

Dublin Transportation Office (DTO)Survey at Dublin Airport

2001

Údarás Náisiúnta Iompair / National Transport Authority, Dún Scéine, Harcourt Lane, Dublin 2.

C	Contents	Page			
1	Introduction	1			
	 1.1 Background to the Survey 1.2 Aims and Objectives 1.3 Survey Methodology and design of questionnaires 1.4 Survey Programme 	1 2 3 4			
2	Survey Sample	5			
	2.1 Number of passengers surveyed2.2 Sample by nationality and departure pier	5 6			
3	Main Survey Findings	8			
	 3.1 Introduction 3.2 Mode of travel 3.3 Arrival and departure profiles and travel times 3.4 Travel Patterns 3.5 Choice of bus service provider 3.6 Parking arrangements 3.7 Nationality of visiting passengers 3.8 Luggage checked in by passengers 	8 8 10 12 15 15 18			
4	Summary of Key Findings	20			
5	5 Appendix A				

1 Introduction

1.1 Background to the Survey

In August 2001, the Dublin Transportation Office* (DTO), in conjunction with Aer Rianta undertook a survey of air passengers at Dublin Airport. The main purpose of the survey was to obtain essential information about air passengers travelling to and from Dublin Airport. The survey focused mainly on obtaining landside travel data, and hence included questions on the patterns of travel, arrival and departure times, and the mode of travel used.

The survey was undertaken as part of a wider study initiated by the Department of Transport into what short term measures could be taken to maintain and improve surface access to Dublin Airport in advance of the construction of Metro North. The final report on this study of Surface Access to Dublin Airport (SADA) may be found on the NTA website or directly from the Transport Modelling section of the NTA upon request.

In July 2001, the DTO appointed Count on Us to undertake the passenger survey at Dublin Airport. The survey was undertaken with the full co-operation and involvement of Aer Rianta. Both Authorities worked closely with Count on Us on the preparations for the survey, the design of the survey questionnaire and the survey pilot. In addition Aer Rianta provided all the security arrangements and security clearances to enable Count on Us surveyors to have access to Airport passengers.

* Note: In December 2009 the DTO was subsumed into the National Transport Authority, and in Autumn 2011, the NTA undertook a follow up survey of passengers at Dublin Airport in conjunction with the Dublin Airport Authority (DAA). The main purpose of this follow up survey was to track the changes in travel behaviour and travel patterns for Airport passengers since 2001. A full report on the NTA's 2011 survey of passengers at Dublin Airport may be found on the NTA website or directly from the Transport Modelling section of the NTA upon request.

Aims and Objectives 1.2

The main aim of the DTO's 2001 survey was to obtain comprehensive data on the travel of air passengers to and from Dublin Airport. This data collected from the survey would be an essential input into the SADA report and would enable the DTO, the Department of Transport and Aer Rianta to plan the short term measures required to maintain and enhance access to the Airport in advance of the construction of Metro North. In addition, the survey would provide essential data to feed into the update of the DTO's transport model for the Greater Dublin Area (GDA) to be undertaken in 2002 and 2003. To achieve this, the DTO drew up a detailed survey brief and agreed this in consultation with Aer Rianta. The brief included a number of specific objectives - including:

- to survey passengers over five days (3 weekdays and 2 weekend days) and obtain a good representative sample (in excess of 20%) of passengers travelling to Dublin Airport on each day of the survey. It was estimated that this would require in excess of 12,000 passengers being interviewed during the 5 days of the survey,
- to survey passengers during August at the time of peak passenger movements through Dublin Airport,
- to obtain a survey sample with an equal mix of passengers who are resident in Ireland and passengers resident outside Ireland and a representative sample of passengers using all three departure piers within the Airport terminal,
- to obtain a representative sample of passenger trips to and from the Airport over an 18-hour day (between 5am and midnight) on each of the five survey days.

As stated above, a key aim of the Airport survey was to obtain land-side details of passenger trips to and from Dublin Airport. Following discussions with Aer Rianta, it was agreed that the best survey methodology to obtain this data was via direct face to face interviews with air passengers at departure gates and to ask questions about both journeys to and from the Airport.

