Incorporating Labour Research into Studies of Global Value Chains: Lessons from India's Auto Industry

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ABSTRACT

It is widely recognised that labour has been downplayed in the literature on global value chains (GVCs) and global production networks (GPNs). While several scholars have tried to bring labour "back in" to GVC research, others suggest this agenda does not go far enough and fails to challenge mainstream political and economic assumptions. Taking its cue from calls for a "re-formulated research agenda" for labour in GPNs, this paper uses a case study of capital and labour relations in India's rapidly growing automotive industry to posit an analytical framework that can sufficiently recognise workers' "co-constitutive" role in the operation, reproduction and restructuring of commodity chains dominated by powerful global corporations.

KEYWORDS

global value chains; India; automotive industry; global production networks

Introduction

Many scholars have questioned the absence of labour in studies of global value chains (GVCs), which focus on commodity chains dominated by powerful "lead firms". This has led to several attempts to "bring labour back in" to GVC-based research. This article uses a case study of the automotive industry in North India to demonstrate how a modified research agenda can provide new insights on the structural dimensions that shape and limit working-class subjectivity in GVCs. The article draws upon Selwyn's (2012) call for a "re-formulated research agenda" in the GVC field. Selwyn argues that the role of the state and its relationship to capital, processes of working-class formation and the capacity to transform the strategic position and place of workers in GVC structures into class power are all critical elements for this agenda. In adopting this framework for our case study, we suggest there is a need for two further key elements: first, the need to incorporate social structures and social relations that are not reducible to the capital–labour relation and have separate causal mechanisms, including gender and caste; and second, the need to more clearly incorporate the structural power of lead-firm capital and inter-firm commercial relations into an analysis of working-class subjectivity.

The second section looks at attempts to integrate labour studies with GVC research, including competing explanations for its absence. The greatest potential in this literature, we argue, lies in efforts to frame labour as "co-constitutive" in the capitalist development process alongside the role

of international capital in shaping commercial and employment relations. The third section applies our modified research framework to the auto industry in India's National Capital Region (NCR). The research was based upon fieldwork among employees, employers, labour contractors and trade unionists in the region. Here, we also aim to explain the types of firms that operate in the supply chain in the NCR, the employment practices adopted by firms in different tiers of the industry, as well as the impact of these practices on workers. We aim to demonstrate how the interaction of capital and labour subjectivities with institutions, gender and caste led to a high level of industrial conflict in the past fifteen years and the emergence of more recent forms of labour struggle which cast doubt upon the dominant regional model of labour relations.

Bringing Labour "Back in" to GVC Research?

The absence of labour in GVC studies has been widely acknowledged in different disciplines (Starosta, 2010; Barrientos, Gereffi and Rossi, 2011; Riisgaard and Hammer, 2011; Lakhani, Kuruvilla and Avgar, 2013; Taylor, Newsome and Rainnie, 2013). Carswell and De Neve (2013: 62) suggest that articles on governance or labour standards "typically end with a paragraph on labour, usually concluding that labour employed at the tail end of the network needs further empirical research". Labour has tended to be treated as an "object" rather than a "subject" with its own set of interests: "Little has been said about labour as an active constituent of the global economy, rather than the passive victim of restructuring processes" (Cumbers, Nativel and Routledge, 2008: 369).

These insights challenge the foundations of GVC research, which remains largely focused on commercial relations between firms. GVC analysis flows historically from world systems analysis, which defines capitalism as "production for profit for world markets", thus downplaying labour relations in the production process (Selwyn, 2012: 210; Newman, 2012). Following the logic of this critique, our analysis draws upon Selwyn's (2012) call for a "reformulated research agenda" on labour in GVCs. Selwyn argues that such an agenda should incorporate three elements:

(i) how states preside over and guarantee reproduction of capital–labour relations, (ii) processes of working class formation and (iii) workers' structural power as derived from the requirements of commodity production, and how it can be transformed into associational power, to wrest concessions from capital and the state (Selwyn, 2012: 217).

In welcoming this framework, we argue for the inclusion of two further points. First, processes of commodity production and integration in global markets rely upon social structures that transcend capital—labour relations. These include gender, ethnicity and, especially in the South Asian context, caste. India's economy is dominated by commodity production in informal enterprises in which it is normal for production and occupations to be structured by caste-based relations (Harriss-White, 2003; Basile, 2013). Firms operating within GVC production in India commonly take advantage of pre-existing production networks and work arrangements: "The informal economy and its regulatory mechanisms are increasingly incorporated into neo-liberal global production structures" (Mezzadri, 2008: 605).

