Locating Women's Work in International Value Transfers

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1 Introduction

The relationship between globalization and gendered inequalities has long been a point of debate in economics. Feminist economists have long argued that the rise of the international division of labor has both relied on and deepened pre-existing gender inequalities (Mills 2015). This perspective is particularly relevant in the context of global value chains (GVCs), which since the 2010s make up the majority of traded goods and services. The impact of GVCs on women's work is contentious as trade-induced investment ("industrial upgrading") does not automatically translate into higher wages or improved protections for women workers ("social upgrading" or "gender upgrading") (Barrientos, Gereffi, and Rossi 2011; Mills 2015; Bamber and Staritz 2016), among other reasons due to the structural position of industries in which women predominantly work within global value chains (Nikulin and Wolszczak-Derlacz 2022). As an alternative to the GVC framework, the older literature on unequal exchange provides a complementary lens for understanding global trade dynamics. It examines how international trade generates value transfers from industries characterized by higher exploitation rates and lower capital intensities (Emmanuel 1972; Shaikh 1980; Işıkara and Mokre 2025). Unlike the global value chains framework, unequal exchange offers a broader theoretical model and empirical strategy to identify the winners and losers of international trade and competition, while also clarifying the causal mechanisms that underlie these transfers. At the same time, political economists in the real competition tradition emphasize that gender discrimination in labor markets is not an anomaly but rather a systemic outcome of both between- and within-industry competition (Botwinick 1993; Mason 1995; Karamessini and Ioakimoglou 2007). Their analyses highlight how women's work—as well as the labor of racially oppressed groups—is persistently positioned in industries and occupations that are structurally subject to lower wages.

In this paper, we investigate if women tend to work in industries that are payers rather than receivers of international value transfers in trade. We combine

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approaches to international trade and labor market discrimination from the classical and Marxist political economics traditions. Revealing the gendered nature of international production chains improves our understanding of international unequal exchange, and also the nature of gender discrimination in labor markets. This sheds light on an underexposed aspect in the unequal exchange literature and at the same time deepens the understanding of discrimination under competition.

Section 2 discusses key contributions from the extensive literatures of gender and global value chains, unequal exchange and labor market discrimination. Section 3 presents summary statistics and describes the dynamics in the global gendered division of labor, it also introduces the empirical approach to international value transfers. Section 4 introduces two simple empirical models and interprets the results, Section 5 contextualizes the empirical evidence in the literature and discusses potential further research.

2 Literature

The literature on the position of women's work in global value chains is too plentiful to be comprehensively surveyed in this paper, with more optimistic contributions focusing on increased female labor force participation and increasing wages, while more skeptical voices suspect that women are pushed in precarious and over-exploited employment by international cost competition. The contradiction connects to earlier debates on within-country female labor force participation and women's emancipation, which weigh potential financial independency against gender segregation on the labor market. (Kabeer 2008) For example, Oostendorp (2009) investigates theoretical avenues for the narrowing as well as the widening of a gender wage gap through globalization to find evidence that it improves the situation for women in richer but not in poorer countries. Mills argues that existing gendered inequalities and marginalizations are integrated in the international division of labor "to poisition members of some populations as cheap and cheaper labor for global capital" (2015, 287). Nikulin and Wolszczak-Derlacz (2022) find that industries involved in global value chains pay lower wages, and the wage premium is more negative for women workers. Generally, feminist economics suggest that international trade would lead to unequal outcomes for men and women, if women are pushed into employment where below-average pay and working conditions are products of international competition, or kept out of industries that gain from it, or if the relative importance of female-dominated low-wage industries for the labor market is increased.

The work on labor market discrimination based on Marxist and classical political economics provides a theoretical approach to the same contradiction between growth and exclusion within countries. It is positioned as an alternative to neoclassical approaches, where discrimination is either a remnant of earlier practices or the result of lacking competition, it instead focuses on the discrimination immanent to the current political economy. As Karamessini and Ioakimoglou (2007) points out, wage determination can be approached from a microeconomic direction where wages correspond to marginal labor productivities, or in a macroeconomic understanding that treats wages as socially deter-

mined. When wages are set as individual transactions, wage differentials for the same labor can appear when market power allows the enforcement of "discriminatory tastes" (Becker 1957), and are automatically diminished when competition intensifies. In contrast, when wages are set in a a social and historically specific process, competition between firms create inequalities that shape the wage curve (Mokre 2022). In Botwinick (1993)'s seminal model, wage growth is limited through two competitive factors, absolute profitability and the competitive distance between the most efficient capital and their closest competitor. Both are determined by one turbulently equalizing and one persistently different factor each, which translates into turbulently equalizing wage gains but persistently different wage levels. (Mokre 2020) At the same time, wage growth is achieved by conflictive bargaining, largely determined by the organizational strength of workers, which also differs between industries and is weakened by between-worker discrimination. In this understanding, gendered discrimination is expressed through sorting into industries with lower wages (Botwinick 1993), the exclusion from occupations with high and increasing wages (Mason 1995, 557), and the negative effects of discrimination on organizational strength and thereby wage increases. It is consistent with intense competition, and focuses on the localization of women's work.

