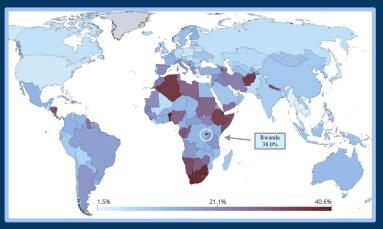
The Implications of Increased Chinese Outsourcing in the Rwandan Textile Industry

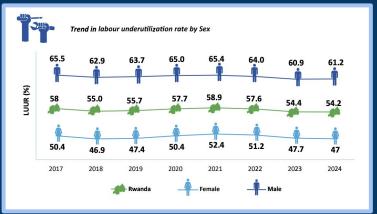
Kaliope R. Hendershot Mentored by Mr. Lupoli Palo Alto High School Foothill College

Introduction

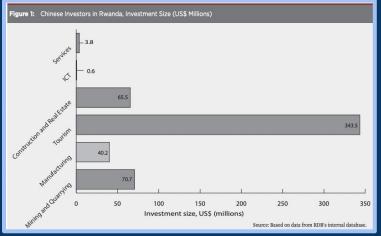
- Urgent need for entry-level employment
- Rwanda has a comparatively high labour underutilization rate (38.0%) (Human Capital Data, 2024)
 - Labour Underutilization: combined unemployment, time-related underemployment, and potential labor force (Human Capital Data, 2024)
 - National Institute of Statistics Rwanda estimates a much higher labor underutilization (NISR, 2024)

World Map of Labor Underutilization

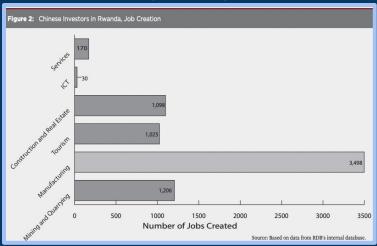




(Human Capital Data, 2024; NISR, 2024)



(Eom, 2018)



(Eom, 2018)

Possible Solutions

- Chinese foreign direct investment (FDI) and outsourcing has been increasing over the years (Eom, 2018)
 - Business strategy popularizing in the 1990's, where companies open factories in third-party locations with few labor laws and lower wages to cut costs (Twin, 2024)
- Chinese FDI into Rwandan manufacturing is by far created the most jobs and is the most cost efficient (Eom, 2018)

"Boosting Africa's manufacturing capacity will add strong links to Africa's regional supply chain, improve intra-African trade, and reduce reliance on foreign imports" - International Economic Analyst Virusha Subban



To what extent have Chinese textile companies outsourcing to Rwanda improved employment opportunities for Rwandans, and is it economically sustainable?

Research Methodologies

Research Inquiry: Evaluation Research

• Goal is to evaluate the impacts and value of increased Chinese FDI in the Rwandan textile and garment (T&G) industry

Quantitative: Correlation

 Goal is to find trends and predict the effects of FDI on Rwanda using Vietnam as a predictor

Qualitative: Summarization

 Goal is to contextualize the human impacts of increased FDI using Vietnam as a predictor

Why Vietnam?

Historical Similarities

- European colonial rule up to mid-19th century
- Colonizers exploited ethnic tensions to maintain power
- Ethnic divide led to devastating conflict
- Colonizers were motivated by economic exploitation in agriculture

Political Similarities

- Strong centralized government leadership
- Power in roles outside the president is minimal
- Dominant/single party
- Centralized power to maintain stability and foster economic growth after violent conflicts

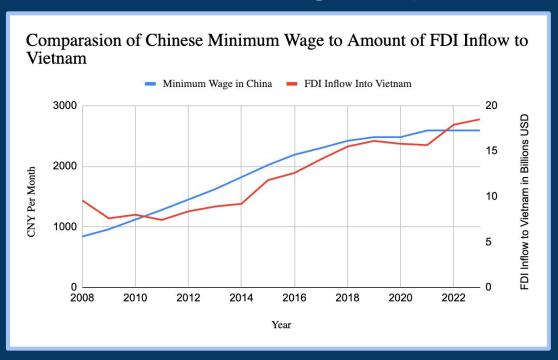
Economic Similarities

- Public policy focused on rebuilding the economy after conflict
- Traditionally exported goods within agriculture but has diversified into manufacturing
- Frequently attempted to decreases dependence on Chinese imports

