

# Trade, Migration, and Other Liberalizing Policies, II: Mitigating Losses

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# Recapitulation 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

# Two Omissions from Lecture 1: Elusive Gains

First, it is **theoretical gains** that remain elusive.

That is, it is hard for an economic theorist like myself to find sufficient conditions ensuring that a liberalizing reform, accompanied by suitable policies to mitigate pecuniary externalities, leads to a Pareto improvement.

This does not at all contradict the widespread (but contested) empirical results suggesting that liberalized policies, especially concerning international trade, really do benefit most participants in the economy.

Second, even if Pareto improvements are possible, they may not be desirable.

Reform in Russia should not be benefiting

the most corrupt officials in the *nomenklatura* of the former Soviet regime.

Also, whatever reforms are instituted to prevent reoccurrence of the massive fraud within companies like Enron and Parmalat, those most responsible for the fraud deserve to be severely punished rather than to benefit from a Pareto improvement.

# Outline of Lecture 2: Mitigating Losses

1. Sagacious Lump-Sum Wealth Redistribution
2. Labour Migration without Local Public Goods
3. Labour Migration with Local Public Goods
4. Incentive Compatible Gains
5. Compensation through Disortionary Taxes and Subsidies
6. Unsolved Problems
7. Concluding Recommendations: Mitigating Losses

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of some of the work discussed here:

Jaume Sempere

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“Limits to the Potential Gains from Economic Integration and Other Supply Side Policies” *Economic Journal* **105** (1995), 1180–1204.

“Gains from Trade versus Gains from Migration: What Makes Them So Different?”  
Stanford University Department of Economics Working Paper No. 98-012; *Journal of Public Economic Theory* (to appear).

“Efficient Migration with Local Public Goods and the Gains from Changing Places”  
Stanford University Department of Economics Working Paper No. 05-001.

# 1. Sagacious Lump-Sum Wealth Redistribution

## Gains from Trade Theorems with Heterogeneous Consumers

In Lecture 1 the three classical theorems showing Pareto gains from trade were stated for the case when every nation had its own representative consumer.

Samuelson, Kemp, Wan, Grinols, and others showed how they can be extended to nations with heterogeneous consumers. But we must allow lump-sum compensation of any who would otherwise lose from trade (or the formation of a customs union).

The key is to postulate a **“sagacious” wealth distribution rule**. This compensates individuals for any possibly pecuniary externalities, thus ensuring that nobody can lose from trade.

# Goods, Consumers, Producers, and Allocations

We assume that there is a finite set  $G$  of **goods**,  
and finite sets  $I$  and  $J$  of **consumers** and **producers**.

For each  $i \in I$  and  $g \in G$ ,

let  $x_g^i \in \mathbb{R}$  denote consumer  $i$ 's **net consumption** of good  $g$ .

Let  $x^i := (x_g^i)_{g \in G} \in \mathbb{R}^G$  denote consumer  $i$ 's **net consumption vector**.

Let  $\succsim^i$  denote  $i$ 's **weak preference relation**.

Similarly, for each  $j \in J$  and  $g \in G$ ,

let  $y_g^j \in \mathbb{R}$  denote producer  $j$ 's **net output** of good  $g$ .

Let  $y^j := (y_g^j)_{g \in G} \in \mathbb{R}^G$  denote producer  $j$ 's **net output vector**,

and let  $Y^j \subset \mathbb{R}^G$  denote the producer's **production set**.

A **feasible allocation** is described by the pair  $(\mathbf{x}^I, \mathbf{y}^J)$

of lists  $\mathbf{x}^I = (x^i)_{i \in I}$  and  $\mathbf{y}^J = (y^j)_{j \in J}$

which together satisfy the **resource balance constraint**  $\sum_{i \in I} x^i = \sum_{j \in J} y^j$ .

# Prices, Profits, and Wealth Distribution Rules

A **price vector**  $p$  is a non-zero member of the space  $\mathbb{R}^G$ .

Each producer  $j \in J$  has a **profit function** of the price vector  $p$  defined by  $\pi^j(p) := \max_{y^j} \{p y^j \mid y^j \in Y^j\}$ .

A **wealth distribution** is a vector  $w^I = (w^i)_{i \in I} \in \mathbb{R}^I$  specifying each individual  $i$ 's wealth level.

A **wealth distribution rule** (or WDR) is a mapping  $p \mapsto w^I(p) \in \mathbb{R}^I$  satisfying  $\sum_{i \in I} w^i(p) = \sum_{j \in J} \pi^j(p)$ .

One example to be found in the **private ownership economy** considered by Arrow and Debreu (1954), etc.

