

THE DISCOURSES OF SNOW DISRUPTION TO BUSINESS

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Abstract

When we have snow or flooding the press is full of reports about travel disruption and the costs of this disruption to the economy, but is this really the case? This paper will present findings from a set of semi-structured interviews with businesses as part of an EPSRC funded project which explored the concept of disruption. The paper will focus on the different discourses that have developed around weather disruption to transport, particularly snow. The discourses focus on three sets of messages; the media message, the organisational message to their staff and the internal management message.

The organisations interviewed were a mixture of large businesses and Small and Medium Enterprises (SMEs), working in a variety of areas including the manufacturing of cars, defence equipment and food, supermarkets and the call centre function of an energy supplier. For all of these businesses maintaining operations on the face of it is critical to their business. However, two important things became clear from these interviews, firstly that in the opinion of the businesses, major disruptions to transport from weather were rare, and secondly, that when such disruption did occur the effect on business was minimal. This is in contrast to the discourse that is seen in the media that portrays such disruptions as frequent and costly. Through exploring the different discourses, this paper will discuss why the impacts are considered minimal and the implications this has for transport policy.

Key Words: Snow disruption, economy, business response, transport

Introduction

Our lives are often thought of as being routine with little opportunity to change routine practices such as commuting to work. Moments of disruption, however, show that these routines are more flexible and adaptable to change both at the individual and organisational level. What this paper will present are the findings from part of an EPSRC funded project which explored the organisational definition of disruption, and their understanding of and response to disruptive events. This paper will focus on the different discourses that have developed around weather disruption, particularly snow.

The focus of this paper is the winter of 2010-2011, which remained cold for prolonged periods of time accompanied by heavy snowfall, or in the words of the MET Office,

'From late November to Boxing Day 2010 the UK experienced two spells of severe winter weather with very low temperatures and significant snowfalls' (The MET Office 2011).

Media reports from this time and more reflexive reports after the event will be used to show how the different media discourses developed. These media reports are then compared to findings from a set of semi-structured interviews with businesses carried out during 2012. The aim is to explore the impact to business and the economy through these different discourses and based on this to question what the best use of resources is for supporting the economy during such disruptive events.

The paper will begin with a literature review of the academic literature that refers to disruptive events in relation to transport. This section will be followed by the findings, outlining the different discourses in the press and within business. The paper then moves on in the discussion to briefly compare the disruption from snow to two other major disruptive events, the ash cloud that closed European air space in 2010 and the loss of the railway line to the West Country at Dawlish in 2014.

This paper is produced and circulated privately and its inclusion in the conference does not constitute publication.

Literature Review

Academic literature on disruptions, particularly in relation to the discourses that emerge during disruptive events is very limited. This is in contrast to an internet search, which leads to a plethora of articles in the media, which are included as part of the focus of the findings in this paper. This literature review will give a brief precis of the limited academic literature that exists.

The academic literature on disruptions has perhaps become a bit more prevalent in response to recent events. These include events such as flooding or other severe weather incidents considered to be signs of climate change, and a flurry of literature in response to the volcanic eruption of Eyjafjallajökull in 2010, closing airspace over much of Europe. Indeed, this led to a whole Mobilities edition dedicated to the disruption caused by the ash cloud (see Mobilities, 2011, Vol 6). The academic literature falls into two main areas, modelling of impacts, and behavioural responses.

A number of papers use modelling to determine the possible impact of disruptive events, including the impact of unseasonable weather on traffic activity (AI Hassan and Barker 1999) and the impact of flooding or other climate change related weather events on journey times and the transport network (Pregnolato et al. 2015, Chang et al. 2010, Papangelis et al. 2013, Ford et al. 2013). This work also tends to look at the risk associated with such events, particularly work such as McKinnon's on the road haulage industry, which highlights the UK's economic vulnerability to a catastrophic failure of the road network (McKinnon 2006). Other work looking at the impacts of disruptions on the economy include Mazzocchi et als, exploring the impact of the disruption caused by the volcanic ash cloud to flights, the aviation industry and the wider economy. They concluded that it was difficult to assess the impacts on a particular industry and that in the economy as a whole, there would be winners and losers, for example car hire companies and Eurostar, both of which saw increased patronage as people sought other means of transport to complete their journeys (Mazzocchi et al. 2010).

