Trade, Migration, and Other Liberalizing Policies, I: Elusive Gains

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Peter J. Hammond
Department of Economics
Stanford University, CA 94305-1027, USA

e-mail: peter.hammond@stanford.edu
webpage: http://www.stanford.edu/~hammond
Teachers . . .

From Joan Robinson, (1946–7)  
“The Pure Theory of International Trade”  

“A good deal of present-day discussion of international trade seems to be based on the notion that there always is a position of equilibrium to be found by relying on the operation of the pricing system, and it is necessary to recognize that the classical doctrine does not exclude starvation from the mechanism by which equilibrium tends to be established.”  [reprinted in *Collected Economic Papers*, p. 189.]

“... any merit there may be in [this volume] is due to the continual effort that [my pupils] have forced upon me to reconcile contradictions, remove obscurities and eliminate mysticism ... I do not add the usual reservation to my acknowledgement to my pupils, for I think they should be held responsible for any errors that they have allowed me to maintain.” [p. vii]

Some students of mine who may bear a little responsibility for my errors:

A few (unnamed) undergraduate students at Stanford who have written papers for my course “Ethics in Economic Policy”.
Doctoral Students

Three doctoral students:

1994 Jaime Sempere PhD, European University Institute, Italy. *Limits to the Third Theorem of Welfare Economics*

Paper with Roberto Burguet:

2000 Gerald Willmann, PhD, Stanford.
*Essays on Trade Policy and Pareto Gains from Trade*

Now at the University of Kiel, Germany.

Gerald also wrote an undergraduate paper for my course in Kiel, in 1993–4.
2001  Giovanni Facchini, PhD, Stanford.
    Essays on International Trade and Factor Mobility
    Now at the University of Illinois in Urbana–Champaign, USA.


18: 57–65.

Jiahua Che and G. Facchini “Dual Track Liberalization: With and without losers” (under review).
Outline of Lecture 1: Elusive Gains

1. Explaining the Title

2. Adam Smith: Gains without Pecuniary Externalities

3. Comparative Advantage

4. Representative National Consumers: Three Results

5. Heterogeneous National Consumers

6. Beyond the “New” Welfare Economics
1. Explaining the Title, I: Other Liberalizing Policies

Apart from trade and/or migration (both national and international) “other liberalizing policies” may include all those seeking to enhance:

- non-distortionary lump-sum taxes, instead of distortionary taxes on consumption, labour, saving, entreprise, . . . [Enrico Barone]
  (but tomorrow I will argue that only distortionary taxes are truly feasible)

- deregulation, privatization, free enterprise

- national competition (anti-trust enforcement), instead of monopoly  . . . [Abba Lerner]
  (but don’t some monopoly profits sometimes provide a suitable incentive to innovate?)
• international competition (globalization)
  (Do we need a supranational anti-trust enforcer?
  Beyond even the European Commission?)

• discovery of new natural resources
  (Is Venezuela avoiding the “Dutch disease” of the 1970s,
   when discoveries significant natural gas fields under the North Sea
   appeared to worsen the performance of the Netherlands national economy?)

• technical progress
  (Does technical progress really make us all better off?
   Or does it adversely effect significant groups of workers?)

• producer efficiency
  (Is it right to accept projects, public or private,
   that pass a cost–benefit test based on “producer” prices?)
Institutions

International institutions ostensibly designed to promote such “liberalizing reforms” include:

- GATT (General Agreement on Tariffs and Trade), since reorganized as the WTO (World Trade Organization)

- EU (European Union, now with 25 members) and EEA (European Economic Area, these 25 plus Norway, Iceland, Liechtenstein)

- various FTAs (free trade areas), particularly NAFTA (USA, Canada, Mexico), CAFTA (the rest of Central America), Mercosur (Argentina, Brazil, Chile, Paraguay), . . . (but NOT the Free Trade Area of the Americas)

There are also many national organizations.
Opposition

Ranging (raging?) against these are many consumer and trade union organizations, some of which have promoted newsworthy demonstrations at meetings of international organizations like the above, as well as meetings of the G8, etc.

They also may have blocked a projected MAI (multilateral agreement on investment), which is alleged to have been intended to limit the rights of governments to regulate corporations within their jurisdictions. (Not just regulation against “foreign” corporations, but any regulation.)