Then each  $w^i(p) = \sum_{j \in J} \theta_j^i \pi^j(p)$ ,

where  $\theta_j^i$  indicates consumer  $i$ 's share of producer  $j$ 's profits.

Obviously one assumes that  $\sum_{i \in I} \theta_j^i = 1$ .

# The Status Quo

Assume there is a **status quo** feasible allocation  $(\bar{x}^I, \bar{y}^J)$  describing completely what would happen **in the absence of** any liberalizing reform.

Note that I deliberately avoid saying that the status quo is the “old” allocation “before” the liberalizing reform.

Or that the allocation resulting from the reform occurs “after”.

In fact, the status quo typically includes what would occur far into the future, had there been no reform.

The “new” allocation which departs from the status quo is the allocation **with** the reform.

## Compensating for Pecuniary Externalities

Given the status quo allocation  $(\bar{x}^I, \bar{y}^J)$ , each consumer  $i \in I$  has a **compensation function** defined by  $\bar{e}^i(p) := \min_{x^i} \{ p x^i \mid x^i \succeq^i \bar{x}^i \}$ . This is the minimum wealth  $i$  needs to be no worse off than in the status quo, where  $i$ 's (net) consumption vector would be  $\bar{x}^i$ .

The function  $\bar{e}^i(p)$  specifies exactly what wealth consumer  $i$  needs in order to negate any pecuniary externalities that arise as the price vector  $p$  changes in response to a liberalizing reform,

Apart from specifying how producers' profits are distributed, a WDR also allows general lump-sum wealth redistribution, especially that needed to compensate for pecuniary externalities. Such compensation plays a key role in the ensuing definition of a sagacious WDR.

# Surplus Wealth

Let: (1)  $S(p) := \sum_{j \in J} \pi^j(p) - \sum_{i \in I} \bar{e}^i(p)$

denote the **surplus wealth** that is left over out of producers' profits, after compensating all consumers for any pecuniary externalities.

Consider any fixed  $p \in \mathbb{R}^G \setminus \{0\}$ .

Note that: (2)  $\pi^j(p) - p \bar{y}^j \geq 0$  for each  $j \in J$  because of profit maximization; and (3)  $p \bar{x}^i - \bar{e}^i(p) \geq 0$  for each  $i \in I$  because of wealth minimization.

Because of feasibility, one has (4)  $\sum_{j \in J} p \bar{y}^j = \sum_{i \in I} p \bar{x}^i$ .

From (1) and (4),  $S(p) = \sum_{j \in J} [\pi^j(p) - p \bar{y}^j] + \sum_{i \in I} [p \bar{x}^i - \bar{e}^i(p)]$ .

By (2) and (3),  $S(p)$  is the sum of non-negative terms.

So if the whole sum is zero, then so is each term.

## Surplus Wealth is Positive (Except in Equilibrium)

It follows that  $S(p) \geq 0$ ,  
with equality only if both  $\pi^j(p) = p \bar{y}^j$  for all  $j \in J$  and  $\bar{e}^i(p) = p \bar{x}^i$  for all  $i \in I$ .

So  $S(p) = 0$  implies that every producer is maximizing profit at  $\bar{y}^j$ ,  
and that any consumer whose expenditure is reduced below  $p \bar{x}^i$   
must be worse off than at  $\bar{x}^i$ .

Accordingly, if there exists  $p \in \mathbb{R}^G \setminus \{0\}$  such that  $S(p) = 0$ ,  
then the status quo allocation  $(\bar{\mathbf{x}}^I, \bar{\mathbf{y}}^J)$   
is already a (compensated) Walrasian equilibrium at the price vector  $p$   
(relative to any sagacious WDR),  
so liberalizing markets definitely cannot lead to a Pareto improvement.

## Sagacious Wealth Distribution Rules

Jean-Michel Grandmont and Daniel McFadden (1972) “A technical note on classical gains from trade” *Journal of International Economics* 2: 109–25.

The wealth distribution rule (WDR)  $p \mapsto w^I(p)$  is **sagacious** provided it satisfies  $w^i(p) \geq \bar{e}^i(p)$  for all  $i \in I$  and all  $p \in \mathbb{R}^G \setminus \{0\}$ , with  $w^i(p) > \bar{e}^i(p)$  whenever  $S(p) > 0$ .

An example of a sagacious WDR is  $w^i(p) \equiv \bar{e}^i(p) + \theta^i S(p)$  where the parameters  $\theta^i$  are all positive **shares of incremental aggregate profit** that satisfy  $\sum_{i \in I} \theta^i = 1$ .