With a similar emphasis on competitive dynamics, the literature on unequal exchange analyzes how international competition exacerbates existing inequalities and sets in motion value transfers from the neocolonial periphery to the imperialist center through trade. Emmanuel (1972) expands on the Marxist model of labor values and an equalized general profit rate, which create production prices, to argue that under international competition more value is produced in countries with lower capitalization and with a lower wage level, but internationally equalized prices favor countries with higher capital intensities and higher wages. Amin (1976) emphasizes the simultaneous importance of capital accumulation and institutional wage setting over Emmanuel's alleged reductionism to wage levels, Shaikh (1980) criticize the notion of capitalist competition between nations rather than between capitals, while Barrientos (1988) notes that the initial formulation of unequal exchange omits the labor values of capital, Tsoulfidis and Tsaliki (2019), Carchedi and Roberts (2023) and Işıkara and Mokre (2025) find that international value transfers induced by differential compositions of capital and those induced by differential general wage levels remain economically significant over time. They and others embrace the approach that competition expresses and exacerbates persistent international inequalities to form a classical and Marxist interpretation of unequal exchange. The estimation of international value transfers from labor values and production prices is a relatively new technique, earlier approaches centered the differences between exchange rates and purchasing power parity rates (Kohler 1998; Reich 2007; Ricci 2019) or the physical resources moved from periphery to center (Amin 1976; Hickel, Hanbury Lemos, and Barbour 2024).

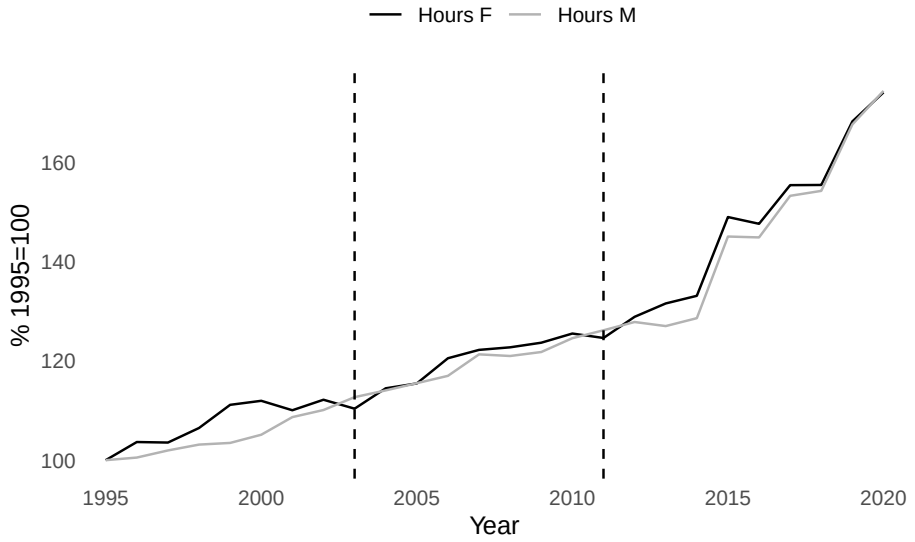
In this paper we investigate the position of women's work in the structure of international value transfers. We use Işıkara and Mokre (2025)'s dataset of international value transfers based on labor values and production prices which distinguishes between capital composition- and rate of surplus value-induced transfers, and employment data from Stadler et al. (2018)'s EXIOBASE, to test if women overproportionally work in industries that are givers rather than

receivers of value transfers. This constitutes an international dimension of a discriminatory gendered division of labor, and is related to the question of gendered wage differentials, as international value transfers increase the profit margins of receiving industries and thereby the limits to wage growth in a competitive wage setting model.

3 Data

3.1 Women's Work and International Value Transfers

On average, women receive lower wages than men. The gender pay gap has industrial, occupational, and individual dimensions: women tend to earn lower hourly wages in the same occupations, they tend to work in industries with lower average wages, and even within the same occupation and industry, they tend to earn less than their male counterparts. I addition, they tend to advance into higher-paying positions less often, tend to perform fewer hours of paid work and have less stable employment. In this paper, we extend the argument that wages and wage differentials are set in a competitive process between firms and workers, where women are pushed into lower-paying segments of the wage curve. Emphasizing value transfers between industries rather than nations, we investigate the relationship between women's work and international value transfers between industries, where industries in the imperialist center tend to receive value transfers from industries in the neocolonial periphery.



The staellite accounts in EXIOBASE 3.8.2 records work hours for men and women in 44 countries and 5 rest-of-world regions, over 163 industries, from 1995-2020. Over that period, global hours worked increased by more than 70 %, with the overall trend almost the same for men and women. In the late 1990s, women's hours increased visibly faster, followed by an almost parallel development until after 2015, and a catching up of men's growth rates to women's

in the years after. Consequently, the share of women's hours in total hours remained stable in that period, between 32 % and 36 %. Between countries and regions, the share of women in the workforce increased in 41 out 49, but the five regions where it fell substantially (India, China, Indonesia and the rest of world regions in the Americas and Africa) represent more than 60 % of global labor hours. Between industries, more industries increased the share of women's labor hours than decreased it. Visual inspection suggests that most industries with a sharp increase had very low shares of women labor in 1995, while decreases seem distributed evenly along the range of 1995 values.

