Purdah, dowry and development in Pakistan

Ian Coxhead
University of Wisconsin-Madison

Sisira Jayasuriya
Monash University
Purdah

- **Purdah** refers to a set of practices that regulate women’s dress, behavior, and social activities, especially outside the family home.
- Importantly, purdah limits a woman’s ability to seek paid employment outside her home or immediate locale.
- Purdah is (now) very widely practiced in Pakistan
  - Women’s LFPR is among world’s lowest
  - Minimal willingness/capacity to relocate for work
    - Est’d elasticity of women’s labor supply w.r.t. wage is 0.16 (cf. Bangladesh: 0.31; Sri Lanka: 0.89; Lopez-Avecedo & Robertson 2016)
Dowry

- **Dowry** is a payment made at marriage by the bride’s family to that of the groom
- Reflects (in part) gender-differentiated earning power
- Banned or restricted everywhere in South Asia, yet persists
  - Major financial burden on families
  - Cause of widespread abuse and violence against women, including sex-selective abortion, female infanticide, and murder
Globalization disappoints in Pakistan

• 1990-2000s, significant lowering of barriers to trade & factor flows
  • Average applied tariff rate was > 70% in 1985; 56% in 1993-94; 20% in 2001-02; 14% in 2014

• But failure to gain from globalization
  • Export growth very sluggish – chronic trade deficits
  • FDI: very little, almost all to home mkt (services, non-tradables)
  • Employment growth very low
  • Industrialization stagnant (or de-industrializing)
  • Exports of labor, rather than of goods and services
Per capita income ($PPP) as fraction of USA (Source: World Bank data)
No boom in labor-intensive apparel exports
Anaemic growth in all mfg exports

Garment & textile exports, source: COMTRADE

- Pakistan
- Bangladesh
- Vietnam
- Cambodia
- India
Explaining disappointing outcomes

• Poor performance is overdetermined
• Laundry list
  • Opening to global markets coincided with rise of China
  • Political instability and poor infrastructure discouraged FDI
  • Inadequate logistical services & institutional support
  • Insufficient skilled labor
  • Negative dynamic with labor export and remittances
    • Hamid and Khan, 2015; Nazeer and Rasiah, 2016; Mangla and Din, 2015; ul Haque, 2015, Mahmood and Ahmad 2017...

• None of these are unique to Pakistan—yet it lags behind comparable countries
Low female LFPR and mobility are more special

Ex ante:

• **Purdah** reduces effective labor force *and* contributes to low labor productivity
  • Persistent misallocation over sectors and occupations
  • Lower potential for industrial expansion
  • Lower incentives for investment and technological upgrading

• **Dowry** may exacerbate existing resource misallocations
  • Labor export and remittance dependency

• Institutions not the cause of dev. failure, but may exacerbate costs
Labor force participation rate, female (% of female population ages 15+): modeled ILO estimate
Figure 1: Female Labor Force Participation and GNI per Capita Worldwide

PRC = People’s Republic of China, LFPR = labor force participation rate, GNI = gross national income.
Note: Labor data for ages 15+ excludes the Middle East.
Figure 11: Locations Available for Work (Conditional on Availability)


Source: ADB 2016
Features of female employment

• Urbanization rate is high but female LFPR (paid employment) is even lower in cities

• Almost no Pakistani women work in Middle East

• Women work in farming (71%), at home, unpaid
  • Employment U-curve: only the poorest & most highly educated are in paid work

• Women’s employment in industry (14%), including apparel mfg, is very low (Makino 2007)
  • In textile and apparel – the most female labor-intensive industry – Pakistan has lowest share in South Asia (World Bank, 2016)
Female employment in formal mfg firms (share)
(Source: calculations from national data in World Bank 2016)
Low female LFPR and mobility: implications

• Specific factors model (SFM) (Jones 1971)
• 2-sector economy w/ vertically integrated agr. (A) and mfg (T)
• Both A & T subject to exogenous world prices
• Production technology: mobile labor and specific capital

• **Counterfactual:** full L mobility: \( L_T + L_A = L^m + L^f = L \)
  
  \[ Y_T = Y_T(L - L_A, K_T) \quad Y_A = Y_A(L_A, K_A) \]

• **Purdah:** only \( L^m \) mobile; \( L^f \) employed only in A:
  
  \[ Y_T = Y_T(L - L^f - L^m_A; K_T) \quad Y_A = Y_A(L^m_A; K_A, L^f) \]

• Differential responses to price shocks: Le Chatelier-Samuelson
Production possibilities and globalization gains with/without restrictions on female labor mobility

Initial long-run equilibrium with prices \( P_0 \) is at A.