Data and Findings -- Quantitative

	A. Minimum Wage in	B. Minimum Wage in		
Correlation	China in CNY per	Vietnam in VND per	C. FDI inflow to	D. FDI inflow to
Coefficient	month	month	Vietnam in billions	Cambodia in billions
A. Minimum Wage in				
China (in CNY per				
month)	X	0.9946245728	0.915442891	0.9496381859
B. Minimum Wage in				
Vietnam (in VND per				
month)	0.9946245728	X	0.9422653708	0.9626409259
C. FDI inflow to				
Vietnam (in billions)	0.915442891	0.9422653708	X	0.9301138355
D. FDI inflow to				
Cambodia (in				
billions)	0.9496381859	0.9626409259	0.930113855	X

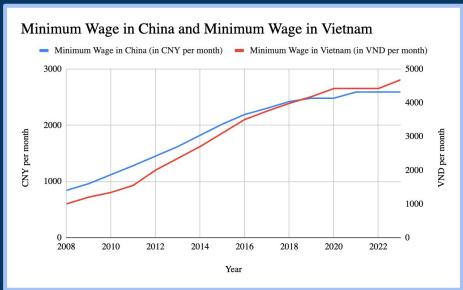
Data and Findings — Quantitative

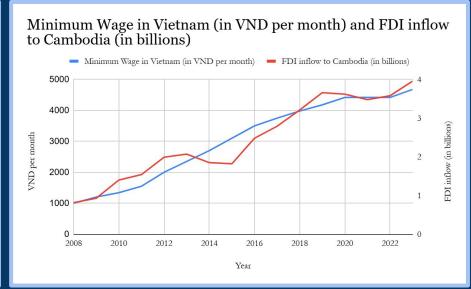


- Strong correlation of 0.915442891
 - a correlation of ±0.75
 is considered a high
 degree of correlation
 (Nickolas, 2024)

(Trading Economics, 2025a; World Bank Group Data, 2023b)

Data and Findings — Quantitative



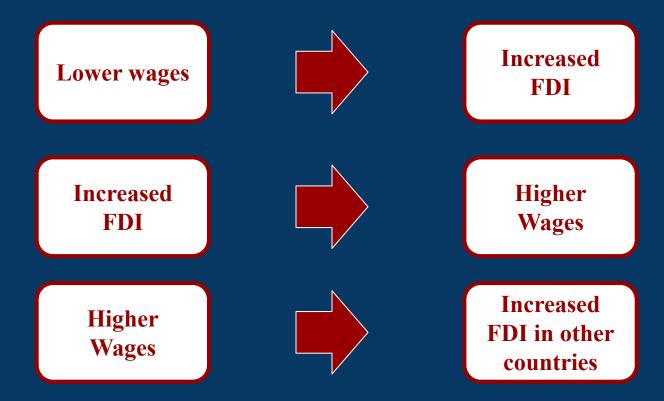


• Strong correlation of 0.9946245728

• Strong correlation of 0.9626409259

Results and Conclusions -- Quantative

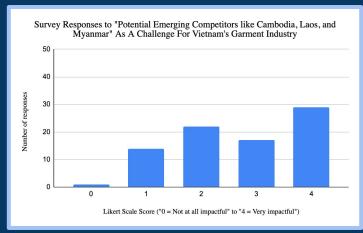
Correlations and Literature Review supports...