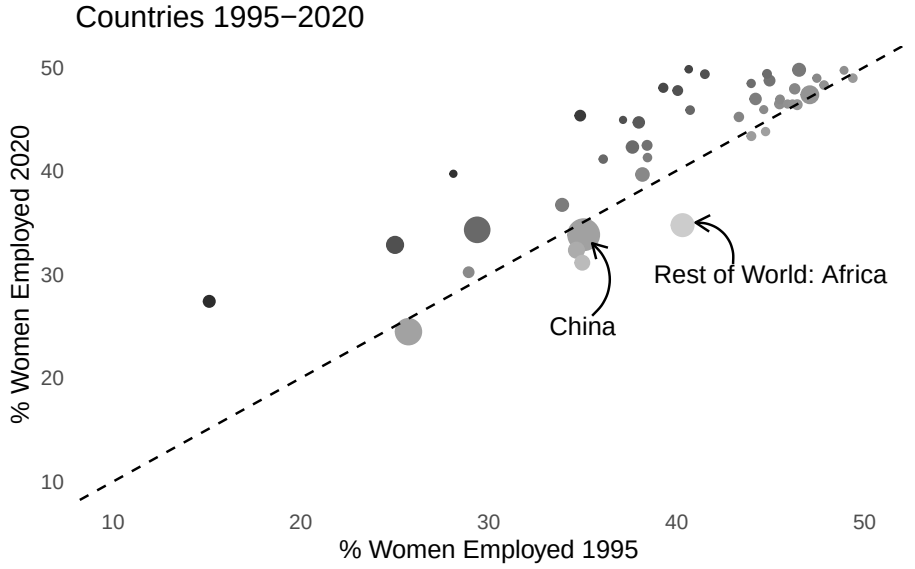


Figure 1: Comparison of the share of women's hours in total hours in 1995 and 2020, aggregated by country or region. Circle size indicates total work hours. Note: Data points below the 45-degree line saw the share of women's hours decrease over that period, and vice versa.

3.2 Price-Value Deviations

The relationship between prices and labor values is a key question in Marxist and classical political economics. Marx suggests that labor values, ie. relative necessary labor in the production of a commodity as well as capital employed is closely correlated with market prices, and even stronger, that the distribution of social labor is a driving force in exchange, growth and distribution. (Rubin 1973) Shaikh (2016) argues that in competition, market prices turbulently equalize around gravitational centers given by production prices, which in turn are determined by total direct and indirect labor as well as a general profit rate. For the estimation of labor values, production and market prices, we refer to the empirical tradition based on seminal contributions by Shaikh (1984), Ochoa (1989) and Cockshott, Cottrell, and Michaelson (1995). The increased availability, progress in harmonization between years and larger geographical base

Figure 2: Comparison of the share of women's hours in total hours in 1995 and 2020, aggregated by industry. Circle size indicates total work hours. Note: Data points below the 45-degree line saw the share of women's hours decrease over that period, and vice versa.

of multi-regional input output tables provide the basis for continued debate and more detailed investigations in recent years.

Total labor values are estimated as labor hours employed in the production of a commodity, as well as in the production of employed capital, normalized to some average skill level (simple labor in Marxist terms). When transformed into monetary values or a relative price level, we refer to them as direct prices, following Shaikh (1984). We estimate them by multiplying an industrial labor vector with the Leontief matrix of circulating capital (from input output tables) and fixed capital use (from corresponding satellite accounts) $(I - A - D)^{-1}$, corresponding to Pasinetti (1973)'s vertical integration. Production prices are a transformation of direct prices where a general profit rate is added to every step of production, they add vertically integrated profits. The Marxist model predicts an almost-linear relationship between production and market prices, but emphasizes the economic importance of price-value deviations as a driving force in competition, investment and technological change.

Direct prices are estimated as skill-adjusted labor hours in production as well as the production of all circulating capital, recorded in a normalized input-output matrix A. Labor hours are adjusted by the deviation of the industrial average wage from the global average wage and reduce labor to an internationally unified standard of simple labor with global wage level $\bar{w}$, industrial wage level w_j industrial wage bill W_j, industrial gross output X_j, industrial labor hours L_j. A denotes the circulating capital an industry bought (recorded in a flow matrix Z) per EUR output x: $A = Z \times \hat{x}^{-1}$. The estimation furthermore includes a matrix of fixed capital use (Södersten, Wood, and Hertwich 2018) K, which

is normalized in the same manner to $D = K \times \hat{x}^{-1}$. Finally, labor values v are normalized to relative direct prices dp' by evaluating industrial output in EUR units and expressing them as shares of global output in a given year. The conversion to monetary units is necessary, as we have no data on unit quantities, so monetary market prices are only available as aggregate industrial output in EUR.

$$\begin{aligned} gl^*_j &= \frac{1}{\bar{w}} \times \frac{W_j}{X_j} = \frac{w_j}{\bar{w}} \frac{L_j}{X_j} \\ v_{j,c,t} &= gl_{j,c,t}(I - A - D)^{-1} \\ dp'_{j,c,t} &= v_{j,c,t} \frac{X_{j,c,t}}{\sum_{j \in J, c=c, t=t} v_{j,c,t} X_{j,c,t}} \end{aligned} \tag{1}$$