As a consequence, it was necessary to design two separate survey questionnaires – one for passengers normally resident in the island of Ireland and one for passengers normally resident outside of Ireland. In the case of both sets of passengers, it could be expected that their journey to the Airport was made on the day of the survey. However, in the case of Irish residents, the return journey from the Airport would be made at some future date, while in the case of Non-Irish residents; the journey from the Airport was made at some date in the past.

In August 2001 the contents of both survey questionnaires were agreed between the DTO, Aer Rianta and the survey company, Count on Us. Both questionnaires included the following questions:

- The origin of trips to the Airport and the destination of trips from the Airport,
- Trip departure and arrival times for both to and from journeys,
- Flight number,
- Mode of travel used for journeys to and from the Airport,
- Number of passengers travelling together (Group size),
- Number of pieces of luggage carried by the Group,
- Parking arrangements of passengers travelling by car.

1.4 Survey Programme

Pilot

In order to test the survey questionnaire, a Pilot survey of 100 passengers was undertaken in the week beginning 6th August 2001.

The pilot surveys were successful, and identified a small number of changes in the wording and content of the questionnaires. The survey methodology of face to face interviews, and the security arrangements for Count on Us survey personnel provided by Aer Rianta were successful, and hence no changes were necessary for the survey methodology and fieldwork.

Fieldwork

The main survey fieldwork was undertaken by Count on Us between Monday 13th Sunday 19th August 2001. Surveys were undertaken on Monday, Tuesday, Friday, Saturday and Sunday of that week. Count on Us surveyors undertook direct face to face interviews with passengers at departure gates on each of the survey days. Aer Rianta provided security clearance for surveyors on each of the 5 survey days. To facilitate the most efficient deployment of surveyors, Aer Rianta also provided detailed profiles of expected passenger departures from each of the three departure piers (A, B and C) in the Airport terminal. This enabled Count on Us to ensure a representative sample of surveys at each of the three departure piers.

Chapter two of this report gives details of the survey sample rates obtained and a breakdown of the sample by various categories. Chapter three details the survey findings under various headings, while chapter four summarises the survey's key findings.

2.1 Number of passengers surveyed

Tables 2.1 gives details of the number of passengers interviewed on each day of the 5 days of surveys at the Airport. The table also gives the average group size represented by each passenger interview and hence the number of passengers represented in the survey sample on each day. The table also gives the Aer Rianta figures for total passenger throughput at the Airport for each day of the surveys, and gives a calculation of the % sample rate obtained on each survey day.

Table 2.1 – Passengers surveyed and sample rates obtained

Day	Date	Passenger Throughput	Interviews Conducted	Average Group Size	Passengers Represented	% Sample Rate
Monday	13/08/2001	25,428	2,822	2.23	6,293	25%
Tuesday	14/08/2001	20,323	3,375	2.20	7,420	37%
Friday	17/08/2001	28,962	2,477	2.22	5,488	19%
Saturday	18/08/2001	30,018	2,315	2.78	6,436	21%
Sunday	19/08/2001	34,657	1,977	2.54	5,017	14%
Totals		139,388	12,966	2.36	30,654	22%

Table 2.1 shows that almost 13,000 passenger interviews were conducted over the 5 days of the survey, and with an average group size of 2.36 passengers per group, this represented an overall survey sample in excess of 30,000. This in turn represented an overall sample rate of 22% of all passengers travelling through the Airport on the five days of the survey. Owing to the very high volume of passenger throughput at the airport on Sunday, it was not possible to achieve the target 20% sample rate on this survey day. However, the overall survey targets in terms of passengers surveyed and sample rates were exceeded.

A further aim of the survey was to achieve a good representative sample of passenger trips to and from the Airport on weekdays and at weekends. Some 8,674 passenger interviews were undertaken over the three weekdays of surveying, while a total of 4,292 interviews were undertaken over the weekend (Saturday and Sunday). Given the average group size of 2.36 passengers per group, this represented sample sizes of 19,201 weekday passengers and

11,453 weekend passengers. When compared to the average weekday and weekend passenger throughput at the Airport, the cumulative survey records obtained represent a 77% sample of average weekday passengers and a 35% sample of average weekend passengers.

