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PINELLAS COUNTY

ECONOMIC DEVELOPMENT

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INDUSTRIAL IMPORTS, EXPORTS, & LOCAL TRADE BALANCES

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Executive Summary

Understanding a region's imports and exports is valuable in order to get a better feel for its overall economy. In particular, export industries often set the tone for the rest of the local economy as they are the economic foundation the greater economy is built upon. Exports are ultimately an area's specialties and strengths where a region excels and one of the most important factors influencing a local economy's size and quality. On the other hand, understanding imports is necessary in order see economic leakage and identify opportunities to diversify the industrial base, incubate nascent industries, and integrate supply chains in a manner that could lead to future growth.

Pinellas County, in 2017, had approximately \$37.3 billion in exports and \$41.1 billion in imports. When being slightly more exact, the trade deficit was approximately \$3.75 billion. Much of this deficit however was driven by government taxation and spending moving money around between industries and regions. After removing trade figures for the most government involved industries (public administration, healthcare, and education) from the calculation, Pinellas County had a trade surplus of \$366 million. Sectors responsible for the largest outflows of money from the community were typically related to food, energy, natural resources, logistics, and tech/media monopolies. Manufacturing on the whole runs a trade deficit of \$1.67B that is primarily driven by imports of prepared food, automobiles, and refined petroleum. The manufacturing deficit is somewhat ameliorated by strong exports of some larger industries such as electronics and medical devices along with miscellaneous smaller local industries including leather goods, boats, and specialty plastics.

Industries with trade surpluses were lead primarily by corporate management offices that netted \$2.2 billion. Financial and insurance firms meanwhile ran a surplus north of \$230 million. Wholesale trade had one of the largest surpluses, \$570M, thanks to the county's role as a hub for computer and software distribution. Professional service firms ran a small surplus in Pinellas County of \$35M as most of the regional export oriented activity appears to be located in Hillsborough. The tourism economy's influence, albeit difficult to directly measure, is evidenced by gross export sales across sectors such as retail, hotels, and restaurants, and entertainment. Together these sectors generated roughly \$2.3B¹ in direct sales from tourism. Not all of the retail sector's export sales come from tourists buying sunscreen however as non-store retailers, primarily e-retailers, had \$482M in gross exports and a trade surplus of \$325M.

¹ In determining this value, export figures from the "accommodation and food services" and "arts, entertainment and recreation" were straightforward enough for easy use as components. The entirety of "retail trade" sector was not used because it includes intraregional shopping trips and delivery orders that show up as exports. Two excluded retail categories are "building materials and garden equipment supply dealers" and "furniture and home furnishing stores." Several other retail categories were excluded for the same reason. The sum used for calculating tourism sales is from gross export sales in the "food and beverage stores," "health and personal care stores," "gasoline stations," "clothing and clothing accessories stores," "sporting goods, hobby, musical instrument and book stores," "general merchandise stores," and "miscellaneous store retailers" cateries. The gross value of exports from these sectors, ~\$1.1B, is likely a high estimate for actual retail tourism sales.

Trade is a popular word in the national political and economic discourse these days with a renewed interest in topics such as the American trade deficit, NAFTA, and tariffs having emerged as hot button issues. Trade however does not just occur at the national level and the various parts of the United States engage in trade with each other constantly through a hyper connected means of exchanging goods, services, ideas, and money across the country. Historically, some of the most successful American infrastructure and economic development projects, such as the Interstate Highway System and the Transcontinental Railroad, were built in order to promote intranational trade. Luckily, trade at the domestic level is not fraught with the same geopolitical landmines found on the world stage as there is no risk that that, hypothetically, Florida and Wisconsin would engage in a trade war going tit-for-tat with escalating tariffs on citrus and cheese.

The vast majority of the American economy however is precisely tied up in intranational commerce with goods and services flowing between states, counties, and regions. An example of domestic trade could be something along the lines of “natural gas from Oklahoma is sold to an electric company in Florida where it is burned to power a factory in Pinellas County that builds medical devices made of steel from Alabama which are then sold to a hospital in Pennsylvania where the doctor performing surgery went to medical school in Virginia and the patient has traveled from Delaware...” Much like international trade there are importers and exporters all over the map and complex flows of materials and services connecting in ways that can make spider webs look simplistic.