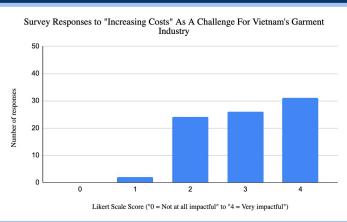


Data and Findings -- Qualitative

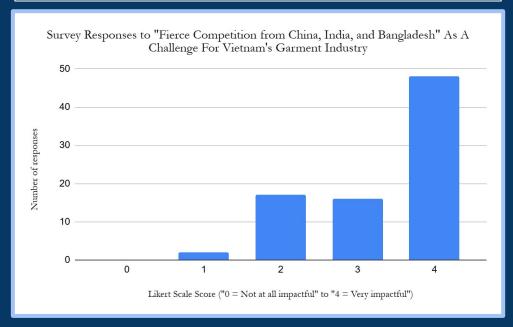
Source	Methodology	Pros	Cons
(Ha, 2020)	Meta-analysis	 Short-term economic growth Employment Industrialization and Productivity 	DependencyIndustrialization and Productivity
(Ngo, 2017)	3 field studies and 47 interviews	Short-term economic growth	Industrialization and ProductivityDependencyCompetition
(Nguyen, 2020)	Literature review	Short-term economic growth	 Dependency Long-term economic growth Competition
(Hao, 2024)	Literature Review	N/A	• Employment
(Quang, 2020)	8 interviews and 83 survey responses	CompetitionIndustrialization and Productivity	DependencyLong-term economic growth

Data and Findings — Qualitative





Survey responses from Domestic Vietnamese T&G Manufacturing Executives



(Quang, 2020)

Results and Conclusions -- Qualitative

Pros

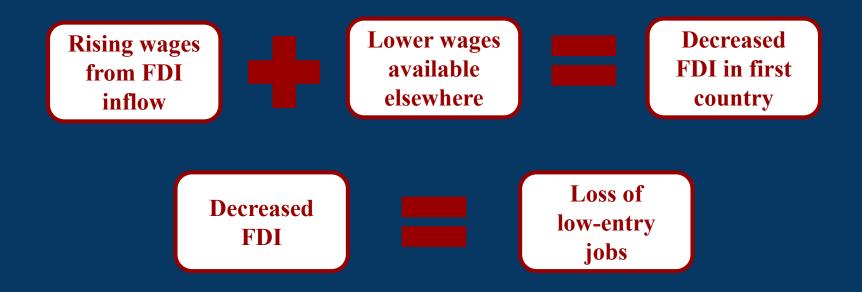
- Creates jobs (Eom, 2018)
- Increases GDP (Ha, 2020; Ngo, 2017; Nguyen, 2020)
- Receiving country is introduced to global supply chain through FDI host country (Ngo, 2017)

Cons

- Likely does not transform T&G manufacturing industry or structural change economy because of failed policies to domesticate (Ngo, 2017)
- No correlation between increased FDI and increased productivity in domestic firms (Ha, 2020)
- Economic dependency can increase risk of job loss (Dijkstra, 2020) and is supported by correlation table

Implications and Next Steps

Does this indicate that FDI will decrease as wages increase and how does that affect job security?



Implications and Next Steps

- Collect further data on employment and FDI in Rwanda
 - Collect data on amount of job opportunities lost and created by increased FDI
- Research further if job security would increase with increased FDI
- Increase investment in domestically owned firms to prevent foreign dependency



(Dijkstra, 2020)

Thank You For Listening!!

Benissan, E. (2022, September 15). Can a Rwandan manufacturing facility boost the "made in africa" movement?. Vogue Business. https://www.voguebusiness.com/fashion/rwandan-manufacturing-facility-boost-made-in-africa-movement-asantii-pink-mango

This article highlights rising global brands from Rwanda, like Pink Mango, while acknowledging the challenges of expanding manufacturing. The focus is on which African companies are successful in the international textile sphere, and based on
the interviews, it argues the need for policymaking to prioritize African brands in policymaking to reduce dependency on imports. The author's voice does not shine through, so the argument feels more like a presentation
of facts than an opinion piece. It is not the most credible source because it was published by a for-profit organization and does not appear to be peer-reviewed. Nevertheless, it provides excellent insights into what has been successful for Rwandan
manufacturing.

Caryl, C. (2015, April 2). Africa's Singapore Dream. Foreign Policy. Retrieved October 22, 2024, from https://foreignpolicy.com/2015/04/02/africas-singapore-dream-rwanda-kagame-lee-kuan-yew/

This source is more focused on Rwanda's diplomacy, but it gives a nuanced background to Rwanda and East Asia's relationship and the origins of Kagame's economic goals. The author delves into the history of Singapore to contextualize why Rwanda would strive for a similar financial model. They both had similarly low GDPs per capita after their independence from colonization, enacted cleanliness laws, made English the common language, and prioritized entrepreneurship. The author refers to China as an autocracy which structurally is correct, but it also could be considered a political bias on this topic. This news publication is also for profit, so it may sway their opinion. Besides that its overall a credible source because the information is cited and the author was top of his class at Yale and has been widely published by household names like the Washington Post.

