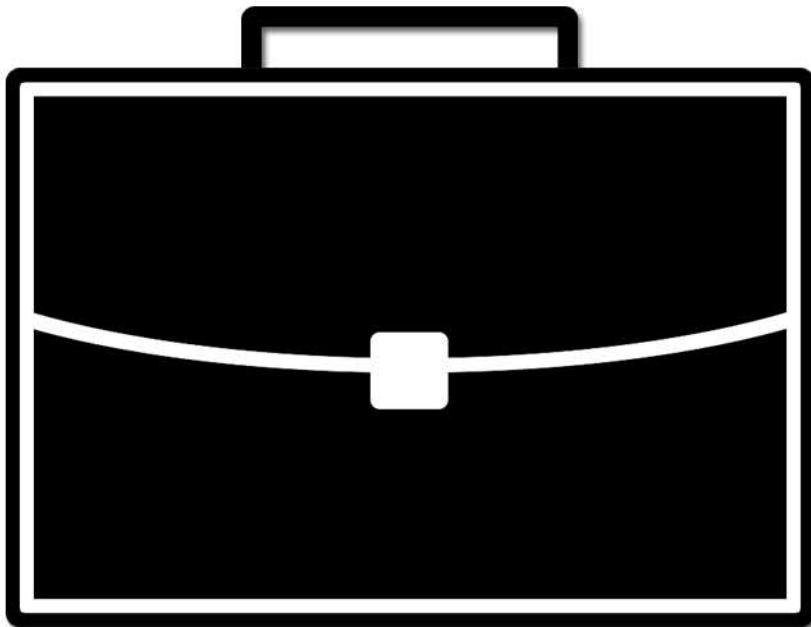


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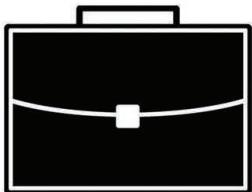
Public Forum Brief



Resolved: The United States Federal Government should substantially increase its investment in high-speed rail.

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These seven statements, while simple, represent the complex notion of what it means to advance students' understanding of the world around them, as is the purpose of educators.

Letter from the Editor

Welcome back everybody, for another thrilling season of Public Forum Debate. As always, I'm excited to get back into researching and preparing for what should be an excellent return to the debate season, which will be my thirteenth(!?) season involved with PF. For our first resolution this year, students will be debating "Resolved: The United States Federal Government should substantially increase its investment in high-speed rail." As somebody fascinated with urban planning and transit, I'm thrilled with this topic selection because I think it will encourage students to do their own research on the subject. Many Americans have preconceived assumptions about High-Speed Rail, but it's tough to truly understand what its impact would be in the United States given our slow adoption compared the rest of the world.

Among the arguments that one can run on this topic, I think it's important to discuss the real world impacts of how this policy measure would improve our real world reducing reliance on cars. The United States is one of the most car-dependent countries in the world, with residents spending years of their life just sitting in traffic wasting fuel and emitting carbon into our atmosphere. Introducing high-speed rail as an alternative for medium-to-long term journeys would significantly reduce the need for Americans to drive in between different cities. The impact would be less emissions, but also improved quality of life for all involved – less stress associated with commuting, less polluted air-quality, and safer roads for pedestrians and cyclists. Sadly, high-speed rail cannot fix America's car obsession on its own, but it would be a meaningful step in the right direction.

Overall, I think this topic should be a great resolution to kick off the season since it's very straightforward and has interesting arguments on both sides. While the scope of U.S investment into high-speed rail in the affirmative world is somewhat vague, the overall debate is well-defined and grounded. I believe this should be a great topic, and I'm very jealous of those of you who get to compete these next couple of months. As always, I wish you the best of luck, and happy researching!

Michael Norton
Editor-in-Chief

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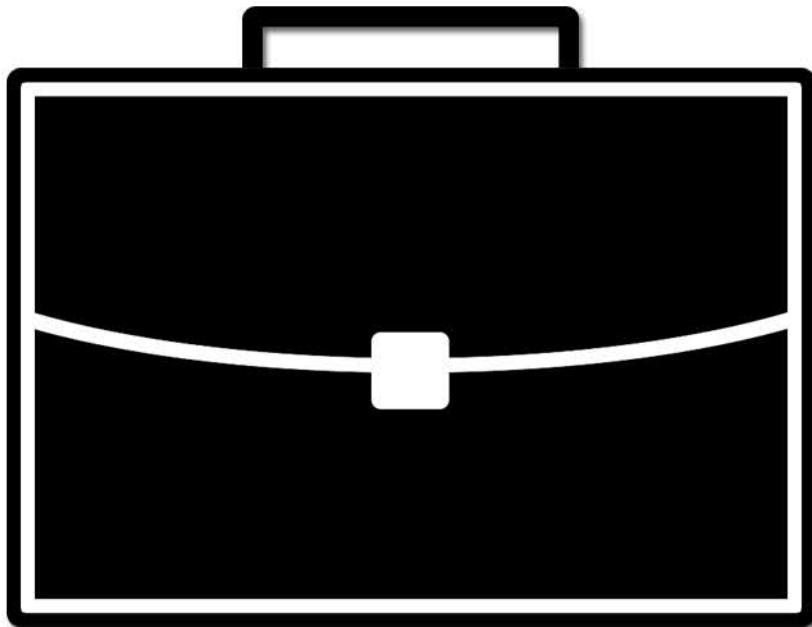
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Public Forum Brief



Topic Analyses

Topic Analysis by Jakob Urda

Resolved: The United States Federal Government should substantially increase its investment in high-speed rail.

Introduction

High-speed rail is a perennial talking point among infrastructure enthusiasts. Countries around the world from Japan to Germany have implemented high-speed rail projects across their countries. These projects are often heralded as important successes and are used by millions of people across the world. The prevalence of fast, cost-effective trains abroad begs the question, should the United States Federal Government substantially increase its investment in high-speed rail?

The United States lags behind its peers in terms of passenger rail infrastructure. While America has a robust freight network, Amtrak, America's passenger rail carrier, operates slow, disjoined, irregular service across the country. Advocates of rail projects believe that provided enough investment, America's passenger rail services could eventually more closely resemble successful rail endeavors abroad. Critics claim that the reason Amtrak has failed is irresolvable by additional funding: more sparse geography, low public ownership of tracks, and prohibitively high costs for land and labor.

The stakes are high. Rail infrastructure lies at the nexus of key policy agenda items. Trains allow for labor mobility, and the ability for workers to access more distant jobs. By decreasing commute times and providing an alternative mode of transportation to costly automobiles, trains may allow Americans to access jobs in farther areas. Environmentally, trains

provide an electric alternative to cars and planes. At the same time, every dollar spent on high-speed rail is a dollar diverted from alternative programs which might further the same objectives.

Background

The history of high-speed rail is too long to recount in a topic analysis. Debaters beginning their search should start by examining the comparative histories of Japan and the United States.

Japan opened its first high-speed rail line (called Shinkansen) in 1964. The project connected the capital of Tokyo with more distant regions to promote economic integration and development. The original Shinkansen connected three of Japan's biggest cities – Tokyo, Nagoya, and Osaka. The train carried 100 million passengers within three years and the line continued to expand until high-speed rail networks crisscrossed the entire country. Today, all major cities in Japan are connected by high-speed rail, which runs at significantly higher speeds and carries tens of thousands of passengers every hour. In 2017 alone, the Japanese high-speed rail network carried 159 million passengers.

The only high-speed rail in the United States is the Amtrak Acela line, which runs between Washington, DC, and Boston, MA. Even the Acela line is slow by high-speed rail standards – only 33 miles of its total 450-mile route reach 150 miles per hour. By contrast, high-speed rail in other countries routinely tops 170 miles per hour and 200 miles per hour in some locations. Acela was launched in 2000 and quickly became popular among business travelers, especially between New York and DC. Acela carried more than 3 million passengers in 2016. For ordinary travelers, however, Acela is often cost-prohibitive. As such, the slower Northeast

Regional Amtrak trains that cover the same route between Boston and DC carry over 8 million passengers a year. Acela is currently undergoing an expansion to purchase new trains to enable more regular, faster transit. The new trainsets are set to deploy in 2023. Outside Acela, the most visible high-speed rail project in the United States is the California High-Speed Rail Project, which has yet to be completed. The project is supposed to connect Los Angeles and San Francisco. Unfortunately, the project has been plagued by delays and cost overruns. The project hopes to generate half a million permanent jobs and over 2 billion dollars a year in revenue. While initially projected at 33 billion dollars, the cost estimate has been raised to at least 113 billion dollars.

Strategy Considerations

Before considering whether high-speed rail is worth the investment, debaters need to ask what specific projects high-speed rail money will go towards. This is called inherency, the part of the debate concerned with what the most likely manifestation of the topic will be. Inherency is important because the resolution does not spell out all of the terms of the topic – it does not say what projects will be prioritized. Debaters, however, do not get to simply make up the projects that they want the investment to go to. They must argue about the most politically realistic form that investment in high-speed rail will take. They need to be able to articulate why “substantially increasing investment” means funding the projects that they have in mind, as opposed to a wholly separate slate of potential proposals. Winning the debate over what the most likely implementation of high-speed rail looks like is crucial. The team that convinces the judge that their proposals are more likely to manifest gets home-field advantage.

The round will be decided on the merits and drawbacks of their plan. Neither side would be wise to forfeit such an immense benefit.

Two intuitive aspects of inherency present themselves: volume of funding and nature of the project. The volume of funding regards how much money is actually “substantial.” This is an important aspect of inherency because by some metrics (billions of dollars) an increase in high-speed rail funding would fail to change the scope of America’s network. The scope of what constitutes substantial funding controls how many projects will go forward. The nature of the projects is important because different high-speed rail projects have different benefits. If all of the substantial increase in funding goes to Acela, the benefits look different than if all the funding goes to the California project. Answering these questions (explicitly or implicitly) will help debaters set the stage for the rest of the round.

Affirmative Argumentation

The affirmative team should consider economic arguments first and foremost. Economic arguments are strategic because economic growth controls the link to so many other impacts. The team that wins an impact of substantial economic growth will be able to raise a legitimate claim to also win impacts about global warming, displacement, poverty, and a whole host of other related impacts. This makes it very hard for opposing teams to simply outweigh arguments about economic growth.

High-speed rail is said to increase economic growth by promoting access to opportunities across geographies. Ordinarily, the range of plausible jobs which a person can hold is limited by the distance that they can travel in a given amount of time. Simply put, it is

harder for people to commute longer distances. Aside from time, commutes can also be expensive and bad for health. By shortening commute times, high-speed rail allows people to access a greater pool of jobs than would otherwise be available. This means that people can bargain for higher wages or find jobs that are better suited to their particular skillset. In countries like Japan, high-speed rail has been so effective at expanding labor mobility that entire cities have become connected. In Japan, the drive from Tokyo to Osaka can take as long as 6.5 hours, but a ride on the train takes merely 2.5 hours. Although the train ride would be a long commute, the car ride would be a prohibitive one.

High-speed rail may also increase economic growth in a variety of other ways. Debaters should investigate arguments about job growth in the construction sector, research and development, and tourism. The benefits of high-speed rail are hard to pin down because faster transportation intersects so many different areas of the economy. The high-speed rail sector would require thousands of new jobs to build, run, and maintain the system. High-speed rail is technologically sophisticated, so the jobs associated with it would likely be high-paying and stable. High-speed rail is self-sufficient in many countries because of the high demand for tickets, meaning that these jobs are resistant to cyclical downturns. While these arguments do not seem world-changing in their scope, every percentage point of economic growth matters and helps reduce poverty and unemployment.

Negative Argumentation

The negative team should start by thinking about why high-speed rail does not exist in the United States. If high-speed rail is economically unviable for basic supply/demand reasons,

then it doesn't make sense for the government to build more. Even if the government constructs all the expensive infrastructure and develops the relevant capabilities, they still need to show that people will use high-speed rail to get the proffered benefits. Otherwise, high-speed rail is just a high-cost boondoggle, sinking time and money that would be better spent elsewhere into a glamorous project.

One way that America is different from countries with large amounts of high-speed rail is density. America is far more sparsely populated than places like Europe and Japan, where high-speed rail has been successful. Density is important because it means that trains can service more people. Sparsely populated countries need more train stops across a greater distance. Commute times are longer, direct connections are less frequent, and it is more difficult to just get to a train station. For example, even if the United States built out high-speed rail, we would likely never get a connection between Los Angeles and New York because the distance is so vast. At that distance, even the fastest trains would be substantially slower than traveling by plane. Considering America's densest urban areas between Washington DC and Boston are already connected by a robust rail network, is there any value to adding rails across the rest of the country?

Once a team can establish that high-speed rail is an ineffective method of transportation, they should show the judge the opportunity costs of such a wasteful investment. Provide the judges with examples of other programs that could be funded with the same money. It would be especially effective to provide examples of alternative investments in infrastructure because these would be programs that could conceivably be funded in

alternative to high-speed rail. Other powerful examples of tradeoffs in government spending include education, welfare, and healthcare programs.

This topic is likely to challenge debaters to get into the nitty gritty of infrastructure investment. Good luck!

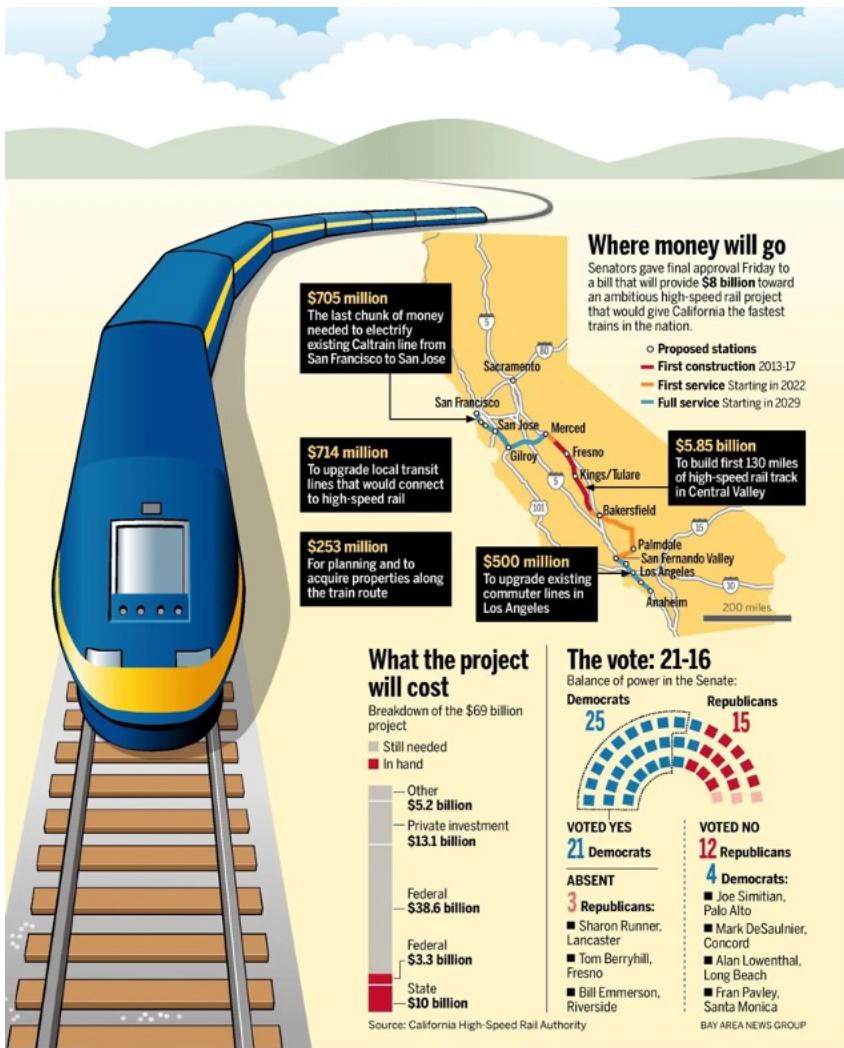
About Jakob Urda

Jakob grew up in Brooklyn, New York. He graduated from the University of Chicago with a BA in Political Science and is currently seeking a Juris Doctorate from the Georgetown University Law Center. Jakob debated for Stuyvesant High School where he won Blake, GMU, Ridge, Scarsdale, Columbia, the NCFL national championship, and amassed 11 bids. He coached the winners of the NCFL national tournament, Harvard, and Blake.

Topic Analysis by Katheryne Dwyer

Resolved: The United States Federal Government should substantially increase its investment in high-speed rail.

The high-speed rail resolution seems simple at first glance but contains several nuances that can be used as strategic angles. First is the actor, the United States Federal Government (USFG). The USFG is one of the most common actors in PF resolutions, but in the case of high-speed rail, federal government investment is a change from current state-level investment. California and Texas have some of the most prominent ongoing high-speed rail projects in the country, and both have seen their fair share of challenges. In California, the plan was launched in 1996 and approved by voters in 2008. It was projected to cost \$33 billion and be operational by 2030. Unfortunately, this has not been the case. Construction started in 2015, and in 7 years of construction, only about 120 miles of track have been built through the Central Valley (the flattest part of California). A fraction of the total is projected to be operational by 2031. This infographic represents the original plans for the California high-speed rail.



In Texas, construction was delayed by an eminent domain court challenge raised against the construction company, Texas Central. Eventually, this past June, the Texas Supreme Court ruled that Texas Central could use eminent domain to acquire land, and construction is set to begin. Negative teams can point to these examples of apparent high-speed rail failures as reasons that all high-speed rail is likely to fail in the United States. Affirmative teams will often make arguments about how federal focus is key rather than the current disjointed state approach. Yonah Freemark of Bloomberg articulates this in 2014: "What's missing is a federal commitment to a well-funded national rail plan. Instead, we have a political system in which

the federal government, having devolved virtually all decision-making power to states, cannot prioritize one project over another in the national interest." Affirmative teams will skirt attacks on current high-speed rail systems by pointing out that these are neither federally managed nor federally funded, and that is the specific advantage of the affirmative.

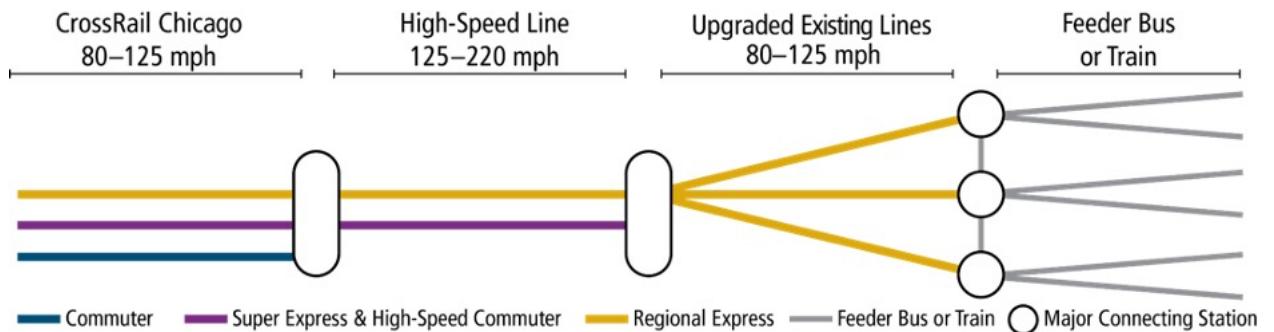
Another strategic consideration about the resolution is what qualifies as high-speed rail. Different definitions range very widely. According to 49 U.S. Code § 26106, high-speed rail means "intercity passenger rail service that is reasonably expected to reach speeds of at least 110 miles per hour." Conversely, many other definitions are more closely aligned with Dan Zukowski of Smart Cities Drive, who writes that "the generally accepted definition of high-speed rail is trains that can travel in excess of 160 mph." Whether or not the United States currently has any examples of HSR is up for debate. William Vantuono, editor-in-chief of Railway Age writes, "In the United States, there is currently one high-speed rail line— arguably. Amtrak's Acela Express, which runs through the Northeast Corridor from Boston to Washington, D.C., can reach speeds of 165 miles per hour, but frequently runs at an average of 70 miles per hour between those cities." Indeed, there's only one portion of the Northeast Corridor where the Acela travels that quickly, the stretch between Richmond, Rhode Island, and Mansfield, Massachusetts. This is soon to be joined by a 16-mile stretch in New Jersey where infrastructure improvements are projected to soon allow the Acela to travel at 150mph. So, whether or not the Acela qualifies as high-speed rail depends on what part of the Acela you're talking about and your definition of high-speed rail.

If the Acela is indeed an example of high-speed rail, then it is the only existing case study or empiric of United States high-speed rail development and therefore of vast importance

to the topic. There are many arguments to make about whether the Acela is successful or not and how these patterns may repeat themselves in larger high-speed rail development in the US. Elise Young of Bloomberg notes that in 2017 Amtrak's Northeast Corridor alone had \$38 billion in maintenance backlogs (although it is important to note that not all of this is the Acela). Tickets for the Acela are pretty expensive -- Jasmine Kim from Business Insider explains that "it's often more expensive to take an Amtrak train from New York City to Boston than to fly." Perhaps most importantly, though, it is just not very fast. The Editors at Smarter Travel note that it takes about 7 hours to get from Washington DC to Boston on the Acela. On the flip side, there are many arguments to be made for the success of the Acela. Amtrak reported in 2019 that upon the development of their new Acela lines, "More than 1,300 new jobs will be generated in nearly 90 communities across the United States to support production, including the creation of new, sustainable, high-tech, engineering and manufacturing jobs in New York." You can decide whether or not you want to define the Acela as an example of a high-speed rail depending on if you think it serves your arguments. If you are arguing that high-speed rail will create jobs and economic growth, the Acela may be a great example for you to use. If you're arguing that the construction process will be cheap and efficient, you may want to explain the distinctions between Acela and future construction.

The final consideration of the resolution is the term "investment." Again, this seems pretty standard. But this topic needs to consider the difference between investment and construction. The resolution does not necessarily imply that we are building new tracks, and it's resolutinal to write arguments about refurbishing existing tracks. Many arguments assume we are building entirely new rail lines, so there can be a lot of benefits to basing your arguments on

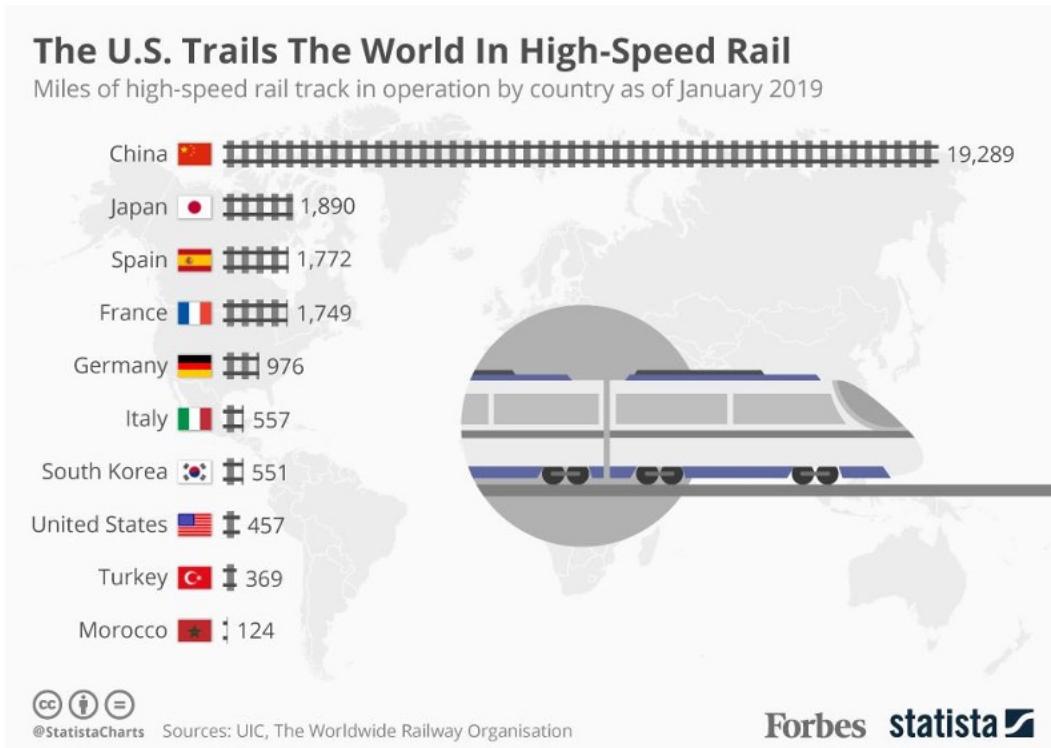
improving existing lines. For example, it is likely less expensive to fix up existing lines rather than construct entirely new ones. Many affirmative teams will try to skirt negative arguments about how difficult it is to construct high-speed rail by arguing we don't need to construct anything new at all, simply refurbish. In reality, though, it seems most high-speed rail advocates don't agree with this approach. Instead, the High-Speed Rail Alliance describes the Phased Approach: as "building new segments of dedicated high-speed lines that connect to the existing railroad network. Modern, high-performance trains travel very fast (125 to 200 mph, or faster) on these new lines, then transition seamlessly to the conventional tracks to finish their journey."



Another interesting approach to the investment vs construction debate is opening up the scope of the debate to international investment. Although it's arguably very unlikely that the United States would pour billions in investment into infrastructure abroad, some scenarios are backed by evidence. For example, Vijay Prashad of Asia Times explains that Biden's pledge of 200 billion dollars in June to create the Partnership for Global Infrastructure Investment along with other G7 countries was clearly to counter China's Belt and Road Initiative's expansion. That could come in the form of high-speed rail, as Brian Hart writes for

the Center for Strategic and International Studies China Power Project that "China's wide-scale support for rail infrastructure development across the globe provides a unique opportunity for Beijing to drive regional connectivity and reap the resulting economic and political benefits. Much of this effort is linked to the broader Belt and Road Initiative (BRI)." If a team wants to make an argument about foreign investment, they can argue that the most likely way to counter China's BRI is for the United States to provide high-speed rail investment in foreign countries to sway countries away from China's influence and towards theirs.

Besides the way the resolution can guide our strategy on this topic, there are other major things to note before approaching research. First, the topic is heavy on examples or empirics. Knowing what happened in international case studies of high-speed rail will be very helpful for you. In practice, this means knowing a lot about China. As of January 2019, they had 10 times more high-speed rail than the country in second place, Japan.



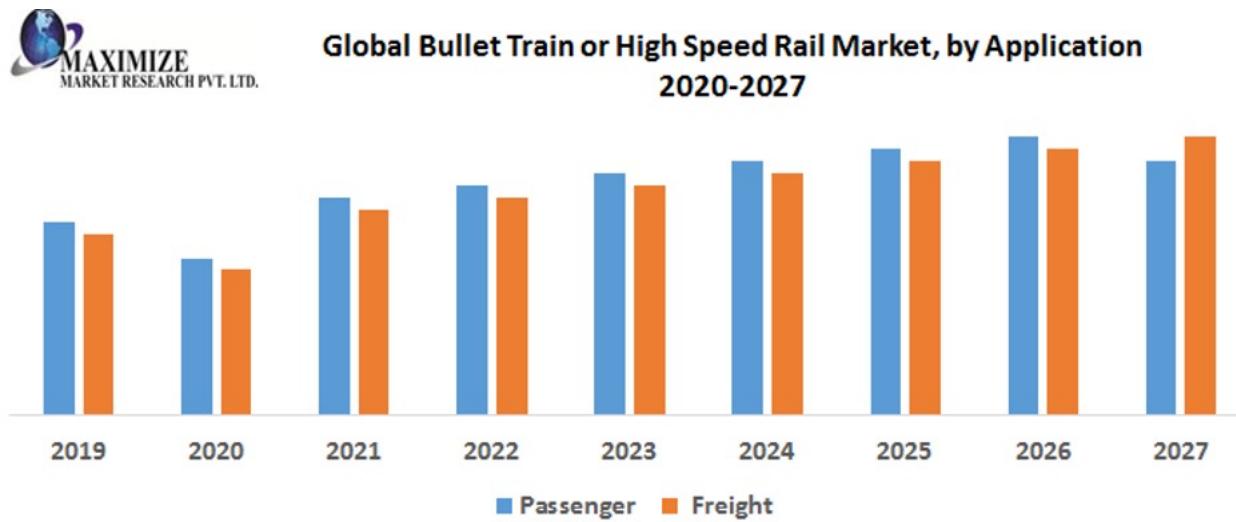
So: is high-speed rail considered a success in these international examples? Once again, it is entirely up for debate. A good rule of thumb is to find at least one international example that supports each argument you're reading. Unless your warranting is somehow incredibly specific to the United States, if your argument is true, there should be another example of it happening. The good news is that there is tons of data out there about different high-speed rail lines having just about every effect under the sun on their home countries, from economic growth, to gentrification, to freight transport, and even terrorism. Once you get this basis in examples for your arguments, it will be helpful to begin looking for examples that disprove your opponent's arguments. Since so much high-speed rail has been built internationally, there are often two opposite effects it has had in different places. Be prepared to defend your empirics and explain why they're the most applicable to the United States. There are many ways to do this -- compare political systems, size, economies, or even simple topography. Whatever your metric is, it's very important you can explain why your empiric is most applicable and why your opponent's competing empiric is not.

Another consideration about how to debate this topic is the implementation. What does it pragmatically look like to build high-speed rail in the United States? A lot of negative teams will tell you that it is such a large task it is likely to fail in the middle, or even just never begin. The affirmative gets to make arguments assuming that we invest in high-speed rail (what the resolution says) but does not necessarily get to win that the investment is successful or sustained over a long period. So, a lot of this debate will come down to the sort of "behind-the-scenes" of how high-speed rail will be implemented. It may be strategic for negative teams to argue that there are short-term harms to building high-speed rail with no long-term benefits

since construction won't be completed. Some affirmative teams have responded to this by looking for affirmative arguments that are not dependent on the completion of construction, like arguments about the workers or steel we need to build the tracks stimulating the economy out of what many think may be an upcoming recession. This can definitely be strategic no matter what side you're on, but keep in mind that by arguing high-speed rail isn't built you will seriously limit the ground for either side in the debate. In the affirmative, it will often be better to defend why construction will succeed rather than just agree and go for your more immediate offense. That all being said, it is not a bad idea to have offense depending on both pre and post-construction links, just in case.

Once high-speed rail has been implemented, it is important to consider that it does not necessarily have to serve as solely passenger transit rail. There are lots of potential benefits to the use of high-speed rail to move freight across the United States, particularly high-speed rail's comparative speed advantage over trucking. The hardest part of these arguments will be to win that freight is a likely use of high-speed rail. There is certainly conflicting evidence on this, but the infographic below from Maximize Market Research argues that the market will

be about evenly split between the two applications as it grows.



Also important to consider is that by the time you're debating this topic, the midterm elections will be right around the corner. There are plenty of arguments to be made about how the wild popularity or spectacular failure (depends on whom you ask) of a massive infrastructure project could sway the results of the midterms. For example, Adriel Bettelheim of Politico explains that independents and republicans tend to view infrastructure projects as inflationary, neither group having strongly supported this fall's bipartisan infrastructure bill. One thing to note about all these political arguments is that high-speed rail is highly partisan, with widespread support amongst democrats and very few republicans in favor of it. We even tried to pass it in one of the original versions of the infrastructure bill, but as Steven Zeitchik of the Washington Post writes, "In June, a version of the infrastructure bill actually had an HSR clause — \$25 billion that could have jump-started a whole bunch of projects. But it didn't survive the congressional back-and-forth." Of course, the challenge with a political argument is that there is any number of unexpected and random curveballs that can completely change the political climate overnight. Whether or not you intend to read a political argument, keeping up

with the news about the elections isn't a bad idea. The polling about who will win critical races is likely to change daily, and that uniqueness is the most important part of these arguments. In short, keep your eye on the news.

Especially because this is the camp topic, arguments are likely to change from tournament to tournament and get more specific to obscure situations that happened in one place that built high-speed rail systems. The best way to stay ahead of this is to ground your arguments in plenty of real-world examples. September is home to a lot of large quarters and octas bids tournaments, which means you're likely to encounter a wide range of judges throughout the topic if you compete on the national circuit. Make sure that your arguments are adaptable to whom you're debating in front of.

About Katheryne Dwyer

Katheryne is a first year at the University of Chicago where she studies international relations and East Asian civilization and language. In high school, she debated for Walt Whitman High School in Bethesda, Maryland, where she amassed 13 bids, including semifinalizing the Tournament of Champions, Blake, and the Blake Round Robin, finaling the Harvard Round Robin, winning Valley Mid-America Cup twice, and reaching late outrounds at numerous other national circuit tournaments and round robins. She now coaches several PF teams.

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Topic Analysis by Nathan Johnston

Resolved: The United States Federal Government should substantially increase its investment in high-speed rail.

Introduction

The September/October topic calls for the discussion of a subset of infrastructure that has seen increased interest, particularly in the United States, over the course of the last fifteen years. High-speed rail has been discussed in US politics since the 1960s, but proposals by President Obama in 2008 and renewed interest with the American High-Speed Rail Act of 2021, President Biden's infrastructure bill, and endorsements from Secretary of Transportation Pete Buttigieg have heightened interest in high-speed rail projects. Debaters this month will grapple with high-speed rail as a potential solution to problems including failing infrastructure, urban sprawl, housing costs, and a variety of other issues.

While other parts of the world have explored and developed significant high-speed rail projects, the United States has fallen behind in this technology. Debaters must consider why that is the case, and whether or not pursuing projects now is worth it when they have been otherwise deemed undesirable in the past. Luckily, the renewed interest in HSR should provide answers to those questions. Debaters who will perform well on this topic will have a strong knowledge of the economic implications of building HSR, urban and rural planning, both sides of the environmental debate, and significant weighing for both short and long-term impacts.

The good news is that this topic is exceptionally novice and varsity friendly. The literature base is rich with significant popular and academic research from the last decade. Moreover, the best 4-5 arguments on both sides of the resolution should quickly float to the top, decreasing the knowledge and research burden for teams starting the year. Unlike more complex September/October topics such as NATO and the Baltics from 2021 or the Belt and Road Initiative from 2019, students should have a good basis of knowledge for a significant portion of the arguments and topic literature related to high-speed rail.

Background Information

High-speed rail first entered US politics in the 1960s with the High-Speed Ground Transportation Act of 1965. This act helped establish the northeast corridor rail system. By the 1980s, the Passenger Railroad Rebuilding Act sought to better understand HSR and ultimately the Intermodal Surface Transportation Efficiency Act of 1991 endorsed five potential corridors in the US for HSR development. Unfortunately, not much came out of the project. Interest was renewed in HSR during the Obama administration when funding was offered over five years totaling 33 billion dollars. The only significant advancement to surface from this project was the California High-Speed Rail network which began its first phase in 2014. In 2019, however, the Trump administration stopped funding the project.

Today, the Infrastructure Bill of 2021 has earmarked over 60 million dollars for rail. That money, however, is not for HSR specifically. In an attempt to focus on HSR, Rep. Seth Moulton proposed the American High-Speed Rail Act of 2021 which would provide \$205 billion in

funding over five years for HSR projects. In short, there is significant interest in infrastructure development in the United States currently and in high-speed rail specifically.

Internationally, HSR has been deployed extensively. China leads the way with over 26,000 kilometers of rail, another 10,000 under construction, with a max speed of 350 kilometers per hour. European countries including Spain, France, Germany, and Sweden have also extensively deployed high-speed rail with over 3,000 kilometers of track in some cases. Finally, Japan and South Korea both have several thousand kilometers. Meanwhile, the United States only has 54 kilometers of built track with only 194 more in construction.¹

Typically, high-speed rail is used to travel longer distances as the distance is necessary to reach high speeds. This means that rather than competing with cars for daily commuting, for example, HSR is largely competing with airlines for longer distances and both cars and airfare for intraregional travel. For this reason, most of the literature will refer to HSR in different corridors to facilitate intraregional travel. For example, we have the Northeastern US corridor, Pacific Northwest, and California. The draw of HSR is that it allows for more efficient intraregional travel generating a variety of economically beneficial activities. Additionally, it is important to note that HSR is used for passengers and not freight.²

¹ Environmental and Energy Study Institute (EESI). (2018, July 19). *Fact sheet: High-speed rail development worldwide*. EESI. Retrieved August 16, 2022, from <https://www.eesi.org/papers/view/fact-sheet-high-speed-rail-development-worldwide>

² O'Toole, R. *Romance of the Rails: Why the Passenger Trains we love Are Not the Transportation We Need, "10 Reasons Not to Build High-Speed Rail in the U.S.*, The Antiplanner, November 3, 2020, <https://ti.org/antiplanner/?p=17764>

Identifying High-Speed Rail

What classifies high-speed rail varies significantly from country to country and even proposal-to-proposal within a given country. The Department of Transportation, for example, defines high-speed rail as being capable of speeds between 110 and 150 or more miles per hour³ while the U.S. Code defines high-speed rail as capable of sustaining a speed greater than 125 miles per hour.⁴ Internationally, definitions are a bit more concrete. Both China⁵ and the European Union⁶ define HSR as upgraded train tracks capable of maintaining a speed of 125 miles per hour and new HSR capable of 155 miles per hour. The good news is that while the definition may not be particularly stable, the literature is largely talking about the same thing as there aren't any projects that are "near high-speed rail" being discussed making "high-speed rail" a functional term of art in the literature. Thus, unless one team is defending something significantly deviating from that term of art, you shouldn't find yourself particularly bogged down in definitional debate. Additionally, Japan's "bullet train" would meet the definition of high-speed rail and you may see that phrasing show up as you are researching.

³ Author Federal Railroad Administration. (2009, April). *High-speed rail strategic plan*. FRA. Retrieved August 16, 2022, from <https://railroads.dot.gov/elibrary/high-speed-rail-strategic-plan>

⁴ U.S.C Title 49. U.S.C. title 49 - transportation. (n.d.). Retrieved August 16, 2022, from <https://www.govinfo.gov/content/pkg/USCODE-2011-title49/html/USCODE-2011-title49-subtitleV-partD-chap261.htm>

⁵ https://web.archive.org/web/20150113172206/http://news.xinhuanet.com/observation/2010-09/26/c_12605899.htm

⁶ DIRECTIVE 2008/57/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 June 2008 on the interoperability of the rail system within the Community (Recast). Official Journal of the European Union. (2000, July 18). Retrieved August 16, 2022, from <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0057&from=en>

It is also important to remove what isn't HSR from the conversation. Throughout your research, you will see references to the "Hyperloop" or "MagLev" trains. While these are a type of passenger train that is capable of significant speed, neither would meet the definition of high-speed *rail* as they don't use *rail* but rather magnets in place of train tracks.

Resolution Analysis

Though the resolution is but fourteen words long, there are three significant portions to consider. They are the inclusion of the word "substantial," the function of the word "its," and finally the consideration of "investment."

First, "substantial." Determining how much of an increase is necessary to meet the threshold of "substantial" is an age-old debate. From 2008 to 2013, the Obama administration offered nearly 33 billion dollars in federal funding for high-speed rail. Today, no money is directly earmarked for high-speed rail, but the 2021 infrastructure bill did hold 66 billion dollars for rail and the government has already started approving grants from that money for HSR.⁷ In short, debaters will have to resolve the substantial debate in the round. This will likely come down to link evidence arguing at what threshold HSR projects are started or completed.

Second, "its." The word "its" is a determiner. It simply identifies association to the thing previously mentioned in the sentence. In this case, the resolution posits that the United States Federal Government should directly increase, likely through legislation given the structures of

⁷ Person, & Shepardson, D. (2022, August 11). *California high-speed rail wins \$25 million U.S. grant, seeks \$1.3 billion more*. Reuters. Retrieved August 16, 2022, from <https://www.reuters.com/world/us/california-high-speed-rail-wins-25-mln-us-grant-seeks-13-bln-more-2022-08-11/#:~:text=Congress%20approved%20%2466%20billion%20for,million%20grant%20for%20the%20project>.

the US government, spending on high-speed rail projects. This is important because it associates the USFG as the agent in increasing investment but does not dictate where that funding will go. Who will receive the money, what projects it will fund, and on what timeline are completely left up to the debaters to work through in rounds. Funding to public-private partnerships (PPPs), private entities solely, state high-speed rail projects, or a nationalized high-speed rail system are all fair game as long as the funding comes from the federal government. Whether or not warrant or probability evidence for each of those entities exists, however, is a separate question entirely.

Third, "investment." The use of the word investment in a topic about expanding high-speed rail is not particularly interesting on its own. What is interesting is that it is the only thing explicitly listed in the resolution as increasing. The resolution doesn't say to increase "investment and development" or any other variation of actually starting programs or expanding current ones. This brings up an interesting question of fiat for affirmative teams to resolve. Does simply increasing investment lead to the production of high-speed rail? Can the affirmative prove that its impacts materialize in a world where states or private companies don't take the increased funding? Is fiat durable enough to resolve a political disadvantage centered around spending waste? There's certainly precedent, like what happened in 2008 with high-speed rail investment, that the USFG could increase funding and states could largely be uninterested in taking them up on their offer.⁸ Affirmatives are going to have to read very good

⁸ McFarland, M. (2021, February 9). *Secretary Pete Buttigieg wants fast trains. he'll have to succeed where Obama couldn't.* CNN. Retrieved August 15, 2022, from <https://www.cnn.com/2021/02/09/economy/pete-buttigieg-high-speed-rail/index.html>

inherency evidence that implicates lacking funding as the keystone for increased high-speed rail or run the risk of significant solvency deficits. On the flip side of the coin, negatives can't simply argue that third parties won't take the money to absent some disad, likely a politics disad, or they run the risk of some very boring presumption debates or losing rounds to a risk of offense from the affirmative.

Affirmative Argumentation

Affirmative arguments will likely center around two things: economic and environmental benefits. In terms of economic benefits, most arguments will center around generating economic activity. This happens in a few ways. First, in the short-term building extensive rail networks creates many jobs for building rail lines and increases the production of construction materials spurring more jobs. The California HSR project proves that it can take over a decade to construct HSR projects meaning we won't see many of the impacts related to HSR for quite some time. Things like construction job creation will be critical for affirmatives for short-term weighing. In the long term, economic benefits stem from increased intra- and inter-regional travel. Whether it be traveling for vacation or business, the idea is more economic activity leads to better economic outcomes. Affirmatives may also argue subsets of this argument including productivity increases from decreased congestion on interstates.

Second, affirmatives will likely spend significant time discussing the environmental implications of HSR. HSR is known to be more energy efficient than cars, planes, and traditional rail which in turn decreases the use of fossil fuels. This of course assumes that the affirmative is winning a tradeoff argument in which they are showing that people are shifting their travel

preferences. The impact story of this argument is that we can delay or reduce global warming.

For this argument to be effective, debaters must do a good job explaining and weighing linear impact stories vs. likely negative big stick impacts.

Most important for the affirmative is proving that lacking funding is the major barrier to HSR development in the United States. Absent being able to prove that more HSR will be built as a result of increased funding, it is going to be very difficult for the affirmative to prove that their impact stories materialize.

Negative Argumentation

Negative teams will likely approach the resolution from multiple angles. First and foremost, it is important to note that there are a lot of defensive arguments on this topic. They include claims that HSR isn't as convenient as driving a car, isn't as expedient as riding in a jet, or that the existence of HSR doesn't reduce air and car travel because people don't use it. While these things may be arguably true, they aren't a reason to vote negative. Negative teams need to focus on offensive reasons investing in HSR could be bad, rather than mitigatory defense for HSR generally.

Luckily, there are plenty of offensive arguments for the negative to make. First, the negative can couple the above defensive arguments with an argument about tradeoffs. For example, they can argue that passing high-speed rail legislation costs too much political capital making it unlikely that other more important pieces of legislation get passed. They could also argue that passing high-speed rail would be unpopular causing a negative shift in upcoming midterm elections. There are also financial tradeoff arguments to be made. The government has a finite amount of money for budgeting purposes. So increasing funding may tradeoff with

giving funding to something else more important. For this argument, it is important to find evidence that illustrates the tradeoff is direct (x causes y) instead of hypothetical or generic.

Second, there is significant literature that high-speed rail may hurt the environment. Building new rail requires land to be cleared, resources extracted from the earth and refined, and fossil fuels used to run the trains. If the negative can prove that this is worse than hypothetical fossil fuel reductions from using HSR then they are in a good position to win this argument. This is also a good place to use the otherwise defensive claims about people not wanting to stop driving their cars or using jets as a way to show that HSR simply increase fossil fuel use rather than causing a shift in travel preferences.

Finally, there are many arguments to be made about gentrification and eminent domain. These train stations must be built somewhere. Often they are built in poorer communities because the land is cheaper there. The train station then may attract new businesses which in turn drives up rent leaving those who lived in the neighborhood unable to afford the new cost of living. Or the government may exercise eminent domain to seize land to attain land for rail and rail stations. This also tradeoffs in questions of affordable housing development in the places where these new train stations are being built.

There are plenty of options for the negative, but they must remember that simply proving HSR is not perfect does not mean we should vote negative. Instead, make sure you're leveraging your defense wisely and going focusing on offense.

The Squirrel Nest

For each topic, I am going to include a section I've decided to entitle "The Squirrel Nest." This section exists to discuss some of the more "squirrely," or off-the-beaten-path, arguments that could potentially exist in the resolution. This month we are focusing on one for the affirmative.

Deep in the nest for the affirmative is the argument that the United States should increase its investment in high-speed rail in other countries. Again, remember that the resolution only determines that the US is the one doing the investment, not where that investment should go. Is there an argument for the US to fund a high-speed rail system in emerging economies? Potentially in South America or Africa? Maybe, though I think the potential for such an argument certainly exists. Admittedly, I think it will be difficult to find evidence that the US would be interested in such investment or that the US is tied to such projects. Or even more off the wall, bullet trains on the Moon or Mars?⁹ Again, the literature is sparse, but we are in the squirrel nest for a reason.

About Nathan Johnston

Nathan Johnston is the Co-Director of Speech and Debate at Lake Highland Preparatory School where he also teaches AP Human Geography. Nathan is a one-diamond NSDA coach who has earned two distinguished service plaques through the NSDA. He is the Region 2 Coordinator for the Florida Forensics League, the former chair of the Florida Panther NSDA district, and the Co-

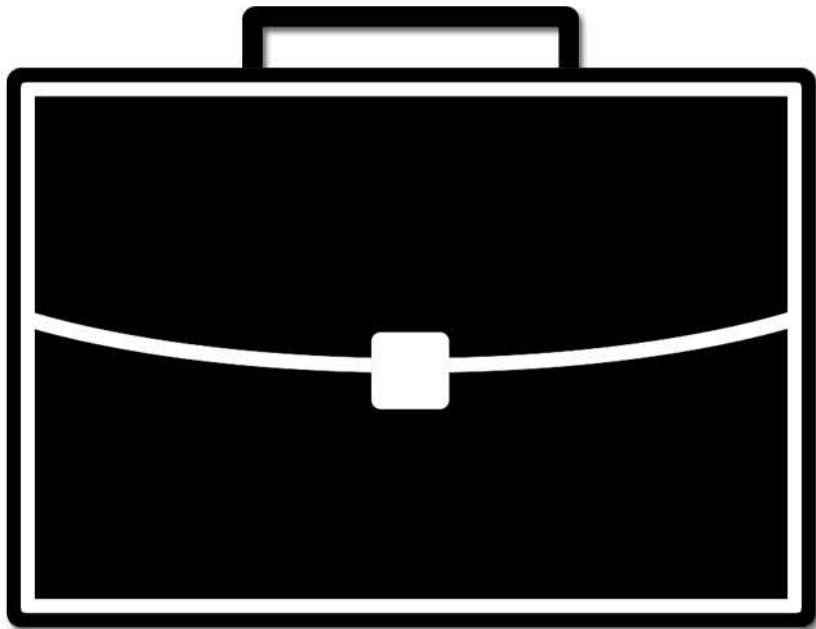
⁹ Pandey, D. (2022, July 19). *Space Travel in bullet train? revolutionary idea to ferry passengers to Mars, Moon is on 'Another level'*. English. Retrieved August 15, 2022, from <https://www.indiatvnews.com/trending/news/space-travel-in-bullet-train-japan-revolutionary-idea-to-ferry-passengers-to-mars-moon-earth-2022-07-19-793390>

Chair of the NSDA Public Forum Debate Topic Wording Committee. He holds master's degrees in both history and educational leadership and is currently working on his doctorate in education. Nathan has coached students to late elimination rounds in PF, LD, Congress, and all speech events at tournaments such as Yale, Bronx, Blue Key, Minneapple, Glenbrooks, Emory, Harvard, TOC, CFL Grand Nationals, and NSDA Nationals.

Champion Briefs

Sept/Oct 2022

Public Forum Brief



General Information

General Information

Resolved: The United States Federal Government should substantially increase its investment in high-speed rail.

Foreword: We, at Champion Briefs, feel that having deep knowledge about a topic is just as valuable as formulating the right arguments. Having general background knowledge about the topic area helps debaters form more coherent arguments from their breadth of knowledge. As such, we have compiled general information on the key concepts and general areas that we feel will best suit you for in- and out-of-round use. Any strong strategy or argument must be built from a strong foundation of information; we hope that you will utilize this section to help build that foundation.

History of the American Railroad

The concept of constructing a railroad in the United States was first conceived by Colonel John Stevens, in 1812. He described his theories in a collection of works called "Documents tending to prove the superior advantages of railways and steam carriages over canal navigation." The earliest railroads constructed were horse drawn cars running on tracks, used for transporting freight. The first to be chartered and built was the Granite Railway of Massachusetts, which ran approximately three miles (1826). The first regular carrier of passengers and freight was the Baltimore and Ohio railroad, completed on February 28, 1827. It was not until Christmas Day, 1830, when the South Carolina Canal and Railroad Company completed the first mechanical passenger train, that the modern railroad industry was born. This industry would have a profound effect on the nation in the coming decades, often determining how an individual lived his life.

By 1835, dozens of local railroad networks had been put into place. Each one of these tracks went no more than a few miles, but the potential for this mode of transportation was finally being realized. With every passing year, the number of these railway systems grew exponentially. By 1850, over 9,000 miles of track had been lain. Along with the proliferation of railroads came increased standardization of the field. An ideal locomotive was developed which served as the model for all subsequent trains. Various companies began to cooperate with one another, to both maximize profits and minimize expenditures.

This interaction of various companies initiated the trend of conglomeration which would continue through the rest of the Nineteenth Century. In 1850, the New York Central Railroad Company was formed by the merging of a dozen small railroads between the Hudson River and Buffalo. Single companies had begun to extend their railway systems outside of the local domain. Between 1851 and 1857, the federal government issued land grants to Illinois to construct the Illinois Central railroad. The government set a precedent with this action, and fostered the growth of one of the largest companies in the nation.

With the onset of the Civil War, production of new railroads fell dramatically. At the same time, however, usage of this mode of transportation increased significantly. For example, the Battle of Bull Run was won by a group of reinforcements shuttled in on a railroad car. By the conclusion of the war, the need for an even more diverse extension of railways was extremely apparent.

Soon after the war, the first transcontinental railroad was constructed. The Union Pacific Railroad company started building from the east, while the Central Pacific began from the west. The two companies met at Promontory Point, Utah, on May 10, 1869. As they drove the Golden Spike uniting the two tracks, a new age was born. Slowly, the small railroad companies would die out or be absorbed by large businesses.

Several more transcontinental railroads were built before the end of the century, all by large corporations. Every decade brought increased standardization. In addition, labor unions were developed to protect the rights of the workers. As companies grew larger, they began to take over other related fields. Soon, large trusts were formed that controlled many aspects of both the economy and society. As more and more areas became controlled by the octopus of the railroad industry, it became apparent that regulation was imperative.



Modern High-Speed Rail

Those who travel to other countries may experience high speed rail (HSR) services and wonder why a similar transportation network has not been implemented in the United States. The following fact sheet provides a brief history of international high-speed rail developments and a comparison of the status of HSR deployment around the world, along with a discussion of issues that policymakers and business leaders may want to consider in their long-term planning for future U.S. transportation infrastructure.

While there is no single international standard for high speed rail, new train lines having speeds in excess of 250 kilometers per hour (km/h), or 160 miles per hour (mph), and existing lines in excess of 200 km/h (120 mph) are generally considered to be high speed. Many countries in Europe and Asia have developed high-speed rail for passenger travel, although some systems also offer freight service.

Japan: The Birth of High-Speed Rail

The first high-speed rail system began operations in Japan in 1964, and is known as the *Shinkansen*, or “bullet train.” Today, Japan has a network of nine high speed rail lines serving 22 of its major cities, stretching across its three main islands, with three more lines in development. It is the busiest high-speed rail service in the world, carrying more than 420,000 passengers on a typical weekday. Its trains travel up to 320 km/h (200 mph), and the railway boasts that, in over 50 years of operation, there have been no passenger fatalities or injuries due to accidents.



Japan's E5 Series Shinkansen (pictured above in its pre-production version) has been in operation since 2011 on the Tohoku line, and since 2016 on the Hokkaido line. Its maximum service speed is 200 mph.