From a local perspective, exporting industries are important to identify because they bring new money into the community and, in many ways, set the stage for the rest of the economy. These base industries, which are sometimes give other names such as driver or primary industries, help set the overall wages in the local economy and support secondary companies. Take a semiconductor manufacturing plant and a diner as examples of a primary and a secondary business in a community. The semiconductor plant buys materials, adds value through the manufacturing process, and then sells product all over the country and maybe even the world to bring in “new” money that can flow around the community and be spent on goods and services. The diner consumes the money flowing around in the community as it is a local institution that relies on local money and largely imports its raw materials (e.g. beef, eggs, potatoes, etc.) from elsewhere.

This report examines what Pinellas County “makes” and what it “takes” at the industrial level by using Emsi’s most recent data to look at the “demand met by imports” and “exported sales” data for industries. Subtracting the demand met by imports variable from the exported sales variable creates a crude approximation of the balance of trade for a particular industry. “Demand met by imports” is not exactly the same as import sales, but it is the closest available data and is a reasonable approximation. As with any economic analysis, it is more important to consider the bigger picture instead of getting caught in the weeds.

As two brief technical notes, Emsi is an online tool that aggregates data from dozens of different government and private sources that then synthesizes and reconstitutes the information into estimates of economic conditions. Although it generally is more contemporary than government sources, data is still delayed and these figures are from 2017. The report categorizes industries by North American Industrial Classification System (NAICS) codes that are used in the United States, Mexico, and Canada to identify and iteratively drill down from broad two digit industry families (e.g. 81 – Other Services) to more specific codes eventually at a six digit level (812113 – Nail Salons).

The headline numbers, from examining exports and imports in Pinellas County from 2017, is a trade deficit of approximately **\$3.75B**. Even though the county sold \$37.3B in goods and services outside its boundaries, it still imported \$41.1B. The table below summarizes, at the broadest level, the total value of everything imported and exported across the various two digit NAICS categories.

NAICS	NAICS Category	Exports	Imports	Trade Balance
11	Agriculture, Forestry, Fishing and Hunting	\$13,060,321	\$288,535,671	\$(275,475,349)
21	Mining, Quarrying, and Oil and Gas Extraction	\$2,833,001	\$392,420,220	\$(389,587,219)
22	Utilities	\$20,976,564	\$636,456,884	\$(615,480,319)
23	Construction	\$555,656,393	\$792,178,243	\$(236,521,850)
31-33	Manufacturing	\$6,491,638,985	\$8,164,415,407	\$(1,672,776,422)
42	Wholesale Trade	\$2,148,281,585	\$1,578,698,934	\$569,582,651
44	Retail Trade	\$2,328,426,853	\$1,258,381,683	\$1,070,045,171
48	Transportation and Warehousing	\$377,715,255	\$1,444,803,823	\$(1,067,088,568)
51	Information	\$831,133,374	\$1,804,280,018	\$(973,146,644)
52	Finance and Insurance	\$2,147,524,264	\$1,913,783,129	\$233,741,135
53	Real Estate and Rental and Leasing	\$1,325,282,553	\$668,381,941	\$656,900,613
54	Professional, Scientific, and Technical Services	\$1,810,131,449	\$1,774,710,055	\$35,421,394
55	Management of Companies and Enterprises	\$2,636,545,153	\$441,220,011	\$2,195,325,142
56	Administrative and Support and Waste Management and Remediation Services	\$623,305,947	\$610,027,843	\$13,278,104
61	Educational Services	\$352,227,115	\$523,057,888	\$(170,830,773)
62	Health Care and Social Assistance	\$1,948,149,219	\$579,025,319	\$1,369,123,900
71	Arts, Entertainment, and Recreation	\$371,698,249	\$286,727,058	\$84,971,191
72	Accommodation and Food Services	\$825,335,864	\$193,476,440	\$631,859,424
81	Other Services (except Public Administration)	\$406,103,271	\$300,648,794	\$105,454,477
90	Government	\$12,102,364,560	\$17,430,682,214	\$(5,328,317,654)
	Total	\$37,318,389,975	\$41,081,911,571	\$(3,763,521,596)

The overall trend however is not quite as bad as the bolded red letters suggest. There are three sectors that can best be described, in a technical fashion, as weird industries in the local economy.

