EU-Morocco FTA

Jan Hagemejer & Marie Rau

Hakim Ben Hammouda & Selami Xhepa

Michael Ferrantino & Hitomi Lisaka

Nora Dihel & Sara Wong

08/13/2004

EU-Morocco FTA (Elbehri and Hertel, 2004)

- Unilateral tariff reduction on Moroccan imports from EU
- Tariff reduction only on manufactures
- Imperfect competition and increasing returns to scale

Extensions:

1. Effects of FTA on employment in Morocco
2. Liberalization of agriculture and the timing of implementation
3. Sequencing trade liberalization
4. Market structure issues and introducing liberalization in services

Morocco-EU FTA and employment

Experiment: Removal of tariffs on Moroccan imports of manufactures from the EU (unilateral tariff reduction)

4 scenarios:

all assume imperfect competition with fixed number of firms

1. full employment, tax replacement
2. full employment, no tax replacement
3. unemployment, tax replacement
4. unemployment, no tax replacement

Closures:

- Unemployment (fixed real wage):

  exogenous: `pfactreal("UnSkLab","MOR")`

  endogenous: `qo("UnSkLab","MOR")`

- Tax replacement:

  exogenous: `del_ttaxr(r)`

  endogenous: `tp(r)`

- Fixed number of firms:

  exogenous: `firms(j,r)`

Scenarios 1 and 2:
- full employment, tax replacement
- full employment, no tax replacement

Both scenarios feature a decline in output in oligopoly industries

→ decline in employment in oligopoly industries

→ reallocation of labor to other industries (full employment)

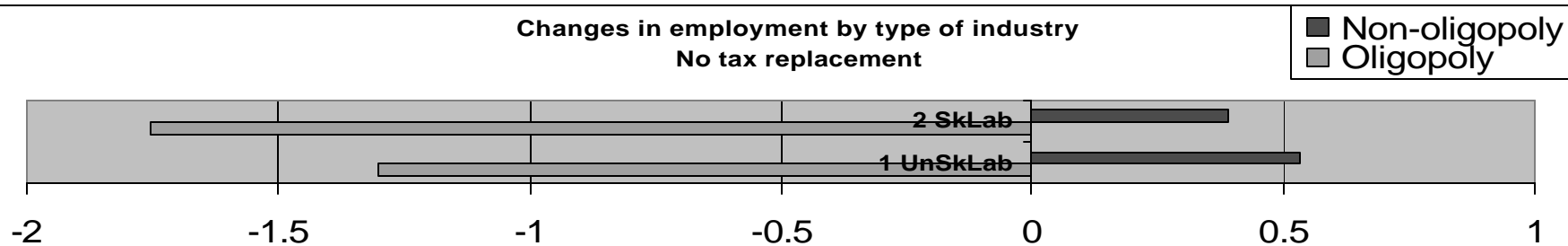Tax replacement → lost tariff revenues replaced by consumption tax

→Decrease in oligopoly sectors output is smaller under tax replacement

→Consumption tax decreases demand more in non-oligopoly sectors

Changes in employment by type of industry
Tax replacement

■ Non-oligopoly
□ Oligopoly

2 SkLab

1 UnSkLab

-0.6   -0.5   -0.4   -0.3   -0.2   -0.1   0   0.1   0.2
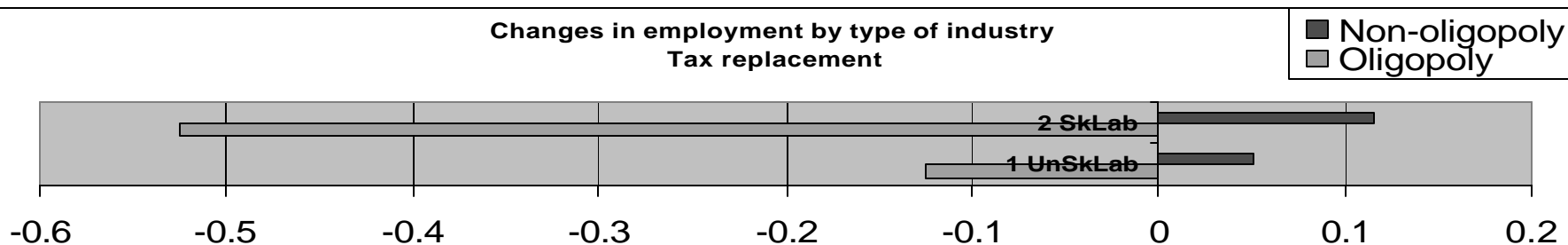
Changes in employment by type of industry
No tax replacement

■ Non-oligopoly
□ Oligopoly

2 SkLab

1 UnSkLab

-2   -1.5   -1   -0.5   0   0.5   1

Scenario 3: Unemployment with tax replacement

1. Output of oligopoly sectors decreases due to increased competition from EU, output of other sectors increases.

  The total output drops by 4.25%

    $\rightarrow$ decrease in demand for endowments

      $\rightarrow$ drop in prices of endowments (except UnSkLab)

2. Tax replacement $\rightarrow$ the consumer price index rises by 4.3%.

  Fixed unskilled labor real wage $\rightarrow$ nominal wage goes up by 4.3%

```
pfactreal(i,s) = pm(i,s) - ppriv(s);
```

  Total change in employment of unskilled labor: -8.4%.

