

Gender, Value-Chain Upgrading, and The Costs of Human Capital: The Case of a Garment Supply Chain in China

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The Global Value Chain (GVC) has become a mainstream analytical framework to map the unequal distribution of value-addition and surplus-capturing power across the global supply-chain economy. Gender and development scholars find that gender inequality in and beyond the GVC constitutes unequal distribution of economic surplus in the GVC. Meanwhile, the GVC discussion also generates a normative development prescription for Global South actors, upgrading their positions in the GVC through strategic accumulation of technology, innovation, and human capital. While gender has been integral to the scholarly analysis of the GVC distributional problem, it is largely absent from scholars' evaluations of the GVC solution of value-chain upgrading. Especially considering that one key element in value-chain upgrading strategies—human capital accumulation—inevitably relies on social institutions that are highly gendered, it is worth questioning the presumption that the costs and gains of value-chain upgrading agenda are “gender neutral.”

I question this presumption through a case study of China's recent transition to a value-chain upgrading regime and its impact on female internal migrant workers, who have constituted the backbone of China's manufacturing economy. Since the late 2000s, the Chinese state has embraced a new, GVC-informed, developmental regime that has focused on upgrading the “quality” of its manufacturing economy through industrial policies (some part of which was once known as “Made in China 2025”) and enhancing the “quality” of its future workforce through labor, welfare, and population law reforms. While the Chinese state's upgrading reform formalized certain factory jobs and expanded social benefits to migrant workers, the reform's heavy emphasis on human capital investment—lacking sufficient public support though it did—dramatically intensified the demand for unpaid parenting work from female workers, which drove them to more precarious and lower quality home-based industrial work in their inland hometowns. This resulted in new gender-based subordination dynamics in the supply chain and unequal access to the

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gains of “upgrading.” This case study contributes to the gender and value chain literature by highlighting the gendered yet often invisible labor costs of human capital investment that are integral to value-chain upgrading and the role of welfare and labor law and development policies in creating and distributing such costs.

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Introduction

The Global value chain (GVC) has become a mainstream analytical framework to map the unequal distribution of value-addition and surplus-capturing power across the increasingly globalized supply chain economy.¹ Gender and development scholars increasingly understand gender inequality as integral to the unequal distribution of economic surplus in the GVC.² By focusing on female workers concentrated on the lower end of the GVC, scholars have discovered the inseparability between the unequal distribution of economic

1. See generally Gary Gereffi, John Humphrey & Timothy Sturgeon, *The Governance of Global Value Chains*, 12 REV. INT’L POL. ECON. 78, (2005); IGLP Law & Global Production Working Group, *The Role of Law in Global Value Chains: A Research Manifesto*, 4 LOND. REV. INT’L L. 57, (2016).

2. See generally STEPHANIE BARRIENTOS, GENDER AND WORK IN GLOBAL VALUE CHAINS: CAPTURING THE GAINS? (2019); ANNIE DELANEY ET AL., HOMEWORKING WOMEN: A GENDER JUSTICE PERSPECTIVE (2018); Shelley Marshall, Kate Taylor & Sara Tödt, *Gendered Distributive Injustice in Production Networks: Implications for the Regulation of Precarious Work*, 52 INDUS. L.J. 107 (2023).

surplus capturing power in the GVC and the gender dynamics in the social institutions, such as the household and the community in which workers are embedded.³ One iconic figure embodying this integration is the female industrial homemaker.⁴ The fact that female workers continue to bear more unpaid social reproductive duties to their households and communities often becomes a barrier for them to access higher value-addition activities and better surplus-capturing positions in the GVC.⁵ In the meantime, the community's undervaluation of female homemakers' unpaid social reproductive work often enables lead firms and other actors to attach a lower value to their productive activities than they would to comparable work in factory settings, perpetuating economic exploitation in the GVC.⁶

Other than providing an analytical framework about inequality in the global supply-chain economy, the GVC literature has also generated a redistribution agenda for Global South firms, industries, workers, and governments with significant normative gravity: value-chain upgrading.⁷ As it proposes, through intentionally accruing human capital, skills, technology, and innovation capacities through strategic GVC participation, and by adopting upgrading-minded industrial government policies that enable and motivate such upgrading efforts, Global South actors can acquire better surplus-capturing positions in the GVC (industrial upgrading), and better working and living conditions for workers and their families (social upgrading).⁸ As critical socio-legal scholars observe, innovation-based upgrading has become the most promising, if not the only, strategy in the mainstream GVC discussion.⁹

Bridging these two sides of the GVC discussion, this Article raises an under-explored question: where is gender in this normative proposal of value-chain upgrading? One key element in the value-chain upgrading agenda—human capital accumulation—inevitably relies on processes and institutions of social reproduction outside the GVC or even outside the formal “economy.”¹⁰ As gender and development scholars have recorded, it is precisely the gender dynamics in these social institutions that contribute to gender-based distributional injustice in the GVC.¹¹ Thus, herein lies a potent distributional

3. See DELANEY ET AL., *supra* note 2, at 20; Marshall, Taylor, and Tödt, *supra* note 2, at 115.

4. See DELANEY ET AL., *supra* note 2 *passim*.

5. See *Id.* at 6-8.

6. Marshall, Taylor, and Tödt, *supra* note 2, at 111-12.

7. See Seth Pipkin & Alberto Fuentes, *Spurred to Upgrade: A Review of Triggers and Consequences of Industrial Upgrading in the Global Value Chain Literature*, 98 WORLD DEV. 536, 536 (2017); IGLP Law & Global Production Working Group, *supra* note 1, at 68.

8. Thomas Bernhardt & Ruth Pollak, *Economic and Social Upgrading Dynamics in Global Manufacturing Value Chains: A Comparative Analysis*, 48 ENV'T & PLAN. A 1220 (2016); Pipkin & Fuentes, *supra* note 7, at 548.

9. Dan Danielsen & Jennifer Bair, *The Role of Law in Global Value Chains: A Window into Law and Global Political Economy*, L. & POL. ECON. PROJECT (Dec. 16, 2019), <https://lpeproject.org/blog/the-role-of-law-in-global-value-chains-a-window-into-law-and-global-political-economy/> [<https://perma.cc/6KSA-FQ2G>].

10. See Kerry Rittich, *Black Sites: Locating the Family and Family Law in Development*, 58 AM. J. COMPAR. L. 1023, 1050-51 (2010).

11. BARRIENTOS, *supra* note 2, at 2; Marshall, Taylor, and Tödt, *supra* note 2, at 127. For a full discussion of the gender and GVC literature, see *infra* Part I.A.

question: what is the distributional effect of value-chain upgrading—a strategy envisioned to empower and redistribute in favor of most, if not all, Global South actors’ value-addition positions—from a gender perspective? Who is accruing the gains from upgrading, and who is billing for its costs both in and outside the GVC? And what is the role of the state in this process of creating and distributing these costs through its laws and policies?

In exploring these questions, this Article proposes some tentative observations through a case study of China’s recent value-chain upgrading reform and its impact on the labor, migration, and family strategies of female internal migrant workers, who have constituted the backbone of China’s position as the “world’s factory” in the global supply chain. I draw from my field work in one coastal industrial town and two inland labor emigration regions in East and Central China between 2018 and 2019, research into China’s law and policy, and sociological and ethnographic research about China’s migrant workers.¹²

As the Chinese state heavily-handedly transitions its economy from an export-oriented cheap-production development regime to a value-chain-upgrading regime (part of which was once known as “Made in China 2025”), it has adopted a set of industrial and social upgrading legal reforms in an effort to significantly restructure its manufacturing economy as well as the country’s regime of social reproduction. In the cheap-labor regime, the Chinese state employed loose labor regulation, strict population control, and a bifurcated social welfare regime to suppress the needs and costs of social reproduction of internal rural-to-urban migrant workers (hereinafter “migrant workers”).¹³ The Chinese state used the *hukou* (household registration) system to exclude migrant workers from fully accessing social benefits in worksite localities and continued migrant worker households’ dependence on their hometown regions for childrearing.¹⁴ For more than two decades, this labor regime channeled both male and female migrant workers into migrating to coastal industrialized regions, where they participated in hyper-productive factory work for a relatively low price.¹⁵

Moving its economy into the new value-chain-upgrading regime, the Chinese state has shifted to emphasize the quality and quantity of the workforce and the importance of “social upgrading” both as an end in itself and as a means to enable the industrial upgrading goals of switching to higher-value industries and activities. While this shift leads to better labor regulation, more social protection, and significant, albeit substantively inadequate, state efforts to close the urban-migrant social welfare gap, the upgrading reform also carries a much higher expectation of parents’ role in investing in their children’s

12. See *infra* Part III.A for a discussion of the methodology. For a more in-depth sociological analysis about the transformation of the labor process in this case study, see Yiran Zhang, *The Paradox of Upgrading: Standards of Social Reproduction and the Gendered Precarization of Garment Work in China*, CRITICAL SOCIO. (forthcoming 2025), available at <https://journals.sagepub.com/doi/10.1177/08969205241307938> [<https://perma.cc/9JLL-TGG5>].

13. CHING KWAN LEE, AGAINST THE LAW: LABOR PROTESTS IN CHINA’S RUSTBELT AND SUNBELT 21-22 (2007); Ngai Pun, Chris King Chi Chan & Jenny Chan, *The Role of the State, Labour Policy and Migrant Workers’ Struggles in Globalized China*, 1 GLOB. LAB. J. 132, 133 (2010).

14. Pun, Chan & Chan, *supra* note 13, at 137.

15. See LEE, *supra* note 13, at 250; Pun, Chan, & Chan, *supra* note 13, at 135-36.

human capital.¹⁶ Coupled with the Chinese state's increasingly gendered ideology about "family values," this process delivers a new normative gender contract that emphasizes women's contribution to the national economy through their unpaid maternal care.¹⁷

As I observed in my field study, the Chinese state's new workforce upgrading discourse, set against the backdrop of a highly competitive educational system, fed into the emerging social norm of "student companion mothers" in which mothers of teenage students had to live around the child's school and perform meticulous care to improve the chances of them getting into college.¹⁸ The legacy of substandard social welfare rights from the previous regime, especially access to education, continued to lead migrant workers to keep their children in inland hometowns rather than industrialized cities where they worked.¹⁹ Without sufficient public support and any meaningful restructuring of the intense factory work, female migrant workers faced new obstacles to accessing factory jobs and entrepreneurial opportunities in coastal industrialized regions. Instead, they created new forms of highly informal manufacturing work in home-based workshops around inland schools, what locals called the "mothers' workshops," that subcontracted the labor-intensive assembling step from coastal factories. This new subordinated extension to the supply chain which concentrated female workers and low-value-addition activities enabled coastal firms and local governments to partially realize the goals of industrial upgrading, without bearing all of the associated labor costs, while creating new workforce constraints for these upgrading strategies.

In other words, the value-chain-upgrading development policy demands "upgrading" the human capital of the next generation's workforce, which, in this particular labor and welfare regime, led many female workers to "downgrade" and caused new gender-based distributional injustice in the supply-chain economy. This not only raises cautions about the gender implications of the value-chain-upgrading agenda but also sheds light on the role of welfare law and development policies in creating and distributing such costs.