NAICS	Sector	Exports	Imports	Trade Balance
61	Education	\$352,227,115	\$523,057,888	\$(170,830,773)
62	Health Care and Social Assistance	\$1,948,149,219	\$579,025,319	\$1,369,123,900
90	Government	\$12,102,364,560	\$17,430,682,214	\$(5,328,317,654)
	Total	\$14,402,740,894	\$18,532,765,421	\$(4,130,024,527)

These three industries are all generally reliant on government transfer payments moving around large sums of money in specifically directed ways. These three are the least like the free market in how

they operate as the government sector mostly is taking money away from regions towards the state and national capitals, education funds flows towards universities in college towns, and healthcare follows people towards where mature populations live. Pinellas County has large retiree population, so medical expenses are a net inflow into the local economy, but the other segments do have significant outflows not only to Washington D.C, but also locations such as Tallahassee and Gainesville. Accounting for these three oddball and government heavy sectors does change the total balance of trade significantly as removing them would change the local trade deficit in a trade surplus of \$366,502,933.

NAICS	Sector	Exports	Imports	Trade Balance
11	Agriculture, Forestry, Fishing and Hunting	\$13,060,321	\$288,535,671	\$(275,475,349)
12	Mining, Quarrying, and Oil and Gas Extraction	\$2,833,001	\$392,420,220	\$(389,587,219)
22	Utilities	\$20,976,564	\$636,456,884	\$(615,480,319)

The next three sectors to consider are the geographically constrained aspects of the local economy. Pinellas is too highly built out to support traditional large scale agriculture. Similarly, mining operations are a nonstarter not only because of space requirements, but even more importantly because of the dearth of commercially valuable minerals. Ultimately these are the imports of food, fuel, and raw materials that every urban area has to consider. Utilities are interesting to consider because utility companies have strong presences in Pinellas County, but they rarely are selling their services outside of the region. In particular, Pinellas County has to generally buy energy and water from outside of the county boundaries which explains the trade deficit in this situation. Here is a similar issue to agriculture and mining that there is little interest or room in building a large scale power installation, so it is likely this will remain a deficit industry.

NAICS	Sector	Exports	Imports	Trade Balance
42	Wholesale Trade	\$2,148,281,585	\$1,578,698,934	\$569,582,651
44	Retail Trade	\$2,328,426,853	\$1,258,381,683	\$1,070,045,171
53	Real Estate and Rental and Leasing	\$1,325,282,553	\$668,381,941	\$656,900,613
55	Management of Companies and Enterprises	\$2,636,545,153	\$441,220,011	\$2,195,325,142
72	Accommodation and Food Services	\$825,335,864	\$193,476,440	\$631,859,424
81	Other Services (except Public Administration)	\$406,103,271	\$300,648,794	\$105,454,477

The above industries however are some of Pinellas County's greatest economic strengths that all have ample trade surpluses. Management of companies and enterprises maintains a strong economic surplus because Pinellas is a popular location for Fortune 500 headquarters along with smaller regional offices for major corporations. Accommodation and food services unsurprisingly has a large trade surplus generally thanks to the tourism economy "exporting" meals and hotel rooms to visitors. Business travelers and regional commuters also play a role in these exports, but it is impossible to disentangle them from the tourist data.

Retail, similar to the accommodation and food services category, is largely tied to the tourism economy as, unsurprisingly, tourists need to buy beach umbrellas, groceries, and souvenirs once they arrive. At the 3 digit NAICS level however, there is an important note that must be made.

NAICS	Sector	Exports	Imports	Trade Balance
454	Nonstore Retailers	\$497,768,680	\$172,299,277	\$325,469,403

Nonstore retailers, particularly electronic shopping and mail order houses, account for nearly one third of the total trade surplus in this category. This category relies on a handful of specific companies selling their goods across the country and often internationally in a way that is not dependent on the tourism economy in the same way that a gift shop is.

Wholesale trade benefits from a strong position distributing electronics and software products. Considering space constraints it is somewhat surprising to see wholesale trade this well represented, but the local industry tends to focus on small high value products as opposed to the distribution of bulkier less "value-dense" commodities such as agriculture and ore. Real estate as a field has significant trade surplus, but this is for a very peculiar reason. The entirety of the surplus comes from "Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)" (+\$723M). The "lessors" sector generally seems to derive from the business licensing, royalties, and franchise fees collected by residents. Compared with other regions in Florida, Pinellas does rather well in this category likely thanks to the county's large retiree population bringing their assets with them. A similar pattern of large inflows from the "lessors" sector is found in communities such as Palm Beach County and Sarasota County.

