THE MARKET SEGMENTATION OF A PUBLIC TRANSPORT CORPORATION IN A DEVELOPING ECONOMY (A CASE STUDY OF NIGERIAN RAILWAY CORPORATION)

BY

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CERTIFICATION

This thesis entitled the Market Segmentation of a Public Transport Corporation in a Developing Economy: A Case Study of Nigerian Railway Corporation by Christopher Chekwube Nwokafor meets the regulations governing the award of the degree of Master of Business Administration of Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DECLARATION

I hereby declare that this write-up is original and a product of my research findings and that I am responsible for any error of commissions or omissions.

All textbooks and artices used have been acknowledged accordingly in the references.

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DEDICATION

This thesis is dedicated to my elder Brother and wife Mr. A. A. Nwokafor and Mrs. P. C. Nwokafor for their guidance and counselling.

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ABSTRACT

One of the agencies through which transport services is carried out, is the Railways. It is one of the most important modes of transportation and very essential for economic activities of any nation. It has the responsibility for providing rail services. In Nigeria this responsibility is vested in the Nigerian Railway Corporation.

The importance of rail services in national development cannot be overemphasised and the potential advantages offered by rail services over other modes are technically numerous, viz; higher safety margin, better space utilization, traffic access priority, greater fuel economy and less pollution.

The Nigerian Railway Corporation markets its services to match the advantageous features of rail transport mentioned above, marketing of products and services though require the same marketing principles, but has different marketing strategies to be accomplished.

It is on this note that I examined the marketing segmentation of the Nigerian Railway Corporation as a marketing strategy and seek to show descriptively and as quantitatively as possible how far this marketing effort of Nigerian Railway Corporation conform or depart from the original concept of market segmentation and also to explain what changes are necessary to put matters right.

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CHAPTER ONE

INTRODUCTION

The provision of transport facilities and services are very crucial to the economic, political, social and cultural life of a nation. There is hardly an aspect of a nation's development in which transportation is not an essential ingredient since there is always the need to collect, assemble, move of transfer and distribute people and things.[1]

Basically transportation is hardly in demand for its own sake, but is derived from the needs of every other activity located in space. Therefore the demand for transport arises from the desire to use it for achieving certain goals, transportation then, is primarily a service industry, or a service sector of the economy.

Rail services as a mode of transportation plays a vital role in the development of any nation. The choice of people between alternative modes of transportation depends upon consideration of quality of service and the cost of obtaining it. To attract patronage, the rail services must be efficient, effective and economical. That is, it should be fast, regular and dependable to create new markets and to retain the existing ones.

Development of these new markets and the maintenance of the old ones depends in parts upon the marketing strategies and planning employed so as to meet competition from alternative modes of transport and the quality and capabilities of the staff charged with the marketing efforts of the organisation.

Success in planning marketing activities require precise utilization of both product or service diferentiation and market segmentation as component of marketing strategy (Kurtz, David L. & Boone Louis E. 1981).[2]
The Nigerian Railway Corporation apply marketing segmentation strategy in offering its services to the public.

Conceptually, as stated by Frank, Ronald E et al (1972), the choice of segmentation as a market strategy for industrial services is predicted on the same assumption and criteria as segmentation for consumer goods. The only difference, therefore, between consumer and industrial market segmentation involve the — specific bases used for segmentation.[3]

A market segmentation is simply a group of present or potential customers with some common characteristic which is relevant in explaining (and predicting) their response to a suppliers marketing stimuli (Frank, Ronald E. et al Ibid).[4]

As a marketing strategy, market segmentation involves first identifying particular segments and then developing differentiated marketing programmes for each of those segments. These programmes may differ with respect to product design, communication or distribution channels used etc. To be useful to marketers, segments must be sufficiently large to make such tailoring of marketing programmes worthwhile.[5]

Market segmentation of the Nigerian Railway Corporation took the laissez-faire approach as there is no department solely responsible for marketing. The marketing effort of the Nigerian Railway Corporation is carried out by the operation and commercial department of the Corporation. The department applied a shade criteria for segmentation of its market, that is yet to make any meaningful impact in the marketing activities of the Nigerian Railway Corporation.