16. For more discussion of the upgrading reforms, see generally FLORIAN BUTOLLO, *THE END OF CHEAP LABOUR?: INDUSTRIAL TRANSFORMATION AND SOCIAL UPGRADING IN CHINA* (2014) (analyzing industrial upgrading in China); MARY GALLAGHER, *AUTHORITARIAN LEGALITY IN CHINA: LAW, WORKERS, AND THE STATE* (2017) (analyzing labor law reforms as part of China's upgrading reforms); Eli Friedman, *Just-in-Time Urbanization? Managing Migration, Citizenship, and Schooling in the Chinese City*, 44 *CRITICAL SOCIO.* 503, 514 (2018) (analyzing social welfare reforms as part of the upgrading reforms).

17. See generally LETA HONG FINCHER, *LEFTOVER WOMEN: THE RESURGENCE OF GENDER INEQUALITY IN CHINA* (2016) (arguing that gender inequality worsened under Xi); See Yun Zhou, "Good Mothers Work": *How Maternal Employment Shapes Women's Expectation of Work and Family in Contemporary Urban China*, 76 *J. SOC. ISSUES* 659, 675 (2020).

18. Also see Xiaohan Wei, *A Studied Sacrifice: Why China's Moms Bet All on Education*, *SIXTH TONE* (Apr. 9, 2022), https://www.sixthtone.com/news/1010049/https%3A%2F%2Fwww.sixthtone.com%2Fnews%2F1010049%2Fa-studied-sacrifice-why-chinas-moms-bet-all-on-education%3Fsource%3Dchannel_sixth [https://perma.cc/BP6N-2THK].

19. ELI FRIEDMAN, *THE URBANIZATION OF PEOPLE: THE POLITICS OF DEVELOPMENT, LABOR MARKETS, AND SCHOOLING IN THE CHINESE CITY 2*, 9-12 (2022) (arguing that exclusion from schools has become the Chinese government's most major population governance mechanism for migrant workers).

In what follows, Part I reviews the gender and GVC literature while posing the question about gender in value-chain upgrading. Part II introduces China's transition from the cheap-labor development regime to the value-chain-upgrading regime. This includes the industrial, social, and population policies catering to each regime. Part III records how the Chinese state's human capital upgrading discourse drove female migrant workers' transition from factory girls to homemaker mothers, as well as the transition's reverse impact on the industrial upgrading efforts. The last Part draws some general reflections about gender, human capital, and value-chain upgrading.

I. Gender and Distribution in the Global Value Chain

This Part traces how gender factors into the global value chain (GVC) literature's analysis of unjust distribution and outlines the GVC's framework for upgrading. Bridging these two parts, I raise the gender and distribution question about value-chain upgrading.

A. Gender and Unequal Distribution in the Global Value Chain

In a globalized economy, the production and exchange of a single commodity is increasingly coordinated and organized among various economic actors across and between firms and nations in a global supply network.²⁰ GVC analysis provides an encompassing conceptual framework for understanding the creation and distribution of value and power in the whole economic process across national borders, even beyond the employer-employee relationship.²¹ Further, the framework offers useful entry points to dissect the common factors underlying the global and local dynamics of unequal distribution, such as unequal access to particular productive activity and human-capital upgrading opportunities, differentials in relative rewards, and the hierarchical governance structure at various nodes of the chain.²²

Scholars are increasingly integrating the gender perspective into analyzing these dynamics of unequal distribution within the GVC.²³ On the one hand, the globalizing of production improves gender inequality by creating income-earning opportunities for women and drawing them into work from which they were once excluded.²⁴ On the other hand, gender inequality underlies the structurally unequal distribution in the GVC. From an inter-firm distribution perspective, lead firms often have more control over value distribution and upgrading activities than lower-tier contractors in the value chain, while gender inequality in the broader society can shape the gender profiling of lead versus

20. Gereffi, Humphrey, and Sturgeon, *supra* note 1, at 82–83.

21. Stephanie Barrientos, *Gender, Flexibility and Global Value Chains*, 32 IDS BULLETIN 83, 83–84 (2001).

22. *Id.* at 84–85.

23. *Id.*

24. Stephanie Barrientos, *Gender and Global Value Chains: Challenges of Economic and Social Upgrading in Agri-Food* 7, 19 (Robert Schuman Ctr. for Advanced Stud., Working Paper No. RSCAS 2014/96, 2014), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2503391 [<https://perma.cc/DH2A-ALC6>].

lower-tier firms.²⁵ From a division-of-labor perspective, gender-specific constraints in access to productive resources and infrastructure constitute barriers for female workers to access high value-addition positions, leaving them concentrated in certain low-reward jobs on the lower rungs of the value chain.²⁶ The predominantly female manufacturing workers on the lower end of the GVC capture even less value than the pecuniary calculation would suggest, considering that they often suffer the negative health outcomes of perpetual overwork and often drop out of GVC production early once past their prime working age.²⁷

Because of these factors, the gender perspective on GVC analysis increasingly expands beyond the narrow scope of contract and employment relationships within the GVC. A line of scholarship has analyzed how the global supply network incorporates and interacts with the existing gender structure in local social institutions, such as the household and the community in which firms and workers are embedded.²⁸ Across economies, women are continuously expected to participate more in social reproductive work, mostly unpaid, than men are, which creates barriers for them to access certain paid jobs.²⁹ Even when women participate in a paid workforce, the value of their productivity is often undervalued due to their social association with reproductive activities.³⁰

One major site of this globalized co-constitution between patriarchy and capitalism is the entanglement between women's participation in unpaid care work and home-based industrial work.³¹ Industrial homeworkers—predominantly women—continuously constitute a major workforce in the GVC of garments and other labor-intensive, light-equipment commodities, despite the common myth that homeworking is an exceptional form of production that will dissipate in the deepening of capitalism.³² For example, studies of Thai homeworkers reveal that they simultaneously face pressure for price and production speed from GVC lead firms alongside the undervaluation of their work from the local community.³³ The local community justifies female homeworkers' lower compensation from the higher-tier firm in comparison to factory workers fulfilling similar activities because of the homeworker's presumed caregiver role in their family; by extension, homeworkers' need for the market income is less acute than breadwinner factory workers, so their productive activity is considered a continuation of economically low-worth housework rather than a

25. Barrientos, *supra* note 21, at 88-89.

26. PENNY BAMBER & CORNELIA STARITZ, INT'L CTR. FOR TRADE & SUSTAINABLE DEV., *THE GENDER DIMENSIONS OF GLOBAL VALUE CHAINS* 2 (2016).

27. DEV NATHAN ET AL., *REVERSE SUBSIDIES IN GLOBAL MONOPSONY CAPITALISM* 97-111 (2022).

28. Marion Werner, *Global Production Networks and Uneven Development: Exploring Geographies of Devaluation, Disinvestment, and Exclusion*, 10 *GEOGRAPHY COMPASS* 457, 457 (2016); BARRIENTOS, *supra* note 2, at 9; Marshall, Taylor, and Tödt, *supra* note 2, at 144.

29. Colin C Williams & Sara Nadin, *Work Beyond Employment: Representations of Informal Economic Activities*, 26 *WORK, EMP. & SOC'Y* 1, 3 (2012).

30. Barrientos, *supra* note 21, at 85-86; DELANEY ET AL., *supra* note 2, at 82.

31. See Marshall, Taylor, and Tödt, *supra* note 2, at 108; DELANEY ET AL., *supra* note 2; Alessandra Mezzadri, *A Value Theory of Inclusion: Informal Labour, the Homeworker, and the Social Reproduction of Value*, 53 *ANTIPODE* 1186, 1189 (2021).

32. DELANEY ET AL., *supra* note 2, at 24-28.

33. Marshall, Taylor, and Tödt, *supra* note 2 at 116-26.

full market activity.³⁴ The societal undervaluation of certain “feminine”-coded productive activities can also result in a lower remuneration for labor in certain value chains, enabling lead and higher-tier firms to capture more value in the distribution.³⁵

From a regulatory perspective, home-based industrial is often invisible and falls outside the scope of traditional labor law, legally reinforcing their status as “not real workers.”³⁶ Recently, both state and international actors have initiated various attempts to extend the labor regulatory regime to homeworkers in the GVC.³⁷ Nevertheless, the regulatory attempts which consciously aim at homeworkers cannot circumvent the conceptual commingling between their paid manufacturing work—which is seen as part of the GVC—and their unpaid reproductive work, which falls outside of it. In the homeworkers’ lived experience, the highly informalized production process and the social reproduction process are often boundaryless: they experience the merger between the space, time, and monetary cost of paid manufacturing work and unpaid household duties.³⁸

In sum, scholars are increasingly noticing how gender inequality integrates with the unfair distribution in the GVC and identify the root of such inequality in and beyond GVC relationships.

B. Upgrading as the GVC Solution

In addition to being a diagnostic tool, the GVC framework has also been a powerful prescription-generating machine. Since its beginning, the GVC framework has carried an explicit normative agenda to assist economic actors in the Global South in identifying strategies that could enhance their positions in the GVC by accruing better value-capturing positions in the inter-chain division of labor.³⁹ The notion of “upgrading” is core to the mainstream development agendas arising from GVC analysis, which refers to Global South actors, industries, and economies moving up the ladder of the GVC through strategic GVC participation and investment in pivotal factors.

Observing various value-chains and actors in different regions, the GVC literature has come up with a taxonomy of common industrial upgrading strategies. This includes firms’ and industries’ efforts to increase their capabilities of 1) making higher-value products, 2) making the same product in a more sophisticated and efficiently organized process, 3) expanding from low-value steps such as production to high-value functions such as branding and marketing of the same product, 4) entering higher value end market, and 5) leveraging skills and knowledge in the current chain to enter a new, higher-value chain.⁴⁰ The success of a specific upgrading strategy for a firm or an industry depends

34. *See id.* at 124–25.

