INCLUSIVE GROWTH AND POLICY

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Views expressed in this presentation are those of the author and should not be attributed to the IMF. This presentation draws on joint work with Andy Berg, Davide Furceri, Siddharth Kothari, Prakash Loungani and Haris Tsangarides.



TRADITIONAL NARRATIVE: GROWTH TRUMPS DISTRIBUTION

Roots of trickle-down in Schumpeter

 "The capitalist achievement does not typically consist in providing more silk stockings for queens but in bringing them within reach of factory girls." (Capitalism, Socialism and Democracy, 1942)

Echoed by Lucas in his famous quotes

- "Is there some action a government of India could take that would lead the Indian economy to grow like Indonesia's? If so, what, exactly? The consequences for human welfare involved in questions like these are simply staggering: Once one starts to think about them, it is hard to think about anything else." (On the Mechanics of Economic Development, JME 1988)
- "Of the tendencies that are harmful to sound economics, the most seductive, and in my opinion the most poisonous, is to focus on questions of distribution." (Minneapolis Fed Annual Report, 2004)

PUSH TOWARD STRUCTURAL REFORMS, MACROECONOMIC STABILITY



THE MACRO-DISTRIBUTIONAL VIEW

Growth and distribution should be analyzed together
 Results on links among growth, inequality and distribution

2) Economic policies pose efficiency-equity tradeoffs

structural reforms: do they deliver growth? what are equity effects?
Growth-equity tradeoffs of structural reforms

o globalization: does it work for all?

Effects of capital account liberalization ("financial globalization")

• macro stability: how low to go (with debt limits, inflation targets)?

Effects of fiscal consolidation ("austerity")

MAIN FINDINGS
1) Fragile growth and inequality are two sides of the same coin
2) A wide range of policies pose efficiency-equity tradeoffs
 Many structural policies deliver some growth but also raise inequality
 Globalization doesn't always work for all Episodes of capital account liberalization followed by increased inequality, little benefit to growth, increased volatility
 Austerity can be costly Episodes of fiscal consolidation hurt short-run growth & raise inequality

• Paying down debt rapidly can be more costly than living with it

POLICIES ARE A KEY DRIVER OF INEQUALITY



Determinants of the Gini measure of inequality based on a panel regression (90 countries; 5-year averages over 1970-2015 period) estimated using weighted average least squares. Each bar shows the percentage point increase in the Gini from a 1 standard deviation increase in the variable.

Global trends: 'Technology' is share of ICT capital in total capital stock; 'Trade' is openness variable from Penn World Tables. Policies: 'Capital Account Liberalization' is measured using the Chinn-Ito Index. 'Domestic Financial Reform' is measured as in Ostry et al (2009). 'Government Size' is share of government in GDP; note (-) impact: higher government size reduces inequality. 'Currency crisis' is from Laeven and Valencia; Structural: 'share of industry' is manufacturing value added in GDP; 'Chief Executive' indicates whether govt. head is a military officer; 'mortality rate' (commonly included in inequality regressions). Source: Ostry, Furceri & Loungani (2016).

Globalization Rising; Inclusion Falling



Increased inequality makes growth more fragile (Berg & Ostry, 2011; Ostry et al., 2014)

Fuelling support for protectionism



Note: estimates based on a panel regression framework relating inequality (social spending, redistribution) with the probability of a party with a nativist agenda at government for a sample of 164 countries over the period 1990-2012. The effects of inequality (social spending, redistribution) are based on their interquartile differences and panel regression coefficients. Social spending=education and health spending as share of GDP; Redistribution=difference between market and net Gini.

RELATIONSHIP OF FINDINGS TO ONGOING DEBATES

- Great concern has been voiced about inequality recently -impact on social cohesion; political capture by elites, etc.
 - Our finding: there is a direct economic cost to inequality -- it leads to lower and less durable growth
- Retreat from globalization (Brexit, Trump etc.)
 - Concerns about distributional effects of trade
 - Protests against migrants
 - Our finding: the effects of financial globalization should be part of the discussion -- it contributes as much to inequality as trade; it lowers workers' bargaining power and income share
 - In fact, financial globalization can make it difficult to mitigate distributional effects of international trade – it leads to a race to the bottom in taxation, eroding revenues needed for social benefits

GROWTH, INEQUALITY AND REDISTRIBUTION

CONTRIBUTION AND KEY FINDINGS

Two approaches

- Panel growth regressions (growth rate over five-year horizons)
- Growth spell duration analysis

