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# UKRAINIAN AIRLINE COMPANIES IN THE GLOBAL ECONOMY

*We examine the issue of the strategies of Ukrainian airline companies in the deregulated airline market. The current network structure offered by the two largest Ukrainian carriers is not viable in the long-run. A merger benveen the two carriers will more likely lead to counter-competitive effects, as compared to an alliance, including only international services of the two carriers. We suggest that such an alliance will allow the two carriers to establish a stronger position on the world airline market.*

## 1. Introduction

Deregulation or removal of artificial barriers to entry and competition is an important process currently reshaping the international airline industry. It also poses a substantial challenge to the national airlines, as the governmental support vanished and they become a part of the global competitive market. Experience of the European Union shows that unless a national airline can find its niche on the global airline market, it can be driven into bankruptcy. While Ukrainian airline companies present on international markets still enjoy the protection from external competition a regulated environment can offer, it is unlikely that Ukraine will be able to completely stay away from the world's trend towards deregulation. Further, if Ukraine enters the European Union, it will become a part of a single deregulated airline market. The Ukrainian airline companies will face serious competition from many European airlines, and should therefore be prepared to meet the new challenges to emerge as a solid force on the new global market.

This paper reviews the issue of the possible role of Ukrainian airline companies in the global economy, in light of experience of deregulated airline markets. The two broad issues to be considered are strategies available to the major Ukrainian airline companies, and relevant government policy. We begin by considering the current state of Ukrainian airline companies' participation in international airline markets; after this, we review the main lessons Ukrainian airlines can draw from experience of the deregulated airline markets to address the above issues. The primary lessons we draw from analysis are the following. First, Ukraine and its airline companies can benefit from the country's geographical position to channel passenger (and cargo) traffic from Europe to Asia. Second, given the current structure of networks developed by Ukrainian carriers, strategy adjustment is necessary to realize this opportunity. We suggest that an alliance between the current major Ukrainian airlines covering the carriers' international routes and excludes the domestic markets, will help establish a strong competitive position for Ukrainian carriers; further, such an alliance will most likely not be counter-competitive, given the current absence of direct competition between Ukrainian carriers on international routes. We also suggest that merging Ukraine International Airlines and Aerosvit Ukrainian Airlines maybe counter-competitive, as it will strengthen the new single airline's position at Kyiv's Boryspil airport, a situation, which has been shown in the literature to lead to higher fares.

## 2. Ukrainian Airline Market — Some Facts

When discussing the market for passenger air transportation in Ukraine, we need to consider its domestic and international parts separately. In light of the purpose of this paper, international part of the market is more important for our analysis. A good general description of Ukraine's airline companies' participation on international routes is contained in the study performed by Noskova (2002). The following general facts must be mentioned here. First, international routes to/from Ukraine are subject to regulation by restrictive inter-governmental bilateral agreements. These treaties determine which carriers can travel on which routes between the two countries, how often, using which aircraft; what fares can be charged, etc. Thus, the structure we currently observe on those markets is most likely the result of some bargaining process between the Ukrainian and foreign governments. Second, while currently Ukraine is represented on international markets by at least two main airline companies (Ukraine International Airlines and Aerosvit Ukrainian Airlines)[1], these carriers do not directly compete on any international route out of Ukraine.

Third, on the markets where both Ukrainian and a foreign carrier are present, Ukrainian carriers often perform their international services "in cooperation" with a respective foreign airline company. This means that such international markets represent typical cases of collusive duopolies. Yet, in some cases such cooperation can be beneficial for both carriers and some consumers, when it allows Ukrainian airlines to feed passengers to other routes of a foreign carrier (for example, Ukraine International's daily morning service to Amsterdam might have been totally unprofitable if it had not fed passengers to KLM's and its partner airlines' services out of Amsterdam Schiphol airport).

[1] The other two main carriers present on international routes are Air Ukraine and Ukrainian Mediterranean Airlines (UM Air); yet. they are of less interest to us, since they both have low market share, and do not try to develop their networks in the same fashion as Ukraine International and Aerosvit do.

Finally, several things need to be noted about the structure of networks being established by the two above-mentioned Ukrainian airlines. First, both carriers perform most of their services out of Kyiv's Boryspil airport, a natural choice given the rather asymmetric nature of development of the Ukrainian economy. Second, Aerosvit appears to be attempting to create a prototype of the hub-and-spoke network, as evidenced by the recently opened services to a number of destinations in Asia.

### 3. Lessons from Airline Deregulation

The first country to deregulate its domestic airline market was the United States in 1978. Since that time, a number of countries have allowed market forces to govern their domestic markets. Basically, we have had a chance to observe evolution of domestic deregulated markets for several decades by now. Williamson (2002) provides a nice and readable comparative analysis of results of deregulation in different countries, suggesting that deregulation has produced mixed outcomes. Morrison and Whinston (1986), however, following a rigorous analysis of US airline market deregulation, suggested it has produced the annual benefits to consumers in the neighborhood of $6 billion (1977 dollars). Scholars have also produced a lot of papers examining different results of deregulation (primarily on the US market), some of which will be referenced later in this section.