NAICS	Sector	Exports	Imports	Trade Balance
48	Transportation and Warehousing	\$377,715,255	\$1,444,803,823	\$(1,067,088,568)
56	Administrative and Support and Waste Management and Remediation Services	623,305,947	\$610,027,843	\$13,278,104
71	Arts, Entertainment, and Recreation	\$371,698,249	\$286,727,058	\$84,971,191

The Arts, entertainment, and recreation category has a surprisingly small trade surplus, but this appears to stem from a few issues. Spectator events such as performing arts and sporting events run surpluses (+\$125M), but many of the support functions such as "agents and managers for artists, athletes, entertainers, and other public figures" (-\$31M) appear to be located outside of the region. The largest deficit comes from the "amusement, gambling, and recreation" (-\$57M) industries as this category includes regional and national draws that tend to take money out of the community as residents in a vacation destination typically want to vacation away from home.

Transportation and warehousing has one of the very largest deficits among sectors because Pinellas County is not a logistics hub. The only sector in this category with an overwhelmingly positive balance of trade is the "scenic and sightseeing transportation" (+\$16.5M) sector that is driven by tourism. The airline industry is somewhat quirky as "air transportation" has a trade deficit around (-\$290M) while "support activities for air transportation" has a trade surplus of around +\$50M. Air transportation is potentially a sector that could decrease its trade deficit in the future as the St

Petersburg-Clearwater Airport (PIE) is currently undergoing an expansion plan, but for lack of a better term, PIE is a “boutique” airport whereas Tampa International is the primary regional workhorse air transportation hub. The other modes of transportation tend to rely on large ports and amounts of space that do not suit the county geographically.

Administrative and support and waste management and remediation services has a small surplus, but underneath the hood the industry becomes more complicated interesting as the “business services” (+\$266M) category has a large trade surplus while the “employment services” (-\$147M) category has a large trade deficit. “Employment services” is primarily composed of industries such as “temporary help services,” but this deficit is largely offset from industries such as “telephone call centers” and “document presentation services” in the “business services” category.

NAICS	Sector	Exports	Imports	Trade Balance
51	Information	\$831,133,374	\$1,804,280,018	\$(973,146,644)
5111	Newspaper, Periodical, Book, and Directory Publishers	\$53,694,060	\$122,021,254	\$(68,327,193)
5112	Software Publishers	\$63,519,360	\$322,000,132	\$(258,480,772)
5121	Motion Picture and Video Industries	\$33,237,266	\$286,887,806	\$(253,650,540)
5122	Sound Recording Industries	\$2,164,327	\$13,326,381	\$(11,162,054)
5151	Radio and Television Broadcasting	\$66,995,449	\$122,345,416	\$(55,349,966)
5152	Cable and Other Subscription Programming	\$17,809,777	\$159,102,072	\$(141,292,294)
5173	Wired and Wireless Telecommunications Carriers	\$544,309,763	\$282,700,067	\$261,609,696
5174	Satellite Telecommunications	\$1,000,928	\$6,821,262	\$(5,820,334)
5179	Other Telecommunications	\$6,982,379	\$39,420,347	\$(32,437,967)

Information is an industry with a large overall trade deficit, but its components reveal more interesting patterns. Telecommunications are a sector with a trade surplus driven by “wired and wireless telecommunications carriers,” but most of the subsectors have very large deficits. Primarily this is because information contain multiple types of publishing industries that are highly clustered in a small number of areas and controlled by monopolies. Put more concretely, there is only one HBO, one Microsoft, and one Cisco and none of them are local companies. These are generally firms that either have a monopoly or exist in monopolistic competition making it very difficult for new firms to gain a foothold selling products such as premium television subscriptions or word processing software. This is not meant to despair the entire state of the information market as being hopeless because fostering a technology ecosystem and in particular, can significantly increase exports sales and has substantial economic benefits. Generally any digital technology or publishing company in a community is an exporter that can help bring potentially significant money into a region.

