

Regulation of freight transportation and logistics is currently being advocated by certain industry groups who seek relief from difficult market conditions.

This report reviews the history of regulation in U.S. transportation and its impact on the economy, with a particular focus on the role of the transport broker.

For forty years, deregulation has enabled a flexible, nimble logistics industry that delivers untold opportunities for U.S. businesses large and small, while vastly improving our domestic economy and global competitiveness.

Deregulating Transportation

A Uniquely Effective Federal Policy

Noël Perry
Partner & Managing Director

Donald Broughton
Principal & Managing Partner

Deregulating Transportation: A Uniquely Effective Federal Policy

By Noël Perry and Donald Broughton

Broughton Capital LLC



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Contents

Deregulating Transportation:	1
Contents	1
INTRODUCTION: Deregulation yields 40 years of benefits	2
TRANSPORT REGULATION: An example of effective Federal policy	3
SUMMARY AND FINDINGS: Eight suggestions for policymaking	6
THE DISCUSSION - PART 1: A short history of deregulation	10
<i>A transformation in transportation</i>	<i>11</i>
DISCUSSION - PART 2: The broker’s position in the market	20
<i>Three basic levels of integration</i>	<i>23</i>
<i>Who owns the brokers?</i>	<i>24</i>
<i>What services are provided by the broker?</i>	<i>24</i>
<i>Brokers manage complexity</i>	<i>25</i>
DISCUSSION - PART 3: Recent crisis and calls for re-regulation	27
<i>Regulation and the future</i>	<i>31</i>
<i>Who benefits from regulation?</i>	<i>33</i>
CONCLUSION: Guidelines for policymakers	35
<i>About the authors</i>	<i>36</i>
<i>About Broughton Capital</i>	<i>36</i>

INTRODUCTION: Deregulation yields 40 years of benefits

Forty years ago, Congress took the extraordinary step of eliminating most of the regulation of the U.S. transportation industry, including the dismantling of almost all the Federal bureaucracy that monitored and managed it. The transportation industry responded by delivering major reductions in cost and improvements in service that extended well beyond the economic aims of those who championed deregulation.

The change also drove a still expanding scope of unanticipated benefits as measured by multiple metrics. They include societal improvements such as environmental quality, demonstrated by significant reduction in consumption of non-renewable resources and even more substantial reductions in emissions. Labor also achieved higher wages and benefits, as well as safety. The results speak for themselves. Deregulation clearly worked.

Under the stress of recent volatility in trucking demand, some interest groups are now asking for a return to regulation in several aspects of trucking, in hopes of relief from difficult market conditions. To inform this debate, we present this report on the history, intent, and performance of U.S. transportation under regulation and de-regulation.

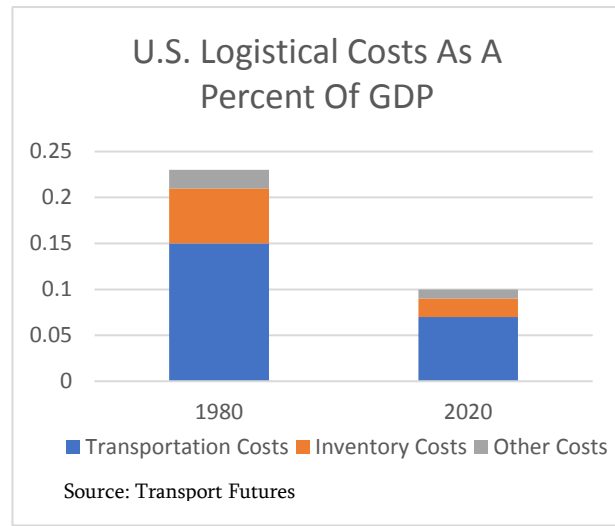
Our work includes a particular focus on the oft-misunderstood and minimized role of the transport broker. We trust that, upon reviewing the history and the facts of the current transportation marketplace, policymakers will be disinclined to reverse policies that have delivered such profound benefits to the U.S, its economy, and its citizens.

TRANSPORT REGULATION: An example of effective Federal policy

Before we change anything, let's learn about it. Over the past few months, extreme stress in the U.S. truckload spot market has caused some groups to suggest a return to one of several forms of price regulation for this market, particularly concerning those transactions involving the services of freight brokers. We write this paper to provide an essential historical context for this debate and to evaluate whether regulation would be an effective means to help reduce the current stress in the market or similar stresses in the future.

Before diving into the details of the discussion, it is essential to review the major changes to the economic regulation of all modes of transportation, specifically the 1978-1980 deregulation of the airlines, trucking, and railroads. In the forty years since then, the market has had the opportunity to test that grand experiment.

The results have been nothing short of miraculous, with the achievement of supply chain productivity that was unthinkable in the previous environment of restricted entry and adjudicated pricing. This single chart illustrates the multiplicative benefits of that change on supply chain costs and the industries those supply chains serve.



Moreover, dramatic improvements in responsiveness and service have facilitated improvements to shippers' operations and markets that dwarf even the savings depicted in the chart. Without deregulation, the current U.S. economy would be far less competitive in the global marketplace.

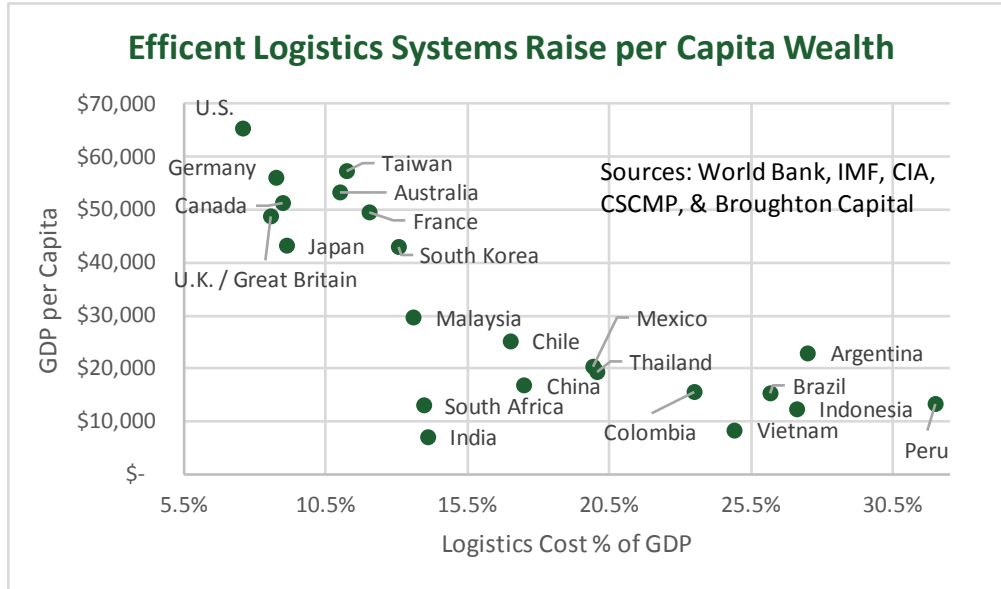
Something very good happened in 1978 and 1980. In the decades since the deregulation of the airline industry in 1978, and the deregulation of the trucking and railroad industries in 1980, U.S. transportation has been completely transformed in almost every conceivable way. The metamorphosis has been so extensive, so spectacularly dramatic, that basic factual assessments of "what it was like before deregulation" versus "what it is like now after deregulation" are hard to accept as true; the changes are that profound. Pick any metric, and you find significant improvements: a social good, a labor objective, an economic goal, or an environmental endeavor, nominal costs, the safety of the workers, public use of transportation services, and sharing the roadways. The list goes on and on: improvements in efficiency and reliability; faster movement of freight; more than a 25% decline in fuel consumption¹ despite a major reduction in toxic emissions, featuring a 99% reduction in NOx emissions². In addition, an entirely new profession and accompanying academic field of study have emerged in transportation and logistics management. Further, financial margins and rates of shareholder returns have dramatically increased, insuring a generous flow of capital investment. *Simply put, the transportation industry has become faster, safer, cleaner, more predictable, and more profitable, to such an*

¹ Greenhouse gases fall proportionately with reductions in fuel consumptions.

² Source, EPA. Without the efficiencies of deregulation, the significant costs in technology and fuel economy of emission regulations would have passed directly to consumers.

extent that it has become one of the most important competitive advantages for the U.S. in the global marketplace for goods.

The U.S. has one of the most efficient transportation and logistics systems in the world. The amount of logistics cost required to produce a dollar of GDP (expressed as a %) fell to 7.6% in 2019, less than half of what it was in 1981 (16.0%).



An efficient logistics system is one of the most powerful forces in a country’s ability to compete in global markets. Even more powerful than cheap labor and abundant natural resources, an efficient logistics system enables a country to produce higher levels of wealth per citizen. Note that other than Canada and Australia, all of the countries that come close to the U.S. in ‘low logistics cost as a percentage of GDP’ are much smaller in geographic size (Japan, Germany, Taiwan, U.K., France, S. Korea).

Where are the brokers in all this? It should be no surprise that benefits of this magnitude have spawned many well documented studies detailing the overall deregulation impacts in the Airline, Rail, and Trucking industries, and how those impacts have changed the industries they serve. It is our purpose here to take this analysis one step further by focusing on the freight brokerage industry, an essential subset of supply chain management. We will show how freight brokers have become a leading factor in driving the transformation of the trucking marketplace. We now have, thanks to brokerage, a trucking market that facilitates and encourages competition between the largest fleets and the smallest fleets. That competition is enabled because brokers have leveled the transportation “playing field” for small trucking companies and independent owner-operators, while providing small, independent shippers with the same low-cost transport as their larger competitors. Whatever the size of the carrier or shipper, we also know the benefits of brokers from this simple fact: Brokerage, either in-house or outsourced, is now an essential part of the management of any significant player in the truckload space, whether the player be a carrier, a shipper, or a logistics service provider.

Déjà vu all over again. We also hope this report will help to illuminate the current debate over the economics of brokerage. This topic is surfaced in part by low rates and the individual carrier challenges resulting from another round of temporary negative economic forces. Such a discussion is important because the economic stress has unearthed many of the same arguments that led to the regulation of trucking between the 1930s and 1980. Disagreement over the issues among marketplace participants has become heated enough, and divergence

of opinions large enough, to result in some truckers organizing protests in Washington D.C. and others petitioning Congress for regulatory solutions. For policymakers considering those solutions, we present this study to lay out the function and facts of the transportation industry, and the implications of returning to governmental controls that utterly failed and, as a result, were so decisively terminated forty years ago.

SUMMARY AND FINDINGS: Eight suggestions for policymaking

Freight brokerages have become an indispensable part of the complex, low-cost, and highly responsive infrastructure that matches demand and supply within the U.S. trucking industry. For example, investments in information technology (IT) reliably enable a freight broker to establish, maintain, and grow a position in the market. Brokers invest in IT that adds dynamics to the marketplace, such as: transparency, credibility, payment guarantees and accelerated payments, insurability and indemnification, and discovery of pricing, supply-demand balance, freight volume, and special requirements. The brokers then offer the use of their IT to shippers and carriers as an inducement to conduct transactions on their platform.

As a result, as much as any of the mechanisms in the market, brokerage has made possible the realization of the aims of deregulation's creators, i.e., a marketplace that is constantly evolving to meet the needs of its carrier and shipper customers, with only the slightest supervision by the Federal Government. Annually, brokers manage the movement of more than 130 million loads, representing \$190 billion in revenue.

1. **The brokerage segment is growing under the pressure of shipper demand.** Brokers have seized the opportunity to fulfill shippers' needs by managing a variety of transportation and logistics challenges, including: demanding dynamic flexibility in capacity as well as velocity, volumes that are extremely unbalanced in lanes or highly uneven seasonally, loads necessitating irregular handling, managing relationships with tens of thousands of small carriers (verifying authority, insurance, etc.), and/or customized services.

These service offerings have given brokers an opportunity to grow their own businesses, and have expanded the brokerage industry overall. Starting before 1980 with a small collection of firms, mainly managing the movement of agricultural commodities, shipper requirements have been crucial to the growth of the brokerage segment into today's \$190 billion dollar industry with a 5% compound annual rate of revenue growth. Brokerage growth reflects the steady expansion in spot-market transactions required by the market's demand for flexible capacity, coupled with the capabilities and capacity necessary to move large volumes of difficult or irregular traffic at a low cost.