(Photo credit: DAJF. Map credit: [Hisagi](#))

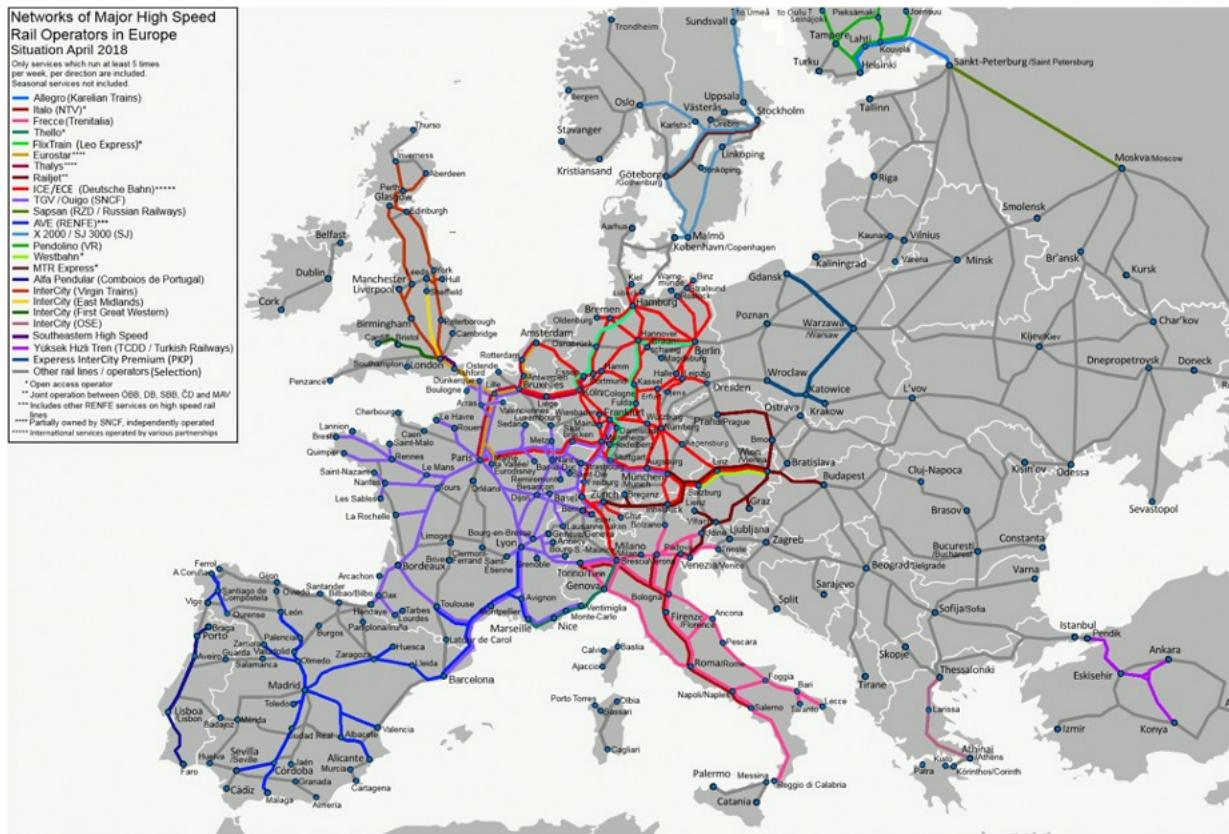


Europe: An International High-Speed Network

The next country to make high-speed rail available to the public was France in 1981, with service at 200 km/h (124 mph) between Paris and Lyon. Today, the French high-speed rail

network comprises over 2,800 km of *Lignes à grande vitesse* (LGV), which allows speeds of up to 320 km/h or 200 mph, on which its TGVs (*Trains à grande vitesse*) run. This inter-city high-speed rail service is operated by SNCF, France's national rail operator. Germany began operation of its Inter-City Express (ICE) high-speed trains through several German cities in 1991. The Eurostar service, connecting Paris to London via the Channel Tunnel, began operation in 1994. Due to France's early adoption of high-speed rail and its central position between the Iberian Peninsula, the British Isles and Central Europe, most other high-speed rail lines in Europe have been built to the French standards for speeds, voltage and signaling, with the exception of Germany, which built to existing German railway standards.

Over the ensuing years, several European countries have built extensive high-speed rail networks that include several cross-border international links. Tracks are continuously being built and upgraded to international standards, expanding the network. International links between Italy and France, with connections to Switzerland, Austria and Slovenia, are underway. These links all incorporate extensive new tunneling under the Alps. European Union funding was approved in 2015 for the Turin–Lyon high-speed railway (at a cost of €25 billion), which will connect the French and Italian networks, and provide a link with Slovenia.

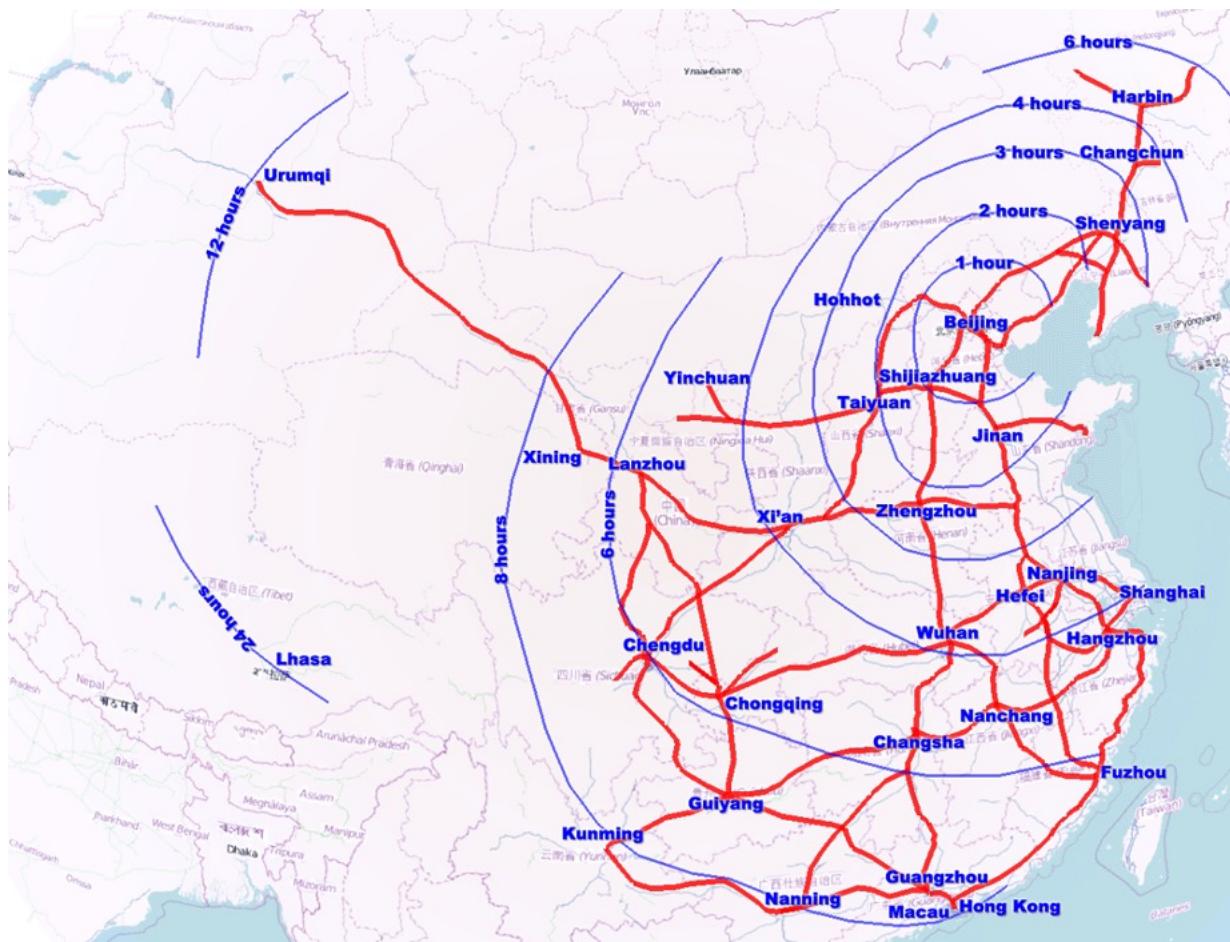


In 2007, a consortium of European railway operators, Railteam, was formed to coordinate and promote cross-border high-speed rail travel. Developing a trans-European high-speed rail network is a stated goal of the European Union, and most cross-border railway lines receive EU funding.

China: Surpassing the Rest of the World

Due to generous funding from the Chinese government, high-speed rail in China has developed rapidly over the past 15 years. China began planning for its current high-speed rail system in the early 1990s, modeling it after Japan's Shinkansen system. Chinese high-speed rail service began operation in 2008, running at speeds from 250 km/h to 350 km/h (217 mph) and traveling from Beijing to Tianjin (117 km or 73 miles). China's HSR network is expected to reach over 38,000

km by 2025, and 45,000 km in the longer term, far more rail lines than in the rest of the world combined. China has imported most of its HSR systems through joint ventures with Japan, Germany, France, and other countries. But in recent years, China has been developing an internal production capability, and is now winning contracts for HSR development in other countries.



After building high-speed rail on conventional tracks, in 2006 China began increasing its budget to build dedicated high-speed rail lines (from \$14 billion in 2004 to \$88 billion in 2009). Overall, China has dedicated \$300 billion to build a 25,000 km HSR network by 2020. Most of the new lines follow the routes of existing trunk lines and are designated for passenger travel only. Several sections of the national grid link cities that had no previous rail connections and will carry a mix of passenger and freight. High-speed trains can generally reach 300–350 km/h (190–

220 mph). On mixed-use HSR lines, passenger train service can attain peak speeds of 200–250 km/h (120–160 mph).

China's most profitable high-speed rail line, reporting 6.6 billion yuan (over \$1 billion) in net operational profit in 2015, connects Beijing to Shanghai, two major economic zones.

Construction first started on this 1,318 km-line in 2008, and it opened for commercial service in 2011.

Critics both in China and abroad have questioned the necessity of having an expensive high-speed rail system in a largely developing country, where most workers cannot afford to pay a premium for faster travel. In response, the Chinese government argues that high-speed rail:

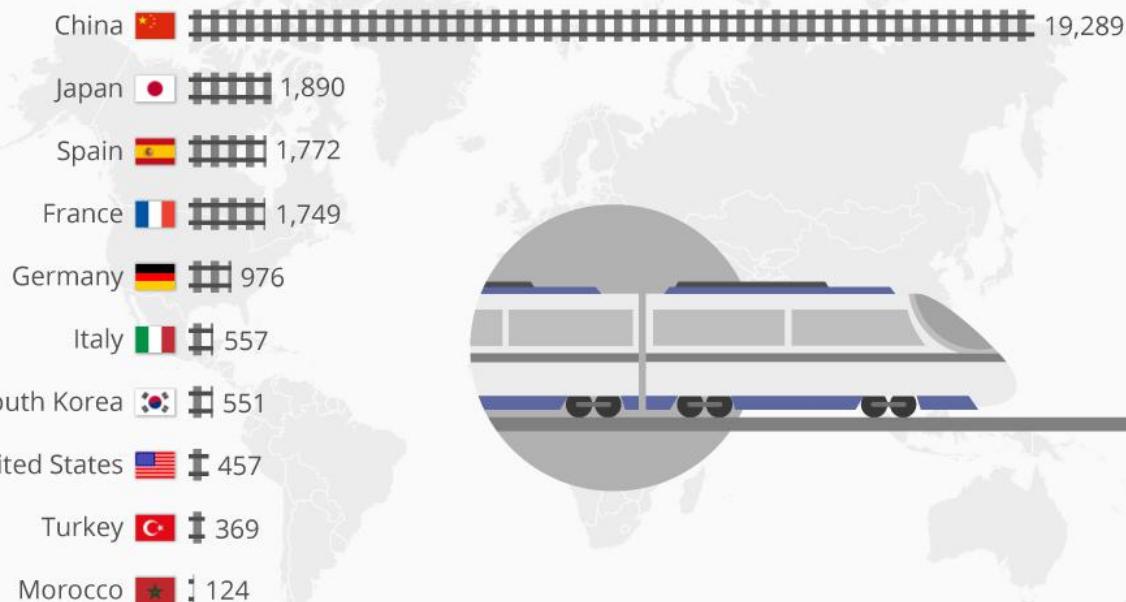
- Provides a fast, reliable and comfortable means of transporting large numbers of travelers in a densely populated country over long distances and improves economic productivity and competitiveness in the long run by linking labor markets and freeing up older railways to carry freight.
- Stimulated the economy in the short term by creating construction jobs and helping drive demand for construction, steel and cement during the economic downturn in 2008-2009.
- Facilitates cross-city economic integration and promotes the growth of smaller cities by connecting them with larger cities.
- Supports energy independence and environmental sustainability, as electric trains use less energy to transport people and goods on a per unit basis and can draw power from more diverse sources of energy (including renewables) than automobiles and aircraft.
- Fosters an indigenous HSR technology and components industry; Chinese train equipment manufacturers have quickly absorbed foreign technologies (such as Japan's Shinkansen systems), localized production processes, and begun competing with foreign suppliers in the export market.

The growth of HSR in China has forced domestic airlines to cut airfares and cancel regional flights, especially for flights under 500 km, and some of the shorter inter-city routes were

completely terminated. China's high-speed rail now carries more than twice as many passengers as its domestic airlines.

The U.S. Trails The World In High-Speed Rail

Miles of high-speed rail track in operation by country as of January 2019



@StatistaCharts Sources: UIC, The Worldwide Railway Organisation

Forbes statista

U.S proposals for national High-Speed rail

A group of 10 senators and 65 House members this spring asked for \$3.5 billion in fiscal year 2023 appropriations to develop high-speed rail corridors. Two years earlier, Rep. Seth Moulton, D-Mass., had proposed a \$205 billion investment to build a national high-speed rail network. These efforts are just two of the latest in a long history of attempts to jump-start bullet train projects in the U.S., dating back to the High Speed Ground Transportation Act of 1965.

While the U.S. has dithered, the rest of the world has built nearly 35,000 miles of high-speed rail, according to the International Union of Railways. The generally accepted definition of high-speed rail is trains that can travel in excess of 160 mph. Amtrak's fastest train, the Acela, reaches a top speed of 150 mph, but new Acela trains are expected to reach 160 mph when they come online in fall 2023.

Below are timelines of three U.S. projects under construction or in late stage development. Brightline West and Texas Central are being developed by the private sector while the California high-speed rail project is publicly owned and funded.

California high-speed rail project: Los Angeles to San Francisco

- **1996**

The state legislature creates the California High-Speed Rail Authority.

- **2008**

California voters approve a \$9.95 billion bond measure to construct high-speed rail from Los Angeles to San Francisco. The High-Speed Rail Authority promises travel time under 3 hours, a construction cost of about \$33 billion, and trains operating by 2030.

- **2015**

Construction of California high-speed rail project begins in Fresno.

- **2018**

The California state auditor faults the High-Speed Rail Authority for cost overruns, delays and poor project management.

- **2022**

Construction is underway along 119 miles in California's Central Valley. The latest cost estimate to complete the full project is up to \$113 billion. The projected opening of the Central Valley to Silicon Valley segment only is 2031.

Brightline West: Las Vegas to Southern California

- **2009**

The Federal Railroad Administration completes a draft environmental impact statement for a plan to build a high-speed rail line along the I-15 corridor from Las Vegas to Victorville, California, about 90 miles east of downtown Los Angeles, proposed by privately held DesertXpress.

- **2013**

Rebranded as XpressWest, the company applies to the FRA for a \$5.5 billion loan toward the anticipated \$6.9 billion cost of construction.

- **2016**

A deal between XpressWest and China Railway International to build the line is called off.

- **2018**

Brightline, which operates a train from Miami to West Palm Beach, Florida, acquires the XpressWest project.

- **2022**

Brightline reports it expects to begin construction in 2023 on the 200-mph line, now branded Brightline West, with a goal of starting service in 2026.

Texas Central: Dallas to Houston

- **2014**

Texas Central begins work on an environmental impact statement.

- **2015**

It raises its first round of capital from Texas investors.

- **2019**

It signs a design-build contract with Salini Impregilo and Lane Construction Corp.

- **2021**

Construction start delayed by a lawsuit over the company's use of eminent domain begins.

- **2022**

Texas Supreme Court rules in favor of Texas Central, confirming its right to acquire land under eminent domain.

VISION for HIGH-SPEED RAIL in AMERICA



Current U.S High-Speed Rail projects

Plans for a bullet train line that could zoom passengers from the Central Valley into downtown San Francisco took a major leap forward this week when rail officials signed off on the 43-mile extension.

California's High-Speed Rail Authority Board voted unanimously Thursday to sign off on a preferred route and environmental clearance for the segment that would carry fast trains from San Jose into the city by sharing electrified track with Caltrain's commuter trains.

The line could open for service by as soon as 2033, the authority projects. Stations are slated for San Francisco International Airport/Millbrae and the Caltrain Mission Bay station at Fourth and King streets, which would eventually be replaced by a station in the basement of Salesforce Transit Center.

Major hurdles to the project remain. For starters, California hasn't figured out where it will get up to \$25 billion needed to build the San Francisco and Silicon Valley bullet train extensions.

Nevertheless, approval of the project's final spur north into the heart of the Bay Area is a significant milestone. It's also the latest in a series of wins for high-speed rail in recent months, a reprieve after years of spiraling costs and litigation caused some Democratic state legislators to consider pulling the plug.

Earlier this spring, the Rail Authority board approved the train's 90-mile segment to connect Silicon Valley with Merced in the Central Valley; construction has been under way in the Central Valley for about seven years.

Then, state legislators agreed in June to release \$4.2 billion in bonds to complete construction on the project's Central Valley line, ending a years-long standoff that was largely fueled by

anger over California's decision to build the train outward from the Central Valley first, rather than inward from Los Angeles and the Bay Area.

Brian Kelly, CEO of the Rail Authority, said all those developments put together show the authority is doing what it's promised to do for years: build the most financially feasible segment of the train first while continuing to make headway on extensions to the state's most populous coastal regions.

"There's a realization, a reality, that construction started where it started," he told The Chronicle. "The fact of the matter is that the federal government gave us money to start in the Central Valley."

Originally, the Rail Authority planned to build track inward from Los Angeles and the Bay Area, including lines running east from San Francisco and Silicon Valley. Gov. Gavin Newsom stunned many state legislators and rail advocates in 2019 when he announced he would focus first on the Central Valley line due largely to rising costs.

The Rail Authority's push to approve plans and environmental clearance for extensions to the Bay Area and Los Angeles is, in part, designed to assure voters the project remains statewide in its scope.



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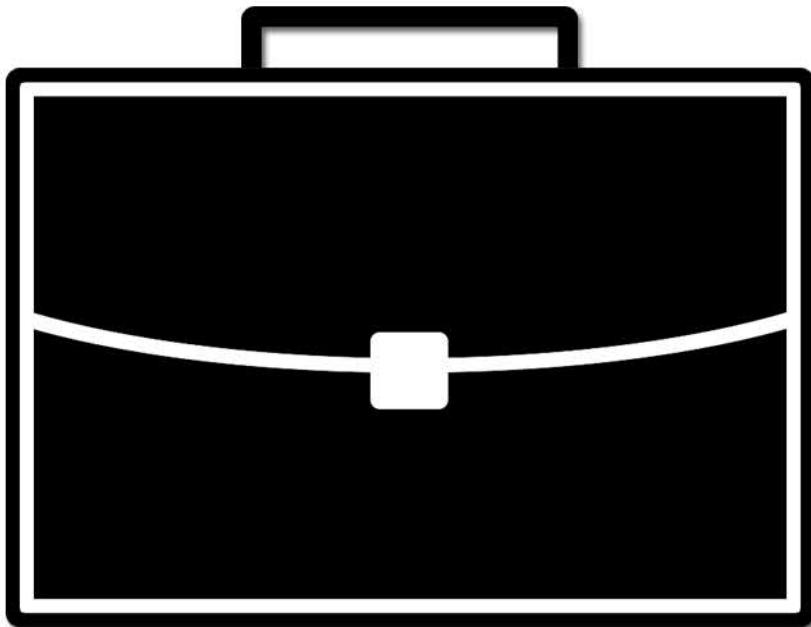
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Champion Briefs

Sept/Oct 2022

Public Forum Brief



Pro Arguments

PRO: High-Speed rail helps empower women

Argument: High speed rail promotes job opportunities for women

Uniqueness: Women are disproportionately affected by federal policies

Boesch, Diana, "When Women Lose All the Jobs: Essential Actions for a Gender-Equitable Recovery," Center for American Progress, 5-19-2020,
<https://www.americanprogress.org/article/women-lose-jobs-essential-actions-gender-equitable-recovery/>

Over the course of the first 10 months of the pandemic, women — particularly women of color — have lost more jobs than men as industries dominated by women have been hit the hardest.⁴ **Overall, women have lost a net of 5.4 million jobs during the recession — nearly 1 million more job losses than men.** The job losses in December are a stark illustration of these trends: Black, Hispanic, and Asian women accounted for all of women's job losses that month, and 154,000 Black women dropped out of the labor force entirely. This push of job losses, combined with the pull of increased caregiving at home, has created a recession in which more women have been affected, leading Dr. C. Nicole Mason to dub it the first ever "she - cession." Congress and the federal government's failure to act immediately has only further jeopardized families' fragile economic security and has the potential to create lasting harm for women's careers and the U.S. economy as a whole. **But these outcomes are not inevitable. They are the result of policymakers' choices — frequent choices not to fix systemic inequalities, modernize workplace standards, create a robust social safety net, or invest in caregiving.** The COVID - 19 recession is different from past economic downturns and will require different solutions than traditional recovery responses. Women and their families urgently need bold, structural policy changes that prioritize their economic security in order to ensure a broad and deep recovery — one on which the success of

the entire U.S. economy rests. **Lawmakers seeking to create a gender - equitable recovery must pass immediate COVID - 19 relief and effective, permanent policies outlined in this brief that support women's work and caregiving in the long term.**

Warrant: HSR physically interconnects regions, increasing the accessibility for jobs in different cities which were once isolated.

Alison Hewitt, "High-speed rail study finds that remote cities benefit from connection to global hubs," UCLA, 3-19-2013,
<https://newsroom.ucla.edu/releases/bullet-train-study-finds-remote-244304>

Bullet trains fuel real-estate booms, improve quality of life and create other unintended consequences by sharply reducing commute times from smaller cities to large megacities, economists from UCLA and China's Tsinghua University observed in a new study in China. A similar dynamic, they said, could play out as California builds its own high-speed rail system. **Because high-speed rail effectively brings cities closer together by reducing travel times, it allows people to enjoy many of the benefits of big cities while living in "second-tier" cities far from the pollution and congestion.** By making second-tier cities attractive to those who would otherwise flock to global hubs, bullet trains could act as a safety valve for crowded megacities in the developing world and ease the effects of overpopulation, the study authors report. In places like California where high-speed rail is planned, proposed stations could create booms for second-tier cities, like Palmdale and Bakersfield near Los Angeles, the authors said. **This would improve quality of life by easing congestion in the major cities while giving more isolated cities greater access to metropolitan hubs.** As the authors observed in China, lower housing costs initially attract new residents, creating a housing boom that will benefit the second-tier cities.

Warrant: With a demand for HSR construction, job opportunities are created.

Andy Kunz, "Ten reasons America needs high-speed rail," Global Railway Review, 11-8-2022,
<https://www.globalrailwayreview.com/article/69858/10-reasons-america-needs-high-speed-rail/>

High-speed rail redirects regional land development patterns into TOD (Transit Oriented Development) – compact, walkable, mixed-use and focused around rail stations. Feeder rail systems spur additional corridors of redirected development into compact, walkable forms. 9. Train stations are a tool for economic development. High-speed rail has the power to attract major real estate development around its stations, while also creating whole new industries due to its extensive manufacturing needs. It will also initiate a nationwide construction boom, followed by a new travel boom that will continue for decades. 10. Jobs are created in manufacturing and construction. **A national high-speed rail system in America will create millions of well paid jobs building the infrastructure and system components, managing the rail systems and operating the stations and related real estate development.** Given all these incredible benefits, high-speed rail represents a truly transformative proposition, worthy of major federal and state investment in America's bright future. Proof of such is evident all around the world where high-speed rail has been solving problems and providing great mobility and access to billions of people. Now it's America's turn to modernise its transportation system for the 21st century.

Empiric: HSR provided job opportunities within California's high speed rail system.

Elliot Robinson, "Investments in high-speed rail continue to lift California's economy," Global Railway Review, 11-8-2022,

<https://www.globalrailwayreview.com/news/132071/investments-in-high-speed-rail-continue-to-lift-california's-economy/>

The 2021 Economic Analysis Report from the California High-Speed Rail Authority (Authority) has explored the economic benefits of the high-speed rail programme at the national, state-wide and regional level, with the latest data showing a rise in jobs and economic investment. “The new analysis **shows the continued progress of the nation’s first high-speed rail project as a strong economic driver,**” Brian Annis, CFO for the Authority, said. “We’re proud of the work **this project is doing to help disadvantaged communities, put women and men to work throughout the state and create opportunities for small businesses.**” Since 2006, the project has invested more than \$8.5 billion in the planning and construction of the nation’s first clean, electrified high-speed rail system. **More than one of every two of these dollars have been invested in California’s disadvantaged communities, spurring economic activity in these areas.** High-speed rail contributed \$840 million in California in labour income (wages, benefits, payroll taxes) and supported 10,100 job-years of employment last year. Job-years are defined as the equivalent number of one-year-long, full-time jobs supported by the project. For example, if one full-time job is supported for two years, it represents two job-years. Additionally, the project contributed an economic output of \$2.2 billion last year. From vendors and contractors to local California businesses benefitting from high-speed rail investment, the analysis highlights the value of indirect and induced benefits. **The project’s total labour income earned by workers on the project is \$5.2 billion since 2006, and the project’s total economic activity is \$13.7 billion.** As of July 2021, more than 630 certified small businesses throughout the state are helping build high-speed rail.

Impact: Empowering women and society

Puri, Lakshmi, "The Role of Women in Democratic Transition," UN Women
– Headquarters, 11-23-2011,
<https://www.unwomen.org/en/news/stories/2011/11/the-role-of-women-in-democratic-transition>

Gender equality and women's empowerment are a matter of justice and human rights, but they are also essential for the achievement of all human rights for all, for the development of all societies and for our collective global future. We must ensure that we capitalize on the potential and talents of all citizens, not just of one-half of the population. **We need the best leaders we can find to confront our challenges — poverty, hunger, disease, environmental degradation, violence — and many of these leaders are women.** Women bring their own insights and perspectives, and this improves decision-making. **Empowering women also makes good economic sense. The World Bank and others have shown that increasing women's access to quality education, good jobs, land and other resources contributes to inclusive growth, sustainable development and long-term prosperity.** The most recent FAO report on the State of the World's Agriculture estimates that closing the productivity gap arising from women's unequal access to productive resources would reduce the size of the population who are undernourished by 12 to 17 percent.

Analysis: Post COVID-19, women have been disproportionately affected by federal policies—systemic inequalities, workplace standards, and social safety nets. In an attempt to create a gender equitable policy, the implementation of high speed rail will stimulate economic growth, opening job opportunities particularly for women. As such, offering HSR construction and management positions to women can empower them and their impact upon society and economic growth.

PRO: High-Speed Rail decreases foreign oil dependence

Argument: High speed railway will decrease foreign oil dependence

Warrant: HSR is more efficient than conventional trains.

"High-speed trains pollute 29 percent less than traditional trains,"
Spanish Foundation for Science and Technology, 12-14-2010,
<https://phys.org/news/2010-12-high-speed-pollute-percent-traditional.html>

High-speed trains consume 29% less energy than conventional trains per passenger transported, and reduce CO2 emissions by the same proportion. These are the conclusions of a study by the Spanish Railways Foundation published in the journal Transportation Research Record. "A **high speed train operating in normal conditions consumes less energy and produces less CO2 emissions per passenger transported (on average 29% less) than a conventional train travelling between the same two points at a lower speed**", Alberto García, author of the study and a researcher at the Spanish Railways Foundation, tells SINC. The engineer explains that the AVE consumes less due to the intrinsic features of the high speed system, "such as its more standardised speed profile and the lower number of stops and curves during the journey". The consumption of auxiliary services (air conditioning, lighting and ventilation) is also reduced in direct proportion to speed. **With regard to emissions, high speed trains use an electric traction system, meaning they do not emit greenhouse gases and contribute less to fossil fuel consumption than other means of transport.** In this respect they are the same as other electric trains. Alberto García stresses that the prime advantage of a high speed line is not in substituting conventional trains, but rather in attracting a large number of travellers who would otherwise travel by aeroplane and private car. **Fewer gases emitted into the atmosphere** The AVE prevents the 3 kg of CO2 per passenger being emitted into the atmosphere **in comparison with other trains**, but when looking

at the bigger picture of how much pollution is saved if a traveller does not travel by car or aeroplane, this figure rises to 31 kg of CO₂.

Warrant: HSR incentivizes people to switch towards railway, directly decreasing gas-extensive automobile use.

"Benefits of High-Speed Rail for the United States," American Public Transportation

Association, 2022

<https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/>

Reduces Congestion and Boosts Productivity: Congestion on our nation's roads costs \$140 billion in lost time and productivity. The U.S. population is projected to grow by another 100 million people in the next 40 years. The population growth is creating mega-regions that will not prosper unless they can be freed from the stranglehold of highway and airport congestion. At the same time, the United States cannot build enough highway capacity or airport runways to meet demand. Reduces the Nation's Dependence on Foreign Oil: Implementing high-speed rail will keep billions of dollars in the U.S. economy by decreasing the amount of oil that the U.S. consumes. **According to the International Association of Railways (UIC), high-speed rail is eight times more energy efficient than airplanes and four times more efficient than automobile use.**

Warrant: High speed rail entails less overall fossil fuel consumption, uniquely disincentivizing demand from abroad.

"High-speed trains pollute 29 percent less than traditional trains,"

Spanish Foundation for Science and Technology, 12-14-2010,

<https://phys.org/news/2010-12-high-speed-pollute-percent-traditional.html>

High-speed trains consume 29% less energy than conventional trains per passenger transported, and reduce CO2 emissions by the same proportion. These are the conclusions of a study by the Spanish Railways Foundation published in the journal Transportation Research Record. "A high speed train operating in normal conditions consumes less energy and produces less CO2 emissions per passenger transported (on average 29% less) than a conventional train traveling between the same two points at a lower speed", Alberto García, author of the study and a researcher at the Spanish Railways Foundation, tells SINC. The engineer explains that the AVE consumes less due to the intrinsic features of the high speed system, "such as its more standardized speed profile and the lower number of stops and curves during the journey". The consumption of auxiliary services (air conditioning, lighting and ventilation) is also reduced in direct proportion to speed. **With regard to emissions, high speed trains use an electric traction system, meaning they do not emit greenhouse gasses and contribute less to fossil fuel consumption than other means of transport.** In this respect they are the same as other electric trains. Alberto García stresses that the prime advantage of a high speed line is not in substituting conventional trains, but rather in attracting a large number of travellers who would otherwise travel by aeroplane and private car.

Warrant/Quantification: The overall demand of oil will decrease because HSR's energy efficiency will decrease the need to import from abroad.

"It's Easy Being Green: Rail Transport Picks Up Speed," Center for American Progress, 3-24-2010,
<https://www.americanprogress.org/article/its-easy-being-green-rail-transportpicks-up-speed/>

HSR systems would take advantage of existing transportation corridors to minimize intrusion onto protected nature reserves, decrease air pollution generated by internal

combustion engines in cars, and reduce greenhouse gas emissions. The California HSR, for example, will remove 12 billion pounds of carbon dioxide per year by 2030 because it uses electricity generated from wind, solar, and other renewable resources. In addition, **California's HSR will save 12.7 million barrels of oil by 2030.** Further, the Center for Clean Air Policy and the Center for Neighborhood Technology concluded in 2006 that a national HSR system could reduce the number of annual car trips by 29 million and annual plane flights by 500,000, saving 6 billion pounds of carbon dioxide emissions equal to removing 1 million cars from the road each year.

Impact: HSR can decrease total emissions

"It's Easy Being Green: Rail Transport Picks Up Speed," Center for American Progress, 3-24-2010,
<https://www.americanprogress.org/article/its-easy-being-green-rail-transportpicks-up-speed/>

Further, the Center for Clean Air Policy and the Center for Neighborhood Technology concluded in 2006 that a national **HSR system could reduce the number of annual car trips by 29 million and annual plane flights by 500,000, saving 6 billion pounds of carbon dioxide emissions equal to removing 1 million cars from the road each year.** If the United States is going to have a world-class rail system, however, it needs to focus on the "speed" part of HSR. President Obama said on January 27, 2010, "there's no reason why Europe or China should have the fastest trains."

Impact: Protecting the economy

Joyce, William "Oil Dependency: a Subtle but Serious Threat,"

American Security Project, , 6-4-2013,

<https://www.americansecurityproject.org/oil-dependency-a-subtle-but-serious-threat/>

Weapons of mass destruction, terrorism, and cyber crime are in the headlines as significant threats to our national security. However, over the next twenty to thirty years, America's overwhelming dependence on oil presents subtler, although no less serious, threats to national security. The U.S. is the largest consumer of oil in the world, burning through 18.83 million barrels per day. Even if the U.S. produced all petroleum products domestically, Americans would still feel the shocks from market volatility. Oil is a global market, and market prices prevail regardless of origin. **Despite policies to improve vehicle efficiency, America remains dependent on oil.** This dependency presents several threats to U.S. national security. 32256-C-0538-Oil-Well-at-sunset First, **oil price volatility hampers American productivity and consumers. Economic vitality requires stable prices, as spikes in oil prices may reduce output and wages while increasing inflation and interest rates.** Most commonly, consumers feel these **disruptions at the gas pump.** The transportation sector alone consumes 13.223 million barrels of petroleum per day. Petroleum facilitates the functioning of these critical transportation networks, and small disruptions may lead to cascading price dumps. **As volatile oil prices destabilize the economy, they jeopardize U.S. interests and national security.**

Analysis: America's transportation system—trains, planes, and automobiles—are not necessarily the most energy efficient. Prioritizing systems that require a net decrease in fossil fuel consumption directly correlates to a decrease in import of oil from abroad. As a result, climate change emissions decrease and the dependent American economy will become more self-sufficient. To win this argument, teams should provide the narrative of the harms of oil dependency in the United States—skyrocketed oil prices for consumers, jeopardized US interests, and threatened national security.

PRO: High-Speed Rail Reduces shipping emissions

Argument: High speed reduces freight emissions

Uniqueness: Freight emissions perpetuate harms to the environment.

US Department of Transportation, "Clean Freight," 2015

<https://www.transportation.gov/mission/health/clean-freight>

Diesel exhaust from freight trucks is a source of air pollutants, including particulate matter (PM) (such as PM2.5), air toxics, and nitrogen oxide (NOx) emissions (a precursor to ozone). Pollutant emissions related to freight delivery have increased more than 50% since 1990 through increased demand for freight. These comprise close to one-third of the nation's transportation greenhouse gas emissions, according to the Federal Highway Administration Freight and Air Quality Handbook (FHWA, 2010). The U.S. Environmental Protection Agency (U. S. EPA) regulates emissions from mobile sources by setting standards for each pollutant being emitted.

Warrant: Freight companies need more technologically efficient strategies to meet demand—decreased emissions diminish harms to the environment.

US Department of Transportation, "Clean Freight," 2015

<https://www.transportation.gov/mission/health/clean-freight>

As these standards become more stringent, the freight industry must devise strategies to meet those requirements. For freight shipped by truck, **technological strategies include engine retrofits and use of alternative fuels.** Operations strategies include congestion mitigation and idling reduction through specific applications such as weigh station bypass / weigh-in-motion. Research has demonstrated the efficacy of these

strategies in reducing emissions. Additional emissions reductions could be achieved by shipping fewer empty containers. Although freight by rail or water is less emissions intensive, technological and operational opportunities exist for emissions reductions within these modes as well. Air cargo is a small part of freight movement in the United States and its estimated contribution to emissions is small, although relative volumes are anticipated to increase in the future. Intermodal freight transportation with well-connected and coordinated modes is a strategy to optimize use of the transportation network, easing congestion and improving air quality.

Warrant/Empiric: HSR increases the total capacity for transport, incentivizing freight companies to utilize high speed rail for transportation instead of conventional methods.

Elisha Sketchley, "HS2 takes 24,000 HGVs off roads as new rail freight depot opens," Planning, BIM & Construction Today, 8-15-2022,
<https://www.pbctoday.co.uk/news/plant-equipment-supplies-news/hgvs-rail-freight-depot/97545/>

HS2 has opened a new railhead near the village of Calvert which will help the project continue to deliver construction materials by rail to its Buckinghamshire site without putting extra lorries on local roads The new railhead – the second to be built at Calvert – will allow **HS2** to run an extra 150 aggregate trains over the next 2 months, saving 8,300 tonnes of carbon and **taking the equivalent of 24,000 trucks off the roads**. Once work is complete, HS2 will pass by Calvert in a 2.5 mile long cutting roughly following the route of the disused Great Central Railway, with a spur off to a new Infrastructure Maintenance Depot from which engineers will repair and maintain the new line. The Infrastructure Maintenance Depot – which is expected to create around 180 jobs locally – will sit alongside the new East-West Rail line which is currently being reopened in stages between Oxford, Milton Keynes, Bedford and Cambridge. Closed in the 1960s, the reopened East-West Rail line will cross HS2 just north of Calvert. Already 369 freight

trains have arrived at the first Calvert railhead – meaning that, **by the end of the year more than 840,000 tonnes of construction materials will have been delivered – taking the equivalent of 84,000 trucks off the roads and saving 29,000 tonnes of carbon.**

Construction is being managed by HS2's main works contractor EKFB – a team made up of Eiffage, Kier, Ferrovial and Bam Nuttall. EKFB are delivering the 80km central section of the route, including 17 viaducts, 81 bridges and three 'green tunnels' and are set to create 4,000 jobs over the next two years. The trains are operated by DB Cargo and Hanson. **Across the whole HS2 project, 15,000 freight trains are set to be used to haul 10 million tonnes of aggregate to construction sites – taking the equivalent of 1.5 million HGVs off the UK's roads.** Reducing disruption for the local community HS2 Ltd's senior project manager, Paul Marshall said:

Impact: Freight transportation is detrimental. Need to scale more efficient transportation strategies (i.e. HSR)

Greene, Suzanne, "Freight Transportation," MIT Climate Portal, 4-9-2020

<https://climate.mit.edu/explainers/freight-transportation>

While nearly three-quarters of the world's cargo is carried by ocean-going ships, road vehicles like trucks and vans make up the majority, 62%, of freight's emissions.² Most ships burn fossil fuels and emit carbon, but they carry large amounts of freight at the same time, making them the most efficient way to move cargo. **Road freight, however, can emit more than 100 times as much CO₂ as ships to carry the same amount of freight the same distance...** Modern engines, low-carbon fuels, and more efficient practices, such as using vehicle space more efficiently or **reducing freight demand, can reduce freight emissions**, but faster progress is needed to achieve our global climate goals.⁹ Old, polluting equipment tends to remain in operation well past its time, especially in developing countries. **To see a change in freight emissions, we must turn**

over old equipment faster, while scaling new technologies, fuels, and efficiency measures at the same time

Impact: Reducing emissions improves air quality

Roberto Molar Candanosa, Nasa'S Earth Science News Team, "Reducing Emissions to Lessen Climate Change Would Yield Dramatic Health Benefits by 2030 – Climate Change: Vital Signs of the Planet," Climate Change: Vital Signs of the Planet, 11-30-2021, <https://climate.nasa.gov/news/3134/reducing-emissions-to-lessen-climate-change-would-yield-dramatic-health-benefits-by-2030/>

New research shows that improved air quality caused by reducing emissions from burning fossil fuels and other sources would improve human health and prevent economic losses. That's according to projections by scientists at NASA, Duke University and Columbia University. When burned, fossil fuels emit carbon dioxide that contributes to global warming. The World Health Organization projects that heat exposure caused by increased temperatures will be the largest health impact of climate change. Simultaneously, burning fossil fuels emit air pollutants, such as sulfur and nitrogen oxides linked to premature death and respiratory illnesses, including asthma. One of these pollutants, nitrogen dioxide, in turn produces ozone pollution harmful for human health. "Emission reductions help us in the long term to avoid disastrous climate change," said Duke University climate scientist Drew Shindell, who led the research. **"But the benefits that we can quantify for health, agriculture, wellbeing, medical expenses, labor and the economy are overwhelmingly driven by clean air in the near term."** Get NASA's Climate Change News: Subscribe to the Newsletter...**Air pollution responds quickly, as we saw with noticeably cleaner air after just a few months of reduced emissions during COVID lockdowns,"** Shindell said. Achieving cleaner air now

“outweighs the costs of a transition towards a completely net zero carbon economy, even in the very first decade.”

Analysis: Currently, freight emissions worsen carbon emission, exacerbating the effects of climate change. Because freight companies desire more technologically efficient strategies, HSR provides a perfect vehicle to meet demand by increasing its maximum capacity. Overall, by scaling new technology, freight emissions are likely to decrease. To win this argument, teams need to prioritize the need for freight companies to uniquely switch to HSR through a financial perspective.

PRO: High-Speed Rail improves connectivity between cities

Argument: High speed rail fosters the creation of megaregions.

Warrant: HSR physically interconnects bigger cities with second-tier isolated ones.

Alison Hewitt, "High-speed rail study finds that remote cities benefit from connection to global hubs," UCLA, 3-19-2013,
<https://newsroom.ucla.edu/releases/bullet-train-study-finds-remote-244304>

Bullet trains fuel real-estate booms, improve quality of life and create other unintended consequences by sharply reducing commute times from smaller cities to large megacities, economists from UCLA and China's Tsinghua University observed in a new study in China. A similar dynamic, they said, could play out as California builds its own high-speed rail system. Because high-speed rail effectively brings cities closer together by reducing travel times, it allows people to enjoy many of the benefits of big cities while living in "second-tier" cities far from the pollution and congestion. By making second-tier cities attractive to those who would otherwise flock to global hubs, bullet trains could act as a safety valve for crowded megacities in the developing world and ease the effects of overpopulation, the study authors report. **In places like California where high-speed rail is planned, proposed stations could create booms for second-tier cities, like Palmdale and Bakersfield near Los Angeles, the authors said.** This would improve quality of life by easing congestion in the major cities while giving more isolated cities greater access to metropolitan hubs. As the authors observed in China, lower housing costs initially attract new residents, creating a housing boom that will benefit the second-tier cities.

Warrant: HSR incentivizes people to travel farther, filling job opportunities and promoting economic growth in larger cities.

Bella Lorenz, "High-Speed Rail Benefits Small Towns and Large Cities," *Urbanist*, 7-30-2020,
<https://www.theurbanist.org/2020/07/30/high-speed-rail-benefits-small-towns-and-large-cities/>

There are many ways a high-speed rail system can benefit the urban hubs of a megaregion, but small towns along the alignment can also benefit and grow economically. According to Representative Seth Moulton (D-Massachusetts), who authored a white paper on American High-Speed Rail, "**Economic development is not limited to the major city pairs that will likely serve as terminals in initial high-speed passenger rail corridors across megaregions: intermediate communities with access to HSR service will also benefit, perhaps even more dramatically.**" Major cities and small towns within in a clustered network are characterized as a megaregion; the Pacific Northwest megaregion stretches from Eugene, Oregon all the way up to Vancouver, British Columbia, encompassing Portland and Seattle as well as smaller cities along the I-5 corridor such as Bellingham, Olympia, and Surrey. **High-speed rail will provide a fast, affordable, and sustainable mode of transportation between larger cities and for commuters in smaller towns—optimizing travel times, boosting innovation opportunities, and providing economic growth to all cities in the region.** In his proposal for American High-Speed Rail, Rep. Seth Moulton explains that the mobility that comes with high-speed rail, "opens new housing markets to workers, reduces the cost of living, and shares economic growth with nonurban areas." **Building high-speed rail in the Pacific Northwest will ease highway congestion, cutting travel times between city centers and suburbs. For example, a commute between Seattle and Everett could be reduced from 90 minutes at peak to 15 minutes with fast trains, which would save employees 650 hours of time spent in traffic each year—that's an extra 27 days of free time that people can spend with their families.** Residents of smaller cities like Bellingham would be able to commute to a job in Seattle in 45 minutes by high-speed

rail, while living closer to nature and reducing the high cost of residing in the city. Workers from nearby metros can also benefit from fast train journeys. Families who are established in Portland may be willing to work in Seattle, but not be willing to move house. **High-speed rail would transform a three hour drive to one hour train trip between the metropolitan areas, expanding collaboration and connecting innovation hubs such as universities, nonprofits, and corporations.**

Warrant/Empiric: (Chinese) HSR expands commerce and market access between cities.

Laura Wilk, "China's bullet trains facilitate market integration and mitigate the cost of megacity growth," PNAS, , 2-12-2013,
<https://www.pnas.org/doi/10.1073/pnas.1209247110>

Several small secondary cities are located between 100 and 750 km of China's megacities of Beijing, Shanghai, and Guangzhou; residents of these cities gained rapid access to the megacities after the introduction of bullet trains (Fig. P1). The distance from these small cities to the megacities is not easily traveled by car, but these locations are close enough to make flying impractical. **Bullet trains improve market access, expand labor markets, and enhance spatial agglomeration. They allow firms and workers in cities such as Tianjin to access megacities such as Beijing.** High home prices and relatively low quality of life experienced by residents of megacities also encourage some households and firms to relocate in secondary cities. **This cross-city integration allowed by bullet trains simultaneously alleviates some of the congestion costs associated with urban growth in megacities and triggers the growth of secondary cities along the bullet train route.** Macroeconomists view urbanization as a necessary condition for long-term economic growth, but rapid urbanization—especially in developing nations—imposes large social costs. China has three megacities—Beijing,

Shanghai, and Guangzhou—with each metropolitan area's total population in excess of 10 million people.

Empiric/Impact: Strictly economic impact of HSR across cities.

Zou, Wei, "High-speed railway, market access and economic growth," *Science Direct*, July 2018,
<https://www.sciencedirect.com/science/article/abs/pii/S1059056019310883>

This paper establishes a general equilibrium trade model, adopts the “market access” approach to measure the impact of the high-speed railway (HSR) network on the economic growth of 110 main Chinese prefecture-level cities, of which we manually collected the pairwise travel distances and railway speeds to calculate MA (Market Access). **The empirical results show that the launch of HSR exhibits significant positive effects on growth, specifically, 1 percentage increase in MA leads to an increase of real income by 0.123** (controlling region fixed effect) or 0.121 (controlling province fixed effect) percentage. Counterfactual econometrics analysis shows that **if all HSR were removed in 2015, the market access would fall by an average of 76.2%, and aggregate real income would decline by up to 9.4%. The growth effect of HSR varies across cities, and HSR has a more prominent impact on services than on manufactures.** The conclusion stands valid after a series of robustness tests.

Impact: High speed railway increases quality of life (income, productivity, business competition,

Petra Todorovich, “International Lessons for U.S. Policy Makers,” 2011
<https://community-wealth.org/content/high-speed-rail-international-lessons-us-policy-makers>, Retrieved June 20, 2022)

High-speed rail's ability to promote economic growth is grounded in its capacity to increase access to markets and exert positive effects on the spatial distribution of economic activity (Redding and Sturm 2008). Transportation networks increase market access, and economic development is more likely to occur in places with more and better transportation infrastructure. In theory, by improving access to urban markets, **high-speed rail increases employment, wages, and productivity; encourages agglomeration; and boosts regional and local economies.** Empirical evidence of high-speed rail's impact around the world tends to support the following theoretical arguments for high-speed rail's economic benefits. Higher wages and productivity: The time savings and increased mobility offered by high-speed rail enables workers in the service sector and in information- exchange industries to move about the megaregion more freely and reduces the costs of face-to-face communication. **This enhanced connectivity boosts worker productivity and business competitiveness, leading to higher wages (Greengauge 21 2010).** Deeper labor and employment markets: By connecting more communities to other population and job centers, high-speed rail expands the overall commuter shed of the megaregion. **The deepened labor markets give employers access to larger pools of skilled workers, employees access to more employment options, and workers access to more and cheaper housing options outside of expensive city centers (Stolarick, Swain, and Adlerian 2010).**

Analysis: By interconnecting urban hubs, high speed railways will optimize travel times, directly increasing job opportunities. In addition to providing a sustainable mode of transportation, expanded commercial trade opportunities and combined market forces will foster economic growth in regions that were initially disconnected from agglomerated markets.

PRO: High-Speed Rail would reduce total emissions

Argument: HSR entails fewer overall emissions.

Uniqueness: The impacts of climate change are accelerating faster than previously expected.

John Jeffay, 5/31/2022, "Climate change is happening faster than expected, study shows,"<https://www.israel21c.org/climate-change-is-happening-faster-than-expected/>
studyshows/#:~:text=They%20concluded%20that%20the%20Earth's,expecte%20until%20the%20year%202080.

Climate change is accelerating so quickly that the southern hemisphere is already experiencing intense winter storms originally predicted for 2080, says an Israeli research team. The long-term, cumulative effect of these storms is to transfer heat away from the Tropics, which has, in turn, already caused the polar regions to warm up by as much as 30 degrees centigrade. **A new study, published by the researchers in the peer-reviewed journal Nature Climate Change, describes the outlook globally as "bleak".** The team, based at Weizmann Institute of Science's Earth and Planetary Sciences Department analyzed huge volumes of data from 30 climate model simulations around the world, together with current storm observations. **They concluded that the Earth's climate is changing faster than anyone expected** and that storms in the southern hemisphere are already at levels of intensity not previously expected until the year 2080...The researchers conclude that **climate projections for the coming decades are graver than previous assessments.** In particular, they suggest that human activity might have a greater impact on the southern hemisphere than previously thought. **They call for rapid and decisive intervention to halt the climate damage** there, and to correct a bias in climate models to provide more accurate climate

projections. “The models are doing a very good job at forecasting nearly all the parameters,” Chemke says, such as changes in temperature, precipitation, sea ice, and summer storm patterns, but he warns they need to take account of the winter storms that his team has identified as a critical factor. Incorporating their findings should allow experts to more accurately estimate the extent of the damage climate change is causing.

Warrant: HSR energy transportation trades-off with automobile emissions.

Vorcheimer, Max, “High-Speed Rail in the United States: Time to Bite the Bullet,” 4/22/2020, <https://deepblue.lib.umich.edu/handle/2027.42/155358>

Researchers, governments, and private corporations involved in transportation markets have recognized the need for reform, as **the environmental impacts of the current system have become threatening for future generations**. Recently, there has been investment in research and development into electric vehicles, biofuels, and other sustainable transportation methods, indicating initial steps to finding a solution...**Given that HSR is proven to have lower emissions than other forms of transportation on a per-passenger basis** (Jehanno, 2011), it is important to analyze whether HSR can make sustainable changes to consumers’ travel patterns or, if used in conjunction with air travel and other modes of transportation (e.g. personal vehicles), would continue to add to emissions totals and inhibit progress. **In the United States alone**, in 2017, air travel accounted for 2.6% of total greenhouse gas emissions, while **on-road vehicles accounted for nearly 24% of greenhouse gas emissions**. It is worth noting that rail made up less than 1% of greenhouse gas emissions in the country in that same year (US EPA, 2015).

Warrant: Growing populations and congestion (California) incentive shift to HSR—an energy efficient model compared to petroleum.

Petra Todorovich, "International Lessons for U.S. Policy Makers," 2011

<https://community-wealth.org/content/high-speed-rail-international-lessons-us-policy-makers>,

To achieve environmental benefits, **high-speed trains must maximize load factors to realize the greatest efficiencies.** As high-speed rail ridership increases, so does its relative energy efficiency, whereas a high-speed train carrying no passengers ceases to be efficient in any sense. In regions where the number of total trips is not growing, **high-speed rail can bring about a net reduction of energy use through mode shift by capturing passengers from automobile or airplane trips.** In regions like California where population and trips are projected to keep growing, **high-speed rail can help reduce the energy and climate impacts on a per passenger basis through a combination of mode shift and attracting new passengers to high-speed rail.** Energy mix: High-speed rail is the only available mode of long-distance travel that currently is not dependent on motor fuels. High-speed rail is powered by electricity, which is not without environmental problems depending on its source (see table 2). If it is powered by electricity generated from fossil fuels, such as coal or natural gas that discharge harmful greenhouse gas emissions, then its environmental benefits are limited. However, **electricity is generally considered an improvement over petroleum-generated power** and provides a crucial advantage as the United States aims to reduce its dependence on foreign oil.

Warrant: Congestion incentives shift to HSR—an energy efficient model compared to petroleum.

Petra Todorovich, "International Lessons for U.S. Policy Makers," 2011

<https://community-wealth.org/content/high-speed-rail-international-lessons-us-policy-makers>,

According to the U.S. Department of Transportation, the “FRA’s vision for a national high-speed rail program is to develop tiered passenger rail corridors that take into account the different markets and geographic contexts found throughout the United States” (U.S. DOT 2010, 10). This is consistent with the recommendation in this report that **investments in Core Express corridors be directed toward the largest markets in the country, where population density and congestion on competing modes of transportation justify the level of investment in dedicated high-speed rail.** Lesser investments in Regional or Emerging/ Feeder corridors could serve smaller networks of metropolitan regions and emerging markets, using an incremental approach to making improvements over time.

Impact: Northeast Corridor’s HSR brings a net decrease in emissions, yielding environmental benefits.