Second, a research agenda for labour in GVCs should incorporate the role of individual firms – especially supplier firms as well as lead firms – as strategists and actors who aim to improve their relative position in markets and should incorporate the commercial relations between these firms. Of

course, this partly represents the traditional focus on GVC research on the role of lead firms as potential agents of social and labour upgrading (Bair, 2009; Barrientos et al., 2011). In this sense, explicit incorporation of individual firm strategy is about *combining* the existing focus of GVC research on governance and commercial relations with labour scholars' focus on social relations in sites of production. This is crucial to labour-oriented research because, as we hope to demonstrate in our case study, commercial relations between firms have a major impact on labour conditions and strategies *within* firms.

In order to apply this modified framework, we use a case study of the auto industry in northern India, specifically the automotive cluster in the National Capital Region of New Delhi. On a global level, the auto industry is dominated by transnational vehicle assemblers known as Original Equipment Manufacturers (OEMs). In a single generation, India has evolved from a country in which privately owned passenger cars and even two-wheelers were a rare luxury to become the world's sixth-largest auto manufacturer (OICA, 2015). Suppliers tend to cluster near assembly plants. In India, the dominant clusters are in the southeast (Chennai), west (near the city of Pune) and north (in the NCR) (Gulyani, 2001; Barnes, Lal Das and Pratap, 2015). The industry is structured as a series of tiers. Tier 1 firms supply components to the OEMs. Tier 2 factories supply parts and materials to Tier 1 firms, Tier 3 firms supply to Tier 2 firms, and so on. In GVC terms, the auto industry has been framed as a "relational value chain" characterised by close collaboration and interdependence between OEMs and suppliers in different tiers (Gereffi, Humphrey and Sturgeon, 2005; Lakhani et al., 2013: 454). However, despite significant research on employment relations in the global auto industry, studies of auto workers have barely featured in the GVC literature.

This article focuses on the cities of Faridabad, Gurgaon and Manesar in the State of Haryana, on the southern fringe of New Delhi. These urban centres dominate the NCR auto cluster. Surrounded by semi-rural villages, Gurgaon and Manesar grew into major industrial townships in the 1990s and 2000s which provide the base for Maruti Suzuki India Limited's (MSIL) production facilities as well as two-wheeler OEMs, Honda Motorcycles and Scooter India (HMSI) and Hero Motorcorp. Faridabad is an older industrial area on New Delhi's southern border and home to a large number of components manufacturers.

There have been a few studies of employment conditions in Indian auto components manufacturing (Awasthi, Pal and Yagnik, 2010; Suresh, 2010; Barnes et al., 2015). The most thorough studies of labour include an NGO report on the Chennai auto cluster (Gopalakrishnan and Mirer, 2014) and Bose and Pratap's (2012) study of the NCR cluster in the early 2000s, which found that most workers were low-wage, inter-state migrants, mainly from Bihar and eastern Uttar Pradesh (UP). However, relatively little has been documented about the conditions of workers employed in enterprises below Tier 2. The information in the following sections is based upon fieldwork conducted in the NCR over seven months in 2011, 2012 and early 2013 as well as secondary-source analysis. Interviews were conducted with workers, managers and owners in OEMs, Tier 1, 2 and 3 firms, as well as labour contractors and trade union officials (see Appendix for details). Although we mention the names of some OEMs, we use codes to describe all supply firms to protect the identity of participants. The Appendix contains a full list of codes and data sources in our study.

Applying the Modified Framework to Auto Workers

This section applies the modified, five-point framework discussed above to the case of auto workers

in the NCR industrial cluster. The first sub-section examines the structure of the auto global value chain in the NCR, including the dominant role of OEMs, their impact upon the functions and operations of supply firms and the consequences for work, employment relations and labour conditions in lower-tier firms. The second sub-section looks at the role of state institutions and regulation in the historical evolution and structural dynamics of the automotive GVC, followed by a brief outline of historical working-class formation in different tiers of the industry in the third sub-section. The fourth sub-section discusses the impact of gender and caste relations on the individual roles, functions and divisions of labour in the industry. Finally, we explore the connections between workers' structural and associational power in different tiers. In each of these five sub-sections, the paper will attempt to draw out implications for workers in OEMs, Tier 1, Tier 2 and Tier 3 firms.

GVC structure, firm strategy and governance

As outlined in the previous section, the auto industry has been framed in the GVC literature as a relational value chain with high levels of direct and frequent interaction between lead firms and suppliers. Our fieldwork suggests that OEMs exert a high level of control over suppliers in multiple tiers by specifying design and quality requirements, by frequently monitoring production within supply firms, setting prices and controlling the frequency at which suppliers are paid. Maruti Suzuki India Ltd, a joint venture between the Government of India and Japanese OEM Suzuki, was the pioneer in establishing this relational GVC in the region. MSIL managers adopted the Japanese "lean" practice of subcontracting to supplier firms. By the mid-1990s, about half of MSIL's top one hundred suppliers were located within 80 km of its Gurgaon assembly plant, with a quarter based in Gurgaon itself (Gulyani, 2001: 117–123). While some of these suppliers operated in a joint venture with MSIL, it was also common for MSIL to have a majority shareholding with their key suppliers and to exercise direct control over their management.

