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EFFECTS OF OPENING THE FIRST PHASE OF CAIRO METRO REGIONAL LINE ON MODAL SPLIT RATIOS AT DIFFERENT STATIONS

دراسة تأثيرات افتتاح المرحلة الأولى للخط الإقليمي لمترو الأنفاق القاهرة على نسب توزيع الرحلات على وسائل النقل عند المحطات المختلفة للمترو

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الخلاصة - إن الغرض الرئيسي من هذا البحث هو تحديد التغيرات التي طرأت على نسب استخدام وسائل النقل المختلفة (نموذج توزيع الرحلات) عند محطات مترو الأنفاق المختلفة بدءاً من حلوان وحتى رمسيس (مبارك) وذلك بعد افتتاح المرحلة الأولى لهذا المشروع في أكتوبر ١٩٨٧ . وتعتبر النتائج المتعلقة بهذه التغيرات ذات أهمية بالغة في إعادة تخطيط وتنظيم ساحات محطات المترو . وقد تم القيام باستقصاء ميداني عند كل محطة مترو بعد الافتتاح بحوالي ستة أشهر وقورنت نتائج هذا الاستقصاء بما تم إجراؤه قبل الافتتاح وقد أوضحت النتائج أن وسائل جديدة ظهرت لتوصيل ونقل الركاب عند محطات المترو ولم تكن موجودة من قبل بالإضافة إلى الوسائل المعتادة ولكنها تشارك بنصيب محدود حتى الآن . كما وجد أن كثيراً من الركاب الذين اعتادوا استخدام الأتوبيس أو الميكروباص كوسيلة للوصول إلى محطات رحلتهم بعد النزول من المترو بدأوا في ترك استخدام المترو واللجوء إلى وسيلة نقل واحدة مباشرة إلى أهدافهم وهذا يرجع إلى تعريفة الركوب المرتفعة التي بدأ العمل بها عند افتتاح خط المترو الجديد . وفي النهاية أظهرت النتائج ضرورة الاهتمام بوسائل تغذية المترو بالركاب حتى يمكن جذب أكبر عدد ممكن من الركاب على المترو كما يجب العناية الخاصة بنحو ٪ المعوقين من الركاب الذين يجدون صعوبة بالغة في استخدام المترو .

I. ABSTRACT The purpose of this paper is to assess the changes in model split ratios at different metro stations from Helwan to Ramsis (Moobarak) station after opening of the new metro line (first phase) in October, 1987. Information concerning these changes are important for replanning the stations forecourt areas. Therefore, a survey has been carried out at each station after the opening by approximately six months. The results of the survey were compared with those obtained from a survey undertaken prior to th- opening of the new metro line. The results indicate that in addition to walking, bus, a shared taxis as access/egress modes, other modes started to appear at many stations althoı the share of these modes is limited. Another finding shows that at some stations, the p sengers who used to take buses and shared taxis as access/egress modes to/from the m started to discard the metro and use one direct mode from their origin to their destina without using the metro. The reason is because of the high tarrif accompanied the op of the metro. The results show that feeders to metro stations should be provided to at more passengers and care should be given to elderly and handicapped passengers wh confronted with difficulties when using the metro .

II BACKGROUND

Cairo as a large city is suffering from acute traffic problems. Population of Greater Cairo is estimated as 12 million inhabitants. It is expected that by the year 2000, approximately 19 million inhabitants will be living in the Greater Cairo area. In such highly populated cities, mass transit can be considered as an effective solution for traffic problems. Introducing such service usually offers benefits to both captive passengers to public transport and private car users. Moreover , mass transit offers remarkable benefits to the society such as saving energy, offering less pollution and noise than cars (1). In October, 1987, the first phase of the new Cairo Metro Regional line (CMRL) has been completed and the metro started its service from Helwan to Ramsis (Mobarak) Square. A considerable change in the travel behaviour is expected and it may take some time until these travel patterns will get established . Accordingly, the public transport operators should respond to these expected new travel patterns. This can be achieved through coordination between their fleets and the metro. Therefore, in the beginning of 1987, the Transport Planning Authority (TPA) engaged the Development Research and Technological Planning Center in association with Societé Francaise d'Etudes et de Realisations de Transports Urbains (SOFRETU) to study the effects of the metro on other modes. As a part of that study (2), the modal split ratios were estimated. According to a survey performed in April, 1987 at the existing stations. The purpose of this survey was to establish modal split ratios for passengers arriving and leaving from metro stations. These information are of a great value in replanning the forecourt areas.