In light of the objective of our paper, learning about deregulation of international aviation is also important. We must admit that liberalization of the international aviation has been lagging behind, as compared to domestic markets. The primary reason for this trend is huge influence of politics in international aviation. Traditionally, national airlines have been regarded by respective governments as primarily a matter of national prestige and sovereignty; as national symbols that required protection. Yet, some success has up to now been made in the process of deregulation of international aviation. The most notable examples are Open-skies' bilateral agreements and liberalization of the European Union's airline market. "Open-skies" treaties are still bilateral air services agreements, but with most restrictions to entry and market conduct removed. In its most liberal form, an "open-skies" agreement allows any airlines from the signatories to the treaty to fly non-stop between any points in the two countries, and set schedules and fares as they see fit. Thus, the only restriction such an agreement leaves is the "nationality clause": an airline flying between two countries has to be owned and controlled by nationals of either of the two states. "Open-skies" agreements have been signed between the United States and a number of (mostly European) countries. On the airline market within the European Union, all restrictions have been removed about a decade ago; so, EU currently represents a single deregulated market. Recent expansion of the Union has also expanded the deregulated European market; should Ukraine ever join the United Europe, its airline companies will immediately become subject to fierce competition from other countries' carriers.

Let us now review the stylized results of airline deregulation. While liberalization of the airline markets was supposed to lead to greater competition, this expectation often failed to materialize. In fact, competition on "thin" and short-haul markets often decreased after deregulation, while the opposite happened on "thick" and long-haul routes (Morrison and Whinston, 1986). More importantly, approximately a decade after deregulation US market experienced a wave of mergers and acquisitions; this year's merger between KLM and Air France could be a sign that the same kind of process is starting to take place in Europe. Many carriers on the US market ended up feeding traffic to major airlines on thin routes, where the majors found it unprofitable to offer own services[1]. This immediately brings the question of whether Ukrainian carriers will end up feeding traffic to other airlines (as they do in some cases now); or whether they will play a role of major carriers.

The second outcome of airline deregulation is establishment of "hub-and-spoke" networks by airlines. Carriers found it beneficial to channel the traffic through one or several airports. This way, airlines were able to offer flights to more destinations and with higher frequency; increase load factor; and manage their fleet more efficiently. As noted above, Aerosvit is currently trying to create such hub-and-spoke system too, with the aim of channeling traffic from Europe and North America to Asia through Kyiv. Also, both carriers are expanding their domestic networks, bringing passengers from major cities in Ukraine to Kiev for their flights to other regions in the world. The question related to this phenomenon is whether Ukrainian airlines are establishing their networks optimally; as well as what strategies can be employed to improve the situation, if necessary.

[1] Examples include American Eagle as a feeder carrier for American Airlines; Comair and Skywest for Delta; Northwest Airlink for Northwest Airlines; and United Express for United Airlines.

Another result, related to hub-and-spoke networks, should be mentioned here. And airline establishing a hub at an airport is likely to obtain a dominant position there. Borenstein (1989) observed (for the US market) that such airport dominance is a source of market power that allows the dominating carrier to charge higher fares for flights to/from such an airport. Evans and Kessides (1993) suggested that airport dominance is a more important source of market power than route dominance; and Bilotkach (2004a) showed that the airport dominance effect applies to international routes as well. Airport dominance will play an important role in our analysis.

## 4. Strategies and Policy Options for Ukrainian Carriers in the Global Economy

Geographical position of Ukrainian airports should allow establishment of a hub for routing passengers from Europe and North America to Asia. These markets are potentially very lucrative. Yet, the competition for the passengers on those routes is likely to be very keen; the most direct potential competitors of Ukrainian carriers, given the network structures, are Aeroflot Russian Airlines, Turkish Airlines, and Finnair. The questions are whether Ukrainian airlines should compete here and what they should do to succeed. As an example of such niche-taking, we can consider the case of Iberia (Spain's national airline), which managed to capitalize on the geographical position of Madrid Barahas airport to convert it into the hub for Europe - South America air traffic.

Forthe first question we asked above, we believe that if Ukrainian carriers fail to take this niche, there will most likely be no place for them on the truly global and competitive market. Historically, metropolitan areas of the size of Kyiv have become hubs of certain carriers. Examples from the US market include Phoenix, Dallas— Forth Worth, Minneapolis — St Paul, Miami. Ukrainian airlines might believe that they will be able to generate sufficient traffic within Ukraine (which can also be routed through Kyiv) to remain internationally competitive. Such situation will be feasible in the regulated environment like the one we currently observe. However, in the deregulated situation airlines will face fiercer competition from the ground transport, as well as from other countries' airlines, offering direct services from European to Ukrainian cities. There is always an option for Ukrainian carriers to simply feed passengers to other airlines; but in the completely deregulated environment such carriers usually are absorbed by stronger competitors.