Dijkstra, A. (2020, October 1). Rwanda's clothing spat with the US helps China. BBC News. https://www.bbc.com/news/business-54164397

This article covers the origins of the clothing ban in East Africa and its impact on the Rwandan population. It features interviews with several Rwandan workers at prominent textile companies at varying ranks and their experiences after the clothing ban. The author also briefly touches on former Chagua sellers switching to Chinese clothing. While they do not directly make an argument, the arrangement of interview quotes and information conveys that Rwanda's secondhand clothing ban has been harmful to Rwanda's economy due to cheap Chinese fashion infiltrating the markets. The BBC is a reputable organization famous for their unbiased coverage of global issues. This article is no different as its primary goal is to present information from interviews and testimonies of people affected by the ban.

Eom, J. (2018). Chinese manufacturing moves to Rwanda: A study of training at C&H Garments. China Africa Research Initiative. Retrieved October 1, 2024, from

https://africa.isp.msu.edu/files/1516/3625/1577/ WP 18 Eom CH Garments.pdf

This source acknowledges the importance of this issue from a policy perspective, as Rwanda has cut ties with the United States under the AGOA Act to expand the Rwandan manufacturing sector. It argues that China should increase regional relations with Rwanda and uses the Flying Geese Theory of economics to support this. The author utilizes the case study approach by interviewing officials within the most prominent Chinese textile manufacturer: *C&H Garments*. Eom concludes that Rwanda has autonomy in this diplomatic relationship because they negotiated for Rwandan factory workers to be trained and that *C&H Garments* will likely structurally transform the Rwandan economy. This is a highly credible source. The author studied politics at Harvard, worked for the World Bank, and has written several research papers for different elite universities. However, Eom studied at Tsinghua University in Beijing and was published by the China Africa Research Initiative (CARI), which hired Tang Xiaoyang. Xiaoyang wrote another one of my sources, and he adamantly defends China's involvement in Rwanda, so it's likely that Janet Eom has a similar perspective.

Gambino, L. (2017, December). 'It's about our dignity': vintage clothing ban in Rwanda sparks US trade dispute. *The Guardian*. Retrieved October 22, 2024, from

 $\underline{https://www.theguardian.com/global-development/2017/dec/29/vintage-clothing-ban-rwanda-sparks-trade-dispute-with-us-united-states-secondhand-garments}$

This article explores the effect the secondhand clothing ban had on Rwandan vendors who relied on those imports and how C&H Garments has filled the niche for affordable clothing. The author also reports that prior to the IMF and the World Bank enforcing trade liberalization policies, many thriving Rwandan factories to close and introduced Chinese dependency. This source is credible but since it is from a publication and not a government or educational organization I'm not going to rely on it for my facts. I was also easily able to find more information on the author Lauren Gambino and she's a senior correspondent at The Guardian.

Ha, V. T. C. (2020, December). Waikato. The Effects of Foreign Direct Investment on Domestic Firms.

https://researchcommons.waikato.ac.nz/server/api/core/bitstreams/b8cfc2ca-764a-4568-bb63-0a4471605831/content

This source is a thorough academic paper the author wrote for his Ph.D at The University of Waikato in New Zealand. It examines the effects of FDI on domestic firms through a range of perspectives.

Hao, T. K., Hieu, N. T., & Thao, N. P. (2024, March). Trade and investment activities of China in Vietnam and Some Related Issues. Institute for International Trade and Investment. https://iti.or.ip/report_155.pdf

This paper is a literature review that covers the history of Trade and Investment between China and Vietnam up to today. This paper is credible because it was written by three different researchers at Hanoi University of Business and Technology (HUBT) Vietnam, two with PhDs and one with an MBA. It was also published in 2024, so the information is highly current.