Petra Todorovich, “International Lessons for U.S. Policy Makers,” 2011

<https://community-wealth.org/content/high-speed-rail-international-lessons-us-policy-makers>,

Amtrak’s Northeast Corridor and parts of the Keystone Corridor (connecting Harrisburg, Pennsylvania to Philadelphia) are electrified. Most other conventional passenger trains in America operate on freight rail lines and are powered by diesel fuel. Energy planning needs to be a part of the planning for high-speed rail to ensure the reduction of greenhouse gases and other harmful pollutants. Even with the current energy mix that includes fossil fuel sources, however, **high-speed rail can yield significant environmental benefits.** A recent study by the University of Pennsylvania (2011) found that a **new high-speed line in the Northeast Corridor, powered by electricity from the current energy mix, would divert nearly 30 million riders from cars and planes, attract 6 million new riders, and still reduce car emissions of carbon**

monoxide by more than 3 million tons annually. The system would also result in a reduction of carbon dioxide emissions if the energy mix were shifted to low carbon emitting sources.

Analysis: Currently, climate change is accelerating at rates faster than initially understood, incentivizing greener decisions. High speed railway—proven to have lower emissions than other forms of transportation on a per-passenger basis—incentives growing communities and already congested cities to pick HSR over conventional methods of travel. HSR's cost and energy efficiency could divert car and plane riders resulting in lower carbon emissions.

PRO: High-Speed Rail prevents auto-fatalities

Argument: High-speed rail would decrease the number of auto-fatalities over time.

Warrant: 42,000 Americans die every year in auto fatalities – this crisis is urgent and preventable

Dan Zukowski, SmartCities Dive, “Traffic fatalities hit 16-year high in 2021, with pedestrian deaths up 13%”, May 18, 2022 Accessed online 8/10/22 at:
<https://www.smartcitiesdive.com/news/traffic-pedestrian-deaths-soar-2021/623913/>

Traffic fatalities hit 16-year high in 2021, with pedestrian deaths up 13%

Dive Brief:

Traffic fatalities jumped 10.5% in 2021 from the prior year, according to an early estimate issued Tuesday by the National Highway Traffic Safety Administration. Fatalities on urban roads rose 16%.

NHTSA also estimated that 7,342 pedestrians were killed in traffic fatalities in 2021, a 13% increase over 2020’s already historically high number. Deaths among bicyclists were up 5% in that period.

The figures were released a day after the U.S. Department of Transportation began accepting applications for \$1 billion in funding under the Safe Streets and Roads for All discretionary grant program, designed to help communities develop safe system-driven safety action plans and projects.

Dive Insight:

While 2020’s steep rise in traffic deaths amid the pandemic horrified safety advocates, 2021 proved even worse.

The newly disclosed 2021 death toll of 42,915 people exceeded prior estimates of 40,000 fatalities and was the highest number of traffic fatalities since 2005. Experts

have attributed the upswing to a mix of more risky driving behaviors and reduced traffic law enforcement.

"This crisis on our roads is urgent and preventable," said NHTSA Deputy Administrator Steven Cliff in a statement. Earlier this year, the DOT released the comprehensive National Roadway Safety Strategy, which follows a safe system approach that focuses on safer roads, safer vehicles and the understanding that drivers make mistakes.

Warrant: This problem will only get worse if nothing is done because auto fatalities are on the rise – 2021 was a 15 year high – increased 10% since 2020

National Highway Traffic Safety Administration, "Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021", May 17, 2022 [nhtsa.gov/press-releases/early-estimate-2021-traffic-fatalities](https://www.safercar.gov/press-releases/early-estimate-2021-traffic-fatalities)

Newly Released Estimates Show Traffic Fatalities Reached a 16-Year High in 2021
In response to this crisis, earlier this year USDOT unveiled the National Roadway Safety Strategy that is now getting resources from the President's Bipartisan Infrastructure Law
The National Highway Traffic Safety Administration has released its early estimate of traffic fatalities for 2021. NHTSA projects that an estimated **42,915 people died in motor vehicle traffic crashes last year, a 10.5% increase from the 38,824 fatalities in 2020. The projection is the highest number of fatalities since 2005 and the largest annual percentage increase in the Fatality Analysis Reporting System's history.** Behind each of these numbers is a life tragically lost, and a family left behind.

"We face a crisis on America's roadways that we must address together," said U.S. Transportation Secretary Pete Buttigieg. "With our National Roadway Safety Strategy and the President's Bipartisan Infrastructure Law, we are taking critical steps to help reverse this devastating trend and save lives on our roadways."

The Bipartisan Infrastructure Law places a strong emphasis on improving safety and includes the new Safe Streets and Roads for All program, which opened its first round of applications just this week. The program, the first of its kind, invests up to \$6 billion over five years to fund local efforts to reduce roadway crashes and fatalities. The Bipartisan Infrastructure Law now being implemented also advances Complete Streets policies and standards; requires updates to the Manual on Uniform Traffic Control Devices, which defines speeds, lane markings, traffic lights and more on most roads in the country; and sharply increases funding for the Highway Safety Improvement Program, which helps states adopt data-driven approaches to making roads safer.

"This crisis on our roads is urgent and preventable," said Dr. Steven Cliff, NHTSA's Deputy Administrator. "We will redouble our safety efforts, and we need everyone – state and local governments, safety advocates, automakers, and drivers – to join us. All of our lives depend on it."

Last week, NHTSA launched the Click It or Ticket campaign, which coincides with special enforcement efforts to raise awareness about the fact that seat belts save lives, and launched a technical assistance program that will assist states in aggressively addressing a continued rise in fatalities. Earlier this week, NHTSA released \$740 million in funding for the 402 State and Community Grant Program, Section 405 National Priority Safety Program and Section 1906 Racial Profiling Data Collection Grants. States are encouraged to use the funding to implement programs to address gaps and opportunities identified during the technical assistance effort, expand partnerships, and focus on risky driving as well as safety concerns among vulnerable road users and overrepresented populations. The full-year estimate of 2021 traffic fatalities also provides a look at state-level estimates during the pandemic. As in 2020, all 10 NHTSA regions are estimated to see increases in fatalities. Forty-four states, the District of Columbia and Puerto Rico are all projected to have had an increase in traffic deaths, as compared to 2020. Preliminary data reported by the Federal Highway Administration show that vehicle miles traveled in 2021 increased by about 325 billion miles, or about 11.2%, as compared to 2020.

Data estimates show the fatality rate for 2021 was 1.33 fatalities per 100 million VMT, marginally down from 1.34 fatalities in 2020. While the fatality rate continued to rise in the first quarter, it declined in the other three quarters of 2021, compared to 2020.

Additionally, the traffic fatalities in the following categories showed relatively large increases in 2021, as compared to 2020:

Fatalities in multi-vehicle crashes up 16%

Fatalities on urban roads up 16%

Fatalities among drivers 65 and older up 14%

Pedestrian fatalities up 13%

Fatalities in crashes involving at least one large truck up 13%

Daytime fatalities up 11%

Motorcyclist fatalities up 9%

Bicyclist fatalities up 5%

Fatalities in speeding-related crashes up 5%

Fatalities in police-reported, alcohol-involvement crashes up 5%

To read more about the U.S. Department of Transportation's comprehensive National Roadway Safety Strategy, which adopts the safe system approach and builds multiple layers of protection with safer roads, safer people, safer vehicles, safer speeds, and better post-crash care, please click [here](#).

Warrant: Investment in high speed rail decreases traffic deaths in both the short and long term – investment alone is associated with decreased traffic deaths

Parisa Bazdar Ardebili * , Peyman Pejmanzad, "Investigating the Relationship between Macroeconomic Variables in Reducing Road Transport Accidents in Iran", Journal of Safety Promotion and Injury Prevention, Vol.9, No.4, winter 2021 Accessed 8/10/22: <https://journals.sbm.ac.ir/spip/article/download/34147/28430/>

Background and Objectives: The low share of rail transport in the total transport of the country shows that most of the suburban trips are made using roads. This has led to many negative consequences, including increased accidents, damage and casualties on the roads. Accordingly, the issue of reducing casualties due to traffic accidents does not seem logical without considering the role of rail transport. Due to the importance of issue, the purpose of this article is to investigate the role of rail transport in reducing road traffic accidents in the country during 2001-2019.

Materials and Methods: **In this study, the short-term and long-term effects of the role of rail transport in reducing road traffic accidents in the country have been investigated.** For this purpose, by collecting annual data and using the self-regression econometric pattern with wide interruption and error correction with the help of EVIEWS10 software, the model has been estimated and the results have been interpreted

Results: **The results show that both in the short and long term, with the increase in the added value of the rail transport sector, the number of road traffic accidents decreased.** Also, with the increase in GDP per capita, the number of road transport accidents will decrease. The results show that with increasing the Gini coefficient, increasing the population and the length of the country's roads, the number of road traffic accidents increases. Finally, according to the error correction coefficient in the ECM model, it can be stated that the adjustment speed is appropriate towards the equilibrium and long-term value, so that in each period about 0.51 of the imbalance error is adjusted and the short-term value towards its equilibrium and long-term value.

Conclusion: **The results obtained from the research findings indicate that both in the short and long term with increasing value of rail transport sector and GDP, the number of road traffic accidents decreases.** Also, with the increase of Gini coefficient, the population of Iran and also the length of the country's roads, the number of road traffic accidents increases. The results of this research can be effective for policy-making in the Ministry of Roads and Urban Development and Railways of the Islamic Republic of Iran and the Roads and Transportation Organization of Iran and the Ministry of Interior.

Warrant: Meta-studies of 31 OECD countries over the course of 17 years prove solvency –

Ali Tavakoli Kashani; Zahra Sartibi; (2021). Is There a Relationship Between Rail Transport and Road Fatalities? . Iranian Journal of Science and Technology, Transactions of Civil Engineering, (), -. doi:10.1007/s40996-021-00667-y

4 Discussion and Conclusion

In recent years, some studies on the effects of macroscale factors such as GDP, gasoline price, alcohol consumption, etc. on road fatalities have been done (Pirdavani et al. 2013; Burke and Nishitateno 2015; Yannis et al. 2014; Chi et al. 2013a, b; Dadgar and Norström 2016) and, they revealed, these factors by affecting vehicle exposures can change the number of traffic fatalities. **This study is the first to investigate the effect of the use of other transportation modes, especially rail transport, on road fatalities by applying panel data models for 31 OECD countries during 17 years.**

The results revealed for the increase in the number of passengers-km carried by railways causes decrease fatalities in roads. It means in OECD countries, which have better economic status and be assumed the number of travels is stable, the shift from road to rail and other modes such as air, can decrease the exposure on roads and, decrease road fatalities consequently. Furthermore, a similar explanation can be expressed about the Gasoline price. High gasoline price leads to low traffic fatalities via cutting of unnecessary trips, increasing travelers tendency of carpooling, and shifting to public transportation (Burke and Nisitateno 2015; Seyedabrizhani et al. 2012; Lukongo 2017; Chi et al. 2013a, b). About other control variables, when GDP grows from one side, the traffic safety conditions and public transportation will improve, which causes a reduction in road fatalities in most cases. But on the other hand, an increase in GDP yields increasing all trips, vehicle ownership, and traffic fatalities (Yannis et al. 2014; Dadgar and Norström 2016).

In this study, both effects have revealed; But its reducing effect has prevailed in most models. And as same as previous researches, increase in alcohol consumption, increases road fatalities and, it has the most additive effect in this paper (Chi et al. 2013a, b, Lukongo 2017). Table 5 presented a brief review about variables, methodology and results in the most related previous studies and this research.

This work is a pilot study to draw considerations to a safety solution in which less attention has been paid yet, and it is evidence that may have some limitations. For example, the analysis only involves the OECD countries which restrict the generalizability of the outcomes. Also, the next studies can concern importing more control variables in the model and applying other modeling methods to approve the findings of this research or gain different interesting results. It's worth mentioning in this research only passenger transport is regarded because it has the biggest share of movements in the road, rail, and air transportation. But also using rail freight instead of trucks and freight vehicles on roads may decrease the number and risk of fatalities. So, investigation of freight transport can be added to passenger transport to make researches more comprehensive.

According to this research's results that- rail transport passengers has preventing role in traffic deaths-, and due to a lot less and incomparable rail transport fatalities than road traffic fatalities, paying more attention to develop railways and rail fleets to provide the possibility of better use of this transportation mode, can reduce the number of deaths.

Warrant: A 1% increase in HSR decreases auto fatalities by 0.13%

Ali Tavakoli Kashani; Zahra Sartibi; (2021). Is There a Relationship Between Rail Transport and Road Fatalities? . Iranian Journal of Science and Technology, Transactions of Civil Engineering, (), -. doi:10.1007/s40996-021-00667-y

The diagram provided in Fig. 1 shows a negative relationship between the use of railway and road fatalities. In the same result, the pooled OLS model and the negative binomial model as presented in Table 1 reveals a 1% increase in rail transport yields a 0.05% decrease in road fatalities. Also, **results** for cross-sectional specification, for a year-2014 indicate a 1% increase in rail passenger yields by 0.13% decrease in road fatalities.

GDP has a preventing function for road fatalities and, population holds a positive sign in all models.

Then more investigations were concerned. Table 2 shows for most of the variables at the level, the null hypothesis of the unit-roots cannot reject by all statistics, and on the other hand, the null hypothesis of existence unit root in the frst difference is strongly rejected. So, there is a co-integration of order one in the regression of the main specfication. Carry on to test co-integration to search about the existing co-integration relationship between road fatalities and dependent variables was done. The outcomes of the Pedroni co-integration tests are shown in Table 3.

As shown in Table 3, in each test, the null hypothesis of no co-integration in at least four statistics rejected. Therefore, there is a long-run relationship between variables. We thus can estimate the FMOLS model. Table 4 displays the results of the estimation models.

The results of the FMOLS model also indicate, more significant rail passengers, decrease road fatalities. As investigated in the literature, gasoline price yields an adverse effect on deaths, and alcohol consumption has a positive relationship with road fatalities. Also, GDP adopted a positive sign. Finally, increasing air passengers causes a decrease in road fatalities. So, it can be said if only these variables affect road fatalities and other factors being constant, a percent increase in rail passengers is associated with a 0.31% decrease in road fatalities. The coefficients of gasoline price and air passengers emerged – 0.34 and – 0.07 and a percent increase in alcohol consumption and GDP yield a 1.03 and a 0.38% increase in road fatalities. Based on this model, all results, except the coefficient of road length, are statistically significant, and the chi-square test indicates

the null hypothesis cannot be rejected and there is no significant difference between the observed and expected values.

Because, as already mentioned, this approach estimates relevant parameters to each other, by entering land area, population makes an adverse impact on road fatalities. The OLS and negative binomial models for former variables revealed similar results with the same signs. For new variables regarding intercept, the sign of gasoline price, air passenger and GDP are negative and alcohol consumption, land area and population are positive. Road length is not statistically significant in all models

Impact: The more we spend on high speed rail, the safer it becomes

Ralf Wilhelms, Lake Superior State University, "SOCIAL BENEFITS AS PART IN THE ECONOMIC EVALUTION OF HIGH SPEED RAIL", August 12, 2015
https://www.researchgate.net/profile/Ralf-Wilhelms/publication/280924889_Social_Benefits_As_Part_In_The_Economic_Evaluation_Of_High_Speed_Rail/links/55cb933508aebc967dfe1a03/Social-Benefits-As-Part-In-The-Economic-Evaluation-Of-High-Speed-Rail.pdf

Another social benefit of the usage of high-speed rail would be the resulting affect of a decrease in traffic fatalities. In 2009 there were 1.13 traffic fatalities for every 100 million passenger miles driven. However, rail has a much safer track record, in the United States there are only .04 deaths for every 100 million-passenger miles. That means **one is 28 times more likely to be involved in a fatal car accident than a train accident** (National Traffic Highway Safety Administration, 2009). It can also be reasonably expected that the **safety record for trains will increase in the future if high-speed rail is further implemented**. High-speed trains have separate grades for crossing, thus eliminating the threat of trains hitting automobiles that fail to stop for oncoming trains.

In order to determine the social benefit in dollars from a decrease in traffic deaths, the average cost of a traffic death in financial terms must be determined. In 1994, the Federal Highway Administration put an average cost on a fatal car accident. The agency accounted for the cost to the life insurance company, the productivity lost by the person killed in the accident, and the increased hardship put on the friends and family of the victim. The Federal Highway Administration came up with the figure of \$2.6 million, or in 2011 dollars, that cost would be \$3.77 million (Judycki, 1994). Therefore, to determine the social benefit of a decrease in car accidents as a result of high-speed rail, the potential lives saved from a decrease in the use of automobiles must be multiplied by \$3.77 million.

Sample and Data Collection

The first route is from Anaheim to San Francisco with major stops at Los Angeles, Fresno, and San Jose. California is a likely candidate for high-speed rail because it is a highly populated state. Figure 2 shows the segment between Anaheim and San Francisco is 520 miles and connects Los Angeles' population of nearly 13 million with San Francisco's population of 4.2 million, also there are four stops in-between with cities of more than 400,000 residents. As illustrated in Figure 2, the Anaheim- San Francisco route has ample amounts of people to fill the trains over such a large area to travel. It is expected that a route between Anaheim and San Francisco would have an initial cost of \$43 billion in infrastructure costs (Government Accountability Office, 2009). When the price of the social benefits of high-speed rail is added into the equation, the true price of the subsidy is in reality much lower.

It is projected that enacting a high-speed rail system in California will reduce carbon emissions in the state by 12 billion pounds (California high-speed train, 2008). If the 12 billion pounds of carbon dioxide eliminated is multiplied by the market price of carbon emissions, which in Europe is around \$20 ton, the social benefit equals \$120 million a year. Another social benefit to be added to high-speed rail is the resulting increase in productivity by workers who can get to work quicker because of less highway congestion. Highway congestion is expected to decrease by 5-7% during peak hours. It is

estimated that in California workers could save 10,500 hours each day in commuting if a high-speed network was implemented. This would equal \$498,000 of productivity each day, if that is multiplied by 250 or roughly the number of non holiday weekdays in a year, the state could see a social benefit of \$124,500,000 (Canadian Government, 2008). It is estimated that when people switch from their daily automobile commute to a high speed rail commute, there will be 52 less traffic fatalities a year in California. If the number of these traffic fatalities is multiplied with the financial cost assigned by the Federal Highway Administration which is \$3.77 million per fatality, it equals a social benefit of \$196,040,000 a year (California high-speed train, 2008).

California is not the only part of the country that has high-density populations that would favor high-speed rail. The Northeast corridor has the highest population density in the country. There is currently a high-speed rail system that operates in the Northeast corridor. It runs between Washington, DC and Boston with many large cities in between. As figure 3 shows, there is a substantial line of cities with heavy populations. In fact, from Washington D.C. to Boston, the high-speed rail network covers over 40 million people living in metropolitan areas. Since there already is a profitable high-speed rail network servicing this area, Acela Express, which is a subsidiary of Amtrak, it would not be necessary to put in an entire new system. Upgrades to existing tracks would help improve speeds, accommodate more passengers, and increase safety.

The social effects of improving the high speed rail system in the Northeast corridor will not be as dramatic as it was in California, mainly because the area is already enjoying some of the social benefits of its limited high speed rail system. However, if the system was to improve enough to take extra cars off the road the social benefits could continue to help lower the cost of the investment. For example, if the upgraded high-speed rail program can eliminate 60% as much of the carbon dioxide emissions as the California high-speed rail plans to; it would eliminate 7.2 billion pounds of carbon dioxide. This would have a social benefit of \$72,000,000 a year. If the high-speed rail improvements of the northeast corridor also reduced traffic deaths by 60% compared to California, then there would be 32 less traffic fatalities. This would have a social benefit value of

\$120,640,000. Finally, the other social benefit of high-speed rail is the reduction of traffic congestion on highways. It is estimated that improved high-speed rail could have similar results to that of California, in that it could take 5-7% of the current automobiles off the road. If this were so, the social benefit would be similar to California's social benefit of \$124,500,000.

Analysis: Affirmative teams should argue that increasing funding for high speed rail will be successful in reducing deaths caused by automobile accidents. The solvency evidence draws on empirical studies from countries who have invested in high speed rail. The argument gets to a quantifiable impact of 40,000 Americans dying every year due to automobile accidents. Because the affirmative likely will not solve 100% of those deaths, PRO teams should be straightforward in arguing that affirming creates a comparative advantage over the status quo.

PRO: Federal funding is key and superior to state and private investment

Argument: Federal funding is essential, other methods of funding are insufficient.

Warrant: High-speed rail requires federal intervention.

David Randall Peterman, Congressional Research Service, "The High-Speed Intercity Passenger Rail (HSIPR) Grant Program: Overview", Congressional Research Service Report, October 18, 2016

If the United States is ever to have true high-speed rail service, this will likely require significant government funding. Financing high-speed rail projects through private investment is very difficult, because vast amounts of money must be spent to build the service before a project starts to earn any revenue—and even then, very few high-speed rail lines anywhere in the world have generated sufficient revenue to cover both construction costs and operating costs. Although the sponsors of a proposed high-speed rail line in Texas have stated, "This project is not backed by public funds," news reports have indicated that the project is likely to depend on long-term loans from the federal government's Railroad Rehabilitation and Improvement Financing and Transportation Infrastructure Finance and Innovation Act (TIFIA) programs. Similarly, while All Aboard Florida, a company related to the Florida East Coast Railroad that is developing a passenger rail service between Miami and Orlando, has stated that it has requested "no state or federal grant money" and that "no ongoing taxpayer subsidies [are] required,"³⁰ the venture has received federal money to improve rail-highway grade crossings and is proposing to issue bonds that would benefit from a federal tax subsidy. Given the important role of federal support for high-speed and other intercity passenger rail projects, lessons drawn from experience to date may prove useful for the future.

Warrant: Private funding fails – takes too long to recoup your investment - High-Speed rail is a public good, not a profit-making endeavor

David Randall Peterman, Congressional Research Service, “The High-Speed Intercity Passenger Rail (HSIPR) Grant Program: Overview”, Congressional Research Service Report, October 18, 2016

The Challenge of Sudden Large but Temporary Grant Funding

Each time federal highway and transit programs are reauthorized, a central point made by the states and localities that receive grants through those programs is the great value of having a long period of predictable funding. A predictable level of funding enables the recipients to plan and implement projects efficiently, avoiding the uncertainty of not knowing how much money will be available in a given year and the higher costs that come with that uncertainty. Funding certainty also facilitates the hiring and retention of people with expertise in transportation project development and implementation, without which projects will be more difficult to complete.

Another consequence of unpredictable funding is project delay. For example, the mandatory environmental impact analyses for some of the HSIPR projects had already been completed prior to the availability of HSIPR funding, but the projects had not progressed. Since conditions change over time, environmental impacts need to be reevaluated after a period of time, typically five years. Hence, in some instances earlier environmental analyses needed to be repeated, delaying the start of construction.

Although the term “shovel-ready projects” was frequently used to refer to projects funded under ARRA, the major HSIPR projects were far from shovel-ready; many of the states previously had no reason to invest significant resources in planning for intercity passenger rail projects, and little time was provided for them to develop applications for the suddenly available funding.

FRA faced a similar challenge, as it was given responsibility for awarding billions of dollars for rail projects quickly although it had little capacity for grant management. FRA struggled to implement the new grant program while also responding to increased responsibilities in other areas as assigned in PRIIA. As it worked to build the capacity to administer the HSIPR grant program, FRA faced two conflicting responsibilities: to approve grants quickly to meet the legislative intent of stimulating the economy, while also being careful to ensure that the money was well used. The FRA Inspector General later reported that FRA's efforts to minimize the misuse of funds had delayed some short-term HSIPR projects because limited staff resources had been devoted to working with the long-term project grantees.

The Challenge of Continuity amid Political Change

Major transportation projects typically take decades to come to fruition. As such, in addition to their engineering and financial challenges, they face political risk: the prospect that a change in the political environment will bring them to a halt. The impact on the HSIPR program of the change from the 111th Congress to the 112th Congress was dramatic: After having been appropriated \$10.6 billion over a span of 10 months, the program received no further funding over the next six years, as well as having \$400 million of the funding already appropriated to it rescinded. It is unclear whether any significant amounts of funding will be provided in the future to continue the development set in motion by the HSIPR grants.

Political uncertainty exists at the state level as well. As noted above, changes in state administrations in Florida, Ohio, and Wisconsin led to withdrawal of state support for HSIPR projects that had previously been approved. While these funds were subsequently redirected to other grantees, their unexpected arrival may have interfered with efforts to use the money quickly.

Warrant: Even privately funded rail projects are BACKED BY FEDERAL long term loans

David Randall Peterman, Congressional Research Service, "The High-Speed Intercity Passenger Rail (HSIPR) Grant Program: Overview", Congressional Research Service Report, October 18, 2016

The Challenge of Funding a Small Number of Costly Regional Projects

Intercity passenger rail development projects for low- and moderate-speed service have relatively modest costs, in part because they generally involve improvements to existing tracks rather than extensive bridge construction and the land acquisition needed for building new lines. High-speed rail lines are considerably more expensive. This poses both a financial and political challenge to a federal program that would support development of high-speed rail: not only must significant amounts of funding be provided over a long period of time, but there must also be a willingness for large portions of that funding to be granted to a small number of projects in relatively few states. This is in contrast to federal programs that distribute resources throughout the country, and to rural as well as urban areas.

Most of the intercity passenger rail projects that have received federal assistance will operate at speeds below 125 mph, and cannot properly be described as high-speed rail. Given the limited funds available in HSIPR, the program might have been more successful at building a true high-speed rail line had Congress directed FRA to concentrate funding on a single project. Congress did not direct FRA to do so. Many Members of Congress have objected to funding for both the California High-Speed Rail Corridor project and Amtrak's Northeast Corridor improvement project; politically, both projects face a challenge in that their direct benefits are limited to relatively few states. Similar political considerations may pose an obstacle to future congressional support for high-speed rail. Others have objected to funding intercity passenger rail in general, contending that it is economically inefficient, requires larger per-passenger subsidies than other modes of travel, is not suited to the economic geography of the United States, and may be superseded by future technologies.

Analysis: The affirmative can succeed by demonstrating that federal funding is uniquely valuable since other actors would not be able to effectively accomplish it on a larger scale in the US.

PRO: High-Speed Rail Supports the Manufacturing Sector

Argument: The manufacturing sector has shrunk over the last three decades as more jobs have moved overseas. HSR provides an opportunity to bring some of those jobs back and help communities that have suffered because of the loss.

Warrant: America has lost many manufacturing jobs

Evan McDowell. "Why Has the U.S. Lost So Many Manufacturing Jobs?" January 2021.

Austin Nichols Technical Search. <https://www.austintec.com/why-has-the-us-lost-manufacturing-jobs/>

"One reason manufacturing jobs are being replaced by automation is the decreasing costs of integrating automation into manufacturing facilities. The costs of robots and automation is expected to drop by 65 percent by 2025. **Because automation is far less expensive than employees, we will continue to see manufacturing jobs decrease in numbers.** A study by MIT suggests that 57 percent of all manufacturing could be fully automated in the next 20 to 25 years, which means manufacturing jobs will continue to deplete if we don't come up with a solution. Manufacturing Jobs Peaked In the 70s. **U.S. manufacturing peaked in the late 1970s with nearly 20 million people in these jobs. However, between 1980 and 2017, the U.S. lost roughly 7.5 million manufacturing jobs. Starting in the late 70s and 80s, more and more people began to pursue higher education, leading them to seek more desirable jobs.** People pursuing higher education combined with automation taking over the industry both were cause for the manufacturing job market to decline steadily since its peak in 1979.."

Warrant: Many manufacturing jobs are moving overseas

Evan McDowell. "Why Has the U.S. Lost So Many Manufacturing Jobs?" January 2021.

Austin Nichols Technical Search. <https://www.austintec.com/why-has-the-us-lost-manufacturing-jobs/>

"It is common knowledge that many U.S. companies outsource their manufacturing to other countries. Since China began participating in the World Trade Organization in 2001, Chinese imports to the U.S. also quadrupled between 2001 and 2004. The main reason companies do this is because of the cost savings. China has very few labor laws and a low minimum hourly wage, which means companies pay employees a lot less for more hours of work. The trade war has caused about 2.4 million manufacturing jobs to move from the U.S. to China. While many manufacturing jobs have moved overseas, automation is still the primary cause of the manufacturing job market decline.

Manufacturing is an integral part of the U.S. economy. Manufacturing jobs have the highest number of workers without college degrees. So, how is the U.S. supposed to bounce back from the dramatic decline in manufacturing jobs? Well, the answer is complicated. Part of the solution is revising trade agreements, which are in the hands of our elected officials. However, there are things that WE can do to help combat this loss. First, we can educate and retrain those in manufacturing jobs. If we have more highly trained individuals overseeing manufacturing plants, it will only increase their productivity.."

Warrant: HSR will generate manufacturing jobs

Lowell F.. "Report: "High-speed rail modernization is good for manufacturing jobs, good for economic growth and good for the environment"" Tiger Communications. April 2013. <https://www.tigercomm.us/insights/2013/02/report-high-speed-rail-modernization-is-good-for-manufacturing-jobs-good-for-economic-growth-and-good-for-the-environment>

"Looking for yet another example of how moving towards a cleaner, advanced technology economy is a winner economically for the United States? Here it is, this time in the transportation sector. **Hundreds of Midwest manufacturers stand to benefit from a web of high-speed passenger rail routes emerging from Chicago's rail hub, according to a report released by an environmental policy group that has fought to defend the use of billions in taxpayer money on such projects.** The report released Friday by the Chicago-based Environmental Law & Policy Center found that 460 manufacturers in seven Midwest states are poised to reap new business, along with a dozen more highly visible companies that make rail cars and locomotives. Those additional supply-chain manufacturers make everything from seats, couplers and bolts to ceiling panels, interior lighting and air horns. They also cut sheet metal, provide electronics and communications equipment, and supply track maintenance machinery.."

Warrant: HSR in California is creating thousands of jobs targeted to low income households

Lowell F.. "Report: "High-speed rail modernization is good for manufacturing jobs, good for economic growth and good for the environment"" Tiger Communications. April 2013. <https://www.tigercomm.us/insights/2013/02/report-high-speed-rail-modernization-is-good-for-manufacturing-jobs-good-for-economic-growth-and-good-for-the-environment>

""It shows that the federal investment in high-speed rail modernization is good for manufacturing jobs, good for economic growth and good for the environment," Learner said. **The bottom line is that "rail investments mean job creation and economic growth and expansion."** To be more specific, the expansion of "next generation passenger rail...means business opportunities for both the Original Equipment Manufacturers (OEM) that make the trains and the many "supply chain" companies that create the components and materials needed by the OEMs." This provides "old-line 'Rust Belt' manufacturing businesses" with opportunities to "[re-tool] to seize opportunities from

"rail growth," and to create jobs with "better wages and benefits" in both the short-and long-term. Given all those benefits, it's about time our country seized this opportunity, instead of watching as other countries race ahead of us down the high-speed tracks.."

Analysis: Use this argument to show that high speed rail modernization will support a critical sector of the economy. The decline of American manufacturing is well known and judges will want to do what they can to save it.

PRO: High-Speed Rail Furthers Economic Justice

Argument: High Speed Rail could be built in a manner that supports marginalized economic groups by unlocking additional economic opportunity.

Warrant: Station location is important for addressing racial equity

Staff. "Wonkabout Washington: Designing High-Speed Rail for Equity and Regulating King County Wineries" May 2019. The Urbanist.

<https://www.theurbanist.org/2019/05/28/wonkabout-washington-designing-high-speed-rail-for-equity-and-regulating-king-county-wineries/>

"Our top concern as a member of the Advisory Group is ensuring a strong equity focus in decision-making, especially given that community-based organizations have not yet been invited to the Advisory Group. While equity is mentioned by group members and consultants as a concern, from our perspective, equity is not yet leading the charge in the discussion, which to date has centered on priorities like alignments, cost, and environmental impacts. But from our perspective, equity is the lens by which we must evaluate all priorities: alignments serving whom, costs borne by whom, environmental benefits received by whom? **Station siting is a top concern for Futurewise in terms of determining equitable distribution of benefits and burdens for investments in ultra-high speed rail. Stations are a critical element of the ultra-high speed rail project as they drive ridership and will have large impacts on land use, transportation and housing in the areas in which they are constructed—issues that are largely outside the control of this project's scope unless other state initiatives fill the gap...**"

Warrant: Because of high costs, HSR will not be able to cover operating costs.

Staff. "Wonkabout Washington: Designing High-Speed Rail for Equity and Regulating King County Wineries" May 2019. The Urbanist.

<https://www.theurbanist.org/2019/05/28/wonkabout-washington-designing-high-speed-rail-for-equity-and-regulating-king-county-wineries/>

"A potential future station in Kelso/Longview highlights these concerns. Currently, two of the three proposed alignments and station locations show Longview/Kelso as a potential stop, which makes sense given the existing Amtrak stop in Kelso. However, Kelso has a 29% poverty rate (more than twice the state average), and the median property value is \$125,000, about a third of the state average. A high-speed rail line that would allow people to live in Kelso or Longview and easily commute to Seattle has the potential to increase access to jobs and drive economic development. At the same time, absent other policy interventions, a new stop is also likely to increase sprawl, gentrification and displacement of vulnerable populations in the area."

Warrant: HSR will bring economic opportunity to those who need it

Stephanie Overman. "High-speed rail delivers jobs to counties" National Association of Counties. April 2022. <https://www.naco.org/articles/high-speed-rail-delivers-jobs-counties>

"California's high-speed rail line isn't anywhere near completion, but it's already bringing benefits to some of the state's Central Valley counties. For key economic indicators — per capita income, unemployment and poverty rates — "valley counties have persistently performed poorly compared to state averages," according to the Center for Continuing Study of the California Economy. The publicly funded California High-Speed Rail Authority can help bridge that gap, according to rail authority CEO Brian Kelly. **Kelly told a recent American Public Transportation Association conference that the first segment of the rail project — in Madera, Fresno, Kings, Tulare and Kern counties — means "huge economic development in one of the most disadvantaged**

areas” of the United States. The project officially broke ground in Fresno in January 2015 and construction is currently taking place within 119 miles in the Central Valley. The Merced to Fresno project section is part of the first phase of the system, a 65-mile electrified, two-track initial operating segment connecting the communities of Merced, Madera and Fresno.”

Warrant: HSR in California is creating thousands of jobs targeted to low income households

Stephanie Overman. “High-speed rail delivers jobs to counties” National Association of Counties. April 2022. <https://www.naco.org/articles/high-speed-rail-delivers-jobs-counties>

“So far, “close to 8,000 construction jobs have been created,” with the help of the State Building and Construction Trades Council, the Fresno Regional Workforce Development Board and other groups, according to Augie Blancas, a public information officer for the authority. **Blancas noted that the high-speed rail authority and its design-builders are implementing the Target Workers Program, which requiring 30 percent of all project work hours be performed by individuals from disadvantaged communities (such as the Central Valley) where household income ranges from \$32,000 to \$40,000. Training workers is a key part of the project, according to Blancas.** The authority has partnered with the City of Selma, in Fresno County, to create a workforce development center training for Central Valley residents. The center is aimed at serving veterans, at-risk young adults, minority and low-income populations. “There’s customized classroom instruction and hands-on training,” that helps students prepare for careers in more than 10 construction-industry trades, Blancas said.”

Analysis: Use this argument to show that the benefits of HSR are going to places where it will be felt the most acutely. Remind the judge that economic benefits are considerably more valuable to the poor than to the rich, because each marginal dollar is more impactful to disadvantaged persons.

PRO: High-Speed Rail is politically popular

Argument: High Speed Rail is a very popular idea that would deliver immense political capital to the governing coalition and help usher in other reforms. Also, democratic governments ought to pass policies supported by their constituents.

Warrant: Young Americans support HSR

Gabby Birenbaum. "Gen Z's high-speed rail meme dream, explained" March 2021. Vox.
<https://www.vox.com/2021/3/10/22303355/gen-z-high-speed-rail-biden-map-meme-buttigieg>

"Such is the popularity among Gen Z-ers of high-speed rail. "We look at other countries that have good examples of it, and we wonder why our country can't do that," Cara said. "It seems like a simple solution that we can't find the reason as to why we're not doing it." For members of the young online left, the high-speed rail map has become a ubiquitous fixture of politics Twitter. Created by graphic designer Alfred Twu in 2013, the map depicts a system of interconnected high-speed rail lines, linking Los Angeles to New York and Minneapolis to Miami, among other projects. (High-speed rail refers to lines that typically run over 160 miles per hour.) **The map has been tweeted out by tiny personal accounts and the Sunrise Movement alike. It has its share of problems — the proposed rail lines go right through tribal lands — but it serves as a handy analog for what the promise of high-speed rail represents to Generation Z.."**

Warrant: Because of high costs, HSR will not be able to cover operating costs.

Gabby Birenbaum. "Gen Z's high-speed rail meme dream, explained" March 2021. Vox.
<https://www.vox.com/2021/3/10/22303355/gen-z-high-speed-rail-biden-map-meme-buttigieg>

"Gen Z isn't the first group of young, online voters to care about transit. But they represent a culmination of trends that have been building in younger Americans: less interest in cars as status symbols, more interest in environmentally friendly transit methods. The popularity of the high-speed rail map meme builds on years of similar conversation, some of it in the Facebook group New Urbanist Memes for Transit-Oriented Teens (Numtot), first created in 2017 and now serving as a "haven for people who love trains," as administrator Emily Orenstein described it. The meme, and **high-speed rail more generally, are popular topics with the group's more than 200,000 users, its three administrators say, because it allows them to dream big.** "I love the high-speed rail map image because I think a lot of urban planning and urbanism today, especially in the United States, is so devoid of inspiration because it's so beaten down by so-called pragmatism, labor costs, legal issues, things like that," said Jonathan Marty, a Numtot administrator who goes to Columbia University. "The high-speed rail thing, the map that circulates a lot, it touches people because it's this genuinely bold and tangible image of the future. People can feel that.""

Warrant: High Speed Rail is very popular in California

Staff. "New Poll Finds Strong Voter Support for High-Speed Rail in California" PR Newswire. April 2022. <https://www.prnewswire.com/news-releases/new-poll-finds-strong-voter-support-for-high-speed-rail-in-california-301526337.html>

"Fourteen years after California voters approved funding to begin building a statewide high-speed rail system, a clear majority of registered voters—and more than 70% of Democrats—still support the project, according to a new survey by UC Berkeley's

Institute of Governmental Studies and the Los Angeles Times. **The poll found that 56% of registered voters "support the state continuing to build the high-speed rail project, even if, as is currently planned, its operations only extend from Bakersfield to Merced in the Central Valley by the year 2030 and to the Bay Area by the year 2033."** Thirty-five percent of voters said they are opposed. By a margin of 73% to 18% Democrats support the project, with 54% of independent voters in support and 37% opposed. Registered Republicans oppose the project—66% to 25%.."

Warrant: HSR support is linked to other important political issues

Staff. "New Poll Finds Strong Voter Support for High-Speed Rail in California" PR Newswire. April 2022. <https://www.prnewswire.com/news-releases/new-poll-finds-strong-voter-support-for-high-speed-rail-in-california-301526337.html>

"This poll confirms what we've believed for a long-time – that the great majority of Californians want electrified high-speed rail to help them alleviate congestion, avoid high gas prices, and address the climate crisis," said Ray LaHood, former U.S. Transportation Secretary and co-chair of the U.S. High-Speed Rail Coalition, which is mobilizing leading unions, businesses, and public servants to advocate for investments that will finally make high-speed rail a reality in America. **High-speed rail will help break the state's dependence on fossil fuels and is essential for California to achieve its ambitious clean air and carbon-free energy goals.** At the same time, the project is creating thousands of good-paying union jobs. Addressing voter worries over spiraling gas prices, the poll found that four in 10 voters said spiking gas prices are hurting them and their families, with low-income voters, especially, saying high gas prices are a serious problem. The California project is at a critical juncture. Governor Newsom has submitted a \$4.2 billion budget request to fund construction work now underway in the Central Valley and to advance key contracts to continue progress on the project. This bond appropriation is the remaining allocation from the original Proposition 1A bond

approved by 6.6 million voters in 2008 to initiate construction on the California High-Speed Rail project."

Analysis: This argument should be made in conjunction with other claims about HSR's effectiveness at achieving substantive policy objectives such as decarbonization. This point is an impact in itself (popular policies are good), but it is also a hidden frontline for common responses to other arguments, where con teams will claim that HSR will not actually be built or will be politically toxic.

PRO: High-Speed Rail creates economic growth

Argument: Substantially increasing investment in high speed rail benefits the economy by increasing labor input and capital.

Warrant: HSR creates jobs

APTAAdmin. "Benefits of High-Speed Rail for the United States - American Public Transportation Association." American Public Transportation Association, 17 Mar. 2021, www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/.

Building high-speed rail will create hundreds of thousands of jobs. Every \$1 billion in investment creates 24,000 jobs. These are highly skilled jobs that will revitalize the domestic rail industries supplying transportation products and services. Many additional jobs are created through the commerce fostered through the economic activity and development which they spark. Every \$1 invested creates \$4 in economic benefits. Upgrading passenger operations on newly revitalized tracks, bridges and rights of way is spurring business productivity along corridors. The rail services will connect America's economically vital mega-regions and help keep them mobile, productive, efficient and internationally competitive.

Warrant: HSR prevents productivity lost from traffic

APTAAdmin. "Benefits of High-Speed Rail for the United States - American Public Transportation Association." American Public Transportation Association, 17 Mar. 2021, www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/.

Reduces Congestion and Boosts Productivity: **Congestion on our nation's roads costs \$140 billion in lost time and productivity.** The U.S. population is projected to grow by another 100 million people in the next 40 years. **The population growth is creating mega-regions that will not prosper unless they can be freed from the stranglehold of highway and airport congestion.** At the same time, the United States cannot build enough highway capacity or airport runways to meet demand.

Warrant: HSR reduces congestion

Paige Malott, Bella Lorenz. "Fast Trains, Cleaner Air, and Less Congestion: Envisioning a Post-Pandemic Pacific Northwest." *The Urbanist*, 20 May 2020,
<https://www.theurbanist.org/2020/05/20/fast-trains-cleaner-air-and-less-congestion/>

High speed rail in the Pacific Northwest would absorb at least 20% of intercity trips including auto, air, and bus travel. That means reduced congestion, and faster travel times for both high-speed rail passengers and those using the highway, including freight. The project is also expected to reduce the region's carbon emissions by six million metric tons. With the help of a 2019 business case study released by the Washington Department of Transportation, we can start to imagine our cities in the Pacific Northwest connected by high speed rail, perhaps by incorporating tracks along highway corridors in Seattle, Portland, and Vancouver, British Columbia. A high-speed rail line can transport 32,000 people per hour, which is more efficient and economically sustainable than expansion of highway infrastructure. HSR systems would take advantage of existing transportation corridors to minimize intrusion onto protected nature reserves, decrease air pollution generated by internal combustion engines in cars, and reduce greenhouse gas emissions. The California HSR, for example, will remove 12 billion pounds of carbon dioxide per year by 2030 because it uses electricity generated from wind, solar, and other renewable resources. In addition, California's HSR

will save 12.7 million barrels of oil by 2030. **Further, the Center for Clean Air Policy and the Center for Neighborhood Technology concluded in 2006 that a national HSR system could reduce the number of annual car trips by 29 million** and annual plane flights by 500,000, saving 6 billion pounds of carbon dioxide emissions equal to removing 1 million cars from the road each year.

Empiric: In Italy, HSR contributed to extra growth of per capita GDP

Cascetta, Ennio. "Economic growth, transport accessibility and regional equity impacts of high-speed railways in Italy: ten years ex post evaluation and future perspectives." *Transportation research. Part A, Policy and practice* vol. 139
Published: 9/22 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7413664/>

The deployment of HSR services in the recent decades has been, arguably, the most significant innovation for intercity travel around the globe. HSR has brought impacts which have been widely studied in different countries in relation to the different socioeconomic, territorial and transport characteristics. This paper analyzes the economic growth, the transport accessibility and the social impacts observed in Italy after ten years of HSR operation, as well as the estimated impacts of the system completion. **The Italian case study is of particular interest since along the 1,467 km of new high speed line (300 km/h), a combination of major cities distances and a unique HSR competitive market, producing prices reductions and more daily trains, brought a 200% increase of HSR demand (from 15 to 45 millions of passengers/year).**
Estimations results show that, on average, HSR in Italy contributed to a significant increase in transport accessibility (+32%) for the zones along the HSR network, while only marginal for the others (+6%). Impacts on the economic growth show that HSR has contributed to an extra growth of per capita GDP of + 2.6% in 10 years and would have contributed to a further increase of 3.6% if the final project scenario (HSR_N) would had been completed by 2018. Regional (horizontal) equity impacts were

evaluated in terms of the Gini indexes' variations with respect to the distribution of the transport accessibility. It results that HSR in Italy has decreased equity in terms of users' travel time accessibility of 11%, increasing the differences between the zones served by HSR and those not. If the HSR_N scenario would have been completed equity indices would have increased of 29% with respect to the pre-HSR 2008 scenario, thus reducing regional inequalities in the country. Results show that the HSR project was a country-level "game changer" in Italy, suggesting that the wider economic benefits, the assumptions on market regulation, the effects on regional disparities and the compensatory measures should be included in the ex ante and ex post evaluation of similar projects.

Impact: Economic growth

APTAAdmin. "Benefits of High-Speed Rail for the United States - American Public Transportation Association." American Public Transportation Association, 17 Mar. 2021, www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/.

Building high-speed rail will create hundreds of thousands of jobs. Every \$1 billion in investment creates 24,000 jobs. These are highly skilled jobs that will revitalize the domestic rail industries supplying transportation products and services. Many additional jobs are created through the commerce fostered through the economic activity and development which they spark. **Every \$1 invested creates \$4 in economic benefits.**

Upgrading passenger operations on newly revitalized tracks, bridges and rights of way is spurring business productivity along corridors. The rail services will connect America's economically vital mega-regions and help keep them mobile, productive, efficient and internationally competitive.

Analysis: Increasing investment in high speed rail has the potential to spur substantial economic growth through job creation, economic connectivity, and increased productivity from a reduction in traffic congestion. The economic vitality that high speed rail produces has been documented in many countries, including Italy, where HSR has contributed to an extra growth of per capita GDP of + 2.6% over a decade.

PRO: High-Speed Rail improves health outcomes

Argument: Increasing investment in high speed rail improves and modernizes America's healthcare system, improving healthcare outcomes.

Warrant: HSR facilitates transportation of healthcare resources

Song, Cai-Xia, et al. "Does High-Speed Rail Opening Affect the Health Care Environment?—Evidence from China." *Frontiers*, Frontiers, 1 Jan. 1AD, <https://www.frontiersin.org/articles/10.3389/fpubh.2021.708527/full#:~:text=A%20an%20important%20part%20of,resources%20and%20promoting%20economic%20development.>

The results of the paper show that the opening of high-speed rail is conducive to improving the health care environment. As an important part of modern transport infrastructure, **high-speed rail can provide healthcare resources and health protection to regions by reducing time costs, increasing the mobility of healthcare resources and promoting economic development.** The health effects of the high-speed rail opening have already been demonstrated. In addition, the effect of the opening of the high-speed rail in improving the healthcare environment is different in different regions.

Warrant: HSR reduces transportation cost and improves flow of medical professionals

Song, Cai-Xia, et al. "Does High-Speed Rail Opening Affect the Health Care Environment?—Evidence from China." *Frontiers*, Frontiers, 1 Jan. 1AD, <https://www.frontiersin.org/articles/10.3389/fpubh.2021.708527/full#:~:text=A%20an%20important%20part%20of,resources%20and%20promoting%20economic%20development.>

According to the new economic geography theory, which introduces spatial distance and transport costs into the economic model analysis, Krugman (14) points out that the reduction in transport costs can generate agglomeration effects of factors and industries, thus creating economies of scale and promoting economic growth. **As an important transport infrastructure in modern society, high-speed rail has the function of shortening spatial distances and reducing transport costs (15, 16).** On the one hand, **the agglomeration of medical industries makes it more convenient for people to access medical and health services.** And on the other hand, **the opening of high-speed rail makes advanced medical technology and medical equipment more easily accessible, thus improving the medical environment in backward areas (17–20).** Furthermore, **the opening of the high-speed railway will facilitate the flow of talents, making it easier for specialists to communicate, expanding the geographical mobility of medical personnel and strengthening inter-regional medical cooperation (21, 22).** At the same time, in order to enhance the location and competitiveness of the opening areas, the local governments of the opening areas will also improve their healthcare environment and increase their financial expenditure on healthcare (23, 24), thus improving the healthcare conditions in the opening areas and further promoting the mobility of healthcare professionals (25). Therefore, the following hypothesis is proposed.

Impact: Saving lives

Lang, Susan. "Distance to Nearest Hospital Is Major Factor in Survival of Heart Attack Victims, Cornell Study Shows | Cornell Chronicle." Cornell Chronicle, 2022, news.cornell.edu/stories/2004/02/distance-hospital-affects-heart-attack-survival.

Heart attack victims who make it to the hospital in time to receive medical attention are four to five times more likely to survive compared with those who don't make it to a hospital promptly, according to a new Cornell University study. The research also finds

that for each five-minute increase in distance from a hospital, a person's probability of getting to the hospital in time falls by 1.25 percent. "With prompt medical attention, a person's blockage to the heart, which causes a heart attack, can often be dissolved. That reduces damage to the heart and greatly lowers morbidity and mortality," says Liam O'Neill, assistant professor of policy analysis and management in the College of Human Ecology at Cornell. O'Neill adds: "But as hospitals close and services and staff are reduced, **the time that heart attack victims must travel to get to a hospital may be increasing, especially in rural areas. This puts patients at a much greater risk in the event of a cardiac or other emergency.**"

Impact: improving access to healthcare facilities for rural americans

Lam, Onyi, et al. "How Far Americans Live from the Closest Hospital Differs by Community Type." Pew Research Center, Pew Research Center, 27 July 2020, <https://www.pewresearch.org/fact-tank/2018/12/12/how-far-americans-live-from-the-closest-hospital-differs-by-community-type/>.

Rural Americans are more likely than people in urban and suburban areas to say access to good doctors and hospitals is a major problem in their community. Nearly a quarter (23%) of Americans in rural areas say this, compared with 18% of urbanites and 9% of suburbanites, according to a Pew Research Center survey conducted earlier this year. People living in rural areas have longer travel times to the nearest hospitalOne factor that may contribute to this view is that getting to a hospital is a longer trip – both in distance and time – for people in rural areas than those in suburbs and cities. **Rural Americans live an average of 10.5 miles from the nearest hospital, compared with 5.6 miles for people in suburban areas and 4.4 for those in urban areas, according to a new Center analysis**

Analysis: The COVID-19 pandemic has highlighted the wide disparities that exist in America's healthcare system. High speed rail investment can increase access to quality healthcare for citizens, especially in rural America where people live an average of 10.5 miles from a hospital. HSR mitigates healthcare inequity through economic development, reduced transport cost for goods and services, and improved flow of talented medical professionals.

PRO: High-Speed Rail creates affordable housing

Argument: Investment into high speed rail could be a solution to America's affordable housing crisis.

Uniqueness: Cost of homes is at an all time high.

Bahney, Anna. "Home Prices Hit an All-Time High, Even as Sales Continue to Slow." CNN, Cable News Network, 20 July 2022,
<https://www.cnn.com/2022/07/20/homes/existing-home-sales-nar-june-2022/index.html#:~:text=Home%20prices%20hit%20a%20new,the%20National%20Association%20of%20Realtors>.

Home prices hit a new all-time high in June, even as home sales declined for the fifth straight month as a lack of affordability continues to push buyers out of the market. **The median home price was \$416,000 last month, up 13.4% from one year ago, according to a report from the National Association of Realtors. It marks more than a decade of year-over-year monthly price gains.** Sales of existing homes -- which include single-family homes, townhomes, condominiums and co-ops -- were down 5.4% in June from May and 14.2% from a year ago. June saw the weakest sales figure since June 2020, which was artificially low due to the pandemic. "**Falling housing affordability continues to take a toll on potential homebuyers,**" said Lawrence Yun, NAR's chief economist. "**Both mortgage rates and home prices have risen too sharply in a short span of time."**

Warrant: Average rent is soaring

"Rents across U.S. Rise above \$2,000 a Month for the First Time Ever." NPR.org, 9 June 2022, www.npr.org/2022/06/09/1103919413/rents-across-u-s-rise-above-2-000-a-month-for-the-first-time-ever.

My rent is increasing 22% this year," she says. "It's harder and harder to save more for a down payment." A new report from **Redfin** shows that nationally listed rents for **available apartments rose 15% from a year ago. And the median listed rent for an available apartment rose above \$2,000 a month for the first time.** Rents are up more than 30% in Austin, Seattle, and Cincinnati. In Los Angeles the median asking rent is \$3,400. **Even in formerly affordable cities such as Nashville it's now \$2,140, up 32% from last year.**

Warrant: high speed rail expands the housing market, reducing cost of living

Kunz, Andy. "10 Reasons America Needs High-Speed Rail." Global Railway Review, 27 Jan. 2020, <https://www.globalrailwayreview.com/article/69858/10-reasons-america-needs-high-speed-rail/>.