It should be mentioned that the survey undertaken in this research has covered all other stations which were not included in the previous study. The previous survey did not consider stations such as Helwan, Syeda Zeinab, Saad Zaghloul, Tahrir (Sadat), 26 th July (Gama, Abd EL Naser, Ahmed Orabi and Ramsis (Mobarak) (Figure 1) which were not operating at that time. For example, the last 5 stations are underground and the construction work was going on during the previous survey. Also, the infrastructure of the first two stations were under construction and at that time the metro was working only from Ain Helwan to Abu El Rish (the closest place to sayeda Zeinab) , see Figure (1).

Survey procedures, data collection, data analysis, conclusions and recommendations are discussed in the following sections.

III SURVEY PROCEDURES

To accomplish modal split survey, some procedures were required :

a. Design of the Interview Form

b. Manpower and Resources Requirements.

C. Time of the Survey Execution

d. Excution of the Survey.

III.1. Interview Form Design

The survey form was specifically designed in order to include all relevant data contained in the previous survey form as well as some important information covering the economic status of passengers. In addition, the form comprises different motivations that urge the passengers to use the metro instead of other competing transport modes.

Trials have been made until the final survey form was established. Thus, most required information were included in the revised form as shown in Appendix (1).

III.2. Manpower and Resources Requirements.

According to the sample size selected in the Metro Interchange Coordination Study (2), the minimum sample size which is based on the assumed different significant levels and sample error was estimated as 96 interviewees at each metro station. To ensure reliable results at all metro stations considered in the survey, the number of interviewees at each station was significantly greater than the required sample size, especially at big stations with high volumes: Helwan, Maadi and Mobarak.

Based on the average productivity of the interviewer, the manpower-hour required was estimated. From the pilot survey performed prior to the formal survey, it was found that the average productivity per each interviewer is ranging from 20-30 interviewees. Thus, approximately, five man-hours will be needed at each station to collect information from 100 persons on the average. Although this number would be sufficient, much more passengers were interviewed as mentioned above, particularly at the heavily trafficked stations.

The total manpower required for the survey performance at all 21 stations was estimated with at least 105 man-hours. However, due to the big stations, more than 120 man-hours were employed. The manpower employed in this survey were 20 persons in order to satisfy the sample size requirement at each station.

Table (1) shows the number of interviewers, interviewees and the duration of the survey at each station.

III.3. Time of the Survey Execution

The modal split survey was conducted on normal working days. The first stage was undertaken on Monday and Tuesday 28. and 29/3/88. Two weeks later, the second stage was performed on 13 and 14/4/1988. Interviews at all metro stations were, thus, conducted on these days. It is worthy to mention that this survey was undertaken prior to the student's summer vacation and the beginning of the Ramadan month. It is essential to get reliable data by including the student population who represents a significant portion in peak traffic periods. During the month of Ramadan travel times change considerably at many work places and this affects the results. So, the chosen dates were suitable for obtaining reliable results which fairly can be compared with the results of the previous survey.

As a result of the limited time and number of interviewers available, the modal split survey was performed at both morning and afternoon peak hours (from 7:30 to 9:30 A.M and from 1:30 to 4:30 P.M)

It should be mentioned that at some stations, when the survey was conducted towards the end of the peak period, the volume of passengers was not enough which demanded more time than usual to satisfy the required sample size (e.g. Tura EL-Asment at 4:30 P.M.).

III.4. Execution of the Survey

As observed from the preceding sections, the survey was carried out in two stages. Each stage involved two days and the survey was performed during both the morning and afternoon peak periods.

Prior to the actual survey, the interviewers were instructed how to fill in the interview form correctly, how to draw the passengers attention to the importance of giving the right information and not to stop those passengers who are in a hurry or persons who had been interviewed before.

The interviewers were divided into two groups and the authors of this paper were appointed as supervisors to direct the groups during survey performance. According to the directional distribution split of the metro, the supervisors assigned the appropriate number of interviewers between the two directions of movement (e.g. CBD inwards or outwards).