Spot-market traffic moves at a mere 43% of the inflation-adjusted cost of moving equivalent loads in 1980, but with significant, substantial improvements in service³.

Conclusion: Brokers have successfully met the needs of shippers.

2. **The brokerage segment is growing under the pressure of strong carrier demand.** The growth in demand for spot-market capacity has attracted a large collection of small to medium-sized carriers who need help in finding loads and managing the high administrative burdens inherent in spot-market moves. Brokers now serve all or part of the needs of hundreds of thousands of carriers, ranging from owner-operators to the largest national truckload fleets. Carrier revenue has grown 118% over the last twenty years, while broker margins have remained constant or fallen. That means, as prices rise or fall, the broker compensation rises or falls proportionately.

³ Source, Transport Futures.

Conclusion: Brokers have successfully and fairly met the needs of carriers.

3. **Brokers provide technology to the entire market.** Brokers and their information specialist partners are the prime sources of market information in the U.S. spot market. Market participants know where the loads and trucks are and how much freight will cost through information obtained from brokerage. The freight management process is profoundly more efficient now than in 1980 due to this information and the administrative processes that manage it.

Conclusion: Brokers are making the market more efficient and making technology available to all players regardless of their size. They have done so without raising their share of compensation.

4. **The brokerage market has few barriers to entry.** In a market with few economies of scale and even fewer regulatory hurdles to entry, entrepreneurs can, with a minimum of resources, quickly get set up as brokers and begin moving freight. As a result, carriers and shippers have their choice of 15,000 highly competitive brokers. In a market with a minority of contractual relationships and limited means to enforce contracts, there is little to keep a customer from quickly shifting from one broker to another.

Even individual agents with a successful book of customers can easily shift from one brokerage platform to another, or establish their own standalone businesses with relative ease. Moreover, shippers and carriers will routinely offer the same loads and trucks to multiple brokers, waiting for the best economics to emerge.

Conclusion: Even if it were legal (it is not), there is no discernible collusion among brokers in search of higher margins.

5. **Recent difficult market conditions would have been far worse without brokers.** During the strong boom during late 2017 through 2018, brokers provided higher levels of marketplace transparency and better information about loading and unloading than had ever been available to any trucker in the marketplace, except for a handful of the largest fleets. The time constraints enforced by the electronic logging device (ELD) mandate made it critically important to identify shippers who took too long to load and receivers who took too long to unload. Spot rates soared as demand exceeded capacity, and many small truckers were paid rates that were higher than contract rates, if they could meet the service requirements. Brokers served an important role in helping truckers gain more information about problem loads, and brokers helped shippers find capacity that was difficult to obtain.

During 2018, almost all truckers added some capacity, and with softer demand in 2019, spot prices fell dramatically from their record highs, at one point more than 25% below the 2018 peak. Late 2019 and early 2020 saw improving trends in demand and rates, but then COVID lockdowns hit, and the situation became much worse.

This downcycle was yet another episode in the well-established history of cyclicity in spot market pricing as the industry adjusts to the inherently high volatility of both its supply and demand. Unfortunately, when the market declines, as it has in the last two years, carriers suffer. Brokers have helped truckers, however –

first by securing premium rates for the carriers when demand was strong, and then by helping them find loads when demand was weak.

Conclusion: The economic stress imposed on carriers by the market's volatility is a function of the highly cyclical nature of trucking market conditions; conditions which are made better, not worse, by brokers.

6. **This is a market with an extensive variety of demands and of possible responses.** The brokerage industry markets its services to a bewildering array of shipper and carrier market segments and industry sectors, each with its own cost structure and many with unique service demands. In response, the brokerage industry is an equally bewildering collection of individual firms, each matched to the freight segments of its choice where their expertise is most useful. This complexity must be managed in the volatile business environment introduced above, and rewards those who develop creative new responses to satisfy those demands.

It is impossible to design a simple set of regulations to manage such a complex, rapidly changing market. Any regulation would necessarily reduce market flexibility and its ability to efficiently serve customer needs, shippers, or carriers. Further, any regulation would also run the risk of enforcing the “old way of doing it,” and might not apply to – or might be made irrelevant by – the “new way of doing it.” For example, old-style less-than truckload (LTL) rate classification is inconsequential to those who consolidate large LTL shipments into full truckloads today.

Conclusion: The economics of the brokerage market are extraordinarily challenging to manage through regulation. A return to economic regulation would raise costs and reduce service levels. That, in turn, would incent industry players to formulate a complex system of workarounds, or the regulations would quickly become obsolete as the industry changes and adapts.

7. **The demand for “margin transparency” contradicts the basic nature** of competitive markets, the behavior of participants, and the incentives driving that behavior, especially when there is constant variation in pricing. Market participants would strongly resist the loss in confidentiality that would result from so-called “margin transparency.”
 - No shipper wants its competitors to know what it pays for transportation.
 - No carrier wants its competitors to know what it charges its customers, be they brokers or shippers.
 - No broker wants its competitors to know what it is charging its customers and paying its carriers.

However, loss of confidentiality would have no material effect on overall rate levels, because transparency is already achieved in the contrast among competitive offers. A shipper or broker offering a significantly higher or lower rate is made highly visible by comparison with other rates being offered; a trucker demanding a significantly higher rate or taking a significantly lower rate is made highly visible by the rates of other truckers.

Rates are constantly changing in every lane, in every mode, and for every service. The Monday rate is different than the Wednesday rate; the Dry Van rate is different from the Flatbed rate; the Boston to Chicago rate is different than the Boston to Atlanta rate; the fuel surcharge is different this week from the fuel surcharge last week; weather (e.g., storm fronts) is constantly changing, etc. The most recent rates, or even the rates embedded in the proposed transaction, are not the only deciding factors to the transaction. It

is the trial and error process of price negotiation that gives the market its flexibility and necessary adaptability; married with the availability of the load and the availability of the capacity, that motivates all of the participants to reach an agreement.

Plus, motivations of each participant change: shippers will agree to higher shipping prices to ensure that a key customer gets his product; truckers will agree to a lower rate to take a load to a destination where a key customer or high-paying load is located; brokers will adjust their margins to satisfy shippers, carriers, or even to reach minimal transaction volumes.

The hyper-competitive nature of this market includes several direct and indirect processes which work to prevent profiteering by any of the actors. Even if a broker contrives a way to extract an outsized gain on one transaction, all the variables (demand, capacity, price, motivations of each participant, etc.) are constantly changing and as a result, pull the broker's future profits into alignment with marketplace norms.

Conclusion: Requiring transparency of broker margins would provide no benefits to individual truckers or small carriers.

- 8. Business conditions cycle up, as well as down, while technology steadily reduces cost.** With the rollback of COVID restrictions, the U.S. economy is already beginning a recovery from the extreme conditions of March through May 2020. Also, there are good indications of a further return to prosperous levels of transportation capacity in 2021 and 2022. Rates and carrier health will improve regardless of Federal Government action.

On the cost side, the digital revolution has major implications for brokerage costs. We expect broker transaction costs to fall by as much as 40% over the next five to seven years. Competition will force those cost savings to be shared by each broker with its shipper customers and its carriers, to keep from losing market share to those brokers who do share their transaction cost savings. We also expect broker margins will continue to fall, as brokers invest in IT and as IT investments reduce the costs of those who provide data to brokers. Such investment is necessary to protect or grow market share, and it produces ever greater marketplace transparency, making it more difficult for any individual company to realize outsized profit per transaction.

Conclusion: The market dynamics are already in motion, to resolve the stress that prompted the renewed interest in reregulation. Broker margins will decline regardless of government regulation. Moreover, the lags and inefficiencies endemic to economic regulation would likely delay and distort both trends.

THE DISCUSSION - PART 1: A short history of deregulation

Trucking regulation began in an era of high stress. It was immediately hijacked by lobbyists. Federal economic regulation of trucking began with the 1935 Motor Carrier Act, a piece of legislation also aimed at relieving the stress of an economic downcycle on carriers. In that case, the purpose was to protect the railroads from competition from the new form of intercity transport that was made possible by the highways constructed after World War One⁴. Before that time, rail was the only viable means of overland freight transport. The open-entry, hyper-competitive truck market was a direct threat to the cartel-based pricing then allowed for railroads⁵. The protective legislation therefore limited new entries into trucking to those carriers who could demonstrate an unserved need in a market. Existing carriers were limited to serving those commodities and geographies specified in their authorities. Lawyers were more important to competition than truckers. Given the obvious cost implications of such regulation, shipper groups gradually persuaded Congress to grant exemptions to the restrictions, most notably for agricultural goods.

If better highways and better trucks are appearing, who cares? Shippers tolerated regulated trucking, from its beginning, because improvements in highway and vehicle technology steadily reduced costs despite regulatory inefficiency⁶. Notably truckers made significant profits and paid their labor generous wages, while traffic departments consistently beat their managements' budget targets without any significant effort, skill or talent. This relaxed environment began to change in the 1970s as the pace of technical improvements slowed, and the appearance of far more sophisticated Japanese supply chain management techniques introduced challenging new competition dynamics for shippers. U.S. companies, with inflexible transportation systems and no professional transportation management talent, were unable to implement advances such as lean manufacturing. Nor were they able to lower inventory carrying costs (the importance of which was only amplified when interest rates climbed sharply), through the simple order and purchase optimization techniques that are now considered routine. Collectively, these pressures resulted in a series of deregulatory reforms.

Deregulation was a bi-partisan agenda. Although many mistakenly attribute the initial deregulation efforts to the Reagan Administration, it was the Carter Administration and several prominent Democrats who spearheaded a profound upheaval in the way we regulate transportation in the U.S. In 1977, an economics professor from Cornell University, Alfred Kahn, was appointed by Jimmy Carter to head the Civil Aeronautics Board. Following the findings of hearings led by Senator Edward Kennedy, Kahn and a coalition of influential Democrats, led by Senator Howard Cannon (D – NV) and Congressman Harley Staggers (D – WV), authored a

⁴ The invention of powered construction equipment allowed the construction of a truly national system of paved roads in the 1920s. Before then, long-distance travel was strictly the province of railroads.

⁵ Rail cartel pricing (rate bureaus) was allowed to prevent the railroads from marginal cost price competition in downturns. The purpose was to protect the carriers from themselves.

⁶ Relaxed size and weight laws doubled truck dimensions just as the new interstate highway system dramatically improved asset velocity. Trucking costs fell by 66% between 1945 and 1980 due to these technical improvements. (Source: Transport Futures)

series of legislative overhauls. Quickly passed by both the Senate and House, and signed by President Carter, this legislation eliminated or severely curtailed the Federal economic oversight of the transportation⁷.

A transformation in transportation

The full process took fifteen years. The first change was the 1978 airline deregulation, which climaxed in the elimination of the Civil Aeronautics Board in 1985. That move was followed by the deregulation of interstate rail and trucking service in 1980 and the abolition of the Interstate Commerce Commission (ICC)⁸ in 1995. For all transportation modes, the Federal Government withdrew from its role in control of entry, service, and rates, except to ensure safety⁹. It is difficult to find other examples of Congress sunsetting any bureaucracies, let alone those that were as large and visible as the CAB and ICC.

Airline passengers are very happy with the change. Once airlines were allowed to fly anywhere at any price, they redesigned their networks to build passenger loads while carefully studying demand elasticities¹⁰. Productivities in redesigned networks, investments in new and more efficient assets, increased use of IT in many areas (ticketing, reservations, preventive maintenance, baggage handling and sortation, labor scheduling), improved optimization (fewer empty seat miles), and falling labor costs allowed airlines to become more profitable even while reducing fares significantly. For example, by 1990 the overall average fare was 30% lower than it was in 1976. Some lanes saw even more dramatic decreases. The lowest price for a roundtrip flight between New York and Los Angeles was regulatorily set at \$1,442 in 1974, but today it can be as low as \$250. A Philadelphia to Cancun roundtrip would cost between \$2,500 and \$4,000 in 1974. Today the same trip goes for \$200 to \$500, depending on the time of year.