Transportation is the single largest source of carbon causing climate change. The American transportation system is the most inefficient on earth, with most of the country driving gas-guzzling, single-occupant SUVs hundreds of miles a day around sprawling communities. Whereas, on the other hand, high-speed rail can be zero carbon transportation. Rail opens up the market for more affordable housing. **High-speed rail helps solve the affordable housing crisis by providing access to a wider housing market and taking pressure off the high price 'hot spots' by levelling out pricing at the regional scale. High-speed rail also spurs the development of additional rail systems including light-rail and streetcars, thereby opening up additional possibilities for affordable living and the ability to live without a car or less cars per household – saving the huge expense of car ownership.**

Warrant: People in cities, specifically, report concerns over availability of affordable housing

Schaeffer, Katherine. "A Growing Share of Americans Say Affordable Housing Is a Major Problem Where They Live." Pew Research Center, Pew Research Center, 18 Jan. 2022, www.pewresearch.org/fact-tank/2022/01/18/a-growing-share-of-americans-say-affordable-housing-is-a-major-problem-where-they-live/.

Regardless of income level, city dwellers generally tend to view affordable housing availability as a bigger issue than those living in the suburbs or rural areas. Two-thirds of urban adults with lower household incomes (66%) say affordable housing in their area is a major problem, compared with 56% of suburban dwellers with lower incomes and 52% of those with lower incomes living in rural areas. Among upper-income adults, **58% of those living in urban areas say housing affordability is a major problem**, compared with 43% of upper-income Americans living in suburban places and 25% of upper-income rural residents.

Empiric: Japan HSR allowed lower-income individuals to find housing

Eaton, Joe. "High-Speed Rail Helped Keep Housing Affordable in Japan. Could It Do the Same for California?" Pacific Standard, Pacific Standard, 28 Jan. 2019, <https://psmag.com/economics/high-speed-rail-means-low-cost-housing>

Their findings are no great surprise—**Japan's rail network allowed lower-wage workers to access exurban areas where housing development is less expensive. While areas close to stations experienced price increases, in general prefectures linked by rail were more affordable than they would have been without rail.** "What happens is you have effectively increased the size of the city," Nickelsburg says. "The size of the city expands, and you get urbanization moving out." Nickelsburg developed the study with California in mind, and he expects to see the same socio-economic sorting if CHSR is completed. **The study suggests that high-speed rail could be a boon specifically for workers in the Bay Area and Los Angeles metros that find themselves priced out of increasingly**

unaffordable central cities. Higher-income workers who can afford urban amenities and rents would be more likely to live in inner cities, Nickelsburg says. Speedier rail might liberate more lower-wage Bay Area workers, many of whom have already migrated to inland exurbs, from their epic commutes. "We see that in cities everywhere," Nickelsburg says **of the rush to the exurbs in search of affordable housing.** "[High-speed rail] just facilitates that."

Impact: 85% of Americans say affordable housing is a problem.

Schaeffer, Katherine. "A Growing Share of Americans Say Affordable Housing Is a Major Problem Where They Live." Pew Research Center, Pew Research Center, 18 Jan. 2022, www.pewresearch.org/fact-tank/2022/01/18/a-growing-share-of-americans-say-affordable-housing-is-a-major-problem-where-they-live/.

Prospective homebuyers and renters across the United States have seen prices surge and supply plummet during the coronavirus pandemic. **Amid these circumstances, about half of Americans (49%) say the availability of affordable housing in their local community is a major problem, up 10 percentage points from early 2018**, according to a Pew Research Center survey conducted in October 2021. **Another 36% of U.S. adults said in the fall that affordable housing availability is a minor problem in their community, while just 14% said it is not a problem.** Americans' concerns about the availability of affordable housing have outpaced worries about other local issues. The percentage of adults who say this is a major problem where they live is larger than the shares who say the same about drug addiction (35%), the economic and health impacts of COVID-19 (34% and 26%, respectively) and crime (22%).

Quantification: The US has a shorting of adorable housing options

Dan, Emmanuel. "A Shortage of Affordable Homes - National Low Income Housing Coalition." The GAP, Mar. 2020,
https://reports.nlihc.org/sites/default/files/gap/Gap-Report_2020.pdf.

Extremely low-income renters in the U.S. face a shortage of 7 million affordable and available rental homes. Only 36 affordable and available homes exist for every 100 extremely low-income renter households. • **Seventy-one percent (7.7 million) of the nation's 10.9 million extremely low-income renter households are severely housing cost-burdened, spending more than half of their incomes on rent and utilities.** They account for almost 72% of all severely cost-burdened renters in the U.S. • Extremely low-income renters are much more likely to be severely housing cost-burdened than other income groups. Thirty-three percent of very low-income, eight percent of low-income, and two percent of middle-income renters are severely cost-burdened.

Analysis: The United States is currently in the midst of an affordable housing crisis, as the average rent just reached over \$2000 a month. Development of High Speed Rail can be part of the solution to the crisis by expanding the housing market to areas now connected with HSR. Empirically, this trend has been exemplified in countries like Japan where housing options linked by rail were more affordable than they would have been without rail.

PRO: High-Speed Rail is more environmentally friendly than planes

Argument: The United States federal government should increase investment into high speed rail because rail travel has a smaller environmental impact than aviation.

Uniqueness: currently, air travel is a significant source of carbon emissions

"Reducing Carbon Dioxide Emissions from Aircraft – Center for Climate and Energy Solutions." Center for Climate and Energy Solutions, 9 Nov. 2021, www.c2es.org/content/reducing-carbon-dioxide-emissions-from-aircraft/#:~:text=In%202018%2C%20aircraft%20were%20responsible,aviation%20making%20up%20the%20rest.

Aircraft are a rapidly growing emissions source within the transportation sector, which has surpassed the power sector as the biggest source of U.S. carbon dioxide emissions. **In 2018, aircraft were responsible for about 3 percent of total U.S. carbon dioxide emissions and nearly 9 percent of greenhouse gas emissions from the U.S. transportation sector. Commercial air travel accounted for most of the aircraft carbon dioxide emissions**, with military and general aviation making up the rest. **From 1990 to 2018, U.S. carbon dioxide emissions from domestic commercial flights grew about 18 percent. Recent studies estimate that U.S. aircraft emissions will increase substantially in the next 20 years. Moreover, airplanes remain the single largest source of carbon dioxide emissions within the U.S. transportation sector that is not yet subject to federal greenhouse gas regulations.** U.S. aviation is part of the increasingly interconnected global aviation sector, which makes up more than 2 percent of global carbon dioxide emissions but is one of the fastest growing sources. From 1990 to 2010, global aircraft carbon dioxide emissions grew about 40 percent. From 2013 to 2018, global emissions grew another 26 percent. If global aviation were a country, it would rank as the 20th largest

carbon dioxide emitter, and U.S. aircraft emissions are 24 percent of all global aircraft emissions. Absent new policies, global aircraft emissions are projected to triple by 2050.

Warrant: HSR produces less carbon emissions than planes

Amit Katwala. "Is Holidaying by Train Really That Much Better for the Environment?"

WIRED UK, WIRED UK, 12 May 2019, www.wired.co.uk/article/trains-planes-emissions-co2-comparison.

When he set up the site, in 2001, most people who travelled abroad by train did so because they couldn't fly due to phobias or medical problems. He attributes the surge in recent interest not just to environmental concerns, but also to people's frustrations with the budget airline experience. But is travelling by train really that much better for the planet? The headline figures certainly suggest so. **According to the European Environment Agency, rail travel accounts for 14 grams of CO2 emissions per passenger mile, which is dwarfed by the 285 grams generated by air travel, and the 158 grams per passenger miles from journeys in cars. Taking the Eurostar from London to Paris instead of a plane cuts up to 90 per cent off CO2 emissions**, according to the company's calculations.

Quantification: HSR is more energy efficient than other modes of transportation

Dai, Wei. "High-Speed Rail: More Environmental Efficient and Energy Saving Transportation." Mathematics for Sustainability: Student Blog Spring 2015, 24 Apr. 2015, <https://sites.psu.edu/mfsblog/2015/04/24/high-speed-rail-more-environmental-efficient-and-energy-saving-trasportation/>

How environmental beneficial is the high-speed rails compared to cars and airplanes? According to a prediction study on American high-speed rail system, “**Americans in 2025 are projected to take 112 million trips on high-speed rail, traveling more than 25 billion passenger miles, resulting in 29 million fewer automobile trips, nearly 500,000 fewer flights, and a potential reduction of greenhouse gas emissions by 2.7 million metric tons of CO2 equivalent.**” Similar prediction result appears on the California High Speed Rail Authority: “In 2022, when the Initial Operating Section (Merced to the San Fernando Valley) is up and running, the resulting GHG reductions will be between 100,000 to 300,000 million metric tons of carbon dioxide (MtCO2e) equivalent in the first year. That’s the equivalent of taking 17,700 to 53,000 personal vehicles off the road. Between 2022 and 2040, the cumulative reduction of CO2 is estimated to be between 5 and 10 million metric tons CO2e.” **Also, train is actually more energy efficiency than cars and planes.** “Trains are 3 times as energy efficient as cars and 6 times as efficient as planes on a per-passenger-mile basis.” (High-Speed Rail Works), one of the main reason is that a train can carry way more passengers (at least 100 people per trip) than a car can do (about 1.6 person per trip). And adding a passenger won’t do any increase on the original total carbon emission (of a train trip) while adding a car will double that (of a car trip). Also, the advantages of high-speed rail will become obvious in the long trip situation: According to the article “How Big Are the Environmental Benefits of High-Speed Rail?” by EDWARD L. GLAESER, a **240-mile car trip produces approximately 157 pounds of carbon dioxide and a 240-mile plane trip produce approximately 133.7 pounds of carbon dioxide.** However, on the other hand, a **240-mile train trip only produce approximately 32.1 pounds of carbon dioxide.**

Warrant: HSR reduces the number of people who ride planes

Chen, Zhenhua. “Impacts of High-Speed Rail on Domestic Air Transportation in China.” Journal of Transport Geography, vol. 62, June 2017, pp. 184–96,
<https://doi.org/10.1016/j.jtrangeo.2017.04.002>.

This study investigates the impacts of high-speed rail (HSR) on domestic air transportation in China using a new comprehensive modeling framework utilizing both demand and supply perspectives. For the first time the assessment was conducted using an improved panel regression model by taking into account of the detailed opening schedules of various HSR services during the period 2001–2014. **The research findings reveal that the deployed HSR services have a significant substitutional effect on domestic air transportation in China**, but the effect varies across different HSR routes, travel distance and city type. **Specifically, the research found a decrease in domestic passengers of 28.2%, in flights of 24.6% and in seat capacity of 27.9% after the introduction of HSR services.** The impacts are found much stronger among those air routes that connect major hub within a distance range of 500 to 800 km. The uneven nature of the impact can be seen in the different experiences of selected cities. For example, air travel declined approximately 45% after commencement of the Wuhan-Guangzhou HSR, whereas it fell by 34% after the opening of the Beijing-Shanghai HSR.

Impact: slowing global warming

UNEP. "How Do Greenhouse Gases Actually Warm the Planet?" UNEP, 2022,
www.unep.org/news-and-stories/story/how-do-greenhouse-gases-actually-warm-planet.

Greenhouse gas (GHG) emissions – the atmospheric gasses responsible for causing global warming and climatic change – are critical to understanding and addressing the climate crisis. Despite an initial dip in global GHG emissions due to COVID-19, the United Nations Environment Programme's latest Emissions Gap Report (EGR) expects a strong rebound in 2021, when emissions are expected to be only slightly lower than the record levels of 2019. **While most GHGs are naturally occurring, human activities have also been leading to a problematic increase in the amount of GHG emitted and their**

concentration in the atmosphere. This increased concentration, in turn, can lead to adverse effects on climate. Effects include increases in the frequency and intensity of extreme weather events – including flooding, droughts, wildfires and hurricanes – that affect millions of people and cause trillions in economic losses. The Emissions Gap Report found that if we do not halve annual GHG emissions by 2030, it will be very difficult to limit global warming to 1.5°C compared to pre-industrial levels by the end of the century. Based on current unconditional pledges to reduce emissions, the world is on a path to see global warming of 2.7 °C by the end of the century compared to pre-industrial levels. “Human-caused greenhouse gas emissions endanger human and environmental health,” says Mark Radka, Chief of UNEP’s Energy and Climate Branch. “And the impacts will become more widespread and severe without strong climate action.”

Analysis: This is a good argument because of the urgency and magnitude weighing that climate-related arguments bring. Air travel produces significantly more carbon emissions than high speed rail. Empirics prove that the availability of rail stations reduces the number of passengers on planes, reducing greenhouse gas emissions; ultimately, this slows the greenhouse gas effect.

PRO: High-Speed Rail boosts tourism

Argument: Investment in high speed rail promotes tourism

Warrant: HSR spurs cooperation in the tourist industry

Yin, Ping, et al. "The Impact of High-Speed Railway on Tourism Spatial Structures between Two Adjoining Metropolitan Cities in China: Beijing and Tianjin." *Journal of Transport Geography*, vol. 80, Oct. 2019, p. 102495,
<https://doi.org/10.1016/j.jtrangeo.2019.102495>.

HSR may also facilitate changes in the spatial structure of regional urban tourism, offering favorable conditions for regional tourism cooperation and stimulating integration and agglomeration of urban resources (Wang et al., 2018). For example, Liang (2010) reported a pattern of cooperation among a number of Chinese cities including Guangzhou, Changsha, and Wuhan. Zhou and Li (2018) observed a similar pattern with the **Wuhan-Guangzhou HSR that has helped optimize the opportunities for tourism co-operation between cities within the Delta area including offering multi-destination itineraries using the savings in time achieved by using HSR**. Using economic relation model and spatial analysis of 338 cities across China, Wang et al. (2018) presented a tourism spatial structure with 19 urban agglomerations. Recently, Huang et al. (2019) have shown that the influence of HSR on the urban agglomeration tourism system is increasing.

Warrant: HSR provides multiple travel options

Yin, Ping, et al. "The Impact of High-Speed Railway on Tourism Spatial Structures between Two Adjoining Metropolitan Cities in China: Beijing and Tianjin." *Journal of*

Transport Geography, vol. 80, Oct. 2019, p. 102495,
<https://doi.org/10.1016/j.jtrangeo.2019.102495>.

The development of HSR systems also stimulates inter-city travel (Hou et al., 2011). HSR attracts travelers who previously used other transport modes leading to changes in travel behavior (Fröidh, 2005). Since the opening of Beijing-Tianjin HSR in 2008, inter-city commuting traffic has increased with commuters working in Beijing and living in Tianjin. In this way HSR can influence commuters' space feeling, facilitating a life-style based on inter-city commuting (Hou et al., 2011). Zhang et al. (2013) examined HSR's impact on urban tourism in Nanjing and found that **HSR expands tourists' route choice, range and frequency of visits**, but tourist stay time may be reduced. However, little is known about the impact of HSR on the change of inter-city tourism spatial structures.

Warrant: HSR can transport people quickly and efficiently

APTAAdmin. "Benefits of High-Speed Rail for the United States - American Public Transportation Association." American Public Transportation Association, 17 Mar. 2021, www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/.

Implementing high-speed rail will keep billions of dollars in the U.S. economy by decreasing the amount of oil that the U.S. consumes. According to the International Association of Railways (UIC), high-speed rail is eight times more energy efficient than airplanes and four times more efficient than automobile use. It will also decrease greenhouse gas emissions and improve air quality. **Expands Travel Choices and Improves Mobility: High-speed rail can deliver people from one downtown to another as fast as or faster than air travel. The addition of HSR as an integrated part of America's transportation system will help airports work better and highways work better.** It will

also expand options for citizens in rural and small urban communities with increased transfer points and feeder services that connect with new HSR corridors.

Empirics: In China, HSR has a positive impact on hotel occupancy rate.

Deng, Taotao, et al. "Do Hotel Business Benefit from Increased Tourist Accessibility? Evidence from China's High-Speed Railway Program." *Tourism Economics*, vol. 27, no. 7, May 2020, pp. 1357–74, <https://doi.org/10.1177/1354816620923216>.

The operation of high-speed railway (HSR) always plays a key role in promoting tourism development of city by improving transportation accessibility and facilitating tourists' travel. Based on the panel data of 50 major tourist cities in China from 2010 to 2017, this article uses a Tobit model to explore the impact of HSR service on hotel performance that is embodied in occupancy rate. The results show that with other factors unchanged, the cities with a high-frequency HSR service system or hub HSR station tend to have higher hotel occupancy rate. Moreover, the hotel occupancy rate of cities with a suburb HSR station is lower than that of other HSR-served cities. After classifying hotels into luxury and budget groups, this article finds that HSR train frequency and station grade still show positive effects on both luxury and budget hotels. However, in cities with suburb HSR stations, budget hotels tend to have lower occupancy rates, while occupancy rate for luxury hotels shows no significant difference.

Empiric: Spanish provinces with HSR receive more tourists

Campa, Juan Luis, et al. "High Speed Rail Effects on Tourism: Spanish Empirical Evidence Derived from China's Modeling Experience." *Journal of Transport Geography*, vol. 57, Dec. 2016, pp. 44–54, <https://doi.org/10.1016/j.jtrangeo.2016.09.012>.

Another argument that supports this idea is that most tourists in Spain come from other EU nations (71% in 2014), and the differences in these price levels are less pronounced. The low sensitivity to price levels is reinforced by the fact that Spain tends to welcome tourists with a high degree of loyalty to the destination. In the revenue models (in both China and Spain), the exchange rate is less significant as a variable than the gross provincial product per capita (gpppc), and is unimportant in terms of significance. While ridership and length are not significant among railway variables, the dummy indicator HSR plays an important role in the Chinese and Spanish foreign tourism models, especially in the case of tourism revenues. The HSR variable is statistically significant at the 1% significance level in the Chinese and Spanish revenue models (Table 5), but only 5% significant in the demand models (number of foreign tourists) (Table 4). **These results are the key findings of this paper, and indicate that Spanish provinces with HSR receive more foreign tourists and more revenues than provinces without this service. In conclusion, the results show that HSR in Spain has positively affected foreign tourism outputs (especially revenues), although its impact is not as important as in China.**

Impact: economic benefits from tourism

Economic Development Research Group. The Economic Impacts of High-Speed Rail on Cities and Their Metropolitan Areas. <https://getliberty.org/wp-content/uploads/2019/02/US-Conf-of-Mayors.pdf>

In all four cities, ridership increases are projected by implementing HSR service. A portion of the riders will be local residents traveling to outside locations. Another includes outsiders who already come to these cities via car or airplane but will shift to use of new high-speed rail. **An additional portion represents new tourism, conference, and business trips to the case study cities. These travelers will generate spending at local hotels, restaurants, and retail stores. That new spending will grow over time. Projections show that by 2035, HSR can annually add roughly \$255 million in the Orlando area; \$360**

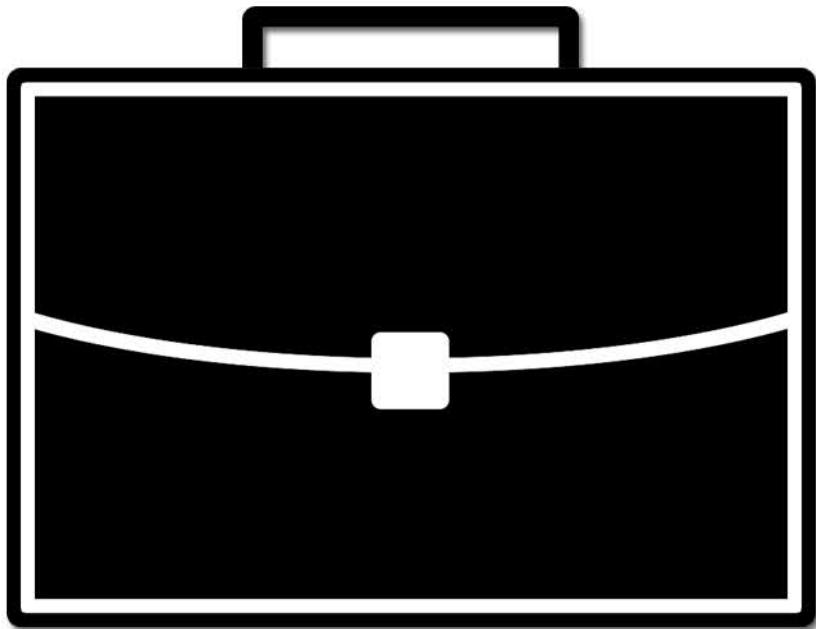
million in the Los Angeles area; \$50 million in the Chicago area; and more than \$100 million in the greater Albany area.

Analysis: Through providing alternative transportation methods and spurring regional cooperation among businesses, high speed rail augments tourism. This has been empirically proven; for instance, Spanish provinces with HSR receive more foreign tourists and Chinese hotels in HSR rich areas have higher occupancy rates. Ultimately, tourism will boost local businesses and prompt economic vitality.

Champion Briefs

Sept/Oct 2022

Public Forum Brief



**Pro Responses to
Con Arguments**

A/2: High-Speed Rail is Inefficient Because of Density

Turn: America is more efficient in the United States

Warrant: America is more dense than other countries

Staff. "U.S. not dense enough for high-speed rail? Think again." Per Square Mile. March 2017. <https://persquaremile.com/2011/05/27/u-s-not-dense-enough-for-high-speed-rail-think-again/>

"Low population densities are often cited as the reason why high-speed rail would never work in the United States. While it's true that typical American metropolitan areas sprawl far and wide, many larger cities are still relatively dense, and a surprising number of our states are as dense as some European nations. California, for example, has just over 90 people per square kilometer (234 per square mile), while Spain has 88 people per square kilometer (231 per square mile). Given the success of Spain's rail system, it stands to reason that California would be fertile ground for high-speed rail.

It's probably not a bad argument to make, and one that sheds some light on why the Obama administration directed money toward certain states for rail upgrades. Ohio and Florida—both of which unfortunately rejected rail funding—are about as dense as France, a world leader in high-speed rail.¹ Illinois, Virginia, and North Carolina sit one density level down, but are on par with Spain and Austria, both of which host high-speed rail. As a state, Illinois may be a poor example since 75 percent of the state's residents live in the Chicago metro area. But if you look at the wider region—from Milwaukee to Detroit to Toledo, with Cleveland, Columbus, and Cincinnati not much farther away—you can see where the Midwest upgrades were headed.."

Warrant: New York to Washington is an excellent candidate for high speed rail

Staff. "U.S. not dense enough for high-speed rail? Think again." Per Square Mile. March 2017. <https://persquaremile.com/2011/05/27/u-s-not-dense-enough-for-high-speed-rail-think-again/>

"The New York to Washington, D.C. market was the top pair of the 27,000 pairs analyzed.¹⁵ In many ways this city pair typifies the ideal corridor for high-speed rail and shares similar attributes with successful existing corridors around the world. Population density in the Northeast Megaregion is higher than anywhere else in the nation, is higher than almost anywhere in Europe, and is similar to densities in Japan. Both cities have extensive transit and regional rail systems to complement intercity rail traffic. Both cities have productive economies and have an extensive existing travel market. And the two cities are separated by just over 200 miles with two major cities in between, Philadelphia and Baltimore. This corridor shares many of the characteristics with the most successful (in term of ridership) high-speed rail corridor in the world, Tokyo to Osaka, which is similar in distance, density, existence of supportive transit systems, and major intermediate cities, Nagoya and Kyoto.."

Analysis: Use this response to undermine the premise of your opponent's arguments. High speed rail may require density, but America is dense enough for the challenge.

Answer: High speed rail can lead to more density

Warrant: In California, proponents of HSR are betting on increases in density

Joshua Smith. "San Diego's high-speed rail plan hinges on urban density as population growth wanes." San Diego Tribune. 2021. <https://www.sandiegouniontribune.com/news/environment/story/2021-05-27/san-diego-high-speed-rail-plan>

"That's the backbone of a recently released \$160-billion blueprint aimed at making public transit as fast as driving a car — which elected officials from across the San Diego region are preparing to discuss Friday. Experts largely agree the plan's long-term success would hinge on whether cities can usher in dense urban development around transit stations, at a time when birth rates in San Diego and throughout California are declining as overall population growth has all but come to a halt. "If new residents can live in apartments near rail, with easy walking, biking and transit access, that will be the key determinant as to whether or not this plan becomes a success," said Ethan Elkind, director of the climate program at UC Berkeley's Center for Law, Energy and the Environment.."

Warrant: Lower density areas still benefit because of easing traffic

Joshua Smith. "San Diego's high-speed rail plan hinges on urban density as population growth wanes." San Diego Tribune. 2021.

<https://www.sandiegouniontribune.com/news/environment/story/2021-05-27/san-diego-high-speed-rail-plan>

"Historically, cities with the most robust transit ridership in the United States, such as Chicago, San Francisco and New York City, have large centralized job centers plagued by gridlocked traffic. San Diego's rail system, on the other hand, would service a region with dispersed employment hubs, often featuring office parks with plentiful parking. That's why agency planners have spent the last year analyzing commuter routes, drive times and countless other factors to develop a system fast enough to keep pace with auto travel. "San Diego's plan as proposed is taking a leap different from every other region in the United States," said Yonah Freemark, senior research associate and transit expert at the Washington D.C.-based think tank Urban Institute.."

Analysis: Use this argument to demonstrate that density is dynamic. The prevalence of accessible rail can increase density over time as people are attracted to the amenity of fast, environmentally friendly transportation.

A/2: High-Speed Rail is Not Self Sufficient

Turn: High Speed Rail is becoming profitable

Warrant: Amtrack is moving toward profitability

Robert Curley. "After half a century, Amtrak may finally make money." Business Traveler. March 2020. <https://www.businessstraveller.com/business-travel/2020/01/13/after-half-a-century-amtrak-may-finally-make-money/>

"US passenger railroad company Amtrak is poised to post a profit for the first time in its 50-year history. Fox Business reports that while the firm posted a \$29.8 million operating loss in 2019, the quasi-public company had record revenues of \$3.3 billion and set a new ridership record of 32.5 million travellers. Overall earnings, although still in the red, rose 82.6 per cent last year, offering hope that Amtrak could post a profit in 2020. Amtrak also invested \$1.6 billion in capital improvements in 2019. "Looking at other domestic and foreign passenger rail operators, these results are truly industry-leading, and this efficiency enables us to dedicate the highest possible proportion of our federal support to vital capital investments in safety, capacity and upgrades to enhance our customers' experience while travelling," said Amtrak President and CEO Richard Anderson."

Warrant: Profitability is not necessarily important for high speed rail

Robert Curley. "After half a century, Amtrak may finally make money." Business Traveler. March 2020. <https://www.businessstraveller.com/business-travel/2020/01/13/after-half-a-century-amtrak-may-finally-make-money/>

"However, some of the changes that Anderson has made in the quest for profitability, such as cutting service to some cities and ending traditional dining-car meals on some routes, have proven controversial. A recent report suggests the group is also considering new fees for changing itineraries, as well as the introduction of nonrefundable tickets.

Republican Peter DeFazio (D-Ore.), the House Transportation Committee chairman, said that becoming a for-profit company might not be the right goal for Amtrak. "I think they should think about efficiency but not profit," he said. "Amtrak is a service, and it can be a better service."

Analysis: Use this response to change the terms of the discussion. High speed rail is profitable, but why does that even matter? The social and broader economic impacts are far more important.

Answer: High speed rail generates positive economic externalities.

Warrant: HSW Increases Economic activity

Staff. "Benefits of High-Speed Rail for the United States." America Public Transportation Association. 2021. <https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/#:~:text=Implementing%20high%2Dspeed%20rail%20will,more%20efficient%20than%20automobile%20use>.

"Every \$1 invested creates \$4 in economic benefits. Upgrading passenger operations on newly revitalized tracks, bridges and rights of way is spurring business productivity along corridors. The rail services will connect America's economically vital mega-regions and help keep them mobile, productive, efficient and internationally competitive.."

Warrant: Lower density areas still benefit because of easing traffic

Staff. "Benefits of High-Speed Rail for the United States." America Public Transportation Association. 2021. <https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/#:~:text=Implementing%20high%2Dsspeed%20rail%20will,more%20efficient%20than%20automobile%20use.>

"Building high-speed rail will create hundreds of thousands of jobs. Every \$1 billion in investment creates 24,000 jobs. These are highly skilled jobs that will revitalize the domestic rail industries supplying transportation products and services. Many additional jobs are created through the commerce fostered through the economic activity and development which they spark."

Analysis: Use this argument to show the judge that there are other ways to benefit the economy besides turning a profit. It is more than worth it to subsidize some high speed rail deficits if it has broader economy-wide effects.

A/2: High-Speed Rail leads to gentrification

Answer: High-Speed Rail is beneficial to lower-income communities.

Turn: gentrification often provides investment into disinvested areas and can have positive impacts.

Van Tol, Jesse. "Yes, You Can Gentrify a Neighborhood Without Pushing Out Poor People," Washington Post, 08 Apr. 2019,
<https://www.washingtonpost.com/outlook/2019/04/08/yes-you-can-gentrify-neighborhood-without-pushing-out-poor-people/>.

But for many neighborhoods, **gentrification represents much-needed investment. Local residents welcome the resurrection and revival of neglected and disinvested areas. Community leaders desire capital investments, leading to better services, jobs, thriving businesses and other components of a healthy, vibrant neighborhood. As one resident of West Baltimore put it: “How can we get some gentrification in our community?”** It turns out both views are correct. **Gentrification does not have to mean displacement — if the circumstances are aligned correctly.**

Warrant: there are tons of alternative causes that other flawed studies don't consider, those are more likely to cause gentrification than transit.

Padiero, Miguel. "Transit-oriented Development and Gentrification: a Systematic Review," Taylor & Francis Online, 31 Jul. 2019,
<https://www.tandfonline.com/doi/full/10.1080/01441647.2019.1649316>.

The last two decades have witnessed a growing trend towards transit-oriented development (TOD) as a critical approach for achieving sustainable mobility. However, some analysts and community activists have expressed concerns that TOD could induce gentrification and potential concomitant low-income group displacements. This paper presents a systematic review of 35 quantitative research-based studies presenting evidence on gentrification outcomes resulting from transit-based interventions, published between 2000 and 2018. To our knowledge, this is the first systematic review on this topic and thus provides a useful synthesis of current empirical evidence on transit-induced gentrification. **Although there is some evidence supporting the transit-induced gentrification hypothesis, methodological flaws render many of the studies' conclusions highly questionable. The findings suggest that gentrification is more closely associated with existing local dynamics, built environment attributes, and accompanying policies than transit-oriented development.** In its critical analysis of research approaches, this paper warns that the incorporation of several sources of bias into study designs may engender a number of misinterpretations, thus ultimately leading to misguided conclusions and policies.

Warrant: tons of examples of conflicting research and findings that actually conclude the opposite.

Padiero, Miguel. "Transit-oriented Development and Gentrification: a Systematic Review," Taylor & Francis Online, 31 Jul. 2019,
[<https://www.tandfonline.com/doi/full/10.1080/01441647.2019.1649316>](https://www.tandfonline.com/doi/full/10.1080/01441647.2019.1649316).

Finally, **two of the highest-ranked investigations concluded that there were no signs of gentrification.** Dong (2017), referring to Portland's oldest rail transit line, nevertheless

suggested that there might be a lengthy time lag for gentrification. In Atlanta, Pathak et al. (2017) showed that **census tracts with access to public bus transit actually have a higher proportion of low-income households than tracts without bus access**. When considering only these 12 highest-ranked studies, the **city-specific outcomes are highly doubtful**. Only San Francisco (gentrification detected) and Baltimore (no signs of gentrification) **provided consistent results** (albeit across only two studies). In the **remaining cities**, such as Denver, Dallas, Los Angeles, Pittsburgh, Portland, San Diego, and St. Louis, **findings vary across the studies**. Among the five identified qualitative and/or perception-based studies, none explicitly sought to objectively **detect gentrification near transit stations**.

Warrant: The harms of gentrification are equally present in the alternative, racially segregated neighborhoods.

Demsas, Jerusalem. "What We Talk About When We Talk About Gentrification," Vox, 05 Sep. 2021, <<https://www.vox.com/22629826/gentrification-definition-housing-racism-segregation-cities>>.

Yet while gentrifying neighborhoods create those types of interactions between neighbors or heavier “order maintenance” policing, the **gentrification isn’t the root issue**. Segregating neighborhoods does not get rid of these sentiments or the harms they cause: it simply hides them. In a wealthy, white enclave like the Upper East Side, there aren’t somehow fewer people who assume any Black person on their street is begging for money than there are in gentrifying neighborhoods. In fact, there are likely more. Gentrifying neighborhoods pull back the veil and allow for these worlds to collide, displaying the vast differences in income, access to education, and government protection and investment. All of the problems people worry about when they invoke gentrification — displacement, police action against people of color, lack of

investment, predatory landlords — are also present in segregated neighborhoods, often even more so. As George Washington University professor Suleiman Osman wrote in his 2011 book The Invention of Brownstone Brooklyn: "Stories abounded of renters [in Brooklyn] being pressured by landlords to leave revitalizing areas. But non-revitalizing blocks with high rates of abandonment and demolition saw rates of displacement that were just as high."

Internal Link Warrant: The connection between gentrification and displacement is overstated.

Eldredge, Barbara. "What is Gentrification? Its Definition, Causes, and Effects," Brownstoner, 06 Jan 2016, <<https://www.brownstoner.com/brooklyn-life/what-is-gentrification-definition-causes-effects/>>.

Another wrinkle is that many gentrifying neighborhoods in Brooklyn — including Fort Greene, Clinton Hill, PLG, and Bed Stuy — have very high rates of black home ownership. Recently, several studies have found that harmful gentrification — the kind that results in displacement — might be more rare than previously believed.

Controversial Columbia University professor Lance Freeman, who is considered a leading expert on gentrification, has argued that there's little empirical evidence to show that displacement is a foregone conclusion when affluent folks move into a neighborhood. In his 2006 book There Goes the 'Hood, Freeman argues that rates of moving are about the same in both gentrified and non-gentrified neighborhoods. Basically, Freeman believes that reports of displacement are overblown.

Analysis: Answering gentrification in a way that gives proper weight to the argument can be tricky. When focusing on the economic benefits afforded by gentrification, make sure to focus on how these benefits reach low income people and particularly the racial minorities that are disproportionately impacted by gentrification. You should usually pair responses about how gentrification leads to growth with defensive responses which say that gentrification does not lead to displacement, so you don't have to compare those two impacts.

A/2: High-Speed Rail is a target for terrorists

Answer: Terrorism is not a threat.

Uniqueness - terror deaths are at decades long lows right now, they must prove attacks are imminent.

Global Terrorism Index, "Deaths from Terrorism Halved in the Last Four Years," Visions of Humanity, Institute for Economics and Peace, 2019,
<https://www.visionofhumanity.org/deaths-from-terrorism-halved-in-the-last-four-years/>.

Deaths from Terrorism Halved in the Last Four Years **Deaths from terrorism fell for the fourth consecutive year** after peaking in 2014, according to the 2019 Global Terrorism Index (GTI). **The number of deaths has now decreased by 52% since 2014**, falling from 33,555 to 15,952. The total number of deaths fell by over 15% in 2018, with the largest falls occurring in Iraq and Somalia on the back of the defeat of Islamic State of Iraq and the Levant (ISIL) in Iraq, and US-led airstrikes on Al-Shabaab. **The fall in deaths was also reflected in country scores, with 98 countries improving** compared to 40 that deteriorated. **This is the highest number of countries to record a year-on-year improvement since 2004.**

Warrant: very few terror attacks or death occur in North America.

Ritchie, Hannah. "Terrorism," Our World in Data, Jul. 2013, Updated Jun. 2022,
<https://ourworldindata.org/terrorism>.

In this chart, we see the number of deaths from terrorism by region in 2019. **Of the 20,329 global deaths from terrorism included in the Global Terrorism Database, 95% occurred in the Middle East, Africa, or South Asia. Less than 2% of deaths were in**

Europe, the Americas and Oceania combined. This is also true when we look at the number of incidents, rather than the number of deaths. As we will see in the following section, not only is there a strong regional focus but this is also heavily concentrated in only a few countries within these regions. Most victims of terrorism die in the Middle East, Africa and South Asia. This hasn't always been the case. Guerrilla movements in Central and South America, for example, dominated terrorism in the 1980s.

Turn: high speed rail is projected to reduce traffic congestion which will make emergency responses easier. (both Malott and FEMA)

Malott, Paige. "Fast Trains, Cleaner Air, and Less Congestion: Envisioning a Post-Pandemic Pacific Northwest," The Urbanist, 20 May 2020.

<<https://www.theurbanist.org/2020/05/20/fast-trains-cleaner-air-and-less-congestion/>>.

On a typical day, the average traffic delay in Seattle rush hour is 40 minutes, the equivalent to a 34% increase compared to free flow rates. The state of Washington estimates that congestion costs over \$3.2 billion annually. **High speed rail in the Pacific Northwest would absorb at least 20% of intercity trips including auto, air, and bus travel. That means reduced congestion, and faster travel times for both high-speed rail passengers and those using the highway**, including freight. The project is also expected to reduce the region's carbon emissions by six million metric tons.

FEMA, "Site and Urban Design for Security," FEMA NYPD Risk Management Series, Dec. 2007 <<https://www.fema.gov/sites/default/files/2020-08/fema430.pdf>>.

After September 11, 2001, many cities have experienced a proliferation of security measures around federal and private buildings. In some cases, these installations have

been considered successful from a security, architectural, urban planning, and cultural preservation standpoint. In other cases, however, the installation of security barriers has been acknowledged as detrimental to the function, quality and viability of the public realm. Restricting access can cause **significant traffic congestion** and **can create unnecessary obstacles on streets and sidewalks, that minimize the efficiency of pedestrian and vehicle circulations systems and prevent the access of first responders in emergencies.**

Warrant: there are several ways in which high speed rail is less vulnerable to attack than conventional rail.

Maurillo, Donna. "High-Speed Rail in the US: Will It Be a More Attractive Terror Target than Inter-city Rail?" University of California Santa Cruz, 2011,
[<https://transweb.sjsu.edu/sites/default/files/pdfs/terror-targets-high-speed-rail-vs-intercity-rail-Maurillo.pdf>](https://transweb.sjsu.edu/sites/default/files/pdfs/terror-targets-high-speed-rail-vs-intercity-rail-Maurillo.pdf).

In at least one other sense, **HSR is less vulnerable because the trains are built to remain connected and “in line” – they do not “accordion” during a derailing or other incidents.** As an example, Christopher Kozub, a security research associate for the Mineta Transportation Institute, noted that a German HSR train hit a flock of sheep in a tunnel. It derailed but remained upright, with only a few passengers sustaining injuries. He said, **“A non-HSR train would have many more casualties because they aren’t built to withstand this type of crash. The design and construction standards for HSR make it less attractive for terrorists if they are looking for a high body count or a spectacular crash scene.”**⁶

Analysis: these responses challenge each important part of the terrorism argument, including the assumption that terror groups have the capacity to fulfill all the goals they have spoken about publicly. Challenging the uniqueness about how many people are dying of terror in North

America contextualizes how unlikely these attacks are. Finally, paired with challenging the specific warrants about why high speed rail is vulnerable, these responses make it difficult to win the terror argument.

A/2: High-Speed Rail causes Brain Drain

Answer: High-Speed Rail has historically not caused brain drain.

Warrant: Britain's High Speed Rail was unlikely to cause domestic brain drain, they must prove why US conditions are different..

Fitzgerald, Todd. "Will Manchester's HS2 link with London lead to 'brain drain'?",

Manchester Evening News, 16 Nov. 2016,

<<https://www.manchestereveningnews.co.uk/news/greater-manchester-news/hs2-link-london-lead-brain-12180768>>.

Politicians have dismissed fears that the HS2 rail service – which will see journey times from Manchester to London slashed little over an hour – will lead to a 'brain-drain' to the capital. The Government has confirmed the route for the second phase of the 250mph line, which will join up with Manchester Airport as well as Piccadilly. Ministers say the £56bn project will boost the UK economy, but some employment experts say it could lead to professionals from Greater Manchester choosing to commute to London every day, in pursuit of better pay and prospects. However, two senior Greater Manchester MPs say that the region will not suffer a 'brain drain' due to the one hour eight minute commute to the capital. Manchester Central MP Lucy Powell said the HS2 second-phase link will give more people the opportunity to work from Manchester – and give Mancunian businesses the chance to get to London more regularly to tout for business. She added: "**These worries or concerns of a 'brain drain' to London are largely unfounded.** The world of work of today, never mind of the future, just isn't like that any more. "**People's jobs are transitory, they're not static. Th+e sorts of people using HS2 will have a portfolio of work, that takes them up and down the country.**" A lot more people will be able to use Manchester as a base. If you look at Manchester's economic progress following investment in the West Coast Mainline, that had a

transformational effect and has been nothing but positive for the city. “People who use that line, overwhelmingly, are based in Manchester and use the service to get more business from London. “This is about us having better connectivity so we can attract more jobs and have better services – and give more people the opportunity to base themselves in Manchester.” Some highlighted that Greater Manchester should be more concerned about its own ‘brain drain’, with businesses on the outskirts of the region losing people to firms in Manchester. Stalybridge and Hyde MP Jonathan Reynolds said: **“If you look at all the data from high-speed rail around the world, especially in France, there’s so much variability. “You can’t just look at our situation and speculate that’s going to happen.** “Greater Manchester has an incredible profile around the world. We’re world-leading in many sectors and have so much going for us. “I’m a self-confident Greater Mancunian. I don’t think we should be afraid of being more connected with the rest of the country and the rest of the world. “HS2 is also about freeing up capacity across the rest of the network, which will help within Greater Manchester. “And to have two of the stations here is a real coup.”

Turn: brain drain is good

Mountford, Andrew. “Can a brain drain be good for growth in the source economy?”

Journal of Development Economics, Aug. 1997, <[https://doi.org/10.1016/S0304-3878\(97\)00021-7](https://doi.org/10.1016/S0304-3878(97)00021-7)>.

Abstract This paper analyzes the interaction between income distribution, human capital accumulation and migration. It shows that **when migration is not a certainty, a brain drain may increase average productivity and equality in the source economy** even though average productivity is a positive function of past average levels of human capital in an economy. It is also shown how the **temporary possibility of emigration may permanently increase the average level of productivity of an economy.**

Turn: high speed rail stimulates development of secondary and tertiary cities rather than just draining people from them.

Wilk, Laura. "China's bullet trains facilitate market integration and mitigate the cost of megacity growth," PNAS, 12 Feb. 2013,
<https://www.pnas.org/doi/10.1073/pnas.1209247110>.

Megacity growth in the developing world is fueled by a desire to access their large local labor markets. **Growing megacities suffer from high levels of traffic congestion and pollution, which degrade local quality of life. Transportation technology that allows individuals to access the megacity without living within its boundaries offers potentially large social benefits, because individuals can enjoy the benefits of urban agglomeration while not paying megacity real estate rents and suffering from the city's social costs.** This paper presents evidence supporting the claim that China's bullet trains are playing this role. The bullet train is regarded as one of the most significant technological breakthroughs in passenger transportation developed in the second half of the 20th century. Starting in 2007, China has introduced several new bullet trains that connect megacities such as Beijing, Shanghai, and Guangzhou with nearby cities. **Through facilitating market integration, bullet trains will stimulate the development of second- and third-tier cities. By offering households and firms a larger menu of location alternatives, bullet trains help to protect the quality of life of the growing urban population.** We document that this transport innovation is associated with rising real estate prices in the nearby secondary cities.

Analysis: the brain drain versus brain gain debate is a very common point of contention, but surprisingly not very well documented in the realm of high speed rail. Because of this, try to use general warranting to strengthen your argument that high speed rail is likely to cause more distribution of good ideas. Some of the common connectivity evidence can also serve as an example of brain gain. Always pair these brain gain claims with defense about why brain drain is unlikely. This way, at worst, no one wins offense on this point, and at best, you do.

A/2: High-Speed rail only services the wealthy, leads to income inequality

Turn: high speed rail significantly improves accessibility in areas near stations - empirics from Germany prove.

Wenner, Fabian. "Brain Train or Brain Drain? The role of High-Speed Rail accessibility for knowledge-intensive firms and regional development," Technical University Munich, 2018,
[<https://az659834.vo.msecnd.net/eventsairwesteuprod/production-ersa-public/c5839e18596b44daaccc6906af49640d>>](https://az659834.vo.msecnd.net/eventsairwesteuprod/production-ersa-public/c5839e18596b44daaccc6906af49640d)

In this paper, we present the results of a difference-in-differences analysis of KI firm development in German regions, in which 'treated' regions that recently received HSR access are compared to otherwise similar, 'untreated' areas. First, accessibility changes are quantified through a comparative 'big data' gravitational (potential) accessibility analysis of people and KI firms on the German rail network for different HSR extensions. We then use the results of the accessibility analysis to determine whether there has been an effect on KI firms, both in the immediate surroundings of new or upgraded HSR stations, as well as their regions. The firms dataset consists of more than one million entries in two timescales, with data on firm type, number of employees, and revenue. Preliminary results of our accessibility analysis show that in Germany, High-Speed Rail (HSR) has only rarely led to a significant reduction of overall accessibility in regions that were bypassed by new infrastructure. **Regional accessibility improvements through HSR stations have been significant**, but in relative terms, the upgrading of conventional rail especially in East Germany after 1990 has had stronger effects. **HSR effects in Germany have furthermore been relatively evenly spread, due to the more dispersed settlement structure**, federal administrative structure, and patchy implementation of HSR, **compared to other European countries**.

Warrant: ticket prices aren't expensive, they're actually cheaper than planes or gas.

High Speed Rail Alliance, "Why High-Speed Rail," 2022, <<https://www.hsrail.org/why-high-speed-rail/better-travel>>.

Here's just one example of a trip begging for high-speed rail: Chicago to Minneapolis. A high-speed train would be three times faster than driving—2.5 hours vs. 7.5 hours. Sure, you could fly, but once you factor in traveling to the airport, going through security, and sitting on a taxiway, the high-speed train is still faster. **It would also be cheaper. A lot cheaper. That high-speed train ticket would cost about \$75, compared to more than \$200 to fly or drive.** The best-kept secret about trains is that they're fun. Your time is your time. Modern trains make travel better than ever, offering spaces that are tailored to different needs and different types of trips. Coach and first-class cars include several seats that face a table, making it easier to get work done or have a meeting. Power outlets and Wi-Fi are available throughout, and some train designs include private lounges or conference rooms, as well as special play areas for kids. Overhead shelves let you keep your bags nearby, while racks near the doors are a better place to leave larger items. Bicycles roll right on and are secured in special holders, so you can take them on and off without any special attention. Cafe cars offer a place to grab a quick bite or a drink, while a more formal dining car serves full-service meals.

Turn: high speed rail helps combat the rural-urban inequality, empirically shown in China.

Bao, Hongjie. "The Impact of High-speed Railway Opening on the Income Gap between Urban and Rural Areas," Atlantis Press, Advances in Social Science, Education and

Humanities Research, volume 385, 2019, <<https://www.atlantis-press.com/article/125931750.pdf>>.

Abstract—In recent years, **the structure of traffic facilities in China has undergone epoch-making changes**. As a new type of transportation facility, high-speed railway is convenient, efficient and punctual, which reduces the transaction cost of the regional economy and enlivens the flow of production factors. A new research perspective for narrowing the income gap between urban and rural residents in the region is offered. Based on the economic characteristics of high-speed railway, this work selected data from 30 provinces from 1999 to 2017. The double difference method (DID) was used to evaluate the impact of high-speed railway opening on the regional income gap between urban and rural residents. It is found that **the high-speed railway opening will help to narrow the income gap between urban and rural residents** during the investigation period. The further heterogeneity test shows that **the high-speed railway opening significantly reduces the income gap between urban and rural residents in the central and western regions**. This conclusion offered a useful theoretical support for the implementation of the targeted poverty alleviation policy in China.

Analysis: the best strategy against the income inequality argument is to focus on the well documented history of overall inequality reductions from high speed rail, then read some defense on the specific link your opponents are reading to why high speed rail hurts people. This allows you to get offense off the turns without conflicting defense, instead, the defense should be very specific to their link (like ticket prices being too high). Make sure you read impacts on these turns and weigh them early, because this is definitely a winnable part of the debate for the negative.

A/2: High-Speed Rail trades off with the airlines, hurting the air industry

Answer: The airline industry is bad.

Turn: airline collapse good, the aviation industry is terrible for the climate.

Flynn, Jack. "Airline Industry Statistics [2022]: 28 Facts To Know Before You Fly" Zippia, 08 Aug. 2022, <<https://www.zippia.com/advice/airline-industry-statistics/>>.

Research Summary. The airline industry is one of the biggest in the US but has seen massive fluctuations as of late. The coronavirus hit the US airline industry hard, causing their revenue to drop significantly. Only now is it starting to recover. After extensive research, our data analysis team concluded: There were 674 million US airline passengers in 2021. US airlines generated \$193.58 billion in revenue in 2021. The number of passengers flying in 2020 dropped by 557 million passengers from 2019-2020, a 40% decline. The US aviation industry currently employs 1,290,400 total employees, comprised of 691,700 pilots and 598,700 other employees. The US aviation industry accounts for 5.2% of America's total GDP, as of 2020. **US commercial air travel contributes between 3-4% of the country's total greenhouse gas emissions. Overall, the U.S. aviation industry accounts for 202.5 million tons of CO2 emissions, 23.5% of the world's total.**

Warrant: alt causes – ballooning airline emissions are causing passengers to look elsewhere anyway.

Stone, Andy. "Can The Airline Industry Survive Climate Change?," Forbes, 10 Dec. 2019, <<https://www.forbes.com/sites/andystone/2019/12/10/can-the-airline-industry-survive-climate-change/?sh=5ac5c727708e>>.

The latest United Nations climate change conference, COP25, is underway in Madrid, with the key goal of hashing out the rules by which countries may trade emissions reductions across international boundaries. The issue of emissions transfers, more commonly known as offsets, is of vital interest to the global airline industry, which has come under fire for its outsized climate impact. Commercial airliners pump out 2.5 percent of total global warming gasses. **The industry's trade group**, the International Air Transport Association, **expects emissions to triple over the coming twenty years as ridership takes off in Asia and mature markets like the U.S. continue to expand**. The air industry's climate problem hasn't escaped public attention. The "flight-shaming" movement now sweeping Europe shows signs of driving would-be air passengers to other modes of transport. In Sweden, the birthplace of flygskam and of climate activist and airline-avoider Greta Thunberg, air ridership is in fact on the decline. Dutch airline KLM has suggested that travelers bypass flying for shorter trips and, **in 2020, Germany will increase the tax on air tickets while simultaneously lowering the tax burden on railway passengers.**

Warrant: Congress bails the airline industry out of serious danger, collapse is avoidable.

Rappeport, Alan. "Crippled Airline Industry to Get \$25 Billion Bailout, Part of It as Loans ,," New York Times, 14 Apr. 2020, <<https://www.nytimes.com/2020/04/14/business/coronavirus-airlines-bailout-treasury-department.html>>.

Airlines will receive billions of dollars in grants and loans to pay flight attendants, pilots and other employees. WASHINGTON — The Trump administration has reached an agreement in principle with major airlines over the terms of a **\$25 billion bailout to prop up an industry hobbled by the coronavirus pandemic.** The Treasury Department said that Alaska Airlines, Allegiant Air, American Airlines, Delta Air Lines, Frontier Airlines, Hawaiian Airlines, JetBlue Airways, United Airlines, SkyWest Airlines and Southwest Airlines would participate. **The program is supposed to help the companies pay their workers and was created as part of the economic stabilization package** that Congress passed last month. In recent days, the bailout negotiations became contentious over the Treasury's insistence that larger airlines repay at least some of the money they received. The two sides ultimately agreed that the government's support would be structured as part grant and part loan and the Treasury would also receive warrants to buy stock in the companies.

Warrant: airline companies are desperate for new staff with current demand, job losses will just mean they aren't understaffed anymore.

Levi, Ari. "The confusing job market: Tech and finance brace for the worst, retail is mixed, travel can't hire fast enough," CNBC, 03 Aug. 2022,
[<https://www.cnbc.com/2022/08/03/tech-companies-banks-overstaffed-while-airlines-hotels-need-workers.html>](https://www.cnbc.com/2022/08/03/tech-companies-banks-overstaffed-while-airlines-hotels-need-workers.html).

Meanwhile, airlines, hotels and eateries face the opposite problem as their businesses continue to pick up following the era of Covid-induced shutdowns. After instituting mass layoffs early in the pandemic, they can't hire quickly enough to satisfy demand and are dealing with a labor market radically different from the one they experienced over two years ago, before the cutbacks. "The pandemic created very unique, once-in-a-lifetime conditions in many different industries that caused a dramatic reallocation of capital," said Julia Pollak, chief economist at job recruiting site ZipRecruiter. "Many of

those conditions no longer apply so you're seeing a reallocation of capital back to more normal patterns."

Analysis: these responses represent several strategies for dealing with the airline industry DA. First, you can simply concede the link and read reasons why the airline industry is bad. This seems to be the path of least resistance. If you're not comfortable doing that, there are several arguments about why collapse is inevitable, will never happen, or will never materialize as job losses that can provide terminal defense on the link. Either option is strong, and being comfortable going for either based on the round leaves you well equipped to handle airline collapse arguments.

A/2: High-Speed Rail increases debt

Answer: The return on investment outweighs the debt created.

Warrant: infrastructure investments create long-term growth, offsetting debt.

Jim Glassman, "Climate Change, Global Food Security, and the U.S. Food System | USDA", 08 Sep. 2021, J.P. Morgan Chase, <<https://www.usda.gov/oce/energy-and-environment/food-security>>

Faster growth could easily offset the additional debt from infrastructure spending.