Unless the status quo allocation is already a (compensated) Walrasian equilibrium, it follows that  $S(p) > 0$  for all  $p \in \mathbb{R}^G \setminus \{0\}$ .

Then any sagacious WDR satisfies  $w^i(p) > \bar{e}^i(p)$  for all  $i \in I$  and all  $p \in \mathbb{R}^G \setminus \{0\}$ .

## Actual Pareto Gains

To repeat, unless the status quo allocation is already Pareto efficient, any sagacious WDR satisfies  $w^i(p) > \bar{e}^i(p)$  for all  $i \in I$  and all  $p \in \mathbb{R}^G \setminus \{0\}$ .

Assuming that preferences are locally non-satiated, any Walrasian equilibrium relative to a sagacious WDR must then be **strictly** Pareto superior to the status quo.

Under standard assumptions of continuity, convexity and compactness, an orthodox Walrasian equilibrium existence proof then establishes strict Pareto gains from trade.

NOTE: A sagacious WDR even ensures that every consumer has a “cheaper point”. This is key to proving the existence of a Walrasian equilibrium rather than merely a “compensated” equilibrium.

# Classical Theorems with and without International Transfers

1. The **first** classical theorem shows that free trade is Pareto superior to autarky. For this, it is enough to have a sagacious WDR within each separate country. Just as in the case with representative national consumers, international transfers are unnecessary.
2. The **second** classical theorem shows that, for a small country, free trade is superior to any alternative trade policy. Again, it is enough to have a sagacious WDR within the small country. The rest of the world is irrelevant, except insofar as it determines the world prices at which trade occurs.
3. As for **customs unions**, the sagacious WDR has to extend over the whole union, including international transfers to compensate for lost tariff revenue, as in the case when each member state has just one representative consumer.

## 2. Labour Migration without Local Public Goods National and EU Labour Mobility

(with Jaume Sempere) “Gains from Trade versus Gains from Migration: What Makes Them So Different?” *Journal of Public Economic Theory* (to appear).

Most economists support labour mobility within nations.

Labour economists worry about rigidities in housing markets that make it harder for workers to move to better jobs.

No economist I know defends the internal passport controls in the former Soviet Union.

National labour mobility is seen as facilitating desirable economic growth, and as one of the most important mechanisms for interregional risk-sharing, especially within the U.S.A.

Many European economists would like to see similar international mobility within the EU.

# What Makes Trade and Migration So Different?

Richard B. Freeman (1993) “Immigration from Poor to Wealthy Countries: Experience of the United States” *European Economic Review* 37: 443–451.

“Given that the economic analyses of immigration and trade are similar, why do economists lead the charge for free trade but not for free immigration? Support free trade, and you are mainstream. Express doubts, and your friends wonder which industry/union pays your rent (or if you imbibed excessively of an increasing returns drug). But declare yourself for open-door immigration, and you are dismissed as an idealist, maybe even a card-carrying member of a human rights or amnesty group.”  
[p. 449]

## “Economic” Migrants as the “New Untouchables”

Nigel Harris (1995) *The New Untouchables: Immigration and the New World Worker* (London: I.B. Tauris)

Many politicians who would never dream of advocating trade restrictions for economic reasons barely hesitate in condemning “economic” migrants as a threat to the employment and other prospects of their electorates.

Especially those with few formal qualifications who come from the poorer countries of the world.

Perhaps it is such politicians whose jobs are most threatened . . .

In California, the Republican Party tried to introduce anti-immigrant policies during Pete Wilson’s term as Governor. It took Austrian immigrant Arnold Schwarzenegger to revive that party’s fortunes somewhat. Until, that is, he also vetoed issuing driving licences to “illegal” immigrants. And pursued an aggressive campaign against labour unions, many of whose members are immigrants.

# Gains from Migration

The theoretical results on gains from migration with sagacious lump-sum wealth distribution are similar to those without migration.

The main technical obstacle to proving a suitable existence theorem is the obvious non-convexity that arises because no potential migrant can be in more than one place at the same time.

Nevertheless, when many agents have appropriately dispersed characteristics, standard assumptions ensuring gains from trade also ensure gains from migration. These supplement and can even reinforce the gains from trade. Where would Italian restaurants in England be without not only Italian chefs, but also Italian olive oil?

As with gains from customs unions, international wealth transfers are generally required. This is so even if the status quo is autarky, or if one is considering a small country.

### 3. Labour Migration with Local Public Goods

#### Pure Public Goods versus Those Subject to Congestion

(with Jaume Sempere) “Efficient Migration with Local Public Goods and the Gains from Changing Places” Stanford University Economics Working Paper No. 05-001.