This study therefore, attempts to make a modest contribution to the development of a more effective and efficient market segmentation strategies of the serices of the Nigerian Railway Corporation. (The first part of the paper that is chapter one deals exclusively on the introduction of the subject, the scope and objectives of the study, the research methods, the data collection and the literature review on marketing segmentation. Chapter two examines the existing market segments in the Nigerian Railway Corporation while chapters three and four discuss the objectives and importance of marketing segmentation to the Nigerian Railway Corporation respectively. Chapter five deals with the problem of marketing segmentation in the Railways and the prospect, recommendation and conclusion formed the content of the sixth chapter.).

SCOPE AND OBJECTIVE OF THE STUDY

Marketing segment in the Railways is a marketing strategy that involves the classification of the customer into distinct sections that possess common characteristics.

This study is to provide a greater understanding of the nature of segmentation in the Railways and how such segmentation could be best achieved.

The objective of the study are thus:

1.i. To examine the existing market segmentation in the Nigerian Railway Corporation.

ii. To analyse the criteria of segmentation in the Railways.

iii. To identify problems associated with segmentation in the Railways.

It also aims at achieving a balance and a comprehensive marketing segmentation procedure which will promote and guide Nigerian Railway Corporation's marketing efforts in the future.

PROBLEM DEFINITION

The Nigerian Railway Corporation's services have become increasingly difficult to market largely because it is difficult to analysis precisely and concisely the factors on which to segment its market.

Inability to overcome this problem threatens to make the big public transport corporation an economic liability rather than an asset. The crisis, became worse with the result of the growing concentration of transport services competition in the last five decades.

The problems associated with segmenting the Nigerian Railway Corporation's market could be said to involve the following:

i. Identifying the service features.
ii. Determing compatible customer characteristics.
iii. Collection of customer data.
iv. Analysis of these data.
v. Grouping of customers into segments.
vi. Capability of reaching the segments with appropriate marketing programmes.
viii Feed back from the results of the marketing segmentation strategy.

HYPOTHESIS

In order to determine the effectiveness of marketing segmentation as a marketing strategy and to ascertain the pattern of rail services, the viability of the segments and the role of the strength and weakness of the corporation, the following hypothesis will be tested:-

1 That the low speed, delays, running behind schedules and infrequency of the rail services determine the degree of rail services patronage by the segments.
2. That the pattern of rail services are influenced by the segments.
3. The number of trains moved by the corporation at a point in time are proportionate to the schedule of the segments that existed.
4. Freight segments is a more viable segment that the passenger segments.

5. The infrequency of the rail services does not influence the usage of rail services by the individual segments.

DATA COLLECTION

Data was collected on the number of market segments in the Nigerian Railway Corporation, the criteria for segmentation and the marketing efforts to reach these segments.

A number of problems were encountered during the field work and among them were the following:

First, the illiterate members of the populance were initially very suspicious of the motives even after due explanations. Again some of the respondents refused to accept the questionaires, some did accept them but failed to complete them.

Furthermore, the research methods were time consuming and expensive as the researcher had to visit Divisional Headquarters of the Nigerian Railway Corporation at Zaria, Enugu, Ibadan, Bauchi, Abuja and Lagos to interview Railway staff, other people and companies.

These problems notwithstanding, the research was concluded on time and almost every information sought for was collected.

LITRATURE REVIEW

Market segmentation has been steadily moving towards centre stage as a topic of discussion in marketing and research circles. In the words of Kurtz, David L. et al (1981), hardly a conference passes without at least one session devoted to it. One of the most striking developments in marketing is the amount of interest shown in market segmentation strategy.[6]

Britt Boyd (1978) held the same view, to him, the concept of market segmentation has triggered a considerable amount of discussions and articles for some decades now.[7] These views imply that there is a real opportunity for a better understanding of the concept of market segmentation by use of a new series of multivariate studies.

The reasons for market segementation have been advanced by many authors. According to Philip Kotler (1985), markets consist of sellers and buyers, they differ in one or more aspects, in their geographical locations, desires, resources, buying habits and practices. Any any of these variables can be used to segment a market.[8]

To him, the maximum number of segments that a market can contain is the total number of buyers making up that market. Each buyer is potentially a seperate market, because of unique needs and desires.