With the slow growth of the U.S. working-age population and steadily climbing medical expenses for retirees, **investments in infrastructure that accelerate economic growth can improve the presently grim fiscal outlook. Raising worker productivity and growing the workforce could be the best ways to finance America's future obligations.**

The nonpartisan Congressional Budget Office forecasts the current infrastructure proposal will add \$256 billion to the deficit over the next decade. At current interest rates, that deficit spending won't significantly alter the nation's fiscal outlook.

Investments that expand the nation's growth potential will likely grow the tax base and eventually pay for themselves.

Warrant: debt is offset by economic gains from Artificial Intelligence.

Holmes, Frank, "AI Will Add \$15 Trillion To The World Economy By 2030", 25 Feb. 2019, Forbes, <<https://www.forbes.com/sites/greatspeculations/2019/02/25/ai-will-add-15-trillion-to-the-world-economy-by-2030/?sh=5a8b1b321852>>

AI Will Add \$15 Trillion To The World Economy By 2030. Artificial intelligence (AI) is no longer the stuff of science fiction. The technology is already disrupting multiple

industries, many of which impact you on a daily basis. Own an iPhone X? Its facial recognition system is powered by AI. Ever been redirected by Google Maps because of an accident or construction ahead? You guessed it: AI. And those are just a couple of small examples. By one estimate, **AI contributed a whopping \$2 trillion to global GDP last year. By 2030, it could be as much as \$15.7 trillion, “making it the biggest commercial opportunity in today’s fast changing economy,”** according to a recent report by PwC.

Non-unique: US debt will increase exponentially in either world, investors are aware/do not care.

Duffin, Erin, "• Federal debt of the U.S. - forecast 2032 | Statista", 21 Jun. 2022, Statista, <<https://www.statista.com/statistics/216998/forecast-of-the-federal-debt-of-the-united-states/>>

By 2032, the gross federal debt of the United States is projected to be about 45 trillion U.S. dollars. This would be an increase of about 16.9 trillion U.S. dollars from 2021, when the federal debt was 28.3 trillion U.S. dollars. The federal debt of the U.S. The federal debt, also called the national debt or public debt, is the amount of debt held by the United States government. This debt may be to other countries, or to different departments within the government itself. The public debt of the United States has increased significantly over the past 30 years, as it was around 3.2 trillion U.S. dollars in 1990 and totaled around 26.9 trillion U.S. dollars in September 2020.

Tamny, John, "12ft | Ignore The Endless Talk Of Doom, Budget Deficits Really Don't Matter", 24 Sep. 2017, Forbes, <<https://12ft.io/proxy?q=https%3A%2F%2Fwww.forbes.com%2Fsites%2Fjohntamny%2F2017%2F09%2F24%2Forget-the-protests-of-conservatives-deficits-really-dont-matter%2F%3Fsh%3D142dcfdf3707>>

At the same time, **the substantial decline of Treasury yields is a certain signal from one of the deepest markets in the world that investors are not remotely worried about Treasury's ability to pay back the \$20 trillion owed, or hundreds of trillions if we factor in the entitlement math of our most ardent deficit hysterics.** Thinking about the hand wringers who are convinced the U.S. as we know it is set to end thanks to existing and looming Treasury debt, and paraphrasing Ken Fisher, the markets have already priced the allegedly dire federal debt scenarios swimming through their heads. And having priced all that the U.S. Treasury owes, those same investors have aggressively bid up future dollar income streams that will be paid out by that same U.S. Treasury.

A/2: High-Speed Rail hurts intermediate cities

Answer: Intermediate cities are lifted up as part of emerging megaregions.

Turn: HSR creates megaregions, integrating intermediate cities and boosting growth.

Freuck, Harrison, "All Aboard: Why high-speed rail is the future of transportation in the U.S., Wisconsin," Mar. 2021, The Badger Herald,<<https://badgerherald.com/news/2021/03/23/all-aboard-why-high-speed-rail-is-the-future-of-transportation-in-the-u-s-wisconsin/>>

The other benefit of high-speed rail is its ability to connect cities within regions, ultimately creating “megaregions” consisting of several metropolitan areas. One potential megaregion in the U.S. is the Minneapolis-Milwaukee-Chicago-Indianapolis connection. Design innovation graduate student and Vice President of WiHST Utkarsh Maheshwari said while high-speed rail could be used to connect an entire country, it really needs to be focused on specific regions. Maheshwari said by creating megaregions, **high-speed rail reduces the time and cost of traveling while it increases passenger productivity.** It also positively affects intermediate cities or stops — such as Madison — more than large cities like Chicago. “A lot of people would rather **move to be in smaller cities to have a better living experience with more affordable housing costs and a higher quality of life,**” Maheshwari said. “**With high-speed rail, you can live in these cities but still work in a larger city that’s just 30 or 40 minutes away by train rather than two or three hours away by car.**” Schlichting echoed this message, explaining your job opportunities would no longer be limited to the metro area you live in or live closest to. Instead, you could live in Madison or Milwaukee and commute to work in downtown Chicago every day. On top of decreasing commute times, high-speed rail would also improve travel in general. Co-founding member of WiHST and former

Operations Director for Badgerloop — a University of Wisconsin student organization — Johnny Kohlbeck explained the concept of a “**Goldilocks Zone**” where high-speed rail would fit in between other forms of transportation. “Areas that are somewhere between 100 and 350 miles apart, that really is a Goldilocks Zone,” Kohlbeck said. “**Where it takes too much time to drive by car and it costs too much money to fly by plane.**”

Non-unique: intermediate cities are increasingly cut off from the economy in the status quo, HSR is try or die.

Khanna, Parag, “A New Map for America,” 17 Apr. 2016, The New York Times,
https://www.nytimes.com/2016/04/17/opinion/sunday/a-new-map-for-america.html?smid=nytcore-ipad-share&smprod=nytcore-ipad&_r=0

The problem is that while the economic reality goes one way, the 50-state model means that federal and state resources are concentrated in a state capital — often a small, isolated city itself — and allocated with little sense of the larger whole. Not only does this keep back our largest cities, but **smaller American cities are increasingly cut off from the national agenda, destined to become low-cost immigrant and retirement colonies, or simply to be abandoned.** Congress was once a world leader in regional planning. The Louisiana Purchase, the Pacific Railroad Act (which financed railway expansion from Iowa to San Francisco with government bonds) and the Interstate System of highways are all examples of the federal government’s thinking about economic development at continental scale. The Tennessee Valley Authority was an agent of post-Depression infrastructure renewal, job creation and industrial modernization cutting across six states. What is needed, in some ways, is a return to this more flexible, broader way of thinking. Already, **efforts to coordinate metropolitan and regional planning and investment** are underway, whether they are quasi-government entities like the Western **High Speed Rail** Alliance, which aims to link Phoenix, Denver

and Salt Lake City with next-generation trains, or industry-driven groups like CG/LA Inc., which **promotes public-private investment in a new national infrastructure blueprint.**

Non-unique - intermediate city growth is faltering now, projects like HSR are the only chance of solvency.

Allard, Scott, "Poverty is rising faster in US suburbs than in cities — here's why," 02 Jun. 2018, Business Insider <<https://www.businessinsider.com/poverty-is-rising-faster-in-us-suburbs-than-in-cities-heres-why-2018-6>>

Why is **poverty rising faster in suburbs than in cities?** There are many reasons. Population growth in suburbs plays a part – the US has become a suburban nation. However, that's not the most important factor. My research finds that **suburban poverty is growing three times faster than population size in suburban communities across the country. As in cities and rural communities, poverty is rising in suburbs because of the changing nature of the labor market.** For those in low-skill jobs, earnings have stayed flat for the last 40 years. In most suburbs, unemployment rates were twice as high in 2014 as in 1990. **Good-paying jobs that don't require advanced training have started to disappear in suburbs, just as they did in central cities more than a quarter century ago. These national employment trends have contributed to rising poverty everywhere, but the impact has been particularly acute in suburbs, where there are a large percentage of workers without advanced education or vocational training.**

Non-unique: transportation access is horrible now, preventing intermediate city economic growth. Projects like HSR are the only chance of solvency.

Puentes, Robert, "Why Infrastructure Matters: Rotten Roads, Bum Economy," 09 Jan. 2018, Brookings Institute,<<https://www.brookings.edu/opinions/why-infrastructure-matters-rotten-roads-bum-economy/>>

The economy needs reliable infrastructure to connect supply chains and efficiently move goods and services across borders. Infrastructure connects households across metropolitan areas to higher quality opportunities for employment, healthcare and education. Clean energy and public transit can reduce greenhouse gases. This same economic logic applies to broadband networks, water systems and energy production and distribution. **Big demographic** and cultural **changes**, such as the aging and diversification of our society, shrinking households and domestic migration, **underscore the need for new transportation** and telecommunications **to connect people and communities**. The percentage of licensed drivers among the young is the lowest in three decades, as more of them use public transit and many others use new services for sharing cars and bikes. The prototypical family of the suburban era, a married couple with school-age children, now represents only 20 percent of households, down from over 40 percent in 1970. Some 55 percent of millennials say living close to public transportation is important to them, according to a recent survey by the Urban Land Institute. Yet unlike Western Europe and parts of Asia, the United States still has a growing population. We've added 25 million people in the past 10 years. This tremendous growth, concentrated in the 50 largest metropolitan areas, will place new demands on already overtaxed infrastructure. Metropolitan areas must be ready to adapt not only to serve millions of new customers but also to help poorer residents, many of whom are jobless, have the best chance possible to find work. A recent Brookings analysis found that only a quarter of jobs in low-skill and middle-skill industries can be reached within 90 minutes by a typical metropolitan commuter. Successful cities will be those that connect workers to jobs and close the digital divide between high-income and low-income neighborhoods. The White House notes that broadband speeds have doubled since 2009 and that more than four out of five people now have high-speed wireless broadband, adoption rates for low-income and minority households remains low (about 43 and 56 percent, respectively.) Our economy is

changing as fast as our society. Over 83 percent of world economic growth in the next five years is expected to occur outside the United States, and because of rapid globalization, it will be concentrated in cities. This offers an unprecedented opportunity for American businesses to export more goods and services and to create high-quality jobs at home. It also amplifies the importance of our seaports, air hubs, freight rail, border crossings and truck routes, which move \$51 billion worth of goods quickly and efficiently each day in the complex supply chains of the modern economy. The diverse energy boom also disrupts our infrastructure. Natural gas needs new truck, pipeline and rail networks. Rooftop solar panels have rattled electric utilities, which are scrambling to find ways to incorporate and store the energy they produce while keeping the grid operating. At the same time, finding the money to pay for the development of a smart electricity grid and for clean energy presents challenges, as hundreds of thousands of small and large projects are projected to come online in coming decades. High-profile natural disasters, such as Hurricane Sandy, drew attention to problems with water infrastructure. Overwhelmed waste water systems, washed-out roads, shorted electrical circuitry and flooded train stations not only highlighted the economy's reliance on these networks, but also revealed their poor condition. The nation's water systems are now being rebuilt. Cities are working to capture storm and rain water rather than building costly pipes to sluice it away. The Center for an Urban Future recently described how New York City plans to spend \$2.4 billion over 18 years in so-called "green" infrastructure such as rooftop vegetation, porous pavements, and soils to soak up rain. Over and above the new types of needed infrastructure is a big change in how projects are financed. **Despite the importance of infrastructure, the U.S. has not spent enough for decades to maintain and improve it. It accounts for about 2.5 percent of the economy**, compared to about 3.9 percent spent in Canada, Australia and South Korea, 5 percent for Europe and 9-12 percent in China. The McKinsey Global Institute estimates that **the U.S. must spend at least \$150 billion more a year on infrastructure through 2020 to meet its needs**. This would add about 1.5 percent to annual economic growth and create at least 1.8 million jobs.

A/2: High Speed Rail contributes Emissions.

Answer: The overall emission impact of high-speed rail is outweighed by the transit it replaces.

Turn: HSR moves traffic off of roads, decreasing emissions.

Wangshu, Luo, "High-speed rail cuts greenhouse gas emissions", 09 Nov. 2021, The State Council,
http://english.www.gov.cn/news/topnews/202111/09/content_WS6189b5f2c6d0df57f98e4b0e.html

China's high-speed railway network has led to a significant reduction in greenhouse gas emissions, a recent study has shown. Published in the journal Nature Climate Change last month, the study was carried out by researchers from Singapore, Hong Kong and the Chinese mainland. The research found that the **high-speed railway connection has led to an annual reduction of nearly 11.2 million metric tons of carbon dioxide equivalent greenhouse gas emissions by replacing road traffic, equal to 1.33 percent of greenhouse gas emissions in China's transport sector**. Researchers explained that the mitigation came **from more cargo being switched to greener regular-speed trains instead of roads**. With the development of the high-speed railway network, passengers have more choices and opt for bullet trains, which opens up capacity on slower trains for freight shipments.

Akerman, Jonas, "The role of high-speed rail in mitigating climate change – The Swedish case Europabanan from a life cycle perspective - ScienceDirect", 09 May. 2011, ScienceDirect,
<https://www.sciencedirect.com/science/article/abs/pii/S1361920910001689>

High-speed rail (HSR) – trains with a maximum service speed that exceeds 250 kph – is an alternative that has increased its share considerably since the first service started between Tokyo and Osaka in 1964. **High-speed rail** travel in Europe amounted to about 90 billion passenger km in 2006, which meant a doubling in less than 10 years (Eurostat, 2009). This mode of travel **has demonstrated the potential to attract travellers who formerly travelled by air and car, in most cases leading to reduced direct emissions of greenhouse gases from vehicle propulsion.** However, to make a full assessment of the net climate benefits, a wider perspective must be applied, including indirect emissions. For example, the construction of high-speed rail tracks might be associated with significant energy use and emissions.

Turn: HSR decreases US oil consumption, providing long-term solvency for emissions and independent economic benefits.

USHSR, "US HIGH SPEED RAIL ASSOCIATION", No date. 2022, USHSR,
[<http://ushsr.org/benefits/energysecurity.html>](http://ushsr.org/benefits/energysecurity.html)

The American economy is extremely vulnerable to oil price spikes, supply disruptions, and shortages due to our huge daily oil dependency. We use 20 million barrels of oil EVERY DAY in America, 70% of which is for transportation. We import 2/3 of our oil, much of it from unstable regions half way around the world. Destabilizing events across the Middle East and North Africa make our oil supply that much more vulnerable. The chart below shows the countries that produce oil, many of which have been steadily declining in overall production numbers - producing less and less oil each year. This is due to the fact that many of the world's leading oil fields have, or are currently maxing out and in decline. This makes it increasingly difficult to meet current American oil demand, and impossible to meet future increases in demand - expected to double over the next 20 years. Much of America was built around \$10 per barrel oil - our suburbs, big box chains, highways, and our aviation system were all built to operate on plentiful,

cheap oil. Those days are clearly gone, as oil has recently been above \$100 per barrel several times, and predicted to reach \$200 per barrel within the coming decade!

America was built for \$10 per barrel oil In addition to being ever more expensive, oil will be more and more difficult to obtain in the huge quantities and at the rate we use it daily in America. Drilling for oil off our coasts and throughout the nation's pristine wilderness areas will not solve this because together these can only produce a tiny percent of the 20 million barrels we use daily. Even with this expanded domestic drilling we would still be importing more and more oil from foreign nations each day. "**High speed rail is the large-scale, comprehensive solution to the oil supply problem**" The **only viable solution is to greatly reduce the amount of oil we use in our daily lives.** Since transportation is 70% of the oil use, changing transportation is job #1. Building a national network of electric high speed rail lines will cut the nation's oil consumption substantially, while also delivering a new, fast mobility option.

Analysis: In general, high-speed rail is a more efficient option because it can support such high ridership, which reduces the amount of total fuel spent per trip.

A/2: High-Speed Rail would be a political catastrophe

Answer: High-Speed Rail would be politically successful.

Warrant: HSR is popular in the status quo.

U.S. HIGH SPEED RAIL COALITION, "New Poll Finds Strong Voter Support for High-Speed

Rail in California", 14 Apr. 2022, PR

Newswire, <<https://www.prnewswire.com/news-releases/new-poll-finds-strong-voter-support-for-high-speed-rail-in-california-301526337.html>>

WASHINGTON, April 14, 2022 /PRNewswire/ -- **Fourteen years after California voters approved funding to begin building a statewide high-speed rail system, a clear majority of registered voters—and more than 70% of Democrats—still support the project**, according to a new survey by UC Berkeley's Institute of Governmental Studies and the Los Angeles Times. The poll found that **56% of registered voters "support** the state continuing to build the **high-speed rail** project, even if, as is currently planned, its operations only extend from Bakersfield to Merced in the Central Valley by the year 2030 and to the Bay Area by the year 2033." Thirty-five percent of voters said they are opposed. By a margin of 73% to 18% Democrats support the project, **with 54% of independent voters in support** and 37% opposed. Registered Republicans oppose the project—66% to 25%. "This poll confirms what we've believed for a long-time – that **the great majority** of Californians **want** electrified **high-speed rail** to help them alleviate congestion, avoid high gas prices, and address the climate crisis," said Ray LaHood, former U.S. Transportation Secretary and co-chair of the U.S. High-Speed Rail Coalition, which is mobilizing leading unions, businesses, and public servants to advocate for investments that will finally make high-speed rail a reality in America.

Warrant: Democrats will lose in the midterms in either world.

Lindsay, James M., "A Midterm Election Update | Council on Foreign Relations", 19 Jul. 2022, Council on Foreign Relations, <<https://www.cfr.org/blog/midterm-election-update>>

Back in March, I reviewed what we know about U.S. congressional midterm elections. The big takeaway was that **the president's party generally loses House seats, but not necessarily Senate seats. That is especially true when the president is struggling in the polls. With President Joe Biden's approval rating at 42 percent eight months out from Election Day, that historical pattern was bad news for Democrats and good news for Republicans.** The one bright spot for Democrats was that the decennial redistricting of House seats looked to be going in their favor. **So where do things stand three and a half months from Election Day? The picture appears to have gotten darker for the Democrats—at least when it comes to holding onto the House. Biden's average public approval rating now stands at 38 percent, and his average disapproval rating at 57 percent.** To put those numbers in perspective, no elected president since World War II has been lower in the polls at this point in his presidency. (Scientific polling didn't begin until the 1940s, so we can't compare Biden's numbers with, say, James Buchanan's.) Barring a turn in events, Biden is more likely to hurt than help the chances of Democratic congressional candidates.

Impact: Joe Manchin will never allow Biden's climate agenda to pass in either world.

Bustillo, Ximena, "Manchin rejects climate and tax provisions in Democratic bill : NPR", 15 Jul. 2022, NPR, <<https://www.npr.org/2022/07/15/1111675233/manchin-rejects-climate-and-tax-provisions-in-democrats-spending-package>>

Sen. Joe Manchin, D-W.Va., delivered a serious blow to ongoing Senate negotiations for a Democratic budget package, telling Majority Leader Chuck Schumer, D-N.Y., on Thursday that he **will not support a bill that includes climate or tax provisions** —

leaving slimmed-down legislation focused on health care. The West Virginia Democrat favors a bill that would lower prescription drug prices and extend for two years health insurance subsidies under the Affordable Care Act, which would prevent premium increases that many states are set to announce next month, according to a Democrat briefed on the conversation. This could mean a standalone health care bill is within Democrats' reach. But this is far less than the \$2 trillion package originally proposed, which would have added record funding to key areas of President Biden's domestic agenda, namely climate and social safety net programs. **No spending bill can advance without Manchin's support** in the evenly divided Senate, and Schumer has been negotiating with the frequent holdout for weeks.

Sanger-Katz, Margot, "Why Build Back Better Is a Health Care Bill Now - The New York Times", 15 Jul. 2022, The New York Times,
[<https://www.nytimes.com/2022/07/15/upshot/build-back-better-health-care-biden.html>](https://www.nytimes.com/2022/07/15/upshot/build-back-better-health-care-biden.html)

WASHINGTON — **President Biden and Democrats in Congress had hoped to pass a broad domestic policy package that would expand the social safety net, raise taxes on corporations and the wealthiest Americans, and tighten regulation of climate-changing pollutants. But the decision by Senator Joe Manchin of West Virginia to withdraw his support from other aspects of an already-shrunken package this week leaves nothing but health care on the table.**

A/2: High-Speed Rail causes displacement

Answer: High-Speed Rail is not unique in displacing communities; it's a necessary evil of transit development.

Non-unique: communities were already divided by US highways.

Evans, Farrell, "How Interstate Highways Gutted Communities—and Reinforced Segregation - HISTORY", 20 Oct. 2021, History,
[<https://www.history.com/news/interstate-highway-system-infrastructure-construction-segregation>](https://www.history.com/news/interstate-highway-system-infrastructure-construction-segregation)

According to estimates from the U.S. Department of Transportation, **more than 475,000 households and more than a million people were displaced nationwide because of the federal roadway construction.** Hulking highways cut through neighborhoods, darkened and disrupted the pedestrian landscape, worsened air quality and torpedoed property values. Communities lost churches, green space and whole swaths of homes. They also lost small businesses that provided jobs and kept money circulating locally—crucial middle-class footholds in areas already struggling from racist zoning policies, disinvestment and white flight.

Turn: HSR reduces housing prices, making living more accessible to urban residents.

Iritani, Evelyn, "In Japan, speedier commutes let workers live farther from jobs, taking some pressure off high-priced housing markets," 09 Oct. 2018, UCLA Anderson Review, <<https://anderson-review.ucla.edu/high-speed-rail/>>

While there are many differences between Japan's and California's economies and cultures, the results suggest **HSR might help slow the rise in California housing costs.**

Los Angeles, San Francisco and San Jose rank among the nation's most expensive places to live. The study showed prefectures that received a new HSR line did not experience an improvement in overall GDP, even with a burst in spending when the rail line was being built. But it does indicate a significant slowdown in prefecture-wide land price increases the year after a new rail line was introduced. **The findings suggest that by making it easier for workers to move out of the city, the high-speed rail line shifted the demand for property from the higher-cost cities to the lower-cost suburbs and rural areas. By helping cities to "decentralize," the HSR reduced the growth in land prices across the region.** Japan is divided into 47 regions or prefectures. By mining a data set that included macroeconomic and sociodemographic information, the researchers were able to compare economic growth and land prices on a prefectoral level prior to and after the construction of Shinkansen. The research covered the 1970s and '80s, when Japan's economy exploded, and the decades-long stagnation that followed. The Shinkansen system was designed to relieve congestion by providing high-speed transportation between the nation's largest cities, such as the Tokaido line that links Tokyo to Nagoya and Osaka. Between 1964 and 2004, the HSR system added, on average, one new line every four years. The first thing the researchers examined was the impact of high-speed rail on prefectoral GDP growth based on data from 1955 to 1995, a period of rapid growth throughout the country. They found that while a new Shinkansen line brought an initial influx of private capital and increased the population of a prefecture, the overall prefecture-wide GDP growth rates declined. One reason for this could be that the newcomers were not as productive as the previous population. The researchers looked at land prices from two periods, the high-growth years of 1955 to 1997 and the low-growth years of 1998 to 2010. There were some places, such as the neighborhood adjacent to a railway station, where land prices went up after the addition of a new HSR line. But they found the **overall growth in the cost of land within the prefecture slowed an average of 33 percent the year after a new line went in.**

A/2: High Speed Rail requires eminent domain

Answer: Railroads were historically built using Eminent Domain

Warrant: All railways were built with eminent domain.

MIKE CLARK-MADISON, Austin Chronicle, "High-Speed Rail Plan Scores Eminent Domain

Power: Texas Supreme Court sides with Texas Central Railroad", JULY 8, 2022

<https://www.austinchronicle.com/news/2022-07-08/high-speed-rail-plan-scores-eminent-domain-power/>

High-Speed Rail Plan Scores Eminent Domain Power

Texas Supreme Court sides with Texas Central Railroad

The Texas Central Railroad, which began work in 2014 on its proposed high-speed rail link between Houston and Dallas, won a big victory on June 24 at the Texas Supreme Court, which ruled that the private enterprise enjoys the eminent domain power the state grants to railroads under the Texas Transportation Code. That means Texas Central, which back in 2020 received environmental and safety clearance for its project from the Federal Railroad Administration, can force reluctant landowners – of whom there are a few in rural East Texas – to sell their property for the project, which the railroad says will carry its first paying passengers in 2026.

Depending on what kind of civics geek you are, you may know that **historically, this is how America's railroads**, and later its pipelines, **got built**. However, there's now only one privately owned intercity passenger railroad in the U.S. – South Florida's Brightline – which opened in 2018 on existing tracks. Amtrak's Acela service, the nation's only true high-speed rail, was also built in an existing corridor, so Texas Central's greenfield project is the first thing like it for about 150 years. Even Texas' fizzled attempt 30 years ago (1989-95) to create a state high-speed rail authority presumed its right-of-way would be publicly owned, even if it granted a franchise to a private operator. The

Obama administration's high-speed rail initiative likewise led to a study of potential service along the I-35 corridor from Oklahoma City to Monterrey – but not from Houston to Dallas. Thus, an opening was left for Texas Central, which plans to use the same Japanese Shinkansen trains that connect Tokyo and Osaka and make the 240-mile journey in 90 minutes, with one intermediate stop to serve Bryan/College Station. The extreme novelty of Texas Central seemed like it would work in favor of those big land and ag interests along the route who've tried to derail the project at the Texas Legislature and stall it out in the courts. Hilariously, Texas Central identifies itself when necessary as an "interurban electric railway company," a phrase in state statute referring to pre-World War II public transit, such as between Dallas and Denton or Houston and Galveston. (Most of these systems were gone by 1940.) Yet Texas Central is to be electric, and it will go between two cities, and so SCOTX – in affirming the earlier ruling of the 13th Court of Appeals – held that it unambiguously has the eminent domain powers granted to interurbans in Texas law more than a century ago. This is despite the fact that, as the plaintiffs argued when they originally won this case in 2018, Texas Central has no tracks, trains, or stations, and is not guaranteed to ever have them: In their brief to SCOTX, the plaintiffs argue that the law should "protect Texas landowners from ill-equipped entities ... who seek to seize land for speculative projects only to inevitably abandon it ..." However, in her opinion for the court, Justice Debra Lehrmann writes that the Legislature could limit eminent domain in such situations, "but it simply has not done so."

Non-unique: Eminent Domain has been used to build non-rail transit projects as well, like the interstate highways.

Evans, Farrell, "How Interstate Highways Gutted Communities—and Reinforced Segregation - HISTORY", 20 Oct. 2021, History,
<https://www.history.com/news/interstate-highway-system-infrastructure-construction-segregation>

According to estimates from the U.S. Department of Transportation, **more than 475,000 households and more than a million people were displaced nationwide because of the federal roadway construction.** Hulking highways cut through neighborhoods, darkened and disrupted the pedestrian landscape, worsened air quality and torpedoed property values. Communities lost churches, green space and whole swaths of homes. They also lost small businesses that provided jobs and kept money circulating locally—crucial middle-class footholds in areas already struggling from racist zoning policies, disinvestment and white flight.

Analysis: Eminent Domain is an essential part of building railroads and other forms of transit. It would be impossible for large projects to be built without eminent domain.

A/2: High-Speed Rail leads to segregation.

Answer: High Speed Rail could be built in a manner that supports marginalized economic groups by unlocking additional economic opportunity.

Warrant: Station location is important for addressing racial equity

Staff. "Wonkabout Washington: Designing High-Speed Rail for Equity and Regulating King County Wineries" May 2019. The Urbanist.

<https://www.theurbanist.org/2019/05/28/wonkabout-washington-designing-high-speed-rail-for-equity-and-regulating-king-county-wineries/>

"Our top concern as a member of the Advisory Group is ensuring a strong equity focus in decision-making, especially given that community-based organizations have not yet been invited to the Advisory Group. While equity is mentioned by group members and consultants as a concern, from our perspective, equity is not yet leading the charge in the discussion, which to date has centered on priorities like alignments, cost, and environmental impacts. But from our perspective, equity is the lens by which we must evaluate all priorities: alignments serving whom, costs borne by whom, environmental benefits received by whom? **Station siting is a top concern for Futurewise in terms of determining equitable distribution of benefits and burdens for investments in ultra-high speed rail. Stations are a critical element of the ultra-high speed rail project as they drive ridership and will have large impacts on land use, transportation and housing in the areas in which they are constructed—issues that are largely outside the control of this project's scope unless other state initiatives fill the gap...**"

Warrant: Because of high costs, HSR will not be able to cover operating costs.

Staff. "Wonkabout Washington: Designing High-Speed Rail for Equity and Regulating King County Wineries" May 2019. The Urbanist.

<https://www.theurbanist.org/2019/05/28/wonkabout-washington-designing-high-speed-rail-for-equity-and-regulating-king-county-wineries/>

"A potential future station in Kelso/Longview highlights these concerns. Currently, two of the three proposed alignments and station locations show Longview/Kelso as a potential stop, which makes sense given the existing Amtrak stop in Kelso. However, Kelso has a 29% poverty rate (more than twice the state average), and the median property value is \$125,000, about a third of the state average. A high-speed rail line that would allow people to live in Kelso or Longview and easily commute to Seattle has the potential to increase access to jobs and drive economic development. At the same time, absent other policy interventions, a new stop is also likely to increase sprawl, gentrification and displacement of vulnerable populations in the area."

Warrant: HSR will bring economic opportunity to those who need it

Stephanie Overman. "High-speed rail delivers jobs to counties" National Association of Counties. April 2022. <https://www.naco.org/articles/high-speed-rail-delivers-jobs-counties>

"California's high-speed rail line isn't anywhere near completion, but it's already bringing benefits to some of the state's Central Valley counties. For key economic indicators — per capita income, unemployment and poverty rates — "valley counties have persistently performed poorly compared to state averages," according to the Center for Continuing Study of the California Economy. The publicly funded California High-Speed Rail Authority can help bridge that gap, according to rail authority CEO Brian Kelly. **Kelly told a recent American Public Transportation Association conference that the first segment of the rail project — in Madera, Fresno, Kings, Tulare and Kern counties — means "huge economic development in one of the most disadvantaged**

areas” of the United States. The project officially broke ground in Fresno in January 2015 and construction is currently taking place within 119 miles in the Central Valley. The Merced to Fresno project section is part of the first phase of the system, a 65-mile electrified, two-track initial operating segment connecting the communities of Merced, Madera and Fresno.”

Warrant: HSR in California is creating thousands of jobs targeted to low income households

Stephanie Overman. “High-speed rail delivers jobs to counties” National Association of Counties. April 2022. <https://www.naco.org/articles/high-speed-rail-delivers-jobs-counties>

“So far, “close to 8,000 construction jobs have been created,” with the help of the State Building and Construction Trades Council, the Fresno Regional Workforce Development Board and other groups, according to Augie Blancas, a public information officer for the authority. **Blancas noted that the high-speed rail authority and its design-builders are implementing the Target Workers Program, which requiring 30 percent of all project work hours be performed by individuals from disadvantaged communities (such as the Central Valley) where household income ranges from \$32,000 to \$40,000. Training workers is a key part of the project, according to Blancas.** The authority has partnered with the City of Selma, in Fresno County, to create a workforce development center training for Central Valley residents. The center is aimed at serving veterans, at-risk young adults, minority and low-income populations. “There’s customized classroom instruction and hands-on training,” that helps students prepare for careers in more than 10 construction-industry trades, Blancas said.”

Analysis: Use this argument to show that the benefits of HSR are going to places where it will be felt the most acutely. Remind the judge that economic benefits are considerably more valuable to the poor than to the rich, because each marginal dollar is more impactful to disadvantaged persons.

A/2: High-Speed Rail is not publicly supported.

Answer: High Speed Rail is a very popular idea that would deliver immense political capital to the governing coalition and help usher in other reforms. Also, democratic governments ought to pass policies supported by their constituents.

Warrant: Young Americans support HSR

Gabby Birenbaum. "Gen Z's high-speed rail meme dream, explained" March 2021. Vox.

<https://www.vox.com/2021/3/10/22303355/gen-z-high-speed-rail-biden-map-meme-buttigieg>

"Such is the popularity among Gen Z-ers of high-speed rail. "We look at other countries that have good examples of it, and we wonder why our country can't do that," Cara said. "It seems like a simple solution that we can't find the reason as to why we're not doing it." For members of the young online left, the high-speed rail map has become a ubiquitous fixture of politics Twitter. Created by graphic designer Alfred Twu in 2013, the map depicts a system of interconnected high-speed rail lines, linking Los Angeles to New York and Minneapolis to Miami, among other projects. (High-speed rail refers to lines that typically run over 160 miles per hour.) **The map has been tweeted out by tiny personal accounts and the Sunrise Movement alike. It has its share of problems — the proposed rail lines go right through tribal lands — but it serves as a handy analog for what the promise of high-speed rail represents to Generation Z.."**

Warrant: Because of high costs, HSR will not be able to cover operating costs.

Gabby Birenbaum. "Gen Z's high-speed rail meme dream, explained" March 2021. Vox.
<https://www.vox.com/2021/3/10/22303355/gen-z-high-speed-rail-biden-map-meme-buttigieg>

"Gen Z isn't the first group of young, online voters to care about transit. But they represent a culmination of trends that have been building in younger Americans: less interest in cars as status symbols, more interest in environmentally friendly transit methods. The popularity of the high-speed rail map meme builds on years of similar conversation, some of it in the Facebook group New Urbanist Memes for Transit-Oriented Teens (Numtot), first created in 2017 and now serving as a "haven for people who love trains," as administrator Emily Orenstein described it. The meme, and **high-speed rail more generally, are popular topics with the group's more than 200,000 users, its three administrators say, because it allows them to dream big.** "I love the high-speed rail map image because I think a lot of urban planning and urbanism today, especially in the United States, is so devoid of inspiration because it's so beaten down by so-called pragmatism, labor costs, legal issues, things like that," said Jonathan Marty, a Numtot administrator who goes to Columbia University. "The high-speed rail thing, the map that circulates a lot, it touches people because it's this genuinely bold and tangible image of the future. People can feel that.""

Warrant: High Speed Rail is very popular in California

Staff. "New Poll Finds Strong Voter Support for High-Speed Rail in California" PR Newswire. April 2022. <https://www.prnewswire.com/news-releases/new-poll-finds-strong-voter-support-for-high-speed-rail-in-california-301526337.html>

"Fourteen years after California voters approved funding to begin building a statewide high-speed rail system, a clear majority of registered voters—and more than 70% of Democrats—still support the project, according to a new survey by UC Berkeley's

Institute of Governmental Studies and the Los Angeles Times. **The poll found that 56% of registered voters "support the state continuing to build the high-speed rail project, even if, as is currently planned, its operations only extend from Bakersfield to Merced in the Central Valley by the year 2030 and to the Bay Area by the year 2033."** Thirty-five percent of voters said they are opposed. By a margin of 73% to 18% Democrats support the project, with 54% of independent voters in support and 37% opposed. Registered Republicans oppose the project—66% to 25%.."

Warrant: HSR support is linked to other important political issues

Staff. "New Poll Finds Strong Voter Support for High-Speed Rail in California" PR Newswire. April 2022. <https://www.prnewswire.com/news-releases/new-poll-finds-strong-voter-support-for-high-speed-rail-in-california-301526337.html>

""This poll confirms what we've believed for a long-time – that the great majority of Californians want electrified high-speed rail to help them alleviate congestion, avoid high gas prices, and address the climate crisis," said Ray LaHood, former U.S. Transportation Secretary and co-chair of the U.S. High-Speed Rail Coalition, which is mobilizing leading unions, businesses, and public servants to advocate for investments that will finally make high-speed rail a reality in America. **High-speed rail will help break the state's dependence on fossil fuels and is essential for California to achieve its ambitious clean air and carbon-free energy goals.** At the same time, the project is creating thousands of good-paying union jobs. Addressing voter worries over spiraling gas prices, the poll found that four in 10 voters said spiking gas prices are hurting them and their families, with low-income voters, especially, saying high gas prices are a serious problem. The California project is at a critical juncture. Governor Newsom has submitted a \$4.2 billion budget request to fund construction work now underway in the Central Valley and to advance key contracts to continue progress on the project. This bond appropriation is the remaining allocation from the original Proposition 1A bond

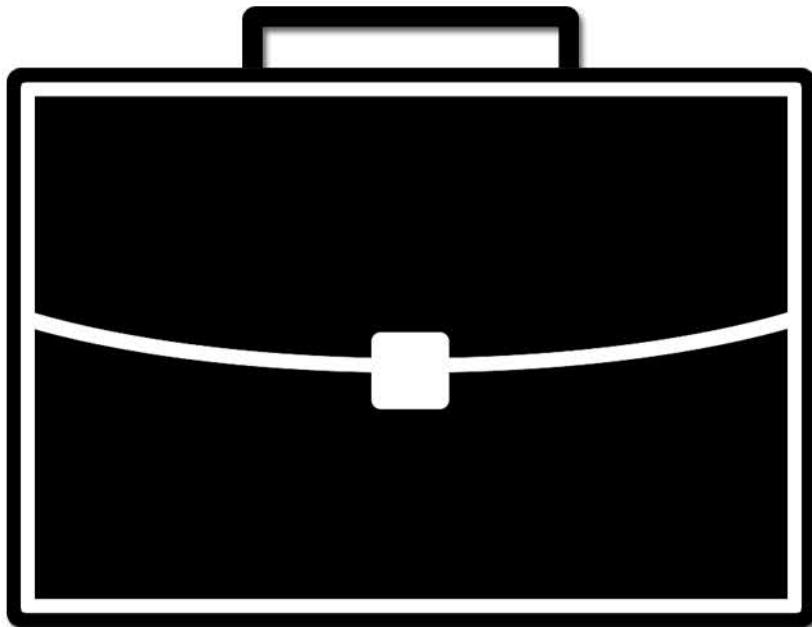
approved by 6.6 million voters in 2008 to initiate construction on the California High-Speed Rail project."

Analysis: This argument should be made in conjunction with other claims about HSR's effectiveness at achieving substantive policy objectives such as decarbonization. This point is an impact in itself (popular policies are good), but it is also a hidden frontline for common responses to other arguments, where con teams will claim that HSR will not actually be built or will be politically toxic.

Champion Briefs

Sept/Oct 2022

Public Forum Brief



Con Arguments

CON: High-Speed Rail is Inefficient Because of Density

Argument: High speed rail is not an efficient form of transit because America's sparse density makes train-stations impractical

Warrant: America is not very dense

"Why Doesn't The United States Have High-Speed Bullet Trains Like Europe And Asia?"

March 2017. Forbes. <https://www.forbes.com/sites/quora/2017/03/11/why-doesnt-the-united-states-have-high-speed-bullet-trains-like-europe-and-asia/?sh=1a463264c080>

"When you fly across the United States, look down on a non-cloudy day and you'll quickly realize how empty and different it is compared to when you fly across most Asian and European countries. And even our denser cities are more "suburban sprawl" than the concentrated type of urban living you see in Asia and Europe. For instance, Dallas (our 4th-largest metropolitan area) has lower population density than Hebei province and Hebei is not even considered a particularly dense Chinese province. This is probably the largest single factor making the economics of high-speed commuter rail very difficult."

Warrant: Low density reduces the utility of high speed rail because people will have to drive to and from the train station

"Why Doesn't The United States Have High-Speed Bullet Trains Like Europe And Asia?"

March 2017. Forbes. <https://www.forbes.com/sites/quora/2017/03/11/why-doesnt-the-united-states-have-high-speed-bullet-trains-like-europe-and-asia/?sh=1a463264c080>

"Most Americans live in suburbs which are dominated by single-family homes sitting on single tracts of land extending for miles (i.e. "suburban sprawl"). This contrasts sharply with the way towns were developed in the pre-automobile era, which is when most European towns and villages first came into existence -- these were designed around the primary mode of transportation of the era, a.k.a. "your feet". One consequence of this is the greater use of mixed-use development strategies where commercial and residential interests are located in close proximity i.e. the traditional European village/town square. For most of America, this makes what should be a fairly easy decision quite difficult: Where the heck do you put the train station? Furthermore, in the U.S., even if you arrive at your destination via train, you still need a car because most cities don't have convenient metro systems in place that can comfortably ferry people around to the places they need to go."

Warrant: City layouts are not conducive to high speed rail stations

Michael Smart. "Why can't America have high-speed trains?" CNN. March 2015.

<https://www.cnn.com/2015/05/03/opinions/smart-high-speed-trains-america>

"For a start, much of the United States is not exactly an ideal market for high-speed rail. Compared to places where rail really flourishes – Japan and Western Europe, for instance – the United States is geographically vast. As a result, in much of the country, cities are far enough apart that air travel provides significant time savings, even compared to some of the fastest trains. The layout of cities matters, too. When you arrive in Tokyo, Paris or Barcelona, it's often convenient (and even pleasant) to walk to your final destination. When it's not, a fast and frequent mass transportation system awaits to whisk you away. This is not the case in many American cities, where arriving by train typically means jumping into a cab or renting a car for the last leg of your journey. Simply put, in many sprawling U.S. cities, getting to your destination by train can still

mean you've got quite a way yet to get home. We could change that. And we probably should. But we're not there yet..”

Warrant: The only part of the United States suitable for high speed rail is the North East Corridor.

Michael Smart. “Why can’t America have high-speed trains?” CNN. March 2015.

<https://www.cnn.com/2015/05/03/opinions/smart-high-speed-trains-america>

“The Northeast Corridor (Boston-New York-Washington) comes in at the top of just about every list of potential candidates for high-speed rail, with the distances involved being considered within the “Goldilocks” zone for fast trains. For example, at just over 200 miles from New York to both Boston and Washington, fast trains could compete with even faster airplanes by offering centrally located stations and providing an alternative to the hassle of airport security lines. These cities are dense, have strong downtowns, and extensive mass transit systems once you arrive. Just as importantly, rail on the Northeast Corridor can also compete with driving, mainly because traffic congestion makes driving in the region so slow and unreliable, while tolls and parking costs can make it an expensive and time-consuming option. Rail in the northeast even has a great track record; after Amtrak’s almost-high-speed Acela service began on the Northeast Corridor in 2000, ridership exploded, quickly outstripping air travel between New York and Washington.”

Analysis: This argument is strategic because it makes a structural case for why high-speed rail is not viable. If HSR would not be used efficiently, then it makes no sense for the government to spend time and money developing the infrastructure only for it to make minimal contributions to real life. Push your opponent to articulate HSR benefits that do not require ridership if they want to draw tangible impacts.

CON: High-Speed Rail is Not Self Sufficient

Argument: High Speed Rail would not generate sufficient revenue to cover its operating costs. As a result, it will exercise a severe drain on government revenue over time and lead to increased taxation.

Warrant: Running and maintaining high speed rail systems is expensive

Randal O'Toole. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology" April 2021. CATO Institute.

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

"Once built, high-speed rail systems are expensive to maintain. Long-run capital renewal requirements include replacement of rails and trainsets as frequently as every 10 years. Transit agencies in the United States currently have a \$176 billion maintenance backlog, mostly for rail infrastructure. A country that can't keep its urban rail systems in shape is not likely to keep even more expensive high-speed rail lines running. Rail planners often ignore these capital replacement costs. The California High-Speed Rail Authority is legally required to earn enough revenues to cover its operations and maintenance costs. The agency's business plans estimate future capital replacement costs (which it calls "lifecycle costs"), but when it projects the future profitability of the project, it only counts operations and maintenance costs, not lifecycle costs, against the revenues. This means taxpayers will be on the hook to cover those costs even in the unlikely event that the system manages to cover its operations and maintenance cost."

Warrant: Because of high costs, HSR will not be able to cover operating costs.

Randal O'Toole. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology" April 2021. CATO Institute.

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

"Passenger revenues probably won't even cover operating costs. Amtrak claims that the Acela, its high-speed train between Boston and Washington, covers its operating costs, but it doesn't count its second-largest operating expense: depreciation. By ignoring depreciation, Amtrak has managed to build up a \$52 billion maintenance backlog in the corridor. If Amtrak's high-speed rail corridor through the most heavily and densely populated region of the country can't pay for its operating costs, then no other corridor will be able to do so either. Where all this money will come from is even more problematic. In 2008, California voters agreed to allow the state's high-speed rail authority to sell \$9 billion worth of bonds without identifying any source of revenues to repay those bonds. The authority's original business plans anticipated that private investors would be willing to offset as much as \$7.5 billion of the construction costs in exchange for being able to profitably operate the line, but no investors have been willing to risk their money based on the state's projections that the line can operate at a profit.."

Warrant: Many high speed rail lines in China are unprofitable

Dhaval Desai. "China's high-speed railways plunge from high profits into a debt trap" Observer Research Foundation. March 2015. <https://www.orfonline.org/expert-speak/chinas-high-speed-railways-plunge-from-high-profits-into-a-debt-trap/>

"In the mad rush to gain the rich economic dividends that the HSR delivered on several profitable lines, especially the Beijing-Shanghai and Beijing-Guangzhou lines, provincial governments across the country have blindly tried to emulate the feat. However, most

of such provincial construction has ignored the low- to zero- potential of the expensive routes to attract similar volumes of passenger traffic and are running at high idle capacity.

Most new HSR lines in China have witnessed a sharp decline in their “transportation density”. Measured in passenger-kilometres, it is an indicator that projects the line’s operating efficiency in terms of annual average transport volume per kilometre. For example, while the 1,318-kilometre Beijing-Shanghai HSR corridor’s transportation density was 48 million passenger-kilometres in 2015 and continues to be high, the 1,776-kilometre Lanzhou-Urumqi line has only 2.3 million passenger-kilometres of transportation density. China’s overall transportation density of HSR was 17 million passenger-kilometres in 2015, while it was 34 million passenger-kilometres for Japan’s Shinkansen in the same year.”

Warrant: HSR construction costs are substantially higher than a normal line

Dhaval Desai. “China’s high-speed railways plunge from high profits into a debt trap”
Observer Research Foundation. March 2015. <https://www.orfonline.org/expert-speak/chinas-high-speed-railways-plunge-from-high-profits-into-a-debt-trap/>

“HSR construction costs nearly three times more than a conventional rail line. Given the absence of freight tariffs, its operational viability is hinged solely on passenger fares to cover the capital expenditure and operating costs. The craze for HSR has made China neglect the construction of conventional systems, adversely affecting the balance of the country’s logistics mix. As a result, rail has consistently trailed road and water freight transport for the past several years. This has led to growing investments in polluting freight road trucks and trailers, offsetting the environmental gains resulting from HSR. But for the China Rail Corporation (CRC) that owns the HSR network, that is the least of its worries.”

Analysis: This argument is smart because it appeals to a judge's intuitive sense of what types of projects the government should fund. Make HSR seem like a shiny, expensive, but ultimately useless boondoggle that will be a persistent drain on government coffers.

CON: High-Speed rail leads to gentrification

Argument: High-Speed Rail increases the cost of living in working class neighborhoods.

Warrant: high speed rail creates gentrification by introducing new populations into working class neighborhoods.

Turrentine, Jeff, "When Public Transportation Leads to Gentrification," NRDC, 6 Jan. 2018, <<https://www.nrdc.org/onearth/when-public-transportation-leads-gentrification>>.

Things have changed. **Transit-oriented development**, once little more than a jargony buzz phrase uttered by urban planners and public transportation advocates, is **transforming cities and suburbs all across the country as the market for housing near transit hubs continues to explode**. Unfortunately, this type of development is also **changing the affordability of long-standing communities that working-class residents have called home for generations**. At issue is something called transit-induced gentrification, a socioeconomic by-product of transit-oriented development that would have been largely unthinkable 25 years ago, when the idea of living above a busy train station and not owning a car held less appeal among the upwardly mobile than it does today. These same **upwardly mobile workers, disproportionately young and college educated, are increasingly citing access to a variety of transportation options—including subways, light rail, bus rapid transit, and pedestrian and bicycle paths—as a determining factor when they're choosing where to live**.

Warrant: high speed rail creates uneven development and tension between station areas and other parts of cities.

Premsagar, Smriti. "A Critical Review of Hyperloop (Ultra-High Speed Rail) Technology: Urban and Transport Planning, Technical, Environmental, Economic, and Human Considerations," *Frontiers*, 04 May 2022,
[<https://www.frontiersin.org/articles/10.3389/frsc.2022.842245/full>](https://www.frontiersin.org/articles/10.3389/frsc.2022.842245/full).

Therefore, **the build-out of space by hyperloop will not be uniform throughout the city. It will create an imbalance between cities and their hinterlands.** The serviced areas will improve their status, modernity and value (Chen et al., 2019). **The result will tend to be gentrification around the station area, causing displacement of lower income populations and an influx of higher income people** (Sideris et al., 2012). Therefore, **hyperloop may facilitate polarization and segregation between station areas and other parts of the city.** The differential increase in accessibility accompanied by hyperloop may **lead to spatial inequality and centralization** (Chen et al., 2019).

Warrant: light rail transit drastically changed neighborhood makeup in Denver.

Tehrani, Shadi. "The Color of Health: Residential Segregation, Light Rail Transit Developments, and Gentrification in the United States," Iran University of Science and Technology, 30 Sep. 2019, <<https://www.mdpi.com/1660-4601/16/19/3683/htm>>.

The presence of the **LRT had a great impact on gentrification in Denver's station-tract neighborhoods, which experienced a 4% relative increase in the White population compared to non-station tract neighborhoods** [92]. Moreover, **there was a 26% relative increase in the neighborhood change index** in LRT station neighborhoods as compared to non-station area neighborhoods. These combined results could indicate that **Denver's LRT station areas experienced gentrification-related neighborhood change in the absence of sustainable transportation promotion by way of TOD.** There was also pronounced gentrification and TOD related changes in San Francisco, CA, USA

between 1980 and 2010. Even with the positive TOD effects of retaining commute mode shares by public transit and non-POV (non-privately operated vehicle) mode, station tracts in San Francisco, CA, USA exhibited a significant relative increase in income (+31%), neighborhood change index (+9%), White population (+4%), and a decrease in poverty (-3%) [92].

Warrant: large apartment buildings constructed by developers drive up rents and push out original residents.

Turrentine, Jeff, "When Public Transportation Leads to Gentrification," NRDC, 6 Jan. 2018, <<https://www.nrdc.org/onearth/when-public-transportation-leads-gentrification>>.

From an economic perspective, it's also quite a boon, not just for cities, which can reap massive tax revenues from new development, but also for individuals who—liberated from their cars—can watch as their transportation costs go down considerably. (Transportation is routinely listed as the third-largest household expense in America, after housing and food.) But as **developers race one another to erect fancy apartment buildings and condominiums that cater mainly to young professionals, longtime residents of neighborhoods adjacent to established or newly planned transit hubs are increasingly finding themselves priced out of their own communities.** And the problem is getting big enough that urban planners and local governments are committing themselves to doing something about it. **In California, we can see how transit-induced gentrification works.** One study recently conducted by the San Diego Union-Tribune looked at urban areas statewide (San Diego, Los Angeles, Sacramento, and the San Francisco Bay Area) and found that over the past five years, **nearly 400 new multifamily buildings had either gone up or were under construction within half a mile of a transit stop. Median family income in these neighborhoods averaged less than \$64,000.** The

average monthly rent for a two-bedroom apartment, meanwhile, was more than \$3,500. And in nearly 20 percent of these neighborhoods, the median household income was less than \$30,000—but the average rent on a two-bedroom apartment was still more than \$3,300. That, suffice it to say, is an untenable situation for the average renter and a recipe for displacement. Concerns about transit-induced gentrification are mounting everywhere that cities are expanding or improving their mass-transportation systems, especially their rail lines. In Maryland's D.C. suburbs, planners and city officials are currently trying to square one of their original goals for the new Purple Line—dramatically easing lengthy commutes for members of working-class communities—with the sudden appearance of \$1.5 million luxury townhomes next to planned stations, developments that excitedly advertise walking distance to trains in their pitches to prospective buyers. Similar tensions are playing out at the moment in Chicago, Atlanta, and Portland.

Warrant: empirically rail has induced transit gentrification in Los Angeles.

Boarnet, Marlon. "Gentrification Near Rail Transit Areas: A Micro-Data Analysis of Moves into Los Angeles Metro Rail Station Areas," UC Davis eScholarship, Dec. 2018, <<https://escholarship.org/uc/item/4p4584w8>>.

An interesting question is how the station area income distribution patterns compare with income distribution patterns citywide. Figure3 reports the income distribution patterns for all filers in L.A. County for whom we have 9 digit zip code data. **Citywide, we observe a pattern similar in some respects to what occurred in rail station areas. The share of households in L.A. County with lower incomes declined continuously over the period.** This dynamic was pronounced at the lowest end of the income distribution; **the share of households who earned less than \$15,000 fell from 34 percent in 1994 to 19 percent in 2012. By contrast, the share of households with incomes greater than \$65,000 nearly doubled between 1994 and 2012, growing from 14 percent to 27**

percent. However, since the L.A. County graph is in static dollars whereas our other graphs present income groups in relation to AMI, any decrease across L.A. County could be explained by inflation.

Impact: transit induced gentrification causes many poor health outcomes.

Tehrani, Shadi. "The Color of Health: Residential Segregation, Light Rail Transit Developments, and Gentrification in the United States," Iran University of Science and Technology, 30 Sep. 2019, <<https://www.mdpi.com/1660-4601/16/19/3683/htm>>.