If customers want service, the market delivers. Low-cost carriers entered short-haul markets, and service to many smaller markets improved. This was a sharp contrast to the predictions of many deregulation opponents. The number of flights taken by U.S. passengers has increased five-fold, from 207.5 million in 1974 to over 1 billion in 2018. Southwest Airlines, which had its first flight in 1971, eventually became the largest domestic airline when measured by total passengers. Air travel before deregulation was a luxury; today it is affordable for almost everyone. Meanwhile, safety has dramatically improved; fatalities per *billion miles traveled* has fallen from 3.2 in 1970 to 0.04 in 2019¹¹. Air cargo carriers FedEx and UPS dramatically expanded their services

⁷ This radical change in governmental policy was completed with the strong support of the Reagan Administration. Such changes are frequently diluted by following legislative and agency action, but the Reagan Administration instead brought home the full benefits of deregulation by resisting such backstepping.

⁸ This commission was established in 1887 to administer the economic regulation of the railroads. It ruled on mergers, pricing, train annulments and track abandonment. It is a little-understood fact of the 1980 deregulation that the new freedom to abandon track was the most important aspect of rail deregulation.

⁹ Washington retains a by-exception capability to regulate transport economics in the Surface Transportation Board (STB). Action there is largely limited to rare railroad rate cases. The STB would be one likely custodian of brokerage regulation although the initial regulatory proposals point to a home in the Federal Motor Carrier Safety Administration.

¹⁰ The airlines quickly discovered that leisure passengers were highly elastic. Lower fares quickly increased volumes. They exploit those elasticities to fill the seats not occupied by the less-elastic business travelers.

¹¹ Source of aviation statistics: Broughton Capital. The last crash of involving a major U.S. carrier was the water landing in the Hudson in 2009. The last crash with major fatalities was in 2001. Since then, more than 600,000 crash victims have died on U.S. highways.

around the globe, leveraging the opportunity presented by deregulation to become the world's dominant forces in the fast-cycle logistics and rapid supply chain fulfillment demanded by the technology industry.

Even the railroads deregulated. Rail underwent changes every bit as dramatic. After decades of growing competition from the trucking industry, regulatory restraints on pricing, and mandates to provide services for which there was little to no economic demand, the rail industry was teetering on bankruptcy, with 22% of all rail miles already under bankruptcy protection. Those railroads which were not yet in bankruptcy were unable to adequately invest in track and infrastructure, leaving more than 47,000 miles of track that could only be used at significantly reduced speeds. A Department of Transportation report in 1978 predicted: "the industry would have a capital shortfall of between \$16 billion and \$20 billion by 1985." Instead, in the wake of deregulation, railroads downsized their networks, negotiated long-term contracts with shippers based on actual needs, and began to rebuild their infrastructure. Service steadily improved, and rails were eventually able to stem the loss of freight traffic to trucks. Since 1974 freight rail fares (pricing) have been cut in half (reduced by 51%), yet the industry has never been so prosperous. The U.S. publicly traded railroads produce the highest operating margins of any transportation mode, and over a half-trillion dollars have been reinvested in railroad infrastructure since 1980.¹²

Trucking was transformed by deregulation. Deregulation eliminated very significant barriers to competition in trucking by opening up access to all commodities and all geographies for any carrier who had fulfilled a simple set of administrative steps needed to obtain such unlimited authority. Carriers were also suddenly allowed to quote specific, confidential rates to customers who pledged future volumes. The result of those freedoms has been a rate decline of 45% in real terms despite three decades of tightened safety and environmental regulations¹³. Those improvements were achieved without the steady increases in size and speed prior to 1980¹⁴. Just as importantly, the geographic coverage and range of service options have exploded now that entrepreneurs can implement their ideas free of governmental restrictions. Not surprisingly, trucking has cemented its place as the dominant heavy freight mode, handling 45% of ton-miles, 60% of tonnage, and 85% or more of revenue¹⁵.

Trucking is unique in one important aspect of its structure: the size distribution of its players. The creative destruction of free markets has, for the other modes, emphasized the economies of scale that are often present in transportation. The rail and airline Industries have steadily consolidated, leaving their marketplaces dominated by a handful of oligopolistic competitors. Yet enough competition remains to encourage better service and achieve higher rates of asset utilization¹⁶. Those improvements, in turn, allowed them to generate higher profit margins, giving them greater access to financial market resources, which in turn empowered them to drive further consolidation and repeat the process. Only in the trucking industry, did attempt after attempt fail to consolidate the marketplace. Although large carriers do exist, more than a third of trucks are in fleets of

¹² Source: Broughton Capital

¹³ Source: Transport Futures

¹⁴ The 45% reduction has come despite a significant tightening of safety and environmental regulation that increased costs by at least 10%. That increase indicates that the regulatory benefits have exceeded 50%.

¹⁵ Source: Transport Futures

¹⁶ Size in the airline industry is also helped by large carrier control of airport capacity. In the rail industry, it is helped by the dependence of customers with only a single railroad's track serving a location.

less than 1,000 trucks, while a quarter are in fleets of 20 or less¹⁷. In the spot market, the small-fleet share of tractors swells beyond 50%¹⁸. Compare that to railroading, where six carriers perform over 90% of long-haul moves¹⁹ and in airlines where four firms carry 66%²⁰ of all passengers.

Many factors keep trucking fragmented. Why has one industry segment remained highly fragmented and welcoming to the smallest participants, while the others have consolidated and eliminated or marginalized the smaller companies? Why is the story of the trucking industry different? The answer can be found in four aspects of trucking:

First, trucks move across the landscape as individuals. Their operations are not constrained by the economies of scale of operating networks. Fly with United, and you MUST get to know their hub in Chicago. Same with Delta in Atlanta, or American in Philly and Dallas. Ship by truck, and your load goes straight to its destination with no intermediate handling. An owner-operator has the same per-mile costs as the biggest fleet if they are hauling the same cargo in the same lane.

Second, the extraordinary flexibility of trucking has created supply nuances that cater to the needs of shippers which make each of the 1.1 billion loads unique. With every load and every market niche different, there is ample opportunity for small carriers to specialize and create defensible positions in the marketplace.

Third, barriers to market entry vanished almost completely for both carriers and brokers with the 1980 law change. Authority is now granted to anyone who submits the required paperwork and demonstrates proof of insurance. This simple system is in stark contrast to the system it replaced. Before deregulation, a new entrant was required to demonstrate a market need for its service, usually in the face of opposition from incumbents. Carriers were often forced to return trucks to the terminal empty, so they operated more than 50% of all miles without pay. By contrast, before 1980, marketing in trucking had more to do with lawyers than entrepreneurial drive.

With only their operating authority and a low-priced, used truck, today's entrepreneurs can enter the trucking industry and go from anywhere to anywhere for whatever rate they are willing to accept.

Fourth and finally, a collection of brokers emerged to link customers of all sizes with this enormous number of small operators. The 1980 law also eliminated most restrictions to brokerage entry, transforming a collection of small, exempt-commodity brokers and a handful of generalist brokers into the modern, 15,000-strong truck brokerage industry that actively matches 350,000 to 400,000 loads with trucks every day.

Aside from carrier size, how else has deregulation changed the market? As pointed out above, the economics of a move are now far more specialized. Under the entry limits of regulation, a carrier could control a particular geography for a range of commodities, courtesy of its authority. The historical limits to entry also affected the

¹⁷ Source: Fleetseek. Note that, when measured by number of fleets rather than by number of trucks, fleets of 10 or fewer trucks represent over 80% of the fleet count.

¹⁸ Source: Transport Futures

¹⁹ Source: Transport Futures

²⁰ Source: Statista

split between LTL (less than truckload) and TL (truckload). Under the old system, the limitations on 'authority to operate' (ability to provide service) funneled traffic more suitable for full truckload into the expensive rate and cost structure of LTL networks. With deregulation, those loads quickly migrated to low-cost truckload operators, as did partial truckloads that could be consolidated into directly delivered (from origin to destination) full truckloads. Those tactics bypassed the high cost of LTL and improved both the speed and reliability of service. Such changes are a great example of the dynamic interactions between load assignment and supply chain design that are afforded by a flexible transportation system.

As a result, the medieval world of pre-deregulation traffic departments morphed into a world of sophisticated transportation management with far more visibility into supply chains. The new transportation field opened up potential career paths for professional supply chain managers who gained access to corporate management, as well as a chance to be promoted to those ranks.

Walmart is only one of the many success stories that were created and enabled by their logistics management team and its ability to make their supply chain more responsive at a lower cost than their competitor, perhaps owing that success as much to the logistics expertise as to the retailing prowess for which they are publicly recognized. Simply put, Walmart's success in retailing was made possible by their best-in-class supply chain and the transportation management professionals who built and ran it.

Did the customers, carriers, and shippers change as a result? When one looks under the hood of this powerful American economic engine, one sees equally revolutionary changes in carrier operations and, especially, shipper use of transportation. On the carrier side, we have a proliferation of carrier types, supporting suppliers, and broker managers. More than 500,000 firms participate in American trucking, a 200% increase since 1980²¹. This is the supply side of the market, a complex amalgam of players, all competing obsessively, most of whom were established since 1980. Again, this explosion of business creativity has occurred despite a steady decline in real²² transportation rates.

On the shipper side, entire supply chains have been transformed by the capabilities of deregulated trucking. Sam Walton was an early 'miner of this gold,' realizing that discount retailing was more an exercise in supply chain management than advertising and store building. His concept of Black Friday was made possible by truckers' abilities to position extra inventory at the stores for the day after Thanksgiving. Remember those trailers stuffed with TVs in the parking lots on that hectic day? Of course, now we have Amazon's Jeff Bezos doubling down on Sam's innovation, creating an online shopping experience with a manifold increase in choice, enhanced price and quality discovery, superior convenience, and almost the same response time as brick and mortar retailing. Such service would not be possible without a dynamic transportation industry.

What about broker customers? Deregulation has likewise enabled the explosion in spot market demand since 1980. Remember that before 1980, people were seldom even aware of the trucking spot markets that existed in limited niches, like moving lettuce east from Salinas, CA, to Chicago or Boston. When handling special services, irregular transport moved in one of two limited ways: 1. Customers who had good relations with large carriers would lump their unusual loads ("bad" freight that was hard to handle) with their regular loads ("good" freight that was easy to handle.) If the overall contract was attractive enough, the bad freight would move under the

²¹ Source Transport Futures

²² "Real" rates are those rate measurements that are corrected for inflation, i.e., total rate increase minus the rate of inflation.

same rates as the good freight, creating a distorting cross-subsidy that encouraged sloppiness in supply chain management. If the contract was not attractive, the freight perceived as "bad" would languish on the dock until a carrier with authority just happened to have some excess capacity. This vague approach to pricing created a situation where potentially valuable freight (viewed as "bad") was delayed or even destroyed in value by unreliable service²³. 2. Alternatively, a shipper could negotiate a contract covering that "bad" freight at extremely high costs. This is only one way the supply chain geometry was distorted by regulation.

Deregulation has enabled the expansion of markets. With deregulation, suddenly, Sam Walton could move those special, seasonal loads at a reasonable cost that was low enough to accommodate the price reductions in the Black Friday sales. In turn, Sam saw that such transport-enabled sales would boost sales volumes and revenues across the entire store. Transportation and logistics management rapidly became a critical competitive factor for large retailers. Consequently, anyone who toured the distribution centers of both Walmart and K-Mart in the early '90s could not have been surprised by the subsequent success of Walmart and the eventual demise of K-Mart.

Intermodal movement of containers from the nation's seaports has also benefited from deregulation. Intermodal is one rail mode free of the franchise constraints of other rail modes. Before deregulation, railroads could legally collude on box movement from the West Coast ports to the Midwest. As rational oligopolists, they voted for high rates at the expense of volumes. The radical opening up of this market under deregulation reversed that choice, forcing a revolution in cost control and service expansion that are the foundation of today's successful market, and a cornerstone that enabled global supply chains. Intermodal is a rare example of rail gaining share from trucking, a development that is clearly related to its deregulated, open-market status²⁴.

Deregulation has created greater segmentation among carriers. One can also see the effects of deregulated brokers in the structure of the carrier side of the trucking equation. At one end of the scale are the mega-carriers, including J.B. Hunt, Knight Swift, Werner, and Schneider National. These carriers specialize in relationships with large shippers who want to cover tens of thousands of loads with a limited number of annual contracts. It is important to understand that for a large shipper such as Walmart or Procter & Gamble, verifying the authority to operate, monitoring the safety rating, and confirming the insurance coverage of thousands of small truckers would be cost-prohibitive. That is even before considering the cost of negotiating service and rate contracts with each.