Human Capital Data (2024). Adult composite measure of labor underutilization, ages 25+ [Data set]. World Bank. https://humancapital.worldbank.org/en/indicator/WB_HCP_LUU_2LU4_MF_A

Jamieson, N. L., & Buttinger, J. (2025, February 23-a). Vietnam. Encyclopædia Britannica. https://www.britannica.com/place/Vietnam/Vietnam-since-e-1990

A thorough history of Vietnam's government, economy, and history. Published and fact-checked by Britannica encyclopedia, so it's very reliable.

Kagayo, M. J. (2021). An Exploratory Study on the Rwandan Fashion and Textile Industry (1685666). [Master's thesis, Uppsala Universitet]. Publications from Uppsala University.

This source includes a literature review of the impacts of the second hand clothing band on the Rwandan textile industry. Kagayo also interviewed two high end Rwandan brands, two local tailors, and a women led manufacturing company. She also explores Chinese companies' role in the Rwandan textile industry through a critical lens. This source seems very credible because it was published by Uppsala University in Sweden by a master's student who was originally from Burundi. Since an East African researcher wrote this paper it's more likely she could capture the Rwandan worker's perspective that would be omitted if it was critical of Chinese interest groups. This study would have been more credible if it had been published by a professor or someone with more experience.

Labour Force Survey 2024. (2024, July 25). National Institute of Statistics of Rwanda. https://www.statistics.gov.rw/publication/2160

This source includes a comprehensive set of employment statistics and recent surveys conducted by The National Institute of Statistics of Rwanda. Since a Rwandan government agency Diplomats Prepared these results, and they are very recent, they are a very credible source for my research.

Lemarchand, R., & Clay, D. (2025, February 23-b). Rwanda. Encyclopædia Britannica. https://www.britannica.com/place/Rwanda

A thorough history of Rwanda's government, economy, and history. Published and fact-checked by Britannica encyclopedia, so it's very reliable.

Mamichi, O. (2024, December 9). Top 10 biggest textile exporters of the world in 2025. Best Diplomatic Conferences | New York.

This source summarizes a lot of information about textile exporters in the global market. Best is an organization based in New York that simulates conflicts, negotiations, and conferences to prepare future diplomats.

Ngo, C. N. (2017a). Industrial Development, liberalisation and impacts of Vietnam-china border trade. European Journal of East Asian Studies, 16(1), 154-184. https://doi.org/10.1163/15700615-01601008

Findings are based on three fieldwork sessions that totaled eight months and forty-seven interviews with experts (government officials, firm managers, suppliers, consumers, and industry experts). This source is very credible because it was written by an accredited professor of economics at Bucknell University and was published by The European Journal of East Asian Studies. It was also published in 2017, so the information is relatively current.

Nguyen, T. (2020, June 18). Is Vietnam Eating into China's share of manufacturing? Carnegie Endowment for International Peace. https://carnegieendowment.org/posts/2020/06/is-vietnam-eating-into-chinas-share-of-manufacturing?lang=en

An economist wrote this article and summarizes a variety of quantitative and qualitative. It is credible because Carnegie Mellon's Endowment published it.

Nickolas, S. (2024, December 26). Correlation Coefficients: Positive, Negative, and Zero. Investopedia, https://www.investopedia.com/ask/answers/032515/what-does-it-mean-if-correlation-coefficient-positive-negative-or-zero asp

NISR (2024). Labour Force survey 2024 [Data set]. National Institute of Statistics Rwanda. https://www.statistics.gov.rw/publication/labour-force-survey-annual-report-Ngo, C. N. (2017a). Industrial Development, liberalisation and impacts of Vietnam-china border trade. European Journal of East Asian Studies, 16(1), 154–184. https://doi.org/10.1163/15700615-01601008

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NISR (2024). Labour Force survey 2024 [Data set]. National Institute of Statistics Rwanda. https://www.statistics.gov.rw/publication/labour-force-survey-annual-report-2024

Omoruyi, E. M. (2021). China's Shifting Labour-Intensive Manufacturing Firms to Africa. Journal of Comparative Asian Development, 18(2), 1–36. https://doi.org/10.4018/jcad.285550

This source acknowledges Rwanda's recent economic success but dives deeper into its issues with manufacturing. The tone of this source is much more theoretical as it is centered around determining whether the economic relationship between Rwanda and China follows the principles of the flying geese comparative advantage theory. It also focuses on the impact of China's foreign direct investment and analyzes the likelihood of it leading to an industrial revolution. This source seems very credible. I couldn't find as much about the author as I could on Tang Xiaoyang but E. M. Omoruyi did earn a Ph.d in World Economy. The source itself is theoretical enough that it does not seem to be biased.

