Sialkot footballs: workshop labour, world-market prices

Reference FX rate used here: 1 USD ≈ PKR 279.897 (20 Jan 2026).

Sialkot's football workers produce commodities that pass through exporters, brands, and retailers into global leagues and tournaments. The same stitched object can reappear in the world market at a money price that stands far above the local wage.

Two benchmarks (converted using the reference rate above):

Retail benchmark:	PKR 46,183 (USD 165)
Export-average benchmark:	PKR 1,243 (USD 4.44)

We will measure one simple thing: how wages, costs, and surplus fit together, and what that implies for class struggle in a supply chain.

Data sources and years:

These slides combine figures drawn from different sources and years (each labelled). The aim is to make the class relation legible.

- **Piece-rate, time per ball, and the PKR 9,600/month example: Bloomberg Businessweek, 22 Nov 2022** (PKR 160/ball; ~ 3 hours/ball; ~ 3 balls/day; $\sim$ PKR 9,600/month).
- **"Living wage $\sim$ PKR 20,000/month":** quoted as a **researcher-estimate benchmark** in that same **Nov 2022** Bloomberg reporting. **Updated** benchmarks are shown later.
- **Export scale / implied export unit value: FY 2021/22** output and value reported via **Reuters (published 9 Dec 2022)**: 43 million balls valued at USD 191 million $\Rightarrow$ implied average export unit value $\approx$ USD 4.44.
- **Producer-stage cost structure c, v, k and mean profit margin:** firm survey evidence in **NBER Working Paper 21417** (dated **July 2015**, revised **July 2016**); cost table is for a **size-5 promotional ball** and reports costs in PKR.
- **FX conversion shown in brackets:** NBP Treasury rate sheet, 20 Jan 2026.

We keep PKR as primary, and we mark benchmark-years so inflation and time are not hidden.

Notations first:

We use standard Marxian notation, defined before any calculation:

- w_{ball}: piece-rate pay per ball. w_{day}, w_{month}: wage income per day/month.
- T_{day}: hours worked per day. $w_{\text{hour}} = w_{\text{day}}/T_{\text{day}}$: implied hourly wage.
- c: **constant capital** (materials, overhead, machines) whose value is transferred.
- v: **variable capital** (wages paid for labour-power).
- $k = c + v$: **cost price** advanced by capital.
- p: selling price at the producer stage. $s = p - k$: **surplus** in money form at this stage.
- $e = \dfrac{s}{v}$: **rate of exploitation** (surplus relative to wages).

From here on, each slide repeats the definition relevant to its step, and then plugs in numbers.

Piece rate → hourly wage: the wage in disguise

Definitions. w_{ball} is pay per ball; q is balls/day; t_{ball} is hours/ball. Then $w_{\text{day}} = w_{\text{ball}} q$, $T_{\text{day}} = t_{\text{ball}} q$, and $w_{\text{hour}} = w_{\text{day}}/T_{\text{day}}$.
Numbers (PKR first; USD in brackets uses NBP 20 Jan 2026 FX):

$$w_{\text{ball}} = \text{PKR}\,160\ (\text{USD}\,0.57), \quad q = 3, \quad t_{\text{ball}} = 3.$$

Daily wage income:

$$w_{\text{day}} = 160 \times 3 = \text{PKR}\,480\ (\text{USD}\,1.71).$$

Daily hours:

$$T_{\text{day}} = 3 \times 3 = 9 \text{ hours}.$$

Implied hourly wage:

$$w_{\text{hour}} = \frac{480}{9} \approx \text{PKR}\,53.33/\text{hour}\ (\text{USD}\,0.19/\text{hour}).$$

A piece rate looks like payment for output. In reality it is a method of controlling time: the worker must increase pace, lengthen hours, or absorb risk to keep income steady.

Monthly wage vs. living wage (2022)

Monthly income at this pace:

$$w_{\text{month}} \approx \text{PKR}\,9{,}600\ (\text{USD}\,34.3),$$

which corresponds to about 20 paid workdays/month at $w_{\text{day}} = \text{PKR}\,480$.
Living-wage benchmark (as reported in Nov 2022):

$$L_{\text{month}}^{(\text{quote, }2022)} \approx \text{PKR}\,20{,}000\ (\text{USD}\,71.45).$$

So under that **2022** benchmark:

$$\frac{w_{\text{month}}}{L_{\text{month}}^{(\text{quote, }2022)}} \approx 48\%, \qquad L_{\text{month}}^{(\text{quote, }2022)} - w_{\text{month}} = \text{PKR}\,10{,}400.$$

This is social reproduction as arithmetic: when wages sit below reproduction, the "adjustment" is rationing, debt, longer hours, and unpaid labour pushed into households. Unless wages rose proportionally with the reproduction benchmark—estimated at PKR 51,733 (urban) and PKR 45,588 (rural) (Anker Method; 2025 estimate)—the implied shortfall would be larger today.