MSIL also exercised influence over employment relations throughout the supply chain. This can be seen in the evolution of its own employment relations practices and the transformation of practices among its suppliers since the 1990s. In the 1980s, MSIL used above-average wages and productivity-based wage bonuses to recruit and retain workers (Ishigami, 2004: 4–5; Becker-Ritterspach, 2007: 8–10). But management moved to change this regime in the 1990s, as manufacturing investment laws were liberalised and market competition increased.

MSIL managers responded by reducing bonus payments and restructuring the productivity-based pay scheme, causing the company's first strike in 2000–2001 and eventually leading to the defeat and deregistration of the workers' trade union. Following its victory, management reduced the number of permanently employed (or "regular") workers employed at the Gurgaon plant from 5 770 in 2001–2002 to 3 334 by 2004 (Becker-Ritterspach, 2007: 40). After 2001, MSIL relied upon recruitment through labour contractors and, by 2004, about 2 000 regular positions were replaced by these "contract workers" who were paid about a quarter of a regular workers' salary (GWN, 2009). By 2007, the Gurgaon factory employed about 1 800 regular workers and 4 000 workers hired through twenty different labour contractors. MSIL implemented a similar policy at its new Manesar factory which, by 2011, employed 1 000 regular workers, 800 trainees, 400 apprentices and 1 200 workers hired through contractors.

Using labour contractors significantly reduced labour costs through lower wages and the denial of regular workers' entitlements, such as productivity and holiday bonuses, and the denial of a range of allowances. By 2011, regular workers at MSIL's Manesar factory earned ₹13 000 to ₹17 000 per

month (roughly \$US200–250) compared to workers hired by contractors earning about ₹6 500 (less than \$US100) (GWN, 2011).¹

These practices were emulated by other OEMs in the region like Honda and Hero Motorcorp and by employers in many Tier 1 firms. In the sample of OEMs, Tier 1 and Tier 2 firms in our study (n = 13), an average of 68 per cent of employees were hired by labour contractors, ranging from a low of 35 per cent to a high of 98 per cent. Most contract workers earned a basic wage (i.e. before overtime, bonuses and allowances) close to the Haryana minimum wage.² Most firms hire multiple labour contractors, of which there are hundreds in the NCR competing to provide services for employers. For firms below Tier 2, there is no formally operating contract labour system. Of the fourteen Tier 3 firms we studied, only one firm regularly hired labour contractors. At this level, most proprietors cannot afford to pay labour contractors' fees and usually rely upon direct recruitment.

Nevertheless, OEM control over the supply chain means that even in these smaller firms they exert considerable influence over employment relations practices. First, they encourage price competition among hundreds of lower-tier suppliers. They exercise market power by regulating this competition through tight control of prices. Second, they exercise hands-on supervision of product quality. Even in Tier 3 firms, we met representatives of OEMs visiting workshops and offices to check products. Third, cash flow in different supply companies filtered down through the tiers of the industry to affect the frequency at which lower-tier suppliers were paid. Proprietors in Tier 3 had little control over the frequency with which they were paid.

Several proprietors and managers explained how this control generated low-margin business. The owner of firm 3E, whose seven employees made fuel lines for two Tier 2 firms and one OEM, explained:

I have very good relations with my main customers. They provide ongoing and regular work. [One Tier 2 customer] uses 200 to 300 vendors to supply the parts. They totally depend 100 per cent on vendors.... They send someone every one to two months to inspect parts. The person they send is checking for quality of products. There is a lot of competition. The rates charged by companies are falling due to competition based on low cost. Another problem is that customers do not pay in time. They are supposed to pay bills in sixty days but usually take up to 110 days to pay (15 April 2013).

Another example is Firm 3I in Sanjay Colony, Faridabad, which employs sixty workers. The firm manufactures parts that are eventually processed for use by Honda, wheel parts for MSIL and tractor parts for agricultural equipment-maker Escorts. During a focus group, a skilled worker told us:

There is cutthroat competition among vendors. Escorts hasn't increased its parts prices in five years. Consequently, wages cannot go up among the suppliers. Each vendor competes on low-cost production, with many acting to undercut each other to win contracts.

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¹Unless otherwise stated, all wages and salaries discussed in this article refer to monthly figures.

²At the time of our fieldwork, this was ₹5 330 per month, based on daily wages of ₹205, assuming a 26-day month. (Most workers we met worked six days per week.) For skilled labourers, the minimum wage was ₹230 per day or ₹5 980 per month.

An unskilled worker ("helper") added:

There is no way wages can go up in this environment.... Buyers cannot increase the rate of parts so wages cannot go up. There is no point moving to a different employer [if you are not happy with these wages]. The employers are united, the workers are not (Focus group, five workers, firm 3I, 18 April).

The implications of this low-wage environment for workers' actions are discussed below.