**Counterfactual** (full L mobility): relative price increase to \( P_1 \) raises output of industry, new eq’m at B

**Purdah** (some L fixed in agriculture): same price increase → less growth in industry output, new eq’m at C
  - Counterfactual industry growth is \( (M_B-M_A)/M_A \); purdah growth is lower at \( (M_C-M_A)/M_A \)
  - GDP gain is measured by x-intercepts of isovalue lines with slope \( P_1 \) relative to one of same slope through A
  - Wage gap widens in purdah case due to declining real returns to specific factors in agriculture
Key parameters of the purdah effect

• In SFM, using proportional change form, e.g. \( \hat{x} = dx/x \)

• With sectoral output and price changes \( \hat{y}_j \) and \( \hat{p}_j \) we have:

\[
\hat{y}_j = \left( \frac{\sigma_j(1 - \theta_{Kj})}{\theta_{Kj}} \right) \varepsilon_{Lk}(\hat{p}_j - \hat{p}_k), \quad j \neq k
\]

where \( \sigma_j = \text{elast of factor substitution}; \theta_{Kj} = \text{cost share of specific factor}; \)

\[
\varepsilon_{Lk} = \lambda_{Lk}e_{Lk}/(\lambda_{Lj}e_{Lj} + \lambda_{Lk}e_{Lk}) = \text{own-price elasticity of L demand (} e_{Lk} \text{)}\]

weighted by sectoral employment share (\( \lambda_{Lk} \))

• Le Chatelier-Samuelson: \( \frac{\hat{y}_j}{(\hat{p}_j - \hat{p}_k)} \to 0 \) as \( \theta_{Kj} \to 1 \) \( \Rightarrow \) PPF more concave
  • (Note: same outcome as when \( \sigma_j \to 0 \))

• Ordering of factor & output price changes in SFM: “magnification effect:” if industry’s price rises, real return to ag. specific factor falls

• These parameters define an agenda for empirical research
Alternative (stronger) statement of the model

\[ T_1 < T_0 \ (C); \quad GDP_1 < GDP_0 \ (D); \quad P_1 < P_0 \ (RER \ depreciation) ; \quad (Y_{N_T})_1 > (Y_{N_T})_0, \ i.e. \ 0B > 0A; \quad + \ supply \ response \ \partial T/\partial P! \]
Economic consequences of purdah

• In vertically integrated agriculture:
  • ‘Feminization’ of work deepens (>70% of females work in ag)
  • Returns to sector-specific labor are lower than counterfactual
  • Lower incentives to adopt labor-augmenting technologies—except in traditionally male activities such as land preparation

• In vertically integrated industry:
  • Lower int’l competitiveness; less FDI, lower growth
  • Men’s outside option (labor export) may exacerbate (real exch. rate effect, reservation wage)

Sabir and Aftab 2007, women’s wage gap growth
Institutional dynamics of purdah and dowry: 

macro version

• Purdah lowers women’s labor productivity and returns to investment in women’s human capital

• Gender wage gap increases demand for dowry
Dowry in Pakistan

• Practiced by 97% rural HHs, 87% all HHs (Anderson 2007)
• Payment restricted by law to ~$300 but most estimates are many multiples, about 1-2 years’ HH income
  • 1.13 (rural) to 1.23 (urban) X annual HH income (Anderson 2005)
  • In rural Punjab, average is ~$1800 (Makino 2017)
• Pakistan has highest dowry death rate in S. Asia
  • Official: 2.45/100,000 women
  • Unofficial: up to 16/100,000
Dowry, labor export and purdah

• Hypergamy ("marrying up") has strong social and economic justifications; dowry is a cost (Rao 2012)