Changes in employment by type of industry

■ Non-oligopoly
□ Oligopoly

2 SkLab

1 UnSkLab

-10   -8   -6   -4   -2   0   2

Scenario 4: Unemployment without tax replacement

1. Output of oligopoly sectors decreases, output of other sectors increases → total output increases by 3.7%.

2. Tariff cut without increase in consumption tax → the consumer price index falls by 4.2%.
   Fixed unskilled labor real wage → nominal wage goes down by 4.3%
   Total increase in employment of unskilled labor: 8.55%.

Changes in employment by type of industry

Legend: ■ Non-oligopoly   ■ Oligopoly

2 SkLab		
1 UnSkLab		

Axis: -4 -2 0 2 4 6 8 10

Conclusions:

- Tariff reduction with tax replacement reduces employment.

- The budgetary costs of the tariff reduction are equal to 5.7 percent of income in Morocco – compensation from EU?

Agriculture in the FTA

Hakim and Selami

I. Introduction

- The EU-Morocco FTA
- The situation is a win/lose game
- The main question is how to balance this situation and to make it a win/win game?

II. Scenarios:

- The main hypothesis of these scenarios is to introduce agriculture in the FTA by opening the EU market to the exports from Morocco
- Two scenarios:
- 50% reduction of the Ag tariffs from the EU on the top of the FA
- 100% tariff cut for the Morocco agricultural products by the EU and apply the FTA
- The simulations are based on the No Entry/full employment closure

III. Results:
Output improvement:

Grains	1.63	Wood prod.	-33.97
Veg.&Fruit	2.17	Paper	-20.71
Oils&Seeds	2.29	Chemicals	-9.3
Sugar	1.17	Metal prod.	-19.53
Plant based fibres	3.31	Motor veh.	-66.98
Other ag.	5.76	Light manufact.	11.31
Livestock	2.23	Other manufc.	-29.62
Fishing	2.67		
Forestry	4.35		

- 12 out of 17 agriculture sectors are turning on positive growth rates (from 7 on the base version);
- There is a resource allocation from industry to agriculture.

Results (cont): Output growth driven mostly by the export growth to the EU

Grains	149.93
Veg.&Fruit	12.83
Oils&Seeds	5.68
Sugar	649.12
Plant based fibres	10.17
Other ag.	13
Livestock	52.28
Fishing	19.3
Forestry	4.76