A second apparent obstacle to achieving a (potential) Pareto improvement from free migration arises because of public goods and externalities.

First, note the important distinction between **pure public goods** on the one hand, and **public goods subject to congestion** on the other.

## A Frozen Public Environment without Congestion

Examples of pure public goods, without crowding, include broadcast radio or television, lighthouses, streetlighting, . . .

Evidently, the cost of providing these is not directly related to population, so is unaffected by migration or congestion.

Suppose all public goods were of this kind.

Suppose too that the **public environment** of each nation or locality remains **frozen** at what it would be in the status quo.

In this way no consumers experience ordinary (non-pecuniary) externalities from changes in the public environment.

Then our earlier results already imply that,  
(with routine modifications to the assumptions)

Pareto gains from free trade and/or migration remain possible.

# Frozen Local Public Environments with Congestion

John Conley and Myrna Wooders (1996) “Taste-Homogeneity of Optimal Jurisdictions in a Tiebout Economy with Crowding Types and Endogenous Educational Investment Choices” *Ricerche Economiche* 50: 367–387.

Also (1997) “Equivalence of the Core and Competitive Equilibrium in a Tiebout Economy with Crowding Types,” *Journal of Urban Economics* 41, 421–440.

The cost of providing local public goods subject to congestion is obviously affected by migrants and the **crowding types** they choose in the location where they choose to settle in order to live and work.

So no simple extension of our earlier results is possible.

Still, Pareto gains from trade combined with **appropriate** migration remain possible, provided that each local public environment remains frozen at the status quo.

This requires **both** the provision of public goods, **and** the congestion levels affecting those goods, to be **frozen**.

## More on Individual Crowding Types

The Conley/Wooders formulation can take account of the fact that some kinds of immigrant may create an unusually high degree of congestion — perhaps because they lack the most relevant language skills, or else need to learn how to respect the customs of the host locality, so that they can live at peace with their new neighbours.

Even then there is no economic reason to exclude immigrants who are willing to undergo relevant training at their own or their new employer's private expense.

# Constrained Pareto Efficiency

A fully Pareto efficient allocation of private and public goods obviously requires an efficient allocation of congestion.

Our results apply even if no such efficient allocation of total congestion occurs.

Instead, we suppose public good provision is fixed at the status quo value, as are all the congestion levels affecting the cost of providing the different public goods. Individuals are still allowed to migrate, and even to change their crowding types, as long as the overall public environment does not change.

The allocation that results from such a reform need be no better than **constrained** Pareto efficient.

This is because no attempt is made to resolve the public good problems involved in choosing an appropriate combination of local public goods and the aggregate congestion levels due to individuals' crowding types.

## Further Gains from Unfreezing the Public Environment

Specifically, our results do not rule out additional Pareto improvements from appropriately unfreezing the public good supply and/or congestion levels. Such further improvements, however, go beyond the scope of our work so far.

Our point is that such additional changes are not needed for Pareto gains to emerge from a combination of free trade and appropriate migration, with each local public environment fixed.

## Pigouvian Taxes and Subsidies . . .

In our model, migration creates externalities by adding to (or reducing) the cost of public good provision in both the source and destination localities.

Consider **any** fixed profile of aggregate congestion created by people of each crowding type, in each locality, and in each date-event. (By “any” I mean not just the status quo).

Then a constrained Pareto efficient allocation between different consumers of the crowding types in different localities which make up these externalities can be induced by a suitable Pigouvian tax/subsidy scheme.

(For technical reasons we should probably assume that both the set of locations and the set of possible crowding types are finite, to avoid complications from having to do general equilibrium theory in an infinite-dimensional commodity space.)

## **. . . Are Residence Charges that Depend on Congestion Type**

By definition, all residents with the same crowding type contribute equally to the congestion affecting the provision of public goods.

That is, the marginal congestion cost per head of world population that results from increasing the proportion of the world population residing in that locality who share a common crowding type must depend only on that type.

The Pigouvian congestion tax per head should equal this marginal congestion cost.

Accordingly, all consumers with the same crowding type in the same location at the same time should pay the same tax (or receive the same subsidy), regardless of national origin.

# Changing Places Efficiently

David Lodge, *Changing Places*

— hilarious novel about academic exchange by Professors of English Literature.

Seminars on this work presented at U. of Birmingham (= “Rummidge”) and at U. of California at Berkeley (= “Euphoric State”).

In equilibrium individuals are allowed to migrate and to change crowding type, as long as they pay appropriate residence charges.

But there must be other individuals choosing to make offsetting changes whose overall effect is that each location’s **demographic history** remains frozen at the status quo.