35. Barrientos, *supra* note 21, at 85.

36. Marshall, Taylor, and Tödt, *supra* note 3, at 126–27.

37. *See, e.g.*, some of the other contributions to this symposium issue.*

38. Mezzadri, *supra* note 31, at 1198.

39. Gereffi, Humphrey, and Sturgeon, *supra* note 1, at 79–81.

40. Pipkin and Fuentes, *supra* note 7, at 538; KARINA FERNANDEZ-STARK, PENNY BAMBER & GARY GEREFFI, DUKE CTR. ON GLOBALIZATION, GOVERNANCE, & COMPETITIVENESS., UPGRADING IN GLOBAL VALUE CHAINS: ADDRESSING THE SKILLS CHALLENGE IN DEVELOPING COUNTRIES 6 (2012).

on both global and local characteristics of the value-chain and on the actor.⁴¹ The lead firm often has a stronger potential to incentivize and deter upgrading opportunities for lower-tier firms.⁴² Specifically, two major industrial upgrading strategies exist for garment and similar buyer-driver industries. The first is to move into the higher value-addition activities of design, marketing, and branding in the chain, which are usually controlled by lead firms in the chain.⁴³ A second strategy is moving from mere assembly to full-package production because, in this model, the manufacturer, not the retailer or marketer, controls the knowledge of making the item, which gives the manufacturer more bargaining power.⁴⁴

Despite the variation of these specificities, the value-chain upgrading agenda demands investments in a shared list of production factors that includes technology, innovation, skills, and human capital of the workforce.⁴⁵ As critical socio-legal scholars observe, innovation-based upgrading has become the most promising, if not the only, strategy to advance in the GVC in mainstream post-GVC development discussions.⁴⁶

In addition to firm strategies, the value-chain upgrading agenda demands and informs industry policymaking by the state and international governance organizations. For example, in an OECD background paper on skills and GVC upgrading, three GVC scholars wrote that the state can play the role of a catalyst for industrial upgrading by coordinating workforce development efforts, providing financial support, and regulating training quality, which, in turn, enables the accumulation of skills and other human capital.⁴⁷ A meta-analysis of value-chain upgrading cases has shown that the state's policy changes have been the most common trigger for value-chain upgrading efforts and, further, that the states capable of industrial policymaking have played a decisive role in the outcomes of upgrading efforts.⁴⁸ At the same time, an increasing number of developing states have consciously adopted upgrading-aware industrial policies, playing a more active and increasingly indispensable role in promoting their nations' industries and firms' value-capturing positions.⁴⁹ Moreover, the proposal of value-chain-upgrading informs development policymaking at international organizations such as the World Bank, while its scope reaches into labor and social policies in addition to trade and industrial ones.⁵⁰

41. See generally Jennifer Bair & Gary Gereffi, *Local Clusters in Global Chains: The Causes and Consequences of Export Dynamism in Torreón's Blue Jeans Industry*, 29 *WORLD DEVELOPMENT* 1885 (2001).

42. *Id.* at 1888.

43. GARY GEREFFI & OLGA MEMEDOVIC, U.N. INDUS. DEV. ORG., *THE GLOBAL APPAREL VALUE CHAIN: WHAT PROSPECTS FOR UPGRADING BY DEVELOPING COUNTRIES* 31-32 (2003).

44. *Id.*

45. Pipkin and Fuentes, *supra* note 7, at 538.

46. Danielsen and Bair, *supra* note 9.

47. Fernandez-Stark, Bamber, and Gereffi, *supra* note 40, at 17-20.

48. Pipkin and Fuentes, *supra* note 7, at 536-547.

49. See generally Gary Gereffi & Timothy Sturgeon, *Global Value Chain-Oriented Industrial Policy: The Role of Emerging Economies*, in *GLOBAL VALUE CHAINS IN A CHANGING WORLD* 329 (2013).

50. Victor Kummritz, Daria Taglioni & Deborah E. Winkler, *Economic Upgrading Through Global Value Chain Participation: Which Policies Increase the Value Added Gains?* 2 (World Bank Grp., Poly Rsch. Working Paper No. 8007, 2017), <https://papers.ssrn.com/abstract=3170147> [<https://perma.cc/V6DD-SXC9>].

Scholars increasingly observe the tension between industrial and social upgrading. The GVC's upgrading agenda commonly prioritizes firms and industries, presuming that Global South firms' moving into higher value activities—or industrial upgrading—generally enhances the conditions and rights of their workers—or social upgrading.⁵¹ Nevertheless, empirical studies increasingly show the contingency between firms' and their workers' interest in upgrading efforts, casting doubt on a universal synergy between economic and social upgrading.⁵² For example, industrial upgrading's increasing demand for quality and productivity might result in stricter discipline and higher demand for workers without necessarily sharing the value addition from such upgrading efforts, which can even result in job loss and downgrading of social conditions for affected workers.⁵³ Thus, certain legal infrastructures—typically labor regulations—are necessary to transform industrial upgrading into social upgrading.⁵⁴

Nevertheless, unlike the growing attention to how gender fits into the distributional injustice in the extant GVC, very little attention has been paid to gender and the GVC's upgrading agenda, a question that the next Section will turn to.

C. Where is Gender in the Value-Chain Upgrading Agenda?

One less-answered question is: how does gender fit in GVC's prescription of value-chain upgrading?

The leading gender and GVC scholar, Stephanie Barrientos, proposes an analytical framework to incorporate the gender perspective into the analysis of economic and social upgrading (or downgrading).⁵⁵ Barrientos's proposal mostly focuses on gender and the distribution of the gains from value-chain upgrading efforts. The two concerns here are: (1) the under-recognition of women's upgrading contributions and (2) gender-based barriers to upgrading opportunities. Female workers often contribute labor and creativity in firms' upgrading efforts, especially in labor-intensive industries, yet their contribution is not necessarily equitably remunerated by GVC actors.⁵⁶ In response, Barrientos also proposes that gender equity, or women's access to jobs with better conditions, should constitute a goal and marker of social upgrading.⁵⁷ This framework leads to a policy focus on gender equality in distributing upgrading-related resources and women's access to high-value jobs.⁵⁸

Nevertheless, the existent discussion about gender and value-chain upgrading has not yet questioned the costs of value-chain upgrading strategies and the distribution of such costs through a gender lens. It especially has

51. Pipkin and Fuentes, *supra* note 7, at 536.

52. Barrientos, *supra* note 24, at 91; Bernhardt and Pollak, *supra* note 8, at 1222-24.

53. Shengjun Zhu & John Pickles, *Bring In, Go Up, Go West, Go Out: Upgrading, Regionalisation and Delocalisation in China's Apparel Production Networks*, 44 J. CONTEMP. ASIA 36, 47 (2014).

54. *Id.*

55. Barrientos, *supra* note 2, at 3-4.

56. *Id.* at 6-7.

57. *Id.* at 6.

58. *Id.* at 20-21.

not fully internalized the gender critique of GVC on how gender dynamics in social institutions beyond GVC relationships constitute and reinforce unequal distribution in the GVC.⁵⁹ As a result, the discussion hardly goes beyond the “market access” centric analysis to understand and promote gender equality in the upgrading process.

To some degree, this silence is not surprising. The broader conversation about law and economic development frequently carves out the family and the household—where a significant portion of social reproduction happens—as a site for “cultural and local particularity” beyond the reach of development policies that focus on the market and market law.⁶⁰ This also rooted in the geographic paradox underlying the gender and GVC analysis: while the production and distribution of goods and their market values are global and transnational, the social reproduction of the workforce, especially of the Global South workforce, remains largely national and local.⁶¹

Nevertheless, the congruence of production and social reproduction processes in both GVC actors’ lived experiences and in upgrading strategies makes the cutoff arbitrary. Development policies increasingly carry a direct expectation that households and the process of workforce social reproduction will facilitate the goal economic development, which has a gender impact.⁶² As Kerry Rittich observes, the World Bank’s development program conceptualizes better education and health outcomes of children as an accumulation of productivity and human capital in the future workforce. This discourse that converges economic and social development also justifies channeling more resources, regulations, and, inevitably, the resulting family responsibilities to women in the household.⁶³ This development agenda both presumes and exacerbates the gender-based division of labor inside the household.⁶⁴

The same dynamic potentially lies underneath one key value-chain upgrading strategy—human capital investment. As the same OECD policy background paper on GVC and skill shows, while the short-term skill enhancement for industrial upgrading can be acquired through on-job training, the longer-term skill accumulation, especially for later-stage upgrading strategies, demands workers with higher degrees and policy intervention in the education field.⁶⁵ In other words, the more targeted forms of human capital investment involve skill transmission between firms of different tiers in the same GVC. However, the more general process of human capital investment relies on social institutions outside the production network, such as schools and households, which inevitably impact the division of labor and other governance dynamics in these institutions. From the gender and GVC literature, these dynamics are particularly potent causes of gender inequality in the GVC.

59. *Supra* Section I.A.

60. Rittich, *supra* note 10, at 1024.

61. This contrasts the social reproduction process of the Global North workforce, which more pronouncedly rely on care migration and a “global care chain.” See generally Arlie Russell Hochschild, *Global Care Chains and Emotional Surplus Value*, in *JUSTICE, POLITICS, AND THE FAMILY* 249 (2015).

62. See Rittich, *supra* note 10, at 1040.

63. *Id.* at 1040–42.

64. *Id.* at 1042.

65. Fernandez-Stark, Bamber, and Gereffi, *supra* note 39, at 21.

Thus, in addition to examining the gender dimension in the distribution of access to human-capital upgrading opportunities and the surplus from upgrading, it is worth asking a more comprehensive set of questions: what kind of social reproduction process does an upgrading strategy demand? How does it map onto the GVC as well as other social institutions in which the GVC is embedded? How is the labor involved in the social reproduction process distributed across institutions, both in and outside of the GVC and across actors of different genders (and other identities)? In other words, are the costs of value-chain upgrading gender-neutral?

To offer some tentative and context-specific observations about these questions, I turn to the case of China's recent value-chain-upgrading reform and its gender implications for the supply-chain economy in the rest of the Article.

II. Industrial and Social Policies in China's Value-Chain-Upgrading Regime

China's manufacturing economy is both a significant example of and a loyal disciple of the GVC analysis, especially its value-chain upgrading prescription. At the same time, the Chinese state's outlandishly explicit recognition that the control of the workforce's social reproduction, including social upgrading policies, is an integral part of its economic development regime—albeit in a non-feminist or even anti-feminist way—provides a great opportunity to comprehensively examine the legal infrastructure of a value-chain-upgrading regime that encompasses industrial, labor, and population policies.

This Part will examine the Chinese state's transition from an export-oriented cheap-production development regime to a value-chain-upgrading development regime and the two respective regimes of social reproduction underlying both. Part III will discuss the gender question.

A. The Cheap Labor Regime and the Legal Infrastructure of "Demographic Dividend"

In the first three decades since the 1980s market reform, China's manufacturing economy relied primarily on an enormous workforce with high-volume productivity and low prices that outcompeted the global market to acquire an enormous share of the lower-end activities in various GVCs. This labor regime not only contributed significantly to the country's rapid economic growth, but also to how it became a dominant force in the global manufacturing market.⁶⁶

Mainstream economists in China explained this development stage as a market response to what they call a "demographic dividend."⁶⁷ Heavily influenced by Nobel Economics laureate Arthur Lewis, they explained that the market reform had moved a labor force of unprecedented size from the non-capitalist rural economy and state-owned industries into a much "freer"

66. Pipkin and Fuentes, *supra* note 7, at 537.

67. Fang Cai, *Demographic Transition, Demographic Dividend, and Lewis Turning Point in China*, 3 CHINA ECON. J. 107, 112-14 (2010).

market of wage jobs, supplying the manufacturing economy with a surplus labor force that were willing to work for lower wages and in worse conditions.⁶⁸

As many legal and labor scholars have pointed out, the Chinese state—through economic, social, and population policies—shaped this regime of cheap labor as part of its economic development strategy. The absence of labor regulation, the massive lay-off of employees from state-owned enterprises, and the systematic suppression of labor power was an intentional policy choice by the state.⁶⁹ Indeed, a unified, adequate labor regulatory system did not exist until the Labor Contract Law of 2008 (hereinafter LCL).⁷⁰ Both before and after the LCL's passage, central and local governments tolerated rampant labor abuses in order to attract and retain investment in their respective localities.⁷¹ This regulatory regime (or the lack thereof) also led to disproportionate industrial and social upgrading results, where the workers reaped much less profit from the rapid productivity growth than did capital.

