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This study provides an overview of the low-cost carrier (LCC) model in the Russian market. The LCC model seeks to achieve a competitive advantage through the reduction of operating costs, below the traditional airline model. Since Russia is an emerging and developing economy, airlines face a high level of uncertainty. Despite the fact that the Russian aviation market is dominated by a few large carriers, Russian low-cost airlines such as SkyExpress and Avianova have been growing rapidly since starting their operations. While Russian LCCs follow the traditional LCC model, some differences are apparent as a result of the specifics of the Russian environment.

Field of Research: Industry Management, Information Technology Management, Contemporary Issues in Management, and all other Management areas.

1. Introduction

The Low Cost Carrier (LCC) concept is considered to have originated in the US (Cento, 2009). It started with Southwest Airlines in the early 1970s and was later adapted to the European market by Irish carrier Ryanair in 1991, followed by the UK-based EasyJet in 1995. It seems that the establishment of LCCs follows a natural industry progression and a countries' economic development. Vasigh and Harraf (1994) investigated that during an economic downturn and the accompanying reduction of disposable consumer income, large carriers face reductions in passenger traffic and, therefore, downsize. As a result, a large pool of skilled labor and availability of discounted aircraft facilitate the emergence of new low cost carriers.

The LCC model seeks to achieve a competitive advantage through the reduction of operating costs below the traditional airline model. According to Cento (2009) the now classic LCC model includes the following characteristics:

1. *Core business*: passenger air-service.
2. *Route structure*: point-to-point network. The carriers fly to main destinations on short or medium haul domestic routes without providing connecting flights for their passengers.

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3. *Airports choice*: secondary airports, which are less expensive in terms of landing and handling fees and are also less congested.
4. *Aircraft fleet*: single type with a higher utilization rate.
5. *Service*: no frills; no product differentiation; no lounge services at the airports; no frequent flight program; fares are not refundable and cannot be used on other airlines.
6. *Distribution system:* sales/reservation costs are minimized. All tickets are in the electronic format, and the distribution channels include the internet or telephone sales only.
7. *Ancillary services*: additional revenue generation from other sources including hotels, car rentals, in-flight food and beverages, etc.

A number of research studies have been conducted to compare the development of LCCs and their operations across different geographic areas (see Table 1). For example, Reynolds-Feighan (2010) conducted a North American and European comparison, while Barbot, Costa and Sochirca (2008) analyzed 49 airlines across the world including LCCs.

Table 1 Worldwide LCC Research

European Market:	Zheng & Morrell (2010); Conrady, Fichert & Klophaus (2010); Coles & Rader (2009); Paleari, Malighetti, Paleari,& Renato (2010); Zenelis & Papatheodoro (2008); Gaggero & Piga (2008)
Eastern Europe:	Rucinska & Knorr (2009)
Asian Market:	Koichi (2009); Albers, Koch & Heuermann (2008)
Korea:	Hew (2010), Choi (2008)
Japan:	Masako (2010)
China:	Chiou, Chen & Shon (2009)
Thailand:	Thanasupsin, Chaichana & Pliankarom (2010)
Australia:	Forsyth (2003)
Brazil:	Oliveira (2008)
North America:	
US:	Malighetti, Paleari & Redondi (2010), Murakami (2011), Reynolds-Feighan (2010), Yetiskul (2010), Chia-Mei (2009), Kumar, Johnson & Steven (2009), Hofer, Dresner & Martin (2008), Pitfield (2008), Cobb (2005), Morell (2005), Windle & Dresner (1999)
Canada:	Flouris & Walker (2005)

Despite a number of similarities in LCC models around the globe, some differences also exist. This research investigates whether low cost carriers in the Russian market follow the traditional LCC model and what differences exist.

2. Russian Aviation

After the dissolution of the USSR in 1991, the Russian transportation industry underwent a dramatic transition. Changes included privatization, a decrease in aircraft production ("from over 200 per year in the late 1980s to less than 10 in the 2000s"), the split of the previously government-controlled, Russian national airline Aeroflot into numerous companies who tried to survive in the new open-market economy, and their later consolidation from 393 airlines in 1994 to 198 in 2007 (Chustuzian & Belianin, 2009). By allowing foreign companies to sell aircraft to Russia, domestic manufacturers lost their market share of aircraft production to Boeing and Airbus (Curtis & Swenson, 2010).

Despite the initial decline of the Russian aviation industry after the disintegration of the Soviet Union, the Russian aviation market has grown over the past ten years (Goldman Sachs, 2010). In 2000-2007, the annual growth rate of the Russian air passenger transportation industry was approximately 10% (Chustuzian & Belianin, 2009). The increase has been driven by demand for air travel, which is linked to increases in GDP. Air traffic in Russia in 2010 is expected to be 27.1% above the level of 2009 due to recovery from the global financial crisis of 2008, while 2011 growth is expected to be between 10-12%, twice the world average of 5-6% (Russian Aviation, December 2010). However, Russian aviation is still in a recovery phase that is 30% below passenger numbers in ex-Soviet Russia in 1990 (Goldman Sachs, 2010).

