

# Reflections on Some Under-researched Issues in Trade and Development

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# 1. Explosion of theoretical and empirical research on firm heterogeneity

- in productivity
- in organizational choice (arms-length vs. in-house)

- Firm productivity is a random draw from an exogenous distribution. From the point of view of development it is important to endogenize firm productivity differences

There have been some recent attempts at endogenization of firm productivity, but from the development point of view one of the more relevant may be Ederington and McCalman (2008): endogeneity derived from different

dates of adoption of new technology  
(which trade policy itself can affect).

This could also be linked to the growing literature in development on the effect of institutions of social learning on adoption of new technology.

Just to give one empirical trade-relevant example, Conley and Udry (2008)

measure the effect of social learning in the diffusion of new technology in the production of pineapples in Ghana for export markets in Europe.

There is, however, insufficient work in the literature of technology diffusion on the link between wealth constraints (in the context of pervasive imperfections in credit and insurance markets) and

adoption of new technology by a firm or farm.

- The recent literature on 'learning by exporting'—beyond simple self-selection into exports—may also be relevant here; see, for empirical evidence from Indonesia, Blalock and Gertler (2004); they also suggest that firms in the poorer countries may have more to learn from exporting.
- A historical footnote about economic obsolescence of firm-specific capital
- Interesting to explore firm heterogeneity in the matter of use of imported inputs, introducing trade in a Hirschman-Kremer-

Jones framework of intermediate product linkage 'multipliers' and production chains. This may be linked up with existing models like that of Venables (1996), where under increasing returns and imperfect competition intermediate goods can create pecuniary externalities that lead to multiple equilibria, and trade liberalization of intermediate products can then trigger a move to an equilibrium with larger output and less industrial concentration.

- Shift of attention from inter-sectoral to intra-sectoral reallocation effects of trade liberalization

But in developing countries one intra-sectoral division, that between formal and informal sectors—largely brought

about by factor market imperfections—is usually ignored both in the theoretical and empirical literature .

Nataraj (2009) shows with Indian firm-level data from both formal and informal sectors that much of the productivity effects of trade liberalization were due to exit of the least-productive tiny firms in the informal sector.

If this is the case, in situations of weak social protection trade liberalization may increase poverty (although Nataraj does not go into this). As the poor informal sector workers cannot afford to remain unemployed, they'll then go and crowd

the non-traded sector, where productivity will fall, even as it rises in the traded sector. A recent paper by Menezes-Filho and Muendler (2007) show that tariff reductions and import penetration in Brazil have been associated with an increase in the likelihood of the worker moving from formal sector jobs to informality and unemployment.

It'll be important to check all this empirically for other countries with firm-level data.

- In several developing countries (India, Indonesia, Kenya, Tanzania, Jamaica, the Philippines, etc.) there is a pronounced 'missing middle' in the firm size distribution in manufacturing. There

is as yet very little empirical work at the firm level to show the role, if any, of trade policy—relative to domestic policies and regulations-- on this phenomenon.

- Trade costs, taken as fixed costs, influence the cut-off point between exporting and not exporting in the Melitz-type models, but there are many factors endogenously determining trade costs for a firm, often asymmetrically between countries or products, that need to be explored. In general, international trade theory has put too much emphasis on the factors behind differences in production costs and less



on those behind costs of trading and mark-ups (which in reality constitute the major part of international price of most goods). The role of trading middlemen has been important throughout history, they may facilitate trade in various ways: reducing matching or search costs or improving market access, etc. but in the paper on middleman margins by Mookherjee, Tsumagari and myself we emphasize the importance of factors like financing and quality reputation in international markets faced by poor country products. The role of trade intermediaries should be an active area of research in the coming years. In a recent paper of Antras and Costinot

(2010) search for traders provides the basis of the cost of intermediation.

- The firm organizational choice literature usually under incomplete contracts—drawing upon Williamson and Hart and Moore-- concentrates on 'hold-up problems', 'thin markets' in searching for matching partners, relation-specific investments, and differences in the quality of contracting institutions. There are, however, other aspects of corporate governance that remain to be incorporated in the trade literature.
  - For example, in a comparison between the Anglo-American and continental European and East Asian corporate institutional structures (the

latter involving more non-market coordination between firms and between management and labor within firms), Hall and Soskice (2001) point out that the Anglo-American structure is more conducive to radical innovations, whereas the latter, more coordinated, institutional structure gives rise to superior capacities for incremental innovations (some arising on the factory floor in the cooperative interaction between managers and the relatively stable and loyal workforce).