The next three sectors analyzed: manufacturing, finance and insurance, and professional services will be the most detailed and diversified because they present information that is the most varied among all of the economic sectors. The reason for this is because local economies tend to become “pointy” with more strongly developed groups of imports and exports in more specialized fields like these industries

NAICS	Sector	Exports	Imports	Trade Balance
31-33	All Manufacturing	\$6,491,638,985	\$ 8,164,415,407	\$(1,672,776,422)
311	Food Manufacturing	\$171,530,250	\$1,492,205,889	\$(1,320,675,639)
312	Beverage and Tobacco Product Manufacturing	\$19,193,076	\$361,048,445	\$(341,855,369)
313	Textile Mills	\$5,367,143	\$41,967,460	\$(36,600,316)
314	Textile Product Mills	\$49,210,912	\$50,163,457	\$(952,546)
315	Apparel Manufacturing	\$8,734,973	\$48,975,517	\$(40,240,544)
316	Leather and Allied Product Manufacturing	\$127,512,008	\$16,275,175	\$111,236,833
321	Wood Product Manufacturing	\$48,889,665	\$100,755,356	\$(51,865,691)
322	Paper Manufacturing	\$56,003,888	\$285,786,638	\$(229,782,750)
323	Printing and Related Support Activities	\$236,919,224	\$82,616,189	\$154,303,035
324	Petroleum and Coal Products Manufacturing	\$11,970,433	\$648,973,401	\$(637,002,968)
325	Chemical Manufacturing	\$601,873,444	\$1,039,681,117	\$(437,807,673)
326	Plastics and Rubber Products Manufacturing	\$500,390,362	\$307,455,569	\$192,934,793
327	Nonmetallic Mineral Product Manufacturing	\$6,901,239	\$167,467,938	\$(160,566,699)
331	Primary Metal Manufacturing	\$92,512,338	\$238,189,127	\$(145,676,789)
332	Fabricated Metal Product Manufacturing	\$281,510,618	\$442,119,462	\$(160,608,844)
333	Machinery Manufacturing	\$581,475,478	\$477,091,540	\$104,383,938
334	Computer and Electronic Product Manufacturing	\$2,203,589,021	\$507,148,235	\$1,696,440,786
335	Electrical Equipment, Appliance, and Component Manufacturing	\$302,999,532	\$155,925,890	\$147,073,642
336	Transportation Equipment Manufacturing	\$294,964,945	\$1,404,574,932	\$(1,109,609,987)
337	Furniture and Related Product Manufacturing	\$90,034,203	\$132,488,608	\$(42,454,405)
339	Miscellaneous Manufacturing	\$800,056,233	\$163,505,463	\$636,550,769

The manufacturing sector has some of the largest values swing around when looking at trade balances because of the sheer specializations and costs of durable goods. The starting point to understand the sector's contours is to first notice the pattern that agricultural products such as processed food and lumber are imported *en masse* because Pinellas is not a region with large agricultural production. The largest single industry that imports goods, after processed food, is the transportation equipment manufacturing sector and this is driven primarily by "motor vehicle manufacturing" (-\$850M) and "motor vehicle parts manufacturing" (-\$250M). Transportation manufacturing's deficit however is somewhat ameliorated by the trade surplus from "boat building" (+\$148M). "Aerospace product and parts manufacturing" has a trade deficit of approximately (\$55M) with a roughly 2:3 ratio of export sales (\$95M) to imports (\$150M).

An interesting contrast is between the commercial printing sector and its related industries "wood product manufacturing" and "paper manufacturing." Commercial printing, both screen and non-screen, largely appears tethered to the county's marketing, promotional, and artistic industries, so it

follows that printing and these industries work very well together and have a natural symbiosis. On the other hand, wood product and paper manufacturing would appear to be more tied to rural development as being closer to the harvested lumber is seemingly more important.

Chemical manufacturing, of the petrochemical and regular varieties are more industries where the county has large annual outflows. Petrochemicals are understandable because Pinellas has a trade deficit of roughly (-\$590M) from “petroleum refineries”. The regular “chemical manufacturing” field contains many subindustries involving chemicals such as resins, solvents, and soaps where relatively small trade deficits add up to be a larger deficit in total. One bright spot in the chemical industries however is in “explosives manufacturing” where there is a (+\$134M) trade surplus. Also under chemical manufacturing, the “pharmaceutical preparation manufacturing industry” runs a surplus of about (+\$125M), but then industries such as biological preparation (-\$80M) and in-vitro diagnostic substance manufacturing (-\$53M) run deficits.

The “computer and electronic product manufacturing” has the largest groupings of industries with significant trade surpluses. “Communications equipment manufacturing” has the largest surplus at (+\$748M), but also “semiconductor and other electronic component manufacturing” has a (+\$538M) and “navigational, measuring, electromedical, and control instruments manufacturing” has a (+\$494M) surplus.