All that administrative cost is not justified when qualifying a small carrier who is only going to move a few loads per year. Only the biggest carriers have the scale and geographic scope to handle the volume of loads that large shippers need to move.

²³ Despite its designation as "bad," such freight is frequently the shippers' most important freight due to its exceptional nature. Bad freight includes loads for promotions or emergency resupply, for example.

²⁴ Although all rail pricing is currently deregulated, 60% of more of carload traffic is controlled by a single, serving railroad. When presented with that advantage, the railroads choose margin over volume to the point of earning operating margins of 40% or higher.

Even among the largest companies, however, the market has progressively segmented into dedicated, national, and regional segments, each with an operating and cost profile precisely matching the characteristics of their huge customers. There is no need to apply for governmental authority to set up those segments. The carriers just adapt their segmentation to the market. Also, many of these carriers have brokerage divisions that function as low-cost transactional organizations to serve the special needs of the large customers' spot volumes. In the same way, there are large brokers such as CH Robinson, Echo Logistics, and Tucker Worldwide, who contract with large customers to cover major chunks of spot market volume through their access to the affordable capacity that is often provided by small carriers.

The accusation that “brokers prey on small truckers and owner-operators” is not only flawed, but is precisely the opposite of the marketplace reality.

Small truckers have thrived in a deregulated market. Importantly, low cost and flexibility are critical to spot market operations. That is because the irregular nature of the spot market makes it a high-cost option with increased transaction costs and lower asset productivity. It is simply harder to match capacity to uncertain demand. The spot market is expanding and thriving because of the development of two specialized capabilities.

First is the brokers' ability to flexibly match capacity and demand in a rapidly changing, unpredictable marketplace.

The second key capability is the development of low-cost capacity. These fleets have very low overhead, no sales or marketing department, no dispatching or maintenance department, no accounting department or HR department, no fancy office building or multiple terminals. They have only minimal administrative costs, and no senior management team or board of directors to compensate. An independent owner-operator with only one truck has no driver recruiting expense.

We estimate that the cost of non-driver wages (sales, dispatch, accounting, HR, etc.) adds \$0.13 to \$0.15 a mile for most large fleets. After all the other incremental costs and overhead of a large carrier are included – or for a small fleet, not included – we estimate that \$0.27 to \$0.44 per mile or 17% to 28% of additional costs, including fuel, are required to support a large fleet.

Small truckers first survive and then thrive by not requiring those functions, or outsourcing the functions to brokers. While those functions enjoy economies of scale that large fleets can justify, the small carriers pay a percentage of total revenue to the brokers in lieu of incurring that overhead. The percentage paid by the small carrier to the broker comprises the margins that are the subject of the current disputes.

The result is low-cost but profitable small carriers. Over the last ten years, the average difference between contract and spot pricing was \$0.21 per mile or 15%, while the gross transportation margin for the largest brokers averaged 14.6%²⁵. Assuming brokers provide most of the services that cost a large fleet \$0.27 to \$0.44 per mile in-house, while the small trucking company operates without those services, the small truckers are \$0.06 to \$0.23 a mile more profitable even after paying the broker a margin to perform those services.

²⁵ Source: Broughton Capital

This suggests that small carriers incur additional costs due to lower rates of asset utilization and higher levels of empty miles, which lower the revenue per truck and increase the operating costs per mile compared to larger fleets. However, those costs are not material enough to cancel out the \$0.06 to \$0.23 per mile cost savings achieved by outsourcing to a broker.

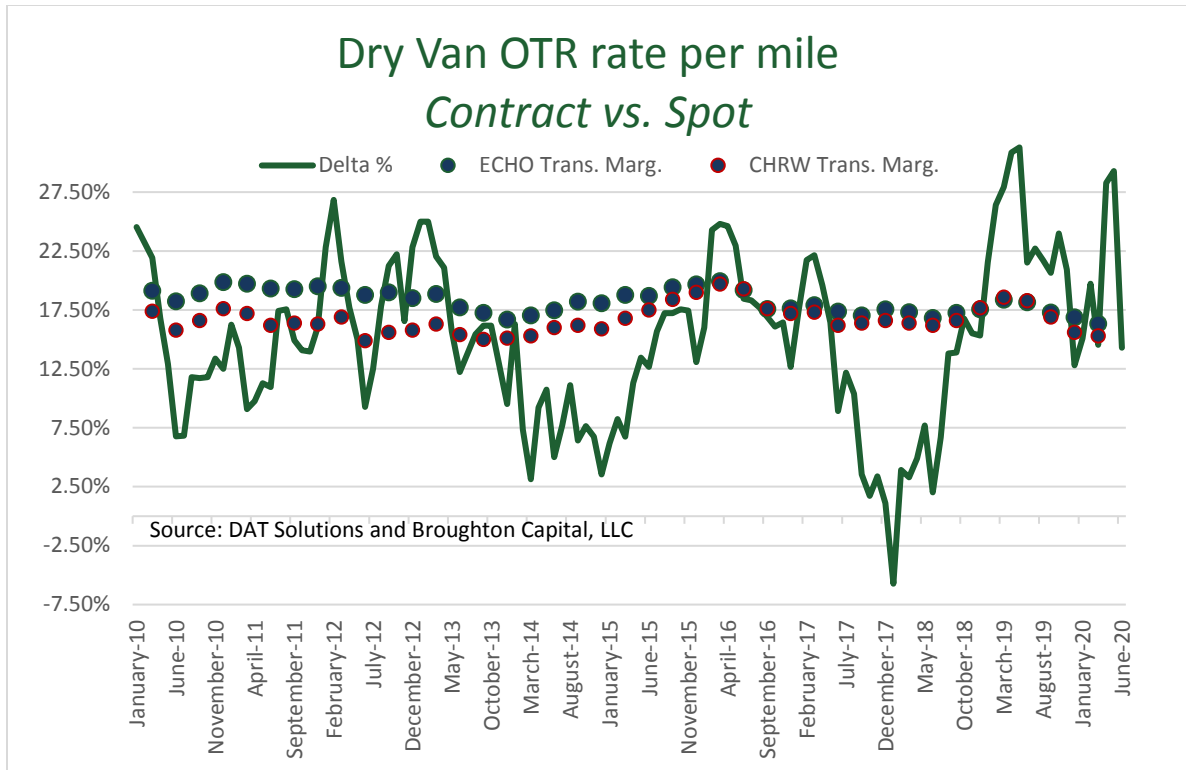
	Larger Fleet				Small Fleet or Independent Owner-Operator	
	Fleet A		Fleet B			
	Per mile	% of cost	Per mile	% of cost	Per mile	% of cost
Wages <i>Driver</i>	\$ 0.86	43%	\$ 0.83	45%	\$ 0.74	47%
<i>Non-Driver</i>	\$ 0.15	8%	\$ 0.13	7%	\$ -	0%
Fuel & Fuel Taxes	\$ 0.13	7%	\$ 0.13	7%	\$ 0.15	10%
Operations & Maintenance	\$ 0.24	12%	\$ 0.20	11%	\$ 0.18	12%
Insurance & Claims	\$ 0.15	8%	\$ 0.13	7%	\$ 0.15	10%
Communications & Utilities	\$ 0.03	2%	\$ 0.03	2%	\$ 0.03	2%
Depreciation	\$ 0.32	16%	\$ 0.29	16%	\$ 0.30	19%
Other SG & A	\$ 0.13	6%	\$ 0.10	5%	\$ 0.02	1%
Total	\$ 2.00		\$ 1.83		\$ 1.56	

28% **Discount to Fleet A**
 \$ 0.44 per mile

17% **Discount to Fleet B**
 \$ 0.27 per mile

Source: Broughton Capital LLC and Company documents

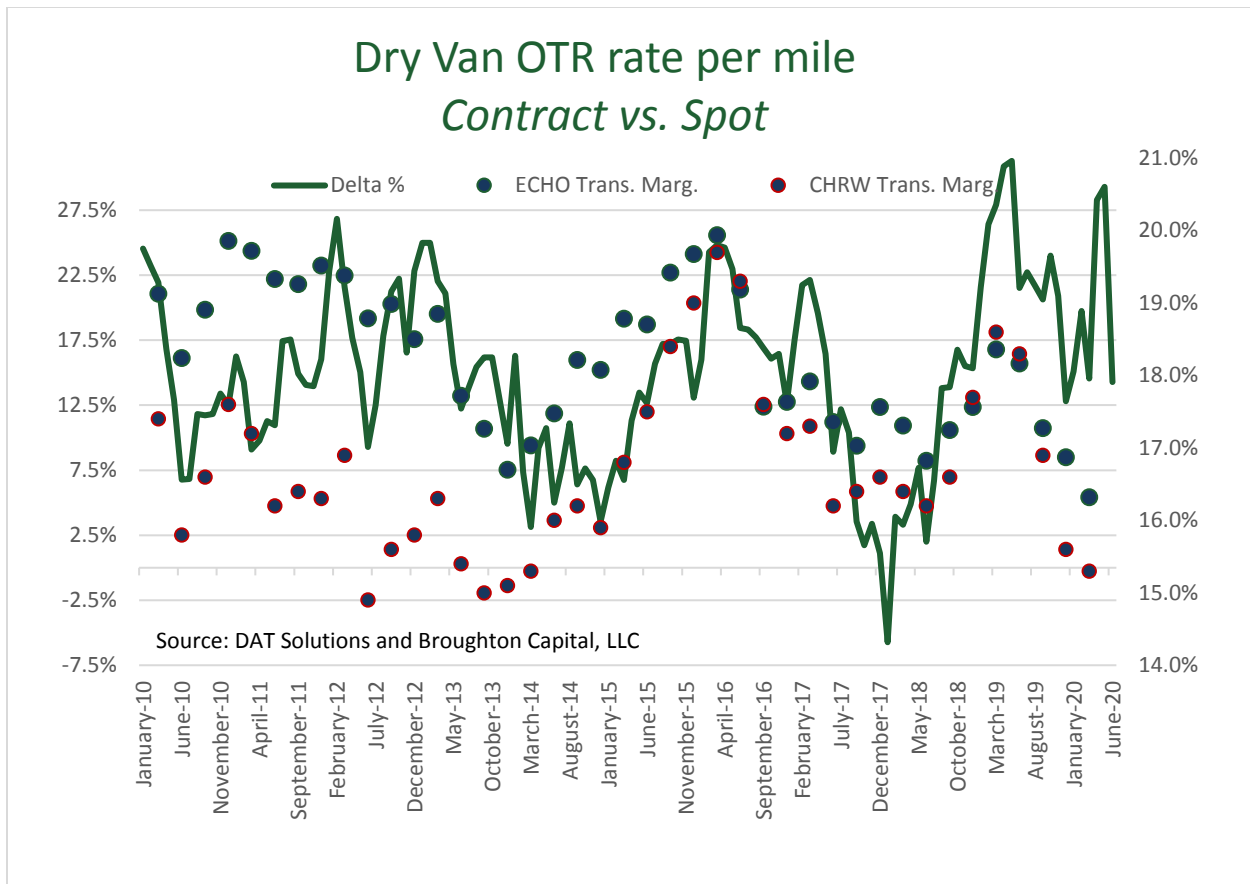
Spot rates vary dynamically. Focusing on the last ten years, the largest gap between contract and spot pricing emerged in May 2019, at \$0.46 a mile or 31.3%, before closing quickly to \$0.34 or 21.5% in June 2019. Gross profit margins did improve notably for the large publicly traded brokers during that timeframe, but nevertheless averaged only 16.0% in 2Q '19, far short of the 20%-plus gross margins achieved briefly in the Q3 '15 through Q2 '16-time frame.



Broker margins do not determine freight pricing. When comparing the magnitude of the difference between contract pricing and spot pricing and the gross transportation margin reported by two of the largest publicly traded truck freight brokers (CHRW & ECHO) there appears to be no meaningful relationship. This also runs counter to the “wisdom” offered as gospel by the advocates of regulating brokers, limiting their margin, or requiring them to disclose the contract pricing or margin anticipated.

Statistically, correlations below 50% and R-square values below .25, depending on the mode analyzed (dry van, reefer, flatbed), drive a few final mathematical nails into the coffin of that so-called “wisdom.” Over the past 10 years (as determined using 126 months of data as reference points) there is no statistically significant relationship between the contract-to-spot pricing gap and the gross transportation margin achieved by trucking freight brokers.