2.2 Sample by nationality and departure pier

Table 2.2 shows the breakdown of passengers represented in the survey broken down by Irish and Non-Irish residents and by pier of departure.

Table 2.2 Passengers by residency and departure pier

Pier	Irish	Non- Irish	Total
A	7,503	8,360	15,863
В	5,145	3,777	8,922
С	3,300	2,569	5,869
	15,948	14,706	30,654

The table shows that the survey achieved a reasonably even mix of Irish and Non-Irish residents in the survey sample. It also shows that Pier A had by far the largest throughput of the three departure piers in the Airport, with more than half of all boarding passengers using this pier.

Sample by Gender and Age

Figure 2.1 shows the breakdown of participating passengers by gender. It shows that the survey achieved an even mix of male and female survey participants.

Gender Profile

Female
48%

Male
52%

Figure 2.1 – Gender profile of survey participants

Figure 2.2 shows the age profile of participating passengers.

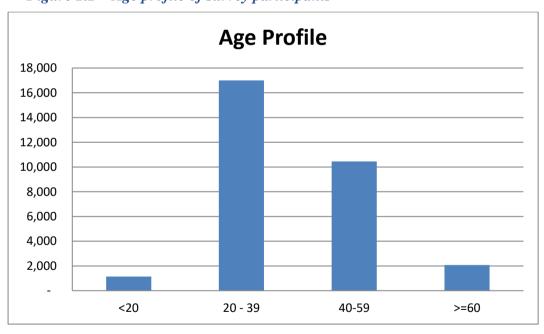


Figure 2.2 – Age profile of survey participants

This profile shows that the survey obtained a representative sample of passengers whose age profile matches the expected profile of people travelling through the Airport.

Main Survey Findings

3.1 Introduction

This chapter summarises the main survey findings under the following headings:

- Mode of travel for accessing the airport,
- Passenger arrival and departure times and journey times to the Airport,
- Origins of passengers travelling to the Airport -i.e. the patterns of travel,
- Choice of bus service provider,
- Parking arrangements for passengers travelling by car,
- Nationality of visiting passengers,
- Average number of pieces of luggage checked in by passengers,

3.2 Mode of travel

Table 3.1 shows the number of passengers who travelled to the Airport by means of travel – broken down by Irish and Non-Irish residents.

Table 3.1 – Means of travel to the Airport

Mode of travel to Dublin Airport

Mode to Airport	Irish	% Mode Share	Non-Irish	% Mode Share	Total	% Mode Share
Car / van	10,443	65%	6,212	42%	16,655	54%
Bus	2,418	15%	3,993	27%	6,411	21%
Taxi	2,761	17%	3,779	26%	6,540	21%
* Other	326	2%	722	5%	1,048	3%
Totals	15,948	100%	14,706	100%	30,654	100%

^{*} Note "Other" includes transfers from another flight

The mode share data is displayed in chart form in figure 3.1 below.

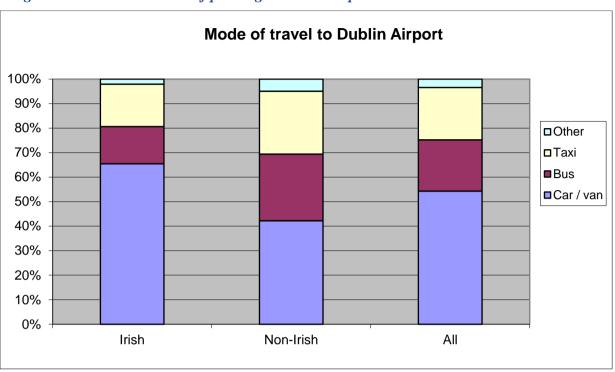


Figure 3.1 – % Mode share of passengers to the Airport

The data on mode share shows that the car is the favoured mode of travel to the Airport for both Irish and Non-Irish passengers, but that bus and taxi have a much higher mode share for Non-Irish passengers. Overall, 21% of all passengers used the bus to access Dublin Airport. This represents a strong mode share for bus that is higher than for most comparable European airports, where equivalent or higher public transport mode shares are only achieved by a combination of bus and heavy rail or metro services (*Data on mode share comparisons of Dublin with other international airports can be found in Chapter 3 of the SADA report referred to earlier*).

