

TERRORIST ATTACK ON THE US: IMPLICATIONS FOR KOREAN INDUSTRIES

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Introduction

There is no doubt that the recent terrorist attacks on the US will impact the world economy and the Korean economy. It will also affect the Korean macroeconomy and industry, which are influenced by the foreign economic environment.

The US attacks will affect the Korean economy in five main ways. First, corporate finance will be difficult in a tight world financial market. Second, the prices of raw materials such as oil are expected to surge due to curtailed production in Middle Eastern countries. Third, the downward trend of the US economy is weakening the dollar's value, which may possibly destabilize the value of the won. Fourth, it is possible that the foreign economic environment will change for the worse due to a harder-line US trade policy. Fifth, a downturn in the US economy would pull down the world economy.

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The direct impact of the terrorist attack has already become apparent. According to a survey by KOTRA, 87 corporations filed loss reports within 10 days after the attack. It said that 463 damage cases were filed, and the amount of damage was 33.7 million dollars.

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Table 1. Export-Related Damage from Terrorist Attacks

	Dollars	Cases
interrupted export negotiation	24,813,861	113
delay of payment collection	3,226,220	132
failure of delivery shipping documents	1,697,824	59
interrupted shipping and unloading	3,326,749	108
failure of trust in the US	620,000	24
Total	33,684,654	436

Source: KOTRA

Impact on Korean Industries

The terrorist attacks are expected to weaken the competitiveness of Korean industries due to uncertainty in the financial markets, and lower export demand due to stagnating US and world economies. Korea's exports have a 70% dependence on the US, Japanese, and Asian markets, and depend on changes in world demand rather than exchange rate

fluctuations. For example, auto exports have a world import demand elasticity of 2.7, but an exchange rate elasticity of merely 0.29. Accordingly, it is expected that the US terrorist attacks will severely affect the production and export of Korean industry.

Still it is hard to accurately forecast how the US will cope with the situation. Below are two possible scenarios and their likely effects on Korean industries.

Optimistic scenario: limited warfare

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The impact to Korean industries of a US counterattack on terrorism depends on whether the US chooses to pursue limited warfare (the optimistic scenario) or a long term war (the pessimistic scenario). If limited warfare is pursued, US business conditions and the world economy are expected to recover rapidly. In turn, Korea's major industries, such as the auto, information & communication, and semiconductor industries will be adversely affected. However a depression of the US and world economies caused by the pessimistic scenario will cause a rapid economic depression in most Korean industries. This is because Korean industries depend on world economic demand.

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If the US pursues a limited campaign similar to the Gulf war, the effects on Korean industry will be both negative and positive. One likely negative impact is decline in the exports of most industries, due to weakened consumer spending, canceled export negotiations, delay of payment collections and customs clearance, and delivery failures. In particular, performance in Korea's key export industries, such as information & communication, semiconductor, and autos, will be severely damaged because of their high dependence on the US market.

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On the positive side, if the war ends in early 2002, the US economy is likely to make a recovery after that time, due to the stimulatory effect of war. After the Persian Gulf War, the US business cycle entered a long-term boom that lasted 10 years. After a war, construction investment increases as well as consumer demand, making business conditions recover as well. If such a scenario occurs in this case, the world economy may recover and Korean exports will also benefit. In this case, Korea's key information & communication, semiconductor, and auto exports will recover rapidly.

———— **Table 2. Export Growth Rates before and after the Gulf War** ————

	1989	1990	1991	1992
Motor	-34.5	-10.2	17.0	14.2
Information & Communication	16.3	-0.3	11.3	9.1
Semiconductor	26.6	12.8	24.6	20.3
Shipbuilding	1.6	56.7	47.3	-0.4
Steel	11.7	-1.4	6.4	19.1
Petrochemical	22.9	47.5	39.6	56.7
Construction	50.6	180.7	-55.1	-8.4

Note: "Construction" category indicates foreign orders received

Table 3. Profitability Changes due to Oil Price Hikes (%)