That is, individuals are restricted to *(ex)changing places* in equilibrium.

# Gains from Changing Places

Even so, in addition to the usual gains from trade, there can still be gains from population exchanges between different localities.

Consumers choose their own personal histories of crowding types and location, as well as their net trade vectors (including labour supply and housing), subject to a budget constraint that reflects the appropriate residence charges for living in each location in each date–event.

In effect, the residence charges are determined by the need to clear markets for different kinds of people, supplying not only different labour skills, but also imposing different crowding types on the locality where they reside.

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Elusive **gains** indeed!

## 4. Incentive Compatible Gains

Feenstra, R. and Lewis, T. (1991) “Distributing the gains from trade with incomplete information” *Economics and Politics* 3: 21–40.

Feenstra, R. and Lewis, T. (1994) “Trade adjustment assistance and Pareto gains from trade” *Journal of International Economics* 36: 201–22.

Brander, J.A. and Spencer, B.J. (1994) “Trade adjustment assistance: welfare and incentive effects of payments to displaced workers” *Journal of International Economics* 36: 239–61.

Potential Pareto improvements are those that pass the compensation test. Converting these into actual Pareto improvements ostensibly requires actual compensation payments. How much compensation is needed depends on details of individuals’ abilities and tastes that may be hard to discover.

## An Example

Consider any one of the many British coal miners thrown out of work when most of the coal mines closed during the 1980s, as Britain relied more on imported coal (as well as natural gas and fuel oil) to fuel its electricity generating plants (other than nuclear and hydro, of course).

The appropriate compensation depends on how long this miner would have continued to work, and at what level of seniority. Should he receive all the wages he would have earned if the coal mine had continued to function indefinitely? Probably not. He might have retired early, and/or chosen a different career a few years later.

## Incentive Incompatible Compensation

Yet clearly the miner has every incentive to say that he was committed to the mining industry, with no plans to change career, and no skills that could be used elsewhere. This is how to achieve the most compensation.

Also, compensation may not be limited to this miner.

His teenage son, about to leave school, might be able to claim that he was intending to go down the mine as well, for the whole of his working life. Along with any sons he might be hoping to have . . .

When compensation may be for damaged career plans extending over many years, one needs to know, but is unable to discover, what the individual would have done in the absence of the liberalizing reform. Any appropriate compensation scheme is vulnerable to exaggerated claims.

# Moral Hazard

Making the amount of compensation paid depend on the ex-miner's later career is also problematic. It creates a disincentive for finding an alternative occupation or acquiring new skills.

Indeed, the individual specific "lump-sum" compensation that the theory requires creates exactly the same difficulties as any attempt to equalize incomes perfectly in a society where skills vary. Like trying to follow Karl Marx's slogan: "From each according to their ability; to each according to their need," it will destroy relevant incentives.

## Eternal Stationarity?

Kemp, M. and H. Wan (1986) “Gains from trade with and without lump-sum compensation” *Journal of International Economics* 21: 111–21.

Murray Kemp (especially in joint work with Henry Wan) continues to contest this claim that compensation schemes are incentive incompatible.

His best argument focuses on the case of a purely static economy in which each individual repeats the same pattern of trade every period.

Then one could indeed tailor compensation to this trade pattern.

But of course this static economy is not the one we have to deal with in reality.

For one thing, if there is going to be a trade liberalization, why not other other kinds of policy reform as well?

# Reform in a Command Economy

Much more interesting is the case of China, before liberalization began in about 1979. For more details, see:

Lawrence Lau, Yingyi Qian, and Gérard Roland (1997) “Pareto-Improving Economic Reforms Through Dual-Track Liberalization” *Economics Letters* 55: 285–292.

Lawrence Lau, Yingyi Qian, and Gérard Roland (2000) “Reform without Losers: An Interpretation of China’s Dual-Track Approach to Transition” *Journal of Political Economy* 108: 120–143.

Also: Jiahua Che and Giovanni Facchini  
“Dual Track Liberalization: With and without losers” (under review).

## A Known Status Quo

Before the reforms, China was a centrally planned command economy.

The government knew in principle precisely what would happen in the absence of any reform, because the economy was going to follow its own detailed plan.

Every enterprise was state-owned,  
and every state-owned enterprise had precise quantitative targets  
for all its inputs and outputs.

Liberalization, at least initially, required that enterprises adhere to these plans.

## Dual-Track Liberalization

But agricultural workers in particular were allowed much more flexibility in devoting a personal plot of land and their own labour time to producing extra output, for sale on liberalized markets.