After interviewing the required number of passengers at each metro station, the group accompanied by its supervisor moved to the next station and continued the survey and so on until the end of the peak period. It is worth mentioning that not more then 10 minutes were lost during the movement from one metro station to another since in all cases the groups were always transferred to the nearby station. Thus the transfer time was kept at minimum. The interview forms collected by the supervisors between the peak periods were examined as to check and realize any deficiency or drawback in performing

the survey at the next stations. Appropriate instructions were given by the supervisors before the next peak period survey started.

IV. Data Analysis

After collection of the filled forms, the data analysis commenced using the computer. A code number was given to each column in the interview form, except for place of origin and destination which were not within the scope of this research. However, they can be included for further use if needed. After editing the coded data to the computer, the data were ready for analysis. LOTUS 1-2-3 package (3), which include data base, can be used effectively to get any desired information.

V. Discussion of Results

Tables (2) and (3) present different modal split ratios as estimated in reference (2) before opening of the new metro line (first phase. The first table exhibits the results of different access modes for persons approaching the stations, while table (3) presents the results of egress modes for leaving passengers. The results of modal split ratios for different access/egress modes after opening of the new metro lines are presented in Tables (4) and (5).

From the tables, the following remarks can be concluded

a) In general, people are encouraged to use other access/egress modes to reach/leave stations. For example, before opening of the new metro line, the dominant modes were : walking, bus, and shared taxi. After opening, other modes such as car, taxi, light rail and kiss & ride started to appear although they still have only small proportions in comparison with other dominant modes (i.e. walking, bus and shared taxi).

b) The pattern started to change to some extent at those stations in which all passengers (100%) reach/leave walking. For example, at EL-Maasara, Tura EL-Asment, Kozzika, Tura EL-Balad and Hadayele EL-Maadi 100% of passengers were arriving walking. After opening, the pattern slightly changed and some conversion has occurred to other access modes.

At these stations, most of the passengers recorded that they are captive to the metro and they arrive/leave the stations walking. The reason for this captivity remains in the fact that the metro line at these stations is very far from Chornish street where the bus lines are operating. Therefore, passengers at these stations face difficulties in getting buses.

The following discusses the modal split ratios for each station:

1) Helwan Station

The station was under construction before opening of the new. metro line (first phase). Therefore, the station. was not included in the previous survey. In the present survey, walking, bus and shared taxi showed to dominate over all other modes showing that other access/egress modes such as taxi, car,rail still have small effect.

2) Ain Helwan Station

In the previous survey, the results showed that high ratios of trips were made by bus mode. They represented 71% and 25% of trips for access and egress modes respectively which decreased to be 4% and 3% after opening of the new metro line. The reason for this remarkable conversion is that the metro was not operating between Helwan and Ain Helwan during the previous survey. The CTA was operating a shuttle bus to get passengers

from Helwan to Ain Helwan and vice versa which showed great proportions of trips made by buses as access/egress mode.

3) Wadi Hof Station

The results revealed that shared taxi as an egress mode started to play an important role among the other modes.

4) Maasara, Tura EL-Asment, Kozzika and Tura EL-Balad Stations.

The pattern of 100% walking as an access mode in these stations started to change after opening of the new metro line (first phase). Other access modes started to appear although they have small proportions of passengers. For egress modes, the stations still depend mainly on walking because of the lack of feeders at these stations.

5) Sakanat EL-Maadi Station

As seen from the tables, a reduction has occurred in using buses and shared taxi as access or egress modes. For example, the percentages of bus and shared taxi users decreased from 21% and 58% to 4% and 9.5% as access modes while they decreased from 5% and 8% to 2% and 5% as egress modes respectively. The significant drop in using shared taxi led to the examination of this phenomenon. The examination revealed that before opening of the new metro line (first phase), shared taxis were used as collective mode from surrounding areas (such as Degla, ... , ect) to Sakanat station, and then passengers were using the metro to reach to their destinations in the CBD. The costs for a trip at that time were estimated to be 15 piasters (10 for shared taxi + 5 piasters for the metro). After opening of the new metro line, the costs increased to be 55 piasters (15 for shared taxi + 40 piasters for the metro) to reach to the CBD. This relatively high cost would make people not to use the metro, but other modes such as buses, minibuses, and shared taxis to reach their destinations. By using these modes, the passengers give the fare priority in their decision to use or not use the metro than other factors. This is different at other places (4) where waiting time was given the priority.