Transit-induced gentrification can engender health consequences when built and social environments are rapidly transformed [82]. Studies have found that **populations displaced by gentrification**, as compared to those who remained, **typically have shorter life expectancy, higher cancer rates, more birth defects, greater infant mortality, and higher incidence of asthma, diabetes, and cardiovascular disease**. Using publicly available data for New York City, NY, USA an adverse association between gentrification and preterm birth among African American residents was found. Specifically, among African American residents a very high gentrification was adversely associated with preterm birth (AOR = 1.16; 95% CI: 1.01, 1.33) as compared to those who lived in a very low gentrified neighborhood [103]. Yet, living in a very highly gentrified neighborhood was protective as compared to living in a very lowly gentrified neighborhood (AOR = 0.78; 95% CI: 0.64, 0.94) for White residents, thus defining a distinct effect of gentrification by race and ethnicity [103]. Hypertension, one of the strongest risk factors for cardiovascular disease, has also been found to be inversely associated with neighborhood affluence/gentrification (OR = 0.7; 95% CI: 0.6, 0.9) among adults participating in the Chicago Community Adult Health Study [105,107]. Conversely, the risk of displacement was positively associated with hypertension (PR = 1.25; 95% CI: 1.08, 1.46) and hypercholesterolemia, another risk factor for cardiovascular disease, (PR

= 1.12; 95% CI: 1.01, 0.24) among a population of Hispanic renters in high foreclosure areas (Chicago, IL, USA; Miami, FL, USA; New York City, NY, USA; San Diego, CA, USA) [108].

Analysis: The gentrification argument is certainly a strategic route to go as long as you feel confident weighing the impact. The negative health outcomes of transit induced gentrification cannot be directly mapped to how many people die of these complications, which can make your weighing debate a bit of an uphill battle. If you do not want to go this route, you can also focus on the racial implications of gentrification, or read income inequality arguments. The argument definitely makes logical sense and is relatable to most people (most major cities have undergone gentrification) so as long as you can weigh it, it's a good strategic argument.

CON: High-Speed rail is a target for terrorists

Argument: Terrorists are likely to target High-Speed Railways.

Warrant: high speed rail creates an attractive target for terrorists.

Maurillo, Donna. "High-Speed Rail in the US: Will It Be a More Attractive Terror Target than Inter-city Rail?" University of California Santa Cruz, 2011,
[<https://transweb.sjsu.edu/sites/default/files/pdfs/terror-targets-high-speed-rail-vs-intercity-rail-Maurillo.pdf>](https://transweb.sjsu.edu/sites/default/files/pdfs/terror-targets-high-speed-rail-vs-intercity-rail-Maurillo.pdf).

Therefore, high-speed rail could become the mode of choice for a growing population that wishes to avoid the almost inevitable highway congestion. **Assuming, then, that high-speed rail does succeed in the US, it could become a target for domestic or global terrorist groups** or individuals **who specifically attack transportation modes**. In that event, which security-related issues could be problematic? Several possibilities exist. First, terrorist attacks against inter-city rail have occurred with almost predictable frequency around the globe. Crowded cars and easy access provide a ready target for anyone with evil intent. Although rail attacks may not deliver the spectacular devastation of an airline attack – such as that of September 11, 2001 – they still can provide sufficient carnage to deliver a stunning message of terror.

Warrant: Al Qaeda is already targeting American rail lines.

Johnson, Bridget. "How the Terror Threat to Rail Has Evolved 15 Years After Madrid," Homeland Security Today, 12 Mar. 2019, <www.hstoday.us/subject-matter-areas/transportation/how-the-terror-threat-to-rail-has-evolved-15-years-after-madrid/>.

Fifteen years after the deadliest terror attack in Spain's history, **terror groups and their ideological adherents still peg passenger rail, freight rail and commuter trains as targets to inflict mass casualties and spread panic among those who depend on mass transit.** On March 11, 2004, 10 bombs on four commuter trains at three stations in Madrid killed 193 people and wounded more than 1,800. Two days later, al-Qaeda claimed responsibility for the carnage. Many years later, the passenger rail threat was illustrated sharply by al-Qaeda in their Inspire magazine, a jihadist how-to guide that speaks clearly to a Western audience and lives in perpetuity on the internet — so much so that the 2010 inaugural issue, which inspired the 2013 Boston Marathon bombers, was discovered last year to have been uploaded at some point as a free e-book available for download at Barnes & Noble. **In a 2017 issue of al-Qaeda in the Arabian Peninsula's magazine — also the most recently released issue — the cover story was train derailment operations, with a recipe for a derailment tool, an illustrated timeline of devastating derailments in America, and a map of passenger and freight rail lines belonging to Amtrak, Norfolk Southern, Union Pacific, BNSF and CSX lifted from the Department of Transportation.**

Warrant: Al Qaeda has specifically focused on the high speed Acela line.

Johnson, Bridget. "How the Terror Threat to Rail Has Evolved 15 Years After Madrid," Homeland Security Today, 12 Mar. 2019, <www.hstoday.us/subject-matter-areas/transportation/how-the-terror-threat-to-rail-has-evolved-15-years-after-madrid/>.

"We have to expose more of their vulnerabilities in their security," the writers added. "And when they spend millions of dollars to tackle a vulnerability we should be ready to open a new [front]... we expect that there will be no effective solution to the security gaps that may be caused by these types of operations that target the train system." **AQAP was particularly interested in the popular Acela high-speed route running**

between D.C. and Boston, as well as discussing the Amtrak Cascades, the Coast Starlight, the Pacific Surfliner, the Palmetto line and more.

Warrant: high speed rail systems have poor security

Shvetsov, Alexey. "Protection of High-speed Trains Against Bomb-carrying Unmanned Aerial Vehicles," Journal of Transportation Security Dec. 2017, <https://www.researchgate.net/publication/318919040_Protection_of_high-speed_trains_against_bomb-carrying_unmanned_aerial_vehicles>.

The problem of terrorist acts on railways has become more acute with the advent of high-speed trains. Terrorist acts and resulting wrecks of high-speed trains will have much more serious consequences than a conventional train crash. **Analysis of the capabilities of technical security systems applied to counter-terrorist protection of high-speed trains shows that there is no protection against drone terrorist attacks committed by bomb-carrying drones.** Simultaneously, the special services of MI5 (United Kingdom) and the FSB (Russian Federation) have revealed information that **international terrorist organizations, such as ISIS** (Islamic State of Iraq and Greater Syria), **are actively investigating the possibilities of employing bomb-carrying drones as a terrorist tool.**

Warrant: there are many reasons why high speed rail is a particularly attractive target to terrorists.

Maurillo, Donna. "High-Speed Rail in the US: Will It Be a More Attractive Terror Target than Inter-city Rail?" University of California Santa Cruz, 2011, <<https://transweb.sjsu.edu/sites/default/files/pdfs/terror-targets-high-speed-rail-vs-intercity-rail-Maurillo.pdf>>.

Third, rail security is more difficult than airline security because it must address much larger numbers of travelers. Of necessity, screening must be brief to keep the crowds moving efficiently. This can allow lethal devices to pass through undetected into the cars. Even chemical-sniffing canines and random screening are imperfect enough to leave certain vulnerabilities in the rail system. And crowds standing in long screening lines can be vulnerable to attack, as well. In addition, a new HSR system in the United States could become a tempting target for those who would wish to destroy any icon of Western values – especially if the nation had just invested a staggering sum of money into it. Attacking airlines is not an easy endeavor. The majority of US transportation security investment has focused on air travel, making another attack much more daunting. On the other hand, rail is so much more accessible and vulnerable not only at the stations, but also along the entire route, where derailments can be carried out in remote areas. By contrast, an airliner is reasonably safe once it has left the ground. One also must consider that a well-placed explosive device planted on high-speed rail could be timed to coincide with that train traveling adjacent to key infrastructure, such as bridges, tunnels, water treatment plants, power stations, and the like. It also is possible to place an explosive device on an inter-city passenger train and time it to explode as the cars pass alongside a high-speed train. And finally, because it would be a new infrastructure, high-speed rail most certainly would be operated with digital technologies throughout. These systems, while more dependable and robust than mechanical systems on older lines, can be hacked in a way that could affect switches, warning lights, electrical circuits, and even the operating systems of the computer networks.

Warrant: terrorism threats on rails short circuit ridership, decreasing HSR benefits.

Leboeuf, Michel. "High-Speed Rail: Opportunities and Threats," Science Direct, 2016, <https://www.researchgate.net/publication/314132658_High-Speed_Rail_Opportunities_and_Threats>.

The second way data can be considered regards security. Society is threatened more and more by cyberattacks, which endanger operations; and not only cyberattacks, but also malevolent actions up to terrorism. **Several large terrorist actions have occurred in Europe. Not only have they damaged the rail image and cause a loss in revenues** (e.g., the terrorist attack on Thalys on August 21, 2015 has caused a loss of ridership†), **but they have also imposed new constraints on rail. For example, Thalys has been driven to install security gates at the entrance of the corresponding platforms. Customers have to arrive in advance and are fenced off until they are allowed go through these gates** (Fig. 11). **Regardless of the cost of these equipment and their operations, this constraint affects modal choice because the time spent in the station is longer; as a result, rail loses part of its door-to-door advantage versus air.** Of course, this aspect threatens collective transport modes much more than it does private ones [9]. Once again, an asset (Asset #6) is diminished, since the safety advantage may be counterbalanced by a loss of security due to collective transport modes being vulnerable to terrorism.

Impact: terrorism causes aggressive nationalism that can spiral into war.

Morgan, Nicole. "Wild Globalization and Terrorism: Three Scenarios," Canadian Association for the Club of Rome, 09 Feb. 2018, <<https://canadiancor.com/wild-globalization-terrorism-three-scenarios/>>.

The terrorist act can reactivate atavistic defense mechanisms which drive us to gather around clan chieftains. Nationalistic sentiment re-awakens, setting up an implacable frontier which divides "us" from "them," each group solidifying its cohesion in a rising

hate/fear of the other group. (Remember Yugoslavia?) To be sure, the allies are trying for the moment to avoid the language of polarization, insisting that “this is not a war,” that it is “not against Islam,” “civilians will not be targeted.” But the word “war” was pronounced, a word heavy with significance which forces the issue of partisanship. And it must be understood that the sentiment of partisanship, of belonging to the group, is one of the strongest of human emotions. Because the enemy has been named in the media (Islam), the situation has become emotionally volatile. Another spectacular attack, coming on top of an economic recession could easily radicalize the latent attitudes of the United States, and also of Europe, where racial prejudices are especially close to the surface and ask no more than a pretext to burst out. This is the Sarajevo syndrome: **an isolated act of madness becomes the pretext for a war** that is just as mad, made of ancestral rancor, measureless ambitions, and armies in search of a war.

Analysis: As with the gentrification argument, by far the most difficult part about the terrorism argument is the impact. Terrorism in reality has caused very few domestic deaths since 9/11, so going with a global impact angle about how terrorism impacts foreign policy is often better. This is an example of an argument with solid historical precedent, so make sure you utilize the historical instances of trains being attacked and the future projections of that happening more often to create a sense of urgency around your argument.

CON: High-Speed rail causes brain drain

Argument: High-Speed Rail takes high-skill workers out of less-urban areas.

Warrant: high speed rail facilitates movement only from cities to larger ones, skipping over rural areas and causing brain drain.

Chen, Yu. "Are Chinese Executives Rewarded or Penalized by the Operation of High-Speed Railways?," MDPI Sustainability, 26 Oct. 2021,
[<https://www.mdpi.com/2071-1050/13/21/11797/pdf>](https://www.mdpi.com/2071-1050/13/21/11797/pdf).

In private enterprises, the Board of Directors and shareholders are owners and enjoy the privilege of control. Senior executives are managers employed by the owners to realize the operating profit and possess only the rights of management. This kind of hierarchical relationship leads to the Board of Directors and shareholders trying to lower the executives' salaries below the normal level to reduce operating costs [29]. In this case, on the one hand, high-speed railway operation provides more opportunities for the Board of Directors and shareholders to interact and communicate with other economic entities, which helps them improve the management system of enterprises according to the obtained information about the value of managers. This results in the Board of Directors and shareholders having a more reasonable and objective evaluation of the actual ability of executives so they can adjust executive compensation from a lower level to a higher level. On the other hand, **high-speed railway operation brings greater risk of brain drain to enterprises due to the promotion of trade, personnel flow, and knowledge spillover between cities** [7,30]. Therefore, when managers find better employment opportunities in cities along the railway, they tend to move to those cities. Consequently, the shareholders paying managers a salary equivalent to their labor can ensure that the company will not face the dilemma of job vacancy and will continue to operate normally.

Warrant: HSR catalyzes brain drain by offering easier access to more attractive opportunities in the big cities.

Cheng, Shiyu. "Three Essays on the High Speed Rail System in China," University of Kentucky, 10 Aug. 2021, <https://uknowledge.uky.edu/economics_etds/56/>.

I then focus on the out-of-province colleges to look into the most important aspects that make out-of-province colleges more attractive after connecting to the HSR network. Colleges in the megacities experience a larger increase in cutoff scores after the station opening. At the same time, the HSR connection only has positive effects for colleges in the elite projects. These findings suggest that the **HSR network stimulates “brain drain” from unconnected cities to connected cities, and especially to the connected megacities.** This chapter contributes to the literature on high-skilled migration. In their review article, Kerr et al. (2017) recognize that **a significant share of high-skilled migration occurs before the workers enter the labor market but during the skill-building process when they choose the location where they receive higher education.** **These migrants choose destinations based on the quality of available schools, the possibility of subsequently entering the labor market, and future professional opportunities** (Rosenzweig, 2006; Kato and Sparber, 2013; Grogger and Hanson, 2011, 2015). While these studies focus on international migration, my **research highlights the impacts of improving transportation technology on domestic migration within China.**

Warrant: China proves, there was a 1.5% drop in local economies after high speed rail stations were built.

Chen, Stephen. "Is there a dark side to China's high-speed rail network?" South China Morning Post, 10 Oct. 2021, <

<https://www.scmp.com/news/china/science/article/3151775/there-dark-side-chinas-high-speed-rail-network>.

High-speed rail could be hurting rather than helping local economies in western China, with some cities becoming darker at night after a station comes to town, according to new research. In a study published in the peer-reviewed domestic journal Geographical Research on Friday, the researchers said that **on average, each high-speed rail station in western China corresponded to a more than 1.5 per cent drop in the intensity of local economic activity**. “China is entering an era of high-speed rail. Many cities hope to use rail construction to stimulate their economic growth. However, there are many differences in cities,” Professor Niu Fangqu and colleagues with the Chinese Academy of Sciences’ Institute of Geographic Sciences and Natural Resources Research said in the paper.

Warrant: uniqueness - without HSR rural America is thriving

Smarsh, Sarah. “Something Special Is Happening in Rural America” New York Times, 17 Sep. 2019, <<https://www.nytimes.com/2019/09/17/opinion/rural-america.html>>.

“It’s kind of a circle,” Dr. Womack said. “When our ancestors were made free, land was their pursuit.” So when she says her students are coming home, she explained, she means that they have realized that farming is a “vehicle that I can use to be free.” The Christian Science Monitor **recently reported a prairie trend of young people, drawn by family ties and affordable entrepreneurship, returning to rural and small-town homes around college graduation. They’re opening restaurants or starting small, unconventional farming operations**. One college senior founded a direct-to-consumer beef company in Otoe County, Neb., and sold \$52,000 worth of meat in the past nine months. **This return — or refusal to leave — is good news for Americans who will**

happily remain in cities. The future of rural is intertwined with suburban and urban outcomes by way of food production, natural resources, the economy, political movements and beyond. We need policymakers who understand this (and care about it). Good news: Progressive Democratic presidential candidates have unveiled a spate of rural policy plans more robust than any in recent political memory.

Warrant: internal link - brain drain destroys progress in rural America

Waldorf, Brigitte. "Brain Drain in Rural America," AgEcon Search, Purdue University, 28 Jul. 2007, <<https://ageconsearch.umn.edu/bitstream/9866/1/waldorf.pdf>>.

The selective migration of the highly educated population is a serious concern in regions suffering from a persistent brain drain. For example, **many Midwestern States have been losing a substantial share of their well-educated residents to other states** (Schachter et al. 2003, Franklin 2003, Waldorf 2007, Whisler et al. 2007) and a recent report from the Brookings Institution (Austin and Affolter Caine 2006) identified the underdeveloped human capital base as **one of the key challenges** for the Great Lake region as it struggles to **retain its economic and social viability**. The lack of human capital becomes even more pronounced when zooming in to a smaller spatial scale.

Impact: physician shortages are already a problem.

Finnegan, Joanne. "Rural health crisis escalates: Sometimes there's only 1 doctor in town (if you're lucky)," Fierce Healthcare, 12 Dec. 2017, <<https://www.fiercehealthcare.com/practices/rural-health-crisis-shortage-providers-karen-tomky>>.

He and his partner operate clinics in three counties that care for more than 10,000 patients and are the reason why Warren County still has a doctor. He sees patients, whether or not they can pay, and says a doctor really has to want to be in a rural community. "You have to have that spirit of service. And you have to want to serve the

people, just to be able to serve," he said. **The shortage of medical providers across rural America has resulted in shorter life spans and higher rates of disease for those living in rural communities**, according to The Denver Post. Like Oklahoma, Colorado has the Colorado Health Services Corps that also helps new doctors repay medical school loans if they work in a rural or underserved area of the state.

Analysis: The brain drain argument is a good way to pull the focus of debates away from only the benefits to cities and instead expand towards how it will impact the entire US population. This argument is strengthened even more if you can prove that because of physical distance and lack of proximity, rural communities will not gain any benefits from newly erected HSR networks. If that is the case, you can make arguments about how vulnerable rural communities are in the wake of covid and how certain shortages are worsening, and HSR continues this effect.

CON: High-Speed rail only services the wealthy, leads to income inequality

Argument: Low-income workers cannot afford high-speed rail.

Warrant: all Americans will pick up the bill for the system while only the elite will be able to access it.

O'Toole, Randal. "We Can't Afford the Luxury of High-speed Rail," CATO Institute. 1 Oct. 2010, <<https://www.cato.org/commentary/we-cant-afford-luxury-high-speed-rail>>.

In short, high-speed rail is more than five times more expensive than any of the alternatives. Since most high-speed rail stations will be in downtowns, the main users will be downtown workers such as lawyers, bankers, and government officials. Yet less than 8% of American jobs are in central city downtowns, meaning all Americans will subsidize trains used by only a small urban elite. High-speed trains in Europe and Asia may be a boon to American tourists, but they haven't proved transformational in those regions either. France and Japan have the world's most extensive high-speed rail networks, yet their average residents ride the high-speed trains less than 400 miles a year.

Warrant: high speed rail kills off lower cost forms of transit, like low speed rail.

De Decker, Kris. "High Speed Trains are Killing the European Railway Network," Low Tech Magazine, 16 Dec. 2013,

<<https://www.lowtechmagazine.com/2013/12/high-speed-trains-are-killing-the-european-railway-network.html>>.

High speed rail is marketed as a sustainable alternative to air traffic. According to the International Union of Railways, the high speed train "plays a key role in a stage of sustainable development and combating climate change". As a regular long-distance train traveller in Europe, I have to say that **the opposite is true. High speed rail is destroying the most valuable alternative to the airplane; the "low speed" rail network that has been in service for decades. The introduction of a high speed train connection invariably accompanies the elimination of a slightly slower, but much more affordable, alternative route, forcing passengers to use the new and more expensive product, or abandon the train altogether.** As a result, **business people switch from full-service planes to high speed trains, while the majority of Europeans are pushed into cars, coaches and low-cost airplanes.** A look at European railway history shows that the choice for **the elite high speed train is far from necessary.** Earlier efforts to organize speedy international rail services in Europe accompanied affordable prices and different ways to increase the speed and comfort of a rail trip. Quite a few of these services were even faster than today's high speed trains.

Warrant: empirically in China, high speed rail increased disparities by deprioritizing low income passengers and less developed cities.

Pagliari, Francesca. "High-Speed Rail, Equity and Inclusion," MDPI, 31 May 2022,

<<https://www.mdpi.com/2071-1050/14/11/6710/htm>>.

In China, for example, Jin et al. [7] analysed the effect of HSR on economic growth as well as on economic disparity between 2002–2016. They demonstrated that the

economic growth was mainly due to the advantages of the HSR in improving accessibility to sources of work, suppliers, and customers. Moreover, they showed that **HSR increased the economic disparities between small-medium and large-mega cities, favouring developed cities rather than less-developed and developing ones, increasing the economic disparities.** Ren et al. [8] investigated how **the deployment of HSR networks could lead to the exclusion of users in some socioeconomic categories.** Indeed, their research demonstrated that **passengers with low income** and lower levels of education, and passengers in central and western China, **were more likely to choose conventional trains w.r.t. HSR.**

Warrant: in Vietnam, low income people were about 5x more likely than rich people to use buses or conventional trains after high speed rail introduction, exacerbating social inequity.

Ngoc, Ah Minh. "Impact of High-Speed Rail on Social Equity—Insights from a Stated Preference Survey in Vietnam," MDPI, 6 Jan. 2022,
[<https://doi.org/10.3390/su14020602>](https://doi.org/10.3390/su14020602).

This study investigated the impact of high-speed rail (HSR) on social equity, utilizing information from a stated preference survey conducted in Vietnam. Social equity was examined across the population of four cities representing the northern, central, and southern areas of Vietnam. In general, **the high price of HSR is one of the barriers to using HSR over inter-city buses and conventional trains. Low-income groups** (less than VND 6 million per month) **have 4.894 and 4.725 times the likelihoods, compared to higher income groups, of retaining the use of an inter-city bus or conventional train, respectively, after introducing HSR.** Our findings reveal the fact that **social inequity may occur, with the low-income group being especially vulnerable, due to the existence of HSR in the future.** Furthermore, our results indicate that the interest of

people towards inter-city buses and conventional trains varied among the four cities before and after the presence of HSR. More specifically, low-income groups in Vinh and Nha Trang were observed to have a higher feeling of staying away from HSR, as they prefer to use inter-city buses. The findings of this study suggest that planners and policymakers need to consider various components of HSR ticket planning, in order to achieve sustainable evolution of the passenger rail system.

Impact: income inequality rising offsets any positive impacts of economic growth for the poor.

Singh, Anoop. "China's Economy in Transition: From External to Internal Rebalancing"
International Monetary Fund, 7 Nov. 2013,
https://www.google.com/books/edition/China_s_Economy_in_Transition/TWQZEAAAQBAJ?hl=en&gbpv=1&dq=Gini+coefficient+almost+directly+offsets&pg=P187&printsec=frontcover.

The regression analysis presented in Table 10.2 suggested that for all countries in the sample, growth is in general pro-poor, with growth leading to significant declines in poverty across all economies and time periods. Specifically, a 1 percent increase in real per capita income leads to about a 2 percent decline in the poverty headcount (column I). However, **a 1 percent increase in the Gini coefficient almost directly offsets the beneficial impact on poverty reduction of the same increase in income.** This finding is consistent with other work that suggests that the incidence of **extreme poverty in China would have fallen to less than 5 percent had inequality not increased after 1990** (ADO, 2012). Moreover, **inequality interacts with income, meaning that a higher level of inequality tends to reduce the impact of income growth on poverty reduction** (column 2): As an illustration, an increase in the Gini coefficient of about 25 percent (as in urban China from 1995 to 2005) reduces the impact of a 1 per- cent increase in income to

about a 1½ percent decline in the poverty head- count from 2 percent in the base case. The implication of this result is that past rises in inequality are likely to reduce the future impact of income growth on poverty, even if the level of inequality remains constant. In addition, the impact of growth on poverty reduction is found to be somewhat lower during the 1990s, possibly as a result of a change in the nature of growth (column 3).

Impact: income inequality is deadly, attributable to ⅓ of all deaths.

Bezruchka, Stephen. "Inequality Kills," University of Washington, 2014,
<https://depts.washington.edu/eqhlth/pages/BezruchkalInequalityKillsBkPubInfo14.pdf>.

The claim that economic inequality is a major reason for our poor health requires that several standard criteria for claiming causality are satisfied: the results are confirmed by many different studies by different investigators over different time periods; there is a dose-response relationship, meaning more inequality leads to worse health; no other contending explanation is posited; and the relationship is biologically plausible, with likely mechanisms through which inequality works. The field of study called stress biology of social comparisons is one such way inequality acts. Those studies confirm that all the criteria for linking inequality to poorer health are met, concluding that the extent of inequality in society reflects the range of caring and sharing, with more unequal populations sharing less. Those who are poorer struggle to be accepted in society and the rich also suffer its effects. A recent Harvard study estimated that about **one death in three in this country results from our very high income inequality. Inequality kills through structural violence. There is no smoking gun with this form of violence, which simply produces a lethally large social and economic gap between rich and poor.** If we face the grim reality of our failure to support the health of the public in the United States, it's critical to identify approaches to change the system that isn't working. The last part of the IOM report lays out ideas for what to do, saying that we know enough to

act without requiring more research. Their call to action is the need to alert the public to our alarmingly low relative health status and stimulate a national discussion about it.

Analysis: winning this income inequality argument is handy, because it has a significant and weighable impact on its own, but it can also cast a lot of doubt on your opponent's arguments. Most arguments from the affirmative will depend on high speed rail being widely used across all social classes, and if you can prove that to be untrue, this argument wins you both significant offense and significant defense.

CON: High-Speed rail trades off with the airlines, hurting the air industry

Argument: The already-struggling airline industry would be significantly hurt by a High-Speed Rail alternative.

Warrant: high speed rail development is intended as an alternative to airlines, and is already competing with airlines in many places.

Irfan, Umair. "America's trains are a drag. The Green New Deal wants to fix that," Vox, 13 Feb. 2019, <<https://www.vox.com/2019/2/8/18215774/green-new-deal-high-speed-train-air-travel>>.

Trains already compete with planes in many parts of the world Certainly, no one is going to lay rail across the ocean, but **in many countries, we're already seeing high-speed trains go toe to toe with planes between major cities.** The United States does have a what can technically be called a high-speed train, Amtrak's Acela Express. But it only runs between Washington, DC, and Boston and averages 68 mph with a top speed of 150 mph, which is pretty meager compared to the high-speed train offerings in a handful of other countries. **China, Spain, Germany, Saudi Arabia, France, Italy, South Korea, and Japan all have trains that top out above 200 mph.** Bloomberg last year put together an excellent analysis of busy transit routes in Europe, North America, and Asia, comparing flights and train trips in terms of time and cost. When factoring in the time it takes to get to the airport, wait in security lines, and travel from the airport to the destination, high-speed trains are roughly on par. We see this in trips between city pairs like Beijing and Shanghai, London and Brussels, and New York and DC.

Warrant: empirically, Spain's domestic air travel took a 40% hit to passengers due to high speed rail expansion.

Anna Aero, "Madrid Air Traffic to Barcelona (down 40%), Malaga (down 50%) Impacted By Expanding AVE High-speed Rail Network," 9 Feb. 2010,
<https://www.anna.aero/2010/02/09/madrid-air-traffic-to-barcelona-down-40-malaga-down-50-impacted-by-expanding-ave-high-speed-rail-network/>.

Spain's domestic air travel market is coming under increasing pressure from the ongoing expansion of the AVE high-speed rail (HSR) network. The first line was opened as far back as 1992 between Madrid and Seville (to coincide with Seville hosting the Expo that year) and has recently been extended in all directions from Madrid. In 2007, the network reached Malaga and in February 2008, the final section needed to connect Spain's two biggest cities was completed enabling high-speed rail journeys to and from Barcelona. **An analysis of air traffic demand since 1999 from Madrid to the top 10 domestic destinations clearly reveals** the dominance of the Barcelona route, and also **the impact of the growing HSR network.** In 2007, **passenger numbers** between Barcelona and Madrid peaked at almost five million. **Last year, this figure had fallen by 40%** to just under three million. No other domestic route from Madrid caters for more than two million annual passengers. The next three busiest routes are all to island destinations (Palma, Gran Canaria and Tenerife Norte) and are therefore unlikely to ever face competition from rail services.

Warrant: high speed rail leads to cutting flights and seat capacities, all hurting airlines. Empirically in China, flight frequency fell almost 25%.

Chen, Zhenhua. "Impacts of High-speed Rail on Domestic Air Transportation in China," PubMed Central, 20 Jun. 2017, <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7127363/>>.

This study investigates the impacts of high-speed rail (HSR) on domestic air transportation in China using a new comprehensive modeling framework utilizing both demand and supply perspectives. For the first time the assessment was conducted using an improved panel regression model by taking into account of the detailed opening schedules of various HSR services during the period 2001–2014. The research findings reveal that **the deployed HSR services have a significant substitutional effect on domestic air transportation in China**, but the effect varies across different HSR routes, travel distance and city type. Specifically, the research found **a decrease in domestic passengers of 28.2%, in flights of 24.6% and in seat capacity of 27.9% after the introduction of HSR services**. The impacts are found much stronger among those air routes that connect major hub within a distance range of 500 to 800 km. The uneven nature of the impact can be seen in the different experiences of selected cities. For example, air travel declined approximately 45% after commencement of the Wuhan-Guangzhou HSR, whereas it fell by 34% after the opening of the Beijing-Shanghai HSR.

Warrant: empirically, China's high speed rail system contributed to massive profit slashes for domestic airlines.

Timmons, Heather. "China's High-speed Rail Is So Popular, It's Hurting the Domestic Airline Industry," Quartz, 31 Mar. 2014, <<https://qz.com/193556/chinas-high-speed-rail-is-so-popular-its-hurting-the-domestic-airline-industry/>>.

China Southern Airlines is the latest Chinese airline to post miserable year-end 2013 results. Net profit dropped 24% to 1.99 billion yuan (\$321 million), and operating profit

fell 70%. China Southern Airlines joins Air China, where net profit dropped 32% in 2013, and China Eastern Airlines, where it fell by 25%. High oil prices, as well as increased competition from low-cost carriers and each other, have taken a toll. But, as each airline has recently acknowledged, so has China's massive and growing high-speed rail system. As Quartz reported last August, the costly and sometimes under-used rail network was shaping up to be a vital part of China's growth strategy. It doesn't have the hurdles of the airline industry: Airlines in China struggle to get clearances from the military to expand flight paths, and China's major airports have earned the title of the most-delayed in the world, where passengers sometimes riot to protest long waits and miserable customer service.

Impact: lowering airline usage means mass layoffs - look to COVID.

Braff, Danielle. "What Airlines Losing Money Could Mean for You," Reader's Digest, 23 May 2022, <<https://www.rd.com/article/what-airlines-losing-money-could-mean-for-you/>>.

Due to the travel collapse, airlines will need to cut payroll costs by 30 to 50 percent, the equivalent of tens of thousands of jobs. United Airlines says that about 36,000 employees could be furloughed, while American Airlines says it plans to lay off or involuntarily furlough 19,000 unless they receive more aid from Congress. Find out the gross things airlines do to save money. Some airlines may fold Smaller international airlines, including Virgin Australia has already folded and Columbia's Avianca has filed for Chapter 11 bankruptcy. Others may soon follow suit, depending on how long the industry is in crisis. The International Air Transportation Association predicts that global travel won't recover until 2024, due to a lack of consumer confidence, continuing global COVID outbreaks, and disruption of business travel, CNN says. This has a major effect on

the survival of the airlines: It's expected that international passenger traffic will fall by 55 percent in 2020 from the 2019 numbers.

Analysis: this argument takes an interesting approach to the topic. While many negative arguments leave room to contest the idea that high speed rail will be widely used, this argument assumes that high speed rail implementation will be successful, and there will still be disadvantages. This leaves the negative with less things it needs to win in order to win the round based on their arguments. It also means that this negative argument will effectively concede the link to some affirmative ridership ground, so weighing will be important.

CON: High-Speed Rail increases Debt

Argument: constructing and maintaining high-speed rail increases US debt.

Warrant: Rail would be extremely pricey.

O'Toole, Randal, "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology | Cato Institute," Cato Institute, 20 Apr. 2021, <<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>>

Secretary of Transportation Pete Buttigieg's proposal to make the United States a "world leader" in high-speed rail would add more than \$4 trillion to the federal debt for construction of new rail lines plus tens of billions of dollars of annual deficit spending to subsidize operating costs. In exchange, such a high-speed rail network is likely to carry less than 2 percent of the nation's passenger travel and no freight.

Empiric: HSR projects increase debt in China.

Dangwal, Ashish, "A Whopping \$900B Debt - China's Once-Profitable High-Speed Railways Now Heading Towards A Trillion Dollar Disaster", The EurAsian Times, 7 Jul. 2022, <<https://eurasiantimes.com/a-whopping-900b-debt-chinas-once-profitable-high-speed-railways/>>

In 2021, **China's** high-speed rail network had covered 40,000 kilometers, connecting 93% of the country's cities with a population of over 500,000. The nation seeks to increase its high-speed rail network to 50,000 kilometers by 2025. However, it seems that the **aggressive campaign to reap the lucrative economic dividends of HSR has increased the state-run operator's total liabilities, which as of the end of 2021 reached**

5.91 trillion yuan (\$882 billion), or roughly 5% of China's GDP, reported Asia Nikkei. The amount is projected to increase, so concerns about China's "hidden debt" take center stage over the country's growth situation. On June 20, China Railway began service on a segment of its Beijing-Guangzhou High-Speed Railway with a state-of-the-art express train.

Warrant: rising US debt is financed through Treasury bonds, which appear safer to investors, scaring them away from entrepreneurial ventures.

Tully, Shawn, "National Debt: Booming Economy and Soaring Deficits Are Toxic | Fortune", 5 Jan. 2019, Fortune, <<https://fortune.com/2019/01/05/us-economy-deficit-government/>>

The U.S. must issue gigantic volumes of Treasury bills and bonds to fund the deficits, and many investors and companies purchase those safe securities instead of channeling that money into entrepreneurial ventures, or providing private enterprises with fresh capital for new plants and data centers.

Impact: increases in US bonds decrease investment.

Huntley, Jonathan, "The Long-Run Effects of Federal Budget Deficits on National Saving and Private Domestic Investment: Working Paper 2014-02 | Congressional Budget Office", 28 Feb. 2014, Congressional Budget Office, <<https://www.cbo.gov/publication/45140>>

CBO's analyses of the long-term effects of changes in federal fiscal policy include the effects of changes in federal budget deficits on aggregate output and income. Those effects depend on the responses of private saving and net inflows of foreign capital to changes in deficits. This paper reviews empirical estimates of those two effects and

explains how changes in private saving and net inflows of foreign capital can offset some of the effects of changes in deficits on national saving and private domestic investment. In its analyses, CBO uses a range of estimates to reflect the high degree of uncertainty surrounding the magnitude of those offsets. On the basis of results published in the empirical literature, CBO concludes that **for each dollar's increase in the federal deficit, the effect on investment ranges from a decrease of 15 cents to a decrease of 50 cents, with a central estimate of a decrease of 33 cents.**

Impact: decreased investment lowers GDP.

Qin, Yu, "High-Speed Rail Upgrade Leads to Economic Slowdown in Counties: Guest Post by Yu Qin", World Bank, 03 Dec. 2013,
<https://blogs.worldbank.org/impactevaluations/high-speed-rail-upgrade-leads-economic-slowdown-counties-guest-post-yu-qin>

High-Speed Rail Upgrade Leads to Economic Slowdown in Counties. As mentioned earlier, I find that **counties being affected by high-speed rail upgrade experienced 4-6 percent GDP and GDP per capita reduction**, which can explain around 64 percent of the predicted GDP growth differentials between the control and treatment counties. The reduction in GDP per capita is not driven by population changes. Instead, I find that **the magnitude of the reduction in fixed asset investment almost explains the reduction in GDP.**

Impact: reductions in GDP increase unemployment.

Sánchez, Juan M., "The Relationships Among Changes in GDP, Employment, and Unemployment: This Time, It's Different - Economic Synopses - St. Louis Fed", Economic Research: Federal Reserve Bank of St. Louis, 13 Nov. 2012,
<https://research.stlouisfed.org/publications/economic>

[synopses/2012/05/18/the-relationships-among-changes-in-gdp-employment-and-unemployment-this-time-its-different>](https://www.jstor.org/stable/23000624?refreqid=excelsior%3A1b6a46d57badf63f677d29d4abab8d00&seq=1)

Different factors affect gross domestic product (GDP) and unemployment. However, historically, **a 1 percent decrease in GDP has been associated with a slightly less than 2-percentage-point increase in the unemployment rate.** This relationship is usually referred to as Okun's law.¹ The first chart plots this relationship for 1949-2011 (open circles). The law, however, seems to have changed during the Great Recession. During the recent recession, the observed decrease in GDP corresponded to a higher increase in the unemployment rate than Okun's law would predict.

Impact: when US growth decreases, developing countries' growth decreases, trapping millions in poverty.

Arora, Vivek, "The Impact of U.S. Economic Growth on the Rest of the World: How Much Does It Matter? on JSTOR", 18 Mar. 2004, International Monetary Fund,
[<https://www.jstor.org/stable/23000624?refreqid=excelsior%3A1b6a46d57badf63f677d29d4abab8d00&seq=1>](https://www.jstor.org/stable/23000624?refreqid=excelsior%3A1b6a46d57badf63f677d29d4abab8d00&seq=1)

The results suggest a positive and statistically significant impact of U.S. growth on growth in other countries, particularly developing countries. The regression results reported in Table 4 cover all countries in the sample. The first regression includes U.S. per capita real GDP growth in addition to the standard growth determinants, while the second regression also includes non-U.S. world per capita real GDP growth. **A 1 percent increase in U.S. growth is correlated with an average 1.0 percent increase in growth in other countries.** The estimate for non U.S. world growth in the second regression is positive (0.4 percent), although much smaller than the U.S. coefficient and not statistically significant. To test whether growth in countries that trade more with the United States is more highly correlated with U.S. growth, the third regression includes

an interaction term of U.S. per capita real GDP growth with the share of exports to the United States in total exports. The interaction term is indeed positive and statistically significant at the 10 percent level (it is significant at the 5 percent level if the t-statistics are corrected for heteroskedasticity).

Analysis - the debt argument is easily digestible because it requires few logical leaps. It's simplicity begets efficient link extensions, while its impact scenario widens the scope of the debate outside of the US-centric focus of the topic. Accessing the developing world provides obvious advantages in the weighing debate (i.e. greater scope, greater magnitude because of fewer social safety nets).

CON: High-Speed Rail hurts Intermediate Cities

Argument: intermediate cities facilitate immense economic growth by serving as innovative and industrial hubs.

Warrant: Intermediate cities are crucial sources of growth.

Pose-Rodríguez, Andrés, "Developing intermediate cities - Rodríguez-Pose - 2021 - Regional Science Policy & Practice - Wiley Online Library", 19 Apr. 2021, Regional Science Policy & Practice,
[<https://rsaiconnect.onlinelibrary.wiley.com/doi/pdf/10.1111/rsp3.12421>](https://rsaiconnect.onlinelibrary.wiley.com/doi/pdf/10.1111/rsp3.12421)

Certainly, **in the developed world** and, particularly, in certain parts of Europe, **intermediate cities increasingly act as drivers of economic development** (Dijkstra et al., 2013). **Intermediate cities have developed (and continue to develop) as industrial and advanced service hubs and, in many cases, have been the source of considerable innovation and productivity growth** (Fritsch & Wyrwich, 2021). **Intermediate cities have spawned – and frequently remain attractive to – some of the world's leading and most innovative companies.** As illustrated in Figure 4, **almost half the Fortune Global 500 companies are based in cities of less than 5 million inhabitants;** 17.2% are headquartered in cities of between 500,000 and 2 million, and 19% in places of less than 500,000. That said, just 4.4% of the Global 500 are located in intermediate cities in developing countries.

Warrant: intermediate cities facilitate economic growth and decrease poverty by linking rural and urban centers.

Rankin, Sara, "Think global, act locally: the role of intermediate cities | CIAT Blog", 26

Aug. 2019, CIAT, <<https://blog.ciat.cgiar.org/pensar-global-actuar-local-el-rol-de-las-ciudades-intermedias/>>

Intermediate cities create important bridges between rural and urban areas, offering rural population an opportunity to access basic facilities (such as schools, hospitals, administration, markets) **and** also services (such as employment, electricity, technology services, transport). Having this intermediate position, **they are also, for the majority of citizens, a focus of transition out of rural poverty.** In addition, the links they create with large cities allow them to complement each other and to function as a system of cities.

Warrant: linkages provided by intermediate cities act as a safety net during times of crisis.

Harman, Oliver, "Intermediate cities: a missing piece in the climate change puzzle - Development Matters", 08 Sep. 2021, Development Matters, <<https://oecd-development-matters.org/2021/09/08/intermediate-cities-a-missing-piece-in-the-climate-change-puzzle/>>

Intermediate cities will account for 49% of urban population growth in Sub-Saharan Africa between 2010 and 2030. Their expansion is driven not only by young populations with high birth rates, but also substantial rural to urban migration. **Intermediate cities provide a crucial link between isolated agricultural areas and connected networks of people, activities (including agricultural supply chains), goods, and services. These networks act as a social safety net in times of crisis.**

Warrant: high-speed rail is incentivized by the market to avoid intermediate cities.

Hermelin, Brita, "Full article: Strategic Planning for High-speed Rail Investments – A Comparative Study of Four Intermediate Stations in Sweden", 14 Feb. 2021, Taylor & Francis Online,
<https://www.tandfonline.com/doi/full/10.1080/02697459.2021.1886401>

With consideration for the economic aspect of sustainable development, it is already described above that **HSR infrastructure focuses on first-tier cities**, which is also generally where the strongest growth effects are found (Blanquart & Koning, 2017; Chen et al., 2019; Vickerman, 2015). In general, **train operators operate through market-like conditions** (Vickerman, 2015), **and they have strong incentives to concentrate on supplying traffic between large urban centres, while smaller and intermediate cities tend to have poorer train services** (Hall, 2009; Vickerman, 2015).

Empiric: by design, high-speed rail avoids intermediate cities, dooming their economic progress.

Moyano, Amparo, "Mind the services! High-speed rail cities bypassed by high-speed trains - ScienceDirect", 07 Dec. 2017, ScienceDirect,
<https://www.sciencedirect.com/science/article/abs/pii/S2213624X16301213>

Small intermediate cities on an HSR line are found to be bypassed by HSR services in favor of the metropolises in both Europe (Urena et al., 2009, Moyano and Dobruszkes, 2017) and China (Qin, 2017). As suggested by Qin (2017), **this bypassing behavior may weaken the relative economic position of small cities, since small cities are further marginalized while the linkages among large cities are enhanced.** To better understand the impact of HSR on regional economy, therefore, we need first to investigate the important question of whether cities in an HSR network are getting more equally accessible and connected as the network expands.

Impact: deprivileging intermediate cities reduces GDP and exacerbates inequality.

Qin, Yu, "High-Speed Rail Upgrade Leads to Economic Slowdown in Counties: Guest Post by Yu Qin", World Bank, 03 Dec. 2013,
<https://blogs.worldbank.org/impactevaluations/high-speed-rail-upgrade-leads-economic-slowdown-counties-guest-post-yu-qin>

As mentioned earlier, I find that **counties being affected by high-speed rail upgrade experienced 4-6 percent GDP and GDP per capita reduction**, which can explain around 64 percent of the predicted GDP growth differentials between the control and treatment counties. The reduction in GDP per capita is not driven by population changes. Instead, I find that the magnitude of the reduction in fixed asset investment almost explains the reduction in GDP. Intuitively, when the cities had been connected by the bullet trains, investment left the counties and crowded into the cities in pursuit of higher returns. Additionally, I find that the negative impact of the upgrade is significant in the service sector and not in the manufacturing sector. This is reasonable since high-speed rail upgrade affects the transportation of passengers and not transportation of goods. Why is there a negative impact of high-speed rail on those affected counties? There are at least two possible mechanisms. First, it is possible that **counties got more isolated after the high-speed rail upgrade, which resulted in an increase in transportation cost and a decrease in economic activities**. Second, it is also possible that **cities got more connected after the upgrade, resulted in an increase of agglomeration spillovers and a diversion of economic activities from counties to cities**.

Warrant: the connections provided by intermediate cities is critical to fight climate change.

That connection can only be sustained by proper infrastructure investment.

Harman, Oliver, "Intermediate cities: a missing piece in the climate change puzzle - Development Matters", 08 Sep. 2021, Development Matters, <https://oecd-development-matters.github.io/intermediate-cities-a-missing-piece-in-the-climate-change-puzzle/>

development-matters.org/2021/09/08/intermediate-cities-a-missing-piece-in-the-climate-change-puzzle/

Intermediate cities' connection with rural areas can help enhance climate adaptation.

With the consequences of climate change not stopping at city boundaries, **for example the fallout from drought, facilitating a rural-urban flow of goods and services as well as mobility of populations is crucial. Yet, the way in which they are developing might tarnish this link. Particularly with respect to land use planning and ability to invest in the necessary infrastructure underpinning development.** Likewise, there may be consequences to locking in undesirable carbon trajectories. These issues are discussed further in the follow-up piece to this blog.

Impact: ignoring intermediate cities prevents them from fighting climate change.

Harman, Oliver, "Intermediate cites and climate action: Driving change through urban land use and governance - IGC", 09 Sep. 2021, IGC,
<https://www.theigc.org/blog/intermediate-cites-and-climate-action-driving-change-through-urban-land-use-and-governance/>

Intermediate cities are a key, but their potential is often overlooked in the battle against climate change. There are currently promising areas of initial intervention, yet to embed them and be truly transformative, it is important for local mandates to provide the platform for change. Active engagement, combined with further research will help understand the positive or negative consequences of such changes. With this, policymakers can facilitate intermediate cities to deliver on their potential – adapting and mitigating to climate threat while delivering on economic opportunity.

Impact: the effects of climate change have the potential to kill millions.

Disha Shetty, "Climate Change Would Cause 83 Million Excess Deaths By 2100", 30 Jul. 2021, Forbes, <<https://www.forbes.com/sites/dishashetty/2021/07/30/climate-change-would-cause-83-million-excess-deaths-by-2100/?sh=4992c45c4f9a>>

A recently published study in peer-reviewed journal Nature Communications found that **climate change would cause 83 million excess deaths by 2100**. The study coins the term "mortality cost of carbon" to describe how many future lives will be lost—or saved—**depending on whether we increase or decrease our current carbon emissions**. A complex and highly malleable number, the social cost of carbon underpins how governments worldwide formulate climate policies, by suggesting how much we should be willing to pay today in order to avert damages in the future. Yet, while recent studies project that climate change will cause millions of premature deaths, current estimates of the social cost of carbon rely on outdated research that does not include those projections.

Analysis - to debate this argument effectively, you need to clearly establish what an intermediate city is and their importance. The easiest part of the argument to win is that intermediate cities are disadvantaged by HSR as they are literally bypassed. Once you have established intermediate cities as key drivers of economic growth and crucial areas of climate change mitigation, you can make an extremely compelling argument that ensuring their growth is the most important issue in the round.

CON: High-Speed Rail contributes Emissions

Argument: high speed rail system release green house gases during construction and new technology advances will render their carbon offset capability obsolete.

Warrant: High-Speed Rail is not worth its price in emissions due to replacement rate.

Joffe, Marc, "High-Speed Rail Is Unlikely to Play a Major Role In Achieving Climate Goals
- Reason Foundation", 23 Mar. 2021, Reason Foundation,
<https://reason.org/commentary/high-speed-rail-is-unlikely-to-play-a-major-role-in-achieving-climate-goals/>

Building high-speed rail systems require steel and concrete, the manufacturing of which typically generates greenhouse gases. Trucks, bulldozers, and other construction site equipment also consume energy. Thus, during their long construction phases, high-speed rail projects add greenhouse gases. Adding lanes to existing highways also generates greenhouse gases, but to the extent that recycled asphalt is used for road paving climate impacts can be somewhat reduced. **There are far quicker, more cost-effective ways to reduce greenhouse gas emissions than high-speed rail. By the time high-speed rail projects commence service, more cars will be fully electric, so future high-speed rail systems would be replacing fewer gasoline-powered automobile trips than they would've been replacing decades ago.** California, for example, plans to terminate the sales of gasoline-powered cars by 2035. Similar bans are being implemented in Canada and the United Kingdom. **Given the California rail project's delays and carbon reductions being achieved by new technology, like electric vehicles, it is possible that, if built, the rail system will never pay back the carbon investment required to build it.**

Empiric: California's HSR project alone will release millions of tons of carbon and do very little to offset it.

Joffe, Marc, "High-Speed Rail Is Unlikely to Play a Major Role In Achieving Climate Goals

- Reason Foundation", 23 Mar. 2021, Reason Foundation,
<https://reason.org/commentary/high-speed-rail-is-unlikely-to-play-a-major-role-in-achieving-climate-goals/>

In a 2010 University of California—Berkeley study, professors Mikhail Chester and Arpad Horvath estimated that **the entire California high-speed rail project would generate 9.7 million metric tons of carbon dioxide during construction. They also estimated that it would take high-speed rail 71 years of operation at medium occupancy to offset its own construction-related greenhouse-gas emissions.**

Impact: construction is a large contributor to pollution that kills millions per year.

Guzder, Kristin, "Construction Pollution | Types & Prevention Methods", 29 Nov. 2019, High Speed Training, <https://www.highspeedtraining.co.uk/hub/pollution-from-construction/>

Air pollution refers to man-made emissions that are released into the atmosphere. Poor air quality is a global health hazard, responsible for approximately 4.2 million premature deaths in 2016. Further, air pollution contributes significantly to the warming of the planet, and therefore to climate change. As construction activities are a large contributor to air pollution, organisations within the sector have a shared responsibility to limit the amount they produce. Therefore, you'll need to have an awareness of the emissions your work activities create and take precautions to limit the harmful impact.

Impact: HSR construction short-circuits efforts to limit emissions, killing millions.

Sibel Nicholson, "Cutting Carbon Emissions Could Prevent 153 Million Air-Pollution Related Deaths", 22 Mar. 2018, Interesting Engineering,
<https://interestingengineering.com/science/cutting-carbon-emissions-could-prevent-153-million-air-pollution-related-deaths>

Acting quickly to curb greenhouse gas emissions would reduce air pollution and stop premature deaths, according to a study published in *Nature Climate Change*. This could help avoid 153 million premature air pollution deaths and save millions of lives within this century. The study, which was led by Duke University with funding from NASA's Goddard Institute for Space Studies and participation from Columbia University, found that if policy-makers act to reduce emissions by 180 gigatonnes of carbon this century, as many as 153 million premature air pollution deaths will be avoided.

Analysis - the emissions argument is easily explained and pretty logical. The strongest part of the argument rhetorically is the impact scenario, there is a wealth of weighing to be done on the topic of climate change (i.e. scope, pre-requisite analysis, magnitude, etc.). The argument can be strengthened by other disadvantages on the cost-effectiveness and/or utility of HSR generally, which act as impact multipliers on the concept that HSR never does enough to offset its construction emissions.

CON: High-Speed Rail would be a political catastrophe.

Argument: Democrats have rebounded in the polls after Roe v. Wade was overturned, but can't survive High-Speed Rail.

Warrant: Democrats are bouncing back.

Weber, Peter, "Did the Supreme Court's abortion decision save Democrats from losing Congress?" 11 Jul. 2022, The Week, <<https://theweek.com/instant-opinion/1014974/did-the-supreme-courts-abortion-decision-save-democrats-from-losing>>

In the 10 generic congressional ballot polls released since the Supreme Court struck down Roe, Democrats are now beating Republicans by an average of 1.7 percentage points, a swing of about 3-5 percentage points in Democrats' favor, Simon Rosenberg writes at the New Democrat Network. With the momentum on their side and "**Democrats now consistently leading in the generic ballot**, it is a new election, a competitive not a wave election, **and all talk of a Republican wave should end.**"

Warrant: Democrats are centering the Roe decision in their campaign strategy as Republicans fight to keep attention on the economy.

Hudson, Craig, "Abortion rights advocates demonstrate near the Supreme Court building over the weekend," 26 Jun. 2022, The Washington Post, <<https://www.washingtonpost.com/politics/2022/06/26/democrats-republicans-midterms-abortion-/>>

Democrats across the country are seizing on the Supreme Court ruling overturning Roe v. Wade, with state and federal candidates seeking to turn anger about the decision

into support at the ballot box, even as Republicans aim to keep attention on rising prices and crime less than five months before the midterms. Led by President Biden, who declared Friday that “Roe is on the ballot” and “personal freedoms are on the ballot,” Democrats on the front lines of the fight to keep the party’s slim congressional majorities have cast their campaigns as key parts of a larger battle to restore abortion rights and prevent the rollback of other liberties.

Argument: passing HSR reverses this trend as large infrastructure projects are associated with inflation, turning away key voters.