Data on inequality and redistribution

- Recently-complied cross-country dataset (Solt (2009))
- Distinguishes market and net income inequality
- Direct calculation of redistribution (Gini of market income - Gini of net income)

Key findings

- Lower net inequality drives faster/more durable growth, for a given level of redistribution
- Redistribution appears generally benign in its impact on growth
 - Only in extreme cases, some evidence of direct negative effects on growth
- The combined direct and indirect effects of redistribution are pro-growth

INEQUALITY IS FOLLOWED BY WEAKER GROWTH REDISTRIBUTION DOESN'T HURT GROWTH



- Strong negative relation between the level of net inequality and growth in income per capita over the subsequent period
- Weak (positive) relationship between redistribution and subsequent growth

BASELINE RESULTS FOR GROWTH: THE EFFECTS GRAPHICALLY



• An increase in net Gini from 37 (such as in the United States in 2005) to 40 (such as in Morocco in 2005) decreases growth on average by 0.5 percentage points, that is, from 5 percent to 4.5 percent per year (holding redistribution and initial income constant)

• An increase in redistribution from the 50th to the 60th percentile (also roughly a 3-Gini-point change) increases the growth rate slightly (controlling for inequality and initial income)

• The total effect of a 10-percentile change in redistribution is to increase the annual growth rate by 0.5 percentage points

INEQUALITY LOWERS DURATION OF GROWTH SPELLS; REDISTRIBUTION DOESN'T AFFECT DURATION



Weak (negative) relationship between redistribution and the duration of growth

BASELINE RESULTS FOR GROWTH SPELLS: THE EFFECTS GRAPHICALLY

The effect of inequality and redistribution on growth spell duration (10 percentile increase in each variable)



• For large redistributions, the estimated negative effect of redistribution on growth duration is somewhat larger than the estimated positive effect of the resulting reduction in inequality

• For smaller redistribution (less than 13 Gini points) the overall effect is growthpositive: roughly neutral direct effects of redistribution, and a protective effect of the resulting reduction in inequality

GROWTH-EQUITY TRADEOFFS IN STRUCTURAL REFORMS



 Do structural reforms give rise to growth-equity trade-offs i.e. do reforms that aim to boost potential output also change the distribution of income?

- If reforms increase inequality, what is the total effect of reforms on growth?
 - Higher inequality is bad for growth.
 - If reforms increase inequality, then the increase in inequality can dampen growth
 - What is the net effect of reforms on growth after taking into account the increase in inequality?

REFORM INDICES OVER TIME BY INCOME LEVEL









GROWTH AND EQUITY EFFECTS OF STRUCTURAL REFORMS

Each panel plots the long-run effect on the level of income and the level of inequality of moving the reform variable from the median to the 75th percentile.









DIRECT AND INDIRECT EFFECTS





What is the net effect of these reforms on growth after taking into account the higher inequality?

Combine the growth and inequality regression results and simulate to answer this question.

GENDER AND GROWTH

New MECHANISMS FROM HIGHER FLFP TO GROWTH & WELFARE



LET'S TAKE SERIOUSLY THE POSSIBILITY THAT GENDER *DIVERSITY* MATTERS

- Macroeconomic models rely on production function, where M and F workers are typically summed: L = F + M (*perfect substitutability*)
 - Such models are used in growth accounting, growth regressions, etc.
 - And also in 'general equilibrium models' for policy analysis
- When men and women are *imperfect* substitutes, growth benefits of gender diversity beyond increasing headcount of workers



LESS-THAN-PERFECT SUBSTITUTABILITY BACKED BY THE MICROECONOMIC LITERATURE

- Diversity in corporate boards matters (Tejersen et al. 2009)
- Lab experiments on risk aversion also underscore gender differences (Azmat and Petrongolo, 2014)
- Relative wages between M and F are sensitive to labor supply shocks (Acemoglu et al. 2004), which implies imperfect F-M substitutability
- The assumption of perfect substitutability makes it difficult for models to differentiate the effect of aggregate policies on gender gaps
- Growing call for macro models to better recognize the potential role of gender diversity (Kocherlakota, 2018)

