Knowing the answer may also determine a true recovery from pent-up demand recoverable only in the very short-term.

In summary, the requirements of homeland security imply changes not only in the political economy/institutional environment but also in numerous aspects affecting the functioning of the owner/operator segment of the motorcoach industry. As these changes are profound and systemic in nature, they demand new policy and operational and strategic responses by owner/operators and their trade associations. Specifically, although the changes in the regulatory environment are revolutionary and those in the competitive environment are evolutionary, the effects of the former lag behind those of the latter (see Figure 1). Therefore, owner/operators in the motorcoach industry need to make individualized, yet concerted dynamic and credible commitments to policies and strategies in the new "punctuated" institutional environment that they face. The dynamics and the extent of these commitments will vary across owner/

operator firms in terms of the trade-offs that they individually make within their functional and cognitive models of the sector and its environmental change.

LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

While insights were obtained into an industry's response to terrorism, the research is by no means definitive. While data analysis was initially limited to dichotomous right-hand-side variables, this was a conscious set of tradeoffs due to the delicate nature of the topic, lack of public data available from the unit of interest, and the salient role the industry's association (i.e., the UMA) played in articulating a collective response to the new environment. Further, previous research (Arimond and ElFessi 2001) determined that very few market surveys are used in tourism-related studies as Likert-type scales are perceived as too tedious and demanding for the respondent and are less likely to capture the respondents' intent than a smaller dichotomous quantitative scale (Mazenac 1984, Cheung 1994).

Importantly, the UMA and ABA provided access to the population sample frame of interest. Collectively, these associations wanted to capture responses and intentions, and were not interested in their members' perceptions (e.g., psychometric captured by a likert scaled instrument), but rather in firm behavior. In sum, the associations wanted to capture collective action.

While the sample captured 163 robust responses, as in all survey research (Anderson, 1985) it is possible that those responding are quite different from non-respondents. The data are further limited in that it was collected from different members

at two locations, but a second wave of questionnaires was not viable. Thus, comparing latter respondents to early respondents was infeasible.

Another limitation is that only those owner operators attending one of two major conferences were included in the sample frame. Perhaps those owner/operators not attending could offer very different insights into strategic and competitive responses to terrorism.

Several future research streams seem viable and ought to be pursued. First, this research sought answers from a single sector of transportation and cannot be confidently generalized across all sectors of transportation. However, seeing if other sectors responded similarly may offer insight into how service providers respond strategically to such situations.

Future research should seek to discover whether there exist any significant clusters in the data. Cluster analysis might identify segments with varying tactics and strategies in response to terrorism. If these clusters can be identified, then a normative model might then be produced.

Moreover, combining clustering analysis with other methodological techniques as suggested by Kechem and Shook (1995) might reveal valuable insight. One significant step is to analyze the clusters in an attempt to determine specific similarities and differences among companies in their post-9/11 responses.

Further theories should be examined to determine whether an industry left to fend for itself without governmental intervention can absorb the cost and respond with collective action regarding homeland security.

CONCLUSION

This research makes a significant contribution to the emerging arena of homeland security and the impact of change of this type on the firms operating and competing in the U.S. motorcoach industry. Unlike emergency preparedness, which is a firm's proactive approach to the threat of episodic terror events and often mandated through regulatory intervention, homeland security is a systemic construct and transpires when the rules of the game change.

Environmental change was modeled in a transportation and tourism sector based on the political economy framework. This framework seems to support well the design of this empirical study intended to capture

the collective response to the changing environment of the motorcoach industry post-9/11. Several descriptive statistics were analyzed and explained. Future directions for greater understanding were then offered.

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