Machinery manufacturing has a healthy (+\$104M) trade surplus that largely stems from the manufacture of “ventilation, heating, air-conditioning, and commercial refrigeration equipment manufacturing” (+\$98M) and “metalworking machinery manufacturing” (+\$54M) in the county. Similar to vehicle manufacturing, net imports are high “construction machinery manufacturing” (-\$51M). The miscellaneous manufacturing sector contains the “medical equipment and supplies manufacturing” field (+\$510M) along with a potpourri of other fields such as “sign manufacturing” (+\$50M), “office supplies (except paper) manufacturing” (+\$57M), and “sporting and athletic goods manufacturing” (+\$8M).

Professional services does run a small trade surplus, but this also masks the massive heterogeneous nature of the overall sector as similarly, to manufacturing, there is plenty of specialization leading to large surpluses and deficits depending on the industry.

NAICS	Sector	Exports	Imports	Trade Balance
54	Professional, Scientific, and Technical Services	\$1,810,131,449	\$1,774,710,055	\$35,421,394
5411	Legal Services	\$129,485,162	\$152,316,186	\$(22,831,024)
5412	Accounting, Tax Preparation, Bookkeeping, and Payroll Services	\$206,060,153	\$104,817,654	\$101,242,499
5413	Architectural, Engineering, and Related Services	\$74,071,772	\$300,842,776	\$(226,771,004)
5414	Specialized Design Services	\$12,954,194	\$12,394,715	\$559,480
5415	Computer Systems Design and Related Services	\$59,409,861	\$331,470,761	\$(272,060,901)
5416	Management, Scientific, and Technical Consulting Services	\$473,272,465	\$80,337,361	\$392,935,104
5417	Scientific Research and Development Services	\$37,707,462	\$521,763,313	\$(484,055,851)
5418	Advertising, Public Relations, and Related Services	\$325,364,246	\$248,267,178	\$77,097,069
5419	Other Professional, Scientific, and Technical Services	\$491,806,133	\$22,500,110	\$469,306,023

The largest trade surplus drivers comes from the “other professional, scientific, and technical services” category which is driven by a **+\$369M** trade surplus in “market research and public opinion polling”. The “accounting, tax preparation, bookkeeping, and payroll services” sector meanwhile is largely propped up by “payroll services” (**+\$174M**) even though “offices of certified public accountants” has a large deficit (**-\$87M**). The “management, scientific, and technical consulting services” sector sees a large trade surplus primarily because of “marketing consulting services” (**+\$170M**), “administrative management and general management consulting services” (**+\$34M**), and “other management consulting services” (**+\$89M**). Interestingly, “advertising agencies” industry runs a (**-\$128M**) trade deficit even though market research and consulting services have such ample surpluses.

A concerning trend is the large deficit that Pinellas County has regarding “scientific research and development services” (**-\$484M**). Part of this appears to be because of classification issues thanks to the NAICS system. Many of the larger industries in the county hire engineers and scientists who conduct research, but their employers is not considered to be a research institution. As an example, large amounts of oceanographic research are conducted in the county, but this research generally takes place within the university and government sectors, so it is not counted as being part of the county’s professional exports. This makes the research sector look much weaker in Pinellas County, but highlights the need to focus on growing a research ecosystem more independent of other sectors in order to move towards a more high tech economy.

Many of the trade deficits and surpluses in this section show the symbiotic nature Pinellas County has the rest of the Tampa-St Petersburg-Clearwater MSA. Legal services has a very large surplus when looking at the entire MSA, so it is surprising to see that there is a small trade deficit for the field as a whole in the county. Seemingly the legal field is more specialized across the bay. Architectural and

engineering services and computer systems design follow the same pattern as the MSA is a net exporter, while Pinellas County the county is a net importer.

NAICS	Sector	Exports	Imports	Trade Balance
52	Finance and Insurance	\$2,147,524,264	\$1,913,783,129	\$233,741,135
521	Monetary Authorities-Central Bank	\$-	\$24,395,348	\$(24,395,348)
522	Credit Intermediation and Related Activities	\$862,256,651	\$788,091,594	\$74,165,058
523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities	\$387,222,343	\$282,856,609	\$104,365,734
524	Insurance Carriers and Related Activities	\$771,671,037	\$472,635,607	\$299,035,430
525	Funds, Trusts, and Other Financial Vehicles	\$126,374,233	\$345,803,972	\$(219,429,739)

Finance and insurance is not quite as lopsided, but is one of the county's larger export sectors. In general the pattern holds that assets management is imported while transaction processing is exported service. "Financial transactions processing, reserve, and clearinghouse activities" account for a trade surplus of over (\$612M), but this is later mitigated by deficits such as the (-\$430M) in "commercial banking" and (-\$75M) deficit from "savings institutions."