WE PROVIDE FIRST ESTIMATES OF F-M ES USING MACRO, SECTORAL & FIRM DATA



GENDER DIVERSITY MATTERS FOR GROWTH, WELFARE, MALE WAGES

- 1) The ES is low: men and women are imperfect substitutes in production
- 2) With this simple model, for a country with a 30 percent gender gap, closing the gap increases GDP by ~25 percent, of which 3 to 7 pp are productivity gains due to gender diversity (for an ES between 1 and 2)
- 3) Productivity gains are higher when women are more scarce and less substitutable by men.
- 4) Immediate effect of increasing FLFP on male wages depends on relative size of:
 - 1) Productivity gains
 - Losses due to reduced capital intensity (as number of workers increases)
- Effect 1) dominates 2) if the ES is below 2.5, as it is in our estimates

A MODEL SHEDS LIGHT ON THE WELFARE COSTS OF FLFP BARRIERS

- Model accounts for women's choice of whether (home versus market) and where (services or manufacturing) to work, as a function of:
 - Productivity differences across sectors relative to a baseline economy (for example, Iceland or USA)
 - Barriers to work in the market economy (calibrated for each country comparing LFP relative to the baseline economy)



FLFP BARRIERS ARE HIGH: REDUCTIONS BOOST WELFARE & GDP



TAKEAWAYS

- Because women bring new skills to the workplace, gender diversity is likely to be beneficial to productivity growth
 - There are gains from increasing FLFP beyond that of increasing the headcount of workers
- Macroeconomic gains from increasing FLFP are larger than what is estimated when assuming men and women are perfectly substitutable
- F-M perfect substitutability rejected by the data; degree of F-M complementarity suggests real-income gains for men when FLFP rises.
- Existing barriers to FLFP may be equivalent to tax rates on female employment of up to 50 percent (particularly high in MENA and South Asia), and welfare & GDP losses could reach up to 60 percent.
- The rise of services (which are more 'female-friendly' should contribute to smaller gender gaps in the future: sectoral transformation along development paths should not be resisted.

EFFICIENCY-EQUITY TRADEOFFS: FINANCIAL GLOBALIZATION

FINANCIAL GLOBALIZATION: TWO PUZZLES

• Financial globalization works well in theory, not so well in practice

Theory predicts output (efficiency) gains from both trade and financial globalization, but gains from latter have proven difficult to demonstrate.

- Stiglitz: "Preconditions to make financial globalization work are lacking in many countries."
- Rodrik: "The association between capital account convertibility and economic growth is weak at best...there is a strong association between financial globalization and financial crises over time"
- Krugman (May 2017): "financial globalization hasn't been the force for good that trade has been"
- Martin Wolf (2004): "the gains [from financial globalization] have been questionable and the costs of crises enormous."
- Eichengreen et al. (2001): evidence of a positive association between capital account liberalization and growth is "decidedly fragile."
- Enormous literature on impact of trade on inequality, while financial globalization gets a free pass.

Financial globalization can affect inequality in theory; shouldn't we look at whether it does so in practice?

CONTRIBUTIONS

We search for output effects: giving theory a chance

- Use both de jure and de facto measures of financial globalization
 - Large changes in de jure measures = policy changes
 - Supplement with information on capital flows (de facto measure)
- Use sectoral as well as aggregate data, since causal effects hard to establish in macro data
 - Use of country-time fixed effects allows for cleaner identification of effects of financial globalization
 - Better identification of channels through which effects of financial globalization operate
- Trace out evolution of output in aftermath of major financial globalization episodes rather than look for permanent growth effects (Henry 2007).

We don't turn a blind eye to distributional effects: taking the theory seriously

Impact on Gini coefficient (aggregate data) and labor shares (aggregate and sectoral data)

Bottom-line: Some evidence of output effects (better identification than in previous work helps), but also strong distributional effects.

IDENTIFICATION OF POLICY-DRIVEN GLOBALIZATION EPISODES

- Policy restrictions on cross-border transactions are reported in the *IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER)* database.
- Information in AREAER is combined by Chinn and Ito to construct an index of capital account restrictions.
- Examining behavior of output (or inequality) before and after removal of major policy restrictions requires information on when restrictions were lifted; difficult to do for large sample of countries.
- We infer timing of major policy changes by looking at large changes in the Chinn-Ito index (Kaopen)
 - Assume liberalization takes place when, for a given country at a given time, the annual change in the Kaopen indicator exceeds by two standard deviations the average annual change over all observations.
- This criterion identifies 224 episodes (over 1970-2010)—the majority occurring in the early 90s (when inequality started to increase).
- > Examples: several EU countries in the early 1990s; India and Brazil in the mid- and late 1990s.