Welfare: the two scenarios are welfare improving both for Morocco and the EU:
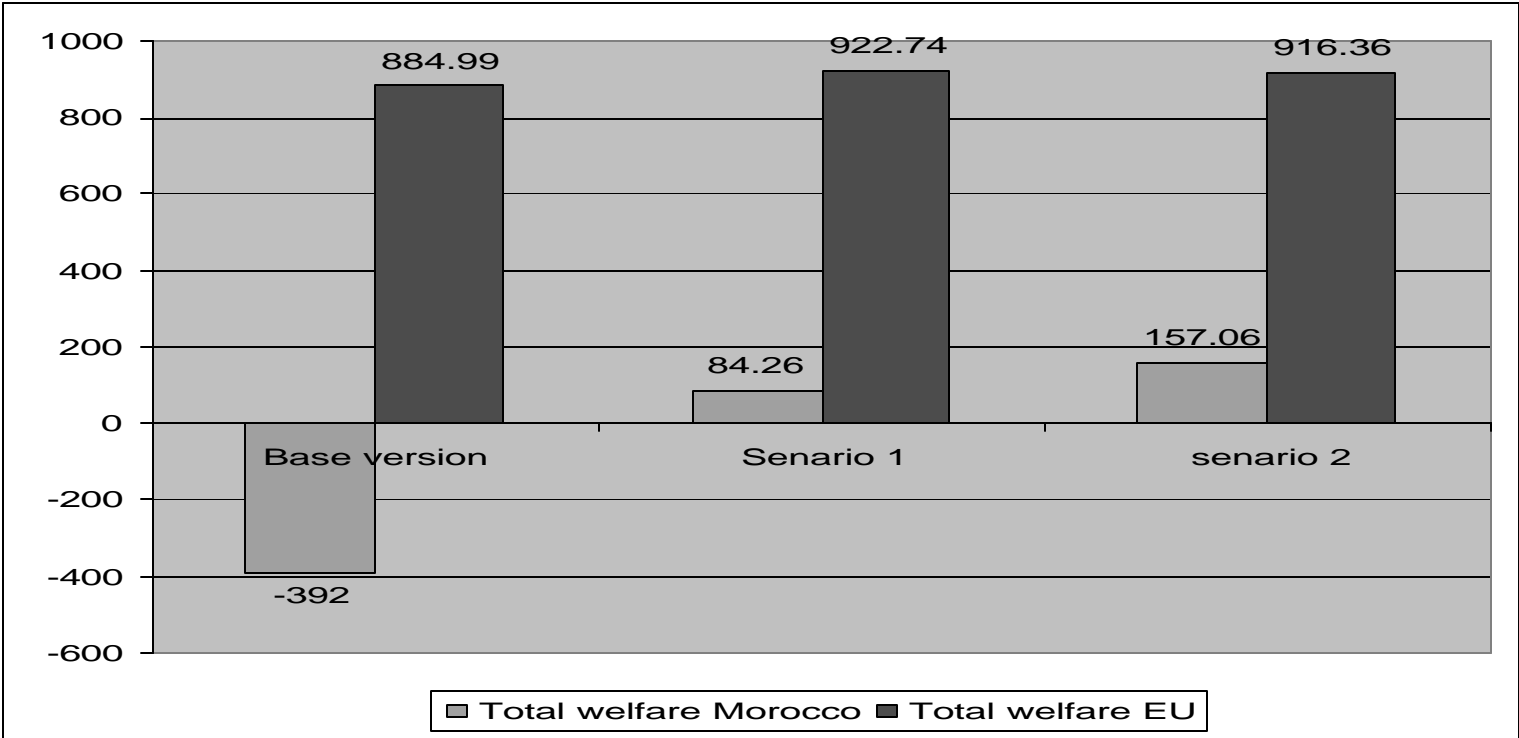
IV. Conclusions and policy recommendations

- To sustain a FTA there is a need to make a win/win situation for all the partners
- In this case there is a need to include agriculture in the FTA to improve the situation of Morocco
- A win/win situation in this case needs to take into account the interests of both partners (progressive opening of the EU agriculture market)

Imperfect competition in services

- Why services?
  - Large part of the economy: 43.2% in Morocco's economy => important welfare adjustments expected
- Welfare effects of the FTA liberalisation (with entry/exit) on Morocco with perfect competition in services (1) versus imperfect competition in services (2)
  - Welfare gains (2) as opposed to welfare losses (1)
  - Scale effects induce the changes

	FTA (1)	FTA (2)
Total welfare	-16	76.9
Allocative efficiency	*659.3*	*667.7*
Scale effects total	*68.8*	*158.9*
Scale effects in services		90
Terms of trade	*-744.1*	*-673.2*

Services Liberalisation

- How to model services protection and liberalisation: big issue in analysing services

- Two experiments with imperfect competition in services:

  1. Without introducing services protection into the database
  - Implement import augmenting technical change in services via a shock to the *AMS* variable.
  - *AMS (" SRV", "MOR")* = 20%
  2. With new services protection data
  - Introduce barriers to foreign presence in services via a tax on output (use Altertax)
  - *TO ("SRV", "MOR")=-4%*
  - Use updated database as starting point for further simulations
  - Remove services barriers by eliminating the tax on output

- How does this influence the welfare results?

FTA with services liberalisation

	FTA and Imperfect competition in services	FTA and Services liberalisation AMS	FTA and Services liberalisation TO
Total welfare	**76.9**	**385.5**	**290.9**
Allocative efficiency	***667.7***	***672.3***	***701.3***
Profit shifting	125.3	96.8	159.1
Scale effects	***158.9***	***588.9***	***389.2***
Output augmenting technical change - all sectors	158.9	325.7	389.2
Output augmenting technical change - services	90.0	220.7	312.6
Import augmenting technical change only from services		259.5	
Terms of trade	***-673.2***	***-781.1***	***-661.5***
Investment savings term	***-76.5***	***-94.7***	***-137.9***

Static Welfare Effects of FTA on Morocco: What difference, if any, can imperfect competition make?

I. Does Imperfect Competition really matter?

	Imperfect Competition (2)		Perfect Competition (3)
	No Entry	Entry	
Total Welfare (1)	**-392**	**-16**	**-73**
Allocative Efficiency	-597	659	664
Scale Economies	-306	69	-
Terms of Trade	-683	-744	-733
Allocative Efficiency (4)	-597	659	664
Profit Shifting	*149*	*126*	*87*

Notes:
(1) In US 1997 millions.
(2) Elbehri, and Hertel (2004).
(3) Simulations performed in lab.
(4) Allocative Efficiency effects includes also effects coming from input, consumption, export, and import taxes.