Some farmers were also allowed to buy the crops they needed to fulfill the targets prescribed by the original plan. This faced them with free markets at the margin.

Also, the new budget constraints could not hurt anybody because adhering to their part of the original plan always remained as an option.

This is the interesting “exception that proves the rule” that lump-sum compensation is generally incentive incompatible.

Nevertheless, this is not quite the end of the story.  
Theoretical gains may be elusive, but not impossible!

## 5. Compensation through Disortionary Taxes and Subsidies: My Supervisors

Peter Diamond and **James A. Mirrlees** (1971)

“Optimal Taxation and Public Production I: Production Efficiency”

*American Economic Review* 61: 8–27.

[Theirs is a much more **useful** theory compared with the famous negative results of R.G. Lipsey & K.J. Lancaster (1956) “The General Theory of Second Best”

*Review of Economic Studies* 24: 11–32.]

Also: Christopher J. Bliss (1991)

“Adjustment, Compensation and Factor Mobility in Integrated Markets”

in C.J. Bliss and J.B. de Macedo (eds.)

*Unity with Diversity in the European Economy: The Community’s Southern Frontier* (Cambridge: Cambridge University Press).

# Frozen Consumer Prices and Dividends

Diamond and Mirrlees (1971) provide a remarkably general argument establishing how, even in the absence of lump-sum compensation, production efficiency may be desirable.

The key assumption is that the government is able to impose whatever commodity taxes and subsidies it may desire on different commodities.

Thus, when producer prices vary as a result of some liberalizing policy, the government can vary taxes or subsidies in order to “sterilize” these variations, and allow consumers to trade at the same prices as they could in the *status quo*.

It must also be able to sterilize all dividend payments and similar transfers from private producers to consumers.

In this way, all consumers remain with an unchanged budget constraint. In particular, all pecuniary externalities are negated.

## Second Best Potential Gains

Avinash K. Dixit and Victor Norman (1986) “Gains from Trade without Lump-sum Compensation” *Journal of International Economics* 21: 99–110.

Now, in the case of a favourable reform like trade liberalization or enhanced production efficiency, after freezing consumer prices and dividends in this way, the government will have surplus revenue.

This surplus can be offered to consumers as some kind of uniform or “lump-sum” subsidy, regardless of personal circumstances or what transactions they undertake. For example, this is how Alaska distributes some of the budget surplus it accrues from oil levies.

Such schemes were used by Dixit and Norman to demonstrate how gains from trade (or customs union formation) could be achieved even in the absence of lump-sum compensation.

# The Need for Distortionary Taxes

Dixit/Norman schemes require **freezing** consumer prices and dividends at what they would have been in the absence of any reform.

They require the government to have a vast array of detailed policy instruments — namely, different taxes and subsidies on all commodities, including those that differ only in time or geographical location.

Even worse, they would appear to require detailed knowledge of how markets would have functioned far into the future.

This is particularly important for labour markets affecting workers' career plans, since these have such a large effect on life-time opportunities.

Also housing markets.

# Producer Pricing

Finally, some important lessons from Diamond & Mirrlees.

Phase out taxes on intermediate products (sold by one producer to another, rather than to a consumer, or by a consumer to a producer).

Replace by Value Added Taxes,  
allowing producers to claim rebates on taxes paid to other producers.

Phase out taxes (and depreciation allowances) on firms' investment purchases.

But, to repeat, variable and very detailed taxes (or subsidies) are needed: both direct taxes on consumers' incomes, including their labour earnings, as well as indirect taxes on consumers' commodity transactions.

## Are Frozen Dividends Really Incentive Compatible?

It is essential that consumers' after tax dividend earnings be frozen.

(Otherwise papers by Dasgupta & Stiglitz and by Mirrlees demonstrate that production efficiency may be undesirable.)

Yet this amounts to lump-sum compensation

to the owners of firms affected by pecuniary externalities.

In particular, considerable sums of money may be needed if, say, a large car manufacturer (such as Rover, General Motors, or Fiat) ceases to be competitive, and so gets shut down.

Compensation requires discovering what after-tax dividends the firm would have paid in the absence of any reform.

Finding this out seems no less problematic than discovering the career plan of the laid-off British coal miner discussed previously.

## 6. Unsolved Problems

### Dixit/Norman Schemes with Migration and Tax Havens

1. It would be desirable to find results like those of Dixit/Norman in the context of migration.

A major complication is the need to deal with tax havens, where migrants may move at the expense of other governments' revenues.

# Incomplete Markets

2. Existing work presumes complete markets, as in Chapter 7 of Gérard Debreu's *Theory of Value*.

Obviously, a framework with incomplete markets is needed to discuss issues like the gains from financial market integration, and the benefits of a common currency area such as the eurozone.