Before we further develop the issue we raised above, it is necessary to introduce the concept of "economies of traffic density", which is crucial to understanding the benefits of the hub-and-spoke system. An airline can increase its output by either expanding the network or increasing traffic on the current network. Intuitively, when talking about economies of traffic density, we refer to a situation, where an airline's average cost of carrying a passenger decrease with increased traffic, holding network size constant. Intuitively this means that under economies of traffic density, it makes sense for an airline to fill up the airplane completely. Several studies (e.g., Brueckneretal., 1992, Brueckner and Spiller, 1994) showed that the airline industry is indeed characterized by economies of traffic density. A well-developed hub-and-spoke network allows bringing passengers from many destinations for a connecting flight at the hub airport, increasing the load factor and allowing the carrier to use economies of traffic density to fuller extent.

We claim that the current network structure, offered by Ukrainian carriers, is not conducive to establishing a strong position on the Europe — Asia market. Above discussion of economies of traffic density provides a self-explanatory hint for why it is necessary to establish this position. Demand for travel between either Europe and Ukraine or Asia and Ukraine alone is insufficient to fill up the airplanes: travelers on Asia - Europe and Asia — North America routes must be added, and as many of those as possible. Yet, we mentioned above that Aerosvit and Ukraine International do not offer overlapping networks, and Aerosvit appears to be the only airline attempting to use Kyiv as a hub for travel between Europe / North America and Asia[1]. This means that Aerosvit is effectively unable to channel passengers from Western Europe to its services to Asia through Kyiv. Also, Ukraine International is not able to take advantage of potentially higher load factors it would be able to achieve with passengers from Aerosvit's Asian services. Thus, Ukraine International currently relies on either substantial number of Ukrainians abroad (e.g., services to Lisbon, Madrid, Rome), or on feeding passengers to hubs of other carriers (Amsterdam, Zurich, Vienna) for filling its planes.

From the previous paragraph it appears that there must be some cooperation between the two

[1] The service to El Kuwait, opened by Ukraine International this year, has been launched in response to Ukraine's participation in rebuilding of Iraq, and not as a part of strategic network development.

major Ukrainian airlines, for a strong position on Europe — Asia markets to be established. The first solution that comes to mind is merger of the two companies. Indeed, such an option has been entertained recently by the Ukrainian government. Two problems can be suggested here. First, such a merger would increase the share of the new single carrier at Kyiv Boryspil airport, which immediately returns us to the above-discussed airport dominance effect. That is, fares for travel to/from Kyiv (one must remember that lion's share of passengers traveling to/from Ukraine use Kyiv as their arrival/departure airport) might increase, even though competition on separate Kyiv - Europe routes will not decrease. However, we should understand that economies of traffic density can work in the opposite direction (lower fares due to lower cost), so that the resulting change in international fares is not so easy to predict. The second problem of such a merger is that it will decrease competition on Ukraine's domestic market, which is clearly counter-competitive.

Yet, we can look at another process currently affecting the international airline industry to suggest a solution, which will not be counter-competitive. Within the recent decade airlines have been consolidating their services through alliances. Such most often involve joining the partner airlines' networks, which allows earners to jointly market each others' flights. Several studies (Brueckner (2001), Brueckner and Whalen (2000), Bilotkach (2005, forthcoming)) have shown that such partnerships can decrease the fares for interline trips (itineraries requiring change of carrier en route). The intuition for this is that without carrier coordination and with product complementarity, the phenomenon known as double marginalization results. When the two airlines providing such complementary services coordinate their actions, the resulting fare for the interline trip will be lower than without coordination.

We suggest the following structure of an alliance between Ukraine International and Aerosvit. Only international flights of the carriers must be included into the suggested alliance's network. This way, for example, Ukraine International will be able to pick up Aerosvit's passengers from Asia for its flights to Western Europe. In general, the network of both carriers will be enlarged. Such an alliance will not be counter-competitive for the following reasons. First, the two carriers do not directly compete on any of the international routes; thus, competition will not be reduced. Second, without a merger there is less chance of price increase due to airport dominance effect, as described above. Moreover, to completely exclude such a possibility, alliance partners must be only allowed to jointly market each other's flights in connection with interline services[1]. We must also stress that domestic flights of the two Ukrainian airline companies must be excluded from the proposed alliance, as otherwise we will end up with lower competition on domestic routes (recall that Ukraine International and Aerosvit do compete on a number of domestic routes). In summary, the proposed alliance will not be counter-competitive and should help Ukrainian carriers establish a solid position on the Europe - Asia markets. On a final note in this paragraph, it pays to note that currently we observe a tendency of Ukrainian airline companies to consolidate their services on domestic markets. In light of the above stated such a tendency is clearly counter-competitive and therefore should be discontinued.