Notwithstanding the healthy mode share for bus, detailed analysis of the data showed that while the bus mode share was high for passengers with origins in Dublin city, there were very low bus mode shares from other origins – in particular from the West of Dublin and from locations outside of the GDA. The purpose for the SADA report was to propose measures in advance of the construction of Metro North that would address these issues and improve the quantum and quality of bus services, so as to maintain and enhance surface access to the Airport. Given the strong year on year growth in passenger throughput at Dublin Airport since the mid 1990s and the projections for these trends to continue, this represents a significant challenge.

As expected, analysis of the mode of travel used by passengers on their journeys from the Airport (having arrived at the Airport on an incoming flight) show a similar percentage breakdown to that shown in Figure 3.1 above.

3.3 Arrival and departure profiles and travel times

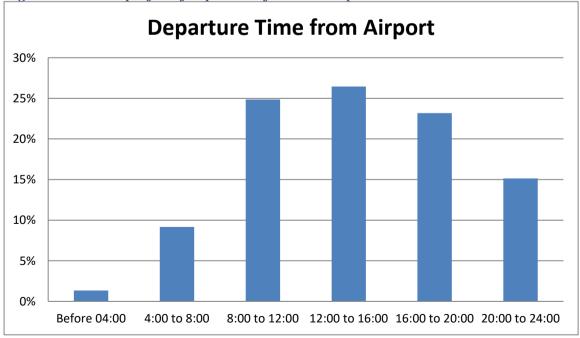
Figure 3.2 gives the time profile of passengers arriving at Dublin Airport, while figure 3.3 shows the equivalent profile for passenger trips from the Airport.

Arrival Time at Airport

40%
35%
25%
20%
15%
10%
5%
0%
Before 04:00 4:00 to 8:00 8:00 to 12:00 12:00 to 16:00 16:00 to 20:00 20:00 to 24:00

Figure 3.2 – Time profile of arrivals at the Airport





The arrival profile in figure 3.2 shows that 12% of passengers arrive at the Airport before 08:00 and that the four hour period between 12:00 midday and 4pm is the busiest time for passenger arrivals at the Airport. The profile shows that there is a very low level of departures after 8pm reflecting the low number of flight departures after this time in the evening.

The profile of departing passengers (i.e. passengers leaving the airport having arrived on an incoming flight) mirrors the profile of incoming flights to the Airport and shows a much greater concentration of incoming passengers in the later times of the day with two thirds of all passengers departing the Airport after midday.

Figure 3.4 shows the profile of journey times of passengers travelling to Dublin Airport.

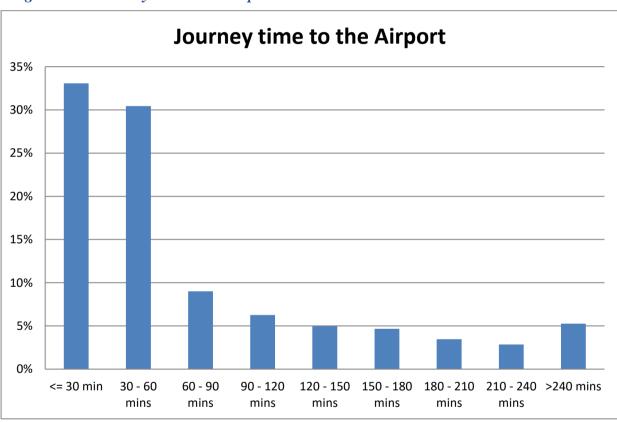


Figure 3.4 – Journey time to the Airport

The profile of journey times shows that one third of passengers have a journey time of less than 30 minutes, while almost two thirds of passengers are within a one hour journey of Dublin Airport. This reflects the fact that notwithstanding the national importance of the Airport, its location makes it highly accessible to a large number of passengers who start their trip from within Dublin city. This will be seen in the analysis of travel patterns in section 3.4.