On the same vein, wendell Smith (1956) believed that the concept of market segmentation is based on the proposition that consumers are different and that these differences are related to differences in market demand. In his words, "segmentation is a process of seperating to find differences between potential customers and then recombining customers who have one of more of these differences in common".[9]

To delineate markets into segments does not seem difficult, but to put the description into practice is not easy, these are the views of Julius O. Onah (1979).[10] Kurtz David L. et al op cit, also expresses the same view, to them market segmentation may be regarded as a force in the market place that will not be denied. It may result, from trial and error in the sense that generalised programmes of product differentiation may turn out to be effective in some segments of the market and ineffective in others. So recognition of an intelligent response, to such situation necessarily involve a shift in emphasis.[11]

Burton H. Marcus et al (1978) looked at market segmentation as a means of viewing the market place to:

i identify additional opportunities and

ii to pinpoint target markets for opportunities previously identified.[12]

In the process both the market and the firm must be analysed. Analysis will reveal the segmentation variables most important to the organisational goals and objectives. These segmentation variables and the organisational goals then combine to inspire programmes for the target markets the firm wishes to serve. Such programmes, of course, specify the mix of marketing efforts most appropriate for the short or long term goals established.

Segmentation having been accepted as a marketing strategy, one is then left with determing on what bases to segment. To Britt Boyd, op cit market segmentation has permeated the thinking of theorists, researchers and managers perhaps more than any of the other fashions and fads that marketing has passed through. Until recently the controversial nature of the issue has been not whether or not segmentation leads to meaningful analysis as much as on what basis to segment.[13]

To the earlier marketing manager, the natural segment of population were related to the socio-economic and demographic variables found in the population census. But the field was not to be left to the census analysis alone, for soon after, personality variables and such concepts as usage ratem brand loyalty, advertising susceptibility and even sensitivity were to make their impact.

Unfortunately these are not susceptible to easy measurement. A second condition is that of accessibility - the degree to which any given segment can be differentially reached.

The final condition is that of substantiality the degree to which the segments are large enough to be worth sub-dividing for seperate marketing activity.

The market concept and related search for products that more effectively satisfy consumer needs often necessitate market segmentation analysis. Burton H. Marcus et al op cit argues that the procedure of market segmentation has passed through two main stages. They stated that the early procedures for segmenting markets used obvious and sometimes crude variables; geography, product usage, product type, industry class or buyer income to name a few. Segmentation by such variables is helpful for both identifying opportunities and developing market strategies. However, use of slightly more complex variables, although often costly and difficult to measure accurately, is frequently more telling. Market literature in the past decade or so has included discussions of such techniques as psychographic segmentation, buyer behaviour and benefit analysis.[14]

This literature review shows that marketing segmentation of consumer goods has been largely studies, problems associated with the procedure of segmentations identified and solution towards solving them offered. Yet, there are still much to be done in the area of market segmentation more especially in a services industry, hence less work has been done in this area.

Therefore, in this study more emphasis are to be directed to the analysis of the procedures and factors on which segmentation of the services of the Nigerian Railway Corporation is based as well as determing the marketing programmes to reach these segments.

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CHAPTER TWO

2.0 EXISTING MARKET SEGMENTS IN THE NIGERIAN RAILWAY CORPORATION

It is difficult to draw a line of distinction between the market segments of the Nigerian Railway Corporation. It could be said that naturally, the segments falls along the type of services being rendered by the Corporation. However, a customer may demand more than one of these services which makes the criteria less dependable. Discussed below are the existing market segments in the Corporation.

2.1 PASSENGER TRAINS

The passenger trains are trains that are for the movement of people exclusively between the point of origin and point of termination. It involves persons of different classes, sexes and ages as well as economic standing. It also runs between towns and villages that are found along the rail lines. There are two categories of passenger train that could be regarded as market segments.

2.1.1 THE EXPRESS PASSENGER TRAIN

These are trains that move people from a major Railway terminal to the other. They are meant to move passengers from one urban area to the other, strictly on schedules. It's services therefore, are made available to the potential rail travellers in the urban

areas where railway stations are found. These terminals are Lagos, Port Harcourt, Kano, Jos and Maiduguri.

The Nigerian Railway Corporation runs six express passenger trains in the past but runs three at the moment.

The surviving ones are:-

i. Lagos - Kano - Lagos

ii. Port Harcourt - Kano - Port Harcourt

iii. Port Harcourt - Maiduguri - Port Harcourt.

The running of Lagos - Jos - Lagos, Lagos - Maiduguri - Lagos and Port Harcourt - Jos - Port Harcourt had been suspended.