Further literature investigates the behavioural responses to disruptions. A theme that emerged in some of this literature is the importance of social or kinship support networks during disruptions, as sources of information and as part of an individual's strategies to cope with disruptions (Guiver and Jain 2011, Jain and Guiver 2011, Papangelis et al. 2013). Work from the same project that this paper is drawn from, developed a typology of the responses from travellers to disruptions (Marsden et al. 2013) and another examined case studies to understand the opportunities to change travel behaviour (Williams et al. 2012).

One paper begins to explore the media discourse at the time of the volcanic ash cloud. It stresses the importance of the political and media framing of the response to the airspace closure from the ash cloud and the effect this had on changing the regulatory limits for ash concentrations permissible for safe flying (Budd et al. 2011).

What this review shows is that the focus tends to be around modelling the impacts of disruptions and the associated risks to society and the economy, and the behavioural responses to disruptive events. This reveals a gap in the literature to explore what Budd et als 2011 paper begins to investigate; what the different discourses are during disruptive events and how they affect behaviours and policy. This paper will begin to explore this in relation to travel disruption caused by snow.

Methods

The data from this paper is drawn from two sources; secondary data from media reports and primary data from semi-structured interviews.

Secondary Data

The secondary data was collected from Google searches of the internet, using the terms 'snow disruption' and 'snow disruption economy'. These news stories were then exported to MS OneNote where they were saved, which has the advantage that should the pages be removed the content is still available for analysis. This search was done on two separate occasions, once in the summer of 2011 and then again in preparation for this paper in the

autumn of 2015. The articles were then content analysed to draw out the main stories and different discourses (Miles and Huberman 1994).

Primary Data

Eighteen semi-structured interviews were conducted with a variety of representatives from different business sectors to reflect a range of perspectives, adding to the internal validity of the study. An accepted and flexible exploratory research method was used (Silverman, 2009), allowing access to the experiences and insights of individuals who could describe their perspective on particular issues. A purposive sampling approach (Neuman 2000) was used to identify the key organisations and individuals within them. These consisted of six from blue collar organisations, four from unions, four from retail organisations, and four from manufacturing companies. These types of businesses were purposively chosen; unions for their work in supporting employees through disruptive events; retail for their flexibility to react to events such as changes in supply and demand; manufacturers for their need to maintain production schedules; and the blue collar organisations because of their particular expertise in reacting to disruptions.

Role	Type of company	Approximate number of employees
Union officer	Union	>250
Financial Services Rep	Union	>250
Union Rep Power company	Union	>250
Policy Officer	Union	>250
Operations Director	Food Retailer	161,000
Policy Officer	Retail Body	<250
Formats Manager	Food retailer	>250
Retail Consultant	Retail	<250
Managing Director	Food Processing	200
Managing Director	Defence Manufacturing Company	68,000
Supply Chain Manager	Crude Oil Processor	870
Safety and Environment Manager	Car Manufacturer	>250
Travel Plan Advisor	District Council	>250
Human Resources Manager	University	5,000
Director of Estates	University	6,000
Property and Sustainability Manager	Power Company	>250
IT Manager	University	4,000
Operations Manager	Conservation Charity	>250

Table 1 Description of Interviewees

The interviewees were either in senior management roles or were directors within their organisations. All interviewees had expertise, either from involvement in managing travel disruption or as a result of being in strategic positions. The organisations were a range of sizes from SMEs to large corporations as described in Table 1.

As semi-structured interviews, an interview topic guide was developed. However, it should be noted that the interviews were not just designed to explore disruptions from bad weather,

but to explore the concept of disruptions more generally, within this the disruptions from weather was raised. The topics addressed defining disruptions in the context of the organisation; how the business responded to disruptions; what were the key operations that needed to be maintained during disruptions; which operation could be interrupted and how long for; what lessons were learnt during periods of disruption and how were these lessons applied; what changed during a disruption; and what travel specific disruptions had they encountered.

Interviews were recorded and transcribed for analysis. Using Nvivo, transcripts and notes were content analysed and coded (Miles and Huberman 1994) in order to identify themes in the data. The analytic strategy involved an iterative approach (Corbin and Strauss 2008), reflecting on each interview as it was undertaken through a process of gradual explanation building (Yin 2009).