“Free trade agreements” are often alleged to do the same, but in theory they should simply ensure that all corporations, whatever their national origin, compete on identical terms within each jurisdiction.

Under NAFTA, is it legal for California to ban MTBE additives in its gasoline?
Explaining the Title, II: Elusive Gains

Many papers (including some of mine with Jaume Sempere) discuss “gains” from trade, etc. This seems far too optimistic, because it suggests that nobody loses. Other work mentions “potential gains”, recognizing that liberalizing reforms offer the chance to create gains for all provided they are accompanied by suitable complementary policies.

In principle, those who would otherwise lose from liberalization can be compensated by those who would gain, thus ensuring a “Pareto” improvement in which all benefit.

But there are rather severe “limits”, even in theory, to these potential gains (as in the title of our 1995 paper). Compensation requires more knowledge of individual circumstances and plans than is likely to be available.
Adam Smith (*Wealth of Nations*, 1776):

As every individual . . . endeavours as much as he can both to employ his capital in the support of domestic industry, and so to direct that industry that its product may be of the greatest value; every individual necessarily labours to render the annual revenue of the society as great as he can. He generally, indeed, neither intends to promote the public interest, nor knows how much he is promoting it. By preferring the support of domestic to that of foreign industry, he intends only his own security; and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an *invisible hand* to promote an end that was no part of his intention. [p. 423]
Adam Smith on Gains from Pairwise Exchange

“It is the maxim of every prudent master of a family, never to attempt to make at home what it will cost him more to make than to buy. The taylor does not attempt to make his own shoes, but buys them of the shoemaker. The shoemaker does not attempt to make his own clothes, but employs a taylor. The farmer attempts to make neither the one nor the other, but employs those different artificers. All of them find it for their interest to employ their whole industry in a way in which they have some advantage over their neighbours, and to purchase with a part of its produce, or what is the same thing, with the price of a part of it, whatever else they have occasion for.
Adam Smith on International Trade

“What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom. If a foreign country can supply us with a commodity cheaper than we ourselves can make it, better buy it of them with some part of the produce of our own industry, employed in a way in which we have some advantage.” [p. 424]

Thus, any pair of individual traders benefits from voluntary exchange. As does any (small) group of traders.

Unless these exchanges are large enough to disrupt the market prices that other parties face, nobody else loses.

So we reach a “Pareto improvement” in which some gain and nobody loses.
Gains without Pecuniary Externalities

Note carefully: there may be no Pareto improvement when other parties are also engaged in exchange, and the prices at which these parties trade are affected.

Negative “pecuniary externalities” are possible. The other parties’ “terms of trade” worsen.

Smith falls for the fallacy of composition in claiming: “What is prudence in the conduct of every private family, can scarce be folly in that of a great kingdom.”
Practical Example Related to the “Singer–Prebisch” Thesis


Sir Hans Singer, PhD from Cambridge in 1936.

Promoting export-led growth in developing economies may be good for each (small) country separately, because terms-of-trade effects are negligible. But because such policies have been pursued by many countries simultaneously, especially those in the tropics, their effect has been to lower significantly these countries’ terms of trade, as exports to the developed world of their (largely primary) products have increased.
3. Comparative Advantage

Adam Smith’s argument relied on absolute cost advantages at existing prices.

19th Century: David Ricardo extended the idea to comparative advantage, based on endogenous prices. England is comparatively less efficient in wine than Portugal (presumably), with a comparative advantage in textiles. With free trade in cloth and wine between the countries, both countries benefit even if England happens to be absolutely less efficient in both textiles and viticulture.

Reason: the cloth/wine price ratio will adjust so that wine becomes less competitive in England, and cloth manufacture less competitive in Portugal. Portugal will export wine in exchange for English cloth.

Provided that all their inhabitants are identical (which implies that all must work part-time in both textiles and viticulture), both countries will gain.
21st Century Comparative Advantage

Norway offering energy (mineral oil, natural gas, hydroelectric power), fish, and forest products

in exchange for

Italian agricultural produce (fruit, vegetables, olive oil, wine).