Since these different kinds of innovations are of differential importance in different products, this

can have implications for international specialization depending on contrasting corporate institutions. In developing countries, particularly at early stages of industrialization, most innovations are of adaptive and tacit kinds, and as such coordinating institutions may be more relevant in determining product specialization. In a recent paper Puga and Trefler (2010) emphasize the importance of incremental innovations in internationally traded goods today and look into the determinants of success in this matter in some low-wage economies as opposed to others.

2. North-South models have been the staple of the trade and development literature, drawing upon different kinds of asymmetry between countries:

- ✓ Demand asymmetry
- ✓ Sectoral asymmetry in economies of scale
- ✓ Asymmetry in learning and human capital accumulation (with emphasis on 'historical lock-in' and self-reinforcing historical handicaps)
- ✓ Quality of contract-enforcing institutions

There is scope here for looking at other important asymmetries—

- Differential management practices— see the recent work surveyed by Bloom and van Reenen (2010)-- for evidence (here informational barriers and cultural traditions matter)
- Differential corporate control structure (family-run vs. diffuse share-holding, involving different kinds of agency problems)
- Differential regulatory standards (the 'pollution haven hypothesis' in the literature on trade and environment is one example of this)

—the work of Eskeland and Harrison (2003) casts doubt on the quantitative importance of the hypothesis, but more such empirical work is necessary)

- Differential incidence of high-powered vs. low-powered incentive structures—generalizing the duality in labor markets across countries. The model of endogenous dual labor market institutions in Esfahani and Mookherjee (1995) may be adapted for a North-South trade model.

The 'good job, bad job' literature in trade, as in Davis and Harrigan (2007), who combine Melitz with Shapiro-Stiglitz, is applied to symmetric situations, but

could be adapted to the North-South context

- Differences in market structure (suppose the world of trade is dominated by a few oligopolistic sellers in the North with the competitive fringe of the world industry being in the South)

[ Here the relatively tractable general-equilibrium oligopoly models of Neary (2002, 2003, 2007, 2010) may be useful.

There should be more work on the lines of Neary (2007) on the impact of globalization on cross-border acquisitions and mergers.]

These kinds of issues are important in the public debates on globalization, as, often contrary to their rhetoric, international anti-



trust rather than anti-trade action is what some of the opponents really have in mind.

- Differences in wage-setting practices (suppose a country like India with highly fragmented and decentralized labor unions trades with a Nordic or central European country with more centralized labor unions)

[There is an interesting analysis in Bastos and Kreickemeier (2009) using a Neary model of oligopoly in product markets and unionized as well as non-unionized labor, with alternative wage-setting at industry or firm level—they discuss the impact of globalization on wages in this context, but they don't discuss the case of

countries with asymmetric labor institutions]

3. On a related topic, there is scope for more theoretical and empirical work on the interrelationship between globalization and labor market institutions and practices. I agree with Goldberg and Pavcnik (2007) that one major constraint for empirical work here is the lack of comprehensive datasets where disaggregated firm-level data are combined with characteristics of workers employed by those firms.

A recent paper by Menezes-Filho and Muendler (2007) is a good start in putting together a rich dataset for Brazil that links

worker-level panel data with firm- and industry-level data, which they use to study the impact of Brazil's trade liberalization during the 1990's on the labor market.

Much of the literature is on wage inequality between skilled and unskilled labor, less on the absolute level of the real wage (or income of the self-employed)—the presumption, often justified, is that globalization by improving productivity raises the absolute real wage in all countries. But can we think of cases where it may not? Can trade increase poverty?

--Rodrik (1997) had earlier suggested that while increased competition from

globalization reduces rent for both capital and labor, the effect is asymmetric because capital can wield more credible threats (offshoring, capital flights, etc.) than labor. So the bargaining power of labor can decline (and with that associated decline of unions).

But the theoretical results on the effect of product market liberalization on the elasticity of derived demand (an index of bargaining power) for labor in the context of imperfect competition are not clear; and the small number of empirical results for developing countries is mixed.

- It is obvious that the lack of mobility issue is a crucial component of the link between trade and poverty. It

should be easy to show, both theoretically and empirically, that mobility-enhancing public investments (in education, vocational training, credit, infrastructure like roads and telecommunication) improve the ability of the poor to cope with globalization. One can also think of a stylized model where these mobility-enhancing investments under imperfect credit markets constrain entry into the tradable goods sector.

- There are also adjustment assistance programs in some countries to help trade-displaced workers (e.g. Trabajar program in Argentina, Probecat in Mexico), but there are very few

rigorous evaluation studies of the effectiveness of such programs in developing countries.

- Rigid labor laws, protecting formal sector jobs, can act as a barrier to mobility for the poor informal workers. But a lot more empirical work is needed to identify the *binding* constraint in particular cases (example from Indian garment industry suggests that labor law may not be the binding constraint).