This cheap-labor, export-oriented development strategy also relied on a population regime that minimized the costs of social reproduction for firms, the state, and workers themselves. The Chinese state enforced this regime of minimal social reproductive cost through both a bifurcated social welfare delivery structure and a strict restriction on fertility.

A major constituent of China's globally competitive workforce was its massive internal rural-to-urban migrant workforce, who circularly migrated to industrialized regions during work seasons without permanently settling their families in them and who worked without formal labor protection or social benefits.⁷² The state, via the infamous *hukou* system, bifurcated and localized the provision of public social reproduction goods, such as education, healthcare, housing, and social insurance.⁷³ Within this system, internal migrants and their families with a rural *hukou* could not have access to these social benefits in the coastal urban regions where they worked, but had access to lower-quality education, healthcare, and land use rights (in lieu of social insurance) in their rural hometown regions.⁷⁴ This resulted in a specific exchange between capital and labor of social reproduction goods. On the one hand, the employers provided all means of daily reproduction—housing and food during production seasons—through their dormitory system, which also exerted enormous control over the workers beyond the factory floor.⁷⁵ On the other hand, the employers and the local government in industrial areas

68. *Id.* at 110; Fang Cai & Yang Du, *Wage Increases, Wage Convergence, and the Lewis Turning Point in China*, 22 CHINA ECON. REV. 601, 609 (2011).

69. See LEE, *supra* note 14, at 256; Eli Friedman & Ching Kwan Lee, *Remaking the World of Chinese Labour: A 30-Year Retrospective*, 48 BRIT. J. INDUS. RELS. 507, 508-10 (2010); See generally Pun, Chan, and Chan, *supra* note 14; GALLAGHER, *supra* note 16.

70. GALLAGHER, *supra* note 16, at 55-58.

71. See, e.g., *id.* at 81.

72. LEE, *supra* note 13, at 199; Pun, Chan, & Chan, *supra* note 13, at 133.

73. FEI-LING WANG, ORGANIZING THROUGH DIVISION AND EXCLUSION: CHINA'S HUKOU SYSTEM (2005), 82-112 (analyzing how the Chinese government used Hukou to divide and manage population).

74. LEE, *supra* note 13, at 199-200; GALLAGHER, *supra* note 16 at 1-2.

75. Ngai Pun, *Gendering the Dormitory Labor System: Production, Reproduction, and Migrant Labor in South China*, 13 FEMINIST ECON. 239, 246 (2007).

avoided responsibility for the migrant worker households' generational social reproduction, making minimal contributions to healthcare, social insurance, and other employment-based benefit programs.⁷⁶ Workers continued to rely on their hometown resources—both state-provided services and community and household labor—for the care of their elder parents, minor children, and themselves when they became too sick, disabled, or old to work in factories.⁷⁷

From a geographic perspective, the urban industrial areas extracted the able-bodied labor without taking much social responsibility for the laborers, while externalizing the costs of social reproduction to the rural inland areas.⁷⁸ Labor sociologist C.K. Lee drew comparisons between Chinese migrant workers and Michael Burawoy's famous study about the US-Mexico seasonal migrants.⁷⁹ In both cases, the state's regulation of mobility cultivated migrant workers' continuous reliance on an alternate economy for social reproduction functions, reducing their demands and dependency on wage labor.⁸⁰ The difference in living costs between the industrialized and rural regions also led to a low cost of social reproduction, making the arrangement sensible for both worker households and the growth model as a whole.

Beyond the structure of welfare provision, this developmental regime also relied on society's minimal demand for social reproductive labor due to both the low quantity and low "quality" of population reproduction at the time. The Chinese state's stringent family planning law (or "one-child-policy") significantly reduced the number of children an average worker household could have and, accordingly, the amount of time, labor, and other resources needed for childrearing. This minimization of social reproduction was more than an incidental result of the population policy. As anthropologist Susan Greenhalgh has shown in her ethnography of the political deliberation process leading to the adoption of the one-child-policy, the decision-makers had consistently seen population control as an integral part of the Chinese state's growth strategy.⁸¹ The mathematic analysis of quantitative indices such as the "dependency ratio," which calculated the percentage of the population not in the workforce to the percentage that was in the workforce, led to the political decision that a strict enforcement of low fertility was necessary to concentrate the population's focus on productivity and, thus, was instrumental to the nation's economic development at that stage.⁸²

The quality of population reproduction in this era was more dynamic. On the one hand, the strict restriction on the quantity of children enabled many families, especially urban ones, to enhance the resources and labor spent per child.⁸³ The Chinese state also promoted the "quality over quantity" discourse to encourage families' investment in each child's human capital in lieu of the

76. See, e.g., LEE, *supra* note 13 at 163-64.

77. *Id.* at 210-11.

78. Mezzadri, *supra* note 32 at 1196-97.

79. LEE, *supra* note 13, at 250.

80. *Id.*

81. SUSAN GREENHALGH, JUST ONE CHILD: SCIENCE AND POLICY IN DENG'S CHINA 60 (2008).

82. *Id.* at 241-42.

83. SUSAN GREENHALGH & EDWIN A. WINCKLER, GOVERNING CHINA'S POPULATION: FROM LENINIST TO NEOLIBERAL BIOPOLITICS (2005), at 217-28 (discussing the emerging norms on the quality of children among Chinese parents).

number of children.⁸⁴ On the other hand, the disparity between urban and rural families' standards or expectations of childrearing remained or widened during this time as the resource differences between urban and rural families vastly expanded, partially because of the *hukou* system discussed above. The massive rural-to-urban labor migration also led to the problem of "left-behind children"—a generation of rural children who grew up under the care of grandparents or other relatives, without the daily presence of either parent for most of their childhood years.⁸⁵ Scholars and social organizations, including the United Nations Children's Fund and All-China Women's Federation (ACWF, the Chinese party-state's official organization for women's issues), have warned since the early 2000s that the millions of "left-behind children" face high risks of health, psychological, and educational struggles.⁸⁶ Nevertheless, the Chinese state silently tolerated the "left-behind children" phenomenon in the shadow of an ultra-productive migrant workforce that enabled China's comprehensive entry into the global manufacturing market.

B. The Value-Chain Upgrading Regime: Industrial Policies

Since the late 2000s, the Chinese state has initiated its transition to a new developmental regime that prioritized upgrading its industries and workforce to achieve a higher value-addition position in the GVC and to reduce the economy's dependency on cheap, export-oriented, labor-intensive manufacturing on the lower rung of the GVC.⁸⁷

Since the late 2000s, the Chinese state implemented a range of industrial policies, encompassing all classic GVC upgrading strategies, including upgrading products, processes, and functions within the same chains and transitioning to higher-value chains.⁸⁸ For the existing labor-intensive low-value-addition industries such as apparel, the Chinese state prescribed three measures: first, the policy encouraged them to upgrade process coordination, technological equipment, and working conditions to standardize the production process and workforce management to improve efficiency and product quality in both national and international markets. Second, the policies encouraged firms to engage in higher-value-addition activities such as branding, marketing, design, and research in the same value-chain so that the firms could access the end market under their own brands, rather than being mere manufacturing subcontracting. Third, the state encouraged low-value-addition industries to relocate to less developed inland regions inside China or low-cost producing countries outside China, creating space for the development of higher-value, more technologically advanced value

84. *Id.* at 43-44 (discussing the Chinese state's promotion of the quality discourse).

85. See generally RACHEL MURPHY, *THE CHILDREN OF CHINA'S GREAT MIGRATION* (2020), at 14.

86. Bingyan He et al., *Depression Risk of 'Left-behind Children' in Rural China*, 200 *PSYCHIATRY RSRH* 306, 307 (2012); Hongwei Hu, Shuang Lu & Chien-Chung Huang, *The Psychological and Behavioral Outcomes of Migrant and Left-behind Children in China*, 46 *CHILD. & YOUTH SERVS. REV.* 1, 1 (2014); Qiang Li, Gordon Liu & Wenbin Zang, *The Health of Left-behind Children in Rural China*, 36 *CHINA ECON. REV.* 367, 367 (2015).

87. GALLAGHER, *supra* note 16, at 176-77.

88. Pipkin and Fuentes, *supra* note 7, at 538.

chains in the prime coastal regions.⁸⁹ All these policies envisioned China's manufacturing economy going beyond the lowest value-addition function of labor-intensive, low-skill, export-oriented manufacturing—an end to reliance on the cheap-labor regime.⁹⁰

Since Xi took office in 2013, the Chinese state has more assertively steered its manufacturing economy away from the cheap labor regime by “supply-side restructuring.”⁹¹ The focus on “high-quality”—in contrast to high-speed—growth has become the fundamental developmental goal.⁹² As a result, this expedited and intensified the upgrading reforms from the previous few years. On the one hand, the industrial policies lean more heavily into the emphasis on innovation and technological progress, more vigorously subsidizing technological development and high-technology industries. On the other hand, the state more actively enforced divesting from “low-quality productivities,” especially environmental polluting industries, sometimes in the form of a mandatory shutdown.⁹³ In 2015, the Chinese state ambitiously branded this manufacturing upgrading regime “Made in China 2025.”⁹⁴

The state's intentional transition out of the cheap-labor development regime responded to the demographic and social constraints affecting the economy. On the demographic side, as the generation of high-volume labor supply gradually aged out of its prime working age, the Chinese workforce's price competitiveness diminished on the global market.⁹⁵ On the social side, the exacerbated inequality between formal urban workers and migrant workers led to massive dissonance between economic and social upgrading and widespread social discontent.⁹⁶

This new value-chain-upgrading regime that vehemently promotes innovation, quality, and technology in industrial upgrading demands a much more skilled, educated, and urban workforce. The shift towards “high-quality growth” as a development goal also targets the improvement of quality-of-life and other elements outside the production process. With all these factors combined, this new development regime entails and demands comprehensive “social upgrading” in addition to the transition of manufacturing firms, which is the focus of the next Section.

C. The Value-Chain Upgrading Regime: Social and Population Policies

In addition to industrial policies restructuring the manufacturing economy, a central goal of this new value-chain-upgrading regime is to upgrade the workforce, for which the state promotes the quality and quantity of its current and future workforce. This includes both a set of labor and welfare reforms

89. Zhu and Pickles, *supra* note 53, at 44–45; Jigang Wei, *China's Industrial Policy: Evolution and Experience* 19–22 (ECIDC Project Paper No. 112020), https://unctad.org/system/files/official-document/BRI-Project_RP11_en.pdf [<https://perma.cc/3832-SY7F>] (last visited Feb. 19, 2024).

90. BUTOLLO, *supra* note 16, at 13–15.

91. Wei, *supra* note 89, at 22–27.

92. *Id.* at 12.

93. *Id.* at 22–27.

