

VinFast's Economic Impact in North Carolina

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ABSTRACT

VinFast, a five-year-old Vietnamese automaker, plans to extend its global footprint into North America by establishing the first automotive manufacturing plant in North Carolina. This research evaluates the state's \$1.2 billion incentive package for VinFast's electric vehicle manufacturing project. IMPLAN software is used to assess the direct, indirect, and induced economic impacts of VinFast's manufacturing plant on the local economy. From 2022 to 2025, this factory is expected to generate \$15.3 billion in output, support over 26,550 jobs and contribute \$4.8 billion in GDP to Chatham County and the surrounding economy. Assuming that resources are easily available and that there is consumer demand for the vehicles, the estimated tax income generated by VinFast's operations should repay the public coffers within five years. It is crucial to note that unforeseeable market reactions may leave VinFast's vehicle production plant unable to satisfy the expectations of stakeholders and shareholders.

Keywords: economic impact, development, incentives, automobile manufacturing

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INTRODUCTION

VinFast was founded in 2017 as a subsidiary of Vingroup, Vietnam's largest private corporation. Within five years, Vinfast proved itself to be one of the best electric car manufacturer in Vietnam's automotive industry. The company set up representative offices in five international markets (U.S., Canada, Germany, France, and Netherlands) and opened showrooms in California. On March 29th, 2022, Chatham Economic Development Corporation announced that VinFast would create a major manufacturing center in Chatham County's Triangle Innovation Point, which it projected to generate approximately seven thousand potential jobs for the local community. The full facility will be able to manufacture around 150,000 vehicles per year.

This project will be the first automotive original equipment manufacturer in the state, followed by Toyota's Battery Manufacturing, North Carolina (TBMNC). North Carolina is a late comer to hosting automobile manufacturing in the southeast United States. Alabama, Georgia, Mississippi, Tennessee and South Carolina are home to established operations. Ranking number one in the Southeast for automotive employment, Tennessee attracts more than 920 automotive establishments across 88 counties (Tennessee Department of Economic and Community Development). Alabama's automotive industry started in 1993 when Mercedes-Benz opened its only U.S. assembly plant there; nowadays Alabama produces almost 1.3 million cars and light trucks, generating around 40,000 jobs for Alabamians (Alabama Department of Commerce). After BMW's assembly line went online in 1994, South Carolina has welcomed many other automotive companies such as Mercedes-Benz and Volvo, having an economic impact of almost \$27 billion and providing job opportunities for over 74,000 people (South Carolina Department of Commerce). Mississippi started in 2003, when Nissan constructed its first manufacturing plant. Today, Mississippi welcomes over 200 manufacturers and employs over 15,000 skilled workers in the automotive sector (Mississippi Development Authority). In 2012, Porsche chose Georgia to open its new North American headquarters, which was followed by a series of governmental incentives, including Opportunity Zone tax cuts and the Georgia Quick Start workforce development program (Georgia Department of Economic Development). These states have set an expectation that North Carolina will attract more foreign direct investments and create automotive jobs for the state's residents.

DATA ANALYSIS

This study assesses the VinFast Manufacturing Plant's effect on the local economy by calculating its direct, indirect, and induced outputs with the use of IMPLAN software. Both construction and annual operations are examined. The goal is to provide perspective on the net benefits to North Carolina residents and taxpayers.

Since this project is the first automobile original equipment manufacturer located in Chatham County, the county data needed to be customized to include the commodities 3340-automobile manufacturing and 3333-storage batteries. Given the scale of VinFast's facility, not all of the resources are coming from Chatham County. A multi-county region was created for the input-output analysis incorporating Chatham County's neighbors: Alamance, Durham, Harnett, Lee, Moore, Orange, Randolph, Wake.

VinFast announced the construction will cost around \$4 billion and last about 2.5 years (Parker, March 2022). This research counts furniture, fixtures and equipment as part of the \$4

billion construction outlay. The total jobs supported in this phase is projected to be 9,070 per year for 2.5 years. The most impacted industries include custom computer programming and architectural/engineering services, as indicated in Table 3 (Appendix). The annual economic impact from construction is estimated to be \$630 million. Summing the direct, indirect and induced effects provides a total impact of \$2.527 billion over 2.5 years as indicated in Table 1 (Appendix). Due to economic leakages from the region, such as institutional purchases, taxes, imports and commuting, the direct impact is less than \$4 billion.

VinFast expects 7,500 full-time employees once the factory opens, planned for July of 2024 (Parker, March 2022). As a result, 2025 will be the first full year of manufacturing. IMPLAN calculates effects based on a full calendar year. The annual economic impact from operations is estimated to be \$10.4 billion. Summing the direct, indirect and induced effects provides a total impact of \$12.6 billion. Yearly operations will support 7,500 jobs directly and 17,476 jobs in total as shown in Table 2 (Appendix). The industries seeing the largest employment impacts will likely be automobile manufacturing and the wholesaling of motor vehicle parts and supplies as listed in Table 4 (Appendix).