3.4 Travel Patterns

Table 3.2 gives a breakdown of the origins of passengers travelling to Dublin Airport. The data is shown in diagrammatic form in Figure 3.5

Table 3.2 – Origins of trips to the Airport

Trip Origin	Irish Passengers	% of Total	Non-Irish Passengers	% of Total	All Passengers	% of Total
Dublin City Centre	1,609	10%	4,538	31%	6,147	20%
Dublin City North	1,300	8%	1,021	7%	2,321	8%
Dublin City South	1,102	7%	1,453	10%	2,555	8%
Fingal	1,407	9%	1,059	7%	2,466	8%
South Dublin Dún Laoghaire /	1,554	10%	686	5%	2,240	7%
Rathdown	1,114	7%	674	5%	1,788	6%
Meath	456	3%	384	3%	840	3%
Kildare	1,043	7%	368	3%	1,411	5%
Wicklow	429	3%	398	3%	827	3%
Outside GDA	5,934	37%	4,125	28%	10,059	33%
Total	15,948	100%	14,706	100%	30,654	100%

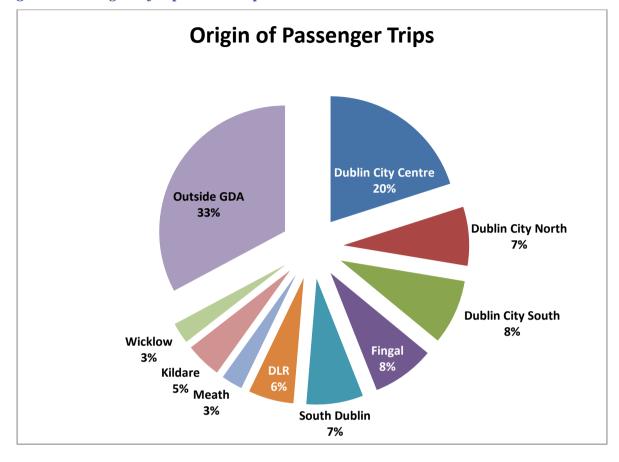


Figure 3.5 – Origins of trips to the Airport

Table 3.2 shows that over one third of passengers (36%) have origins in the Dublin city region, while a further one third of passengers come from outside the Greater Dublin Area (GDA). Of the other passengers with origins in Dublin county, the largest proportion of these have origins in Fingal – reflecting the Airport's location and its high accessibility from all the main population centres within Fingal.

Figure 3.6 gives a further breakdown of the origins of passengers who travel from outside the GDA.

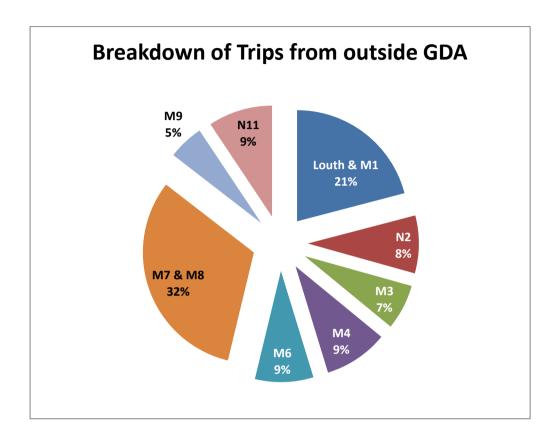


Figure 3.6 Origins of trips from outside the GDA

Figure 3.6 reflects the level of population served by each of the main road corridors entering Dublin – with the highest percentages of airport passengers (travelling from outside the GDA) accessing the Airport via the M7 / M8 corridor. Not surprisingly, the next highest proportion of trips from outside the GDA access the Airport via the M1 corridor.

As expected, analysis of the patterns of travel of passengers travelling from the Airport shows passenger destinations having a similar breakdown to the trip origins shown in Figures 3.5 and 3.6 above.

3.5 Choice of bus service provider

Figure 3.7 shows the breakdown of passengers who travelled by bus to the Airport by their choice of bus service provider.