6) Maadi Station

At Maadi station, other modes such as car, taxi, and kiss & ride started to appear. However, as the volumes show, the use of these modes is still limited. On the other side, the use of bus and shared taxi started to decline for the reasons mentioned above.

7) Hadayek EL-Maadi Station

As seen from the tables, 100% of passengers at this station were arriving/leaving the station walking prior to the opening of the new metro line (first phase). After opening, also other access/egress modes such as bus and shared taxi were used. Shared taxi users represented 10% of all passengers arriving at the station. Better forecourt area planning is needed to provide accommodations for feeding buses and shared taxis.

9) EL-Zahraa Station

In addition to walking and bus modes, other modes showed up such as shared taxi and kiss & ride. However, the bus passengers arriving / leaving the station decreased from 36% and 38% before opening to 16% and 11.5% after opening. The reason is that before opening the new metro line (first phase), the old metro line was operating only from Bab EL-Luk (near Tahrir) to Helwan. Therefore, the passengers having their origin before Bab EL-Luk (for example Ramsis square) and destination in Helwan were using buses from Ramsis Square to catch the metro at the closest bus stops (such as EL-Zahraa and Mari Gerges). These passengers form a great percentage since Ramsis square can be considered as a

big collective place from the northern part of Cairo. After opening of the new metro line (first phase), the metro started the service from Ramsis Square which offered to those passengers a direct ride from Helwan to Ramsis Square without the need for buses. Consequently, the arriving/leaving bus passengers decreased at these stations.

10) Mari Gerges

Beside walking and bus modes for arriving passengers, all other modes except light rail started to appear. The decrease in bus passengers can be seen from the tables and the reasons are mentioned above. For leaving passengers, the status did not change.

11) EL-Malek EL-Saleh Station

For arriving passengers, a significant change is seen between walking and bus modes. Conversion of passengers between the two modes can be noticed from the tables in which bus passengers decreased from 41% before opening to 20% after opening of the new metro line. However, for leaving passengers, other modes beside walking and bus started to appear. This station is considered as a big transfer point for Giza and EL-Haram passengers. After opening and the metro fare increase, bus passengers who used to take the metro from this station were seeking other direct modes such as buses and shared taxis which are relatively less expensine.

12) EL-Sayeda Zeinab Station

For arriving passengers, bus passengers ratio did not change. A great drop appeared in light rail passengers from 12% before opening to only 1% after opening. For leaving passengers, walking passengers increased and shared taxi appeared.

13) The Remaining Station

The remaining stations such as Saad Zaghioul, Anwar EL-Sadat, Gamal Abd EL-Naser, Ahmed Orabi and Hosni Mobarak exhibit less proportion of walking and most of the other access/egress modes are used.

VI. CONCLUSIONS

The main findings of this research work are summarised as follows:

1- The results of a survey conducted before opening the new metro line (first phase) show that a few modes were used in getting the passengers to metro stations. Such modes were : walking, buses and shared taxis. After opening, some other access/egress modes started to appear at many stations such as taxis, cars, kiss&ride and rail. However, the obtained results indicate that the share of these new modes, particularly if compared with walking, bus and shared taxi, is limited. The reasons can be referred to one of the following:

a) The most important and controlling factor is the tariff. For example from Helwan to Mobarak, the metro fare is almost 5 times the bus fare. This caused passengers to change from metro to other modes such as buses, minibuses and shared taxis in spite of comfort and time saving attained by use of the metro.

b) The forecourt areas at many stations are not well planned. More car owners may be attracted to the metro if parking places are provided at metro stations.

c) The lack of feeders to metro stations especially at Maasara, Tura EL-Asment, Kotzzika and Tura EL-Balad. Most of the passengers mentioned that they are captive to the metro, although most of them declared that the walking distance is more than one kilometer. If the access roads to these stations are properly paved, more passengers will be attracted and other access/egress modes will appear.

d) In designing the metro stations, care has not been given to elderly or handicapped passengers who are confronted with difficulties using the metro and climbing stairs up and down. Electrical escalators, for example, are not found anywhere. For this group of passengers suitable services should be provided to reach the metro.