Murray Kemp claims results for incomplete markets.

But these rely on lump-sum transfers in each date/event.

Were such transfers incentive incompatible and so conceivably feasible, they could effectively complete the market system entirely by substituting for Arrow's well-known complete contingent securities.

## Exogenous Incompleteness

Oliver Hart (1975) “On the Optimality of Equilibrium when the Market Structure is Incomplete” *Journal of Economic Theory* 11: 418–443.

Hart [pp. 439–442] has a famous example showing how, if markets remain incomplete even after opening some new ones, the reformed equilibrium allocation could be Pareto **inferior**.

David Newbery and Joe Stiglitz (1981) *The Theory of Commodity Price Stabilization: A Study in the Economics of Risk* (Oxford University Press); and (1984) “Pareto Inferior Trade” *Review of Economic Studies* 51: 1–12.

More realistic example of Pareto inferior trade.

# Endogenous Incompleteness

Joseph Stiglitz (1981) “Pareto Optimality and Competition”  
*Journal of Finance* 36: 235–251.

Avinash Dixit “Trade and Insurance with . . .  
(1987) . . . Moral Hazard” *Journal of International Economics* 23: 201–220.  
(1989) . . . Adverse Selection” *Review of Economic Studies* 56: 235–247.  
(1989) . . . Imperfectly Observed Outcomes”  
*Quarterly Journal of Economics* 104: 195–203.

Stiglitz himself, followed by Dixit, suggests that examples like those of Hart and Newbery/Stiglitz lose much of their force if one does not treat the structure of incomplete markets as *exogenous*. Instead one looks for features such as asymmetric information which can explain the incomplete market structure *endogenously*.

# Pareto Gains from Liberalized Endogenous Contracting?

John Geanakoplos (2003) “Liquidity, Default, and Crashes: Endogenous Contracts in General Equilibrium” *Advances in Economics and Econometrics: Theory and Applications, Eighth World Conference* (Cambridge University Press) Volume II, pp. 170–205.

Once the market structure becomes endogenous, theoretical results on gains from liberalizing reforms may re-emerge.

**Warning:** efficient contracts with asymmetric information seem typically to involve non-linear pricing.

## Price Uncertainty: May Autarky Be Desirable After All?

3. When markets remain incomplete, consumers and producers face serious price uncertainty. At an extreme, the only way to ensure their own survival is not to rely on any market transactions at all, and ensure that survival remains possible even under autarky. This is NOT the same as actually having autarky, however, at either the level of individuals or the nation as a whole. But it does suggest growing enough vegetables in your back garden to survive for a while.

Some combination of government intervention and insurance markets seems needed to entice people into abandoning such extremes.

Though residents in most areas of California are being urged to have what they need (water, food, medicines, etc.) to be self-sufficient for at least 3 days following a major earthquake.

# Endogenous Demography

## 4. Migrants have families.

Realistic models of the long-run effects of migration therefore need to allow endogenous population.

Yet even Arrow's (1951) classical welfare theorems really require population to remain exogenous. Otherwise decisions to have families (or not) create externalities, such as the European pensions crisis. Such externalities may possibly be relieved by immigration, or possibly not . . .

Perhaps we need to model families as “clubs”, following the work of Bryan Ellickson, Birgit Grodal, Suzanne Scotchmer, and William Zame.

With the important difference that, unlike those who join a club to be with the “best” type of fellow members, the youngest members of a family do not choose the type of parents they have.

## Free Trade for Producers Only?

5. Models used to establish gains from trade and related results typically presume perfectly competitive markets.

(Major exceptions include: Murray Kemp and Takeshi Negishi (1970)

“Variable Returns to Scale, Commodity Taxes, Factor Market Distortions, and Their Implications for Trade Gains” *Swedish Journal of Economics* 72: 1–11; Elhanan Helpman and Paul Krugman (1985) *Market Structure and Foreign Trade* (MIT Press); and Paul Krugman (1990) *Rethinking International Trade* (MIT Press), chapters 1–3.)

Yet real multinational corporations enjoy monopoly power, often as a result of patents or other forms of “intellectual property”. Trade liberalization could wind up benefiting them (and their shareholders) at the expense of consumers and workers, as it facilitates their locating where inputs are cheap.

## Or Free Trade for Consumers As Well?

Often trade liberalization does not prevent multinationals practising international price discrimination, because “free trade” may not extend to consumers being able to purchase on “grey markets” products made in any country they choose — “parallel” imports.