Input-output analysis not only enables the study of direct impacts, but also indirect effects (secondary impact originated from business-to-business transactions in the supply chain) and induced effects (secondary impact derived from household spending of labor income). Vinfast's manufacturing plant's economic effect on Chatham County from 2022-2025 is projected to be \$15.3 billion in output and \$4.8 billion in total value added as indicated in Table 2 (Appendix). The highest induced impact employment belongs to limited-service restaurants. Knowing that the "ripple" effect accounts for the Social Accounting Matrix (SAM) employment multipliers on the Chatham County regional economy, we can infer that for every construction job, an additional 0.18 total jobs are generated in the local economy, and for every automobile manufacturing job, an additional 0.26 total jobs are generated in the local economy.

Tax Incentives

VinFast is receiving a \$1.2 billion incentive package to locate in North Carolina. A state job development investment grant (\$316 million) is payable over 32 years as employment targets are met. State appropriations (\$450 million) will fund road, rail, sewer, and water infrastructure improvements. Community college job training programs (\$38 million) will be established. The Golden Leaf Foundation contributed grants worth \$50 million and Chatham County is providing local incentives worth \$400 million (Job Development Investment Grant, n.d.). North Carolina Secretary of Commerce Machel Baker Sanders reinforced that even though there's always some risk to any program, any project, and any company, the state has faith in the historical performance and financial health of Vinfast to further support its \$4 billion Chatham County automotive plant (Talhelm, 2022).

One research question is whether the incentive package is justified. VinFast will generate tax revenue at the federal, state and county levels. Part of this includes taxes paid directly by the firm. There are also tax revenue streams from employee income taxes, sales taxes, real estate property taxes from employee home purchases, and more. Table 5 reports the estimated results (see Appendix). Revenue generated by the direct, indirect and induced effects of VinFast's operations should repay the public coffers within four years. Keep in mind that not all local residents are benefitting. At least 27 homes, five businesses and one church will be demolished as roads around the site are widened (Stradling, 2022).

VinFast's Financial Plan

VinFast executives hope to raise at least \$2 billion through an IPO. On December 6th, 2022, Vinfast publicly filed Form F-1 (registration statement for certain foreign private issuers) with the Securities and Exchange Commission (the "SEC") and planned to list its ordinary shares on the NASDAQ Global Select Market Composite under the ticker "VFS," as soon as the preliminary prospectus is effective (VinFast Auto Ltd., 2022; Vinfast, 2022b). As the Chairman of VinFast stated, "we ourselves are determined to push and commit to this IPO, but the highest target for the IPO is not financing but to set up VinFast in the global market" (Mallard, 2022). Raising awareness among investors plays a role in this Vietnamese car manufacturer's globalization journey. VinFast executives are also eyeing the Biden administration's \$25 billion Advanced Technology Vehicles Manufacturing financing program, which aims to support and promote EV businesses (Eisenstein, 2022).

In its home market, the Vietnamese government provides significant assistance to the automaker throughout both the production and export stages. Several internal incentives, including tax and non-tax breaks, preferential government purchasing policies, and a buy-local drive called "Vietnamese people use Vietnamese products," are provided to manufacturers. The automotive industry is looking to diversify away from the top two strongest exporting industries which are the textile and electronics (assembly) industries. Although the Ministry of Industry and Trade and Ministry of Planning and Investment support the domestic car manufacturing sector, the Ministry of Finance and Ministry of Transport view this sector as a potential threat for social status disproportion, pollution, and congestion (Schröder, 2021).

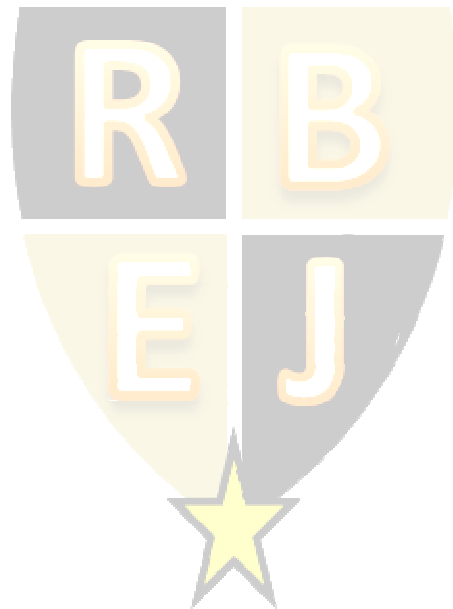
Until the North Carolina manufacturing plant comes online, all VinFast automobile models will be manufactured in the Hai Phong Manufacturing Plant. According to the United States - Vietnam Bilateral Trade Agreement, exporters in Vietnam will be exempted from the value added tax (VAT) and given concessions on profit taxes (Parker & Reifel, 2003). The goal of establishing an overseas manufacturing facility in the United States is to better serve the demands of American consumers in terms of supply chain management, pricing stability, and output levels. However, VinFast must consider the costs associated with operating a fully owned manufacturing plant in the United States. It may be difficult for this new company to compete with established ones that have been operating in the U.S. market for decades due to the higher labor cost and local availability of skilled workers.