State governance, regulation and reproduction of capital-labour relations

Historically, Indian state institutions have protected and nurtured domestic auto production by segmenting and restricting the domestic market, by channelling foreign investment into joint ventures and by providing subsidies through cheap land and utilities. For example, MSIL's success has significantly relied upon support from state institutions. Until the 1990s, the Government of India shielded MSIL from foreign competition in domestic passenger car production. For example, it blocked Honda's attempt to establish a joint venture in car production with Telco (now Tata Motors), although it agreed to segment the two-wheeler and passenger car markets by allowing Honda to establish a joint venture with the Punjab-based Hero Group in motorcycle and scooter production. In the NCR, both MSIL and Hero Honda benefited from industrial subsidies allocated via the Haryana State Industrial and Infrastructure Development Corporation (HSIIDC). For example, HSIIDC allocated land to MSIL and its key suppliers at below-market prices, including 330 acres in Gurgaon in 1982 and a further 250 acres in Manesar in 1996.

After the 1980s, the state reshaped the practices of industrialists by gradually liberalising foreign investment rules. As suggested above, the impact of these changes on domestic market competition strongly influenced MSIL's employment relations practices. In 1993, the government allowed automatic approval for foreign investment up to 51 per cent ownership in joint ventures. After 2000, the government allowed automatic approval for 100 per cent foreign ownership (Narayanan and Vashisht, 2008: 76).

The domestic market for passenger cars, two-wheelers and commercial vehicles is highly competitive today, with most local operations wholly owned by foreign OEMs or domestic OEMs linked to Indian family conglomerates. Rising competition has underpinned the shift towards a regional contract labour system in the NCR. This system has made it extremely difficult for unions. The regional contract labour system means that the "principal employer" is able to eschew responsibility for many employment conditions. Most of these workers are hired as ongoing production-line workers, in violation of the Contract Labour (Abolition and Regulation) Act 1970.³

Processes of working-class formation

The rapid rise of auto production in the NCR since the 1980s has, understandably, had a major impact on workers and labour markets in the region. Like Bose and Pratap's (2012) findings, most employees in our fieldwork came from towns, villages and cities interstate, mostly from Bihar and

³See Shyam Sundar (2012) for an explanation of the role of this law and debate about the "contract labour system" in India.

eastern Uttar Pradesh although many others came from Orissa, Rajasthan, Uttarakhand and even from Nepal. Most interview participants were unmarried men in their twenties and thirties who had been attracted to the region by the promise of more secure employment and higher wages. For example, in contrast to the Haryana minimum wage of ₹5 330 per month, which provided a rough basis for casual and contract workers' basic wages in the NCR, the minimum wage for unskilled labourers in Uttar Pradesh at the time of our fieldwork was just ₹2 600.

In higher-tier firms, labour contractors were encountered by migrant workers in a variety of ways. Many travelled directly to the factory gate where they met labour contractors' representatives. In other cases, labour contractors were met after workers at a factory were asked by their contractor or a manager to invite relatives or friends to migrate for job opportunities. Sometimes, a contractor or manager would ask an agent to supply a fixed number of workers from their home village or town, or contractors would send their own representative interstate to meet and recruit new workers. In our interviews with workers, it was normal for this system to leave workers in precarious employment. As a worker at firm 2B in Faridabad explained to us:

I earn ₹5 700 to ₹6 000 with a six-month contract. My company has 500 workers [of which] forty to fifty are regular workers who earn ₹25 000. The company has four factories in this area. After six months, I ask my labour contractor [thekedar] for more work. He offers me work in one of the company's other factories for another six months. So I have to move to there. I have worked like this for the past four years (15 April 2013).

Workers in Tier 3 firms tended to be recruited directly due to lower profit margins which, proprietors explained, were too low to afford labour contractors' commission (Interviews with proprietors at 3B to 3F inclusive, 9–15 April 2013). In industrial colonies in Faridabad, we observed dozens of small workshops with signs advertising for different positions, including semi-skilled jobs like machine, drill or lathe operators and less-skilled jobs ("helpers").

However, we also found cases of interstate migrant workers recruited via an informal system of labour market intermediation which rested upon workers' social networks, often via family members in industrial areas. A helper at firm 3B explained: "My brother was already working here [before I arrived]. He said the boss was looking for helpers and told me to come [from UP] for work" (8 April 2013). At firm 3G, a metal plating company in Mujessar, Faridabad, a young worker explained:

I used to work as a tailor in Mumbai. But the company I was working with closed down. Simultaneously I used to also do the same thing as here which is plating of auto parts. I acquired the skills for both the jobs. There were a few people from my village [near the city of Gorakhpur in eastern UP] who were working here at the time. They suggested I come here and I that's when I came to Delhi (6 December 2011).

Role of social structures outside the capital-labour relation

Most of the interstate migrant workers we interviewed had a caste background that fell within the official category of Other Backward Classes (OBCs), which is historically used by the state to record numerous castes classified as socially disadvantaged. In our study, most workers came from cultivating families with marginal or small landholdings in Bihar or UP although some came from

lower-caste landless families in rural areas, including a minority of Scheduled Caste or Dalit workers.