2- The stations with 100% walking started to have some other access/egress modes. This occurred at Maasara, Tura EL-Asment, Tura EL-Balad and Hadayek EL-Maadi

3- The most striking notice was found at Sakanat EL-Maadi and Maadi stations in which the use of shared taxi decreased after opening of the new metro line (first phase). Checking this phenomenon led to the fact that those passengers who already used shared taxis as an access/egress mode before opening of the new metro line started to change their trip pattern after the opening which has been caused by the high metro fare. They preferred to get one direct mode from their origins surrounding these metro stations to reach to their destinations in the CBD.

VII RECOMMENDATIONS

CMRL is a large investment. The policies should be directed to encourge the people to use the metro, especially in Cairo with its highly populated areas. Therefore, the results of this research work lead to the following recommendation:

1- The most important factor for attracting people to use the metro is the tariff. The present tariff of the metro is almost 5 times of the buses running parellel to the metro. Therefore, The coordination study made by DRTPC (2) should be applied as soon as possible.

2- The forecourt areas should be well planned, particularly those of large stations to attract car users to the metro and to provide waiting places for feeding buses and shared taxis.

3- The roads to different metro stations should be paved. This will encourage shared taxis and buses to work as feeders instead of their current role as competitive modes.

4- Some more care should be given to elderly and handicapped people who are faced with difficulties in reaching the metro itself at different stations.

VIII. ACKNOWLEDGEMENT

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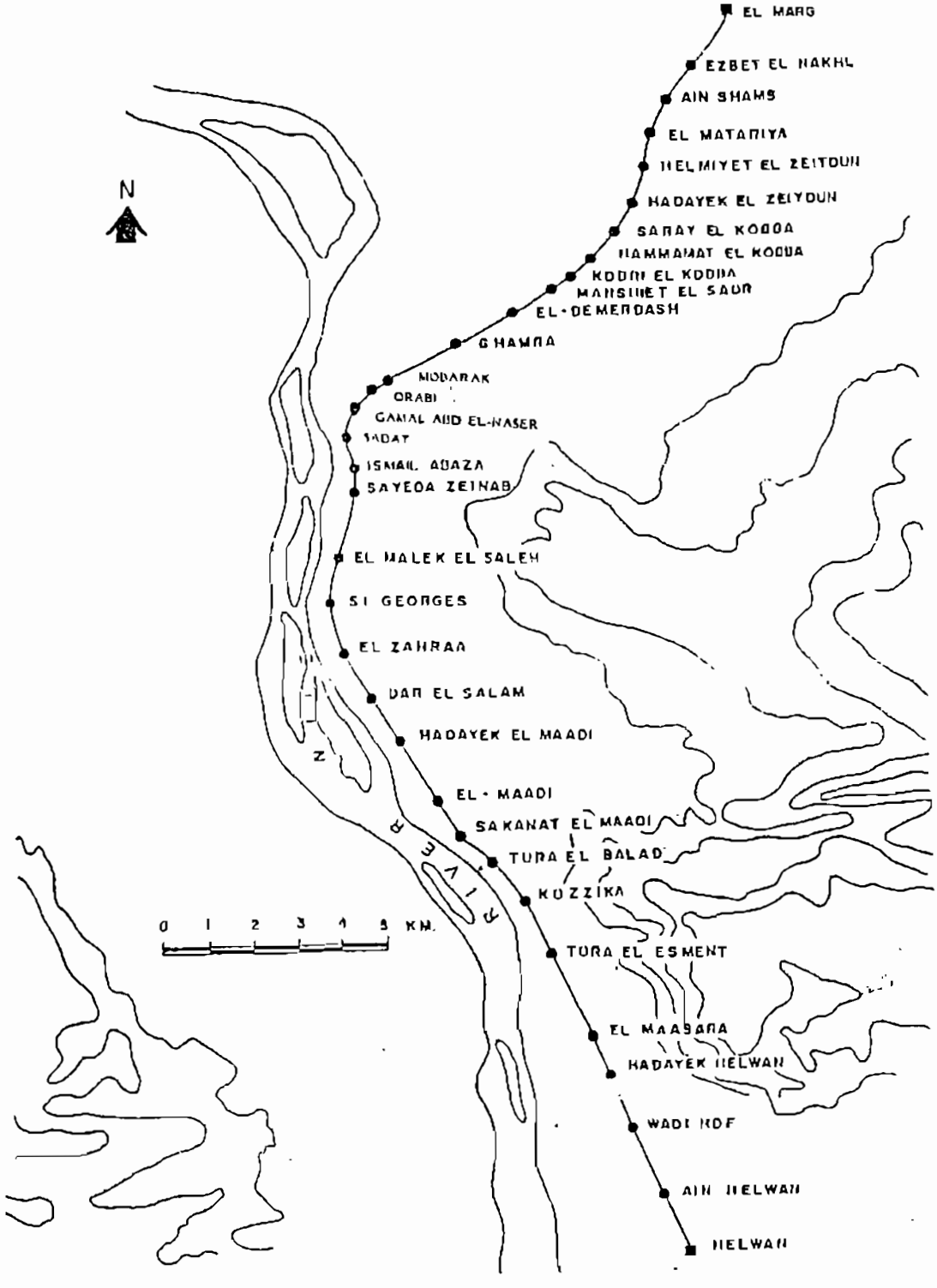