The development of the Russian transportation industry is considered to be one of the main areas of government concern. New initiatives include the modernization of airports and aircraft fleet and an increase in the quality and affordability of aviation services. By 2020 the Russian government is planning to allocate more than five trillion rubles (167 billion dollars) for the needs of aircraft industry from the federal budget (Russian Aviation, April 2011). The Russian Ministries of Transport and Economics, Rosaviatsiya and other agencies intend to attract more foreign investors. This initiative would allow foreign investment in the capital of Russian airlines to exceed 50% (Russian Aviation, April 2011). Under such regulations, the previously unsuccessful negotiations regarding the sale of a large share of SkyExpress, a Russian low cost airline, to Richard Branson, the owner of Virgin Group, might have succeeded.

Russia offers a promising market for low cost carriers (LCC). With its large territory, air transportation is the fastest and most convenient way of travel (Chustuzian & Belianin, 2009). However, main carriers airfares still remain unaffordable for a large portion of Russian regional population. Therefore, LCCs marketing strategy should target potential passengers who currently rely on rail transportation by providing them with faster and cheaper service. For example, in 2006, the Russian air transport industry carried 19.2 million passengers on domestic routes, while inter-city railways had about 140 million travelers (Komarov, 2007).

Despite the market attractiveness, a large number of barriers exist that are specific to the Russian market. They include 1) the existence of only a few routes with high-density

passenger flows, 2) older Russian-built aircraft do not meet international regulatory standards, 3) costly lease of Western-made aircraft due to import taxes, 4) a lack of adequate domestic maintenance facilities results that aircraft maintenance has to be performed abroad, and 5) Internet, commonly used as a distribution channel by LCC in other countries, is not yet widely used in Russia (Komarov, 2007). In order to stay competitive, Russian airlines develop and implement new strategic approaches. For example, older generation aircraft are being replaced by more modern versions, allowing certification standards to be adjusted in accordance with international regulations, and newer technology is being introduced to improve tickets distribution and sales including Internet booking and e-tickets.

3. LCC Model in the Russian Market

3.1 Core Business

Although discount charter airlines, such as Red Wings (formerly VARZ-400 and Airlines 400), founded in 1999, already operate in Russia, the LCC concept entered the market with the establishment of the first official low cost operator, SkyExpress, in 2006 with operations starting in 2007. The ownership of SkyExpress is represented by a consortium of private investors including Altima Partners LLP, Mr. Abramivich (25%), the European Bank for Reconstruction and Development (20%), and Sloane Robinsons LLP (ATI, 2011). In addition to domestic passenger flights, SkyExpress operates international charter flights to Eastern Europe, Scandinavia and Spain.

The second Russian LCC operator is considered to be Avianova, which was established in 2006 and started its operations in 2009. Under the ownership of the Russian-registered company Luch, Avioanova represents a joint venture between the Russian-based A1Group, which owns 54% of the airline, Texas Pacific Group with 35% ownership, and US-based Indigo Partners with 14% (ATI, 2011). The characteristics of two low cost carriers are presented in the Table 2.

In addition to the two existing LCCs, Aeroflot, the Russian flag carrier has announced plans to create a new low-fare unit by 2013 based in Domodedovo airport as a part of its new development strategy. Aeroflot held the largest share of the overall Russian market in 2009, including domestic and international flights, which was relatively stable over the last five years (Goldman Sachs, 2010). Aeroflot is already considered to be among the most cost-efficient air carriers globally with some cost levels close to those of low-cost carriers, including lower fuel costs due to its modern fleet, and lower labor costs (Goldman Sachs, 2010).

Table 2 Russian LCC Characteristics

	SkyExpress	Avianova
Started operation	2007 in Moscow	2009 in Moscow
Services	Scheduled, Passenger, International, Regional, Domestic	Scheduled, Passenger, Regional, Domestic
Destinations	11	20
Fleet in operation	8 Boeing	5 Airbus
Airport	Vnukovo International Airport	Sheremetyevo International Airport, St.Petersburg's Pulkovo Airport (plan to close) and Kaliningrad (plan to open)
Revenue (million)	$124 USD (2010)	n/a
Passengers (million)	1.1 (2010)	n/a
Employees	445 (2009)	n/a
Passenger load factor Jan 2010	67.1% (avg.78.8% Feb-July 2010)	76.8%*
Monthly statistics for Jan 2010:		
Passengers (thousand)	80	28
Revenue Passenger km (million)	110.8	30.9
Available Seat km (million)	165	40.2

Source: ATI, 2011
* Calculated as 30.9/40.2

3.2 Route Structure

SkyExpress operates scheduled domestic services from the Russian capital, Moscow, to 11 destinations. Additionally, domestic and international charter flights are operated on a seasonal basis to Finland, Sweden, Greece, Spain, and Turkey.