Concentrate production where the nation has a “comparative advantage”, and export surplus production

in exchange for

imports of products where the nation has a “comparative disadvantage”.

4. Representative National Consumers: Three Results
   I: Free Trade versus Autarky

Paul A. Samuelson (1939) “The Gains from International Trade”
Paul A. Samuelson (1962) “The Gains from International Trade Once Again”

There are two major classical gains from trade results for nations with representative consumers. Both rely on even more restrictive special assumptions which rule out the negative pecuniary externalities between nations that trade can otherwise create.

The first result presumes that the status quo, before trade reform, is *autarkic*, meaning that each country relies on its own resources, without any trade at all.
First Classical Theorem

With a representative consumer in each separate country, pecuniary externalities cannot arise if the status quo is autarkic. So no national representative consumer can lose. Also, except in the special case when autarky is already Pareto efficient and so trade is irrelevant, at least one country must gain.

(Kemp also shows that even limited trade, distorted by multiple tariffs and quotas, is superior to autarky. The value of aggregate output cannot be less than under autarky, and is generally more.)
Edgeworth–Bowley Box Diagram, 1

The baker’s indifference map, and initial endowment $E$. 

Peter Hammond, Stanford: Caffè Lecture 1
Edgeworth–Bowley Box Diagram, 2

The grocer’s indifference map, rotated through $180^\circ$, and initial endowment $E$. 
\( E \) denotes the initial endowment or autarky point, where the baker has all the bread and the grocer has all the jam.
The black curve is the **contract curve** of **Pareto efficient** allocations.

$C$ denotes the **competitive equilibrium**, which is Pareto superior to $E$. 

Peter Hammond, Stanford: Caffè Lecture 1
Representative National Consumers, II:
Free Trade Is Better for a Small Country

The second case when trade liberalization creates no pecuniary externalities between nations arises in a single small country. By this, international economists mean a country so small that the world prices of what it imports and exports are completely unaffected by any trade policy it could ever undertake.

Because the small country has a representative national consumer, pecuniary externalities cannot arise.

By moving to unrestricted free trade at whatever (fixed) world prices it faces, the country’s representative consumer cannot lose.

Except in the special case when the status quo is already optimal, the country must gain.
Gains from Trade for a Small Country

Free trade moves the country away from the status quo $S$ on (or even within) the black production frontier. The point $P$ maximizes the value of national production at the fixed world prices corresponding to the slope of the blue budget line. According to the indifference map shown, there is a new equilibrium point $E$ which optimizes national consumption subject to the blue budget constraint. Point $E$ is better than point $S$ (but $P$ is actually worse than $S$).
This result for “small” countries is often used to argue that free trade is the appropriate policy for any country, regardless of how restrictive or protectionist the trade policies of other countries may be.

However, the requirement that the country be small is very restrictive. Even for a country like Singapore, the advertising at its main airport takes (justified) pride in how it is definitely not a small country in important markets like construction cranes, ship servicing, and producing equipment for semi-conductor and chip manufacturing. As it sends more construction cranes to Shanghai, hiring cranes becomes more expensive. Also, the additional construction drives up the price of steel. Both these affect construction costs in Singapore itself.

Of course, a country like Norway may be small in some markets (cheese, butter, meat, steel, motorcars) but significant in others (oil, natural gas, timber, aluminium).
Representative National Consumers, III: Gains from Customs Unions

The next significant extension to these very limited classical theorems applies to customs unions.

Such a union occurs when a group of nations agrees to common external tariffs for each different category of imported good (along with common external taxes or subsidies for each kind of export).

These are accompanied by an internal common market allowing all goods, whether imported or not, to move freely between the nations of the union, once tariffs on goods imported from outside the union have been paid.

Effectively, the countries have become a single united bloc as far as international trade is concerned.
Trade Creation and Diversion

Free trade areas are different, because goods that move across international borders within the area can still face tariffs if their “national origin” is deemed to be a country outside the area.

The European Economic Area, which includes Norway, Iceland, and Liechtenstein, is in principle such a customs union, with some extra provisions allowing labour mobility as well.