Marxist production prices express vertically integrated labor hours in production with a general profit rate added to both labor and capital outlays. Here, $v = gl\,(I - A - D)^{-1}$ denotes vertically integrated labor hours and $H = (A + D)\,(I - A - D)^{-1}$ vertically integrated capital used per EUR output.

$$\begin{aligned} pp &= (1 + r)\,(w\,gl + pp\,(A + D)) \\ pp &= (1 + r)\,w\,gl\,(I - A - D)^{-1}\,(I - r\,(A + D)\,(I - A - D)^{-1})^{-1} \\ pp &= (1 - \frac{r}{R})\,v\,(I - R\frac{r}{R}H)^{-1} \\ pp'_{j,c,t} &= pp_{j,c,t} \frac{X_{j,c,t}}{\sum_{j \in J, c=c, t=t} pp_{j,c,t} X_{j,c,t}} \end{aligned} \tag{2}$$

Positive price-value deviations accelerate investment in an industry and intensify competition, which drives market prices down. The deviation is expressed as surplus profit over the general profit rate. Usual models for evaluating the price-value relationship include measures of deviations such as mean absolute deviations between relative prices, mean relative weighted deviations, the coefficient of variation and the scale-free Euclidian distance measure. (Shaikh 2016) Another established method is regression analysis, where a regression of market prices on production prices, with both sides in logarithms, should give an intercept close to 0, a slope parameter close to 1 and an R^2 statistic close to 1. When the underlying data includes multiple years and countries, fixed effects for the both as well as industries are appropriate, but prohibit intercept analysis. The regression setup also allows for the inclusion of further independent variables.

When estimating international value transfers from production and direct prices, value transfers correspond to differentials between production prices, with internationally equalized profit and nationally equalized wage rates on the one hand, and direct prices on the other. Since direct prices express labor values, the differentials to production prices express the relative effects of profit and wage rate equalization. Within a closed national economy, the difference between production and direct prices favor capital-intensive industries, who have a lower rate of surplus value than the general profit rate. International value transfers are

captured by the differentials between direct prices, production prices with profit and wage rates equalized at the national level, and production prices with profit rates equalized on the world market. At the same time, unequal general wage rates between countries express differential ratios of paid to unpaid labor, ie. rates of exploitation. When production prices are valued at the national wage rate rather than the international average, this disadvantages industries in low-wage countries but favors producers in high-wage countries when they use low-wage commodities as circulating and fixed capital. International value transfers can be decomposed in value composition of capital (VCC) induced transfers as the difference between direct prices and production prices with internationally equalized profit rates (but wage rates equalized on the country level), and rate of surplus value (RSV) induced transfers as differentials between said production prices and ones with wage rates equalized internationally. Profit rates equalized at the country level are expressed as r_c and internationally equalized ones as r. Expressing profit rates as shares in the maximum profit rate R, which is derived from the multinational capital coefficient matrix, national wage rates w_c can be rewritten as $(1 - r_c/R)$ following Tsoulfidis and Tsaliki (2019, 169–70). By expressing differential wage rates in differences in the national share of profit rates of the maximum profit rate R, we can combine nationally equalized wage rates with internationally equalized profit rates on circulating and fixed capital in the same equation. As before, we transform production prices into relative prices, that is, shares of international gross production, indicated by $pp' = (pp'_1, pp'_2, pp'_3)$.

$$
\begin{aligned}
(1+r)\,w &= (1-\frac{r}{R}) \\
(1+r)\,w_c &= (1-\frac{r}{R}-\frac{r_c-r}{R}) && = (1-\frac{r_c}{R}) && (3)\\
pp_1 &= (1+\frac{r_c}{R})\,gl\,(I-A-D)^{-1}\,(I-\frac{r_c}{R}\,R\,H)^{-1} && && (4)\\
pp_2 &= (1+\frac{r_c}{R})\,gl\,(I-A-D)^{-1}\,(I-\frac{r}{R}\,R\,H)^{-1} && && (5)\\
pp_3 &= (1+\frac{r}{R})\,gl\,(I-A-D)^{-1}\,(I-\frac{r}{R}\,R\,H)^{-1} && && (6)\\
& && && (7)
\end{aligned}
$$

Finally, when calculating international value transfers, differences between direct prices and production prices with nationally equalized profit rates are included, because multi-regional circulating and fixed capital flow matrices include both domestic and foreign inputs for each industry. Value transfers express an over- or undervaluation of commodities in terms of production prices as opposed to direct prices. To estimate international value transfers and decompose them into effects of the value composition of capital and the rate of surplus value, one compares (1) production prices with profit and wage rates equalized on the national level, (2) the profit rate equalized on the international level and (3) the hypothetical case of both profit and wage rates equalized on the international level.

$$\delta_{VCC} = pp_2' - dp' \tag{8}$$
$$\delta_{RSV} = pp_2' - pp_3' \tag{9}$$
$$\delta_{total} = \delta_{VCC} + \delta_{RSV} \tag{10}$$
$$\delta = (\delta_{total}, \delta_{VCC}, \delta_{RSV}) \tag{11}$$