In fact, in order to extract the appearance or suggestion of a causal relationship, the gross transportation data must be magnified by a factor of 5.5X (31.5% to -7.5% is a range of 3900 basis points vs. the range of 21.0% to 14.0% or 700 basis points).



When times are good for all truckers, they are particularly good for spot market players. We should point out that spot pricing at times exceeds contract pricing for brief periods, making the economic advantages even greater for operating a small fleet and outsourcing sales and administrative functions to a broker²⁶. Since these periods of high spot rates almost always coincide with very strong demand, the minor headwinds of lower asset utilization and higher deadhead are probably significantly reduced or eliminated during these periods, increasing the economic returns of small truckers even further.

Further, while the average difference was 15%, any periods in which the gap is narrower are periods when the trucker receiving the spot rate is getting an even smaller discount compared to the trucker receiving the contract rate. This further illustrates how unfounded are the complaints about the disadvantages accruing to truckers who receive the spot rate for their services.

For 50% of the months in the last 10 years, the difference between spot rates and contract rates was less than 15%, and in 25% of the months the difference was less than 10%. Further, in 10% of the months the difference was below 5%. This data leads to the proposition that not only is the smaller trucker, with the assistance of the broker, more economically prosperous than the large trucker when the contract and spot pricing are at their average level of difference, but in a substantial number of months the smaller trucker, with the assistance of the

²⁶ Please note that the spot pricing referenced in this paper is the compensation received by the carrier. It does not include the broker's margins, which are then added to determine the spot price paid by the shipper.

broker, is extracting even larger amounts of outsized economic profit. Note that each 5 percentage points represent approximately \$8,500 in additional revenue on an annualized basis, and this incremental revenue accrues without any material incremental cost. We estimate that pre-tax operating profit increases by over \$25,000 per truck incrementally on an annualized basis during those months where the difference between contract and spot is less than 5%.

Open markets adjust quickly. It is important to note that without this easy path of entry into the truck market, new capacity would come in much more slowly, and with less flexibility, given the difficulty of setting up the assortment of support functions which are necessary for truck operations and can instead be relegated to the broker.

DISCUSSION - PART 2: The broker's position in the market

What is a broker? A broker in any industry is a person or company that brings together buyers and sellers and who facilitates transactions by handling communication, paperwork, and monetary flow.

Amazon is the world's most visible broker even though they brand themselves as a retailer (or e-tailer). Amazon links the consumer with sellers. It grows market share, the volume of products sold, the range of products it offers, and the revenue it receives from the consumer, before passing most of that revenue on to the seller of the products, using its highly developed online platform. Amazon does not produce the products it sells. It merely invests in more and more IT. That IT facilitates a continually improving level of marketplace transparency, better and better price discovery and higher levels of quality discovery. So advanced is its IT platform and capabilities, that Amazon generates highly profitable revenue (\$35 billion in 2019) through its Amazon Web Services (AWS) subsidiary that provides on-demand cloud computing platforms and APIs to individuals, companies, and governments, on a metered, pay-as-you-go basis.

Some people don't like brokers even though they need them. Cargill is another example of a large broker, only with a concentration in raw materials. Amazon and Cargill join most other brokers in having to deal with the stigma of being an intermediary, a middleman. People assume that it is easier and more effective for the buyer to deal directly with the seller. However, consider the convenience and capability of Amazon next time you log on to buy a book, especially an unusual one. How would you find the bookstore that has your book? How would you know if you can trust them with your credit card? How can you be sure they will accept a return? Are there any other bookstores which have the book you are looking for? How much do they want for it and what condition is it in? You approve the purchase because Amazon, your broker, handles all that, just as a truck broker finds, secures, and manages loads and capacity.

Brokers handle the problem freight. The key to understanding the truck broker is in the word "unusual" with a strong connotation of "difficult." That is because truck brokers handle the "unusual" freight, whether it be a sudden increase in volume, a new destination, a special service need. Such requirements come up suddenly, unpredictably and must be handled on the "spot," hence the term "spot market" which is applied to most truck-brokered freight. There are two particular characteristics of this freight: First is the difficulty in finding capacity for such transitory and volatile demand. The second is the need to conduct an individual transaction for each move. The repetitive moves of contract freight are far easier to organize under an overall governing transaction, the contract. Moving trucks from where they are to where they will be needed can be carefully planned in a

fully deliberate pace that optimizes efficiency, maximizes utilization and minimizes cost. The sharp contrast between contract market services and spot market services is substantial, but that doesn't prevent the uninformed, or those with another agenda, from focusing only on rate, or trying to make "apples to oranges" comparisons.

Brokers specialize. Our earlier example of an Amazon book order contains another important characteristic. Odd books tend to be stocked by small, specialty booksellers subject to the particular book suppliers of that sellers' interests or geography. In the same way, carriers and the brokers who serve them usually specialize in a geography, commodity, or service. For instance, our friends at RSL Logistics specialize in the LTL movement of temperature-controlled food, a likely outcome for a broker located in the agricultural area of Southern New Jersey. Such specialization ensures that the shippers in this difficult market segment get the reliable service they need. Specialization also means that each broker's charges are different, according to the services required. RSL provides consolidation and temperature-controlled storage, something the average broker does not provide. By necessity, the company charges more for its uniquely valuable service and expertise.

Small is beautiful but hard to reach. Specialization is but one of several reasons why much of the capacity in the spot market is provided by owner-operators or small fleets. Brokers form a useful interface between the universe of small capacity providers and shippers. Most shippers maintain lists of ten or fewer preferred carriers for contract moves. However, that same shipper's spot market volume may move through a list of hundreds of carriers, with the assistance of a handful of brokers.

The shipper substitutes a short list of preferred brokers for a necessarily very long list of spot carriers, so the broker handles all that complexity. In the same way, brokers make it possible for carriers to reach and serve the thousands of small shippers. The key takeaway is that truck brokers are specialists in managing the complexity of linking supply and demand in the highly complex, highly transactional, often fragmented spot market.

Brokers exist because carriers prefer to concentrate on operating trucks, and shippers prefer to concentrate on manufacturing or selling their goods. Both sides outsource the matchmaking, accounting, company qualification, tracing, and administrative tasks to the broker in this difficult market. Because that outsourced work is labor- and technology-intensive, it is costly, hence the average broker "margin" of 16% of the full price for moving a load²⁷.

Note that the broker's "margin," as referred to in this paper and commonly in the industry, is the portion of the total gross revenue of a move that is the broker's compensation for the brokerage work performed. As such, it is not, as commonly thought, a "profit margin." It is mostly compensation to cover the broker's costs. The broker's net profit margin is the small percentage of the full gross margin that is the owner's reward for the capital and entrepreneurial effort required for success.

A word about the definitions. Brokers, broadly defined, have a wide range of vertical integration in truck-based supply chains. Some brokers provide significant additional operational services to include trucking, material handling, warehousing, and even subassembly. Some brokers take on other management services, usually for shippers, to include transportation management. Such brokers are then called third-party logistics providers (3PLs.) The two terms have become interchangeable, as all 3PLs are brokers, and most brokers are also 3PLs.

²⁷ There is no fixed amount or percentage for the broker's margin. The fee is determined by the services rendered and market conditions.

Since all providers offer the intermediary brokerage services that are the focus of this report, we will use the term “broker” to represent all the firms in question.

Have transportation brokers always been with us? In fact, this basic supply function has been with us since the days of the early Egyptian empires, thousands of years ago. However, as we said in the introduction, the brokers of today's U.S. trucking market have existed in meaningful numbers only since the 1980 deregulation of trucking. Again, trucking was regulated almost from the start of intercity trucking, with the completion of the national paved highway system in the 1930s. At that time, the Depression-stressed railroads persuaded Congress to regulate entry and pricing in trucking to protect the declining rail freight business from the emerging modal competition. Railroads had been regulated since the Interstate Commerce Act of 1887. It is no coincidence that trucking regulation was created more for the benefit of the railroads, a competing industry, than to advance the needs of the public. Such distortion of the original aims of regulated industries is sadly a common occurrence.

Brokers appeared in the deregulated segments. Given the inflexibility of regulated trucking, brokerage was slow to develop as the industry matured. Before 1980, truck brokerage was limited to less than twenty general freight brokers. Still, it was common in the movement of commodities exempt from regulation, generally agricultural commodities and a minority of packaged goods. CH Robinson, for instance, got started in truck brokerage by using the long list of carriers it had built to move its own fresh produce, to find spot capacity that other food shippers desperately needed but had no way of finding.

As the most flexible actors in the trucking market, brokers are particularly sensitive to regulatory restraints. It is important to note the negative correlation between the growth of brokered services and regulation. Regulation stifled the flexibility required to run a brokerage in the same way it inhibited the growth of the spot market. Shippers had much more difficulty finding cost-effective carriage for their non-standard spot moves until deregulation. Subsequently, brokers were allowed to provide more market accessibility to shippers looking for trucks, and trucks looking for loads to move.

Prior to deregulation, that gap was a major constraint on the development of effective supply chains. As a result, transportation departments in shippers' supply chains were seen as simple cost minimization and auditing functions, while the commercial departments of carriers were more about obtaining expensive rate authorities and entertaining clients than efficiently finding loads. The carrier that had the proper rate authority and the best football tickets got the business, regardless.

Brokers wear many hats in a deregulated market. In the same way, open entry has spawned the creation of a bewildering array of brokerage services of all sizes and shapes from the mega-firms like CH Robinson and Echo Logistics to the smallest broker serving a single town in central Montana. Each entity is adapted to a particular market niche protected from competition only by its specialized match to the demands of that niche. CH Robinson doesn't want those ten loads a month from Glendive, MT, so the local broker thrives in its hometown.

Importantly, such specialization creates a large collection of optional specialized services, like real-time location tracking, product security, and temperature control. Each service is priced into the broker's margin, creating a range of brokers' margins. In addition, as a brokerage integrates itself into either the carrier or shipper side of the equation, the very idea of a separate brokers' margin disappears. A third-party logistics provider charges its shipper customer for the entire transport management function, combining broker and traffic department fees into a single price to the shipper.

The market, in its wisdom, has created and priced a multitude of services, either separated or combined according to the customer's needs. We see a similar effect with Amazon's free shipping for its Prime customers and products. Of course, there is a shipping cost. Amazon recognizes that a consumer does not care about the embedded shipping costs for products purchased in a brick-and-mortar store, nor does the customer want an itemized breakout of those shipping costs. So, why should online shopping be any different?

What do brokers look like today? There are approximately 15,000 firms in the U.S. that have authority to broker truck freight. About 8,000 of them move freight on a regular basis. Among those brokers, approximately 1,000 control 85% of the revenue²⁸. Brokerage accounts for \$170 billion in annual freight revenue. At an average gross margin of 16%, that translates into \$27 billion in net revenue for the brokers. Such is the value of the services brokers provide²⁹.

That broker revenue has grown by 7% compounded annually since 2002, which is a testimony to the enduring value of brokerage services. Moreover, the growth of spot market functionality and small fleets, which brokerage so clearly supports and enables, is testimony to the positive effect of brokers on supply chains. Total spot market revenue has grown by an average of 5.1% per year since 2000, despite two market collapses, including the events of 2020.

We assert that broker revenue has grown faster than the overall market because of the value brokers have created. As buyers and sellers try to capture that value, they have steadily increased their reliance on broker services. They are generally content to allow brokers to earn a profit, especially since the economics of brokerage are improved for both buyers and sellers even after the broker's percentage is included.

Three basic levels of integration

Brokers can be segmented by the degree of their integration with shippers.

1. **Intermediaries:** All brokers provide a basic intermediary service, linking shippers with the carriers that ultimately move their loads. Intermediary service is the core function discussed in this paper.
2. **Transportation managers:** Some intermediaries also take responsibility for managing a shipper's transportation needs, becoming, in essence, the customer's traffic department. Commonly called third-party logistics providers (3PLs), these companies schedule and tender loads, negotiate price, pay, audit bills, and manage every process from the introduction of a pallet into the shipping queue to its acceptance at the receiving location. Importantly, such providers have a profound fiduciary responsibility to the shipper, to include minimizing price and securing superior service. 3PLs are not neutral players in a market, as "pure" brokers frequently are, when the latter provide intermediary services only.
3. **Supply chain managers:** Some 3PLs also take responsibility for managing a shipper's full supply chain needs, becoming in essence the customers' supply chain department. Such providers, often called 4PLs, will

²⁸ Source: Transport Futures.