Customs unions supposedly create benefits because trade is liberalized (“created”) within the internal common market. But common external tariffs may “divert” trade from outside the union, depending on their size.
References on Gains from Customs Unions


Vanek (1962, 1965) first explained how to avoid trade diversion by setting appropriate “sterilizing” tariffs. These effectively freeze the tariff-free prices at which the rest of the world trades with the union, and so (presumably) also fix the aggregate volume of trade in each commodity between the union and the rest of the world.

That leaves the external tariff as an instrument to determine the tariff-inclusive producer prices within the union which clear the markets for producer goods. (Because of the internal market, these prices must be the same in each member state.)

Also, imports from outside the union are likely to be shifted away from member nations that originally had low tariffs toward those that originally had high tariffs. Total imports of each good must remain constant, however.
Special Case: A Global Union

If the new customs union is the whole world, there will be no external trade to sterilize.

Even so, international lump-sum transfers to compensate for lost tariff revenue (or for adverse movements in a nation’s terms-of-trade) may still be necessary in general to ensure gains, despite the presence of pecuniary externalities.

Except, of course, in the “classical” case when the status quo is autarky, so there are no pecuniary externalities.
Compensation for Deteriorating Terms of Trade

Point $S$ denotes the status quo allocation. Free trade at $C$ worsens the grocer’s terms of trade so much that he is worse off than at $S$. Point $G$ denotes the shifted equilibrium where the baker receives lump-sum compensation from the grocer. It is Pareto superior to $S$. 
International Compensation Needed

Forming a customs union with external trade sterilization obviously avoids trade diversion, by deliberate design. Is the trade created within the union beneficial?

Not necessarily if there is some trade in the status quo. Some members of the new union may suffer significantly deteriorated terms of trade. This deterioration is effectively accompanied by reduced tariff revenue when they switch to a common external tariff (with “internal” tariffs now prohibited).

Because each member country has its own representative consumer, these losses can only be compensated if revenue comes from outside, from countries that gain revenue from the common external tariff. The same is true with heterogeneous consumers.

Nevertheless, once such international compensation is allowed, one can prove results on the potential gains from customs union formation.
5. Heterogeneous National Consumers
Losers as well as Gainers

In Ricardo’s classic example of comparative advantage, suppose Portugal had begun to import more English cloth. Then Portuguese cloth manufacturers’ demand would have fallen, as would their workers’ wages. Those workers who had acquired specific clothmaking skills would have their skills lose value.

Even moving to England might not have helped, because there skilled English-born hand-loom weavers were being displaced by less skilled factory workers.

Intranational pecuniary externalities would arise even if both countries were originally autarkies. Reduced cloth prices and weavers’ wages in Portugal ensure that there are some losers, unless compensation is paid.
Henry Fawcett (and David Ames Wells)

Henry Fawcett (1878) *Free Trade and Protection: An inquiry into the causes which have retarded the general adoption of free trade since its introduction into England* (London: Macmillan)

“[I]t has been stated by the well-known American economist Mr. D. A. Wells that the people of the United States have to pay in consequence of the protective duties on imported steel such a needlessly high price for the steel rails they use that it would be a remunerative expenditure if these protective duties were abolished, and if, out of state funds, the existing Bessemer steel works were purchased and then closed, those employed in them receiving a pension in the way of compensation.” [p. 9]

NOTE: I have not yet found this as an explicit statement by Wells, but it is implicit in his 1876 article “The Creed of Free Trade” *Atlantic Monthly* **36**: 204–21, especially pp. 207–9.
“Those however who have an interest in these works know perfectly well that they would have no chance of obtaining such compensation, and consequently the more they hear about the great reduction in price which would result from the free importation of steel, the more they become impressed with the loss which would be inflicted upon them, and consequently their opposition is intensified rather than appeased. I think we are able thus at least in part to understand why free trade has made such slow progress in those countries where protection has been long established, and where consequently it is supposed that many branches of industry depend upon the continuance of the system not only for their prosperity, but in many cases for their very existence.” [Fawcett p. 9, continued]
Henry Fawcett, born 1833 in Salisbury, was educated at Cambridge University, where he became a Fellow of Trinity Hall. Though blinded in both eyes by a shooting accident at the age of 25, he continued with his studies, especially in economics. In 1863 he published his *Manual of Political Economy*, becoming in the same year the inaugural Professor of Political Economy at Cambridge (a position he held till his death in 1884, when he was succeeded by Alfred Marshall.)