4 Model

To identify the relationship between the share of female employment, we first estimate the likelihood of women working in an industry conditional on VCC-induced, RSV-induced and total value transfers. Since the sum of transfers is perfectly collinear with total effects, we run separate regressions to identify the overall effect, and to decompose it. We furthermore estimate the impact of female employment shares on the likelihood of the sign of total transfers. In the regression, we exclude all observations with zero values for market prices (ie. zero output) or production prices (ie. zero labor input and/or zero capital inputs). We include fixed effects for years $t \in T$, countries $c \in C$ as well as industries $j \in J$, and denote value transfers in percentage points of global gross production, spanning from 0 to 100. We exclude the rest of world regions from the regression, as aggregation of many industries across countries into one observation make econometric identification as well as theoretical consistency with the concept of industrial value transfers difficult. We furthermore exclude fictitious industrial sectors such as real estate activties (which can include imputed rents), private households with employed persons and extra-territorial organizations and bodies.

$$SHR = \alpha_t + \alpha_c + \alpha_j + \beta_1 \, \delta_{VCC} + \beta_2 \, \delta_{ROE} + \epsilon_{t,c,j} \tag{12}$$

Table 1 shows that (1) VCC-induced value transfers go with lower female employment shares in an industry, while (2) ROE-induced transfers go with higher shares, (3) that the total effect is negative and (4) the within-R^2 statistic as an indicator of explanatory power is very low. Increasing value transfers by one percentage point of gross global output decreases the share of female employment by 7.01 % on average. The results indicate that women tend to work in industries with lower total capital compositions, but in industries located in countries with higher wage rates, even after controlling for country- and industry effects. The low R^2 also suggests that these factors do not explain the female employment share, but rather indicate correlations.

Dependent Var.:	Share Hours	Share Hours
VCC Transfers	-18.96*** (3.46)	
RSV Transfers	9.47* (4.01)	

Total Transfers		-7.01*** (1.36)
Fixed-Effects:	-----------	-----------
Year	Yes	Yes
Country	Yes	Yes
Industry	Yes	Yes
S.E.: Clustered	by: Year	by: Year
Observations	119,455	119,455
R2	0.6856	0.6856
Within R2	0.0003	0.0001

Table 1: Three-way panel regression of shares of female employment in total employment on international value transfers, capital composition- and rate of exploitation-induced respectively, as well as total value transfers. Production industries only, 1995-2020.

We also estimate a LOGIT regression of the sign of total transfers, ie. if an industry is a giver or recipient of value transfers, on the share of female employment.

$$log(\delta) = \alpha_t + \alpha_c + \alpha_j + \gamma_1 \, SHR + \epsilon_{t,c,j} \tag{13}$$

The regression results in Table 2 show that the log odds of an industry receiving positive total transfers decreases with the share of female employment, with a significant negative effect on VCC-induced transfers and no significant effect on ROE-induced ones. The coefficient of -0.0059 transforms into an odd's ratio of 0.99, increasing the female employment share by one percentage point decreases the likelihood of receiving positive transfers by one percent.

Dependent Var.:	Sign Total Transfers	Sign VCC Transfers	Sign RSV Transfers
Share Hours	-0.0057* (0.0022)	-0.0119*** (0.0022)	0.0029 (0.0025)
Fixed-Effects:	-----------	-----------	-----------
Year	Yes	Yes	Yes
Country	Yes	Yes	Yes
Industry	Yes	Yes	Yes
S.E.: Clustered	by: Year	by: Year	by: Year
Observations	104,227	118,272	67,994
Squared Cor.	0.5409	0.5087	0.4648
Pseudo R2	0.4969	0.4664	0.4079
BIC	70,655.9615	83,093.5043	57,318.8005

Table 2: Three-way panel LOGIT regression of th eisgn of total, VCC_ and ROE-induced value transfers on the share of women's hours in total hours. Production industries only, 1995-2020.

The overrepresentation of women in value transfer-giving industries suggests that economic transfers from the periphery to the center are overproportionally based on female labor. This has potential consequences for gendered wage inequality, if negative value transfers go with lower profit rates on new capital, or women tend to work in lower-capitalized industries, as Botwinick (1993) argues, and Mokre (2020) show empirically, that maximum wage increases in bargaining increase with both factors.

To investigate this issue, we estimate a regression of the female employment share on deviations between market and production, market and direct as well as production and direct prices. Since all dependent and independent variables are on a strictly positive domain, and for simpler interpretation, we transform all variables in logarithms. The interpretation of coefficients ζ is therefore the percentual change in female employment shares following the relative increase of price deviations by one percent.

$$log(SHR) = \alpha_t + \alpha_c + \alpha_j + \zeta_1 MP - PP + \epsilon_{t,c,j} \tag{14}$$

$$log(SHR) = \alpha_t + \alpha_c + \alpha_j + \zeta_2 MP - DP + \epsilon_{t,c,j} \tag{15}$$

$$log(SHR) = \alpha_t + \alpha_c + \alpha_j + \zeta_3 PP - DP + \epsilon_{t,c,j} \tag{16}$$

The results in Table 3 indicate significant negative impacts of market-production, market-direct and production-direct price deviations on female employment. The production-direct deviation effect is almost three times the size of the market-production deviation, which is noteworthy as international value transfers are located in the deviations between production and direct prices. A one percentage point larger production-direct price difference goes with a 0.96 % lower share of female employment in an industry. The low R^2 statistic indicates little explanatory power over the composition of the workforce.