The reliability of qualitative research concerns whether the data are plausible, and the extent to which findings are consistent with "divergent" sources of information (Neuman 1997, pp368). Interviewing a range of informants with different perspectives and collecting news articles from a range of media outlets helped such convergence to be achieved (Yin 2009). Complementing the interview data with documentary evidence that included research project reports, press coverage, and government publications (Denzin and Lincoln 1998) allowed a rich picture to be developed and enabled triangulation and verification of the results. The quotations used to illustrate the findings are anonymised.

Findings

We have all seen headlines about how disastrous to the economy heavy snow fall is and how poor we are as a country at keeping the transport network working during such disruption. These sorts of headlines were particularly prevalent during the winter of 2010-2011. However, when you read further into the press articles and follow up pieces once the snow has cleared the dire headlines such as, '*Cost of arctic weather could top £1bn*' (Guardian, 2009) and '*Snow piles on problems for UK economy*' (BBC News, 2013) are not quite as bad as they would first appear. In the findings some of the discourses in the media headlines and articles will be examined and how these compare to the messages directly from businesses.

Media

The news stories used in this article cover the time predominately of the cold winter of 2010-2011. It is important to consider the timing of this cold spell as it was in the run up to Christmas, the peak retail period, when the economy was just beginning to emerge from the recession of 2008-2009. This helps to frame the discourse in the headlines that focussed on the impact of the weather on the economy.

One of the main issues to be raised was the impact on the economy of people's inability to get to work due to the problems on the transport network.

'The Federation of Small Businesses (FSB) estimated 20% of the UK's working population, or 6.4 million people, did not make it to work. South-east England had the worst snow it has seen for 18 years, causing all London buses to be pulled from service and the closure of Heathrow's runways' (BBC News 2009).

However, these problems with getting to work were not just due to the problems with the transport network, the closure of schools meant many parents had to take time off to care for their children.

"...with a third of Britain's schools having told their pupils to stay at home during the cold spell, parents who might otherwise have been able to get to work have been forced to stay at home to look after their children.

The latter might find listening to the local radio to find their school has declared a "snow day" exciting. For employers it is a nightmare' (Moore 2011).

These problems with accessing work have implications for both business and the individual. Businesses are not legally obliged to pay staff that are unable to get to work due to the weather. Indeed some staff either end up losing a day's pay or needing to take the time off as a day's holiday.

NO PAY FOR ABSENTEES

WORKERS stuck at home because of the snow yesterday were told their pay could be cut.

Companies ranging from Sainsbury's to Virgin Trains said absent staff would not be paid despite the chaos on the roads, trains and buses.

The move will enrage those who say they have had no option but to stay at home during the freeze. Brendan Barber, general secretary of the Trades Union Congress, said any pay cut was unfair and unnecessary. 'Workers who have been prevented from getting to work despite their best efforts should not have to foot the bill for the bad weather conditions,' he said.

Yesterday businesses insisted that they would give staff every chance to make up the lost days.

Adam Marshall, director of policy at the British Chambers of Commerce, said firms were being as flexible as possible.

A poll by the chambers and Sky News said one in ten firms found their entire workforce absent.

(Hale 2010)

This is an interesting example of different discourses in the media in relation to the loss of pay, with surprisingly large companies best able to absorb the effects being named, the unimpressed response from the TUC and the more conciliatory reaction from the Chambers of Commerce. Media coverage of the union response focussed on the resentment that docking pay would cause, particularly with media comments such as,

'Some [businesses] may take steps to try to recover losses from workers' pay packets by deducting pay from workers who are trapped at home in the snow...' (Hough and Britten 2010).

Indeed, the resentment from employees could be further fuelled when you see the uncertainty in what the actual costs to the economy from the disruption were. The estimated losses to the economy from the reduced numbers of staff being able to get to work quoted in the headlines during that winter ranged from £280m to £1.2bn per day.

'Transport disruption in freezing weather over the winter cost the UK economy about £280m a day, Transport Secretary Philip Hammond has said' (BBC News 2011).

…leading insurance company RSA estimated the cost of the snow disruption to the country could be as much as £1.2bn a day' (Cassidy 2010).