After repeated defeats, in 1865 he was elected Member of Parliament for Brighton. He campaigned for women’s suffrage, and through this met Millicent Garrett, whom he married in 1867. In 1880 he was appointed Postmaster-General. He introduced many innovations, including parcel post, postal orders, and licensing changes to permit payphones and trunk lines.
Compensation Tests: Hotelling


Included in a volume where Federico Caffè translated and edited the most important papers of the 1930s and 1940s on compensation tests. Caffè also discussed these papers at some length.

... *if* some distribution of the burden is possible such that everyone concerned is better off than without the new investment, *then* there is a prima facie case for making the investment. . . . [p. 267]
“. . . It may often be good social policy to undertake new enterprises even though some persons are put in a worse position than before, provided the benefits to others are sufficiently great and widespread. It is on this ground that new inventions are permitted to crowd out less efficient industries. To hold otherwise would be to take the side of the hand weavers [Luddites] who tried to wreck the power looms that threatened their employment. But the rule must not be applied too harshly. Where losses involve serious hardship to individuals, there must be compensation, or at least relief to cover subsistence.” [p. 267, continued]
Kaldor Himself


In all cases, therefore, where a certain policy leads to an increase in physical productivity, and thus of aggregate real income, the economist’s case for the policy is quite unaffected by the question of the comparability of individual satisfactions; since in all such cases it is *possible* to make everybody better off than before, or at any rate to make some people better off without making anybody worse off. . . .

"In order [for the economist] to establish his case, it is quite sufficient for him to show that even if all those who suffer as a result are fully compensated for their loss, the rest of the community will still be better off than before. Whether the landlords, in the free trade case, should in fact be given compensation or not, is political question on which the economist, *qua* economist, could hardly pronounce an opinion. The important fact is that, in the argument in favour of free trade, the fate of the landlords is wholly irrelevant: since the benefits of free trade are by no means destroyed even if the landlords are fully reimbursed for their losses."

All that I proposed to do was to make clear that the statement that social welfare was increased [by free trade] itself involved an arbitrary element—that the proposition should run, *if* equal capacity for satisfaction on the part of economic subjects be assumed, *then* social wealth can be said to be increased. Objective analysis of the effects of the repeal of duties only showed that consumers gained and landlords lost. . . . [p. 638]
Question for Kaldor

Suppose free trade, in the absence of compensating transfers, would benefit wealthy landlords but impoverish some workers on the margin of survival. Would Kaldor have argued (as consistency really requires) that free trade is also beneficial then, provided the landlords could overcompensate the workers, regardless of whether compensation is actually paid?

[Compare the discussion in Ian Little’s *A Critique of Welfare Economics*]

In my view, Robbins was right.

The compensation tests, when compensation is not actually paid, amount to value judgements that all persons’ incremental money has equal worth, regardless of how much more desperately some of these persons may need it.
Probabilistic Compensation

A. Mitchell Polinsky (1972) “Probabilistic Compensation Criteria”  

Hotelling (continuing previous quote):
“Where there are many improvements, the law of averages may be trusted to equalize the benefits to some extent, but never completely. It will always be necessary to provide for those individuals upon whom progress inflicts special hardship; if it were not possible to do this, we should have to reconcile ourselves to greater delays in the progress of industrial efficiency.” [p. 267]

Problem: There may be an inherent and systematic bias toward choosing potential Pareto improvements that favour the rich, powerful, and well connected (especially to the media) over the poor, powerless, and marginalized whose views are not so influential.
Articles on Political Economy Models

What can happen when political campaign contributors seek influence . . .


Giovanni Facchini, Johannes van Biesebroeck, and Gerald Willmann “Protection for Sale with Imperfect Rent Capturing” NBER working paper 11269, forthcoming in the *Canadian Journal of Economics.*
Compensation Tests and Gains from Trade

Classical example: abolishing the British “Corn Laws” restricting wheat imports.

Most consumers and workers benefited from cheaper bread and other wheat products. But owners of land suitable for wheat production, and some of their agricultural workers, were harmed.