Dependent Var.:	Log Share Female Employees	Log Share Female Employees	Log Share Female Employees
(MP-PP)	-0.3304*** (0.0163)		
(MP-DP)		-0.3188*** (0.0140)	
(PP-DP)			-0.9627*** (0.1584)
Fixed-Effects:			
Year	Yes	Yes	Yes
Country	Yes	Yes	Yes
Industry	Yes	Yes	Yes

S.E.: Clustered	by: Year	by: Year	by: Year
Observations	170,523	170,523	170,523
R2	0.6615	0.6616	0.6615
Within R2	0.0002	0.0002	0.0001

Table 3: Three-way panel regression of shares of women's hours in total hours on market-production, market-direct and production-direct price deviations respectively. Production industries only, 1995-2020.

5 Conclusion

In this paper, we located the gendered division of global labor in the political economics of international value transfers. We estimate value transfers as differentials between total labor time in production of commodities as well as capital used in production on the one hand, and production prices with internationally equalized profit rates and nationally equalized wage rates on the other. These measures express international inequalities in production and trade of circulating capital, where received transfers are unequally distributed at the benefit of a few countries in the center, and given transfers constitute a substantial share of gross production in many peripheral countries. We find a significant negative relationship between received transfers and the share of women in the workforce after controlling for time, location and industry.

When we decompose transfers into capital composition- and rate of exploitation-induced effects, we find that differences in capital composition drive the results. We furthermore find that female labor participation significantly increases the likelihood of an industry giving value transfers rather than receiving them. Here to, capital composition carries significantly negative coefficients while rate of exploitation effects are not significantly different from zero. Our results do not suggest that one variable causally determines the other, in fact the explanatory power of the regressions is negligibly low, but rather locate female labor in industries giving more and receiving less transfers.

This issue, and international economic trade inequalities in general, is intimately related to the gendered dimension of wage inequality, the gender wage gap. Industries with lower profit rates on new capital and lower capital intensity tend to show smaller wage increases, cumulating to persistent inter-industry wage inequalities. (Botwinick 1993; Mokre 2020) We further follow this intuition and investigate the relationship between turbulently equalizing (Shaikh 2016; Işıkara and Mokre 2025) differentials between market, production as well as direct prices and the share of women in the workforce to find a significantly negative effect. As price deviations are one indicator of higher-than-normal profit rates, this result reinforces the notion of lower potential for wage increases in industries where more women tend to work. As with international value transfers, we find no evidence for causality, but rather locate female labor in industries that benefit less from turbulent competition.

Our analysis also contributes to the debate on the role of global value chains integration and gendered inequalities, specifically the contributions arguing that its international division of labor is partially based on gendered divisions of labor within countries, and the predominance of women workers in more precarious and worse paid industries. Our results point in the same direction, at the same time, including all between-industry trade (rather than only GVCs), and clearly identifying the channels transfers, emphasizes the relationship between gender discrimination and the production structure.

The geographical and temporal width of our dataset, which is to our knowledge the largest collection of direct and production prices, suggest that the location of female labor in the political economy is a persistent feature of modern, international capitalism. This suggests a structural, if not systemic, role of the gendered division of paid labor. It further emphasizes the need to investigate exploitation and wage inequalities in unified frameworks. The approach of the paper opens research avenues into the relationship between gender and other economic dimensions of international inequalities, gender and ecologically destructive production, and after considering additional data sources, the relationship with unpaid female labor.

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Tables

Country	Global employment share	% Hours F 1995	% Hours F 2020	Increase Hours F
[World]	100.00	34.00	34.49	0.49
ES	0.45	33.41	50.64	17.23
WM	1.01	15.12	27.39	12.27
MT	0.01	28.11	39.70	11.59
IT	0.57	34.87	45.31	10.44
CY	0.01	40.64	49.79	9.15
NL	0.18	39.29	48.00	8.71
WE	4.34	25.01	32.84	7.83
BE	0.11	41.50	49.31	7.81
LU	0.01	37.14	44.90	7.75
ZA	0.32	40.06	47.73	7.68
AT	0.12	43.46	50.82	7.36
DE	1.18	44.36	51.06	6.69
KR	0.81	37.98	44.66	6.68
CH	0.10	40.71	45.84	5.13
GR	0.08	36.09	41.12	5.03
WA	14.87	29.38	34.29	4.91
JP	1.22	37.65	42.28	4.64
PT	0.13	44.81	49.34	4.53
DK	0.06	43.96	48.42	4.45
TW	0.33	38.43	42.45	4.02
FR	0.59	44.94	48.69	3.75
LT	0.04	47.83	51.21	3.38
RU	1.48	46.51	49.74	3.23
IE	0.08	38.45	41.26	2.82
MX	1.52	33.90	36.70	2.80
GB	0.82	44.20	46.92	2.73
EE	0.02	48.49	51.13	2.64
AU	0.23	43.31	45.18	1.87
PL	0.45	46.28	47.90	1.62
FI	0.06	47.46	48.92	1.46
BR	1.81	38.18	39.63	1.46
HU	0.12	45.50	46.88	1.38
TR	0.56	28.93	30.20	1.28
HR	0.04	44.63	45.89	1.26
CA	0.34	45.48	46.45	0.97
LV	0.03	48.91	49.68	0.77
NO	0.05	45.90	46.43	0.53
BG	0.10	47.84	48.26	0.42
SI	0.03	46.16	46.46	0.29
US	5.00	47.09	47.33	0.24
RO	0.34	46.41	46.37	-0.04
SE	0.09	49.38	48.93	-0.44
CZ	0.15	43.97	43.34	-0.64