In several Tier 3 firms, all employees hailed from OBC castes with a family background in small-scale cultivation (Interviews with: two workers at 3G, December 2011; proprietors at 3E and 3F, 15 April 2013; five workers at 3I, 18 April 2013). The wages gap between different categories of workers in Tier 3 firms often followed caste lines. For example, at firm 3F, which employed a total of thirty-five workers in two workshops in Faridabad, the firm's ten helpers were all OBC workers from UP or Bihar earning a basic (sub-minimum) wage of ₹4 800, which was less than half of a skilled worker's wage.

This does not mean that income differences mirror caste differences in an exact way. For example, while most OBC workers are hired as helpers, some are employed in skilled occupations. At firm 3F, we spoke to a skilled engineer from Lucknow with an OBC background. At firm 3B, although all workers at the firm's workshop were OBCs from Bihar or UP, some were machine operators paid a basic wage of ₹10 000 − nearly double the wage of helpers. Nevertheless, the prevalence of OBC workers from interstate regions and the maintenance of a low-wage environment meant that there was often an overlap between workers' caste origins and their employment status.

These origins mean that ties between workers throughout the industry and their home villages and towns are strong. It was common for workers to send 40 to 80 per cent of their wage income as remittances to family members interstate and to return to their family homes every six to twelve months for festivals, weddings or to assist during harvesting, especially in wheat production. One 21-year-old worker at firm 3G explained:

I have worked here for one year. This is my first job. ₹4 800 is my basic pay and with overtime I earn about ₹7 000.... I work twelve hours a day and six days a week with Sundays as holidays.... [Since arriving in Gurgaon], I have gone home and spent three months there. My father is a farmer [in rural UP]. He has about five acres of land. We barely manage to meet our domestic expenses but are unable to make any profit from the produce. I manage to send around ₹4 000 [home per month]. I somehow manage to live here on the money I get on my overtime pay (6 December 2011).

The majority of contract and casual workers we spoke to maintained similar ties to cultivating families. Some workers had brought spouses and children with them. The village of Binola near Manesar illustrates this process. In Binola, there are about 500 local people, mainly landholding members of the Yadav community, which comprises several castes historically linked to cattle rearing. Since several Tier 1 and Tier 2 auto firms have located here in the previous two decades, the population has swelled to between five and six thousand, of which most are young unmarried men but about a third are migrant families (Interviews with unionists, regular workers and contract workers, firms 1C, 1E, 1I and 1J, March–April 2013). Elsewhere, in Udyog Vihar, Gurgaon, a 38-year-old contract worker at steel forging firm 2C explained his desire to stay in the region on a permanent basis:

I am married with one boy and one girl. We came here from Bihar.... I go home once per year. I send ₹2 500 to ₹3 000 per month home to my parents. I get paid ₹7 000. I normally work twelve-hour days, starting at 7 a.m. My wife works in garment exports. She earns about

the same. If I lose my job, I will stay in this area and search for whatever job I can get. This can be in auto parts, in garments or whatever. I do not want to go back to Bihar (13 April 2013).

The proprietor of firm 3G, who was originally from rural Bihar, explained to us:

There are two types of workers who come from Bihar [to Faridabad]. Workers who come here with their families permanently, and [who] go home occasionally for festivals or marriages. They work in industry. Most of these workers own some land. These are medium-sized plots and are used only for subsistence for families. [Second], there are agricultural labourers who migrate on a seasonal basis to Punjab or Haryana. They are the lower castes. Most of the jobs in local industry are taken by workers from Bihar or eastern UP. But this not considered as taking jobs from locals [in Haryana]. Most of the local workers are farmers [kisan] and they find industrial work to be derogatory. Maybe 60 per cent of workers in this area are from Bihar and about 25–30 per cent from eastern UP and the rest from Punjab and other places (1 December 2011).

It is important to emphasise that "industry" and "industrial work" in this workers' narrative explicitly refers to small-scale workshops, not large factories. In fact, many local workers *do* work in larger-scale industry, particularly in OEMs or Tier 1 firms, and a small minority will work in Tier 3 firms. However, the vast majority of unskilled "helpers" are interstate migrants. In a few cases, this division of labour was expressed in prejudiced terms. For example, the vice-president of a steel forging firm, 2C, in Udyog Vihar, Gurgaon, told us:

The Biharis are good for this heavy and hot work. They do not require qualifications. They are mostly helpers paid the government minimum wage. But they keep disappearing during the summer for harvesting and festivals. This is our main internal problem in the summer (11 April 2013).

While the vast majority of workers in the industry are men, we also found a significant minority of women, both married and unmarried, working in the industry. Most women were employed as "helpers", undertaking a range of manual tasks like cleaning, counting and sorting components. However, a smaller minority of women in some firms were employed as skilled machine operators (Interviews: proprietor 3C, 9 April; proprietor 3K, 18 April, 2013).