94. JOST WÜBBEKE ET AL., MERCATOR INST. FOR CHINA, *MADE IN CHINA 2025* 17 (2016).

95. GALLAGHER, *supra* note 16, at 1–2.

96. *Id.*

that expand public service provisions to “urbanize” migrant workers, which have been understood as “social upgrading” reforms, as well as a less-noticed population dimension of “upgrading”—a higher expectation for the household’s investment in the quality and quantity of their children’s human capital. This part unifies the two sides together through their shared development goal of “upgrading” workforce quality.

The expansion of publicly provided social goods mostly happened through labor and welfare law reforms.⁹⁷ The 2008 LCL channeled jobs into formal employment contracts, and the 2011 Social Insurance Law extended the formal employment-based social insurance program to migrant workers.⁹⁸ The passage and increased enforcement of these two laws initiated the state’s effort to both enhance the rate of formal employment and to unify the social security system that was once bifurcated between urban and rural workers via formal employment.⁹⁹

A gradual welfare reform to “upgrade” migrant workers to urban ones also happened outside labor law. In 2014, the central government adopted the plan to gradually abolish the dichotomized urban-rural *hukou* system, ending the two-tier social welfare regime.¹⁰⁰ A 2016 government document followed that proposed a gradual merging of the hitherto segregated rural and urban healthcare systems.¹⁰¹ The central government also pushed destination cities to open up the pathways for migrants to permanently settle down there with their families, which includes the expansion of public service—such as public education—for migrants who were not in the workforce.¹⁰²

As many labor scholars have pointed out, the expansion of public goods is happening too slowly and in too limited a fashion.¹⁰³ Some of these constraints originate from the tension between central and local governments. As local governments still retain some discretion over access to education, they often leverage tiered access to schooling to selectively integrate the wealthiest and most educated migrants into the local community while leaving behind the mass of migrant laborers.¹⁰⁴ As a result, migrant children still face significant institutional barriers to accessing a full range of educational resources in the places where their parents migrate.

Nevertheless, the direction of the labor and welfare reform is consonant: the promotion of formal employment lays the foundation for a unified employment-based social welfare system and the expansion of public service to

97. GALLAGHER, *supra* note 16, 52-112 (detailing the labor law reforms since 2008 that enhanced labor standards in China); FRIEDMAN, *supra* note 19, 43-84 (analyzing recent changes in Hukou and social welfare policies).

98. See GALLAGHER, *supra* note 16, at 4-10.

99. *Id.* at 4.

100. 关于进一步推进户籍制度改革的意见 [Opinions on Further Promoting Household Registration System Reform], State Council of China (July 30, 2014), https://www.gov.cn/zhengce/content/2014-07/30/content_8944.htm [<https://perma.cc/ZVM4-A7JF>].

101. 关于全面推进政务公开工作的意见 [Opinions on Comprehensively Promoting Government Affairs Transparency], State Council of China (Jan. 12, 2016), https://www.gov.cn/zhengce/content/2016-01/12/content_10582.htm [<https://perma.cc/2TWB-JWBD>].

102. Friedman, *supra* note 19, at 514.

103. See GALLAGHER, *supra* note 16; see FRIEDMAN, *supra* note 19, at 515-16; Yige Dong, *Spinners or Sitters? Regimes of Social Reproduction and Urban Chinese Workers’ Employment Choices*, 61 *Int’l J. Compar. Sociol.* 200, 202 (2020).

104. FRIEDMAN, *supra* note 19, at 513.

migrant worker households to enable them to integrate into the urban workforce and fully utilize the formal benefits thereof. The expansion of this formal, urban workforce supports a more standardized, more stable, more technology-intensive, and higher-quality manufacturing industry. In other words, these labor and social reforms advance social upgrading as an end and as a means that enables the development goal of industrial upgrading.

While these social upgrading reforms materially redistribute a significant amount of public goods to migrant households, the new developmental regime also imposes a higher expectation of migrant households' contribution to enhancing the quality and quantity of the next generation's workforce, which involves the expansion of both consumptive activities and unpaid intra-household care labor.

In 2016, the central government, for the first time, declared the "left-behind children" phenomenon as a social crisis in the new development stage.¹⁰⁵ The Opinion acknowledged the necessity of prioritizing labor migration over childrearing and migrants' contribution in the previous stage of economic development. Nevertheless, the Opinion prescribed a different responsibility for rural parents to close the care cap for their children. The Opinion stresses that schools, local governments, neighborhoods, and village organizations all have the duty to enforce more responsible parenthood through education, propaganda, home visits, and, in extreme cases, legal measures. Ideally, a migrant worker couple should migrate with their child to the cities or leaves at least one parent at home to take care of the child; leaving children behind to other relatives is an alarming, last resort option that demands attention from local governments.¹⁰⁶ This Opinion has triggered a new propaganda campaign across local governments in labor emigration regions to promote the return of migrant parents. During the same time when the Chinese state was promoting parental care for rural children, it also abolished the numeric restriction on childbirth and switched, instead, to aggressive encouragement for reproduction once the lifting of such restriction alone failed to reverse the fertility decrease. In other words, since 2010, the Chinese state has massively expanded the normative expectation for the quality and quantity of children that an average family should produce.

This new expectation of parenthood is gendered in its messaging. Noticeably, the 2016 Opinion has adopted a narrower definition of "left-behind children" than UNICEF: children residing with one parent for most of the year do not qualify as "left-behind."¹⁰⁷ In other words, the new standard expects only one migrant parent to return home. The new developmental regime's rapidly intensifying expectation for childrearing standards also occurred at the same time as the Chinese state turned to promoting traditional "family values" as a part of its nationalist project. This remaking of family ideology increasingly

105. 国务院关于加强农村留守儿童关爱保护工作的意见 [China's State Council Opinions on Efforts to Strengthen Care and Protection of Rural Left-Behind Children], State Council of China (Feb. 14, 2016), https://www.gov.cn/zhengce/content/2016-02/14/content_5041066.htm [https://perma.cc/E2RL-NGJ3].

106. *Id.*

107. *Id.*

promotes the importance of marriage and emphasizes women's contribution to society through their roles as wives, mothers and family caregivers.¹⁰⁸

The connection between economic development, child development, and women's new role in the economy was explicit in the public discourse. In a 2017 speech, Scott Rozelle—a Stanford economist with a wide collaboration network with rural governments in China—declared that the human capital deficit among rural children constituted a bottleneck constraint on China's future workforce which would perpetuate China in a middle-income trap—and the only solution was to recall migrant mothers to their hometown for child-rearing duties.¹⁰⁹ The speech gained wide attention in China and promoted a societal discussion about rural women's transforming role in the new developmental regime. Rozelle's team also collaborated with local family-planning officials in inland regions to distribute educational materials about high-quality infant care and teach “family reading time.”¹¹⁰ In my field, I also observed similar new efforts from local ACWF and family planning officials to promote family education training for mothers of young children.¹¹¹

This new state-promoted parenting standard revealed *ex post* an under-acknowledged, quasi-intended gender contract from the previous cheap-labor regime's population policy: the cheap-labor regime's suppression of the social reproduction costs for migrant workers also paradoxically included a lower expectation of women's unpaid social reproductive labor to their household when they migrated into coastal factories as ultra-productive “ideal” workers.

The next Part will examine how this transition from the cheap labor regime to the new value-chain-upgrading regime appears from the perspective of a garment supply chain in East China and the migrant worker households embedded in it.

III. Redistributing while Upgrading: Transformation of Women's Work and the Supply-Chain Economy

This Part traces the reconfiguration of labor, migration, and family strategies among a group of middle-aged female industrial workers under China's transition from cheap-labor to the value-chain-upgrading regime described in Part II. Faced with the intensifying expectation of investing maternal care into their school-age children's human capital, they moved from factory jobs in industrial areas to create new pockets of inland “mothers' workshops,” subcontracting unskilled tasks from coastal factories. This transformation created a new dynamic of gender-based subordination and downgrading in the

108. FINCHER, *supra* note 17; Zhou, *supra* note 17.

109. Gabriel Corsetti & Hu Yalin, *Stanford professor Scott Rozelle's talk on rural education causes a stir in China*, (Sept. 22, 2017), <https://chinadevelopmentbrief.org/reports/stanford-professor-scott-rozelles-talk-on-rural-education-causes-a-stir-in-china/> [<https://perma.cc/FC55-YH87>].

110. See Sean Sylvia et al., *From Quantity to Quality: Delivering a Home-Based Parenting Intervention Through China's Family Planning Cadres*, 131 THE ECON. J. 1365, 1369-70 (2021).

111. Fieldnotes, Winter 2019 (on file with author).

supply-chain economy, as well as a gendered distribution of access to the gains from value-chain upgrading.

A. Methodology

Part III is based on my field trips, conducted over a cumulative five months between 2018 and 2019, in two labor emigration regions—Qianshan, Anhui Province, and Huai'an, Jiangsu—and one manufacturing town—Zhili, Zhejiang Province—in Yangtze River Delta, one of the two major powerhouse regions for China's manufacturing economy.

Zhili is an industrialized town that succeeded in emerging from the cheap-labor regime as well as during the transition to the value-chain-upgrading regime. As China's largest supplier of children's apparel in 2019, Zhili is a typical "cluster supply-chain city," where firms of various sizes work along the value chain for a single product agglomerate, forming a scale economy without a massive, centralized factory.¹¹² As is typical of coastal industrial cities, around 75% of Zhili's 450,000 residents were working-age migrant workers and entrepreneurs from the less industrialized hinterland. Unlike some other industrialized towns where local government heavily directed its firms towards a different, higher value-addition chain under the upgrading policy, the Zhili government encouraged local firms to upgrade within the same chain of children's apparel.¹¹³ In 2018, the central government selected Zhili as an experimentation site for "new urbanization and standardization models," endorsing its upgrading plan.¹¹⁴

The other two field sites, Qianshan and Huai'an, are labor emigration regions whose economies heavily rely on migrant workers' remittances. In 2018, an estimated 25% of Qianshan's total population migrated to other regions for work.¹¹⁵ According to local officials, almost every family had some prime-working-age members away from home, and its economy predominantly depended on migrants' remittances.¹¹⁶ Similarly, labor emigration had been the most common labor arrangement for working-age residents from Huai'an.¹¹⁷

I implemented a semi-ethnographic approach in the communities and interviewed both actors in the manufacturing supply chain (factory owners, subcontractors, and workers) and in the community (government officials, schoolteachers, and parents). This approach provided a more holistic observation of the changes in and around the supply-chain economy.

112. Gary Gereffi, *Development Models and Industrial Upgrading in China and Mexico*, 25 EUR. SOCIOLOG. REV. 37, 46-47 (2009).

113. Interview with Official 3 (Development and Reform Office), at Zhili Town Government, (Dec., 2018). For ethical concerns and in compliance with the IRB requirements, I anonymized my informants and their specific organizations. Instead, I provided a general description of their roles. A list of informants is on file with the author.

114. PRC National Development and Reform Commission, 关于公布第三批国家新型城镇化综合试点地区名单的通知 [Notice on The Third Batch of National New Urbanization Experimentation Localities], (2018).