Country	Global employment share	% Hours F 1995	% Hours F 2020	Increase Hours F
SK	0.07	44.73	43.77	-0.96
CN	26.77	35.05	33.82	-1.23
IN	16.22	25.72	24.47	-1.26
ID	3.45	34.67	32.33	-2.33
WL	2.63	34.98	31.12	-3.85
WF	10.99	40.31	34.74	-5.57

Industry	Employment Share	% Hours F 1995	% Hours F 2020	Increase Hours F
[All]	100.00	34.50	34.49	-0.01
i13.20.14	0.09	4.92	34.61	29.70
i13.20.12	0.62	14.23	39.49	25.25
i13.20.15	0.08	10.67	32.30	21.63
i14.1	0.20	13.03	34.54	21.51
i12	0.02	12.99	33.78	20.80
i11.c	0.00	7.49	26.93	19.44
i13.20.11	1.31	10.66	26.88	16.22
i90.1.f	0.00	13.74	28.50	14.76
i13.1	0.15	6.45	20.26	13.81
i11.b	0.13	10.73	24.31	13.58
i90.1.a	0.01	14.03	27.10	13.07
i90.2.a	0.00	13.48	26.42	12.94
i90.1.e	0.00	15.57	28.42	12.85
i14.3	0.13	8.06	20.80	12.74
i90.3.b	0.00	16.33	28.59	12.25
i13.20.16	0.17	15.10	27.26	12.16
i90.1.b	0.01	14.65	26.55	11.90
i90.1.c	0.01	15.02	26.89	11.87
i15.a	0.15	26.49	38.19	11.71
i90.2.b	0.00	16.68	28.22	11.54
i32	0.71	42.86	54.19	11.33
i16	0.06	55.90	66.81	10.91
i14.2	0.29	17.20	27.53	10.34
i90.1.g	0.01	15.74	25.72	9.99
i40.11.h	0.00	9.92	19.41	9.49
i90.5.e	0.01	21.51	30.33	8.82
i90.5.f	0.01	20.87	29.49	8.62
i40.11.c	0.02	16.49	25.10	8.61
i90.2.c	0.01	18.03	26.48	8.46
i90.3.a	0.01	16.79	25.17	8.39
i41	0.02	14.12	22.05	7.93
i10	0.28	16.44	24.12	7.68
i90.5.d	0.03	18.74	26.32	7.58
i40.11.j	0.00	16.26	23.78	7.53
i11.a	0.17	12.28	19.38	7.10

Industry	Employment Share	% Hours F 1995	% Hours F 2020	Increase Hours F
i40.11.k	0.00	12.33	19.38	7.05
i21.1	0.02	25.87	32.88	7.01
i15.h	0.05	31.48	38.43	6.95
i90.5.a	0.05	20.09	27.02	6.93
i05	1.43	25.61	32.41	6.81
i15.b	0.10	32.35	39.09	6.74
i90.1.d	0.01	18.48	24.84	6.36
i15.e	0.08	30.04	36.37	6.33
i90.5.b	0.03	20.68	26.97	6.28
i40.2	0.06	13.93	20.00	6.07
i90.5.c	0.02	21.94	27.99	6.05
i90.4.a	0.22	6.37	12.27	5.90
i90.4.b	0.27	6.66	12.37	5.71
i13.20.13	0.02	16.92	22.51	5.59
i30	0.17	45.51	51.02	5.51
i40.11.l	0.00	17.70	23.08	5.37
i26.a.w	0.00	18.05	23.25	5.21
i40.11.d	0.02	15.53	20.55	5.02
i27.45	0.02	6.44	11.33	4.89
i15.d	0.70	34.63	39.50	4.87
i40.11.b	0.05	13.67	18.48	4.81
i75	5.33	29.04	33.39	4.35
i24.b	0.00	21.53	25.48	3.95
i45.w	0.00	8.55	12.16	3.61
i40.12	0.01	15.23	18.60	3.37
i40.11.g	0.00	16.96	20.08	3.12
i40.13	0.05	16.01	18.92	2.91
i67	0.36	40.90	43.44	2.54
i65	0.85	40.46	42.88	2.42
i24.a.w	0.00	26.08	28.49	2.41
i27.43	0.02	6.57	8.92	2.36
i15.f	0.04	34.02	36.33	2.31
i15.k	0.16	35.38	37.34	1.95
i80	4.51	48.02	49.85	1.83
i60.3	0.03	14.49	16.21	1.72
i61.1	0.20	14.29	15.88	1.60
i52	3.93	44.30	45.86	1.56
i40.3	0.01	17.08	18.63	1.55
i21.w.1	0.01	26.11	27.62	1.51
i40.11.f	0.00	13.93	15.43	1.50
i26.a	0.12	19.89	21.24	1.35
i15.i	0.53	34.09	35.28	1.18
i24.a	0.07	23.79	24.97	1.18
i40.11.e	0.00	20.95	21.81	0.85
i45	6.53	10.61	11.45	0.83
i27.41	0.02	6.37	7.20	0.83
i64	1.20	24.48	25.25	0.78