²⁹ Source: Transport Futures. In a world of significantly incomplete data, estimates of broker revenue range from \$70 Billion to \$200 Billion.

influence production schedules, shipment volumes, directions, service levels, and supply chain timing. They appear to the market more as a shipper than as a broker. We see this blending today in Amazon's forays into the brokerage market. Indeed, many carriers have difficulties determining the distinction between Amazon as a neutral intermediary and Amazon as a shipper.

Who owns the brokers?

Brokers can also be characterized by ownership. On one vector, we have the difference between private ownership and investor ownership. Most brokers are privately owned, with the owners' or founders' family members often engaged in managing the enterprise. A smaller proportion is owned by equity investors in the same way that Warren Buffet owns BNSF, the railroad. GlobalTranz is a well-known example of an investor-owned brokerage.

There is also a small number of very large firms whose stock is publicly traded. These companies, exemplified by the giants CH Robinson and Landstar, earn a disproportionate level of interest and attention because of their size and the presence of publicly available financial information. That such information is endlessly examined by stock analysts further magnifies interest in this segment. Since most stock analysts have never routed a single piece of freight, explanations for shipping customers behavior or trucking company conduct are often nothing more than fiction constructed to concur with their latest investment thesis.

What services are provided by the broker?

The second major ownership segmentation has to do with other supply chain services provided by an owner.

1. **No other services:** Many small to medium brokers provide only broker services. They meld a collection of carriers and shippers into a book of business, limiting themselves to the basic business of matching capacity and demand.
2. **Carrier services:** Many large carriers maintain brokerage services as a means of diversifying either capacity or revenue. In the same way, some medium-sized brokers move into carriage to earn incremental revenue. Schneider National's brokerage and carriage arms are a good example of the combination of carriage and brokerage.
3. **Supply chain services:** 3PL and 4PL brokers will frequently offer warehousing, material handling, and administrative services. Echo Global and XPO Logistics are premier examples.
4. **Shipper connections:** It is even common for shippers to supplement their capacity management with open-market brokerage. That makes them both a shipper and a broker/carrier. Cargill is a good example. At the extreme, a shipper with critical mass in size or service may choose to diversify into brokerage as a major business endeavor, just as Amazon has expressed an interest in a significant expansion into truckload freight brokerage. Amazon has already achieved this position in the provision of cloud computing services, and it has made significant investments in warehousing, fulfillment centers, the purchase or lease of local

delivery trucks, the lease of trailers, and the wet lease of airplanes. Amazon's parcel volumes still represent only a small fraction of FedEx's and UPS's business, so it is still far too early to predict whether Amazon will gain the critical mass or route density to become a competitive parcel and express delivery network for volumes other than its own. Walmart has long since achieved such scale in trucking, but has limited its freight involvement to moving its own goods³⁰.

5. **Supporting services:** On rare occasions, a broker will also sell supporting services publicly, just as Schneider National once sold its TMS software.
6. **Technology-supported services:** Much more common are the many service businesses that sell to the broker community, often encroaching on the brokerage space, knowingly or unknowingly. Load boards, those web services that aggregate loads and trucks for their customers to match, are a good example. The work of collecting, finding all the loads that do not have trucks and finding all the trucks that do not have loads and are available to move those loads, used to be a prime function of a broker until the DAT load board was established by Al and Fred Jubitz in 1978, followed by Truckstop.com's Scott Moscrip web-based marketplace in 1995. With access to DAT and/or Truckstop.com, the broker can now concentrate on matching the right load to the right truck, and complete the administrative work necessary to move the freight to its destination. There are dozens of other examples, including providers of freight bill factoring and transportation management software. The boundaries will continue to blur between such services and the brokers themselves, as digital freight matching technology advances.

Brokers manage complexity

Is it really that complicated? Yes, and more so. However, the core of brokerage service boils down to three fundamentals. Labor comes first. Part of that is the phone calls or e-mails to find capacity, find loads, make connections, and then ensure that loads move properly. Such work makes up about 50% of a broker's costs, and quickly explains XPO's technology initiative that focused on the complete elimination of all typing from their employees' daily activities.

If labor is the single largest component in the cost of a transaction, then anything that makes the labor more productive or lowers the amount of labor needed per transaction will lower that broker's transaction cost and make them more competitive in the market. That said, labor will always be a part of the transaction. People are instrumental in developing the relationships that are an essential component and a crucial differentiation in any broker's service offerings.

Because of the complexity of the matching function, a carrier or shipper must know that his or her broker is providing the 'right' loads or trucks for that customer's needs. Determining what is 'right' demands an intimate knowledge of the customer's business, supply chain requirements, nature of the product, and the economic balance between cost and service. These requirements are different for each customer, and are often different for each product of each customer. Moreover, the customer must trust that his or her needs will be emphasized

³⁰ Walmart owns a large delivery fleet and has developed a robust ability to find backhauls for trucks returning from store drop-offs.

by the broker despite the availability of many alternative opportunities as well as conflicts of interest. This distinction is critical in determining both the value of a broker's offerings and the cost savings that will be made available as the labor content is increasingly automated.

Information Technology is growing. The second fundamental is technical, including the communications, computing, and information storage that are at the heart of a brokerage operation. Such capacity is rapidly growing to the point that it will become the prime cost factor in the next decade. Keep in mind that both labor and technological services must be available 24/7 and be reliably backed up. Such requirements increase brokers' costs well above a simple calculation of cost-per-load-matched.

Cash is king – a third fundamental. Think of a brokerage also as a bank. The broker must accrue the cost of each load as it moves. Then after receiving proof of delivery, the broker must pay the carrier, including fuel surcharge, and also pay all internal brokerage costs³¹. The broker must then wait 30 or more days before receiving payment from the shipper. Hence, what begins as a bookkeeping entry becomes an immediate cash drain. In essence, during the four to six weeks between paying the carrier and getting paid by the shipper customer, the broker acts as a lending bank to the carrier.

The money may spread across a broad geography. The number of offices for a given brokerage varies with the company's size and geographic focus. A company with comprehensive national coverage like CH Robinson may have a hundred or more locations, while a local specialist has one. What's important is each office must have an intimate knowledge of the geographic area of its service. That usually means a physical location in the relevant area.

The amount of money depends on the depth of the work. While a simple freight matching service can add \$240 or more to a broker's monthly overhead, a broker providing ancillary services can build up additional costs very quickly. The following list mentions just a fraction of the many possible services: load tracking, delivery confirmation, product monitoring, ETA notification, packaging, warehousing, picking, security, factoring, auditing. A broker's margin can easily double depending on what services a shipper requires. Put differently, the broker is managing all this complexity so the carrier can concentrate on driving safely.

A trucking stock exchange? – fundamental four. To complete this review of brokerage functions, consider this presentation of a seldom-appreciated aspect of the brokerage market. The partnership between brokers and information-collecting suppliers like DAT and Truckstop.com mimics the information function of the New York Stock Exchange. Every day, millions of businesspeople follow prices on that exchange as an indicator of both the values of companies and also the health of the broad business world itself.

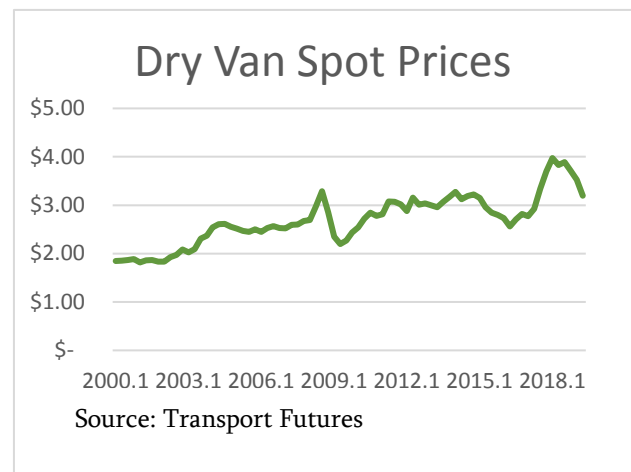
As a result of the partnership between brokers and these service providers, players in the truckload market for the first time in history have real-time information on conditions in that market. Access to such information is one reason why large asset-based carriers maintain brokerage divisions. They use that function in part as a barometer of market conditions. Such spot market involvement is especially valuable because spot market activity is a reliable leading indicator of overall market conditions. What's happening now in brokerage will be happening everywhere after just a little time has passed. Brokers are acting as a valuable lubricant to capacity and pricing management.

³¹ Those costs include salary and commissions for sales associates and other personnel, technology, communication, access to marketplace data, accounting (payables, receivables, collections, etc.), qualification of carriers' authority to operate, confirmation of insurance coverage, and capital carrying cost.

DISCUSSION - PART 3: Recent crisis and calls for re-regulation

I'm hurting. It must be somebody's fault. Recently, the trucking trade press has been full of reports of a dispute between carriers and brokers. This dispute has as its root a serious deterioration in market conditions. The truckload industry, especially the spot market segment, has recently come off a remarkably high peak period caused by regulatory change³² and a strong economy. Capacity utilization approached record levels as did rates, climbing 48% from the beginning of 2017 to mid-2018. However, as has been the case in many market cycles before, the peak conditions disappeared, quickly moving spot rates back to and below normal levels. In the year following the 2018 peak of early July, spot rates fell by 22%³³. Such a fall caught the market unprepared, given the significant increase in capacity encouraged by the record rates of 2018. This difficult situation became critical in March of 2020 when an already-weakening market plunged another 26% as state governments imposed strict economic limitations in response to the COVID virus. In this environment of great carrier stress, low rates, and depressed volumes, it is natural for the stressed parties to view other participants in the supply chain with suspicion, reasoning that such extreme conditions cannot solely be the result of impersonal market forces. Accordingly, some spot market carriers have accused the brokerage industry of profiteering at their expense. That is a troubling conclusion because, in times such as these, the carriers need the brokers more than ever as a source for scarce loads.

This market has its share of bad times. There are three reasons why such a conclusion misses the mark. The first is the well documented history of the U.S. truckload spot market. Since 2000 there have been three significant downturns in spot revenue: one in 2008, a second in 2016, and the current event. Moreover, the history of truckload pricing shows the same cyclical pattern, producing five downturns between 1970 and 2000 despite very strong underlying growth. Although this downturn qualifies as an extreme event, sharp downturns are a normal circumstance in this market, including three other events that rival this one.



Sometimes I hurt. Sometimes you hurt. Unfortunately, this data shows us that the U.S. spot market is inherently cyclical and thus inherently stressful. That it has grown by 158% since 2000, a third faster than the truckload contract segment, proves that carriers can manage the volatility and indeed prosper³⁴. As to the claim that brokers profiteer during those downturns due to the vulnerability of carriers, one must reconcile those economics with conditions at the other side of the cycle. The same market power logic applies to carriers in times of scarce capacity. Would not those conditions make the brokers vulnerable to carriers? So, if the downturn accusation is true, then it is a manifestation of the economic cycle and is offset by positive carrier conditions in the upturns. No one should deny that carrier economics change during the business cycle, but these are not due to changes in broker behavior, rather a result of natural market changes.

³² When safety regulations are tightened, carrier productivity usually declines and capacity tightens.

³³ Source: Truckstop.com, Transport Futures.

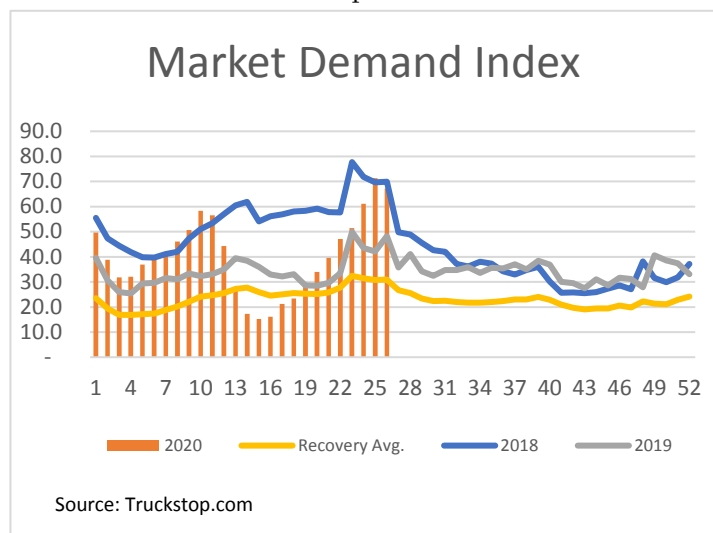
³⁴ Source: Transport Futures

What do the numbers say? The second reason to challenge the perception of broker profiteering is that the statistics refute it. This conclusion should be obvious because, as fellow participants in a spectacularly open market, the brokers must work through the same difficult economic cycles as the carriers. In downturns, brokers suffer too. Since 2019, broker compensation (margin times rate) has fallen by 39%, which 800 basis points more than the percentage decline in the rates paid to carriers. The difference is explained by the fall in broker percentage margins from 17.0% to 15.0% over the same time frame. The data from the publicly traded brokers show the same declines, down 19% since the beginning of 2019.³⁵ Apparently, brokers are doing the same kind of margin cutting as the carriers, to secure business. The shippers certainly benefit. Neither the brokers nor the carriers do.