FIG. 2: REGIONAL METRO LINE HELWAN-EL MARG.

Source: Cairo Metro Interchange Study.

MINISTRY OF TRANSPORT
TRANSPORT PLANNING AUTHORITY

AN INTERVIEW FORM

Metro Station: Name of Interviewer: Time From: To:

SERIAL NUMBER	Origin of the Trip	Boarding Station	Access Mode: Walking	Bus	Shared Taxi	Taxi	Tram	Private Car	Kiss&Ride	Alighting Station	Destination of the Trip	Leaving Mode from Metro St.: Walking	Bus	Shared Taxi	Taxi	Tram	Private Car	Kiss&Ride	Trip Purpose: Work	Education	Social	Others	Do you use the Metro Frequently?: Yes	No	Reasons for Using the Metro: Cheap	Comfortable (Door to Door)	Close to Des	Fast	Others	Were you accustomed to use the Metro before? Yes	No	Do you own a car? Yes	No	Ticket	Who Pays for the Pass?: Work	the passenger	Family Sized Income per Month
1																																					
2																																					
3																																					
4																																					

TABLE (1)

Number of Interviewers and Interviewees at each Metro Station

Station No.	Date of Survey	Station Name	Survey Duration Hr.	Min	Number of Interviewers	Number of Interviewees
1	13/4 A.M	Helwan	1	15	11	292
2	13/4 A.M	Ain Helwan		45	6	217
3	13/4 P.M	Wadi Hof		30	5	149
4	13/4 A.M	Hadaek Helwan	1	30	6	164
5	14/4 A.M	Massara	1	30	5	188
6	14/4 A.M	Tura El-Asment	1	00	6	165
7	14/4 A.M	Kotsika	1	00	5	163
8	13/4 P.M	Tura El-Balad	1	00	6	122
9	13/4 A.M	Sakanat El-Maadi		30	10	235
10	29/3 P.M	El-Maadi (1)	1	00	10	409
	13/4 A.M	El-Maadi (2)			6	
11	29/3 P.M	Hadayk El-Maadi		20	10	119
12	28/3 P.M	Dar El-Salam		50	10	269
13	14/4 P.M	El-Zahraa	1	00	6	189
14	29/3 A.M	Mary Gerges		30	10	134
15	29/3 A.M	El-Malek El-Saleh		40	10	190
16	28/3 P.M	Sayyeda Zainab		50	10	212
17	14/4 P.M	Saad Zaghloul	1	30	6	176
18	28/3 P.M	Sacat		50	10	235
19	14/3 P.M	Gamel Abdel-Nasr		30	6	104
20	14/3 P.M	Orabi		30	6	102
21	29/3 A.M	Mobarak	1	00	10	246
Total						3893

TABLE (2)