While women working in the export garments sector or in various informal occupations is well-established in the NCR, some managers and workers explained that there was growing pressure for married women to seek employment in Tier 3 automotive enterprises. During a focus group with five workers (four unskilled employees and one skilled contractor) at firm 3I in Sanjay Colony, Faridabad, we were told that rising living costs and low wages were factors increasing pressure at a household level for male workers' spouses to find work in local enterprises:

Most families need ₹8 000 to ₹10 000 [per month to survive]. We have two options. We can work overtime or we can ask our wives to find work. Sometimes we have to borrow food from shopkeepers. During lean times, we can only pay landlords [rent] when we can.

Sometimes we ask our employer for more money [as a wage advance] to keep going (worker A, 3I, focus group, 18 April 2013).

Now maybe half the families in this area have both the husband and the wife working locally. This is increasing (worker B, 3I, focus group, 18 April 2013).

Workers' structural power and conversion into associational power

Selwyn's use of the concepts of structural and associational power comes from Wright's (2000) widely cited analysis. Structural power comes from the position of workers within capitalism as a system of production and distribution. Associational power comes from the collective organisation of workers, including but not limited to the workplace itself. From Western European and North American perspectives, the global auto industry has strong traditions of collective bargaining, leading to high wages and good working conditions. In part, this arises from the strategic importance of workers in global centres of motor vehicle production. It is perhaps understandable that some scholars in the GVC literature have predicted that the global expansion of auto production in emerging markets like India should lead to long-term, stable employment relations with decent labour conditions (Lakhani et al., 2013).

In the NCR, the operation of a regional contract labour system and a casualised, low-wage environment means that this prediction has not been fulfilled. Trade unions are active in the local auto industry, especially the All-India Trade Union Congress (AITUC) and the Hind Mazdoor Sabha (HMS) and, to a lesser extent, the Centre of Indian Trade Unions (CITU) and the New Trade Union Initiative (NTUI). However, the prevalence of labour contractors in OEMs, Tier 1 and Tier 2 firms effectively prevents the majority of workers from joining unions. To date, there are no local examples of contract workers being organised into trade unions, even if they have occasionally participated in industrial campaigns alongside trade union members (Barnes et al., 2015).

In the NCR auto industry, the well-documented institutional weakness of trade unions in India has sometimes combined with the regional composition of the workforce in OEMs and Tier 1 firms. For example, at firms 1C and 1E in Binola village, plant unions were run by regular workers who came from local Yadav families. The families of several union office-bearers owned land in the local village and rented rooms to contract workers who came from interstate regions or from Nepal, thus establishing a stake in the regional contract labour system.

In most cases, the industrial campaigns of regular and non-regular workers were kept separate, with some regular workers attempting to seek improvements in wages, bonuses and allowances via union-negotiated collective agreements, and contract and casual workers locked out of formal bargaining processes. The wages and conditions of these workers were either imposed unilaterally by managements or improved through an informal process of concession bargaining, often after brief bouts of industrial action.

This pattern was affected by the most significant strike to occur in the auto industry to date at MSIL's Manesar factory in 2011–2012. In 2011, workers initially organised for wage parity between regular, contract and casual workers and the "regularisation" of contract workers' employment. After several months of lockouts, strikes and a factory occupation, the conflict culminated in a violent confrontation in July 2012, during which a manager was killed. Following this, MSIL temporarily closed the plant and fired over 550 regular workers and 1 500 contract workers. Of this, 147 workers were arrested and imprisoned. At the time of writing, most were yet to be convicted.

MSIL pursued two broad approaches during this conflict. On one hand, mass sackings demonstrate a despotic approach to employment relations that echo company practices during the 2000–2001 strike in their Gurgaon factory. Most of the sacked workers have been replaced with a new cohort of employees. On the other hand, there is evidence that MSIL has significantly adjusted employment practices in response to the conflict. First, the firm significantly increased wages. Regular workers' wages were increased from between ₹13 000 and ₹17 000 in June 2011, prior to the unrest, to between ₹32 000 and ₹36 000 by November 2013 (GWN, 2014). Second, MSIL announced a shift towards the direct employment of "company casuals" to replace recruitment via labour contractors. By March 2014, the company claimed a combined workforce at its two plants in Gurgaon and Manesar of 12 500 regular workers, 1 100 apprentices and a group of 6 500 divided between company casuals and workers hired by contractors (Mukherjee, 2014). Company casuals were paid ₹11 000 per month – itself a significant increase on former wages – and the remaining minority of workers hired by contractors were paid ₹5 500 to ₹6 000 (GWN, 2014).