What the worker produces in a day

Definitions. Output per day is q. Daily wage is w_{day}. We compare the wage to two money benchmarks for the day's output.
At this pace $q = 3$ balls/day and $w_{\text{day}} = \text{PKR}\,480$ ($\text{USD}\,1.71$).
Benchmark values of the day's output:

$$\text{Export benchmark/day} = 3 \times \text{PKR}\,1{,}243 \approx \text{PKR}\,3{,}728,$$
$$\text{Retail benchmark/day} = 3 \times \text{PKR}\,46{,}183 = \text{PKR}\,138{,}549.$$

Wage as a share of those benchmarks:

$$\frac{w_{\text{day}}}{\text{export benchmark/day}} = \frac{480}{3{,}728} \approx 12.87\%,$$
$$\frac{w_{\text{day}}}{\text{retail benchmark/day}} = \frac{480}{138{,}549} \approx 0.346\%.$$

These ratios do *not* claim the local employer pockets full retail. They show the scale of separation between the wage and the commodity's world-market money form.

Who captures the margin? (factory-gate profit after costs)

We have one **producer-stage** example with full costs (a size-5 promotional ball):

$$k = \text{PKR}\,210.83 \text{ (reported)},$$
$$p \approx \text{PKR}\,227.91,$$
$$s = p - k = \text{PKR}\,17.08.$$

So the **local capitalist's profit after costs at this stage** is:

$$s \approx \text{PKR}\,17.08 \text{ per ball.}$$

This is not "the whole supply-chain profit". It is the surplus captured at **one documented producer stage**. Next we compare the factory gate to export and retail benchmarks.

Downstream spread (export/brand/retail gap)

World-market benchmarks (converted using NBP 20 Jan 2026 FX):

$$\text{export unit value} \approx \text{PKR}\,1{,}243,$$
$$\text{retail benchmark} \approx \text{PKR}\,46{,}183.$$

Downstream **spread beyond the factory gate** p (*not "pure profit"; includes freight, finance, marketing, brand rents, etc.*):

$$\text{export} - p \approx \text{PKR}\,1{,}015, \qquad \text{retail} - p \approx \text{PKR}\,45{,}955.$$

Same relation as **multiples of the factory gate**:

$$\frac{\text{export}}{p} \approx 5.45, \qquad \frac{\text{retail}}{p} \approx 202.6.$$

Local producer-stage **profit after costs** as a share of benchmarks:

$$\frac{s}{\text{export}} \approx 1.37\%, \qquad \frac{s}{\text{retail}} \approx 0.037\%.$$

This is the scale of the downstream spread fought over among exporters, brands, and retailers.

Inside one ball: c, v, k

Definitions. c = constant capital *advanced and used up* in production (value transferred); v = variable capital (wages paid for labour-power); $k = c + v$ = cost price advanced by capital.

Breakdown of c. In general,

$$c = c_{\text{materials}} + c_{\text{depreciation}} + c_{\text{overhead}},$$

where materials include rexine/synthetic panels, bladder, thread/glue, packaging; depreciation is wear-and-tear of tools/machines/buildings; overhead includes electricity, rent, admin, and related running costs. In the producer-cost figures used here, these elements are reported together as one combined c (materials + overhead), so we do not split them numerically.

Costs per ball (parts sum to 210.81; reported total 210.83):

$$c = \text{PKR}\,154.52, \qquad v = \text{PKR}\,56.29, \qquad k = \text{PKR}\,210.83.$$

Why it matters: c does not create new value; it passes value on. New value comes from living labour. Profit is not explained by "exchange" alone; it is rooted in production under capitalist control.

Selling price p, surplus s, and new value $v + s$

Definitions. p = producer-stage selling price; $s = p - k$ = surplus in money form at this stage; new value (money form) = $v + s$.
With markup $m = 8.1\%$ on cost (as documented in literature):

$$p = k\Big(1 + \frac{m}{100}\Big) \approx \text{PKR}\,227.91.$$

So surplus:

$$s \approx p - k = \text{PKR}\,227.91 - \text{PKR}\,210.83 = \text{PKR}\,17.08.$$

New value added by living labour (money form):

$$v + s = \text{PKR}\,56.29 + \text{PKR}\,17.08 = \text{PKR}\,73.37.$$

Labour creates new value; wages return only part of it. The remainder appears as s, and that remainder is what capital lives on.