For example, limitations on US residents being able to purchase cheaper prescription medications from Canada. And the European Court of Justice’s legal action against the British chain store Tesco for selling Levi’s jeans imported directly from the USA.

In such cases, consumers’ losses from enhanced monopoly power, including multinationals’ freedom to practise price discrimination, may exceed the gains from trade (including increased profits) which is “free” for producers but not for consumers. Sagacious wealth distribution may be impossible because the surplus  $S(p)$  may become negative.

## 7. Concluding Recommendation: Mitigating Losses

Lawrence, R.Z. and Litan, R.E. (1986) *Saving Free Trade: A Pragmatic Approach* (Washington, D.C.: Brookings Institution).

Peter Diamond (1982) “Protection, trade adjustment assistance, and income distribution” in Jagdish Bhagwati (ed.) *Import Competition and Response* (Chicago: University of Chicago Press) 123–49.

We appear to face diminishing returns in trying to find theoretical results establishing potential Pareto gains from trade and other liberalizing policies.

Empirical studies abound. They seem to do rather better at establishing how growth and prosperity, if not social welfare, typically result from liberalizing reforms.

Nevertheless, theory alerts us to the general probability that liberalizing reforms will create even large losses for some deserving individuals.

# Does Globalization Need a Welfare State?

“Free” markets for private goods require major public support if they are to function properly. Property and contract laws are needed to enforce appropriate budget and borrowing constraints. Monopoly power and rent-seeking behaviour need to be curtailed. Financing the essential public institutions needed for these activities requires a functioning and respected tax system.

Liberalizing reforms would seem to require something like a comprehensive welfare state to take care of the inevitable economic casualties they will create. Schemes like “trade adjustment assistance” in the US, intended to help workers made redundant because of international competition, may help, but are surely too limited in scope.

## From Vicious to Virtuous Circles?

Obviously any effective welfare state requires serious institutional resources, which a poor country cannot afford unless it grows, perhaps due to liberalization.

Yet liberalization is likely to have especially severe consequences in a poor country that cannot afford a welfare state.

On the one hand, we appear to have a vicious circle.

On the other hand, we may be able to put the circle into reverse.

That is, there could be some parallel development of liberalizing reforms, combined with the anti-poverty reforms expected of a welfare state, each buttressing the other and allowing both to proceed simultaneously.

## **“A rising tide raises all boats.”**

To which one might retort:

“Except those stuck in the mud, or full of holes, which need rescue and/or repair.”

The growth in national income that should accompany any liberalizing reform is often likened to a rising tide, and the economy’s participants as boats that should rise with the tide.

From [William] *Safire’s New Political Dictionary* (Random House, NY, 1993):

“In 1993, Theodore C. Sorensen informed the author [Safire]:  
‘As Legislative Assistant to Senator John F. Kennedy 1953–1961, I often received material from a regional chamber of commerce-type organization called ‘The New England Council.’ I was favorably struck by the motto set forth on its letterhead: ‘The rising tide lifts all the boats,’  
and not surprisingly it found its way into J.F.K.’s speeches’.”

# Boats that Don't Rise, and Trickle Down Economics

From: [http://www.phrases.org.uk/bulletin\\_board/42/messages/1056.html](http://www.phrases.org.uk/bulletin_board/42/messages/1056.html):

Mr. Safire includes a couple of quotes along those lines.

“The falling tide in the Defense Department puts ships in the sand selectively.  
(*National Review* article, 1987).

And nine years before Vernon Jordan said that “black people are in the drydock of this economy,” Safire said that Democrats use this phrase in a positive vein but deride the Republicans’ “trickle-down” theory.

Increases in national income are supposed to **trickle down** to benefit **everybody**.

Attributed to John Kenneth Galbraith:

“If you feed enough oats to the horse, **some will pass through to feed the sparrows.**”

## Some Rare Economics Teachers . . .

Economists who promulgate liberalizing reforms owe the world justifications much better than those which most economics students appear to get taught.

Not everybody has the good fortune to enjoy professors as wise and careful as Federico Caffè appears to have been. Or as those from whom I benefited in Cambridge (particularly Christopher Bliss, Michael Farrell, and Jim Mirrlees, but also James Meade, David Newbery, and Joan Robinson, . . . ).

## . . . and their Wonderful Students

Nor are all professors as fortunate as Federico Caffè in having students of such high quality as Mario Tiberi and Nicola Acocella. My hearty thanks to them for doing me the great honour of inviting me. And for not only arranging the lectures, but for rearranging them when some problems at home made it hard for me to travel anywhere, even to Rome.

Perhaps in the end we really did find an actual Pareto improvement. I hope so, anyway.