The conflict at MSIL had reverberations throughout the regional supply chain. At the same time during the industrial conflict in late 2011, there were strikes by workers at least eleven Tier 1 auto plants in the NCR (GWN, 2011). In addition, there is evidence that the outcome of the conflict in 2012 impacted significantly upon employment relations in Tier 1 and Tier 2 firms in the region. In some cases – for example, at firms 1B and 1C – managers regularised an increased minority of contract workers, recognised a new plant-level union and negotiated a collective agreement with higher wages. As such, one can claim that workers' associational power, via concession bargaining and limited unionisation, has increased in some firms. However, despite MSIL's own policy change, these changes have not abolished the regional contract labour system. There is no evidence that contract workers have been included in collective representation, and high levels of inequality persist in terms of wages and worker treatment on the shop floor (Yaday, 2015).

The structural and associational power of workers in Tier 3 firms is completely different to outcomes in the higher-tier firms. The low-margin, low-wage environment in these firms means that conflict rarely occurs over basic wages. Combined with the absence of trade unions from Tier 3 firms – we found no evidence of union membership or of union efforts to recruit workers in Tier 3 industrial zones in Faridabad or Gurgaon – this low-profit, low-wage environment encouraged many workers to pursue individualised strategies. As a worker at firm 3G explained:

If there were a problem, I would quit and look for other work. It is not as if this is the only plant in Faridabad which has jobs; there are several other plants. I am confident that I would find work elsewhere. They put up notices for employment (6 December 2011).

Furthermore, labour mobility meant that employers often complained about problems of labour shortages during the festival seasons, especially during Holi or Diwali. For example, the manager of firm 3C in Faridabad told us:

My main problem is a labour shortage. Some workers from Bihar return home for festivals and don't come back on time or when they agreed. Sometimes I have to find casual workers [to replace them]. Sometimes I have to send work to other companies (9 April 2013).

When interviewed a month after Diwali in 2011, a casual worker at firm 3G explained:

There are ten men and one woman working here [but] eight of them have gone on a leave and currently only three people are working here. Because of Diwali most people are visiting their villages for the festive season (6 December 2011).

The proprietor of firm 3B explained how the Holi festival impacted on his business each year: "Workers go home for one month. So we have to lower production for the whole month. This is not good but we have no choice" (8 April 2013). Workers at firm 3I agreed that most firms cut production levels in response to the festival season as thousands of workers temporarily left the region (18 April 2013).

Conclusion

The auto industry represents an instructive case study for this discussion, both because it is a strategically important sector in India's emergence as a regional economic power and because there has arguably been less focus on building international labour solidarity among workers in more capital-intensive GVCs. Our modified framework can help explain why this sector, as a relational GVC characterised by the close collaboration and domination by OEMs over supply firms in multiple tiers, has led to flexibilised labour relations rather than the stable, high-wage environment historically associated with auto production on a global level. While fully addressing this contradiction would be the subject of a separate paper, we suggest that two key explanatory factors are the peculiarities of class formation in the region and the character of the institutional-regulatory regime. On class formation, we have shown how the rapid emergence of the industry has relied upon a flow of migrant workers, mainly from cultivating castes with ongoing social ties to villages and towns in interstate regions. This mobilisation has occurred via a regional contract labour system and via a complex network of small to medium-sized enterprises competing to service the demand, as well as strict price and quality controls of the dominant OEMs. The structural and associational power of labour is strongly shaped by the social and familial ties that bind workers in industrial and interstate areas and that influence the circulatory migration of workers. On institutions, we have also shown how India's complex system of labour laws has failed to address the interests or rights of most workers in the region. For example, the operation of a regional contract labour system contradicts protections stipulated by the Contract Labour Act. These explanations point to the need for a modified framework for labour research in GVCs by incorporating analysis of social dimensions of class formation as well as the state-institutional regime in regional development.

In OEMs, Tier 1 and Tier 2 firms, low wages are driven by the regional contract labour system. Employers encourage competition among labour contractors to handle employment relations and pay most contract workers a base salary close to (and sometimes below) the Haryana minimum wage. Below Tier 2, where labour contractors are rare, low wages are underpinned by lead firm domination, price competition and low operating margins. In OEMs and higher-tier firms, contract workers have often taken collective action for better wages, conditions and union rights, but have been restricted by a lack of legal protection or institutional support. In Tier 3 firms, workers express dissent by leaving or, sometimes, agitating for better employment conditions without formal collective bargaining over wage rates. Thus the responses, actions and interests of workers in the industry are heavily dependent on the tier in question, which is itself strongly influenced by the commercial

structure and inter-firm relations of regional auto production.