Figure 3.7 – Bus service provider

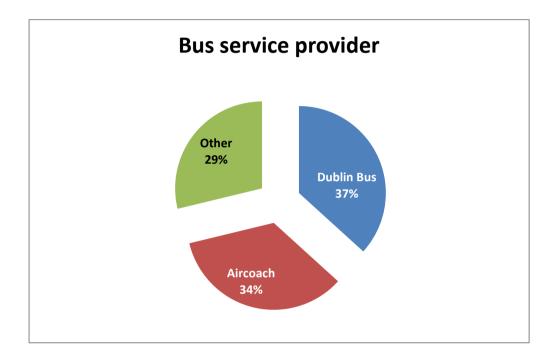


Figure 3.7 shows that Dublin Bus carries the largest proportion (37%) of passengers who access Dublin Airport by bus. However, the Aircoach service that runs from the South East of the city, through the city centre and on to the Airport via the Swords road is also proving very popular – catering for 34% of all bus based passengers. Other airport bus services are provided by a number of private bus operators, and cater for the remaining 29% for bus passengers.

3.6 Parking arrangements

Table 3.3 gives the breakdown of passengers who travelled by car to the Airport by Irish and Non-Irish residents and by those who were self-drive, dropped off only or dropped off and accompanied into the Airport terminal. The percentage breakdown for all car based passengers is shown in Figure 3.8.

Figure 3.9 further breaks down self-drive passengers by the Airport car park they used.

Table 3.3 - Car passengers and drivers accompanied or not

Accompanied or not	Irish	Non- Irish	All
Self-drive	5,610	3,698	9,308
Drop off only	3,782	1,925	5,707
Drop off and accompany into terminal	1,051	589	1,640
Total Car Drivers / Passengers	10,443	6,212	16,655

Figure 3.8 – Car drivers and passengers accompanied or not

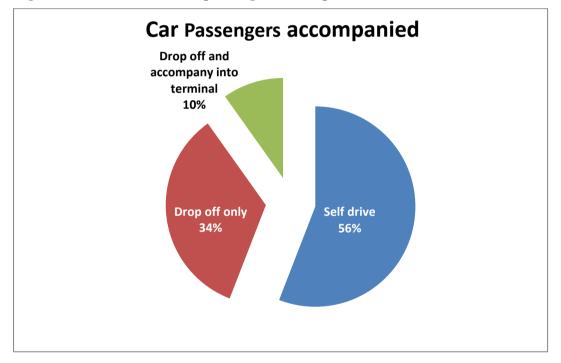


Table 3.3 shows that in the case of both Irish and non-Irish passengers, 10% are dropped off by someone who accompanies them into the terminal. The vast majority of all car based passengers are either self-drive or are dropped off with the driver returning home.

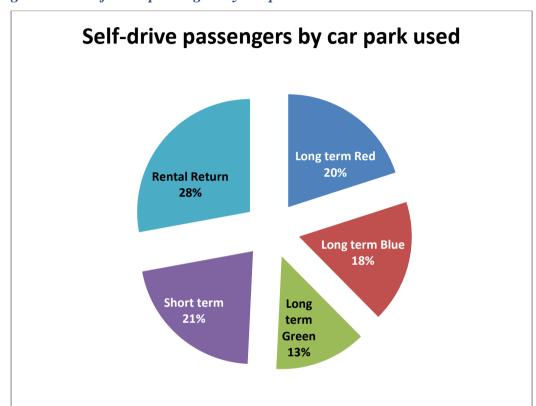


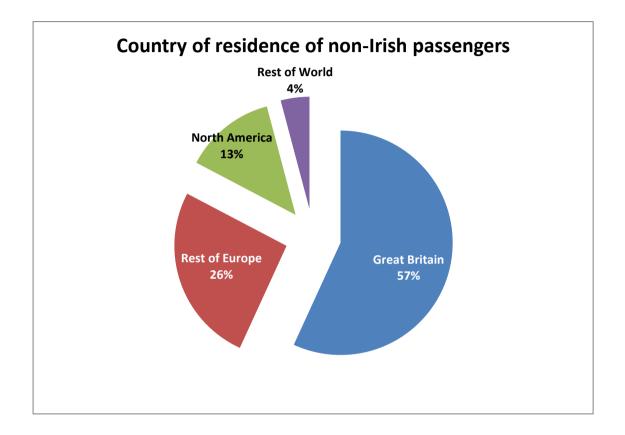
Figure 3.9 – Self-drive passengers by car park used

Figure 3.9 shows that 28% of self-drive passengers were using rental cars that they returned at the Airport. Of the remaining passengers who drove private cars to the Airport, similar numbers used the Short term, Long term (Red) and Long term (Blue) car parks. A smaller number (13%) used the Long term (Green) car park.