4. The overwhelming presumption in the trade literature, again largely justified, is that competition is good for efficiency. But when

development involves exploring uncharted territory, new costly experiments, or what Hausman and Rodrik (2003) call 'self-discovery', there may be a productive role for (contingent) rent-creation. In the context of the East Asian developmental state Aoki, Murdock and Okuno-Fujiwara (1997) show how the state resolved coordination failures by arranging for various kinds of 'cooperation-contingent rent'.

More recently, Emran and Stiglitz (2009) have argued against financial liberalization, on the basis of the need for generating some contingent rent to overcome underinvestment due to externalities and facilitate entrepreneurial discovery.

- Temporary monopoly rent contingent on innovation, as the basis of the patent system, is, of course, more widely accepted. The theoretical underpinning of TRIPS under WTO or intellectual property rights in general is, however, still quite underdeveloped in international economics. One of the most fully-developed models is that of Helpman (1993), where North innovates and South erodes the Northern advantage through imitation with cheaper labor. But it is highly limited in its significance—its main result on the long-run implications of patents on innovation in the North is primarily driven by the general-



equilibrium trade-off between  
production labor and research labor.  
One'd like to have a more general  
model with:

- ✓ labor heterogeneity
- ✓ innovation of one period providing the ingredient for future innovations, and
- ✓ the trade-off between policies that encourage innovation through 'pull' (the incentive of temporary monopoly rent ex post through a patent or prize) and 'push' (where research is induced by ex ante subsidy or grant).

However, as Goldberg (2009) points out, much of the work on IPR overlooks the

real problems in poor countries (like TRIPS have been largely ineffective in inducing research for, say, life-saving drugs for their tiny markets or the severe problem of access and distribution networks for patented drugs in these countries, which make the static-dynamic trade-off issue of the standard IPR literature rather secondary in importance).

There is some literature showing that stronger IPR protection in the South, while reducing imitative production in the South may increase FDI from the North which may compensate for it. For an empirical assessment of the

argument with the use of data from US multinational affiliates, see Branstetter, Fisman, Foley and Saggi (2011).

In general, however, contingent rent creation does not necessarily require policies of 'hard' protection.

I agree with Harrison and Rodriguez-Clare (2009) that a 'soft' industrial policy regime, often involving mostly domestic policies of coordination and capacity-building, may be enough.

5. Finally, a few words on political economy.

- As Rodrik in his survey article (1995) has pointed out, most political economy models in trade explain why there is

pressure for redistribution, but not why it takes the particularly inefficient form of protection. One of the few models in partially explaining the latter is that by Acemoglu and Robinson (2001) –we need more work on this.

- Theoretical and empirical work on how a coalition of mobile factors may help bring about trade liberalization will be useful. Similarly, if a significant part of gains from trade is from a variety of new inputs, the political conflict between users of these new inputs and the incumbent domestic producers of traditional inputs needs to be modeled.

If there is complementarity between domestic and imported inputs, as in the

empirical study of Halpern, Koren and Szeidl (2009), that conflict may be less.

- There is a major political-economy problem in experiments for 'self-discovery': if retreat from failed experiments involves job losses, in democratic countries there is a built-in disincentive for politicians to launch such experiments in the first place
- The opposite issue i.e. the reverse of politics→policy, of how the opening of the economy alters the pre-existing political equilibrium has hardly been explored. There are suggestions—see, for example, Diaz-Cayeros, Magaloni, and Weingast (2000)—

about the increased international exposure following NAFTA facilitating the erosion of the long-durable oligarchic rule of PRI in Mexico.

- There is evidence that more competition through foreign trade can have wholesome effects on governance institutions that are riddled with corruption.

Adam Smith and David Hume believed that commerce is 'civilizing' in the sense that it increases the value of honest deals and honoring of promises particularly in repeated transactions; but as Anderson (2003) points out this depends on the particular organization of trade. It has been noted in many European countries

that the process of economic integration into the European Union has cleaned up the institutional structure in many countries.

- What is particularly important is that international competition makes 'bad' institutions more costly, and can thus nudge a country toward political-institutional reform. Acemoglu, Johnson, and Robinson (2005) show that the rise of international trade in the Atlantic economies during the early modern period promoted a demand for institutional reforms that were growth-favoring.

However, much depends on the type of trade and the nature of political and

economic competition. In many cases of history trade expansion in natural resource intensive products (like oil, sugar, bananas, timber, diamonds), for example, has strengthened the political power of large exporters who then raised barriers to entry and promoted oligarchic institutions.