Kaldor, Hicks, and other “new welfare economists” argued that the change was still beneficial. They reasoned that the gains from cheaper wheat imports were large enough to pay compensation to any losers (including wealthy landowners) so that everybody could benefit in the end. This is called overcompensation.

This exemplifies a compensation test for a potential Pareto improvement.
Extending the Classical Theorems

By applying compensation tests, Samuelson (1939, 1962) and Kemp (1962) extended their two classical gains from trade results to economies with many heterogeneous consumers within each nation.

They showed that the gainers within each country can overcompensate the losers.

The Portuguese wine exporters’ gains from selling to England, together with the gains of all the Portuguese from access to cheaper cloth imported from England, are sufficient to overcompensate its cloth producers and weavers.

The same is true even if we think of Portugal as a country which is small in both cloth and wine markets. (The latter is certainly implausible).
Relatively simple algebra shows that the argument extends to many consumers in many countries with many traded and also many non-traded goods, as long as the status quo really is autarky.

And to any small country, regardless of how many consumers or goods there may be.

Also to customs unions, as long as there is international compensation within the union for deteriorating terms of trade linked to lost tariff revenue.
Beyond the “New” Welfare Economics

The “new” welfare economists claimed that compensation tests of this kind could identify policy improvements whether or not compensation was actually paid.

Presumably, they intended this to hold even if freeing trade had benefited rich landlords and driven workers below the poverty line.

Compensation tests may not be logically wrong (depending on what is meant by an improvement), but to many their use seems ethically offensive.
The compensation tests were intended to identify potential Pareto improvements.

Tomorrow’s lecture will begin by closely examining how any potential improvement that results from a liberalizing reform could be converted into an actual Pareto improvement, where everybody gains.

The reform must be accompanied by a suitable complementary policy — namely, the payment of compensation to any potential losers using something like a sagacious wealth distribution rule.

But being able to devise such a rule relies crucially on having the right information.
Incentive Constraints and Second Best Gains

Unfortunately, trying to make appropriate compensation payments usually creates perverse incentives which make them impractical.

Except in the kind of command economy where in the status quo, absent any reform, individuals’ economic activities are totally determined by some known “central plan”!

Accordingly the alleged potential Pareto improvement is generally illusory, precisely because it cannot converted into an actual Pareto improvement.

Nevertheless, some positive results remain even when other “second best” policy measures must be used, instead of “first best” lump-sum compensation payments.

More realistically, even these second best gains remain elusive. If we cannot avoid losses altogether, can we at least mitigate them?
Carrots and Sticks


“These propositions were the essential content of welfare economics as I learned it in the fifties. . . . The theory underlay much of what economists thought they could tell the world and its rulers. It was the basis for free trade arguments, for urging the control of monopoly, for methods of cost-benefit analysis, and the justification of marginal-cost pricing by publicly-owned firms. It was also used to support the extension of free markets and private ownership of property, and to recommend the use of price systems even in planned economies.”
“Transfers to or from a person that depend on the characteristics of that person, not his behaviour, are known as lump-sum transfers. Desirable lump-sum transfers are, in effect, impossible, because they require information that is not available. The attempt to implement them would be expected to destroy the value of the information on which they would have to based.

Following that line of thought, in the mid-sixties, Peter Diamond and I were convinced that one should think about economic welfare and economic policy in the context of public finance. At first we studied a general economic model in which the government was not able to use lump-sum transfers at all. Clearly that was going too far, and we went on to allow that the government could use uniform lump-sum taxes or, more plausibly, subsidies. Otherwise it had to use taxes, taxes that from the point of view of the pure welfare theorems are regarded as distorting. This was a model in which all consumers and producers were price takers, but they did not necessarily face the same prices, because tax rates could make the two parties to a transaction face different effective prices. It was a conventional model, in having competitive behaviour of private agents; but it was a distorted economy, and the distortion could be optimal.”
Outline of Lecture 2: Mitigating Losses

1. Labour Migration (without, then with Local Public Goods)

2. Incentive Constraints

3. Gains without Lump-Sum Compensation

4. The Need for Distortionary Taxation

5. Producer Pricing

6. Unsolved Problems

7. Concluding Recommendations