Markets work! The third challenge to the profiteering hypothesis comes straight from free-market economics. With easy entry into this market, there are well over 10,000 truckload brokers moving freight in the U.S. (Over 15,000 have active authority.)³⁶ Should a carrier receive unfair treatment from one broker, that carrier need only shift to another broker. Keep in mind that brokers seldom have a lock on a particular customer's freight. Shippers routinely offer the same loads to multiple brokers, encouraging the brokers to compete with each other. Moreover, collusion between brokers to forestall such competition is expressly forbidden by law, a law that holds violators criminally responsible. Finally, the fluid nature of the spot markets makes such coordinated action impractical even if it were allowed. If two or three brokers should succeed in coming to agreement, the over-priced freight will have already been awarded to other, cheaper providers. We conclude based on this evidence that the stress honestly felt by spot-market truckers this spring was purely the result of difficult market forces, the obverse of the difficult market forces that put shippers under dire stress just two years ago. Yes, this is a challenging, volatile market due to its inherent volatility. But such major swings in market prospects are not the result of profiteering by brokers.

But can anything help? Is there a public solution that could ameliorate the stress of the carriers? We start with the obvious solution that applies to any cyclical market. If left alone, market forces will relieve the stress without government intervention. We see that already happening in June and July of 2020. Prices are already up 23% and are approaching the averages for 2019. Given the even more dramatic performance of

Truckstop.com's Market Demand Index (a measure of demand vs. capacity), more price gains are in the offing (see next chart). We are reminded by this data that dealing with cyclicity is a critical business challenge in spot market trucking. Importantly, deregulation is an enabler to such a necessary management process. Carriers, brokers, and shippers are becoming more nimble in their response to market changes. One can see this in the Market Demand Index chart above, which has moved dramatically (red bars) in response to the shutting down and opening up of markets due to the COVID crisis.



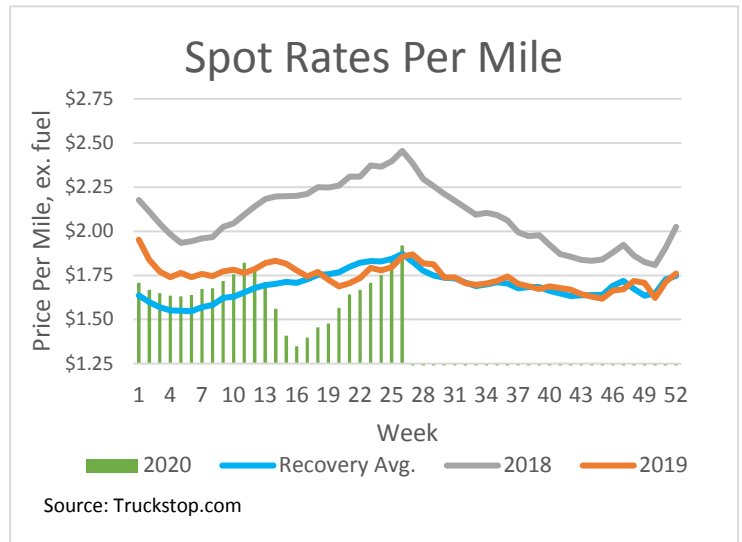
³⁵ Source: Broughton Capital

³⁶ Source: Transport Futures

We also know that such spot market movements have already applied pressure to the contract market as well.

Re-regulate? The next question to consider is whether the government can take regulatory action to help businesses in that challenge. The original trucking regulation of the 1930s was, at least, nominally intended to do just that.

One option, a relatively neutral one, is to require “transparency,” i.e., to require brokers to disclose their margins to carriers. Such transparency is already required in an existing statute, but the requirement is seldom honored in the real world of trucking. It is not used for two reasons.



First, the requirement was designed at a regulated time when broker margins were usually expressed as a percent of the total rate. As such, they were easy to express and understand. The customer and broker agreed on a rate, and the broker received a standard percent. That method also made it easy for the carrier to judge whether the broker was being fair. The carrier would only have to compare the percent from one broker to the percentages from other brokers.

Such simplicity worked in a regulated world where tailored transport services were limited. In today's world, each move is subject to a collection of service options, all of which have some broker involvement. As a result, so-called “broker margins” are actually “broker payments” today, to compensate the broker for the services provided. So the process of determining whether that payment is a fair share of the total rates is far more difficult. One sees quickly that leaving the matter of “fairness” in the hands of the competitive market is far easier, and more accurate, than attempting to determine fairness based on an arbitrary standard of bureaucratic oversight.

Shippers don't like transparency, especially of their own data. While the carrier may choose to examine the margin as the statute requires, few carriers take that action. They decline in order to gain access to the complete menu of freight, including many loads from shippers who prefer to keep their freight rates confidential. Such a desire is common in a world of intense competition. Shippers compete, too! To protect their privacy, those shippers require that their brokers' respective carriers waive the right of broker margin disclosure.

Some carrier groups are lobbying the Federal government to make such waivers illegal. They do so because they underestimate the market's ability to work around problematic regulation when it affects strongly held interests. Some shippers would simply shift their freight out of the brokered space to be included in already confidential contracts with carriers. In that case, carriers would have access to that freight only as subcontractors to asset-based carriers, of course, with no visibility to the margins the asset carriers collect on that freight.

The other solution could be a whole new brokered market based on the use of loopholes in the transparency regulations. Consider, for instance, the position of a broker already in the third-party logistics (3PL) business, something most already do. Under those conditions, the 3PL can negotiate a flat fee for its universal services, becoming, in essence, an outsourced traffic department with the specialized skills to handle the spot market as

well as contract moves. To avoid even the appearance of brokerage, that 3PL could identify itself as the shipper. Whatever the solution, the freight would move, but in a less efficient manner with more administrative cost.

Why not require one margin that fits all? A second, more draconian option is to set a nationwide standard margin, going back to a standard percent of the total rate. That option would certainly be easy to understand and administer, but it would also reopen the door to trucking rate regulation.

It would fail for four reasons:

1. **Who would determine fairness?** History tells us that such processes always become the playgrounds of lobbyists and those trying to influence public servants with the least understanding of market reality. We are reminded that the railroads quickly achieved control of rate regulation in the early 1900s. What was designed to lower rates to small towns and farmers quickly became a legalized cartel of railroads. However, for the sake of argument, should this process become the rare one to hold the lobbyists off, it would still be subject to government bureaucrats to determine fairness, bureaucrats with limited understanding of market realities. Since that bureaucracy will raise Federal costs, Congress will likely underfund it, worsening a process already proved so ineffective that it was abandoned 40 years ago.
2. **One size fits nobody.** In the U.S., there are 41,701 zip code zones, translating to 1.7 billion individual lanes from zip to zip. In any lane, there are many types of trucks, trailers, services, and capacity requirements. Conservatively, those parameters create 26 trillion possible sets of move requirements³⁷. That level of complexity challenges our supply chains every day. Since about a third of all moves are spot moves, that same complexity requires 8.6 trillion broker margin calculations. Imposing a regulatory standard on this process would either require a bewildering administrative burden or create a single mark that would ideally undercompensate half of brokers and overcompensate the other half. That is the way regulated economics always work, understanding that clever lobbying can easily move that mark in either direction depending on the interests of the dominant lobbyists. Keep in mind that the drive to compete will still exist even if regulators neutralize some of the competitive levers. Competition simply shifts to overemphasize the remaining levers. In the regulated airline days, air carriers competed on service, with frills like free meals and attractive cabin attendants. Since deregulation, the market has revealed that air travelers are most interested in price. They will sit wedged tightly together, served no food, as they are scolded about the position of their seat back, all in pursuit of the lowest fare.
3. **What about the economic cycle?** Now, the market adjusts margins according to the pressures of the economic cycle. Under regulation, the standard either would not change, or it would be set by an inexact, usually delayed administrative process. We know from former transportation regulation that the change process was very slow and cumbersome. The famous Big John grain rail rate case took five years to resolve in the 1970s³⁸. Such regulatory drag would make the already difficult process of managing industry cycles all the more difficult.

³⁷ Source: Transport Futures

³⁸ In this case in the 1970s the Southern Railway (now part of Norfolk Southern) was petitioning to lower rail rates on grain based on their purchase of the first 100-ton grain cars, much larger and easier to load than the smaller box cars commonly used for grain transport at that time. The goal was to win back share from barges and trucks. However, the other railroads, afraid of losing their grain business to the Southern, objected to the lower rates, forcing a legal process that ended up in the U.S. Supreme Court.

4. **Workarounds would be inevitable.** Some groups would successfully lobby for exemptions, just as produce was exempted from the original trucking regulation. Some brokers would invent surcharges or rebates to offset the inadequacies of the regulatory standards. Some shippers, as outlined above, would move their spot freight to categories not covered by such regulations. As we documented using several methods earlier in this report, it is important to note that the current unregulated brokerage market clearly favors small carriers.

Reregulation would make things worse for all but a few. The overall result is easy to see. We already had an example as recently as 1979. The trucking industry would operate at a higher cost, and it would be less flexible, with lower volume, greater concentration of market power, and supported by an army of highly compensated lawyers. The small truckers calling for governmental help would not fare well in such an environment. Of course, the industry would still be subject to difficult cyclical stresses, precisely the conditions the regulations were designed to moderate. Note importantly, that this analysis would apply to an even larger extent to any attempts to extend regulation so that it applies to carriers' full compensation. Again, that was the intent of the 1930s regulation, a deeply flawed system which the Federal government dismantled with spectacular success in 1980.

Regulation is not just about 2020. Any discussion of regulating brokers must take larger market trends into account. We introduce this factor because the U.S. trucking market is entering a period of radical change. Along with a large collection of macro-economic and environmental disruptions (pandemics, global warming, challenges from China, e.g.), supply chain design is now beginning to embrace the capabilities of a wide range of digital tools.

What can we automate? Autonomous trucks reduce the need for highly trained drivers in some instances. How does communication change? Zoom conferences replace in-person events. How does a company leverage these tools to change a market? Amazon is a pioneer and exemplar. We know for sure that these market pressures are progressively blurring the lines of demarcation between carriers and brokers and between brokers and shippers. One wonders how brokerage regulation can continue to be effective and relevant in a market with increasingly blurry definitions of "what is a broker?" or "what should a broker become?"

The small carriers who protest do not realize that regulation favors consolidation, which results in a market that is dominated by large carriers.