EMPIRICAL STRATEGY—MACRO LEVEL DATA

Baseline:

$$g_{it} = a_i + \gamma_t + \sum_{j=0}^{l} \delta_k D_{i,t-k} + \sum_{k=0}^{l} \vartheta_k X_{i,t-k} + \varepsilon_{it}$$

1

Role of country-specific factors:

$$g_{it} = a_i + \gamma_t + \sum_{j=0}^l \vartheta_j X_{i,t-j} + \sum_{j=0}^l \delta_j^- D_{i,t-j} G(z_{it}) + \sum_{j=0}^l \delta_j^+ D_{i,t-j} (1 - G(z_{it})) + \varepsilon_{it}$$

1

g = change in log output (Gini);

D = liberalization episode;

X = <u>baseline</u>: current and lagged reforms in trade, current account, product and labor market; <u>robustness checks</u>: baseline + growth expectations + other controls.

G= smooth transition function (G = 1 \Leftrightarrow (extremely) low financial liberalization/inclusion, crises).

Estimates based on OLS and IV (liberalization in trading partners and initial degree of openness) for 149 countries for the period

EMPIRICAL STRATEGY—SECTORAL LEVEL DATA

Baseline:

$$g_{jit} = a_{ij} + \gamma_{it} + \rho_{jt} + \sum_{k=0}^{l} \delta_k S_j D_{i,t-k} + \varepsilon_{jit}$$

i (country); j(sector); t (time).

- g = change in log output (labor share of income);
- D = liberalization episode;
- S = external financial dependence (EFD); natural-layoff rate (NL); EOS between capital and labor.

Theoretical predictions:

(i) output (labor share) effects are larger for industries with higher EFD—*demand for external funds;*

(ii) labor share effects are larger for industries with higher NL—bargaining power;

(iii) labor share effects are larger for industries with EOS>1—cost of capital.

Estimates based on OLS using sectoral data for 23 AEs, 25 industries, 1975-2010.

Insignificant output gains but significant increases in inequality



Note: The solid lines indicate the response of output (inequality) to a capital account liberalization episode; dotted lines correspond to 90 percent confidence bands. The x-axis denotes time. t=0 is the year of the reform.

...the results are robust to endogeneity checks



Note: The solid lines indicate the response of output (inequality) to a capital account liberalization episode; dotted lines correspond to 90 percent confidence bands. The solid black lines denote the baseline effect.

But output & distributional effects depend on institutions



Note: Medium-term effects (that is, after five years of the reform). ***,**,* denote significance at 1 percent, 5 percent and 10 percent, respectively.

... and on the extent of capital flows (de facto measure)



Note: Medium-term effects (that is, after five years of the reform). ***,**,* denote significance at 1 percent, 5 percent and 10 percent, respectively. Blue (red) bars denote the medium-term response (that is, five years after the reform) of output (inequality). Flows defined as the cumulative 5-year change in total asset and liabilities as percent of GDP after the reform.

CAPITAL SURGES AND FINANCIAL CRISES



The panel on the left shows the total number of surges ending in a given year and those that end in a financial crisis. The panel on the right compares capital flow reversal and growth between surges that end in a crisis and those that do not. The analysis is based on data for 53 emerging market economies over 1980-2014. Source: Ghosh, Ostry and Qureshi (AER P&P, 2016)

Sectorally, short-term output gains, significant decline in labor share



Note: Solid line denotes the differential effect of capital account liberalization episodes between a sector with a high external financial dependence/layoff rate/elasticity of substitution (at the 75th percentile) and a sector with a high external financial dependence/layoff rate/elasticity of substitution (at the 25th percentile).

Results robust to controlling for domestic finance reforms...(and trade reforms, and technology)





Panel 3. Labor share (ppt)—natural layoff rate



Panel 2. Labor share (ppt)—external financial dependence



Note: Solid blue line denotes the differential effect of capital account liberalization episodes between a sector with a high external financial dependence/layoff rate/elasticity of substitution and a sector with a high external financial dependence/layoff rate/elasticity of substitution). Black lines denote baseline effects.

Less redistribution, even though needed more



Note: redistribution = difference between market Gini and net Gini. Vertical axis measure percent change. Estimated impact on growth following a capital account liberalization episode. Liberalization is measured using the Chinn-Ito index. Estimates are based on an autoregressive distributed lag model. The horizontal scale is in years after the episode. See Furceri, Loungani and Ostry (2017) for details.

Sharing the benefits helps



Note: estimated impact on net Gini following a capital account liberalization episode. Liberalization is measured using the Chinn-Ito index. Estimates are based on an autoregressive distributed lag model. The horizontal scale is in years before or after the episode. The vertical scale shows percent change. ***, **, * denote significance at 1 percent, 5 percent and 10 percent, respectively. See Furceri, Loungani and Ostry (2017) for details.