Industry	increase in cost of production when oil is \$30/barrel	increase in cost of production when oil is \$40/barrel
textile	1.3	4.0
oil refining	6.4	19.2
petrochemical	5.7	16.9
steel	0.3	0.8
machinery	0.1	0.4
electronic & electrical	0.2	0.5
automobile	0.1	0.3
shipbuilding	0.1	0.4

Source: Hyundai Research Institute

Pessimistic scenario : long-term full-scale war

In case of a long-term, full-scale war, the earnings for Korean industry will take a turn for the worse. First, such a conflict would increase oil prices, and it is possible that the profitability of Korean industries will suffer. While a price rise to \$30 per barrel would have a minor influence on Korean industry, a rise to \$40 per barrel would seriously damage corporate earnings. Industries that are especially vulnerable to oil

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Table 4. Export Share and Impact by Industry

	Share of Exports to		By Region				Elasticity of World Demand	Impact
	Total Export	the US	North America (US)	Europe	Asia	Middle East		
Motor	7.6	13.6(38.6)	42.6(38.6)	26.7	6.7	9.4	2.7	×
Information & Communication	14.0	22.4(34.8)	35.7(34.8)	20.9	34.7	2.4	6.0	×
Semiconductor	15.1	21(30.4)	30.7(30.4)	15.3	53.7	0.0	3.8	×
Shipbuilding	4.8	0.9(4.1)	7.5(4.1)	41.9	5.4	8.5	-	
Steel	4.4	3.3(16.4)	18.9(16.4)	8.1	62.2	4.3	1.1	
Petrochemical	5.5	0.9(3.6)	3.9(3.6)	8.8	76.0	3.2	3.1	
Construction (orders received)	3.2	0.02(0.13)	3.0(0.13)	5.2	62.5	29.5	-	
Total	100	100	23.2(21.8)	16.3	47.1	4.4	-	-

Note: 1) Share of Total Export = (% of total industry export / total export), Exports to the US = (the export of each industry / total export to the US), figures in parentheses = (export to US by each industry / total export of each industry)

2) By Regional number = (% of export to region / total industry exports)

3) All figures based on year 2000

4) Elasticity of World Demand = industry export change due to change in world demand

5) × : serious impact, : impact, : small impact

— Table 5. Impact on Korean Industries of a Long-term Middle East War —

Industry	Impact	Factors
Auto	Serious Impact	High % of export to US Decrease of domestic demand by oil price rise
Information & Communication	Serious Impact	High % of export to US Slowdown of demand in domestic and world
Semiconductor	Serious Impact	High % of export to US Slowdown of demand in domestic and world
Shipbuilding	Small Impact	Decrease of new orders due to world economic slump
Steel	Impact	Slowdown of domestic demand
Petrochemical	Impact	Worsened earnings due to high oil prices Decrease of world demand
Construction	Impact	Interruption of orders from Middle East Decrease of new demand

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price hikes include oil refining, petrochemical, and textiles because they use oil-related products as fuel and raw materials. In addition, the auto industry, although it faces little direct impact from a oil price hike, will suffer indirectly due to the higher price of fuel.

Second, it is possible that industrial business conditions will become depressed. A long-term full-scale war would precipitate an economic depression in both the US and the world economies, which would worsen export conditions for Korean industries. This would lead to a depression of domestic business. Exports in the information & communication, semiconductor, and auto industries would plummet due to a contraction of consumer spending in the US. Industries such as the petrochemical industry would face undermined price competitiveness due to oil price hikes. In addition, the shipbuilding, steel, and construction industries would suffer due to worsened business conditions in Europe and Asia, as well as the interruption of orders received from the Middle East.

Other effects of crisis

The impact of the terrorist attacks is proportional to the importance of the US to the Korean and world economy. Although the effects are overwhelmingly negative, there may still be some small reasons for hope in some industries. For example, a long-term war would raise oil prices which would negatively effect domestic demand in the auto industry. However, decreasing income and rising oil prices would help shift consumer demand from luxury vehicles to small or mid-sized cars. This would be an opportunity to increase market share in the US auto market as well, because Korean auto firms are more competitive in small or mid-sized vehicles. Therefore, some industries may have unexpected opportunities for survival in the changed economic environment. **VIP**