Bettelheim, Adriel, “POLITICO-Harvard poll: Big domestic spending bills seen as stoking inflation, 26 Jan. 2022, Politico,
<https://www.politico.com/news/2022/01/26/biden-poll-social-spending-inflation-00001785>

The survey of 1,004 respondents, conducted from Jan. 4 to 9, also found the majority convinced that the \$1 trillion infrastructure plan Congress passed last year won’t help either the country or their personal lives. Independents tended to side with Republicans in viewing the package as inflationary, upending the conventional view that big, bipartisan public works initiatives transcend partisan politics. “Democrats really need something powerful here, since the bipartisan infrastructure bill that was enacted isn’t being strongly supported by many Republicans or independents,” Blendon said of the outlook for 2022. The findings come as Biden continues to rally support for his domestic agenda. At a health care-focused conference hosted by the progressive advocacy group Families USA, Biden on Tuesday touted actions he’s taken during his first year in office and renewed calls for the Senate to pass the social spending package that was derailed late last year by more conservative members of his party. But respondents to the POLITICO-Harvard survey were skeptical about the benefits when asked about five key items in the package. On social spending policies, 59 percent said

establishing free universal pre-K for the nation's 3- and 4-year-olds would help the country, and 53 percent felt the same about providing four weeks of paid leave for U.S. workers. Just less than half believe that policies in the plan meant to lower prescription drug prices would actually reduce the cost of medicines. There was less enthusiasm for some major environmental and tax policies. Fewer than four in 10 believe that funding different approaches to address climate change will actually make progress, or that an extension of the Child Tax Credit, which expired at the end of last year, will help the country as a whole. **At a time when inflation is a growing concern, the survey found more than four in 10 people believe that both the BBB and the infrastructure bill will increase inflation.**

Impact: if democrats lose the midterms, Biden's climate change agenda is doomed.

del Carmen Corpus, Maria, "What Your Vote In the Midterms Can Mean for Climate Change | theSkimm", 21 Apr. 2022, theSkimm, <https://www.theskimm.com/news/4-solvable-reasons-were-losing-the-fight-against-climate-change-ne3jLyl7uB9YWaCOgOHZv>

This year, hundreds of climate scientists sounded the alarm on global warming. And said the time to take action is “now or never.” You might feel like you've heard this warning before. But recently, the alarm bells have actually gotten worse. Case in point: **About half of the world’s population already faces water shortages at some point during the year. 1 in 3 people worldwide are exposed to deadly heat stress.** But things could go from worse to even worse if nothing's done to help the planet chill out. What's to blame? Scientists are largely pointing the finger at human activity. And are calling on governments to do more. Around the world, countries have teamed up to address climate change with things like the Paris climate deal. They've made individual pledges, too. See: China, the US, and India (the world's top three carbon emitters). But in America, making climate dreams come true may be hanging in the balance. Enter: The **2022 midterm elections.** Aka **the fight over Congress and statewide positions like**

governor, which can call the shots on climate policy with a ‘yea,’ ‘nay,’ or the stroke of a pen. Meaning, 2022 could be a “make-or-break” year for President Biden’s climate agenda. And how you vote could impact what happens over the next few years and even decades.

Impact: if not stopped through Biden’s efforts, the effects of climate change have the potential to kill millions.

Disha Shetty, "Climate Change Would Cause 83 Million Excess Deaths By 2100", 30 Jul. 2021, Forbes, <<https://www.forbes.com/sites/dishashetty/2021/07/30/climate-change-would-cause-83-million-excess-deaths-by-2100/?sh=4992c45c4f9a>>

A recently published study in peer-reviewed journal Nature Communications found that **climate change would cause 83 million excess deaths by 2100**. The study coins the term "mortality cost of carbon" to describe how many future lives will be lost—or saved—**depending on whether we increase or decrease our current carbon emissions**. A complex and highly malleable number, the social cost of carbon underpins how governments worldwide formulate climate policies, by suggesting how much we should be willing to pay today in order to avert damages in the future. Yet, while recent studies project that climate change will cause millions of premature deaths, current estimates of the social cost of carbon rely on outdated research that does not include those projections.

Analysis - politics arguments provide an interesting perspective to the round because they are entirely based on perception rather than reality. The tangible benefits and disadvantages of HSR no longer matter in the round, only the reactions of voters to the concept of HSR. This allows the neg to circumvent basically all aff offense as it generally relies on benefits post-construction. This argument can be strengthened by warranting as to why HSR doesn't access its benefits in either world due to costs, construction delays, etc.

CON: High-Speed Rail causes displacement

Argument: High-Speed Rail displaces low-income communities.

Warrant: HSR will always be built through low-income communities because land costs are low.

Poole, Robert, "Surface Transportation News: Highways Splitting Neighborhoods, Replacing Fuel Taxes, a High-Speed Rail Proposal and More - Reason Foundation", 12 Jul. 2021, Reason Foundation, <<https://reason.org/transportation-news/highways-splitting-neighborhoods-replacing-fuel-taxes-a-high-speed-rail-proposal-and-more/>>

Low-income areas were generally selected because the land values were lower, limiting the cost of acquiring the right of way via eminent domain. Many of these areas were multi-ethnic immigrant communities; this was before much of the move to the suburbs from many such neighborhoods. **There may well have been a racial and/or ethnic elements to the selection process in some cases, but the right-of-way (ROW) decisions appear to have been based mostly on engineering and fiscal considerations.** Another factor was widespread support at that time for so-called “slum clearance” and redevelopment.

Warrant: physical HSR tracks divide communities, often along existing social disparities, heightening inequality.

Roberts, Kim, "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say | The Texan", 26 Jul. 2021, The Texan, <<https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say/>>

"By dividing and isolating some areas and neighborhoods from others, the proposed high-speed rail project will reinforce and in many cases exacerbate geographic, racial, and income disparities along its path," Delta Troy wrote to DOT. "At its very essence, the proposed project serves affluent travelers and business executives at the expense of the rural residents in areas in between who must bear the brunt of the environmental, economic and social degradation and segregation wrought by the project."

Empiric: California's HSR project is actively dividing low-income communities of color.

Joffe, Marc, "The California High-Speed Rail Project's Negative Impacts on Minority Communities - Reason Foundation", 17 May 2021, Reason Foundation, <<https://reason.org/commentary/the-california-high-speed-rail-projects-negative-impacts-on-minority-communities/>>

Today, another type of infrastructure project is disrupting and threatening the state's communities of color: **the California high-speed rail system**. In a recent letter to the California High-Speed Rail Authority, Congressman David Valadao, R-Hanford, called on the authority to address problems caused by its **tracks running through the center of Wasco, a city with a predominantly Latino and low-income population. The rail route forced the abandonment of Wasco's farm labor housing complex**. Although the rail authority contributed to the construction costs of new farmworker housing, it did not provide money to demolish the old complex, which has been heavily vandalized and has become a magnet for gang activity. Paying for the demolition is now a point of contention between Wasco and the rail authority. "These are impacts that have sent ripples through our community and we need them to be held accountable and responsible for what they've done by choosing to build through Wasco," said Alex Garcia, mayor of Wasco. **High-speed rail construction has also caused disruptions in**

Fresno, the largest city on the rail system's initial operating segment, and one with large Latino and low-income populations. Several buildings around downtown—including a rescue mission—were forced to close and some of the abandoned buildings were set on fire by arsonists. If the high-speed rail system ever extends beyond its initial operating segment, other communities will be impacted. Tehachapi officials, for example, already expressed concerns over noise and vibrations impacting a hospital and residential subdivision if high-speed rail begins operating along its currently-planned route.

Impact: income inequality produces a lethally large gap between the rich and poor, killing millions.

Bezruchka, Stephen, "Inequality Kills", 09 Feb. 2014, New York, New Press
<<https://depts.washington.edu/eqhlth/pages/BezruchkalInequalityKillsBkPubInfo14.pdf>>

A recent Harvard study estimated that about **one death in three in this country results from our very high income inequality. Inequality kills through structural violence.** **There is no smoking gun with this form of violence, which simply produces a lethally large social and economic gap between rich and poor.** If we face the grim reality of our failure to support the health of the public in the United States, it's critical to identify approaches to change the system that isn't working. The last part of the IOM report lays out ideas for what to do, saying that we know enough to act without requiring more research. Their call to action is the need to alert the public to our alarmingly low relative health status and stimulate a national discussion about it.

Warrant: income inequality leads to economic instability by reducing aggregate demand, pushing the US towards economic crisis.

Holmes, Anne, "Some economic effects of inequality – Parliament of Australia", 09 Feb. 2013, Parliament of Australia,
https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook44p/EconEffects

A number of economists have argued that **inequality leads to economic instability**. One mechanism by which this happens is that **the rich consume a smaller proportion of their income than the poor. They save money which people on lower incomes would spend. This leads to a reduction in aggregate demand, which in turn leads to unemployment. In response, governments take measures to stimulate demand, such as lowering interest rates. This feeds into asset bubbles**—for example, unsustainably high housing prices. **Meanwhile, as inequality grows, individuals facing low or declining relative incomes maintain their consumption through borrowing (financed by the savings of the rich). A very small rise in unemployment or interest rates can lead to defaults on mortgages or consumer loans and can have catastrophic results.** There is some level of consensus that **inequality in advanced countries helped cause the global financial crisis.**

Warrant: the current state of the global economy means that increased inequality certainly pushes the US past the brink of recession.

Rappeport, Alan, "I.M.F. Warns That a Global Recession Could Soon Be at Hand - The New York Times", 26 Jul. 2022, The New York Times,
<https://www.nytimes.com/2022/07/26/business/imf-world-economy.html>

The world could soon be on the brink of a global recession as the economies of the United States, China and Europe slow more sharply than anticipated amid a collision of crises, the International Monetary Fund warned on Tuesday. In an update of the World Economic Outlook, the I.M.F. said **economic prospects had darkened**

significantly in recent months as war in Ukraine, inflation and a resurgent pandemic inflicted pain on every continent. If the thicket of threats continues to intensify, the world economy faces one of its weakest years since 1970, a period of intense stagflation across the globe. “**The world may soon be teetering on the edge of a global recession,** only two years after the last one,” Pierre-Olivier Gourinchas, the I.M.F.’s chief economist, wrote in a blog post accompanying the report. Put simply, the outlook for the global economy is “increasingly gloomy,” he wrote.

Impact: when US growth decreases, developing countries' growth decreases, trapping millions in poverty.

Arora, Vivek, "The Impact of U.S. Economic Growth on the Rest of the World: How Much Does It Matter? on JSTOR", 18 Mar. 2004, International Monetary Fund,
<https://www.jstor.org/stable/23000624?refreqid=excelsior%3A1b6a46d57badf63f677d29d4abab8d00&seq=1>

The results suggest a positive and statistically significant impact of U.S. growth on growth in other countries, particularly developing countries. The regression results reported in Table 4 cover all countries in the sample. The first regression includes U.S. per capita real GDP growth in addition to the standard growth determinants, while the second regression also includes non-U.S. world per capita real GDP growth. **A 1 percent increase in U.S. growth is correlated with an average 1.0 percent increase in growth in other countries.** The estimate for non U.S. world growth in the second regression is positive (0.4 percent), although much smaller than the U.S. coefficient and not statistically significant. To test whether growth in countries that trade more with the United States is more highly correlated with U.S. growth, the third regression includes an interaction term of U.S. per capita real GDP growth with the share of exports to the United States in total exports. The interaction term is indeed positive and statistically

significant at the 10 percent level (it is significant at the 5 percent level if the t-statistics are corrected for heteroskedasticity).

Impact: global recession traps 900 million in poverty.

Bradford, Harry, "Economic Shock Could Throw 900 Million People Into Poverty, IMF Study Warns | HuffPost Impact", 05 Apr. 2013, The Huffington Post, <https://www.huffpost.com/entry/global-poverty-900-million-economic-shock_n_3022420>

A recent study by the International Monetary Fund warns that **as many as 900 million people could fall back into poverty in the event of an economic shock** like the Great Recession. That figure is three times the size of the U.S. population. According to the World Bank, 1.2 billion people are currently living on less than \$1.25 a day. **While the report acknowledges that progress has been made to reduce global poverty and strengthen the world economy following the financial crisis, the world is still in a vulnerable situation.**

Analysis - when running displacement, be aware that the argument is dependent entirely on construction. The HSR gets built vs. HSR never gets built debate is very common, be prepared to defend your argument against claims that costs are too high or delays are too great to ever see construction. This argument can definitely be strengthened by weighing/framing specific to the marginalized communities affected by displacement (i.e. Structural Violence).

CON: High-Speed Rail requires eminent domain.

Argument: Building High Speed Rail would require the invocation of Eminent Domain to acquire land to build the rail.

Warrant: Historically, eminent domain has been used to build railroads.

US Department of Justice, "HISTORY OF THE FEDERAL USE OF EMINENT DOMAIN",
January 24, 2022 Accessed online 8/10/22 at: justice.gov/enrd/history-federal-use-eminent-domain

Early Evolution of Eminent Domain Cases

The federal government's power of eminent domain has long been used in the United States to acquire property for public use. Eminent domain "appertains to every independent government. It requires no constitutional recognition; it is an attribute of sovereignty." *Boom Co. v. Patterson*, 98 U.S. 403, 406 (1879). However, the Fifth Amendment to the U.S. Constitution stipulates: "nor shall private property be taken for public use, without just compensation." Thus, whenever the United States acquires a property through eminent domain, it has a constitutional responsibility to justly compensate the property owner for the fair market value of the property. See *Bauman v. Ross*, 167 U.S. 548 (1897); *Kirby Forest Industries, Inc. v. United States*, 467 U.S. 1, 9-10 (1984).

The U.S. Supreme Court first examined federal eminent domain power in 1876 in *Kohl v. United States*. This case presented a landowner's challenge to the power of the United States to condemn land in Cincinnati, Ohio for use as a custom house and post office building. Justice William Strong called the authority of the federal government to appropriate property for public uses "essential to its independent existence and perpetuity." *Kohl v. United States*, 91 U.S. 367, 371 (1875).

The Supreme Court again acknowledged the existence of condemnation authority twenty years later in *United States v. Gettysburg Electric Railroad Company*. Congress wanted to acquire land to preserve the site of the Gettysburg Battlefield in Pennsylvania. The railroad company that owned some of the property in question contested this action. Ultimately, the Court opined that the federal government has the power to condemn property “whenever it is necessary or appropriate to use the land in the execution of any of the powers granted to it by the constitution.” *United States v. Gettysburg Electric Ry.*, 160 U.S. 668, 679 (1896).

Condemnation: From Transportation to Parks

Eminent domain has been utilized traditionally to facilitate transportation, supply water, construct public buildings, and aid in defense readiness. Early federal cases condemned property for construction of public buildings (e.g., *Kohl v. United States*) and aqueducts to provide cities with drinking water (e.g., *United States v. Great Falls Manufacturing Company*, 112 U.S. 645 (1884), supplying water to Washington, D.C.), for maintenance of navigable waters (e.g., *United States v. Chandler-Dunbar Co.*, 229 U.S. 53 (1913), acquiring land north of St. Mary’s Falls canal in Michigan), and for the production of war materials (e.g. *Sharp v. United States*, 191 U.S. 341 (1903)). The Land Acquisition Section and its earlier iterations represented the United States in these cases, thereby playing a central role in early United States infrastructure projects. Condemnation cases like that against the Gettysburg Railroad Company exemplify another use for eminent domain: establishing parks and setting aside open space for future generations, preserving places of historic interest and remarkable natural beauty, and protecting environmentally sensitive areas. Some of the earliest federal government acquisitions for parkland were made at the end of the nineteenth century and remain among the most beloved and well-used of American parks. In Washington, D.C., Congress authorized the creation of a park along Rock Creek in 1890 for the enjoyment of the capitol city’s residents and visitors. The Department of Justice became involved when a number of landowners from whom property was to be

acquired disputed the constitutionality of the condemnation. In *Shoemaker v. United States*, 147 U.S. 282 (1893), the Supreme Court affirmed the actions of Congress. Today, Rock Creek National Park, over a century old and more than twice the size of New York City's Central Park, remains a unique wilderness in the midst of an urban environment. This is merely one small example of the many federal parks, preserves, historic sites, and monuments to which the work of the Land Acquisition Section has contributed.

Warrant: Historically Eminent Domain was used to build the Transcontinental Railroad displacing Native American communities and destroying native land

GARY A. KOVACIC, "High-speed rail project conjures emotions from the past", Oct 24, 2016

Gary A. Kovacic is an eminent domain attorney with offices in Pasadena. Accessed 8/10/12 at: visaliatimesdelta.com/story/opinion/2016/10/24/high-speed-rail-project-conjures-emotions-past/92649318

High-speed rail project conjures emotions from the past

Large transportation projects in the United States have historically met with political resistance, physical challenges, and winners and losers. One of the best examples of this is **the Transcontinental Railroad**, the first spikes of which were driven in 1863 during the turmoil of the Civil War. More than 2,000 miles of track were laid along rugged terrain that included mountains of solid granite for a project that was completed in six years at a cost of \$50 million. Upon completion, the project changed the face of the West with surging interstate trade made possible by freight trains, passenger travel that often led to settlement, and emerging towns and cities along the route with flourishing new businesses.

But it also **came at a great cost to** others, most notably **Native Americans, who lived in the path of the railroad, and Chinese laborers**, who endured the hazardous and

backbreaking work of laying track. **The wholesale slaying of herds of buffalo** was yet another casualty.

Warrant: Eminent Domain displaces millions and empirically gets used against poor folks and people of color – you have a moral obligation to stop this oppressive tool

The United States Commission on Civil Rights, “The Civil Rights Implications of Eminent Domain Abuse”, 2014

https://www.usccr.gov/files/pubs/docs/FINAL_FY14_Eminent-Domain-Report.pdf

Mr. Shelton said that the NAACP, which he represents, is our nation's oldest and largest, most widely recognized grass roots civil rights organization. With branches in every state, it has about 2,200 units throughout the country. The NAACP Washington Bureau is the organization's federal legislative and national public policy arm.³⁶

Too many elected and appointed **officials disregard the rights and concerns of racial-and ethnic minority Americans**, Mr. Shelton said, **and disproportionately misuse eminent domain against them and the economically disadvantaged**, in keeping with “our nation’s sad history of racial prejudice, racism, [and] bigotry.” Mr. Shelton stated that **authorities agree that the exercise of eminent domain affects African Americans disproportionately**, although accurate, nationwide counts of those displaced are lacking, he said.³⁷ Mr. Shelton cited statistics from two studies. One³⁸ estimates that, **since World War II**, urban renewal takings **displaced three to four million Americans** from their homes, the majority of whom were racial and ethnic minorities. The other study,³⁹ according to Mr. Shelton, reports that, between 1949 and 1973, government officials executed 2,532 projects in 992 cities, displacing one million people, two-thirds of whom were African Americans. **Eminent domain use displaced African Americans**

five times more often than their representation in the nation's population, he reported.⁴⁰

Mr. Shelton explained the NAACP's concern **that the U.S. Supreme Court permitted expanded use of eminent domain with its 2005 ruling in Kelo v. City of New London. This decision allows the government to take property by asserting that it can put the land to a higher use. This new sanction**, Mr. Shelton said, **fosters more discrimination.**

It occurs because property and community stability are more easily transferred from those with fewer resources to those with more.⁴¹

Mr. Shelton gave several reasons for the disparities in eminent domain displacements. First, municipalities typically pursue redevelopment projects in areas with low property values because the condemning authority pays less compensation and the state or local government realizes greater financial gains from ensuing increases in property values. Second, officials more easily accomplish eminent domain takings in low-income and predominantly racial- and ethnic-minority neighborhoods because such residents frequently lack the resources to contest the condemnations politically or in court.⁴² In addition, he reported, many believe that governing officials have aimed displacements to segregate and maintain the isolation of poor racial and ethnic minorities. Even if one dismisses segregation as a motivation, Mr. Shelton stated that, with the Kelo holding allowing municipalities to pursue eminent domain for private development, financial advantages compel local authorities to perpetuate and possibly exacerbate the disparate impact of eminent domain use on minority groups and the economically disadvantaged.⁴³

Mr. Shelton further asserted that **the exercise of eminent domain affects racial and ethnic minorities more often and more profoundly**. First, the term "just compensation" in eminent domain cases is a misnomer because the market usually undervalues or has yet to recognize the worth of any property that local authorities have designated for economic development.⁴⁴ Moreover, when local governments use economic development to increase an area's tax base, the low-income families that such takings displace cannot afford to live in the revitalized communities. At the same time, any

remaining affordable housing in the area increases in value.⁴⁵ A mid-1980s study⁴⁶ found that 86 percent of those relocated as a result of the use of eminent domain were paying more rent—averaging almost double the amount—at their new residences, Mr. Shelton said.⁴⁷ Mr. Shelton indicated that destabilization of organized minority communities will likely result when local governments exercise the takings clause in areas with significant racial and ethnic populations. The dispersion of relocated minority families undermines their community support mechanisms, weakens community leaders' existing political power, and hinders efforts to further build community strength.⁴⁸ The threat of such takings undermines efforts—financial and otherwise—to build up these communities. According to Mr. Shelton, too many communities—racial and ethnic minorities, the elderly, and those with low incomes—have witnessed an often devastating abuse of eminent domain powers.⁴⁹

On behalf of the NAACP, Mr. Shelton urged that legislators, administrators, and others listen to concerns about eminent domain abuse, hear the voices of “segments of our population that have too long been muted,”⁵⁰ and learn how eminent domain use for economic development or removal of blight exploits these communities. He added that the NAACP has concerns that eminent domain imposed for any purpose, including traditional public uses for highways, utilities, and waste disposal, disproportionately burdens communities with the least political power: the poor, racial and ethnic minorities, and working-class families. Furthermore, not just owners, but renters—both residents and small-business proprietors—suffer from the use of eminent domain and seldom receive any protections or payments.⁵¹

Mr. Shelton explained that the application of eminent domain must require processes that protect racial and ethnic minorities and low-income communities. He recommended to legislators and administrators that these procedures: (1) be open and transparent and guarantee the full participation of any affected communities; (2) provide fair compensation covering replacement costs for the takings, not just the appraisal value, so that those displaced are not worse off; and (3) ensure compensation

for business losses on the basis of the length of time an enterprise has been located there.⁵² According to Mr. Shelton, NAACP's supporters believe that all American communities deserve these protections. In conclusion, Mr. Shelton offered that, "the NAACP stands ready to work with the federal, state, and local municipal officials to develop policy and legislation to end eminent domain abuse."⁵

Warrant: Eminent Domain hurts California agriculture worth 37.5 billion

GARY A. KOVACIC, "High-speed rail project conjures emotions from the past", Oct 24, 2016 Gary A. Kovacic is an eminent domain attorney with offices in Pasadena. Accessed 8/10/12 at: visaliatimesdelta.com/story/opinion/2016/10/24/high-speed-rail-project-conjures-emotions-past/92649318

High-speed rail project conjures emotions from the past

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But it also came at a great cost to others, most notably Native Americans, who lived in the path of the railroad, and Chinese laborers, who endured the hazardous and backbreaking work of laying track. The wholesale slaying of herds of buffalo was yet another casualty.

Fast forward to 2016 in California, where a similarly impressive technological project is underway. **The California High Speed Rail Project seeks to transport passengers from the Los Angeles region to the Bay Area** with a 220-mph bullet train that clocks in a 2.5-hour ride.

Unfortunately, the main casualty left in the wake of this ambitious venture may be the California farmer, whose valuable cropland sits in the crosshairs of the project. What are these farmers, many whose families have farmed the same land for generations, up against? A lot! The California High Speed Rail Project Authority has an army of experienced right-of-way agents, appraisers, consultants, and litigators backing it, as well as a governing board that includes politicians, attorneys, financiers, investors, and legislative advocates.

Analysis: The con should argue **that** a necessary component of building high speed rail throughout the United States will be the seizing of land to build the rail lines through the process of eminent domain. This argument is strongly rooted in history – the construction of the transcontinental railroad and the federal interstate highway system both required the invocation of eminent domain. The government has empirically used eminent domain to seize land from the most vulnerable displacing millions of Americans.

CON: High-Speed Rail leads to segregation

Argument: HSR is bad for low income communities

Warrant: HSR can economically segregate poor areas

Kim Roberts. "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say." The Texan. July 2021. <https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say>

"Delta Troy Interests, LTD, a real estate development firm active in the greater Houston area, believes that **the project will have a disproportionately negative impact on residents of Waller County, a majority minority county northwest of Houston whose population consists of 54 percent minority residents.** "By dividing and isolating some areas and neighborhoods from others, the proposed high-speed rail project will reinforce and in many cases exacerbate geographic, racial, and income disparities along its path," Delta Troy wrote to DOT. "At its very essence, the proposed project serves affluent travelers and business executives at the expense of the rural residents in areas in between who must bear the brunt of the environmental, economic and social degradation and segregation wrought by the project."."

Warrant: HSR can have problematic community-wide impacts

Kim Roberts. "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say." The Texan. July 2021. <https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say/>

“In fact, the final EIS discloses that two meetings were held during Thanksgiving week in November 2019 and that the only meeting ever held in Waller County was the Tuesday before Thanksgiving 2019!” Scofield wrote in his comments requested by the DOT about equity issues. **Rep. Kevin Brady (R-TX-08), who has been critical of the Texas Central project, wrote in an email to The Texan, “Local officials have also raised concerns that the rail system will displace low-income and minority neighborhoods along the route, specifically in the area surrounding Dallas.** Not only would this project displace the most vulnerable communities who are trying to recover from the pandemic, but it would be funded by taxpayers from those same recovering communities.”.

Warrant: Amtrak believes that faster trains help the rich

Liz Lazo. “D.C.-to-Baltimore maglev would only benefit rich, Amtrak chief says.”
Washington Post. March 2021.
<https://www.washingtonpost.com/transportation/2021/05/06/amtrak-maglev/>

“Amtrak CEO William J. Flynn on Thursday took a shot at the proposed maglev train line for the Northeast Corridor, telling Congress the technology is vastly more expensive and environmentally disruptive than conventional and high-speed rail — and once built, it would serve only the rich. “The huge public expenditures required to construct a maglev line would benefit only a small number of affluent travelers,” Flynn said during prepared testimony to the House subcommittee on railroads, pipelines and hazardous materials..”

Warrant: HSR would be substantially more expensive

Liz Lazo. “D.C.-to-Baltimore maglev would only benefit rich, Amtrak chief says.”
Washington Post. March 2021.
<https://www.washingtonpost.com/transportation/2021/05/06/amtrak-maglev/>

“The cost to ride the maglev would be higher than using Amtrak. According to a federal analysis, the expected average fare would be \$60 for a one-way trip to Baltimore, although it could vary between \$27 and \$80 per trip. Amtrak’s Acela costs about \$46 one way, and a coach seat on a regular train can cost as little as \$8. Flynn’s comments come as the railroad is on a crusade to build support — both financial and political — for a major expansion of its network. Amtrak has unveiled a plan to provide new intercity service to 160 communities and expand service in corridors with heightened demand for rail. The passenger railroad is pushing for 30 possible new routes.”

Analysis: Use this argument to demonstrate to the judge that the benefits of high-speed rail do not tend to flow to the poor. Ask the judge to be realistic about who will be able to use these new, expensive trains.

CON: High-Speed Rail is not publicly supported

Argument: High Speed Rail is unpopular

Warrant: Other forms of transit are popular, which has led to their dominance

Randal O'Toole. "The High-Speed Rail Money Sink: Why the United States Should Not

Spend Trillions on Obsolete Technology." CATO Institute. March 2020.

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

"In 1900, when the United States had only 8,000 registered automobiles, the country already had 2.3 million miles of road, mostly unpaved, for them to drive on . **As autos became more popular, gas taxes and other fees paid by auto users covered the costs of paving roads and expanding the highway network. Similarly, when the first planes went into commercial air service, they could land in any open field. As air travel became more popular, airlines used their profits and air ticket fees to improve airports and air terminals. In contrast, high-speed trains require that the high-cost infrastructure be put in place first.** Moreover, unlike highways and airports, which are shared by passenger, freight, and national defense vehicles, high-speed trains can only be used for passengers, making them far less cost-effective."

Warrant: HSR may be popular, but it is not enough to justify the massive investment

Randal O'Toole. "The High-Speed Rail Money Sink: Why the United States Should Not

Spend Trillions on Obsolete Technology." CATO Institute. March 2020.

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

"The differences in infrastructure requirements explain why air travel costs so much less than rail travel. For most of the lengths of their journeys, the only infrastructure modern airliners require is air traffic control. High-speed trains require extensive infrastructure that must be built and maintained to highly precise standards. **The requirement for dedicated, high-cost infrastructure is a problem common to the pipe dreams of many mass transportation enthusiasts, whether they are promoting light rail, monorails, maglevs, hyperloops, or personal-rapid transit. These systems are all far more expensive to build than highways and can't do nearly as much.**"

Warrant: HSR is decreasing in popularity in California

Staff. "Benefits of High-Speed Rail for the United States." America Public Transportation Association. 2021. <https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/#:~:text=Implementing%20high%2Dspeed%20rail%20will,more%20efficient%20than%20automobile%20use>.

"It appears that they are finally bringing forth more realistic cost estimates and a more realistic schedule," said Stephen Levy, executive director and senior economist with the Center for Continuing Study of the California Economy, a Menlo Park-based research group. "The whole project remains in doubt as the costs increase and the funding gap increases." Political uncertainty and opposition to the project have only increased over time. A decade ago, California voters approved Proposition 1A, authorizing nearly \$10 billion in bond money for the construction of the high-speed rail system. Since the 2008 vote, though, the project been plagued by delays and cost overruns, and polls show most California voters want the funds to go for something else other than high-speed rail."

Warrant: Even traditional HSR supporters are less enthusiastic

Staff. "Benefits of High-Speed Rail for the United States." America Public Transportation Association. 2021. <https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/#:~:text=Implementing%20high%2Dsspeed%20rail%20will,more%20efficient%20than%20automobile%20use>.

But critics argue that the costs will outweigh the benefits.

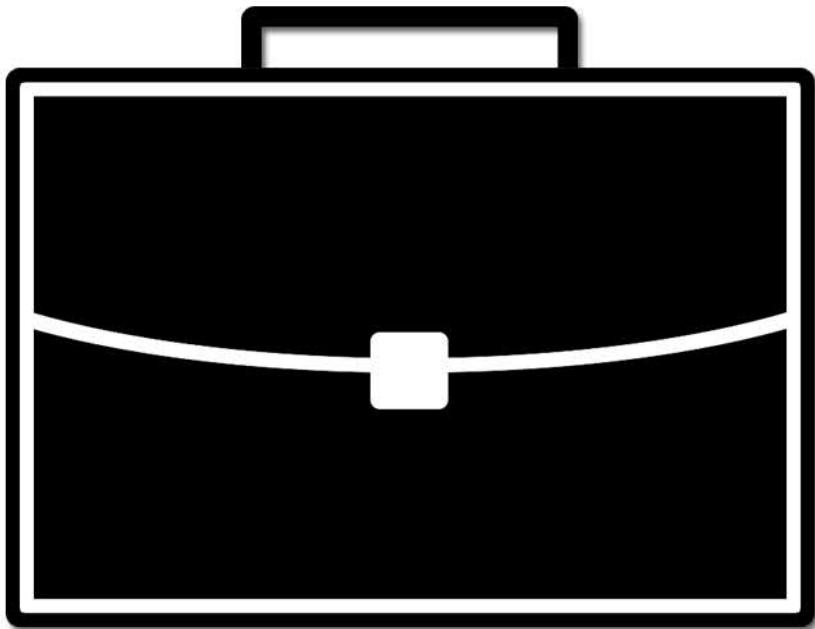
"You can imagine a new governor with new priorities will just look at the trade-offs being too high," said Adrian Moore, a policy expert at the Reason Foundation, a Los Angeles-based free-market think tank. "How much are we not investing in the transportation system that people are actually using ... because we're shoveling all this money into high-speed rail. And that's just going to get worse in the coming years. Someone has to be willing to go with public opinion, instead of prevailing wisdom in Sacramento, and kill this thing." A June 5 primary will decide which two gubernatorial candidates, regardless of party, advance to the general election Nov. 6. Among the gubernatorial candidates, longtime front-runner Lt. Gov. Gavin Newsom was an early supporter of the 2008 rail bond issue to help finance construction, but the Democrat has since expressed real concerns on the proposed rail plan. A spokesperson for Newsom didn't respond when asked about the new rail authority's business plan.."

Analysis: Remind the judge that HSR sounds great in theory, but once the debate moves into the planning stage a whole host of problems arise. As such, even people who initially support HSR may find themselves in opposition to it before long.

Champion Briefs

Sept/Oct 2022

Public Forum Brief



Con Responses to Pro Arguments

A/2: High-Speed rail helps empower women

Answer: HSR jobs are short term

Warrant: Most of the jobs being created are not permanent

Richard N. Velotta, 3-25-2010, "High-speed train would create equivalent of 50,000 one-

year construction jobs," Las Vegas

Sun, <https://lasvegassun.com/news/2010/jul/23/high-speed-train-wouldcreateequivalent-50000-con/>

When the DesertXpress high-speed train is built, there would be up to 700 permanent jobs at an operations and maintenance facility — in Victorville, Calif. Tom Stone, president of DesertXpress Enterprises LLC, told representatives of the Associated General Contractors at a lunch Thursday that building the privately funded, \$4 billion traditional high-speed rail system would create 50,000 person-year construction jobs over the four-year design and construction period expected to begin late this year.

Translated, 50,000 person-year jobs is the equivalent of 50,000 people working for a full year. The statistic illustrates the vast number and diverse types of jobs — planners, architects, draftsmen, engineers, construction workers, electricians and other specialists — that will be created over the course of the project. But the bulk of the permanent operations jobs would be in Victorville, the southern terminus of 185-mile double-track system. Stone said the decision to build the primary maintenance facility, which would include an operations control center, a train-washing facility, repair shop, parts storage, track storage, meeting rooms and administrative offices, was based on the availability of a 200 acre-plus, narrow piece of land in California. "There's no place large enough to accommodate this in Las Vegas," Stone said. "Las Vegas will get more of its fair share of the construction jobs." **Stone said the operations and maintenance center would start out with about 500 permanent jobs, growing to about 700 as ridership increases. A**

smaller number of permanent jobs would be based in Southern Nevada for crews that would clean and inspect trains parked overnight in Las Vegas, Stone said. He didn't have an estimate of how many jobs would be created here. But contractors were enthused about the prospect of a long-term construction project. Stone said his company is still awaiting final approval of an environmental impact statement before work can begin on the project. He said he hopes to get the environmental approvals by the end of summer so that some of the detailed engineering work could begin later this year and construction early next year. Still undetermined is the exact location of train stations on both ends of the train line. Three sites are proposed in the draft environmental impact statement for Victorville and four in Las Vegas. Two of the four Las Vegas sites are near Flamingo Road and Interstate 15, while another is on the west side of I-15, near Russell Road. Another is in downtown Las Vegas.

Warrant: Women are paid less than men in management/construction positions for railroads.

Michael Jackson, 3-30-2017, "Executive gender gap persists at Class I railroads NEWSWIRE," Trains, <https://www.trains.com/trn/news-reviews/news-wire/30-female-railroad-executives/>

"We used to hire women in positions set aside for them, such as stenographers. Of course, they never had a chance to develop. We start the boy in at the bottom as office boy and give them a long ladder to climb. Things are changing now. If the women are started at the bottom like the boys and given the chance, they will climb, too." – Unnamed railroad official, cited in a January 1920 Railway Age article summarizing a U.S. Railroad Administration report on women in the workforce. **Nearly a century later, women are still trying to climb the ladder in the male-dominated railroad industry.** A stubborn gender gap persists in top management ranks at Class I railroads. And railroads slightly lag other large companies in the percentage of women who hold top executive positions. By how much depends on the survey and the definition of executive. **Some 22**

percent of the senior-level executives at the seven big railroads are women, according to a Trains News Wire review of the corporate leadership pages on their respective websites. **That's slightly below the 25 percent of women who hold executive and senior-level positions at S&P 500 companies**, according to Catalyst, an advocacy group that tracks workplace inclusion. The percentage of women declines when measured by C-suite positions, those at the executive vice president level and above, whose titles generally include "chief." Only 18 percent of C-suite positions at the Class I railroads are held by women, versus 19 percent in the LeanIn.org and McKinsey & Co. Women in the Workplace Study 2016, which surveyed 132 companies. And none of the Class I railroads has a woman as its chief executive, compared to 5.8 percent of companies in the S&P 500, according to Catalyst. Perhaps the numbers shouldn't come as a surprise. **Women make up less than 10 percent of the Class I railroad workforce, versus 44 percent in S&P 500 companies.** The two biggest obstacles to having more women in the executive suite are the lack of women in field operations and cultural bias in even the most well-intentioned male executives, says retired railroad executive Kathryn McQuade.

Mitigatory Warrant: The jobs created are less than expected

Bay Area News Group, 12-21-2021, "California high-speed rail jobs estimate too good to be true," East Bay Times, <https://www.eastbaytimes.com/2011/12/21/california-high-speed-rail-jobs-estimate-too-good-to-be-true/>

Though California's high-speed train faces an intensifying backlash over its \$99 billion price tag, political leaders from Washington to Sacramento justify the cost by touting another huge number: 1 million jobs the rail line is supposed to create. But like so many of the promises made to voters who approved the bullet train, those job estimates appear too good to be true. A review by this newspaper found the railroad would create only 20,000 to 60,000 jobs during an average year and employ only a few thousand people permanently if it's built. "They have a really hard sales pitch with the real

numbers, so they've fudged the numbers," said state Sen. Doug LaMalfa, a Chico-area Republican who is introducing legislation to send the rail line back to voters. "C'mon, a million people working on a 520-mile railroad? I practically laughed out loud when (I heard that)." **One million people — more than the combined workforce of San Jose and San Francisco — would have to cram shoulder-to-shoulder just to fit along the rail line between San Francisco and Anaheim.** In trying to win over a skeptical public to support the most expensive public works project for any state in U.S. history, Gov. Jerry Brown, the Obama administration, Democratic lawmakers and big city mayors such as San Jose's Chuck Reed have repeated the 1-million-jobs mantra. "The facts are clear: Over 1 million good-paying jobs will be created," House Minority Leader Nancy Pelosi said in a statement last week. But state leaders, it turns out, quietly beefed up employment estimates. First, they counted every year of work as a separate job. **So if one person were to work 10 years, that would count as 10 jobs.** Next, they figured outside companies, such as restaurants and retailers, would hire two new people for every single construction worker. **Grand total: 20,000 construction workers and 40,000 "spinoff" employees — each working the entire 22-year project — would count as more than 1 million jobs.**

Warrant: While jobs may be created, it is at the loss of disadvantaged communities being overrun by government projects—example from San Joaquin Valley.

Vartabedian, Ralph, 10-31-2021, "Bullet train leaves a trail of grief among the disadvantaged of the San Joaquin Valley," Los Angeles Times,
<https://www.latimes.com/270alifornia/story/2021-10-29/270alifornia-bullet-train-impacts-disadvantaged-communities-san-joaquin-valley>

California history is replete with cases of highways, ports and water projects displacing poor people, who lacked the clout to fight the government. The California high-speed rail project pledged to do better. **But up and down the San Joaquin Valley, the bullet**

train is hitting hard at people who are already struggling to survive tough economic conditions in one of the poorest regions in the nation. The impacts include the **Central Valley's largest homeless shelter, which was cut in half**. A Cambodian couple lost their funky 1950s diner and are now unemployed. **Drug deals and other crimes are flourishing at a former farm labor camp in Wasco that was shut by the bullet train.** Future construction will probably cause more problems. Another homeless mission in Bakersfield is due to be torn down, according to environmental documents. **A working-class neighborhood with a large Latino population in San Jose is braced for greater noise and the loss of homes when new tracks are installed.** The rail authority says it has worked hard to help communities in the project's path and to compensate for the impacts it is causing. In 2012, before construction began, it issued an Environmental Justice Guidance that pledged: "To avoid, minimize, or mitigate disproportionately high human health and environmental effects, including social and economic effects, on minority and low-income populations." Anthony Williams, a rail authority board member, said **that any project with the scope and size of the bullet train will have impacts on communities up and down the economic scale.** In the long run, Williams, who is Black, believes the project will help elevate the economically depressed Central Valley. **"I come to this as a person of color who understands the long and not-great history of how communities of color have been impacted — if not with effect — with actual intent to harm and divide and isolate those communities,"** said Williams, who grew up in Bakersfield and considers himself a "Central Valley kid." He went on to graduate from Harvard and is now an Amazon executive.

Analysis: In a project this extensive, new jobs are going to be inevitable. To understand whether those jobs come at the cost of something else should be taken into account. Evidence of eminent domain claims and reported benefits of long-term employment can help provide clarity to whether these newly created jobs are advantageous or not.

A/2: High-Speed Rail decreases foreign oil dependence

Answer: HSR won't decrease foreign oil consumption because the 'expected' decrease in oil demand will be filled by new drivers.

Warrant: Traffic remains the same after light-rail is installed.

Downs, Anthony, "Traffic: Why It's Getting Worse, What Government Can Do", Brookings, 1-1-2004

<https://www.brookings.edu/research/traffic-why-its-getting-worse-what-government-can-do>

Triple convergence affects the practicality of other suggested remedies to traffic congestion. An example is staggered work hours. In theory, if a certain number of workers are able to commute during less crowded parts of the day, that will free up space on formerly congested roads. **But once traffic moves faster on those roads during peak hours, that will attract other drivers from other routes, other times, and other modes where conditions have not changed to shift onto the improved roads.**

Soon the removal of the staggered-working-hour drivers will be fully offset by convergence. The same thing will happen if more workers become telecommuters and work at home, or if public transit capacity is expanded on off-road routes that parallel a congested expressway. This is why building light rail systems or even new subways rarely reduces peak-hour traffic congestion. **In Portland, where the light rail system doubled in size in the 1990s, and in Dallas, where a new light rail system opened, congestion did not decline for long after these systems were up and running. Only road pricing or higher gasoline taxes are exempt from the principle of triple convergence.**

Warrant: America is already oil independent.

Rapier, Robert, "Surprise! The U.S. Is Still Energy Independent," Forbes, 3-8-2022

<https://www.forbes.com/sites/rrapier/2022/03/08/surprise-the-us-is-still-energy-independent/>

As I explained, a correct accounting would be to add up all of our energy production (oil, natural gas, coal, renewables) and then subtract our net energy consumption. **The U.S. is a net exporter of coal and natural gas**, so it really comes down to the petroleum balance. **U.S. net imports have been declining since 2005 as a result of hydraulic fracturing**. That year, U.S. net imports of petroleum and petroleum products (e.g., gasoline, diesel, jet fuel) averaged 12.5 million barrels per day (BPD). By the time President Obama left office, the number had declined to 4.8 million BPD (Source). During Obama's last full month in office, the number was 4.2 million BPD. When President Trump took over, the downward trend continued. During President Trump's last year in office, the net import number turned negative. It is therefore true that we gained energy independence (per this definition of net imports) under President Trump. Net exports in 2020 averaged 635,000 BPD for the year. **However, when the Covid-19 pandemic resulted in widespread stay-at-home orders, U.S. energy demand and energy production both plummeted**. For the first four months of 2020, net exports averaged one million BPD. But then by May we had to start importing again. In May and June the U.S. imported (net) three quarters of a million BPD. In the second half of the year, net imports once again became net exports. **For the full year of 2020, the U.S. became a net exporter for the first time in modern history**

Impact Turn (Economy): Although the American economy may become disconnected from oil economies, the lack of financing measures directly worsens the national debt.

Randal O'Toole, "The High-Speed Rail Money Sink: Why the United States

Should Not Spend Trillions on Obsolete Technology," Cato Institute, 4-20-2021

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-s>

should-not-spend-trillions-obsolete

To generate new travel, a new transportation system must be faster, more convenient, and less expensive than existing systems. High-speed rail fails all these tests, being slower than flying, less convenient than driving, and more expensive than both. On that last point, airfares average less than 14 cents per passenger-mile,⁵³ and Americans spend an average of 25 cents a passenger-mile on driving,⁵⁴ while Amtrak fares for its high-speed Acela average nearly \$1 per passenger-mile.⁵⁵ **Far from boosting the economy, most countries that have built high-speed rail systems have gone heavily into debt to do so.** Even if the first lines make economic sense, political pressures demand that the countries build more and more lines that are less and less sensible. Financing these lines requires huge amounts of debt that can significantly harm the national economies. China has built more miles of high-speed rail than any other country and has gone more into debt doing it. At the end of 2019, China's state railway had nearly \$850 billion worth of debt, and most of its high-speed rail lines aren't covering their operating costs, much less their capital costs. As a result, China is slowing the rate at which it is constructing new lines.⁵⁶

Impact Turn Empiric: Case studies of China, France, and Japan's failure illustrate how mega regions are debt-financed which is detrimental for long-term economic growth which outweighs the potential benefits of disconnecting our oil dependency from other nations.

Randal O'Toole, "The High-Speed Rail Money Sink: Why the United States

Should Not Spend Trillions on Obsolete Technology," Cato Institute, 4-20-2021

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Analysis: When responding to the foreign oil dependency argument, teams should question whether the need for oil increases or decreases. Evidence suggests that HSR may divert some riders, but that temporary displacement will be filled by new drivers meaning that oil consumption stays the same. Moreover, the definition of oil dependency should be also put into question—what are the material effects of current oil ‘dependency’ from other countries?

A/2: High-Speed Rail Reduces shipping emissions

Answer: High speed railway costs significantly more than conventional freight transportation.

Warrant: High-Speed rail is extremely expensive.

Wagen, Arien, "Why High-Speed Rail Shouldn't Be a Priority," Northeastern University Political Review, 8-15-2022,
<https://www.nupoliticalreview.com/2021/12/16/why-high-speed-rail-shouldnt-be-a-priority/>

In addition to its high construction costs, the Institute of Transportation Studies (ITS) at UC Berkeley predicts that the total operating costs of the work-in-progress California line will be, at best, comparable to those of highways and much higher than those associated with air travel. **The ITS finds that HSR's only discernible operating benefits will be reduced noise, fewer accidents, and less pollution.** However, even while ignoring the pollution resulting from electricity generation, the internal costs of HSR's construction, operation, and maintenance outweigh these external benefits. Further, HSR miles generate few positive externalities for other industries. **Rail currently provides low-cost long-distance transportation for heavy freight, which HSR is unlikely to do given its higher costs and the track damage caused by heavy trains.** HSR may compete with the domestic air cargo industry, though its historically poor profitability suggests lackluster returns. There thus seems to be no possible arrangement for sharing any significant portion of HSR's infrastructure costs. Highways, however, are used for both freight and passenger transportation; investment into the highway system benefits US firms' logistics and freight operations as well as personal travel.

Warrant: HSR costs significantly more than conventional freight transportation—no incentive to switch.

Boehm, Mathias, "The potential of high-speed rail freight in Europe: how is a modal shift from road to rail possible for low-density high value cargo?," SpringerOpen, , 1-5-2021,
<https://etrr.springeropen.com/articles/10.1186/s12544-020-00453-3>

A fully electrified transport chain offers considerable potential for CO2 savings. In this paper, we examine the conditions necessary to introduce a fully electrified, large-scale, high-speed rail freight transport system in Europe in addition to high-speed passenger trains, aiming to shift goods transport from road to rail. **We compare a novel high-speed rail freight concept with road-based lorry transport for low-density high value goods to estimate the potential for a modal shift from road to rail in 2030.** Methods To characterize the impacts of different framework conditions, a simulation tool was designed as a discrete choice model, based on random utility theory, with integrated performance calculation assessing the full multimodal transport chain regarding costs, emissions and time. It was applied to a European reference scenario based on forecast data for freight traffic in 2030. Results **We show that high-speed rail freight is about 70% more expensive than the conventional lorry but emits 80% less CO2 emissions for the baseline parameter setting.** The expected mode share largely depends on the cargo's value of time, while the implementation of a CO2-tax of 100 EUR/tCO2eq has an insignificant impact. The costs of handling goods and the infrastructure charges are highly influential variables.

Warrant: Logistical Constraints to pursue a swift from conventional freight to HSR.

Straile, Mathieu, "High-Speed Rail for Freight: Potential Developments and Impacts on Urban Dynamics," Bentham Open, 06-20-2015
<https://opentransportationjournal.com/contents/volumes/V10/TOTJ-10-57/TOTJ->

10-57.pdf

High-speed rail (HSR) is not used for carrying goods in Europe for the following reasons [1, 2]: Inadequate infrastructure: With the exceptions of some German and Spanish lines, **high-speed tracks are designed for passenger services, not for heavy freight heavy trains**. High-speed trains (HST) are not designed for carrying goods. Moreover, high-speed lines' (HSL) geography link major city centres. Freight activities locations are not connected by HSL. Inadequate exploitation: **The management of HSL is focused on passenger services; for example many tracks are closed at night for maintenance**. During the day, passenger trains have priority and some HSL are already congested. The high cost of HSR: **Because of HSR technology, the required security measures and the cost of infrastructure, the cost of HSR use is very high**. The absence of freight services: Since there is not best practice examples (with the exception of "La Poste"), the risk of launching a freight service is high.

Warrant: High speed railway construction and its environmentally detrimental electrical power outweighs the potential carbon benefit.

Wagen, Arien, "Why High-Speed Rail Shouldn't Be a Priority," Northeastern University Political Review, 8-15-2022,
<https://www.nupoliticalreview.com/2021/12/16/why-high-speed-rail-shouldnt-be-a-priority/>

But **electrically powered does not automatically mean clean; electricity production is currently responsible for 25 percent of US carbon emissions**. Because electricity is such an incredible driver of carbon dioxide production, the International Union of Railways (UIC) notes that electricity production's decarbonization is a driving force behind European rail's lower emissions. **On top of this, the High Speed Rail Alliance's claims often fail to consider the carbon footprint associated with the construction of new rail**

networks. A 2019 UIC study on the carbon footprint of rail infrastructure finds that the new construction of railway lines only begins to reduce total carbon dioxide emissions after one to three decades, depending on ridership estimates. The more pessimistic Cato Institute uses past ridership statistics to show that trains tend to be emptier than estimates claim, with Amtrak filling an average of only 51 percent of its seats. **Due to these revised estimates and regular maintenance, Cato predicts that the Los Angeles to San Francisco line will need at least seventy years, not ten to thirty, to achieve carbon neutrality.** Accurate carbon cost calculations depend on accurate ridership assumptions as well as emissions information about the construction, maintenance, and use of HSR. **While HSR does boast impressive operating energy efficiency, the carbon costs of infrastructure construction and maintenance make it far less appealing than it initially seems.** The confluence of assumptions about ridership and the availability of clean energy reduce the reliability of projected carbon-savings from rail. **Reducing emissions from the US electrical system would more effectively and efficiently reduce total emissions.**

Analysis: While there's merit to why transportation companies would use high speed railway for their future freight endeavors, logistical drawbacks—lack of maintenance and specifically designed infrastructure—persuade them to stick with conventional practices. In addition, the high cost provides no incentive to switch. Providing extensive amounts of mitigatory defense is an effective strategy to create the most amount of doubt regarding the argument

A/2: High-Speed Rail improves connectivity between cities

Answer: High speed railway simply redistributes growth from other areas instead of generating economic benefits.

Warrant: Rail connectivity doesn't create growth, it just moves it.

Randal O'Toole, "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," Cato Institute, 4-20-2021
<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

Studies have found that high speed trains can generate new economic development near the stations where the trains stop. However, the same studies show that economic development slows in communities not served by such trains. **On a nationwide basis, high-speed rail is thus a zero-sum gain: as a study of the proposed California high-speed rail line concluded, “The economic development impacts of the California HSR project are likely to be more redistributive than generative.”** The paper adds that if higher-density development is more productive than low-density development, then the high densities encouraged by high-speed rail might result in a net gain. However, the COVID-19 pandemic has led people to question claims that high-density development is needed for economic productivity and whether they want to live and work in such densities. **Realistically, to produce actual economic growth, new transportation infrastructure must generate new travel or shipping that wouldn’t have taken place without the infrastructure.** The Interstate Highway System, for example, stimulated billions of passenger-miles of new travel and billions of ton-miles of new shipping that weren’t taking place before the highways were built. **To generate new travel, a new transportation system must be faster, more convenient, and less expensive than**

existing systems. High-speed rail fails all these tests, being slower than flying, less convenient than driving, and more expensive than both. On that last point, airfares average less than 14 cents per passenger-mile,⁵³ and Americans spend an average of 25 cents a passenger-mile on driving,⁵⁴ while Amtrak fares for its high-speed Acela average nearly \$1 per passenger-mile.⁵⁵ Far from boosting the economy, most countries that have built high-speed rail systems have gone heavily into debt to do so. **Even if the first lines make economic sense, political pressures demand that the countries build more and more lines that are less and less sensible. Financing these lines requires huge amounts of debt that can significantly harm the national economies.**

Warrant: Case studies of China, France, and Japan's failure illustrate how mega regions are debt-financed which is detrimental for long-term economic growth.

Randal O'Toole, "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," Cato Institute, 4-20-2021
<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

China has built more miles of high-speed rail than any other country and has gone more into debt doing it. **At the end of 2019, China's state railway had nearly \$850 billion worth of debt, and most of its high-speed rail lines aren't covering their operating costs, much less their capital costs.** As a result, China is slowing the rate at which it is constructing new lines.⁵⁶ **France's state-owned railroad has piled up debts of more than \$50 billion and has been repeatedly bailed out by the government. About half the debt is due to operating losses, and half is due to the expense of building new high-speed rail lines.**⁵⁷ Spain has built its high-speed rail system with an availability-payment public-private partnership. Officially, the private partner has gone into debt by \$18.5 billion.⁵⁸ While the country is obligated to pay the private partner enough

money to repay its debt, the debt isn't on Spain's books, which allows it to evade eurozone debt limits.⁵⁹ If the EU changes its rules, however, Spain would be in serious trouble. Japan provides an object lesson for what happens when a country has a rail debt crisis. In 1987, state-owned Japanese National Railways had a debt of \$550 billion (in today's dollars), much of it due to political demands to build money-losing high-speed rail lines.⁶⁰ The government privatized rail lines that were profitable, continued to subsidize those that weren't, and hoped to recover some of the debt by selling railway property.⁶¹ But Japan was in the midst of a property bubble—at its peak, the few hundred acres making up the Tokyo Imperial Palace was estimated to be worth more than all the land in California.⁶² Government plans to sell former railway land contributed to the bubble's collapse, and the government ended up absorbing more than \$400 billion in railway debt. **Together, these led to at least two decades of economic stagnation.**⁶³ Despite having to absorb the losses from lines built before 1987, the Japanese government has continued to build more high-speed rail lines. Typically, the national government pays two-thirds of the cost while local governments pay a third, and the lines are then leased to private railroads for a fraction of what it would take to repay those costs.⁶⁴

Warrant: HSR's direct economic growth is temporary.