Avianova operates scheduled domestic services from Moscow to 20 destinations. In addition to domestic service, in the spring of 2011 Avianova secured rights to provide international scheduled service from Moscow to the Belarusian capital, Minsk, as well as to Kharkov and Simferopol in Ukraine. Moreover, Avianova has also obtained rights for charter services to three cities in Croatia, one in Montenegro and one in Greece with a total frequency of 10 weekly flights (ATI, 2011).

3.3 Airports

Both airlines operate from the city of Moscow. Moscow is the most populous city in Russia and conveniently located between main routes to Europe and Asia. SkyExpress currently operates from Vnukovo International Airport, which ranks third in terms of passenger traffic in Russia. Opened in 1936, it is one of the oldest airports in Moscow and has two runways and two terminals. A third terminal is currently under construction. In 2009, the airport offered its services to more than 7.7 million passengers (ATI, 2011). Vnukovo Airport and SkyExpress have joint plans to establish a special terminal

dedicated solely to low cost operations. This will allow a reduction in boarding time and increased efficiency and effectiveness in operations.

In contrast, Avianova began its operations at Vnukovo Airport, but, in March 2010, moved to Sheremetyevo International Airport's Terminal B. Sheremetyevo Airport is the leading Russian airport. In 2009, the airport offered its services to more than 14.7 million passengers, and hosted 159,896 aircraft takeoffs and landings (Sheremetyevo Airport, 2011). The airport opened in 1959 and has 5 terminals and 2 runways, with a third runway currently in the planning stage. Sheremtyevo Airport can be used by all classes of aircraft and has a passenger capacity of about 25 million per year. Sheremetyevo also serves as the headquarters for the Aeroflot Russian Airlines. The master plan for airport development through the year 2030 includes the establishment of a second flight zone with a third runway. By 2015, Sheremetyevo expects to increase passenger traffic to 35 million people.

Avianova currently accounts for roughly 25% of the capacity at Sheremtyevo airport. Relocating its Moscow operations from Vnukovo Airport to Sheremetyevo has given Avianova a competitive advantage including a dedicated area in the passenger terminal and an adjacent apron space. Currently, Avianova uses buses to transport passengers to its aircraft at Sheremetyevo but future plans include parking its aircraft closer to the terminal so that passengers can walk as they do in St. Petersburg. Moreover, Avianova plans to shorten boarding and aircraft turnaround time to 30 minutes through different arrangements with its airports. In addition to the main hub in Moscow, Avianova operates a second hub at St. Petersburg's Pulkovo airport. However, Avianova is currently considering closing this hub and opening a new one in Krasnodar, which would be a technical base staffed by Avianova maintainance engineers (Russian Aviation, January 2011).

In the spring of 2011, the Russian government announced that Vnukovo and Sheremetyevo airports will be unified in a single network forming a part of the Moscow Air Cluster. Currently, the Moscow local government owns 75% of Vnukovo and the Russian federal government owns Sheremetyevo outright. This project will create a single network, which in the future is planning to be privatized (Russian Aviation, March 2011).

3.4 Aircraft Fleet and Maintenance

SkyExpress operates a fleet of 8 aircraft, consisting of seven leased Boeing 737-500s built in 1990 and 1992, one Boeing 737-300 built in 1991, and another B737-300 currently in storage. SkyExpress is also evaluating the Airbus A319 for a possible move to phase out some of the older Boeing aircraft. A delivery of the first three A319 is expected in 2011. SkyExpress is outsourcing its aircraft maintenance to Aeroplex of Central Europe in Hungary, Lufthansa Technik AG in Germany and Snecma Services Brussels in Belgium.

Avianova operates a fleet of 5 leased Airbus A320-232s built in 1997 and 2003. Avianova is planning to take delivery of a sixth leased Airbus A320 in spring 2011 and is looking for additional aircraft. In order to waive duties on imported single-class aircraft, Avianova is planning to reduce the original 180-seaters configuration down to 170 seats. For the same reason Avianova previously pulled about 20 seats out of the cabins of its five A320s (ATI, 2011). For the maintenance service, Avianova signed a 5-year agreement in 2009 with Sabena Technics.