Insurance by itself is one of the largest exports from Pinellas County across most fields with numerous flavors being major exporters. "Direct life insurance" (+\$210M), "direct title insurance" (+\$31M), and "direct property and casualty insurance carriers" (+\$315M) are examples of this trend. The online significant outliers in the insurance industry appear to be "reinsurance carriers" (-\$41M) and "direct health and medical insurance carriers" (-\$317M).

Conclusion

Even though Pinellas County has a deficit in the overall trade balance, the comparison of imports and exports shows an economy with numerous opportunities for further development. Much of the overall deficit is likely driven by demographics as the county's large retiree population largely consumes goods and services that are often brought in from outside of the region. Attracting a younger workforce seems like one strategy for improving the balance of trade as increasing the workforce to population ratio is a possible tact for reducing the trade deficit.

Potentially the sectors with the easiest path forward for improving the overall trade deficit are encouraging the professional services, financial sectors, and software industries in the local economy. Expanding corporate management offices is arguably the most ideal form of development that should be sought after, but will likely be difficult. These are all well-paying industries and have few negative externalities, but they are heavily reliant on human capital and subject to fierce competition. Tourism is another industry that can be used increase exports from the region, but problematically it is largely composed of low wage jobs, has more externalities, and the industry tends to be very "brittle" making it subject to macroeconomic shocks.

Manufacturing facilities, especially on a per job basis, provide some of the largest dollar amounts in exports making them very attractive for any form of expansion or relocation. Opportunities for these industries across fields and expanding this sector, although the most competitive and

potentially difficult field to grow, is one that the county will continue to target. An interesting paradox in play in the manufacturing sector is the long term trend that industrial output is expected to continue increasing while the overall number of employees decreases. On the one hand, this trend especially illustrates the importance of retaining and expanding existing manufacturing facilities, but it also could require Pinellas and other communities to consider how to develop around high tech manufacturing and what the ancillary developments connected to the industry will be.

Import substitution is one strategy that can be considered for developing a more diversified and export oriented industrial base, but choosing the right industries for substitution is in some ways more of an art than a science. One of the most popular and organic forms of import substitution to have developed in recent years has been the explosion in craft brewing operations. Not every city can expect to become the next Asheville or Portland, but craft brewery growth has set the stage for sustainable local manufacturing that keeps wealth in communities.

Small scale manufacturing hubs and the maker movement are more opportunities for manufacturing to both increase exports and decrease imports in the local economy. Small scale manufacturing such as coffee roasters, boutique fashion, and artisanal crafts are all examples of quirky small scale manufacturing production that can both reduce imports and increase exports. The existing tourism industry coupled with the growth of online platforms such as Etsy make it possible to see small scale manufacturers play an increasingly important role in the local economy.

For Pinellas, a holistic import substitution strategy that recognizes and builds off of existing strengths is the most sensible path forward. The finance and insurance industry is an excellent case study as already being a sector that has a trade surplus overall, but contains numerous industries that run substantial trade deficits. Commercial banking, asset management and health insurance are industry examples of businesses that run substantial trade deficits, but are also the types of companies that would be able to seamlessly fit into the existing business ecosystem. A more detailed review of import industries and a substitution policy would have to be undertaken in order to get a more clear view of these opportunities, but there are seemingly numerous sectors of the local economy where it would be possible to bridge the gaps between related industries and complete the supply chain.

Interestingly, green technology and developments appear to be an opportunity to reduce imports and foster more local economic activity. A large reason is because energy must generally be imported into the community. Insulating structures, solar water heaters, and double pane windows are seemingly some of the most cost effective ways to redirect economic activity back towards the local community. Pedestrian and cyclist improvement are another possibility that could help reduce the petroleum trade deficit. Ironically, some of the lowest hanging fruit may literally be low hanging fruit as community agriculture programs and backyard or rooftop gardens are another potential easy way to reduce agricultural imports. Green developments like these by no means would close the trade gap and nobody is going to get rich off of backyard tomatoes, but they are incremental steps that could stem the outflows from the county and improve local economic activity.