For the proposed alliance between the two Ukrainian airline companies to be successful, the carriers must implement several adjustments in other dimensions of their services. First of all, coordination of schedules will be required. Passengers can be easily distracted from flying through Kyiv if they have to wait for ten-fifteen hours between the flights. Second, the key to success of an airline is in being able to attract frequent business travelers. And an important factor in attracting such customers is frequency of flights. This issue can prove especially problematic for the two Ukrainian carriers in question. There are only few European destinations, from which Ukrainian carriers offer daily services; Aerosvit's flights to Asia are also infrequent. This schedule will not attract frequent price-insensitive business travelers. Moreover, such customers usually tend to stick with a single airline, even though this may mean higher ticket prices; this is due to the frequent-flier programs, offering rewards for brand loyalty. Frequent flier programs also happen to be more attractive, the larger the network over which miles can be collected and redeemed. That is why all serious alliances involve joining of the partner airlines frequent flier programs. We can also suggest that Ukrainian carriers can consolidate their services with other major airlines, which may include joining the frequent flier programs with world's biggest airlines. This strategy has both benefits (makes services of Ukrainian carriers more attractive for partner airlines' frequent customers) and costs (if passengers who have earned miles on partner airline redeems it on Ukrainian carriers' flights).

[1] Another issue is that the State owns a substantial share of both airlines. Perhaps privatization must also occur, which is a subject for another research piece.

Finally, an option of partnership with other European carrier(s) could be considered, with the most radical one involving entering one of the four global alliances that currently exist. Indeed, Aeroflot has recently joined the Skyteam alliance, its largest European partner being Air France. Regulators should be careful in approving such partnerships, however, to make sure they do not substantially reduce competition on certain routes. When the partner airlines' network involve overlapping parts, there is a trade-off between reduced competition on the overlapping routes, and benefits to interline passengers. Brueckner (2001) suggests that in most cases benefits will outweigh the costs due to economies of traffic density. Bilotkach (2004b), however, finds that reduced competition due to alliance membership does increase fares on the affected routes. We suggest that any partnerships between Ukrainian and European carriers, either existing or proposed, must be evaluated on case-by-case basis. The following general guidelines, however, can be proposed. Partnerships involving overlapping networks should be approved if they increase frequency of service; where share of passengers traveling wholly on the overlapping part of network is low relative to the total number of passengers on a respective flight[1]; and if economies of traffic density are substantial.

## 5. Conclusions

This note provides a general overview of the role of Ukrainian airline companies in the global economy. In light of the current trends, Ukrainian carriers are likely to meet increasing competition from other countries' airlines and enjoy less protection from its government, and must therefore be prepared to face the new challenges. Given the experiences of airlines on deregulated markets, the key to success is development of a viable network, which capitalizes on the geographical position of the airline's home and is attractive to frequent business travelers.

Overview of the current situation on Ukrainian airline markets allows us to state that Ukraine and its airline companies can benefit from the country's geographical position to channel passenger (and cargo) traffic from North America and Europe to Asia. Yet, given the current structure of networks developed by Ukrainian carriers, strategy adjustment is necessary to realize this opportunity. We suggest that an alliance between the current major Ukrainian airlines, which only covers the carriers' international routes and excludes the domestic markets, will help establish a strong competitive position for Ukrainian carriers; further, such an alliance will most likely not be counter-competitive, given the current absence of direct competition between Ukrainian carriers on international routes. We also suggest that merging Ukraine International Airlines and Aerosvit Ukrainian Airlines may be counter-competitive, as it will strengthen the new single airline's position at Kyiv's Boryspil airport, a situation, which has been shown in the literature to lead to higher fares.

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[1] A good example is offered by Northwest - KLM partnership. This alliance created non-stop flights on the routes Amsterdam - Detroit and Amsterdam - Minneapolis. Currently most passengers on those flights use it only as a part of their journey.

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## УКРАЇНСЬКІ АВІАКОМПАНІЇ У ГЛОБАЛЬНІЙ ЕКОНОМІЦІ

*Розглянуто питання стратегії українських авіакомпаній на дерегульованому ринку авіаційних перевезень. Поточна структура мережі двох найбільших українських авіакомпаній не є життєздатною у довгостроковій перспективі. Злиття двох авіакомпаній може призвести до зменшення конкуренції на ринку більшою мірою, ніж альянс між ними, що охоплює лише міжнародні рейси двох перевізників. Такий альянс допоможе перевізникам зайняти сильну позицію на глобальному ринку авіаперевезень.*