Industry	Employment Share	% Hours F 1995	% Hours F 2020	Increase Hours F
i15.g	0.07	24.53	25.29	0.76
i36	0.77	24.13	24.88	0.75
i40.11.i	0.00	18.40	19.14	0.74
i74	2.02	41.85	42.56	0.71
i29	1.59	18.62	19.31	0.69
i73	0.67	39.22	39.79	0.56
i50.b	0.07	45.84	46.31	0.47
i01.j	2.95	35.80	36.27	0.47
i27.42	0.06	8.70	9.11	0.41
i27.44	0.06	8.33	8.66	0.32
i66	0.52	43.10	43.41	0.31
i15.c	0.16	35.23	35.42	0.19
i27.44.w	0.00	14.54	14.73	0.18
i92	0.56	43.88	44.03	0.16
i26.b	0.20	19.35	19.49	0.15
i31	0.75	30.16	30.20	0.04
i51	2.68	44.92	44.78	-0.14
i26.e	0.15	17.81	17.59	-0.22
i33	0.33	35.89	35.66	-0.23
i01.l	2.06	37.00	36.65	-0.35
i01.a	2.03	36.73	36.24	-0.49
i71	0.12	42.23	41.63	-0.59
i20	0.19	16.76	16.12	-0.64
i22	0.43	29.03	28.38	-0.65
i50.a	1.98	44.95	44.28	-0.67
i27.5	0.11	7.56	6.87	-0.69
i60.1	0.23	17.15	16.28	-0.87
i28	0.95	13.37	12.44	-0.93
i63	1.20	19.44	18.34	-1.09
i21.2	0.21	27.93	26.79	-1.14
i02	0.55	35.62	34.42	-1.20
i27.45.w	0.00	7.01	5.77	-1.24
i26.d	0.14	18.64	17.38	-1.26
i35	0.34	13.41	12.04	-1.37
i01.b	1.39	35.60	34.23	-1.37
i27.a.w	0.01	12.21	10.83	-1.38
i01.h	1.46	36.32	34.81	-1.51
i40.11.a	0.12	19.19	17.65	-1.54
i34	1.02	14.47	12.86	-1.61
i20.w	0.01	17.04	15.43	-1.61
i15.j	0.13	35.43	33.72	-1.71
i01.n	1.30	35.44	33.73	-1.72
i01.c	1.37	35.68	33.92	-1.76
i01.g	1.18	36.47	34.58	-1.90
i26.c	0.01	17.93	16.01	-1.92
i27.a	0.51	9.69	7.69	-2.00
i26.d.w	0.00	24.01	21.91	-2.10

Industry	Employment Share	% Hours F 1995	% Hours F 2020	Increase Hours F
i01.d	14.13	37.10	34.98	-2.12
i23.2	0.38	12.56	10.39	-2.18
i18	0.52	65.70	63.47	-2.23
i27.41.w	0.00	13.34	11.09	-2.24
i24.c	0.06	27.20	24.94	-2.26
i01.o	0.11	37.78	35.48	-2.30
i25	0.70	29.40	27.01	-2.39
i70	0.33	44.75	42.34	-2.41
i01.f	0.47	36.36	33.54	-2.82
i60.2	1.96	15.56	12.63	-2.93
i19	0.31	45.45	42.48	-2.97
i17	0.85	39.53	36.53	-2.99
i93	0.47	49.08	46.00	-3.08
i72	0.89	41.48	38.36	-3.12
i01.m	0.26	36.33	33.13	-3.20
i01.i	0.71	36.05	32.79	-3.26
i62	0.30	19.42	16.04	-3.38
i27.42.w	0.00	15.60	12.11	-3.49
i27.43.w	0.00	17.25	13.55	-3.70
i61.2	0.01	20.05	15.92	-4.13
i91	0.47	50.01	45.70	-4.32
i24.d	0.62	23.71	19.25	-4.47
i01.e	1.16	36.64	32.04	-4.61
i01.k	2.26	36.77	32.08	-4.69
i85	3.73	69.79	64.83	-4.97
i95	0.72	67.76	61.86	-5.90
i23.3	0.00	24.30	17.93	-6.38
i23.1	0.03	14.02	7.03	-6.99
i55	3.70	50.56	43.34	-7.23
i37	0.12	39.69	28.33	-11.35
i37.w.1	0.00	35.24	19.81	-15.43