3.5 Service

Both airlines operate aircraft in an all-economy seating configuration and do not provide any complimentary meals or beverages although these can be purchased on board. SkyExpress offers three different fares (Mini, Midi, Maxi) as well as discounts for children under 12. Avianova appears to have only one fare class for each flight, with the rate changing according to route, date and time. In addition to regular published fares, both airlines offer a number of specials and promotions. For example, SkyExpress offers 25% discount for weekend flights, while Avainova offers special fares from 250 RUB (around USD $9) to some destinations, which is cheaper than taking the train.

Online check-ins are available at both airlines in addition to traditional airline check-in desks. While SkyExpress offers access to airport lounges for a fee, as well as a basic loyalty program, Avianova does not offer either of these services. In order to attract more passengers, Avionova is planning to offer onboard entertainment by inviting different artists to perform during flights. The extra space created by the reduction in number of seats due to existing import duty regulations, will serve as a stage.

3.6 Distribution System

SkyExpress handles sales through its website, a reservation center, as well as various travel agents. Furthermore, in a move echoing Western-European and American LCCs, SkyExpress also signed on to the Sabre global distribution system, thus giving travel agencies all over the world access to their seat inventory. Similarly, Avianova handles distribution through its website, a reservation center and various travel agencies.

Traditional distribution channels are more expensive than electronic ticketing and other e-services. However, according to estimates by the Avantix online travel agency, the percentage of airline ticket sold online in Russia is below 1%. That share is projected to increase to 4-5% next year, but still lags far behind the average for European carriers. SkyExpress management is aware of the online distribution channel challenges. The airline offers booking through its website or a call center. After payment passengers receive a validation number to be used at check-in. However, credit card payments outside Moscow are rare, which create additional challenge to overcome.

3.7 Ancillary services

SkyExpress passengers have access to a series of discounts of up to 50% with several hotels as well as discounts for car rental. SkyExpress offers Express taxi service for its passengers, which can be booked online. Other ancillary revenue sources include the purchase of hot meals, which can be booked up to 24 hours prior to departure, carriage of small pets, allowances for an additional baggage, sale of paper tickets for about 300 RUB (around USD $11), and printing of itineraries and boarding passes at the airport for 100 RUB (USD $4). Seat assignment can be purchased for 300 RUB for the first three rows in the cabin and 150 RUB for any other row. Access to the airport business lounge can be also purchased at some airports.

Avianova has similar structure and offers 50% discount on select hotels and car rental as well. Preferred seating and extra legroom seats can be purchased through the website or the reservation center no less than 48 hours in advance. Boarding passes can be printed at the airport for 200 RUB (around USD $7), and food and beverages can be also purchased onboard.

4. Conclusion

Russia is an emerging and developing economy, therefore, airlines face a high level of uncertainty. Despite the fact that the Russian aviation market is dominated by a few large carriers, Russian low-cost airlines such as SkyExpress and Avianova have been growing rapidly since starting their operations in 2007 and 2009 respectively. Both airlines operate from the city of Moscow, which is the largest city in Russia where the largest number of businesses and government agencies are located. Therefore, this allows a higher seat load factor on flights between Moscow and other Russian destinations (Chustuzian & Belianin, 2009).

The traditional LCC model, based on short and medium route domestic destinations structure, was successfully applied by Russian LCCs. However, in addition to the scheduled domestic service SkyExpress also offers charter and international flights, while Avianova has recently secured rights to provide such services. This indicates a hybrid LCC approach in the Russian market.

The traditional LCC model utilizes secondary airports. Russian secondary airports are not developed enough in terms of infrastructure and traffic; therefore, both airlines operate from Moscow primary highly concentrated airports. While SkyExpress operates from Vnukovo International Airport, Avianova moved its operations from Vnukovo airport to the more modern Sheremetevo International airport and established an additional hub of operation. On the other hand, those two airports will be joined into a single network in the future.

The aircraft fleet of a traditional LCC consists of a single type of aircraft with a higher rate of utilization. While SkyExpress is currently updating its older fleet of Boeings with

newer Airbus aircraft, Avianova already operates a fleet of Airbus A320s with plans to add additional Airbus aircraft of the same type.

The traditional LCC model neither differentiates their products nor allows changes in tickets. In contrast, SkyExpress offers three type of fares, loyalty programs and the ability to change ticket details for a fee. Internet services still present a challenge, especially outside of Moscow. Therefore, in addition to internet distribution, both airlines utilize traditional reservation centers and travel agents. This differentiates them from the traditional online and phone sales LCC model. Both airlines follow the traditional LCC model by trying to gain revenues from ancillary sources.

While Russian LCCs follow the traditional LCC model, some differences are apparent as a result of the specifics of the Russian environment. Due to the rapid growth of the two existing LCCs, other Russian companies might try to adopt the LCC model. Will it be Aeroflot's offspring, a charter airline Red Wings with a new scheduled passenger service, a new airline initiated by the investment company Alfa Group, or some other entrants? Despite many obstacles, the LCC model is currently working in the Russian market.

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