The market segmentation of Nigerian Railway Corporation in respect of the express passenger trains is to reach all categories and levels of the urban populace. The target is the high, middle and low income earners of the urban society.

The people who fall into this category of travellers by rail form the market segment of this class of rail services. Though we assume the above criterion for this segment of Railway customers, there is no factor to distinguished them from the over-all urban populace.

To determine the make up of the present express passenger train travellers both in some Railway towns and inside the express trains, as well as the potential express train passengers in these urban areas. Below are the tables of the survey conducted in some selected towns with Railway station.

TABLE I: NUMBER OF RESPONDENTS INTERVIEWED IN EIGHT MAJOR RAILWAY TOWNS IN NIGERIA BY PROFESSION

S/NO.	TOWNS	CIVIL SERVANTS	TRADERS	SELF EMPLOYED PERSONS	STUDENT	TOTAL
1	Kano	125	125	125	125	500
2	Kaduna	125	125	125	125	500
3	Ibadan	125	125	125	125	500
4	Lagos	125	125	125	125	500
5	Enugu	125	125	125	125	500
6	Port Harcourt	125	125	125	125	500
7	Maiduguri	125	125	125	125	500
8	Jos	125	125	125	125	500
	TOTAL	1000	1000	1000	1000	4000

TABLE II: POTENTIAL EXPRESS PASSENGER TRAIN TRAVELLERS IN THESE TOWN

S/NO.	TOWNS	CIVIL SERVANTS	TRADERS	SELF EMPLOYED PERSONS	STUDENT	TOTAL
1	Kano	83	114	56	111	364
2	Kaduna	95	108	44	98	345
3	Ibadan	62	86	49	92	289
4	Lagos	77	81	52	88	298
5	Enugu	85	99	61	107	352
6	Port Harcourt	61	102	33	91	287
7	Maiduguri	48	84	29	78	239
8	Jos	59	94	46	104	303
	TOTAL	570	768	370	769	2477

Source; field work 1995

TABLE III ACTUAL EXPRESS PASSENGER TRAIN TRAVELLERS IN THESE TOWNS

S/No.	Towns	Civil Servants	Traders	Self Employed persons	Students	Total
1	Kano	31	58	16	49	154
2	Kaduna	30	33	9	34	106
3	Ibadan	22	22	11	41	96
4	Lagos	28	39	8	35	110
5	Enugu	11	28	10	22	71
6	Port Harcourt	12	41	4	15	72
7	Maiduguri	8	25	6	11	50
8	Jos	14	36	7	21	78
	Total	156	282	71	228	737

Source: NRC

The result of the analysis indicated that out of 4000 people interviewed in these towns, 3263 persons are not currently using the express passenger trains for their travel, that is about 81.58% leaving only 737 or 18.42% as those that use the express passenger trains presently for their travels.

The result also reveals that 62% or 2477 of 4000 persons interviewed are potential express passenger train users that are not being reached with it's services. This shows that 786 or 19.6% of 4000 people do not make use of the express passenger train at all.

This goes a long way to prove that Nigerian Railway Corporation has not been able to reach a substantial segment of the society with its services of the express persenger trains.

Furthermore, of the 737 persons actual rail travellers of the 4000 respondents, Traders ranked first with 282 persons or 33.3%, next is the students with 228 or 31% and the civil servants and the self employed persons have 156 or 21% and 71 or 9.7% respectively. In essence traders and students make up the bulk of the express passenger train users. This is evident in both the potential and actual rail travellers as shown in tables two and three.

Considering the towns in isolation, the percentage of potential and actual rail travellers on express passenger trains defers, as shown below:

	Potential travellers	Actual traveller	Difference
Kano	72.8%	30.8%	42%
Kaduna	69%	31.2%	47.8%
Ibadan	57.8%	19.2/	38.6%
Lagos	59.6%	22%	37.6%
Enugu	70.4%	14.2%	56.2%
Port-Harcourt	57.4%	14.4%	43%
Maiduguri	47.8%	10%	37.8%
Jos	60.6%	15.6%	45%

From the above analysis it is obvious that Nigerian Railway Corporation has not been able to reach half of the potential express passenger train travellers in these towns with their services. This by implication means that a lot need to be done to reach a substantial number of these potential express passenger train travellers in the towns with railway station.