MODAL SPLIT RATIOS AT DIFFERENT STATIONS BEFORE OPENING FOR PASSENGERS COMING TO THE STATIONS

STATION	MODES						
	WALKING	BUS	SHARED TAXI	TAXI	CAR	RAIL	KISS & RID
HELWAN							
AIN HELWAN	29	71					
WADI HOF	70	10	10		10		
HADAYK HELWAN	86		14				
MAASARA	100						
TURA ESMENT	100						
KOTSIKA	100						
TURA BALAD	100						
THAKANAT	21	21	58				
MAADI	47	16	37				
HADAYK MAADI	100						
DAR ELSALAM	80	4	11		5		
ZAHRAA	64	36					
MARY GERGES	75	25					
MALEK SALEH	50	41	4.5		4.5		
SAYEDA ZEINAB	57	26	6			12	
SAAD ZAGHLOUL							
SADAT							
GAMAL ABDEL-NASR							
ORABI							
MOBARAK							

TABLE (3)

MODAL SPLIT RATIOS AT DIFFERENT STATIONS BEFORS OPERNING
FOR PASSENGERS LEAVING THE STATIONS

STATION	MODES						
	WALKING	BUS	SHARED TAXI	TAXI	CAR	RAIL	KISS & RIDE
HELWAN							
AIN HELWAN	66	25	9				
WADI HOF	97	3					
HADAYK HELWAN	86	14					
MAASARA	89	11					
TURA ESMENT	87	13					
KOTSIKA	100						
TURA BALAD	83	17					
THAKANAT	87	5	8				
MAADI	78	11	11				
HADAYK MAADI	100						
DAR ELSALAM	80		20				
ZAHRAA	62	38					
MARY GERGES	67	33					
MALEK SALEH	85	15					
SAYEDA ZEINAB	40	52		9			
SAAD ZAGHLOUL							
SADAT							
GAMAL ABDEL-NASR							
ORABI							
MOBARAK							

TABLE (4)

MODAL SPLIT RATIOS AT DIFFERENT STATIONS AFTER OPENING

FOR PASSENGERS COMING TO THE STATIONS

STATION	MODES						
	WALKING	BUS	SHARED TAXI	TAXI	CAR	RAIL	KISS & RIDE
HELWAN	53	18.5	22	4	1	0.5	0.5
AIN HELWAN	91	4			1	4	
WADI HOF	94	1	2.5		1	1.5	
HADAYK HELWAN	97		3			1	
MAASARA	99	1					
TURA ESMENT	90	5	2.5				2.5
KOTSIKA	96	2	1				1
TURA BALAD	94	3	1				2
THAKANAT	82	4	9.5	0.5	1	2.5	0.5
MAADI	70	4	17		0.5	5	3.5
HADAYK MAADI	86	3	10				1
DAR ELSALAM	91	1.5	4	0.5	2		1
ZAHRAA	72	16	6				6
MARY GERGES	83	6	2.5	0.5	1		6
MALEK SALEH	68	20	3	1	1		7
SAYEDA ZEINAB	67	26	3	1	1		2
SAAD ZAGHLOUL	91	6	0.5				2.5
SADAT	69	23.5	4	2	0.5		1
GAMAL ABDEL-NASR	88.5	4.5	2	2.5			2.5
ORABI	59	28	8	1			4
MOBARAK	35	28	10	5	9	1	12

TABLE (5)

MODAL SPLIT RATIOS AT DIFFERENT STATIONS AFTER OPENING
FOR PASSENGERS LEAVING THE STATIONS

STATION	MODES						
	WALKING	BUS	SHARED TAXI	TAXI	CAR	RAIL	KISS & RIDE
HELWAN	67	13.5	18	0.5	1	1	1
AIN HELWAN	92	3	1.5		3		0.5
WADI HOF	75	3	20.5		1.5		
HADAYK HELWAN	86.5	3.5	9	1			
MAASARA	98.5	0.5	1				
TURA ESMENT	100						
KOTSIKA	98	2					
TURA BALAD	99	1					
THAKANT	89	2	5	2	2		
MAADI	78	4.5	15.5	1	0.5		0.5
HADAYK MAADI	92	5	2		0.5		0.5
DAR ELSALAM	82	3.5	13	0.5	0.5		0.5
ZAHRAA	86.5	11.5	1.5		0.5		
MARY GERGES	92	8					
MALEK SALEH	73.5	20	4.5	2			
SAYEDA ZEINAB	68	27	2	1			1
SAAD ZAGHLOUL	93	4	1	1			1
SADAT	62	31	4	2	1		
SAMAL	70	22	7		1		
ORABI	61	36	3				
MOBARAK	36	33	13	4	5		7