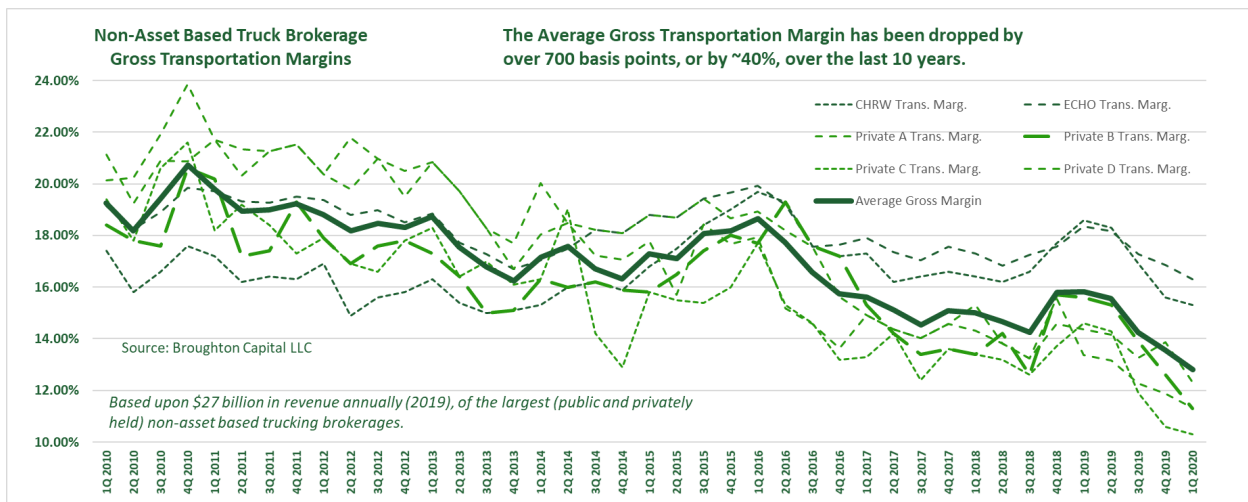
Regulation and the future

Without detailing the many possibilities, these pressures speak loudly to regulatory policies in three ways:

1. **Change requires flexibility.** First, when adapting to radical change, flexibility is paramount. Not only must the participants be ready to change quickly, the answers to many questions are unknown until tried in the marketplace. There is no way to make regulatory policy to control the unknown. Also, there is no way that a regulatory process can keep pace with rapid change. We saw this in the rail regulatory policy of the 1950s when the building of the interstate highway system revolutionized inter-city freight transportation. At the

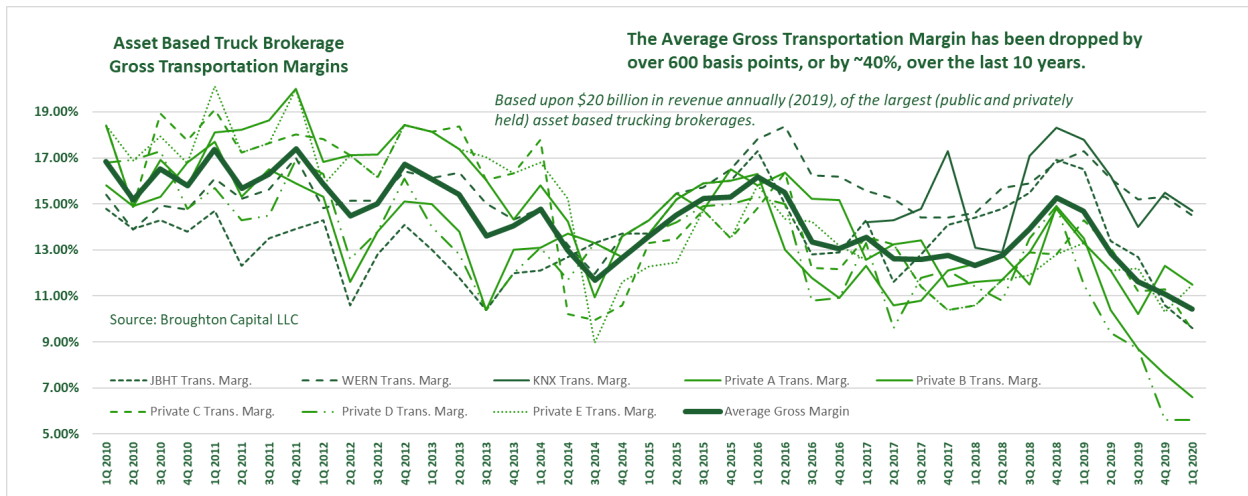
end of World War Two, the railroads controlled almost 80% of inter-city freight as measured by load volumes. Due in part to the inflexibility of regulation, their share of freight fell below 20% by the 1970s and a third of the railroads were bankrupt, while most of the rest were poorly capitalized and losing money³⁹. With the 1980 deregulation, the rails stemmed the bleeding and now earn impressive margins, albeit on an even lower market share. One wonders whether more fundamental change would have occurred if their adaptations had started in 1950 rather than thirty years later.

2. **Technology reduces costs.** Second is an ironic fact of digital progress. Beginning with railroads and banks in the 1950s, designers discovered that computers were great at performing clerical work, replacing or supplementing slow, error-prone human labor with machines that worked 24/7 and seldom made mistakes. The same opportunity is available to the brokerage industry today in the automation of the significant remaining human-powered clerical work in brokerage.
3. **Brokerage margins will decline without regulations.** Our studies estimate that digital progress will eliminate up to half of brokerage costs in this decade. You can see this in the data from the accompanying two graphs. The first graph depicts the history of margins from publicly traded brokerage companies. The size of the margins has been falling steadily due in part to competition, and to steady increases in transparency and price discovery, but also due to steady cost-cutting that is assisted by technology.



³⁹ Source: Transport Futures

The second chart shows the same data from the brokerage operations of large, publicly traded, asset-based truckers⁴⁰; they have done exactly the same thing. Better market efficiencies and lower transaction costs are passed along to customers by all brokers who want to retain or grow market share.



Who benefits from regulation?

Regulation protects powerful incumbents. Here's the regulatory angle: Under regulation, such powerful, large companies would exploit the regulatory umbrella to confiscate a big portion of that cost saving for themselves. Under deregulation, it will show up mainly as a reduction in broker margin, which is exactly what the carriers are seeking. At today's average of 16%, broker margins attract attention. At 8% or less, who cares? Meanwhile, new digital tools have helped create a whole new family of broker competitors, categorized broadly as “digital” brokers. Those new entrants, armed with sophisticated digital tools, are distinguished by their claims of lower cost to shippers and higher returns to carriers. If any of the carriers' claims of broker profiteering are true, these digital brokers are determined to disintermediate those margins⁴¹. Their presence shows that competition among brokers is increasing to the benefit of carrier (and shippers).

Open markets are good for small guys. Third is the expansion of the spot market, a trend that was accelerated initially by the 1980 deregulation. The spot market depends on the low-cost transaction management of the brokerage industry. Because digital tools further reduce transaction costs and improve in the freight matching process, the expansion of the spot market should continue, with an accompanying expansion of the small carrier's role. It is a central theme of this report that a deregulated environment is a major prerequisite for the ongoing presence of small carriers and owner-operators in the marketplace. These small operators often speak

⁴⁰ Source for both charts: Broughton Capital

⁴¹ Disintermediation is the process of eliminating or reducing the power of “intermediaries,” or middlemen, who work to link suppliers with customers in a market. Digital tools and services such as Travelocity disintermediated the vast majority of the travel agents who were once the ubiquitous intermediaries between travelers and airlines.

out against all other types of regulation. We hope they don't succeed in their support of this new category of regulation, only to suffer the most of any market participants in the burdensome regulatory environment.

Reregulation would be a problem for more than just brokerage. The principals discussed above apply to all aspect of economic regulation not just that affect brokerage. The increasingly popular calls for regulatory definitions of employees are a good example. Aspiring trucking entrepreneurs frequently gain entry to the industry through purchasing a truck with the help of an asset fleet who then provides loads for the new owner-operator on a leased basis. The fleet benefits from having a flexible source of contractor capacity while the owner-operators gains easy entry into the market, not having to worry about loads as her or she learns the ropes. Proposals to forcibly redefine such relationships as formal employment relationships (with benefits) pushes against the powerful market forces from both carriers and owner-operators that have created the current arrangement.

Here is a clear example of the potential for workarounds that bypass regulatory constraints. Fleets and owner-operators are already devising ways to work around such requirements so they can maintain the status quo, albeit with an element of inefficiency. The result is a market that delivers none of the supposed benefits of the regulation, but one that is no less clear and less efficient. Taken to its limits such developments created the cumbersome, murky truck market that proceeded the 1980 deregulation. We are reminded, once more, that no economic regulation can hope to serve the multitude of trucking applications, nor can regulation prevent the workarounds that powerful market forces will apply.

CONCLUSION: Guidelines for policymakers

Proponents for the return of economic regulation of any sort to spot market, brokered trucking must confront these realities.

- **The current stress on carriers is entirely the result of market conditions**, which are difficult but well understood. The current downturn is just another phase of the cyclical market that successful truckers have dealt with since the beginning of the industry.
- **There is no evidence that brokers are contributing to the carriers' stresses.** The numbers show that brokers are, in fact, sharing fully in the market-induced pain.
- **The open-market aspects of trucking make “broker profiteering” virtually impossible** to execute in a single transaction, and completely impossible to execute repeatedly.
- **The market has already begun a turn that is reversing market conditions**, in the time it has taken to study and understand the issue. The problem is going away, not to return until the next downturn.
- **Demands for transparency ignore the real market need for confidentiality**, while failing to show any practical market or transactional use, economic advantage, or even modest benefit. Broker margins are already naturally minimized by market forces; transparency en masse produces market forces that are far more powerful than per-transaction transparency could become.
- **The complex, disaggregate nature of the spot market** makes it a maddingly difficult entity to understand, let alone regulate. Although hard to imagine, even if regulation could be developed to produce better outcomes and stronger protections than those already provided by the current marketplace, the spot market simply does not lend itself to the one-size-fits-all nature of economic regulation.
- **Re-regulation is far more likely to worsen industry conditions than to improve them** – unless one happens to belong to the group with the most persuasive lobbyists. In the interest-laden and myopic world of regulation and its bureaucratic inertia, it is highly unlikely that small, independent carriers will wield much influence without access to lobbyists.
- **The industry is on the cusp of revolutionary change** that will make much of the current industry obsolete, including its regulation. What do hours of service regulations mean in a world of autonomous trucks? History tells us that regulation will impede that change, delaying the delivery of its full benefits to consumers. Rail regulation impeded the railroads' adaptation to superhighways for thirty years. Trucking regulation in 2020 would create similar barriers with respect to the digital revolution.

The changes proposed above will almost certainly reduce broker margins, without considering the potential inefficiencies created by regulation. Therefore, re-regulation would threaten nor even destroy brokers' ability to enhance the market for all participants. Ironically, regulation would most likely cause the greatest harm to the small carriers who currently champion it.

The deregulation of transportation in 1980 was an experiment that has succeeded beyond the dreams of its far-seeing creators. Wise policymakers do not change things that work, especially those things that work very well.

About the authors

Noël Perry

Noël Perry is widely recognized as one of the leading thinkers on the economics of the transportation and logistics industry. In his journey from the loading dock to the C-Suite, he completed combat duty in Viet Nam, earned degrees at two of our nation's most prestigious universities, and acquired decades of real-world transportation industry experience in roles at Cummins Engine, CSX, and Schneider National.

As Partner and Managing Director of Broughton Capital, Mr. Perry contributes to the firm's forecasting and data services. Mr. Perry focuses on market sizing, where his extensive and comprehensive authority provides far more detail and verifiable data sourcing than is currently obtainable from any other source. In his spare time, he is a gardener, singer, golfer and amateur World War II historian.

Donald Broughton

Donald Broughton founded Broughton Capital in 2017, after spending over two decades as one of Wall Street's top analysts – first at A.G. Edwards where he covered the transportation industry, led the Industrials Research Team, and served on the firm's Investment Strategy Committee.

His stock-picking performance has been repeatedly recognized by The Wall Street Journal as an "All-Star Analyst," by Forbes in its "When Picky Analysts Pick" series and ranked by both Zacks Investment Research and Starmine as a 5-Star Analyst, their highest rating. He is a frequent guest on national broadcast media, including CNBC and Nightly Business Report. Many in the transportation industry know him for his quarterly tracking of trucking bankruptcies, and is highly regarded for his forecasts that translate goods flow data into economic forecasts.

Prior to going to Wall Street, Mr. Broughton spent almost a decade in distribution and operations management in the beverage industry, including serving as the Corporate Manager of Distribution for the Dr Pepper - Seven-Up companies and Chief Operating Officer for Bevmark Concepts. He is convinced that most individuals know more about the economy than they realize, and he strives every day to demonstrate that economists don't have to be boring.

About Broughton Capital

Broughton Capital brings the nation's top financial analysts and economists together to report, analyze, and predict the noteworthy trends in all transportation modes. Dubbed "the independent variable," they dynamically pivot predictions as the data dictates without any of the conflicts of interest that plague many firms. As freight flows comprise an excellent leading indicator of economic growth, the company's highly regarded reports provide insights into this effective bellwether and enable investors and industry practitioners to respond quickly and effectively to emerging trends. Broughton Capital reports on the North American, Asia-Pacific, and Eurozone freight markets are available by subscription. See www.broughtoncapital.com/reports



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