This range in figures stems from the lack of hard data at the time. Some of the estimates were based on the loss to the economy from businesses being closed for a bank holiday, but there is no detail about how other estimates were derived. What is clear from looking at the different press reports is that these are approximations made at the time of the event and in reality no clear picture can be drawn until much later in the year. Indeed, when you look beyond the headlines at the time and read more reflexive pieces after the event, there is an acceptance that the losses to the economy tend to be short-lived and there are winners and losers, where one sector may suffer as a result of bad weather others do much better, for example the energy companies and outdoor clothing stores.

'Someone who does not go to their out-of-town supermarket will instead spend money in their corner shop.

Retailers probably saw a run on winter clothes last week ahead of the forecast snow and ice. More people have the facility to work from home. And a spell of cold weather gets people thinking about their summer holidays' (Hotten 2013).

For many businesses lost revenue is made up later in the year as most activities are delayed rather than cancelled.

'Howard Archer, chief UK and European economist at IHS Global Insight, points out that many companies will be able to make up lost production because they have not been working at full capacity' (Hotten 2013).

As can be seen here, media coverage of the bad weather in 2010-2011 becomes more reflective by 2013 or even later in the year. One report written in the autumn of 2011, claims that there was less impact on big business than from previous similar disruptions. The article goes on to explain that businesses were learning from previous disruptive events. The example talks of how those in the service sector made use of modern communication technologies to enable their people to work from home.

"One thing that has made things slightly easier has been the willingness of people to use modern technology, especially broadband internet, to work from home to try to help companies keeping going, and this is obviously a good thing" (John Cridlan, CBI deputy director general in, Moore 2011).

Interestingly, the article suggests that this level of preparation stems from 'the epidemic that never was – swine flu' (Moore 2011). This improved preparation benefited smaller business and retailers,

'As a Sainsbury's spokesman explains: "What swine flu did mean was we had detailed plans to make sure we could operate effectively and continue to get enough deliveries" (Moore 2011).

The piece goes on to quote Philip Shaw, Chief Economist at Investec, who believed that the impacts of the cold weather on the economy would only be short term and the economy would continue to grow (Moore 2011). One article looks back to the cold winter of 1962-1963 to make their point,

'According to McWilliams [CEBR], the extremely cold winter of 1962-1963 cut manufacturing output in February 1963 by 75%, but higher spending on heating meant that overall GDP was unaffected (Wearden 2009).

However, these comments are based on data drawn from national figures. The story is likely to be different when you explore the detail. Such extreme weather events are more likely to affect smaller businesses because; (i) cash flows may be hit by delayed payments (ii) they have less capacity to absorb reduced staff levels; and (iii) they are less likely to have developed the continuity plans to mitigate the effects. The risk to small businesses was heightened by the fragile state of the economy at the time.

What can be seen by looking at the media reports over a period of time, not just during the bad weather, is that the discourses change from the headline losses to the economy to a more reasoned view of the impact of the disruption. However, the discourse in the media for this particular cold winter should be taken in the context of the timing of the snow fall. The heavy snowfalls were in December in the run up to Christmas, the most critical period of the year for retailers, the economy was struggling to recover from recession, hitting businesses at a time when they were already fighting to survive. It is also worth noting that there had not been any significant snowfall for several years, no doubt adding a novelty value to the reporting.

Business

What was surprising was the businesses reaction to snow disruption, perhaps more redolent of the reflexive pieces in the media. In contrast to the discourse in the media at the time of the disruption and the discourse to their staff, a couple of days disruption from snow was seen as unimportant. One organisation explained that a continuity plan ensured that critical **UTSG** January 2016 Bristol

operations would be kept running, whilst other aspects of the business were less critical and people would either work remotely or things could be put on hold for several days.

'Every site has a continuity plan and basically what we look at is on that site, if the site stopped working today and we said it was going to be back up in 24 hours, 48 hours, 72 hours, two weeks, a month, what each department needs, how many people as a basic minimum to get into the office or on the network to be able to work. Every site we've got that in place so we know that, if it's bad weather and it's going to last a week and you can't get into the site, these are the people we need to prioritise and get them working. The majority, for a week, it's not a problem' (Property and Sustainability Manager, Power Company).