• Labor export to raise dowry: both compulsion and incentive
  • “Ruinous impact” of many daughters on HH econ status (White 2017)
  • Indian HHs with higher F/M child ratios save more (Horioka and Terada-Hagiwara 2016)
  • Pakistan: 5% of HHs send (male) workers to Gulf; remittances are biggest single source of export revenue
Dowry demand promotes labor export
(Cheema & Coxhead, 2018)

### Multinomial logit: migration choice
(omitted: no migration)

### Household dowry dependency ratio:
girls & young women
working age men + 1

### Ave. marginal effect, DDR:
Domestic mig: 0.5pp (5%)
Foreign mig: 0.5pp: (10%)

<table>
<thead>
<tr>
<th></th>
<th>Domestic</th>
<th></th>
<th>Foreign</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coeff.</td>
<td>z</td>
<td>Coeff.</td>
<td>z</td>
</tr>
<tr>
<td>Ln. dowry dep. ratio</td>
<td>0.069***</td>
<td>(7.58)</td>
<td>0.042***</td>
<td>(3.32)</td>
</tr>
<tr>
<td>Ln HH head age</td>
<td>0.466***</td>
<td>(3.67)</td>
<td>0.052</td>
<td>(0.24)</td>
</tr>
<tr>
<td>Ln HH size</td>
<td>-1.23***</td>
<td>(-10.44)</td>
<td>-0.803***</td>
<td>(-4.43)</td>
</tr>
<tr>
<td>Ln dep. ratio</td>
<td>0.031**</td>
<td>(2.64)</td>
<td>0.023</td>
<td>(1.29)</td>
</tr>
<tr>
<td>Owns livestock</td>
<td>-0.158</td>
<td>(-1.85)</td>
<td>-0.174</td>
<td>(-1.45)</td>
</tr>
<tr>
<td>Ln land value</td>
<td>0.023***</td>
<td>(4.02)</td>
<td>0.038**</td>
<td>(3.11)</td>
</tr>
<tr>
<td>Ln migrant density</td>
<td>0.537***</td>
<td>(9.34)</td>
<td>1.035***</td>
<td>(11.2)</td>
</tr>
<tr>
<td>Rural</td>
<td>0.644***</td>
<td>(6.94)</td>
<td>-0.139</td>
<td>(-1.20)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.414*</td>
<td>(-2.04)</td>
<td>1.210</td>
<td>(1.16)</td>
</tr>
</tbody>
</table>

Pseudo-R2: 0.15. Omitted from table: education dummies, province dummies.
The bad dynamics of purdah, dowry & development

• Purdah erodes comp. advantage in L-intensive industry by restricting female participation in wage labor
  • Equivalent to reducing the effective labor endowment for manufacturing and modern services
• Labor force growth leads to growth in home market-biased goods, low-productivity services—and male labor export
• Hence instead of expanding labor-intensive manufacturing and generating productive employment, Pakistan is ‘de-industrializing’ – and growth is stagnating
• Low growth may impede efforts to reduce/abolish dowry

24
Institutional dynamics of purdah and dowry: *micro version*

- Dowry as compensation for earnings differentials (& see Makino 2017)

- **Dowry may incentivize purdah**
From stylized facts and models to hypothesis tests

- Can we understand drivers of change in purdah prevalence, intensity, or impacts?
- Micro questions, e.g.: do labor market shocks induce changes in seclusion?
  - Direct data on dowry and purdah are very hard to obtain (Anderson 207; Makino 2017)
  - But PLSM survey has “Female questionnaire” incl. questions about HH decision-making over employment, etc.
- Macro questions, e.g. how big is the seclusion penalty?
  - Underidentification challenge
  - Cross-country comparisons are revealing as ‘casual empiricism’, but can they yield estimable models?
Meta-analysis: the need for context

• Micro-development analyses always benefit from context
• In this work we try to draw connections between “micro” issues and their macro environment
• In doing so, we perceive a variety of important questions that haven’t previously been asked
  • Often, because to do so requires “boundary crossing”
  • Cf. recent developments on resource booms and Dutch Disease; on trade, labor and distribution, and similar areas
• There are many such micro-macro gaps in the development literature; to explore them will at least make the micro work better!
Thank you

Questions/comments: ian.coxhead@wisc.edu