Definition. The rate of exploitation is $e = \dfrac{s}{v}$: surplus relative to wages.

Compute:

$$e = \frac{17.08}{56.29} \approx 0.303 \Rightarrow 30.3\%.$$

Meaning: for every PKR 100 paid in wages, about PKR 30 is appropriated as surplus at this producer stage.

Time intuition (for a 9-hour day):

$$T_{\text{day}} = T_n + T_s \approx 6.9 + 2.1 = 9,$$

where T_n is necessary labour time (the part of the day in which the worker reproduces the value of their wage) and T_s is surplus labour time (the part of the day in which the worker produces surplus value appropriated by capital).

How long to buy what you make?

Definitions. w_{hour} is hourly wage. $H = \dfrac{\text{price}}{w_{\text{hour}}}$ is hours needed to earn a given price in wages.

Hourly wage:

$$w_{\text{hour}} \approx \text{PKR}\,53.33/\text{hour}\ (\text{USD}\,0.19/\text{hour}).$$

Retail benchmark price:

$$\text{PKR}\,46{,}183\ (\text{USD}\,165).$$

Hours to afford one retail-price ball:

$$H = \frac{46{,}183}{53.33} \approx 866 \text{ hours}.$$

Convert into output and workdays:

$$866 \div 3 \approx 289 \text{ balls}, \qquad 866 \div 9 \approx 96.2 \text{ days}.$$

So the worker must stitch roughly **289 balls**—nearly **96.2 workdays**—to earn enough wages to buy **one** ball at the retail benchmark.

Why Marxism clarifies what liberal economics obscures

Neoclassical and neoliberal economics typically start from exchange: a wage contract is made, a price is paid, and outcomes are explained as "returns" to factors.

Marxism starts from production and power. Workers sell *labour-power* for wages v. Under capitalist command, labour produces new value $v + s$. Because capital owns the product, it appropriates s. Exploitation is the measurable split:

$$\text{new value} = v + s, \qquad e = \frac{s}{v}.$$

This is why exploitation can exist even when contracts are legal and wages are paid on time. The issue is not merely a defective contract; it is the property relation that makes the contract necessary.

History as class struggle:

When Marx and Engels say history is the history of class struggles, they mean the central conflict is over control of labour, ownership of the product, and appropriation of surplus.
In a supply chain like football manufacturing, that conflict appears as:

- piece rates and speed-up (how time is commanded for how little pay),
- subcontracting and fragmentation (how capital isolates workers),
- compliance regimes and buyer power (how global contracts discipline local labour),
- reproduction crises (how wages below survival are "managed" through debt and unpaid labour).

The arithmetic is not for classrooms or textbooks, but for streets and neighbourhoods. It makes the relation legible: who bears the cost, who captures the surplus, and why collective organisation becomes necessary.

Perspectives for the movement

If wages are below reproduction (PKR 9,600 vs $\sim$ PKR 51,733 urban living wage), closing the reproduction gap is not charity; it is a class demand. If surplus exists and is measurable ($e \approx 30.3\%$ in the producer-stage example), the struggle is also over time, intensity, and control.

Practical implications:

- Raise piece rates and base wages so monthly income meets and exceeds the reproduction benchmark.
- Reduce working time without wage loss: contest surplus labour time directly.
- Organise across workshops and subcontractors so capital cannot isolate workers by contract type.
- Target downstream enforcement: purchasing contracts and brand/retail power that squeezes labour at the bottom.

Marxist rigour is useful because it ties demands to the structure of the relation: v versus $v + s$, reproduction versus deprivation, and the necessity of collective power to change the terms.

What these numbers can and cannot show

Reported profit is a stand-in. Surplus value is a social relation measured in labour time. A firm's profit in rupees is only an accounting proxy for it, at one stage of a long chain.

The figures do not describe one workplace. Pay comes from 2022 reporting, costs from a survey of promotional balls, and prices from other sources. The cost table's stitching cost (PKR 39.24) differs from the reported piece rate (PKR 160).

So read $e \approx 30.3\%$ as an illustration. The arithmetic is exact, and the categories are what it teaches. It is not a measured rate of exploitation for Sialkot.

Retail is a benchmark. The official match ball is a premium product, so hours-to-buy shows a market gap.

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