115. Interview with Official 18 (Bureau of Small and Micro Firms), in Qianshan County Government office (Dec., 2018).

116. *Id.*

117. Interview with Official 3232 (Village Head), in a community restaurant in Huai'an (May, 2018).

Soon after I entered the field, I noticed and heard from multiple informants, often with a dismissive attitude, about the emergence of a new industry in the labor emigration regions—what locals called “mothers’ workshops.” These workshops were often located on the ground floor of or in structures attached to local homes (usually of the workshop owners). Also, these workshops were especially common around schools, and were typically staffed by women in their thirties or forties.¹¹⁸ The workshops mainly produced garments, but I observed a wide range of light-manufacturing goods, ranging from medical masks and umbrellas to baby strollers and electronic chips.¹¹⁹ Through interviews, I also discovered that, in addition to the mothers who worked in these home-adjacent workshops, there were other mothers, less visible from the outside, who also subcontracted tasks in their own homes on loaned sewing machines.

Home-based manufacturing in China was commonly associated with the early stage of market reforms in the 1990s and with migrant workers’ informal settlements in cities.¹²⁰ Recent studies observed the continuation of household factories on the outskirts of industrialized towns.¹²¹ In the more general development literature, “industrial homework” continues to be understood as a lingering “traditional” production model despite more recent pushbacks which highlight its structural integration into the expansion of global capitalism.¹²² However, workers and locals in these inland hometowns experienced these workshops as new and recent. After more than a decade of working standardized factory jobs in industrial regions, many workers moved to work inland at these new silos of “mothers’ workshops.” Indeed, many of them continued their old manufacturing jobs, albeit significantly restructured. This Part traces this transformation from both the perspectives of these returning migrant women and the supply-chain economy in the region.

B. From “Factory Girls” to “Student Companion Mothers”

The bulk of this group of female workers who were recently returning to inland hometowns were born in the 1970s and 1980s and entered manufacturing work between the late 1990s and early 2000s under the cheap labor regime. Many of them started labor migration in their teenage years, right out of middle or high school. Neither agricultural work nor college education was ever a realistic option. Leslie Chang’s nonfiction, *FACTORY GIRLS*, vividly depicted the human face of China’s global role as the “World’s Factory”: namely, this cohort of female workers who came of age at a time when China’s manufacturing economy rapidly expanded and integrated into the GVC.¹²³

118. Fieldnotes, (May, 2018; Dec., 2018) (on file with author)

119. *Id.*

120. See LI ZHANG, *STRANGERS IN THE CITY: RECONFIGURATIONS OF SPACE, POWER, AND SOCIAL NETWORKS WITHIN CHINA’S FLOATING POPULATION* 60 (2001); BIAO XIANG, *TRANSCENDING BOUNDARIES: ZHEJIANGCUN: THE STORY OF A MIGRANT VILLAGE IN BEIJING* 81 (2004).

121. Lina Hu, *Familial Consent: Household Factories in China*, 46 *ASIAN J. SOC. SCI.* 132, 137 (2018); Nellie Chu, *Jiagongchang Household Workshops as Marginal Hubs of Women’s Subcontracted Labour in Guangzhou, China*, 53 *MODERN ASIAN STUD.* 800, 803-804 (2019).

122. DELANEY ET AL., *supra* note 2, at 16-17; Mezzadri, *supra* note 31, at 1197.

123. LESLIE T. CHANG, *FACTORY GIRLS: FROM VILLAGE TO CITY IN A CHANGING CHINA* 284-85 (2009).

Chang and the ethnographers depicted gender as an integral factor in the coercion of and desire for female migrant factory workers.¹²⁴ This image of women as more submissive and docile fed into the “model worker” depiction of women in menial factory work.¹²⁵ Employers employed the dormitory factory system to tightly control female factory workers’ social reproductive life outside work and maximize their productivity.¹²⁶ A combination of filial duties as daughters as well as the desires to leave the hometown community—including abandoning or challenging its gender dynamic—fed into the aspiration to migrate in the first place.¹²⁷

Most “factory girls” continued labor emigration and factory work after marriage and childbirth.¹²⁸ Lacking much public support for childrearing and without legal access to a full range of social welfare rights where they migrated to work, they had to mobilize a flexible family structure for childcare. This structure often involved a multi-local household across hometown and destination localities, a strategy in which they often could not reside with their child year-round.¹²⁹ Compared to their male counterparts, women’s participation in labor migration was much more contingent on the family’s income needs and the availability of unpaid childcare labor in the household.¹³⁰

The contingency of their migration and participation in factory work, as well as the Janus-faced meanings of labor migration, also surfaced in my interviews. One male garment worker explained his wife’s labor arrangement over the years: “*Our family’s arrangement predominantly comes down to my job. When we had our first child, I had a better-paid job so she could stay at home till the child was six; for our second child, my wife started working the second year after giving birth because my job at the time did not pay well enough.*”¹³¹ A female migrant worker in her late forties explained the other side: “*Whether a woman gets to (“捞的着”) work outside depends on the family situation. If her in-laws can take care of her child, then she gets the luck to go; if not, then she doesn’t get to go.*”¹³² The decision to migrate into factory work was made at the household level; it was seen as a response to the economic pressures that the household was facing and as a precious opportunity to make and access money. As this group, these women did not have any meaningful access to parental leaves and healthcare coverage in their worksite locale at the time, childbirth was an almost universal disturbance to their labor migration. Many recalled skipping months or a couple of years for pregnancy, childbirth, and breastfeeding, and leaving the

124. *Id.*; CHING KWAN LEE, GENDER AND THE SOUTH CHINA MIRACLE 31 (1998); PUN NGAI, MADE IN CHINA: WOMEN FACTORY WORKERS IN A GLOBAL WORKPLACE (2005), at 134-35; Pun, *supra* note 75, at 242-43; ARIANNE M. GAETANO, OUT TO WORK: MIGRATION, GENDER, AND THE CHANGING LIVES OF RURAL WOMEN IN CONTEMPORARY CHINA 22-23 (2015); Hu, *supra* note 122, at 133-36; Chu, *supra* note 122, at 801-02.

125. PUN, MADE IN CHINA, *supra* note 124; GAETANO, *supra* note 124, at 22-23.

126. Pun, *supra* note 75, at 242-43.

127. GAETANO, *supra* note 124 at 28-45.40.

128. See CHANG, *supra* note 123; GAETANO, *supra* note 124 at 99-129..

129. GAETANO, *supra* note 124 at 99-129.

130. *Id.*; Dong, *supra* note 103, at 213.

131. Interview with Worker 12 (worker in a garment factory in Zhili), in the factory office (July, 2018).

132. Interview with Worker 59 (a seasonal migrant worker from Huai’An), in her home in Huai’An (May, 2018).

kid to in-laws or other relatives when the child reached a certain age, such as one year old.

Nevertheless, looking back, the expectation of parental care labor at the time was less in aggregate and less gendered. It was a normal and mainstream practice to have the grandparents take care of the child while both parents worked year-round in industrial regions. Older children often attended boarding middle and high schools, which were in county seats far away from rural homes. They would typically return home every two weeks. The parents and children reunited during the one-month Chinese New Year and the summer recesses. The seasonal reunions and the relatively short distance between their home- and migration towns (compared to migrants from Western China) mitigated the feeling of separation.

This norm concerning childcare and labor migration dramatically changed in the mid to late 2010s, when the norm of “student companion mother” or “peidu mama (陪读妈妈)” emerged across rural China.¹³³ Female migrants increasingly felt the social expectation that they *should* return to their hometown to serve as a student companion mother when their child hit a “pivotal school age,” usually when the student faced an important college or high school entrance exam. She would also feel pressured to reconfigure her paid job accordingly. In my field work, schoolteachers also reported this observable sea change. Up until the early 2010s, only a handful of the students were living with parent(s) throughout the year.¹³⁴ In 2019, by contrast, over 30% of primary schoolers and 40% of middle schoolers lived with at least one parent.¹³⁵ Student companion mothers of high schoolers were most common. Over half of students in the 11th grade lived with their “student companion mothers,” and all but a handful of students in the 12th grade, the year right before the College Entrance Exam, did.¹³⁶ Most fathers continued seasonal labor migration and remained absent in their children’s everyday lives.¹³⁷

Multiple factors fed into the rapid transformation of childcare norms in this community. The increasing average wage for migrant workers and the growing savings of worker households reduced the economic pressure to have two full-time, wage-earning migrant workers in the household. The expansion of transportation infrastructure into these inland regions enabled the burgeoning of industrial jobs in hometowns. Nevertheless, the driving force behind this change in norms was the new discourse about education and parenting promoted by schoolteachers and grassroots government officials under the new upgrading development regime. Following the central government’s 2015 opinion on “left-behind children,” village officials and local ACWF staff, who were often returning mothers themselves, started to keep an official record of households with left-behind children and to pay annual welfare-check home

133. Wei, *supra* note 18.

134. Interview with Teacher 2 (a middle school principal in Qianshan), in the school office (Dec., 2018).

135. *Id.*

136. Interviews with Teachers 5 and 6 (high school teachers in Qianshan), in the school office (Jan., 2019).

137. *Id.*

visits to these households, although they did not have any power to coerce migration decisions.¹³⁸

More effectively, the schoolteachers started to firmly stress the importance of the parent's role, especially the mother's, in the child's upbringing and education. Although the teachers had more ambivalent personal attitudes on the "grandparents versus mother" debate, the local schools' official stance declared grandparents to be underqualified caregivers to attend to students' everyday developmental needs.¹³⁹ Teacher-parent meetings and teachers' home visits all stressed that this would negatively impact students' school performances in the long run, and even threaten their chances of getting into college.¹⁴⁰ The new communication technologies used in schools, such as WeChat groups and homework apps, also disengaged technologically illiterate grandparents while engaging migrant parents in everyday educational supervision, even when they were working in factories hundreds of kilometers away.¹⁴¹ Many teachers made targeted calls to recall the mothers of certain students who had low grades or other issues in school.¹⁴²

The returning mothers and parents predominantly focused on school grades as the value of their return and understood their care through the lens of human capital investment. One returning father said: "*I didn't return for my first son and he didn't get into a college. We are now putting more effort into our second child—he has to get into college, at least get an associate degree. Younger people will not make garment anymore and they cannot live without knowledge these days.*"¹⁴³ Another mother said: "*We shut down our business outside to return home but our kid is more important. It'd be a gain as long as he can get into a college.*"¹⁴⁴ Conversely, another mother expressed doubt when her return did not lead to a grade increase. One expressed frustration about the limitation of her control over the return: "*Although I can manage my son better than his grandmother, I still cannot control if he pays attention to homework, and I haven't seen any reward for my return in his grades.*"¹⁴⁵

Companion mothers, regarded as higher-quality caregivers than grandparents, yet lacking human capital themselves, provided value primarily through substitution and supervision. With great dedication, they diligently undertook every possible daily task of their children's to enable their children to participate in highly demanding schoolwork with minimal constraints. Some mothers sent lunchboxes into the classroom every day to save the students

138. Interviews with Officers 20 and 21 (Family Planning Office in Qianshan), in their office (Jan., 2019); Officer 31 (an ACWF representative at a village in Qianshan), in her home (Jan., 2019).

