Lifting Economic Sanctions on Iran:
Global Effects and Strategic Responses

Elena Ianchovichina, Shantayanan Devarajan, and Csilla Lakatos

Abstract

This paper uses a global general equilibrium simulation model to quantify the effects of lifting economic sanctions on Iran with and without strategic responses. Iran benefits the most, with average per capita welfare gains ranging from close to 3 percent, in the case when Iran's crude oil exports to the European Union recover to half their pre-embargo level, to 6.5 percent, in the best case of complete recovery of oil exports to the European Union, successful domestic reforms that enable a strong supply response, and increased market access for Iranian exports in developed markets. Iran could achieve benefits close to the upper range if Gulf Cooperation Council oil exporters limit their crude oil exports to support the oil price. If they do nothing, however, the price of oil will decline by 13 percent in the case of complete recovery of oil exports to the European Union, leaving net oil importers better off and net oil exporters worse off.

Summary and concluding remarks

We use a global general-equilibrium simulation model to quantify the global effects of lifting Iran's economic sanctions and the effect of strategic responses to this trade regime change. The analysis highlights individually the countries and groups of countries that play an important role or could affect the outcome of the nuclear negotiations and the major oil exporting countries or country groups. It represents the lifting of Iran's economic sanctions in a stylized fashion, emphasizing three components that are likely to have effects in the near to medium term: (i) the lifting of the EU oil embargo, (ii) the reduction in Iran's trade costs, and (iii) the liberalization of cross-border imports of financial and transport services.

The lifting of Iran's economic sanctions is most beneficial to Iran's economy. Its per capita welfare is expected to rise by 3.7 percent mainly because of the lifting of the oil embargo imposed by the EU and the liberalization of cross-border trade in financial and transport services. Net oil importers gain while net oil exporters lose as the world price of oil declines by about 13 percent due to the additional amount of oil sold on the global market in response to the recovery of Iranian oil exports to the EU. In per capita terms, Israel is the second largest beneficiary of the lifting of Iran's economic sanctions, gaining almost 0.5 percent in per capita welfare, while the EU and the US gain 0.5 percent and 0.3 percent, respectively. The losses are steepest for OPEC members, especially the GCC countries which as a group are expected to lose 3.9 percent in per capita welfare. Per capita welfare for other OPEC members and Russia declines by 2.8 percent and 1.6 percent, respectively. Overall, the world benefits most from the lifting of the EU oil embargo and less so from other aspects of the sanction removal as Iran accounts for a negligible share of the world's non-oil trade.

Net oil exporting countries lose mainly due to the deterioration in their terms of trade. As many of them subsidize oil, the lower oil price will have a compensating efficiency gain, but not enough to reverse the welfare loss. Net oil importing countries gain mostly because of improvements in their terms of trade, but also because cheaper oil enables expansion of their petrochemical production and because in most of these countries oil use is taxed, so the interaction of existing distortions and structural change leads to efficiency gains.

If major OPEC members limit the quantity of oil produced and exported to support the world oil price, they will enhance Iran's gains, limit oil exporters' losses, and reduce the gains to oil importers (see Summary Table 10). The world would be worse off as the reduction in oil exporters' losses would be insufficient to compensate the reduction in oil importers' gains.

Reforms to enhance the supply response in Iran could greatly enhance Iran's welfare benefits from the trade regime change. Unilateral reduction of import tariffs on capital goods could add an additional 0.4 percentage points to the baseline per capita welfare gain, while reforms in support of the automobile sector recovery could enhance per capita welfare by an additional 1.5 percentage points (Table 10). Improved market access is important not only to Iran, which is expected to gain an additional 1 percentage point in per capita welfare, but also to market access granting countries although their per capita benefits are small.

Admittedly, there is uncertainty about the welfare gains of the trade regime change discussed in this paper. We address some of this uncertainty by presenting a range of possibilities. We find that Iran's welfare gains range from just under 3 percent, in the case when Iran's oil exports to the EU recover to half of their pre-embargo level, to 6.5 percent if Iran's oil exports not only recover to their pre-embargo levels, but Iran implements reforms that enhance the economy's competitiveness and strengthen its supply response and Iran's partners in the West open up their markets to Iranian exports (Table 10). Iran could benefit as much (6.5 percent) also in the case when GCC oil exporters limit their oil production and exports in order to support the oil price.

Table 10: Range of welfare effects (percent) under alternative scenarios

	Base-line	Half-way	Baseline + Cutting GCC Oil Output	Baseline + Liberalizing Capital Goods	Baseline + Boosting Auto Output	Baseline + Market access to the West	Baseline + All reforms
Iran	3.7	2.9	6.5	4.1	5.2	4.8	6.5
USA	0.2	0.1	0.0	0.2	0.2	0.3	0.3
EU28	0.4	0.2	0.0	0.4	0.4	0.5	0.5
Russia	-1.6	-0.8	-0.1	-1.6	-1.6	-1.8	-1.8
Israel	0.5	0.2	0.0	0.5	0.5	0.5	0.5
Non-OPEC oil exporters	-0.7	-0.3	0.0	-0.7	-0.7	-0.7	-0.7
Rest of OECD	0.4	0.2	0.0	0.4	0.4	0.4	0.4

GCC OPEC	-3.9	-2.0	-1.3	-3.9	-3.9	-4.3	-4.3
Developing MENA OPEC	-2.2	-1.1	-0.1	-2.2	-2.2	-2.4	-2.4
Other OPEC	-2.9	-1.5	0.0	-2.9	-2.9	-3.2	-3.2
MENA Oil Importers	0.3	0.2	0.0	0.3	0.3	0.4	0.4
Other Developing MENA	-2.7	-1.4	0.0	-2.7	-2.7	-3.0	-3.0
Rest of developing world	0.2	0.1	0.0	0.2	0.2	0.3	0.3
World	0.1	0.1	0.0	0.1	0.1	0.1	0.1

At the same time, there are a number of caveats that the reader should keep in mind when using these results. There is little knowledge of the true extent to which sanctions were binding Iran's trade and production. Iran may have found ways to effectively minimize the damage of the restrictions through various means (e.g. barter trade). Likewise, we do not have a perfect picture of what trade with Iran would look like in the absence of sanctions. Without such knowledge, it is hard to estimate the potential of trade to pick up following the removal of restrictions. With the oil price so much below its 2011 level, the estimated per capita gain to Iran will be smaller than the numbers presented in the baseline scenario. Finally, in our static model, we ignore important investment-growth effects that would enhance Iran's output but may have different welfare effects depending on the composition of domestic and foreign investment.