3.7 Nationality of visiting passengers

Figure 3.10 gives a breakdown of the country of residence of passengers who had visited Ireland via Dublin Airport.





This breakdown shows that the greatest number of visitors to Ireland via Dublin Airport are from Great Britain (57%), with the next highest proportion of visitors being from the rest of Europe (excluding the U.K.). Figure 3.10 shows that 13% of visitors came from North America, while 4% were from the rest of the world.

Interviewed passengers were asked how many pieces of luggage the group were checking in. Dividing this by the group size in each case gives the average number of pieces of luggage checked in per passenger, and this breakdown is shown in figure 3.11 below:

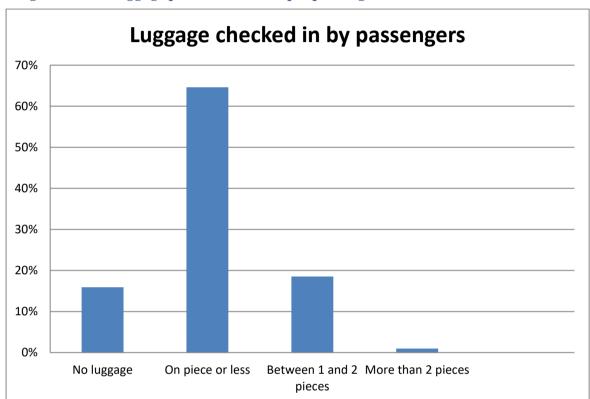


Figure 3.11 – Luggage pieces checked in per passenger

Figure 3.11 shows that 16% of passengers checked in no luggage, while almost two thirds of passengers checked in on average one piece of luggage or less per passenger. 18% of passengers checked in between 1 and 2 pieces of luggage per passenger, while 1% of passengers checked in more than 2 pieces of luggage. The average number of luggage pieces checked in per passenger was 0.87.

Summary of Key Findings

Some of the more significant findings of the DTO Airport survey 2001 are as follows:

- Dublin Airport is currently well served by bus and bus enjoys a healthy market share of over 21% of passengers accessing the airport. The bus mode share is highest for passengers travelling to the airport from the centre of Dublin, but is poor for passengers travelling from the West of Dublin and from many areas outside of Dublin. This poses a challenge to significantly improve the bus offer from these areas so as to maintain and enhance the accessibility of the airport in advance of the construction of Metro North.
- Dublin Bus enjoys the largest market share of companies providing bus services to Dublin Airport, but the Aircoach service from the South East of the city is also proving very popular with airport passengers. The AirDart service that provides a link to the airport from the Howth Junction rail station has very low levels of patronage. This may reflect the poor quality of the Rail / Bus interchange provided at Howth Junction for air passengers.
- While Dublin City is the origin for the largest proportion (36%) of passengers travelling to Dublin Airport, one third of passengers have origins outside the GDA. This reflects the status of Dublin Airport as Ireland's national airport.
- Midday (between 12 noon and 4pm) is the busiest time for departing passengers to arrive at Dublin Airport, and 12% of passengers arrive before 08:00. This reflects the scheduling of flights with the vast bulk of flights scheduled to depart over a 12-hour period between 8 in the morning and 8 in the evening. In contrast, some 38% of incoming passengers to Dublin Airport depart the airport for their destinations after 4pm in the afternoon.
- Almost two thirds of passengers have a journey of one hour or less when travelling to Dublin Airport – reflecting the Airport's high accessibility in particular for passengers with origins within Dublin City.
- Over 80% of passengers checked in at most 1 piece of luggage.
- The U.K. provides by far (57%) the largest proportion of overseas visitors using Dublin Airport, and only 4% of visiting passengers travel from countries outside of Europe and North America.