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APPENDIX: METHODOLOGY AND DATA SOURCES

Field research for this study was conducted in Faridabad, Gurgaon, Manesar and Delhi over a period of seven months in 2011, 2012 and 2013. Semi-structured interviews were conducted with sixty-five workers, eleven employers, four labour contractors, eight trade union officials and one industry representative. Out of this, four focus groups were organised with a total of twenty-two workers. In addition to formal interviews, discussions with many people took place informally in communities and public areas. Apart from Original Equipment Manufacturers (OEMs), the names of companies, employers, employees and labour contractors have been kept anonymous. The full list of firms and coding used in the article is given below. Table 1 details the OEMs, Tier 1 and Tier 2 firms in this study while Table 2 details the Tier 3 firms. These tiers are put into separate tables because, as we explain in the main article, the contract labour system does not operate fully in smaller, Tier 3 firms. We were also given guided tours of several Tier 1 and Tier 2 factories and Tier 3 workshops. Among the labour activists we spoke to were representatives from four trade union confederations: the All-India Trade Union Congress (AITUC), the Hind Mazdoor Sabha (HMS), the Centre of Indian Trade Unions (CITU) and the New Trade Union Initiative (NTUI).

Table 1: Large and medium-sized firms (OEMs, Tier 1 and Tier 2) in this study

	Table 1: L			ns (OEMs,		r 2) in this study
Tier	Firm code	Location	Products	Contract labour (%)	Ratio of contract-to- regular workers' wages	Source
OEM	Maruti Suzuki	Manesar	Passenger car	35	0.50	Three ex-regular workers, 11 March 2013
	Honda (HMSI)	Manesar	Motorcycles and scooter	71	0.18	Interview, Anil Kumar, AITUC Gurgaon secretary, 11 March 2013
	Hero Motorcorp	Gurgaon	Motorcycles and scooter	80	0.16	Focus group, five regular workers, 11 March 2013
1	A	IMT Manesar	Plastic moulding	80	X	Plant manager, 7 April 2013
	В	Gurgaon	Engine and gear parts	78	0.52	Plant union president, 13 March 2013
	С	Binola	Car doors, exhausts	82	0.48	Plant union president, 22 March 2013; senior supervisor, 6 April 2013; 3 contract workers, 22 March 2013
	D	Gurgaon	Sheet metal, dash, chassis	98	0.25	4 regular workers, 11 March 2013
	E	Binola	Sheet metal, tubes	41	0.44	3 regular workers, 6 April 2013
	F	Gurgaon	Engine parts	X	X	Plant union president and vice-president, 9 March 2013
	G	IMT Manesar	Engine parts	X	X	Regular worker, 11 March 2013
	Н	Gurgaon	Engine parts	X	X	Regular worker, 11 March 2013
	I	Binola	Engine parts	50	0.68	Union president, 22 March 2013
	J	Binola	Gears, engine parts	52	0.53	Regular worker, 6 April 2013
	K	Faridabad	Engine parts	X	X	Plant manager, 15 April 2013
	L	Gurgaon	Gear parts	X	X	Regular worker, 6 December 2011
	M	Faridabad	Bonded rubber parts	X	X	COO, 20 April 2013
2	A	Udyog Vihar, Gurgaon	Brakes	70	0.58	7 workers, 13 April 2013
	В	Faridabad	Engine parts	90	0.24	Contract worker, 18 April 2013
	С	Udyog Vihar,	Steel forging	60	X	Vice-president, 11 April; contract worker,

X = unknown

Table 2. Small firms (Tier 3) in this study

Firm	Location	le 2: Small firms (To Products	Ratio of unskilled-to-	Source
code			skilled workers'	
(3)			wages	
A	Faridabad	Sheet metal, spare parts	see below*	5 workers, 13 April 2013
В	Sururpur, Faridabad	Brake shoes, indicators	0.6	Owner, 8 April 2013
C	Sanjay Colony, Faridabad	Tractor parts	X	Manager, 9 April 2013
D	Sanjay Colony, Faridabad	Tools, worm shafts	X	Owner, 9 April 2013
E	Shiv Colony, Faridabad	Fuel lines, tractor parts	X	Owner, 15 April 2013
F	Shiv Colony, Faridabad	Engine parts	0.48	Engineer, 15 April 2013
G	Mujessar, Faridabad	Plating	0.71	Proprietor; 2 casual workers, 6 December 2011
Н	Sanjay Colony, Faridabad	Spare parts	1.00	2 casuals, 18 April 2013
I	Sanjay Colony, Faridabad	Spare parts	1.00	5 workers, 18 April 2013
J	Manesar	Fans, spare parts	1.00	Worker,8 December 2011
K	Welcome Industrial Complex, Sector 23, Faridabad	Spare parts	1.00	Owner, 18 April 2013
L	Welcome Industrial Complex, Sector 23, Faridabad	Tractor parts	0.50	Worker, 18 April 2013
M	Welcome Industrial Complex, Sector 23, Faridabad	Pistons, pulleys	1.00	Worker, 18 April 2013
N	Binola	Electroplating	X	Owner, 6 April 2013

X = unknown

^{*}Note: at 3A, 77 per cent of workers were hired by labour contractors and there was no difference between regular and contract workers' basic wages. This is the only Tier 3 firm we found that relied on contract workers.