Wei, Yiping, "High-speed rail impact on urban economic growth," Atlantic Press, 6-1-2018, <https://www.atlantis-press.com/proceedings/hsmet-18/25899114>

With the rapid development of high-speed railways, China has entered the era of high-speed rail. High-speed railways inject new impetus into the economic development of the city and enable the economy to achieve a new leap-forward development. This article takes Changsha City as an example to evaluate high-speed railways using comparative evaluation methods. It is assumed that under the conditions of "having

high-speed rail" and "without high-speed rail" the impact of high-speed railway on regional economic development will be discussed by the regression model and gray predict the GM(1,l) model. **The results show that the opening of high-speed rail has a pulling effect on urban economic growth and the contribution rate to economic growth shows a tendency of increasing first and then decreasing. Particularly, the contribution of high-speed rail to the economic growth in the first few years is swift and violent, with significant impact, then slows down.**

Warrant: Necessitates an unrealistic cost to successfully complete a project. Implication—assumes increased taxes or federal debt financing.

Jackson, Kerry, Center for California Reform at the Pacific Research Institute,
"High Costs & Construction Delays Plague Cali. High Speed Rail", City Journal, 2-25-2021
[https://www.city-journal.org/high-costs-construction-delays-plague-ca-high-speed-rail jt](https://www.city-journal.org/high-costs-construction-delays-plague-ca-high-speed-rail-jt)

The project, which has gone through at least a half-dozen business plans, is the definition of a money pit. When voters approved it via 2008's Proposition 1A, they were told it would cost \$33 billion. The Los Angeles Times editorialized that the cost was "not too much to wager on a visionary leap that would cement California's place as the nation's most forward-thinking state." Several other newspapers favored the train, but a few came out against it, with the Orange County Register warning that Prop 1A was "a fast track to bankruptcy" and a "boondoggle." The original projection has proved far too optimistic. Cost estimates have bounced around since 2008, landing at various times at \$64 billion, \$77 billion, \$98 billion, and \$117 billion before settling, for **now, at \$100 billion for a scaled-back version** that links Los Angeles and San Francisco...**The train's ridership is now predicted to be so light that operating subsidies will be needed "to cover its day-to-day financial losses."** As the LAO pointed out, the train's need for

subsidies “does not appear to be consistent with the spirit of” Proposition 1A. Initially, passengers, “rather than the general public,” were expected to “pay for the full cost of its ongoing operations and maintenance.

Analysis: Empirical examples of China, Japan, France, and Spain all suggest that implementation of high speed railway all question cost. Whether it is debt financing or an increased payment from tax payers, HSR is a “zero-sum game.” In addition, the temporary economic developments are not necessarily being created; whereas, they are being redirected to other cities. While HSR may theoretically promote mega-regions, insights from other countries must be taken into account.

A/2: High-Speed Rail would reduce total emissions

Answer: HSR will increase emissions by attracting drivers to replace those who switched to HSR. Overall net increase in emission from cars and trains.

Empiric: Drivers will replace those who take advantage of the railways.

Downs, Anthony, "Traffic: Why It's Getting Worse, What Government Can Do", Brookings, 1-1-2004,
<https://www.brookings.edu/research/traffic-why-its-getting-worse-what-government-can-do>

Triple convergence affects the practicality of other suggested remedies to traffic congestion. An example is staggered work hours. In theory, if a certain number of workers are able to commute during less crowded parts of the day, that will free up space on formerly congested roads. **But once traffic moves faster on those roads during peak hours, that will attract other drivers from other routes, other times, and other modes where conditions have not changed to shift onto the improved roads.**

Soon the removal of the staggered-working-hour drivers will be fully offset by convergence. The same thing will happen if more workers become telecommuters and work at home, or if public transit capacity is expanded on off-road routes that parallel a congested expressway. This is why building light rail systems or even new subways rarely reduces peak-hour traffic congestion. **In Portland, where the light rail system doubled in size in the 1990s, and in Dallas, where a new light rail system opened, congestion did not decline for long after these systems were up and running. Only road pricing or higher gasoline taxes are exempt from the principle of triple convergence.**

Warrant: Rail is unlikely to displace enough riders to be sustainable while construction costs outweigh environmental benefit.

Glans, Matthew, 10-12-2017, "Research & Commentary: High-Speed Rail Is a Bad Option for States", Heartland Institute, <https://www.heartland.org/publications-resources/publications/research--commentary-high-speed-rail-is-a-bad-option-for-states>

Supporters of high-speed rail claim that in many instances, it is a better form of transportation than automobile or air travel, and they say it is more energy-efficient. However, the evidence shows in most cases, high-speed rail makes little sense. **The United States has a very dispersed population compared to parts of the world where rail is successfully utilized, and its major cities are located further away from each other. Automobile or air travel almost always makes more financial sense than traveling by train.** These problems are precisely why conventional rail companies effectively disappeared in the 1970s, when they were replaced by Amtrak, a heavily subsidized national train service that costs taxpayers nearly \$50 per passenger to keep afloat. Since 1971, Amtrak has received a total of \$45 billion in subsidies. **The beneficial effects on the environment of having millions more people travel by rail, which are often touted as one of the primary advantages of high-speed rail, are also limited.** While a new high-speed train line may displace some air and car travel, **the construction and use of the train disrupts the environment in other ways.** For instance, building a new high-speed rail line demands large amounts of land, and the new trains will create noise and air pollution and require significant amounts of electricity. High-speed rail is an expensive endeavor with questionable benefits for taxpayers. Instead of subsidizing the construction of new high-speed rail lines, **states should focus on maintaining and improving their current highway and air systems,** which are well-established, still in-demand, and in dire need of repair.

Warrant: HSR's energy used for travel doesn't take into account the energy lost during generation and transmission which make HSR less efficient than conventional trains.

Randal O'Toole, 4-20-2021, "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," Cato Institute,
[https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-](https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete)

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The USHSR has claimed that a single gallon of fuel can move an entire high-speed train 6,600 miles, or all the way from New York to Los Angeles and back.³⁴ This is nonsense unless the organization means “one gallon of lubricating oil plus 250 megawatts of electricity.” **Most other claims about high-speed rail’s energy efficiency are similarly misleading or wrong.** It takes a lot more energy to move a train at 220 mph than to move one at conventional speeds of 60–80 mph. “The power required increases with the cube of the train speed,” notes engineering professor Alan Vardy.³⁵ To partially make up for this cube law, high-speed trains are built especially light, but they still require more energy to move. **The East Japan Railway Company, which operates both high-speed and conventional trains in Japan, says that moving a high-speed train car one kilometer requires 57 percent more energy than a conventional train car.** Most high-speed trains are powered by electricity, which brings up another inherent inefficiency. Because of losses in generation and transmission, **electrical generation plants must consume three units of energy (such as British thermal units, or BTUs) to deliver one unit to customers.**³⁷ **Most estimates of high-speed-train energy consumption are based on the energy delivered to the train, not the energy required to generate that power.**

Warrant: HSR energy efficiency doesn't take into account varied projected demand, constant maintenance costs, low passenger demand, and upfront infrastructure costs.

Randal O'Toole, 4-20-2021, "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," Cato Institute,
<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

Many comparisons of the energy efficiency of high-speed trains with planes assume both are equally full. **But, prior to the pandemic, airlines filled 85 percent of their seats while Amtrak filled only 51 percent of its seats.**³⁸ That's because most airline flights are nonstop, so the airlines can base the size of the plane on the projected demand for each individual route. Most passenger trains, however, make many intermediate stops, and the **trains must be sized to meet the maximum demand along the route**. As a result, many **trains tend to be relatively empty for much of their journeys, greatly reducing their energy efficiency**. Rail proponents also generally assume that **competing modes will be no more energy efficient in the future than they are today**. California's 520-mile line would release 9.7 million metric tons of greenhouse gases, or 18,650 tons per mile. Assuming that California's high-speed trains would fill, on average, 50 percent of their seats, the study estimated that operating those trains would reduce greenhouse gases but that it would take 71 years to repay the construction cost.⁴⁰ Since rails, concrete ties, and other **infrastructure must be replaced or rebuilt every 30–40 years**—and even more frequently on lines with frequent train service—and since such replacements would require the release of more greenhouse gases, **the savings would never make up for the cost**. Even if we ignore construction emissions, high-speed rail does not appear to offer any environmental benefits. Outside of the West Coast and a few other states, most of the electricity that would power U.S. high-speed trains is generated by burning fossil fuels, so rail wouldn't significantly reduce greenhouse gas emissions at all. While green-energy advocates hope to eventually replace fossil fuels, **adding trains to electrical demands would**

simply increase the time and effort required to build a non-fossil-fuel electrical system.

Analysis: Most studies tend to exaggerate HSR's energy efficiency by only taking into account the energy used throughout the duration of a train ride. However, by not including short term infrastructure costs, long term maintenance cost, and even varied passenger demand, the likelihood of a self-sufficient 'clean' electric system does not seem realistic. Combining pieces of mitigatory defense allows for the best narrative to question your opponent's accuracy of their claims.

A/2: High-Speed Rail prevents auto-fatalities

Answer: High-Speed Rail will not replace car-culture.

Empiric: Drivers will replace those who take advantage of the railways.

Downs, Anthony, "Traffic: Why It's Getting Worse, What Government Can Do", Brookings, 1-1-2004,
<https://www.brookings.edu/research/traffic-why-its-getting-worse-what-government-can-do>

Triple convergence affects the practicality of other suggested remedies to traffic congestion. An example is staggered work hours. In theory, if a certain number of workers are able to commute during less crowded parts of the day, that will free up space on formerly congested roads. **But once traffic moves faster on those roads during peak hours, that will attract other drivers from other routes, other times, and other modes where conditions have not changed to shift onto the improved roads.**

Soon the removal of the staggered-working-hour drivers will be fully offset by convergence. The same thing will happen if more workers become telecommuters and work at home, or if public transit capacity is expanded on off-road routes that parallel a congested expressway. This is why building light rail systems or even new subways rarely reduces peak-hour traffic congestion. **In Portland, where the light rail system doubled in size in the 1990s, and in Dallas, where a new light rail system opened, congestion did not decline for long after these systems were up and running. Only road pricing or higher gasoline taxes are exempt from the principle of triple convergence.**

Warrant: Rail is unlikely to displace many riders.

Glans, Matthew, 10-12-2017, "Research & Commentary: High-Speed Rail Is a Bad Option for States", Heartland Institute, <https://www.heartland.org/publications-resources/publications/research--commentary-high-speed-rail-is-a-bad-option-for-states>

Supporters of high-speed rail claim that in many instances, it is a better form of transportation than automobile or air travel, and they say it is more energy-efficient. However, the evidence shows in most cases, high-speed rail makes little sense. **The United States has a very dispersed population compared to parts of the world where rail is successfully utilized, and its major cities are located further away from each other. Automobile or air travel almost always makes more financial sense than traveling by train.** These problems are precisely why conventional rail companies effectively disappeared in the 1970s, when they were replaced by Amtrak, a heavily subsidized national train service that costs taxpayers nearly \$50 per passenger to keep afloat. Since 1971, Amtrak has received a total of \$45 billion in subsidies. **The beneficial effects on the environment of having millions more people travel by rail, which are often touted as one of the primary advantages of high-speed rail, are also limited.** While a new high-speed train line may displace some air and car travel, **the construction and use of the train disrupts the environment in other ways. For instance, building a new high-speed rail line demands large amounts of land, and the new trains will create noise and air pollution and require significant amounts of electricity.** High-speed rail is an expensive endeavor with questionable benefits for taxpayers. Instead of subsidizing the construction of new high-speed rail lines, **states should focus on maintaining and improving their current highway and air systems**, which are well-established, still in-demand, and in dire need of repair.

Warrant: Trains are empty most of their journey because of low demand; Americans prefer driving.

Randal O'Toole, 4-20-2021, "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," Cato Institute,
<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

Many comparisons of the energy efficiency of high-speed trains with planes assume both are equally full. **But, prior to the pandemic, airlines filled 85 percent of their seats while Amtrak filled only 51 percent of its seats.**³⁸ That's because most airline flights are nonstop, so the airlines can base the size of the plane on the projected demand for each individual route. Most passenger trains, however, make many intermediate stops, and the **trains must be sized to meet the maximum demand along the route**. As a result, many **trains tend to be relatively empty for much of their journeys, greatly reducing their energy efficiency**. Rail proponents also generally assume that **competing modes will be no more energy efficient in the future than they are today**. California's 520-mile line would release 9.7 million metric tons of greenhouse gases, or 18,650 tons per mile. Assuming that California's high-speed trains would fill, on average, 50 percent of their seats, the study estimated that operating those trains would reduce greenhouse gases but that it would take 71 years to repay the construction cost.⁴⁰ Since rails, concrete ties, and other **infrastructure must be replaced or rebuilt every 30–40 years**—and even more frequently on lines with frequent train service—and since such replacements would require the release of more greenhouse gases, **the savings would never make up for the cost**. Even if we ignore construction emissions, high-speed rail does not appear to offer any environmental benefits. Outside of the West Coast and a few other states, most of the electricity that would power U.S. high-speed trains is generated by burning fossil fuels, so rail wouldn't significantly reduce greenhouse gas emissions at all. While green-energy advocates hope to eventually replace fossil fuels, **adding trains to electrical demands would**

simply increase the time and effort required to build a non-fossil-fuel electrical system.

Analysis: Building a bunch of expensive trains does not change American car-culture. Driving is still largely cheaper and more convenient, meaning that the total number of traffic fatalities will likely remain the same.

A/2: Federal funding is key and superior to state and private investment

Answer: The Federal Government cannot handle the burden of high-speed rail.

Warrant: High speed rail adds 4 trillion to debt.

O'Toole, Randal. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," <https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete#citation> Policy Analysis no. 915, Cato Institute, Washington, DC, April 20, 2021.

Secretary of Transportation **Pete Buttigieg's proposal** to make the United States a "world leader" in high speed rail would add more than **\$4 trillion to the federal debt for construction of new rail lines plus tens of billions of dollars of annual deficit spending to subsidize operating costs.** In exchange, such a high-speed rail network is likely to carry less than 2 percent of the nation's passenger travel and no freight.

Warrant: High speed rail requires a lot of infrastructure/money to maintain

O'Toole, Randal. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," <https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete#citation> Policy Analysis no. 915, Cato Institute, Washington, DC, April 20, 2021.

The main disadvantage of high-speed trains, other than their slow speeds compared with air travel, is that they require a **huge amount of infrastructure that must be built**

and maintained to extremely precise standards. Since the United States is struggling to maintain the infrastructure it already has—particularly its urban rail transit systems and Amtrak’s Northeast Corridor, which together have more than \$200 billion in maintenance backlogs—it makes no sense to build more infrastructure that the nation won’t be able to afford to maintain. Once built, high-speed rail systems are expensive to maintain. Long-run capital renewal requirements include replacement of rails and train sets as frequently as every 10 years. **Transit agencies in the United States currently have a \$176 billion maintenance backlog, mostly for rail infrastructure.**²³ A country that can’t keep its urban rail systems in shape is not likely to keep even more expensive high-speed rail lines running.

Warrant: Debt hurts the economy

Peter G Peterson Foundation. “The Fiscal & Economic Impact of the National Debt.”

Pgpf.org, pgpf.org, 2016, www.pgpf.org/the-fiscal-and-economic-challenge/fiscal-and-economic-impact.

Reduced Public Investment. **As the federal debt mounts, the government will spend more of its budget on interest costs, increasingly crowding out public investments.** Over the next 10 years, the Congressional Budget Office (CBO) estimates that interest costs will total \$5.4 trillion under current law. Currently, the United States spends over \$900 million per day on interest payments. Reduced Private Investment. **Federal borrowing competes for funds in the nation’s capital markets, thereby raising interest rates and crowding out new investment in business equipment and structures.** Entrepreneurs face a higher cost of capital, potentially stifling innovation and slowing the advancement of new breakthroughs that could improve our lives. At some point, investors might begin to doubt the government’s ability to repay debt and could demand even higher interest rates — further raising the cost of borrowing for businesses and households. Over time, lower confidence and reduced investment

would slow the growth of productivity and wages of American workers. Fewer Economic Opportunities for Americans. Growing debt also has a direct effect on the economic opportunities available to every American. If high levels of debt crowd out private investments in capital goods, workers would have less to use in their jobs, which would translate to lower productivity and, therefore, lower wages. On the other hand, reducing federal borrowing would counter such effects; according to CBO, income per person could increase by as much as \$6,300 by 2050 if we were to reduce our debt to 79 percent of the size of the economy by that year.

Analysis: High-speed rail costs a lot of money to maintain, and requires a huge upfront investment. The federal government would need to remain committed, which is a difficult thing to expect from the U.S.' policymakers.

A/2: High-Speed Rail Supports the Manufacturing Sector

Answer: HSR does not help manufacturing jobs

Turn: HSR does not create many jobs at all

Kim Roberts. "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say." The Texan. July 2021. <https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say/>

"Atop massive viaducts and bridges under construction for the bullet train in the San Joaquin Valley, the state has hung banners proudly proclaiming "5,000 workers and counting." The slogan is catchy, but misleading. **The state rail authority has never had anywhere near 5,000 construction workers on the high-speed rail project at any one time. A review by The Times also found other transportation programs generally employ more workers for every \$1 million in spending.** The banners are an important part of a campaign that the California High-Speed Rail Authority has waged to maintain political support, calling attention to the hourly jobs it has funded in the depressed economy of California's heartland."

Warrant: HSR is a wasteful, ineffective way to create jobs

Kim Roberts. "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say." The Texan. July 2021. <https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say/>

"Nonetheless, the ongoing employment on the project is just 20% of what the banners say. The rail authority currently has about 1,000 carpenters, ironworkers, operating engineers and other hard hats at various construction sites stretching 119 miles from Madera to Wasco. That is down from 1,174 in November. Construction companies have laid off some workers because the state doesn't have enough land to build on. The project's history of problems has forced the state to spend a lot of money that does not go to hourly workers, but rather for consultants, design changes, claims filed by contractors for delays caused by the rail authority, and much else."

Analysis: Use this response to show that even though HSR creates some jobs, it is not an effective way to revitalize the economy and likely trades off with better programs that would make more of a difference.

Answer: HSR jobs have bad macroeconomic consequences.

Warrant: Job creation is politically motivated and has bad land use policies

Randal O'Toole. "The Dark Side of the Bullet Trains." CATO Institutie. March 2021.

<https://www.cato.org/blog/lesson-japans-high-speed-trains>

"One reason it lost money was that Japanese politicians insisted that it build more high-speed rail lines into areas that cost more but produced fewer riders than the first route. Another was that politicians protected railroad jobs so that JNR had to employ more than twice as many workers as it really needed. Meanwhile, Japan had imposed land-use policies aimed at protecting farms and rural open space. This created an urban property bubble; at one point, someone estimated that the few hundred acres under the imperial palace in Tokyo was worth more than all of the land in California. There were few actual land sales, but companies like Toyota earned more money selling

securities based on the artificially inflated values of the land they owned than from making and selling cars.”

Warrant: The externalities of HSR are economically crippling

Randal O'Toole. “The Dark Side of the Bullet Trains.” CATO Institutie. March 2021.

<https://www.cato.org/blog/lesson-japans-high-speed-trains>

“This should be an object lesson for the United States. Building a national network of high-speed rail lines would require trillions of dollars of deficit spending, pushing our national debt to well above 100 percent of GNP. California and several other states that want to build high-speed rail are suffering from property bubbles because they have adopted land-use policies that are supposed to encourage compact development; policies endorsed by the Biden administration. **If Congress decides to fund high-speed trains and promote compact development in other states, then the United States is likely to suffer some lost decades of its own.”**

Analysis: Use this response to show that even if there are short run economic gains, the long term picture is bleak. Creating a few thousand jobs with HSR is not worth it at the cost of long term economic stability.

A/2: High-Speed Rail Furthers Economic Justice

Turn: HSR is bad for low income communities

Warrant: HSR can economically segregate poor areas

Kim Roberts. "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say." The Texan. July 2021. <https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say>

"Delta Troy Interests, LTD, a real estate development firm active in the greater Houston area, believes that **the project will have a disproportionately negative impact on residents of Waller County, a majority minority county northwest of Houston whose population consists of 54 percent minority residents.** "By dividing and isolating some areas and neighborhoods from others, the proposed high-speed rail project will reinforce and in many cases exacerbate geographic, racial, and income disparities along its path," Delta Troy wrote to DOT. "At its very essence, the proposed project serves affluent travelers and business executives at the expense of the rural residents in areas in between who must bear the brunt of the environmental, economic and social degradation and segregation wrought by the project."."

Warrant: HSR can have problematic community-wide impacts

Kim Roberts. "High-Speed Rail Route May Adversely Impact Low-Income and Minority Property Owners, Critics Say." The Texan. July 2021. <https://thetexan.news/high-speed-rail-route-may-adversely-impact-low-income-and-minority-property-owners-critics-say/>

“In fact, the final EIS discloses that two meetings were held during Thanksgiving week in November 2019 and that the only meeting ever held in Waller County was the Tuesday before Thanksgiving 2019!” Scofield wrote in his comments requested by the DOT about equity issues. **Rep. Kevin Brady (R-TX-08), who has been critical of the Texas Central project, wrote in an email to The Texan, “Local officials have also raised concerns that the rail system will displace low-income and minority neighborhoods along the route, specifically in the area surrounding Dallas.** Not only would this project displace the most vulnerable communities who are trying to recover from the pandemic, but it would be funded by taxpayers from those same recovering communities.”.

Analysis: Use this response to show that even though some polling indicates HSR is popular, it is clearly not popular enough to justify the investment. It is one thing to check a box in support, quite another thing to write a check.

Answer: High Speed Rail projects mainly help the rich

Warrant: Amtrak believes that faster trains help the rich

Liz Lazo. “D.C.-to-Baltimore maglev would only benefit rich, Amtrak chief says.”

Washington Post. March 2021.

<https://www.washingtonpost.com/transportation/2021/05/06/amtrak-maglev/>

“Amtrak CEO William J. Flynn on Thursday took a shot at the proposed maglev train line for the Northeast Corridor, telling Congress the technology is vastly more expensive and environmentally disruptive than conventional and high-speed rail — and once built, it would serve only the rich. **“The huge public expenditures required to construct a maglev line would benefit only a small number of affluent travelers,” Flynn said during**

prepared testimony to the House subcommittee on railroads, pipelines and hazardous materials..”

Warrant: HSR would be substantially more expensive

Liz Lazo. “D.C.-to-Baltimore maglev would only benefit rich, Amtrak chief says.”

Washington Post. March 2021.

<https://www.washingtonpost.com/transportation/2021/05/06/amtrak-maglev/>

“The cost to ride the maglev would be higher than using Amtrak. According to a federal analysis, the expected average fare would be \$60 for a one-way trip to Baltimore, although it could vary between \$27 and \$80 per trip. Amtrak’s Acela costs about \$46 one way, and a coach seat on a regular train can cost as little as \$8. Flynn’s comments come as the railroad is on a crusade to build support — both financial and political — for a major expansion of its network. Amtrak has unveiled a plan to provide new intercity service to 160 communities and expand service in corridors with heightened demand for rail. The passenger railroad is pushing for 30 possible new routes.”

Analysis: Use this response to demonstrate to the judge that the benefits of high-speed rail do not tend to flow to the poor. Ask the judge to be realistic about who will be able to use these new, expensive trains.

A/2: High-Speed Rail is politically popular

Turn: High Speed Rail is unpopular

Warrant: Other forms of transit are popular, which has led to their dominance

Randal O'Toole. "The High-Speed Rail Money Sink: Why the United States Should Not

Spend Trillions on Obsolete Technology." CATO Institute. March 2020.

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

"In 1900, when the United States had only 8,000 registered automobiles, the country already had 2.3 million miles of road, mostly unpaved, for them to drive on . **As autos became more popular, gas taxes and other fees paid by auto users covered the costs of paving roads and expanding the highway network. Similarly, when the first planes went into commercial air service, they could land in any open field. As air travel became more popular, airlines used their profits and air ticket fees to improve airports and air terminals. In contrast, high-speed trains require that the high-cost infrastructure be put in place first.** Moreover, unlike highways and airports, which are shared by passenger, freight, and national defense vehicles, high-speed trains can only be used for passengers, making them far less cost-effective."

Warrant: HSR may be popular, but it is not enough to justify the massive investment

Randal O'Toole. "The High-Speed Rail Money Sink: Why the United States Should Not

Spend Trillions on Obsolete Technology." CATO Institute. March 2020.

<https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete>

"The differences in infrastructure requirements explain why air travel costs so much less than rail travel. For most of the lengths of their journeys, the only infrastructure modern airliners require is air traffic control. High-speed trains require extensive infrastructure that must be built and maintained to highly precise standards. **The requirement for dedicated, high-cost infrastructure is a problem common to the pipe dreams of many mass transportation enthusiasts, whether they are promoting light rail, monorails, maglevs, hyperloops, or personal-rapid transit. These systems are all far more expensive to build than highways and can't do nearly as much.**"

Analysis: Use this response to show that even though some polling indicates HSR is popular, it is clearly not popular enough to justify the investment. It is one thing to check a box in support, quite another thing to write a check.

Answer: High Speed Rail projects decrease in popularity as the costs become more apparent

Warrant: HSR is decreasing in popularity in California

Staff. "Benefits of High-Speed Rail for the United States." America Public Transportation Association. 2021. <https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/#:~:text=Implementing%20high%2Dspeed%20rail%20will,more%20efficient%20than%20automobile%20use.>

"It appears that they are finally bringing forth more realistic cost estimates and a more realistic schedule," said Stephen Levy, executive director and senior economist with the Center for Continuing Study of the California Economy, a Menlo Park-based research group. **"The whole project remains in doubt as the costs increase and the funding gap increases."** Political uncertainty and opposition to the project have only increased over time. A decade ago, California voters approved Proposition 1A, authorizing nearly

\$10 billion in bond money for the construction of the high-speed rail system. Since the 2008 vote, though, the project been plagued by delays and cost overruns, and polls show most California voters want the funds to go for something else other than high-speed rail.”

Warrant: Even traditional HSR supporters are less enthusiastic

Staff. “Benefits of High-Speed Rail for the United States.” America Public Transportation Association. 2021. <https://www.apta.com/research-technical-resources/high-speed-passenger-rail/benefits-of-high-speed-rail-for-the-united-states/#:~:text=Implementing%20high%2Dspeed%20rail%20will,more%20efficient%20than%20automobile%20use>.

But critics argue that the costs will outweigh the benefits.

“You can imagine a new governor with new priorities will just look at the trade-offs being too high,” said Adrian Moore, a policy expert at the Reason Foundation, a Los Angeles-based free-market think tank. “How much are we not investing in the transportation system that people are actually using ... because we’re shoveling all this money into high-speed rail. And that’s just going to get worse in the coming years. Someone has to be willing to go with public opinion, instead of prevailing wisdom in Sacramento, and kill this thing.” A June 5 primary will decide which two gubernatorial candidates, regardless of party, advance to the general election Nov. 6. Among the gubernatorial candidates, longtime front-runner Lt. Gov. Gavin Newsom was an early supporter of the 2008 rail bond issue to help finance construction, but the Democrat has since expressed real concerns on the proposed rail plan. A spokesperson for Newsom didn’t respond when asked about the new rail authority’s business plan..”

Analysis: Remind the judge that HSR sounds great in theory, but once the debate moves into the planning stage a whole host of problems arise. As such, even people who initially support HSR may find themselves in opposition to it before long.

A/2: High-Speed Rail creates economic growth

Answer: HSR hurts the economy

Warrant: High speed rail adds 4 trillion to debt.

O'Toole, Randal. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," <https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete#citation> Policy Analysis no. 915, Cato Institute, Washington, DC, April 20, 2021.

Secretary of Transportation **Pete Buttigieg's proposal** to make the United States a "world leader" in high speed rail would add more than **\$4 trillion to the federal debt for construction of new rail lines plus tens of billions of dollars of annual deficit spending to subsidize operating costs**. In exchange, such a high-speed rail network is likely to carry less than 2 percent of the nation's passenger travel and no freight.

Warrant: High speed rail requires a lot of infrastructure/money to maintain

O'Toole, Randal. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," <https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete#citation> Policy Analysis no. 915, Cato Institute, Washington, DC, April 20, 2021.

The main disadvantage of high-speed trains, other than their slow speeds compared with air travel, is that they require a **huge amount of infrastructure that must be built and maintained to extremely precise standards**. Since the United States is struggling

to maintain the infrastructure it already has—particularly its urban rail transit systems and Amtrak’s Northeast Corridor, which together have more than \$200 billion in maintenance backlogs—it makes no sense to build more infrastructure that the nation won’t be able to afford to maintain. Once built, high-speed rail systems are expensive to maintain. Long-run capital renewal requirements include replacement of rails and train sets as frequently as every 10 years. **Transit agencies in the United States currently have a \$176 billion maintenance backlog, mostly for rail infrastructure.**²³ A country that can’t keep its urban rail systems in shape is not likely to keep even more expensive high-speed rail lines running.

Warrant: Debt hurts the economy

Peter G Peterson Foundation. “The Fiscal & Economic Impact of the National Debt.”

Pgpf.org, pgpf.org, 2016, www.pgpf.org/the-fiscal-and-economic-challenge/fiscal-and-economic-impact.

Reduced Public Investment. **As the federal debt mounts, the government will spend more of its budget on interest costs, increasingly crowding out public investments.** Over the next 10 years, the Congressional Budget Office (CBO) estimates that interest costs will total \$5.4 trillion under current law. Currently, the United States spends over \$900 million per day on interest payments. Reduced Private Investment. **Federal borrowing competes for funds in the nation’s capital markets, thereby raising interest rates and crowding out new investment in business equipment and structures.** Entrepreneurs face a higher cost of capital, potentially stifling innovation and slowing the advancement of new breakthroughs that could improve our lives. At some point, investors might begin to doubt the government’s ability to repay debt and could demand even higher interest rates — further raising the cost of borrowing for businesses and households. Over time, lower confidence and reduced investment

would slow the growth of productivity and wages of American workers. Fewer Economic Opportunities for Americans. Growing debt also has a direct effect on the economic opportunities available to every American. If high levels of debt crowd out private investments in capital goods, workers would have less to use in their jobs, which would translate to lower productivity and, therefore, lower wages. On the other hand, reducing federal borrowing would counter such effects; according to CBO, income per person could increase by as much as \$6,300 by 2050 if we were to reduce our debt to 79 percent of the size of the economy by that year.

Answer: High speed rail investment does not mean criteria for economic growth

O'Toole, Randal. "The High-Speed Rail Money Sink: Why the United States Should Not Spend Trillions on Obsolete Technology," <https://www.cato.org/policy-analysis/high-speed-money-sink-why-united-states-should-not-spend-trillions-obsolete#citation> Policy Analysis no. 915, Cato Institute, Washington, DC, April 20, 2021.

Studies have found that high-speed trains can generate new economic development near the stations where the trains stop. However, the same studies show that economic development slows in communities not served by such trains. **On a nationwide basis, high-speed rail is thus a zero-sum gain: as a study of the proposed California high-speed rail line concluded, "The economic development impacts of the California HSR project are likely to be more redistributive than generative."**⁵² The paper adds that if higher-density development is more productive than low-density development, then the high densities encouraged by high-speed rail might result in a net gain. However, the COVID-19 pandemic has led people to question claims that high-density development is needed for economic productivity and whether they want to live and work in such densities. Realistically, to produce actual economic growth, new transportation infrastructure must generate new travel or shipping that wouldn't have taken place

without the infrastructure. The Interstate Highway System, for example, stimulated billions of passenger-miles of new travel and billions of ton-miles of new shipping that weren't taking place before the highways were built. To **generate new travel, a new transportation system must be faster, more convenient, and less expensive than existing systems.** High-speed rail fails all these tests, being slower than flying, less convenient than driving, and more expensive than both. On that last point, airfares average less than 14 cents per passenger-mile,⁵³ and Americans spend an average of 25 cents a passenger-mile on driving,⁵⁴ while Amtrak fares for its high-speed Acela average nearly \$1 per passenger mile.

Analysis: This response examines the reality of building HSR. While it may seem appealing to create jobs and increase investment, building high speed rail is extremely expensive. These costs will increase US debt which imposes negative effects on the US economy. In addition, this response highlights that high speed rail will not create economic growth because it is not a faster, more efficient mode of travel than cars or planes.

A/2: High-Speed Rail improves health outcomes

Answer: HSR contributes to climate change which hurts human health

Warrant: HSR hurts the environment

Poole, Robert. "High-Speed Rail Is Unlikely to Play a Major Role in Achieving Climate Goals - Reason Foundation." Reason Foundation, 23 Mar. 2021, <https://reason.org/commentary/high-speed-rail-is-unlikely-to-play-a-major-role-in-achieving-climate-goals/#:~:text=Building%20high%2Dspeed%20rail%20systems,rail%20projects%20add%20greenhouse%20gases>.

In a 2010 University of California—Berkeley study, professors Mikhail Chester and Arpad Horvath estimated that the entire California high-speed rail project would generate 9.7 million metric tons of carbon dioxide during construction. They also estimated that it would take high-speed rail 71 years of operation at medium occupancy to offset its own construction-related greenhouse-gas emissions. Building high-speed rail systems require steel and concrete, the manufacturing of which typically generates greenhouse gases. Trucks, bulldozers, and other construction site equipment also consume energy. Thus, during their long construction phases, high-speed rail projects add greenhouse gases. Adding lanes to existing highways also generates greenhouse gases, but to the extent that recycled asphalt is used for road paving climate impacts can be somewhat reduced. There are far quicker, more cost-effective ways to reduce greenhouse gas emissions than high-speed rail. **By the time high-speed rail projects commence service, more cars will be fully electric, so future high-speed rail systems would be replacing fewer gasoline-powered automobile**

Warrant: HSR requires more energy to operate.

O'Toole, Randal. Policy Analysis the High-Speed Rail Money Sink Why the United States Should Not Spend Trillions on Obsolete Technology. 2021,
www.cato.org/sites/cato.org/files/2021-04/policyh-analysis-number-915.pdf.

The USHSR has claimed that a single gallon of fuel can move an entire high-speed train 6,600 miles, or all the way from New York to Los Angeles and back.³⁴ This is nonsense unless the organization means “one gallon of lubricating oil plus 250 megawatts of electricity.” **Most other claims about high-speed rail’s energy efficiency are similarly misleading or wrong. It takes a lot more energy to move a train at 220 mph than to move one at conventional speeds of 60–80 mph.** “The power required increases with the cube of the train speed,” notes engineering professor Alan Vardy.³⁵ To partially make up for this cube law, **high-speed trains are built especially light, but they still require more energy to move. The East Japan Railway Company, which operates both high-speed and conventional trains in Japan, says that moving a high-speed train car one kilometer requires 57 percent more energy than a conventional train car.**³⁶ Most high-speed trains are powered by electricity, which brings up another inherent inefficiency. Because of losses in generation and transmission, electrical generation plants must consume three units of energy (such as British thermal units, or BTUs) to deliver one unit to customers.³⁷ **Most estimates of high-speed-train energy consumption are based on the energy delivered to the train, not the energy required to generate that power. Many comparisons of the energy efficiency of high-speed trains with planes assume both are equally full.** But, prior to the pandemic, airlines filled 85 percent of their seats while Amtrak filled only 51 percent of its seats.³⁸ That’s because **most airline flights are nonstop, so the airlines can base the size of the plane on the projected demand for each individual route. Most passenger trains, however, make many intermediate stops, and the trains must be sized to meet the maximum demand along the route. As a result, many trains tend to be relatively empty for much of their journeys, greatly reducing their energy efficiency.**

Warrant: climate change hurts health

WHO. "Climate Change and Health." Who.int, World Health Organization: WHO, 30 Oct. 2021, www.who.int/news-room/fact-sheets/detail/climate-change-and-health.

Climate change affects the social and environmental determinants of health – clean air, safe drinking water, sufficient food and secure shelter. Between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year, from malnutrition, malaria, diarrhoea and heat stress. The direct damage costs to health (i.e. excluding costs in health-determining sectors such as agriculture and water and sanitation), is estimated to be between USD 2-4 billion/year by 2030. Areas with weak health infrastructure – mostly in developing countries – will be the least able to cope without assistance to prepare and respond. Reducing emissions of greenhouse gases through better transport, food and energy-use choices can result in improved health, particularly through reduced air pollution.

Empiric: HSR contributed to TB in China

Liu, Yahong, et al. "Association of High-Speed Rail and Tuberculosis Transmission in Newly Integrated Regions: Quasi-Experimental Evidence from China." International Journal of Public Health, vol. 66, Nov. 2021, <https://doi.org/10.3389/ijph.2021.1604090>. Accessed 08/11/22

Objectives: **The spread of tuberculosis (TB) is related to changes in the social network among the population and people's social interactions. High-speed railway (HSR) fundamentally changed the integrated market across cities in China.** This paper aims to examine the impact of HSR on TB transmission in newly integrated areas. Methods: By

exploiting the opening and operation of the first HSR in Sichuan province as a quasi-natural experiment, we have collected and used the economic, social, and demographic data of 183 counties in Sichuan province from 2013 to 2016. Results: **The new HSR line is associated with a 4.790 increase in newly diagnosed smear-positive TB cases per 100,000 people among newly integrated areas. On average, an additional increase of 34.178 newly diagnosed smear-positive TB cases occur every year in counties (or districts) covered by the new HSR. Conclusion: HSR development has significantly contributed to the transmission of TB.** The public health system in China needs to pay more attention to the influences of new, mass public transportation.

Analysis: This is a good response because it turns the argument that HSR can improve health outcomes by pointing out the reality that development of HSR can cause irreversible damage to the environment. The terminalization of this is that atmospheric warming and climate change engender significant and even fatal health consequences including malaria and heat stress. Finally, this response includes empirics from China that exemplify even more negative health effects from high speed rail; specifically, HSR prompts urban agglomeration and brings people and businesses together in close proximity, increasing the risk of disease transmission.

A/2: High-Speed Rail creates affordable housing

Answer: rather than provide affordable housing options, HSR development can force people out of their homes.

Warrant: High speed rail requires a significant portion of land. This land is often taken from low-income communities.

Poole, Robert. "The California High-Speed Rail Project's Negative Impacts on Minority Communities - Reason Foundation." Reason Foundation, 17 May 2021, reason.org/commentary/the-california-high-speed-rail-projects-negative-impacts-on-minority-communities/.

Address problems caused by its tracks running through the center of Wasco, a city with a predominantly Latino and low-income population. **The rail route forced the abandonment of Wasco's farm labor housing complex. Although the rail authority contributed to the construction costs of new farmworker housing, it did not provide money to demolish the old complex, which has been heavily vandalized and has become a magnet for gang activity.** Paying for the demolition is now a point of contention between Wasco and the rail authority. "These are impacts that have sent ripples through our community and we need them to be held accountable and responsible for what they've done by choosing to build through Wasco," said Alex Garcia, mayor of Wasco. **High-speed rail construction has also caused disruptions in Fresno, the largest city on the rail system's initial operating segment, and one with large Latino and low-income populations. Several buildings around downtown—including a rescue mission—were forced to close and some of the abandoned buildings were set on fire by arsonists. If the high-speed rail system ever extends beyond its initial operating segment, other communities will be impacted.** Tehachapi officials, for example, already

expressed concerns over noise and vibrations impacting a hospital and residential subdivision if high-speed rail begins operating along its currently-planned route.

Warrant: Texas Supreme Court rules that private enterprises have eminent domain power

Madison, Mike. "High-Speed Rail Plan Scores Eminent Domain Power."

Austinchronicle.com, 2022, www.austinchronicle.com/news/2022-07-08/high-speed-rail-plan-scores-eminent-domain-power/.

The Texas Central Railroad, which began work in 2014 on its proposed high-speed rail link between Houston and Dallas, won a big victory on June 24 at the Texas Supreme Court, which ruled that the private enterprise enjoys the eminent domain power the state grants to railroads under the Texas Transportation Code. That means Texas Central, which back in 2020 received environmental and safety clearance for its project from the Federal Railroad Administration, can force reluctant landowners – of whom there are a few in rural East Texas – to sell their property for the project, which the railroad says will carry its first paying passengers in 2026. Depending on what kind of civics geek you are, you may know that historically, this is how America's railroads, and later its pipelines, got built. However, there's now only one privately owned intercity passenger railroad in the U.S. – South Florida's Brightline – which opened in 2018 on existing tracks. Amtrak's Acela service, the nation's only true high-speed rail, was also built in an existing corridor, so Texas Central's greenfield project is the first thing like it for about 150 years.

Answer: status quo solving

Warrant: federal funding has recently been allocated towards affordable housing initiatives.

Garrison, Joey. "Biden Takes Actions on Affordable Housing, Aiming to Close Gap in Housing Supply in 5 Years." USA TODAY, USA TODAY, 16 May 2022, www.usatoday.com/story/news/politics/2022/05/16/biden-housing-supply-gap-five-years/9788290002/. Accessed: 08/15/22

Amid skyrocketing prices, President Joe Biden's administration is taking steps to spur more affordable housing as the White House seeks to close the U.S. "housing supply gap" in five years. Among the efforts is an increase in federal assistance to help finance and produce more factory-built homes, including mobile homes. Freddie Mac announced it is exploring purchasing chattel loans, on which the majority of homeowners who buy manufactured homes rely rather than traditional mortgages. **The Federal Housing Finance Agency committed to work with lenders to begin a pilot program to offer financing for the construction and renovation of accessory dwelling units, which are typically cheaper than traditional homes.** This housing includes garage apartments, backyard homes and in-law suites. Biden's plan aims at the practice of large-scale investors buying single-family homes in low-income neighborhoods. The Federal Housing Administration will make foreclosed, real-estate-owned properties available to owner-occupants and nonprofits for 30 days before opening them to all bidders. The Department of Housing and Urban Development has taken similar steps for vacant property it holds. The place with pervasive, 'urgent' need: Housing Home prices increased nearly 20% in major cities in February, according to the latest S&P CoreLogic Case-Shiller national home price index. Research by the National Association of Home Builders found the cost of building materials increased 33% since the start of the pandemic. **The White House encourages states and cities to use unspent dollars from \$350 billion in direct aid from the American Rescue Plan, which passed in spring 2021, on preserving or adding affordable housing. Local and state governments committed \$3.2 billion in COVID-19 rescue funds to housing.**

Answer: HSR actually increases rent/housing expense

Wang, Rong, et al. "The Impact of High-Speed Rail on Housing Prices: Evidence from China's Prefecture-Level Cities." MDPI, Multidisciplinary Digital Publishing Institute, 4 July 2019, <https://www.mdpi.com/2071-1050/11/13/3681>.

Based on panel data of 285 cities in China from 2008–2016, this study used the difference-in-difference based on propensity score matching (PSM-DID) method to calculate the impact of HSR on housing prices. **The conclusions of the study indicated that, at the regional level, HSR significantly promoted the rise in housing prices in HSR cities along the rail line. HSR had a positive effect on housing prices, where the coefficient of HSR influence was 0.1511 and passed a 1% significance test. From the perspective of the combination of sub-regional and sub-city scales, HSR mainly played a significant role in promoting housing prices in “small and medium-sized cities” and “central and western cities”, especially in small and medium-sized cities in the central and western regions;**

Analysis: This response is strong because of its three components. First, empirics from China were HSR actually caused property cost or rent to increase. Second, this response discusses eminent domain, the process of the government forcing people to sell their land so that the government can build on it. Finally, this response argues that the status quo solves through multiple executive and congressional initiatives that seek to expand affordable housing.

A/2: High-Speed Rail is more environmentally friendly than planes

Answer: people will not want to use HSR over other modes of transportation

Warrant: routes are incomplete and inconvenient

O'toole, Randal. Policy Analysis the High-Speed Rail Money Sink Why the United States Should Not Spend Trillions on Obsolete Technology. 2021,
www.cato.org/sites/cato.org/files/2021-04/policyh-analysis-number-915.pdf.

The Obama administration's 8,600-mile high-speed rail network was really designed as six different and disconnected systems. Even **within each system, the routes were incomplete: travelers could get from Chicago to St. Louis and from St. Louis to Kansas City, but there was no planned direct route from Chicago to Kansas City.** USHSR's proposed high-speed rail system would correct only a few of these problems. It still doesn't include, for example, a 220 mph route from Chicago to Kansas City. **The 220 mph network misses several urban areas with more than 500,000 people, and even the 110 mph system skips many urban areas with more than 100,000 people.** People driving on an interstate freeway can get off the freeway at any exit and access the nation's other 4.1 million miles of roads. Once rail passengers arrive at a station, they must find some other mode of travel to reach their final destinations, greatly reducing the convenience of the system.

Warrant: HSR is more expensive— empirics in the UK prove

Carrington, Damian. "Trains Far Greener but Much More Costly than Planes, Analysis Finds." The Guardian, The Guardian, 14 July 2021,

www.theguardian.com/environment/2021/jul/14/trains-far-greener-but-much-more-costly-than-planes-analysis-finds.

Train fares on popular UK routes are 50% more expensive than plane fares despite rail journeys causing 80% lower carbon dioxide emissions, according to analysis by the consumer group Which?. It said passengers face a “near impossible” choice between low ticket prices and climate-friendly travel. More people are taking holidays in the UK due to coronavirus and airlines have launched dozens of new domestic routes. The Which? study examined 10 routes within the UK and found that eight were cheaper by plane. **The biggest price difference was from Birmingham to Newquay where the return plane fare was £67 and the train fare was £180.**

Answer: HSR is not more environmentally friendly than planes

Warrant: ridership will not be high enough to offset the environmental damage created during construction of HSR.

“How Green Is High-Speed Rail?” Bloomberg.com, Bloomberg, 15 Nov. 2011,
www.bloomberg.com/news/articles/2011-11-15/how-green-is-high-speed-rail.

There's a lot of talk right now about the capital costs of high-speed rail - the planned Los Angeles-San Francisco line, which would be the model for America, may eventually cost some \$98 billion (or about \$75 billion in 2010 money) - but for the most part its environmental benefits are taken for granted. Rail transport tends to be greener than car and air travel, so it stands to reason that as high-speed rail attracts people off the roads and runways, net carbon emissions will fall. Often that comparison overlooks one critical detail: the environmental damage caused by building high-speed rail lines in the first place. **Unless high-speed rail travel reduces emissions by more than what it generates during construction, the project may not be worthwhile from an environmental**

perspective. Indeed, some researchers have their doubts. A recent British study suggests that high-speed construction emissions may be significant enough to call entire projects into question, writes Eric Morris, who described the work a couple years back at the *Freakonomics* blog: **When the emissions spewed by all those earth movers, tunnel boring machines, bulldozers, trucks, cranes, etc. are taken into account, the carbon advantage for HSR vis a vis air travel largely evaporates.** Largely, but emerging work shows, not entirely. A new study by Swedish researchers Jonas Westina and Per Kagesona of the Royal Institute of Technology concludes that high-speed rail can offset the emissions created during construction if it attracts enough riders from air travel. The \$98 billion question, of course, is just how many riders is enough? Westina and Kagesona modeled the environmental damage generated during the construction of a hypothetical 500 kilometer double-tracked high-speed rail line that travels 10 percent of its route through tunnels. Then they calculated the change in carbon emissions that would occur for a person who shifts to high-speed rail travel from another mode - namely, flying or driving. The goal was to find the point at which savings from these shifts balance out the environmental costs of constructing and operating the high-speed line. In the January 2012 issue of *Transportation Research Part D: Transport and Environment*, Westina and Kagesona conclude that to balance construction emissions, high-speed rail traffic volumes "need to be large, **and the diverted traffic should primarily come from aviation.**" If high-speed rail were to attract a high rate of passengers who used to travel by airplane, Westina and Kagesona estimate that a line needs to average 10 million annual one-way trips "**to compensate for the annualized construction emissions.**"

Quantification: HSR development would generate 9.7 million metric tons of CO2

Poole, Robert. "High-Speed Rail Is Unlikely to Play a Major Role in Achieving Climate Goals - Reason Foundation." Reason Foundation, 23 Mar. 2021, <https://reason.org/commentary/high-speed-rail-is-unlikely-to-play-a-major-role-in-achieving-climate->

goals/#:~:text=Building%20high%2Dspeed%20rail%20systems,rail%20projects%20add%20greenhouse%20gases.

In a 2010 University of California—Berkeley study, professors Mikhail Chester and Arpad Horvath estimated that the entire California high-speed rail project would generate 9.7 million metric tons of carbon dioxide during construction. They also estimated that it would take high-speed rail 71 years of operation at medium occupancy to offset its own construction-related greenhouse-gas emissions. Building high-speed rail systems require steel and concrete, the manufacturing of which typically generates greenhouse gases. Trucks, bulldozers, and other construction site equipment also consume energy. Thus, during their long construction phases, high-speed rail projects add greenhouse gases. Adding lanes to existing highways also generates greenhouse gases, but to the extent that recycled asphalt is used for road paving climate impacts can be somewhat reduced. There are far quicker, more cost-effective ways to reduce greenhouse gas emissions than high-speed rail. By the time high-speed rail projects commence service, more cars will be fully electric, so future high-speed rail systems would be replacing fewer gasoline-powered automobile

Analysis: This is an effective response because you attack each level of the link and internal link of the argument. First, you prove that people do not have an incentive to take trains over flights because HSR routes are incomplete and inconvenient. Then, you have an additional layer of attack: even if people do switch to using rail instead of planes, rail is not better. This is due to the fact that construction of HSR is deadly to the environment.

A/2: High-Speed Rail boosts tourism

Answer: HSR does not increase economic activity generated from tourism

Warrant: Even if the number of tourists arriving increases, tourism revenue does not increase.

Gao, Yanyan, et al. "Does High-Speed Rail Boost Tourism Growth? New Evidence from China." *Tourism Management*, vol. 72, June 2019, pp. 220–31, <https://doi.org/10.1016/j.tourman.2018.12.003>.

This paper evaluates the impact of high-speed rail (HSR) on tourism growth using China's city panel data from 2004 to 2015. **The empirical results from the difference-in-differences method show that HSR connection does not promote tourism revenue but does boost tourist arrivals, leading to a negative effect of HSR connection on tourism revenue per arrival;** these results are further confirmed by the instrumental variable method to address the issue of endogenous HSR route placement, and by various robustness checks. Further investigation shows that the effect is heterogeneous. By connecting to HSR, less-developed central and western regions have attracted more arrivals than the developed eastern region, and cities with unique tourism resources, although they attract less arrivals, gain more revenue than cities without those resources.

Answer: tourism is harmful for the environment

Warrant: tourism puts pressure on water systems

Bari, and Ciheam. Environmental Impacts of Tourism ENVIRONMENTAL IMPACTS OF TOURISM. 2003, pp. 263–70, om.ciheam.org/om/pdf/a57/04001977.pdf.

Water Resources Water, and especially fresh water, is one of the most critical natural resources. The tourism industry generally overuses water resources for hotels, swimming pools, golf courses and personal use of water by tourists. This can result in water shortages and degradation of water supplies, as well as generating a greater volume of waste water. In dry and hot regions like the Mediterranean, the issue of water scarcity is of particular concern. Because of the hot climate and the tendency of tourists to consume more water when on holiday than they do at home, the amount used can run up to 440 liters a day.

Warrant: tourism causes eco-degradation

Oishimaya Sen Nag. "What Are the Negative Effects of Tourism on the Environment?"

WorldAtlas, WorldAtlas, 11 Oct. 2018, www.worldatlas.com/articles/what-are-the-negative-effects-of-tourism-on-the-environment.html.

Every ecosystem works on a delicate natural balance. Every species in the ecosystem has a specific role to play in the system. However, tourism often disturbs this delicate balance and creates a great disaster in the ecosystem. When the tourist industry active in an area is completely profit-minded, it pays little heed to the needs of nature. For example, often hotels and resorts are built illegally very close to the beach or inside the core areas of forests. Large patches of natural vegetation need to be cleared to allow space for the sprawling resorts or hotels. As old tourist spots get degraded due to overuse by tourists, newer 'upcoming' destinations with fewer crowds become the next favorite of tourists and the tourism industry. The same situation is repeated once more. Unsustainable practices by the tourism industry can thus lead to deforestation, sand erosion, loss of species, changes in sea currents and coastlines, destruction of habitats, etc. Even activities like nature walks can be harmful to the environment if tourists

trample on the local vegetation during their walk. Such trampling can lead to reduced plant vigor, breakage of stems, reduced regeneration, etc. Tourists breaking off corals during snorkeling or scuba diving activities can also contribute to ecosystem degradation. Commercial harvesting of corals for sale to tourists also causes harm to coral reefs. Even the anchorage of cruise ships to coral reefs can degrade large sections of the reef.

Analysis: This is a good two-pronged response. First, you prove that there is not actually any significant economic benefit from an HSR-induced increase in tourism. Then you argue that without the economic benefit, tourism is largely harmful for the environment.