EFFICIENCY-EQUITY TRADEOFFS: FISCAL CONSOLIDATION

FISCAL CONSOLIDATION: OVERVIEW

- Public debt has been an obsession in some quarters, with a clarion call to reverse the build-up during the global financial crisis
 - to lay a foundation for growth
 - to insure against bad shocks in future
- Some countries want to run surpluses to pay down the debt, rather than let debt ratios decline organically through growth
- But paying back the debt rapidly may be the costlier option (Ostry et al., 2014)
- Evidence also suggests adverse distributional impacts of fiscal consolidation
- Hence, given the evidence:
 - Better to live with high debt if fiscal space is ample
 - Design fiscal consolidation to mitigate distributional impacts
 - As in the case of capital account liberalization, use redistribution

OPTIMAL POLICY IS NOT TO PAY DOWN DEBT!

Figure 2. Dynamics Under Low, Medium, and High Initial Debt (in percent of GDP) 1/ Public Debt Public Capital Δ

AUSTERITY IS BAD FOR INEQUALITY

- Historically, episodes of fiscal consolidation have been followed by:
 - a sharp-rise in long-term unemployment, which is an important channel for increases in inequality
 - a bigger contraction in wages than in profits
 - an increase in the Gini coefficient

EFFICIENCY-EQUITY EFFECTS OF AUSTERITY



Estimated impact on growth and market Gini following an episode of fiscal consolidation. Episodes are based on the narrative approach. Estimates are based on an autoregressive distributed lag model (ARDL). The horizontal scale is in years before or after the episode. The vertical scale shows percent change. See Ostry, Loungani and Furceri (2016, F&D) for details.

THE BROAD MESSAGE...

- High inequality and low & fragile growth are two sides of the same coin--a dangerous gamble therefore to 'go for growth' and assume equity will take care of itself
- Fear of using fiscal redistribution is overblown. In fact, on average in the data, redistribution is a pro-growth policy through the greater equality it engenders. The 'leak' in Arthur Okun's bucket has not been large in practice

• Evidence on financial globalization

- Costs in terms of increased volatility are high
- Output benefits elusive and shared unevenly
- Other effects: a race to the bottom on taxes? Reduced redistribution?
- Be cognizant of growth-equity tradeoffs in macro & structural policies
 - How can we design policies so growth benefits go up AND equity costs go down?
 - Use of complementary policies: "trampoline" policies—such as job retraining and assistance with search—to help workers bounce back from job displacement
 - Redistribution: greater reliance on wealth and property taxes, more progressive income taxation, and better targeting of social benefits
 - Reducing barriers to FLFP may be both pro-equity and pro-growth (with larger effects than previously thought).
- On macro policies, case for paying down public debt is weak when fiscal space ample

"This book shows that, far from being either necessary or good for growth, inequality leads to weaker economic performance. Moreover, increases in inequality have been a choice, not an unexpected outcome. The extent of inequality depends very much on the policies governments chose. These conclusions come from careful research conducted over several years. This book's message is simple: societies



are free to choose policies that will deliver more inclusive growth."

Joseph Stiglitz, Nobel Laureate in Economics

"Here Ostry, Loungani, and Berg explain why concerns about income distribution should be more central to policy making, and why the world will be better off for it."

Raghuram G. Rajan, University of Chicago Booth School of Business

"We must move from assessing the effects of economic policies only on growth to assessing their effect on both growth and inequality ... This book represents an important start."

"Ostry, Loungani, and Berg have done some of the best empirical research on globalization, inequality, and economic growth. This book not only brings the work together, but also sets out a rich policy agenda on inclusive growth. *Confronting Inequality* should be on the shelf of everyone who wants to understand the future of our economies." Dani Rodrik, Harvard University

"Coming from the top IMF economists, this new approach may herald a major change in global policies such that attention is paid to both growth and equality."

Olivier Blanchard, Peterson Institute and former chief economist, International Monetary Fund

"Ostry, Loungani, and Berg tell a compelling story in a pithy, accessible way— about how inequality hurts economic growth and stability and how to design policies to deliver a more inclusive growth." Heather Boushey, executive director & chief economist, Washington Center for Equitable Growth

Branko Milanović, The Graduate Center, CUNY

"A cogent and concise summary of what we know about inequality, and about how to reduce it." Jeffry Frieden, Harvard University



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