139. Interview with Teacher 2, *supra* note 134; Interview with Teacher 7 (an elementary school principal in Qianshan), in the school office (Jan., 2019).

140. *Id.*

141. *Id.*

142. Interview with Teacher 2, *supra* note 134.

143. Interview with Owner 13 (owner of a small sewing workshop in Qianshan), in his workshop (Dec., 2018).

144. Interview with Worker 31 (worker in a garment workshop in Qianshan), on the workshop floor (Dec., 2018).

145. Interview with Worker 40 (worker in a small sewing workshop in Qianshan), on the workshop floor (Dec., 2018).

five minutes standing in a cafeteria line.¹⁴⁶ Others woke up one hour earlier to warm the students' shoes, allowing for them to receive an extra five minutes of sleep.¹⁴⁷ As middle and high schools were far away from most rural homes, most companion mothers leased a room in a group housing next to the child's school. These group housings' parallel to dormitory factories were uncanny: while the latter operated to maximize the workers' productivity on the streamline, the former was organized to maximize the students' study, both of which had extensively long and highly disciplined hours.¹⁴⁸

The new norm of companion mothers not only recalled them from labor migration, but also made it impossible for them to work any full-time jobs in the handful of local factories. As worker Li explained, "*the hours in local factories are longer and I cannot cook for my child. If I don't cook for him, it doesn't count as a student companion.*"¹⁴⁹ The locality, as well as the schedule of factories and school companion mothers, made the two incompatible with each other.

Thus, the en-masse return of female migrant workers for their children's education gave rise to a new wave of "mothers' workshops" around inland schools in the owners' or workers' homes that subcontracted sewing jobs and other similarly less demanding tasks from coastal factories, which created a new subordinated extension in the supply chains. The next Part will situate these changes in the power dynamic of the supply-chain economy.

C. "Mothers' Workshops" and "Downgrading" in the Supply Chain

This shift in the motherhood norms has led to the emergence of highly informal, home-based or home-adjacent industrial work in these inland regions. These workshops were commonly run by returning parents and staffed predominantly by companion mothers. In another article of mine, I detailed the informalization and flexibilization of garment work in these workshops in response to the outsourcing factories' own demand for a lower price and volume flexibility, and returning mothers' priority of a flexible and care-friendly schedule over income.¹⁵⁰ Here, I focus on these workshops' and their workers' subordinated position in the supply chain in relation to the gender roles of the workforce.

Functioning as satellite subcontractors to coastal factories, these "mothers' workshops" in inland regions had much less surplus-capturing power not only vis-à-vis their outsourcing factories but also in comparison to other subcontracting workshops in coastal regions who had a more extensive exposure to alternative opportunities. Owner Peng, who had operated a subcontracting workshop in an industrialized town before starting their "mothers' workshop" in their hometown, made the comparison: "*The profit here is only one-third of before. We have to eat up all of the costs to transport the garment from and to the*

146. Fieldnotes, Jan. 2019 (on file with author).

147. Interview with Mother 10 10(a student companion mother in Qianshan), in her home (Jan., 2019).

148. Fieldnotes, Jan. 2019 (unpublished notes, on file with author).

149. Interview with name, Worker 42 (an own-account home-based garment worker), in her home/workshop (Dec., 2018).

150. Zhang, *supra* note 12.

factory, or they will not pick us over nearby workshops. If one order failed the quality check (at the factory), we must transport it again. I still rely on my past clients from before times and cannot develop new ones.”¹⁵¹ In other words, moving back to their hometown was very much a “downgrading” move for these firms, in which they lost the power to bargain over profits and risks. Indeed, outsourcing factories only chose these mothers’ workshops to conduct less demanding jobs for their advantage in price and flexibility. As a subcontracting coordination manager explained: “these hometown workshops are better for winter clothes, which demand lower speed but more labor per piece.”¹⁵²

For similar reasons of market access and workforce composition, these inland mothers’ workshops did not have any “upgrading” opportunities to capture a division of labor in the chain beyond the single, labor-intensive task of sewing that was outsourced to them. The same Owner Peng explained: “Outside, with skills and enough courage, a workshop can launch into making big money. To do that, the firm must cover the whole line, from design, sample, and networking, to sales and even having one’s own brand. We don’t have any of these here. The workers at home are all here for their children’s sake.”¹⁵³ Another returning couple who ran a “mothers’ workshop” explained the similar constraint to advance on the value chain from their hometown: “We thought about expanding or picking up better orders, but it is not possible here—the locality constrained the business. We could not find non-residential spaces here. Nor could we find a high-quality workforce with reliable output. . . We (they and their workers) are all trapped here for our children.”¹⁵⁴ Moving away from the mature production network that value-chain cluster cities like Zhili have developed for decades, these workshops lost all market benefits from such a scale and specialty economy.

The disparity also existed in the workforce’s access to labor and contract enforcement. The issue of not paying wages before Chinese New Year—the customary pay date for yearly salary and business payments—has perpetually been the most severe abuse for migrant workers in China.¹⁵⁵ Since the central government added wage theft as a basis for social credit blacklisting the employer as part of its labor law enforcement campaign, the enforcement loophole has shifted to not paying subcontractors, according to labor enforcers in Zhili.¹⁵⁶ As hometown subcontractor “mothers’ workshops” were both physically and, as a matter of information-flow, farther away from the coastal factory, they often fell victim to non-payment when outsourcing factories fell

151. Interview with Owner 13, *supra* note 143.

152. Interview with Worker 88 (a subcontracting manager at a large garment factory in Zhili), in the factory office (July, 2018).

153. Interview with Owner 13, *supra* note 143.

154. Interview with Owner 16 and 18 (owners of a small sewing workshop in Qianshan), in their workshop (Jan., 2019).

155. See Gallagher, *supra* note 16, at **.

156. The Ministry of Human Resources and Social Security formally stipulated the regulations for social credit blacklisting wage theft in 2022. See PRC Ministry of Human Resources and Social Security, 拖欠农民工工资失信联合惩戒对象名单管理暂行办法. However, my informants reported this enforcement practice back in 2018. Interview with Officials 12 and 13 (labor mediators in Zhili), in the mediators’ office in Zhili (Aug., 2019).

insolvent.¹⁵⁷ In these cases, the workshop owners and the workers often had to eat the losses.¹⁵⁸

Moving from jobs in coastal factories to these workshops was very much a “downgrading” experience for these returning female workers, too. Having worked in coastal-town factories until recently and continuously observed their husband’s jobs in coastal factories, these returning mothers were acutely aware of the disparity in the value attached to their labor when they worked in different localities. Worker Chen, who worked along with her husband until the year of our interview, said: “*I earned more money than my husband when we were both outside because my hands are quicker. This month, I only earned a thousand-something RMB while he still earned seven to eight. . . . When we were outside, we would switch among different bosses or towns depending on the income and living conditions. Back home, all firms are not that different.*”¹⁵⁹ It was blatant to these workers that the compensation for their labor differed due to the locality of the workshop as well as their alternatives, not the skill or productivity of their work. In other words, their position in the supply chain, more so than anything else, determined the compensation they received.

As these “mothers’ workshops” only got the contract for the most repetitive, unskilled step—sewing, ironically, many returning workers wasted the “human capital” that they had accumulated from previous factory work. For example, Worker Zhang, who had been a specialized embroidery worker since her early twenties, only got sewing gigs since her return: “*I’ve learned to design embroidery patterns on the computer after so many years. . . . But one has to find a factory to do embroidering, which doesn’t enable me to take care of the family.*”¹⁶⁰ The dearth of economic opportunities more significantly constrained mothers returning from other industries. Worker Zhao, for example, was a skilled furniture maker along with her husband before her return yet had to work as an unskilled helper in a garment workshop, which was the only existent industry around her children’s school, and it was not interested in training new workers.¹⁶¹

Some workers developed new strategies to extract some extra value by moving up and down this newly extended value chain. I met Worker Yin when she was working as a seasonal technician in her husband’s factory in a coastal industrial town. She said: “*I want to come out to make more money, but I cannot during the school year. Now is the summer break—I bring my two kids here and get to earn the technician salary for two months.*”¹⁶² Quite tellingly, such strategies were ultimately constrained by their children’s school demands.

In some cases, the female worker’s return to their hometown dissolved her entire household’s workshop in industrial areas, causing the entire household

157. *Id.*

158. *Id.*

159. Interview with Worker 4040, *supra* note 145.

160. Interview with Worker 4646 (an own-account home-based garment worker), in her home/workshop (Dec., 2018).

161. Interview with Worker 45, (worker at a small sewing workshop in Qianshan), on the workshop floor (Dec., 2018).

162. Interview with Worker 17, (a seasonal worker at a large garment factory in Zhili), in the factory office (July, 2018).

to “downgrade.” Worker Wang, a technician in a Zhili factory, explained his life before his wife’s return: “We were starting our subcontracting workshop for export sweater orders. My wife managed the money, and I was the salesperson—we made a great team and made some good money! Now, it’s only me working outside and I have to work for others.”¹⁶³ In other words, the transformation of the female worker’s role not only downgrades the value of her manufacturing work but also constrains the household’s strategies of participating in the supply chain.

D. The Distribution of Upgrading Gains

While the previous Section discussed returning female workers’ experiences of “downgrading” under the transition to a value-chain-upgrading regime, this Section discusses both the extant and prospective gains from firms’ and the state’s value-chain upgrading efforts and its attendant distribution. This cross-site case study reveals that the gains of China’s industrial upgrading policies tended to concentrate in coastal industrialized regions and with actors who managed to remain in these localities during and after the transition, which, as the previous two sections established, hinged on a gendered migration pattern.

Having succeeded in the cheap-commodity manufacturing economy, the Zhili government localized the central government’s industry-upgrading agenda into an initiative to move the local economy into a higher-value niche in the children’s apparel industry. The Zhili government’s public plan proposed to create a “headquarter economy” that concentrates higher value-addition activities, such as designing, financing, and business promotion in the children’s apparel industry while sifting out “low-end productivities,” the labor-intensive process of garment manufacturing, especially informal manufacturing.¹⁶⁴ Spatially, the government allocated land to develop standardized industrial parks, trading markets, and residential neighborhoods, segregating the three.¹⁶⁵ The same plan is also dedicated to transforming micro- and informal garment firms into standardized, or even publicly traded enterprises.¹⁶⁶ To promote firms’ upgrading activities, the Zhili government had also adopted industrial subsidies for a range of value-chain upgrading strategies, such as the adoption of automated technology, the registration of trademarks overseas, participation in product exhibitions, merchandising own-brand commodities to transnational e-commerce platforms, and winning national quality prizes.¹⁶⁷ The government further created tax credits for firms that invested in R&D, design, and branding efforts, as well as those that enrolled their employees with formal social benefits.¹⁶⁸

163. Interview with Worker 2424, (a technician at a large garment factory in Zhili), in the factory office (July, 2018).

164. Interview with Official 66, (Children’s Apparel Industry Office), in Zhili Government office (Jan., 2019) ; ZHILI GOV’T, THE PLAN OF UPGRADING CHILDREN’S APPAREL INDUSTRY (2019) (on file with author).