Sources of Changes in Welfare:

$$dV/V_E = tdm \ - \ mdp \ + \ [p + t - a]dX \ - \ Xa_x dx$$

trade	terms	Profit Shifting	Scale
volume	of trade	effect	effect
effect	effect		

II. Static Welfare Effects: What the perfect competition assumption misses.

A. Expected welfare effects from Scale economies [Check "OSCALE" in AnalyzeGE]
-   Gains (or lower losses) when entry/exit is allowed

	No Entry	Entry
Total	-306	69

Intuition: As markets are opened to foreign competition, firms have to become more efficient (in particular those more export oriented) as they increase production, in order for them to stay in the market.

B. Gains from profit shifting effects [Check "prodtax" in "A2", "Welfare Decomposition"]
-   Markup discipline effect is less evident if entry/exit is allowed.
-   Still, there might be significant welfare gains coming from "profit shifting effects" in certain industries.

Example:

	Motor Vehicles
Markup (%)	3.4

Decomposition of Profit shifting effect in Motor Vehicles

Industry output	-65
Price	-5
t	0
ao	-3
Total effect	130

III. In summary…

1. Accounting for imperfect competition in a trade liberalization regime does make a difference in welfare effects.
   Depending on entry/exit assumptions, initial concentration levels, elasticities, and markups, total gains/losses in welfare could be greater or lower than under perfect competition.

2. If entry/exit is allowed, there might be scope for welfare gains coming from scale economies (not accounted for if trade liberalization modelling assumes perfect competition).

3. If entry/exit is allowed, the generation of markup discipline is less strong or may not be present at all.
   Still there might be welfare gains coming from profit shifting effects in certain industries (again, not accounted for if trade liberalization modelling assumes perfect competition).

Consequences of Sequenced
Trade Liberalization and Choice of Partners

- This extension compares the potential impacts on Morocco's economy from implementing sequential trade liberalization.

- Assumptions
  - Morocco first engages in FTA with the EU. Then it implements multilateral liberalization that involves a 30% across the board cuts in all tariffs for Morocco, the EU and ROW.
  - Entry/exit, full employment closure

Welfare effects of Multilateral liberalization, FTA and Sequenced liberalization

	ML	FTA	ML after FTA
Total welfare	**528.0**	**-16.0**	**363.0**
Allocative Efficiency	656.7	659.3	359.5
Profit shifting	-8.7	126.3	-75.3
Others	665.5	533.0	490.0
Scale Economies	83.1	68.8	62.2
Terms of trade	-211.8	-744.1	-58.6

Results from Three Trade Liberalization
Percentage change in selected variables

	Beverage & Tobacco			Apparel		
	ML	FTA	ML after FTA	ML	FTA	ML after FTA
q per firm	12.5	9.9	12.2	5.5	31.4	-2.1
sectoral q	-0.8	-0.1	-0.4	1.2	15.3	-3.4
IM from EU	46.1	208.1	10.8	46.0	296.4	-2.2
IM from ROW	19.4	-43.0	36.6	43.1	-68.0	89.7

Which trading partner is best?
(Do you believe in free entry and exit?)

Partner	EU	EU	ROW	ROW	MFN	MFN
Entry/exit	none	free	none	free	none	free
Total	-294	-16	-199	-194	-314	30
allocative	714	659	163	1	912	912
Scale	-330	69	-124	-7	-398	46
TOT & IS	-678	-744	-238	-283	-827	-917

When Morocco unilaterally opens mfrs, it loses different industries to different trading partners

	Output shifts in million $					
	EU/NE	EU/FE	ROW/NE	ROW/FE	Scale (FC/AVC)	EU import share
Wood	-201	-289	-11	-11	.129	58%
Paper	-215	-297	-11	-10	.252	83%
Chemical	-189	-358	10	14	.193	71%
Metals, machines	-643	-919	-35	-25	.096	62%
Motor vehicles	-430	-730	-81	-120	.340	68%
Veg. oils and fats	1	7	-117	-157	.187	62%
Sugar manuf.	-17	6	-706	-1001	.117	0%

Big output losses with scale economies cause big TE losses

- But they can be mitigated by free exit!
- Exit reduces the number of firms and limits the loss in scale economies
  - Example-autos

	EU/NE	EU/FE	ROW/NE	ROW/FE
Scale loss ($ million)	-167	-26	-27	-2
% q output	-39	-66	-7	-11
?SCALE	.213	.046	.027	.002
"Firms"	3.5	1.4	3.5	3.1