A manufacturer explained that as part of their continuity planning they built in a degree of flexibility into their production schedule by using Friday as the 'catch up day',

'Yeah, we shut the whole site for the day, and then because we do this demand led scheduling, and that allows us to... for office people like myself there's no problem and you've just got a day's work you've got to catch back up, but for the line and for production, then they'll introduce this demand-led scheduling, so for a 37 hour week, which is what we work, they do a nine day fortnight. So it gives us that Friday, if we lost a day and we've got that Friday, they can just slot the production back into there, so the impact is actually quite... unless we had a lot of sustained snow over a period' (Safety and Environment Manager, Car Manufacturer)

Another manufacturing company, also and SME, ensured that they had back up stock to see them through such periods. What was seen as important was from their customer's perspective, to appear to be operating as 'normal'.

'One of the ways we manage our disruption here on stuff like that is we store our finished goods externally, away from here, which allows us to continue to give good customer service. We always have plenty of stock offsite. Whilst we may not be producing for a few days for whatever disruption, be it weather, be it any sort of problem in our plant, we can generally cope with it' (Managing Director, Food Processor).

Of the businesses interviewed, there was a consistent response that in the last 5 - 10 years they had made efforts to develop contingency or continuity plans to help mitigate the effects of disruption, either from weather, a problem with the energy supply or problems in the supply chain. Often weather disruption does not have a specific continuity plan, but would come under the auspices of staff unable to get to the site or supplier unable to deliver.

In developing these plans, for example in manufacturing, the organisations identify who are the key personnel to have on site, often ensuring that these key personnel live within walking distance or are able to work remotely.

'The last few years, there's been a couple of times that what we do is, we make sure that we have a skeleton staff, so as long as we get certain people in, then certain things can happen. And again, it's never been that bad. And there are people that stay within a couple of miles, and maybe they could walk, regardless of how bad the weather is. So we've had times where we've shut the factory, and the general workflows, but in terms of the...we've kept the important pieces are kept going, because we've had plans for certain people who we know could come in and look after it' (MD, Defence Manufacturing Company).

In other cases, such as a call centre, operations may be diverted to another site where staff travel is less disrupted. During these disruptive events much is learnt about how to mitigate such an event in the future and improve the continuity plans, however, little is learnt from the experience of doing things differently during the disruptive event to feed into business as usual. This would appear a missed opportunity to change behaviour.

Another surprising and important finding from these interviews with businesses, was that in contrast to the impression given in the media discourses, was that major disruptions were rare.

'There were about 5 years when we didn't have any snow at all, but you have to have the plans in place. So it is pretty infrequent that you take that decision' (Director of Estates, University).

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'That's four. Bad weather, five, bad weather this year; six times in 17 years, so one every two or three years, literally.' (Property and Sustainability Manager, Power Company).

The media discourse gives the impression that these bad weather events happen regularly and that in the UK we are very bad at coping with such events and that we do not learn from the experience of past events. Indeed, there is a recognition that the business case does not stack up to invest in the equipment needed to deal with such events when they are so rare.

'But Mr Johnson said it did not necessarily make sense to make a major investment in snowploughs if they were only used once every two decades.

This view was shared by Professor David Begg, a former government transport adviser.

He said buses and trains could be equipped with snow-ploughs, but he was not convinced that the "economic case stacked up" (BBC News 2009).

Such statements from politicians and experts and the comments made by business about the rareness of such events, perhaps go some way to support the economic argument for not investing in snow clearing technology, however the economy is not the only reason to keep the network operating.

Staff

The discourse to staff was again varied both from the 'company line' and differed between companies. The large manufacturing companies interviewed took the approach that too few people would be safely able to get to work, so the site would be shut and the staff would be allowed to make up the time over an agreed period of time. One organisation that felt that snow disruption for several days was not an issue, interestingly took a much stronger line with their staff, in some cases disciplining staff that arrived late or were unable to get in.

"...it was the first winter and it was the very first time we got very bad snow throughout the country, so people's travel to work was just horrendous. They couldn't get in. They were making people pay time back. They were being, from our point of view, the business wasn't being particularly helpful in allowing staff the time to get to work in time and it was a case of you're not here on time, well, we'll have to look at disciplinary...' (Union Rep, Power Company).

This approach was counter-productive and the issue was exposed in the media, souring staff relations and giving the wrong public and customer image.

'There was an article in the local newspaper saying one of the biggest employers in the [regional paper], [company name], who are making huge profits, usual trade union line, it's doing this to its staff and disciplining them for being late when today's travel is extremely bad with the snow on the ground, hardly any bus links, all that type of thing' (Union Rep, Power Company).