165. ZHILI GOV’T, *supra* note 164.

166. *Id.*

167. *Id.*

168. *Id.*

Under both the government's conscious value-chain upgrading policies and, more importantly, the booming e-commerce platforms such as Alibaba and Pinduoduo, many Zhili firms and workers had managed to move beyond a value-addition position where they exclusively supplied cheap labor. Since the 2010s, many Zhili firms, especially the large-scale ones, have moved from subcontract manufacturing into sales under their own online brands, mostly sourcing from the domestic market. The expansion of online market access and the availability of a mature production network in the region also made micro-entrepreneurship relatively accessible, even for an average working household. For example, a 28-year-old female worker with a vocational school degree told me that she and her husband—who was a streamline garment worker at the time—had already registered an online shop and planned to open their own workshop in the next two years once they accumulated an initial capital of 200k RMB.¹⁶⁹ Meanwhile, the entrepreneurial opportunities did not necessarily lead to entrepreneurial success—some workers had to go back to factory jobs after losing their savings in a failed business venture.

Labor and social policy-wise, the Zhili government's new plan proposed to fully integrate “qualified” migrants who can facilitate the industrial upgrading goals into permanent settlements in the region and into the formal urban workforce.¹⁷⁰ It guaranteed public education to migrant children if at least one parent owned a formally registered business, bought formal housing, or held formal employment with continuous social insurance contributions.¹⁷¹ The local government further issued housing subsidies and mortgage support to migrants with college degrees or an associate degree in apparel-related subjects.¹⁷² The incentives for both employers and employees had some impact. The local firms increasingly extended formal social benefits, including social insurance and pension contributions, to retain their managerial and technician employees, even though they continued to compete exclusively on wages for streamline workers.¹⁷³

For average manufacturing workers, the Zhili government successfully strengthened the enforcement of selected labor rights under the upgrading regime. The first and the most meaningful aspect, as the previous Section mentioned, was the better enforcement against wage theft through the powerful tool of the social credit system. Second, the Zhili government had adopted stricter health and safety rules, especially fire safety regulations, as part of its industrial upgrading efforts to standardize the manufacturing process. In 2018, it successfully mandated the installment of a fire sprinkler in firms of all sizes and reduced fire hazards by enforcing some spatial segregation between manufacturing and living spaces in most firms.¹⁷⁴ A third aspect was the wide enrollment of workplace accident insurance even when most em-

169. Interview with Worker 20, (worker at a large garment factory in Zhili), in the factory office (July, 2018).

170. ZHILI GOV'T, *supra* note 164.

171. *Id.* The practice in Zhili was similar to that in larger industrial cities in China, *c.f.* Friedman, *supra* note 17, at 505-09.

172. *Id.*

173. Interview with Official 7, 8, and 9, (Comprehensive Governance Office), in Zhili government cafeteria (Jan., 2019),

174. *Id.*

ployers resisted other social benefit contributions for streamline workers.¹⁷⁵ At the same time, the local government continued to tolerate the unlawfully long hours and other time-related labor violations that had been an entrenched norm in the garment industry.¹⁷⁶

In contrast to the coastal industrialized Zhili, rural inland counties' major industrial policy changes in this period were some inter-local-government collaborations to build industrial zones to channel some manufacturing jobs from coastal factories.¹⁷⁷ Nevertheless, the industrialized zone in Qianshan was a major failure—the occupancy rate fell under 50% in 2019 despite the government's rent subsidies.¹⁷⁸ Most crucially, it failed to attract the bulk of the returning migrants because the location and schedule of these local factories could not accommodate these returning migrants' duties as school companion mothers. Beyond building industrial zones, there was not much state action to promote industrial upgrading or to expand labor protection and social services in either of the two hometown regions where I conducted field study.

As a result of the geographic distribution of “upgrading” gains, female manufacturing workers who had labored in Zhili and similar coastal towns for most of the adult lives were left out of all these economic and social benefits from the government's or firms' upgrading efforts. More paradoxically, the Zhili economy's somewhat success—its transition into an upgraded “headquarter economy” with a higher concentration of value-adding activities without losing the price competitiveness—was precisely enabled by the proliferation of inland “mother's workshops” and these female workers' downgrading in the supply chain. At the same time, the proliferation of these home workshops also imposed new constraints on some industrial upgrading goals, such as standardizing the manufacturing process.¹⁷⁹

But what about the gains from “human capital upgrading” that have motivated this cohort of female workers' shift in their labor and migration strategies in the first place? According to the community's consensus, the worthiness of returning mothers' economic sacrifices was determined by one single question: whether their child could get into a good enough college as a result of their return. However, schoolteachers and parents all recognized that the answer was contingent on many factors beyond the mothers' control, and they had observed varied or even opposite outcomes among different students.¹⁸⁰ A deep sense of anxiety that all these sacrifices might end up in vain plagued the student companion mothers and motivated them to exert a tighter grip over their children.

If we zoom out a bit about mothers' contribution to children's development, a line of recent early childhood development research, most of which involved Scott Rozelle that Part II.C introduced, does find that more parental

175. *Id.*

176. Interview with Official 5 (an industrial park manager in Zhili), in the industrial park office (Jan., 2019).

177. Interview with Official 18, *supra* note 115.

178. *Id.*

179. Interview with Owner 14 (a garment factory owner and the president of local garment association in Qianshan), in the factory office (Dec., 2018).

180. Group Discussion 2 with four high school teachers, in the high school cafeteria (Jan., 2019).

presence and various expert-designed interventions of parenting training and support programs do result in positive cognitive and social outcomes for pre-school-age children in rural China, including benefits lasting into primary school.¹⁸¹ Nevertheless, I failed to find any sociological research on the educational returns of “student companion mothering” for teenage children, especially on this specific expectation of college admissions. Yet, local parents prioritized older children closer to the college entrance exam as the target of intense parental care. This divergence between experts, the government, and the community regarding what constitutes “human capital investment” speaks to the complexity of these changing norms.

On a larger scale, these students and their families faced intense structural pressure in the educational system. China’s current system, via an annual national College Entrance Exam, assigns graduating high schoolers to a state-sanctioned ranking which determines their access to universities, colleges, specialized trade schools, or no higher education. The competition is tight. Although 80% of the exam takers end up with some higher education, fewer than 15% of exam takers attend a first-tier university and fewer than 2% are admitted to the top universities.¹⁸² The “good jobs” that promise a middle-class life in metropolitan cities are only reserved for graduates of high-ranking universities. Students going to low-ranking universities cannot necessarily escape following their parents’ pathway of labor migration.¹⁸³ While college admission is essential for students across socio-economic classes, the stakes are especially high for students from rural areas—this is the main pathway to achieving social upward mobility through education for themselves and their households.¹⁸⁴ Due to the unequal distribution of admission quotas and educational resources, students from less industrialized rural regions face significant structural disadvantages in getting into a good college compared to their counterparts from middle-class urban families.¹⁸⁵ Nevertheless, as the economy switched to a growth model promoting technology, innovation, and human capital upgrading, the stakes surrounding such higher education is higher than ever before for the students, their mothers who make life-changing decisions for their education, and their households since repeating their parents’ labor trajectory has become less desirable in the new value-chain-upgrading regime.

181. Qiran Zhao, Xiaobing Wang & Scott Rozelle, *Better Cognition, Better School Performance? Evidence from Primary Schools in China*, 55 CHINA ECON. REV. 199, 215 (2019); Dorien Emmers et al., *Early Childhood Development and Parental Training Interventions in Rural China: A Systematic Review and Meta-Analysis*, 6 BMJ GLOB. HEALTH e005578, e005578 (2021); Lei Wang et al., *Parental Investment, School Choice, and the Persistent Benefits of an Early Childhood Intervention*, 165 J. DEV. ECON. 103, 166 (2023).

182. ZACHARY M. HOWLETT, MERITOCRACY AND ITS DISCONTENTS: ANXIETY AND THE NATIONAL COLLEGE ENTRANCE EXAM IN CHINA 31 (2021).

183. In fact, since 2016, more than 10% of the migrant workers have a higher-education degree. See 蔡翼飞 & 高文书 [Yifei Cai & Wenshu Gao], 农民工人力资本结构转变: 农村高校毕业生生的存量分析 [The Structural Changes of Migrant Workers’ Human Capital: An Analysis of Rural College Graduates], in 中国人口与劳动问题报告 No. 20: 面向更高质量的就业: “十四五”时期中国就业形式分析与展望 [Report on China’s Population and Workforce No. 20: Higher-Quality Employment: An Analysis of China’s Workforce under the Fourteenth Five-Year Plan] 176 (2019).

184. Howlett, *supra* note 182.

185. *Id.*

Conclusion: The Gendered Cost of Human Capital Upgrading

This case study is in many dimensions exceptional: China's unique social welfare regime, the Chinese state's exceptionally explicit connection between industrial and population policies, the rapid shift between economic stages, and, correspondingly, the appallingly speedy shift in gender norms. Nevertheless, it raises some questions about gender and value-chain upgrading that the extant literature has mostly been silent about. This paradox between the state's and firms' efforts and somewhat success to upgrade in the global value chain and this group of female workers' "downgrading" in the local supply-chain economy highlights the gendered, yet often invisible labor costs of human capital investment that is integral to the value-chain upgrading agenda.

Although the major social institutions involved in human capital investment—school and family—tend to involve a certain gender-based division of labor, the amount, type, and distribution of the costs (and gains) of human capital investment are by no means predetermined. Rather, it varies across economic systems, depending on the institutional arrangement of education, work, and care, especially through welfare law, labor regulation, and development policies. In this case, the subordinated "mothers' workshop" is a result of a list of institutional and social dynamics, including the state's changing discourse on upgrading, the community's interpretation of human capital investment, the social welfare regime's allocation of education rights, the dearth of public care services, and the unchanged working schedule of factory work. In other words, they all constitute potential entry points of intervention if we recognize the gendered costs of human capital investment as both a problem and as a problem that warrants intervention.

To take one step back, this case study about human capital investment further raises questions about the constructed boundary of transnational labor rights in a globalized economy. While a transnational labor rights framework may possess ambitions to expand the prospective framing of labor law beyond national borders and the traditional employer-employee relationship to catch workers in Global South countries, can this web reach informal home-based garment workers who are often on the bottom of the global value chain? Even when a transnational labor rights framework has the capacity and willingness to reach the home-based worker's time, income, and labor that ends up in commodities entering the global value-chain economy, can it regulate her time, income, and labor related to household and community duties—and can one ever effectively separate the two sides? Nevertheless, if the goal is to raise a global labor standard across various transactions of productive labor, can it achieve such a goal if it stops at the norms of social reproduction that we still recognize as cultural and local when the two sides are so deeply embedded in each other and global economic competition penetrates every aspect of social life? In the meantime, is it desirable that this regulatory web should ever want to encompass all these aspects, knowing all of the risks associated with attempts to rewrite culture?

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