DISCUSSION AND CONCLUSIONS

Given that VinFast is a new automaker, there hasn't been a full assessment of its potential on the ground in North Carolina. This research estimates that the construction phase will generate annual economic output of \$1.01 billion and combined federal, state and local tax revenue of \$110.7 million. Annual operations are projected to generate a total economic impact of \$12.6 billion and combined federal, state and local tax revenue of \$506.2 million.

The economic impact analysis assumes that resources are readily available and that there is consumer demand for the product. Because VinFast is the first OEM in North Carolina, there may be skilled labor shortages in the early years. Since brand awareness is so important in the car industry, VinFast may struggle to compete in the American market. Clients must be informed of VinFast and understand its unique model for leasing the electric car batteries. It is difficult to make an exact forecast about the amount of success that VinFast will have in the US market

since the manufacturing facility for VinFast is still being constructed. With a favorable consumer reaction, this study indicates that the incentives given to attract VinFast to North Carolina could be a sensible political and business decision.

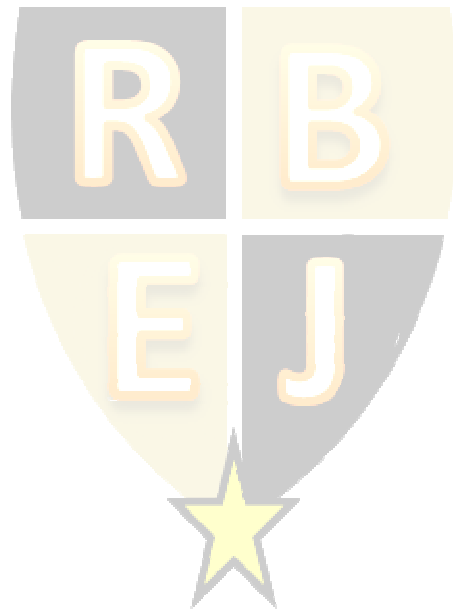


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APPENDIX

Table 1: Annual Economic Impact of VinFast's Construction on the Chatham County Region

Impact Type	Labor Income	Value Added	Output
Direct Effect	\$265,651,446	\$306,714,767	\$630,346,001
Indirect Effect	\$71,778,311	\$116,612,525	\$256,799,054
Induced Effect	\$32,013,681	\$68,075,064	\$123,881,367
Total Effect	\$369,443,438	\$491,402,355	\$1,011,026,421

Source: Authors' estimation

Table 2: Annual Impact of VinFast's Manufacturing Operations on the Chatham County Region

Impact Type	Employment	Labor Income	Value Added	Output
Direct Effect	7,500	\$867,176,813	\$2,791,976,815	\$10,491,696,871
Indirect Effect	6,930	\$418,342,664	\$730,117,598	\$1,680,547,748
Induced Effect	3,054	\$130,565,316	\$272,712,424	\$491,594,171
Total Effect	17,484	\$1,416,084,793	\$3,794,806,837	\$12,663,838,791

Source: Authors' estimation

Table 3: Annual Estimated Jobs Supported during Construction

Rank	Industry	Jobs Supported
1	Construction of new manufacturing structures	2,210
2	Retail – Miscellaneous store retailers	1,769
3	Custom computer programming services	1,219
4	Construction of new commercial structures	877
5	Architectural, engineering, and related services	274
	Total (including industries not listed)	9,070

Source: Authors' estimation

Table 4: Annual Estimated Jobs Supported during Operations

Rank	Industry	Jobs Supported
1	Automobile manufacturing	7,500
2	Wholesale - Motor vehicle and motor vehicle parts and supplies	1,304
3	Wholesale - Machinery, equipment, and supplies	644
4	Truck transportation	637
5	Other real estate	510
Total (including industries not listed)		17,484

Source: Authors' estimation

Table 5: Annual Estimated Tax Revenue

	Federal tax revenue	State tax revenue	County tax revenue	Total
Annual construction	\$164,040,468	\$23,026,557	\$19,780,699	\$206,847,694
Annual operations	\$294,394,817	\$106,379,094	\$93,386,083	\$494,159,994

Source: Authors' estimation