Quang, T. T., Tran, T., Tho, A., & Burgess, J. (2020). Chances and challenges of Vietnam's garment industry in the new trend of Sustainable Development. 2020 5th International Conference on Green Technology and Sustainable Development (GTSD), 286–290. https://doi.org/10.1109/gtsd50082.2020.9303100

Comprised of two studies. The first study was a qualitative look into the opportunities and challenges within the Vietnamese Garment industry through eight interviews with executives. The second study provides quantitative evidence from the survey responses of 83 leading professors and experts in the industry. This source is credible because it was prepared by three different Vietnamese professors specializing in Business and Garment Technology at Ho Chi Minh University of Technology and Education. It was also presented at an international conference, which increased its legitimacy.

Trading Economics. (2025-a). China Minimum Monthly Wages [Data set]. Trading Economics. https://tradingeconomics.com/china/minimum-wages

Trading Economics (2025-b). Vietnam Minimum Wages [Data set]. Trading Economics. https://tradingeconomics.com/vietnam/minimum-wages

World Bank. (2011). From Flying Geese to Leading Dragons. https://openknowledge.worldbank.org/server/api/core/bitstreams/55acb391-76c7-5fcb-8784-1e00da0833ec/content

This source is an in-depth exploration of the Flying Geese Theory of economics and how its served developing countries. Lin argues that Flying Geese Theory is a highly successful approach for developing countries because, under the latecomer advantage, developing countries can replicate evolving industries found in developed countries. Economist Justin Yifu Lin was the Senior Vice President of the World Bank when he wrote this policy research paper on the Flying Geese Theory. He is a prominent figure in the economic policies of developing countries and is a reputable source. However, shortly after writing this complimentary paper on the success of this Chinese economic policy, he was appointed as State Council Counsellor of China by the CCP Premier. Given his involvement with the Chinese government, it is unlikely that he would criticize their policies.

World Bank Africa Eastern and Southern. (2023, April). Poverty & Equity Brief Rwanda (J. C. Parra Osorio, Author). World Bank.

This source summarizes and reports data gathered by the World Bank on poverty and equity in Rwanda. The economist found that despite considerable economic growth, the rate of poverty reduction does not match. Osorio cites that compared to other African countries with a similar income per capita, Rwanda has higher poverty rates. This is a credible source because it was published by the World Bank, which, though it is not a government institution, is owned by 187 governments globally. The author is also not trying to argue or persuade on what the Rwandan government should do but simply reporting facts.

World Bank Group Data (2023a). Foreign direct investment, net inflows (BoP, current US\$) - Cambodia [Data set]. World Bank Group.

https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?end=2023&locations=KH&start=1970&view=chart

World Bank Group Data (2023b). Foreign direct investment, net inflows (BoP, current US\$) - Viet Nam [Data set]. World Bank Group. https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=VN

Xiaoyang, T. (2022). IMPACT OF ASIAN INVESTMENT ON AFRICA'S TEXTILE INDUSTRIES. Carnegie Endowment for International Peace. Retrieved October 16, 2024, from

https://carnegieendowment.org/research/2014/08/the-impact-of-asian-investment-on-africas-textile-industries?lang=en

Tang Xiaoyang argues that while the inflow of Chinese competitors in the East African fashion industry stifles domestic enterprises, they provide crucial co-development opportunities. The study primarily focuses on what East African policymakers should be doing to encourage Asian outsourcing. Looking into Tang Xiaoyang background, it is clear that he is an adamant defender of China's economic involvement in Africa. In interviews, he's claimed that Africa's debt caused by Chinese predatory lending was actually the U.S. fault because they trade in American dollars.