A further organisation considered themselves to be a good employer and took the approach that the site was not safe for staff to enter due to the ice and snow and therefore shut the site for the day, paid all the staff, and didn't expect them to take the time as leave or make up the time at a later date.

'And whilst they had been trying to clear since 3am, some of the roads were clear, but none of the car parks were clear and only some of the paths had been gritted because there had been so much to do. So what I had to do then was to speak to the university secretary, I had warned him the day before that I might be ringing him up very early in the morning. And said that my recommendation was to close the campus for the day, because we don't believe that it is safe for staff (Director of Estates, University).

'I think the university is a good employer and it is just accepted, it is classed as a working day. So it is not our fault that they close it down. The letter of the law, you don't work you don't get paid, but I suppose custom and practice here is that there wouldn't be anything recorded other than it was a normal working day. If people decide...the other part of the policy is that if some people can get in and some people can't, then the manager has discretion whether they accept that reason. I think it is down to the manager and their team and then they would record it as a contingency day. So it is recorded to say this individual



could not get in, but you wouldn't expect not to be paid for it' (Human Resources Manager, University).

This differs from the legal situation that requires staff to make their best efforts to get to work, but does not require employers to pay staff or let them take the 'snow day' as holiday.

What these example shows are just some of the different discourses related to one disruptive event. This paper will now go on to discuss these discourses in relation to other disruptive events.

Discussion

This paper has looked specifically at the discourses associated with travel disruption from snow and the impacts this has had on business. However, these types of discourses are also present for other events, for example, the loss of the rail link to the South West at Dawlish in early 2014. All over the media were the dire costs to the economy in the South West, but when the opinion of organisations such as the Local Enterprise Partnership, Chambers of Commerce and groups representing manufacturing and maritime industries was asked, they expected little impact to their business from the loss of the rail link. Most of their travel was done by road or air because the rail link was too slow. Tourism had the potential to be affected, but February was far from high season for tourists. This again shows the importance of timing in the impacts of such a disruption. In this case, the fact that it was not peak tourist season reduced the impact on the economy, whereas the snow disruption in the run up to Christmas of 2010 had the potential to have more serious consequences. However, regardless of the impact on the economy, it was clear that the powerful images of the track suspended above the sea in the media prompted a rapid response from network rail to repair the line.



Rail line at Dawlish, 2014

The media has a lot of power to bring about responses to such disruptive events as was seen in the closures to air space over Europe in 2010 as a result of the volcanic ash cloud. The headlines in the media moved the concerns away from the ash cloud to blaming policy makers as Budd et al (2011) explained.

'...what we see in the response by the media to the closure of the European airspace is repeated attempts to construct the series of events surrounding the volcanic eruption as the 'avoidable and blameworthy failures' of government and bureaucratic decision-makers' (Budd et al. 2011).

The outcome was that what was considered a safe level of ash in the atmosphere for flying was lowered rather than waiting for the ash levels to fall. What these examples show is the power of the discourse in the media to bring about policy changes or action, which may or may not be the most appropriate response. It is interesting to note that these unique events seemed to have delivered more of a response than the repeated, albeit rare, snow

disruptions. This is in contrast to the response to the non-event of the swine flu pandemic, a potential disruption of unknown impact and scale, which prompted businesses to seriously consider the impacts of low staffing levels and take action to mitigate the effects. It is beyond the scope of this paper to explore in detail the media and business discourses during these events, but there is no doubt that the different discourses will have been influential in shaping policy and the responses from business.

Conclusions

What these examples do is to illustrate the impact that the media has on the reaction and policy interventions in response to disruptions. What this paper has tried to show is that there are different discourses, not just within the media, but also within business, each of which will have an influence on policy decisions. When you explore the different discourses you begin to see that maybe focussing policy on keeping the transport network running to reduce the impact on the economy may not be the only or best solution. Maybe other interventions such as keeping schools open or developing other childcare alternatives, so parents are better able to continue working, investing in fast broadband to help support people working at home or investing in continuity plans to keep businesses running with reduced staff levels would be better policy interventions. That is not to be said that there are not very legitimate reasons to keep the transport network open, but perhaps the economic argument is not quite as strong as the media reports would suggest.

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