5 Appendix A

Survey Questionnaires

Irish Residents

Airport Survey 0000000
For Passengers normally resident in Ireland
Day Date Time Location Interviewer
For your Journey to Dublin Airport Today 1. How many passengers are travelling in your group (including you) Please wife in number
2. From what exact address did you begin your journey to the Airport today? Please enter full address
Example 10, Roselawn Avenue, Glasnevin, Dublin 11
3. How did you get to the airport? Tick one box only
By Foot ☐1 By Bus ☐2 By Car/Van (Rental) ☐3 By Car/Van(Private ☐4 By bike ☐5 By Taxl ☐6 By Motorcycle ☐7
From Another Flight 6 By Airdart 6
4. If you travelled by bus what bus company provided the service?
Dublin Bus 1 Aircoach 2 Other 3 Please Specify
5. If you were driven to the airport as a passenger did the person with you?
Drive away after dropping you 1 Park the car and accompany you into the terminal 2
6. If you were accompanied into the airport how many people accompanied you?
7. If you drove to the airport by car where did you park? Tick one box only
Long Term Car-Park - Red 1 Long Term Car-Park - Blue 2 Long Term Car-Park - Green 5 Short Term Car-Park 4 Other 5
8. What is your flight number?
Please enter the Flight number 9. How many pieces of luggage did your group check in?
10. At what time did you begin your journey to the airport? (Use 24hour clock) Hour Minute
Example 1 3 1 0
11. At what time did you arrive at the airport? (Use 24hour clock) Hour Minute
Example 1 3 1 0
For your Return Journey through Dublin Airport Day Month
12. On what date will you return to Dublin Airport?
13. On return how many people will be traveling in your group (including you)?
Please write in Number
14. On return how many people will come to meet you at the Airport?
Please write in Number
15. At what time will you leave Dublin Airport? (Use 24hour clock) Hour Minute
Example 1 3 1 0 16. What mode of Transport will you use to get to your final destination?
By Foot 1 By Bus 2 By Car/Van (Rental) 3 By Car/Van(Private) 4 By bike 5 By Tax 6 By Motorcycle 7
Another Flight 8 By Airdart 9
 If your final destination will be other than that given in Q2 above – please give the exact address below.
Example 10, Roselawn Avenue, Clasnevin, Dublin 11
18. How long will the journey take you to get to the address given in Q17?
16. How long will the journey take you to get to the address given in Q17? Example 1 2 5

For the Interviewer: Persons Sex:..... Persons Approximate Age......

Non-Irish residents – Page 1

000000 Airport Survey For Passengers not normally resident in Ireland Location Interviewer... Country of Residency of Respondent? For your Journey to Dublin Airport Today 1. How many passengers are travelling in your group (including you) 2. From what exact address did you begin your journey to the Airport today? Please Example 10, Roselawn Avenue, Glasnevin, Dublin 11 3. How did you get to the airport? Tick one box only By Foot 1 By Bus 2 By Car/Van (Rental) 3 By Car/Van (Private 4 By blke 5 By Taxl 6 By Motorcycle 7 From Another Flight 8 By Airdart 9 4. If you travelled by bus what bus company provided the service? Dublin Bus 1 Aircoach 2 Other 3 Please Specify. 5. If you were driven to the airport as a passenger did the person with you? Drive away after dropping you 1 Park the car and accompany you into the terminal 2 6. If you were accompanied into the airport how many people accompanied you? 7. If you drove to the airport by car where did you park? Tick one box only Long Term Car-Park - Red _ 1 Long Term Car-Park - Blue 2 Long Term Car-Park - Green s Short Term Car-Park 4 Other s 8. What is your flight number? 9. At what time did you begin your journey to the airport? (Use 24hour clock) 10. How many pieces of luggage did your group check in? 11. At what time did you arrive at the airport? (Use 24hour clock) For the 1st leg of your journey into Dublin Airport 12. On what date did you arrive in Dublin Airport? 13. How many people met you in the airport when you arrived? 14. At what time did you leave Dublin Airport on this date? (Use 24hour clock) 15. When you arrived in Dublin Airport what was the exact address of your final destination? 16. How did you travel to this address?

By Foot 1 By Bus 2 By Car/Van (Rental) 3 By Car/Van (Private) 4 By blike 5 By Taxt 6 Another Flight 8 By Airdart 0 9 17. How long will the journey take you to get to the address given in Q15?