For instance in Enugu about 70.4% of the sampled population are potential express passenger train travellers and out of this percentage only 14.2% has been reached by the Corporation with it's services, leaving 56.2% to be reached. The ratio of the number reached and yet to be reached is about 1:4. This ratio is on the high side. For Jos, Port Harcout and Maidugiri the ration 1:3. Kaduna and Ibadan has a ratio of 1:2 while Kano and Lagos has a ratio of 1:1.5.

Apart from studies conducted in the Railway towns; surveys were also carried out at the surviving express passenger trains. The data is shown below:

TABLE IV: NUMBER OF RESPONDENTS INTERVIEWED INSIDE EXPRESS PASSENGER TRAINS BY CLASSES

S/No.	Express Passenger trains	1st class sleeper	1st class seater	2nd class	Total
1	Lagos-Kano	10	108	382	500
2	Kano-Lagos	7	118	375	500
3	Port Harcourt-Kano	-	-	500	500
4	Kano-Port Harcourt	-	-	500	500
5	Port Harcourt-Maiduguri	-	-	500	500
6	Maiduguri-Port Harcourt	-	-	500	500
		17	226	2757	3000

Source: Field work 1995

This segment of rail users can be classified according to the coaches provided by the Nigerian Railway Corporation for the individual express passenger trains. Apart from Lagos - Kano - Lagos express passenger trains that has three classes of passengers, Port Harcourt - Maiduguri - Port Hartcourt and P/Harcourt - Kano - Port Harcourt have only one class of passengers.

A total of 1000 passengers were interviewed on Lagos-Kano Lagos express passenger train, out of these number, only 16 or 1.6% were first class sleeper passengers, 22.7% or 227 passengers were first class seater passengers while 757 passengers or 75.7% were 2nd class passengers. This shows that the Lagos-Kano-Lagos express passenger train travellers were more on the 2nd class. Port Harcourt - Maiduguri - P/Harcourt and Port Hartcourt - Kano - P/hartcourt have only a class of passengers (ie 2nd class passengers). Below is the table of the Respondents in the express passenger trains by income level.

TABLE V RESPONDENTS IN THE EXPRESS PASSENGER TRAINS BY INCOME LEVEL

Income P.A ₦	Lagos-Kano-Lagos	P/Hartcourt-K/P/Hartcourt	P/Hartcourt-M/P/Hartcourt	Total
1,000-15,000	495	589	598	1682
16,000-30,000	289	344	297	930
31,000-48,000	129	49	67	245
49,000-60,000	82	16	28	126
61,000&Above	5	2	10	17
TOTAL	1000	1000	1000	3000

Source: Field work 1995

The above data reveals that this segment of Railway passengers for express trains are made up of

i low income earners - 87.06%

ii middle " " - 12.37%

iii high " " - 0.57%

The low income eaners forms the bulk of this segment of Railway passengers. This is a reflection of the class of coaches use in running these trains.

However, below is the tables of the respondents interviewed in the Railway towns by income level, for both potential and actual express passenger train travellers.

TABLE VI CLASSIFICATION OF RESPONDENTS IN TABLE II BY INCOME LEVEL

TOWNS	₦ P.A 1000-15000	₦ P.A 16,000 30,000	₦ P.A 31000- 48000	₦ P.A 49000- 60000	₦ P.A 61000- &Above	TOTAL
Kano	105	94	68	57	40	364
Kaduna	84	86	79	51	45	345
Ibadan	72	81	55	39	42	289
Lagos	80	73	54	56	35	298
Enugu	106	120	61	44	21	352
P/Hartcourt	71	89	58	52	17	287
Maiduguri	78	54	43	39	25	239
Jos	73	72	68	66	24	303
TOTAL	669	669	486	404	249	2477

Source: field work

*₦ P.A = Naira per annum

TABLE VII RESPONDENTS IN TABLE III BY INCOME LEVEL

TOWNS	₦ P.A 1000-15000	₦ P.A 16000-30000	₦ P.A 31000-48000	₦ P.A 49000-60000	₦ P.A 61000 & Above	TOTAL
Kano	56	47	36	12	3	154
Kaduna	30	39	24	6	7	106
Ibandan	31	29	19	12	5	96
Lagos	38	40	27	5	-	110
Enugu	44	20	7	-	-	71
P/Hartcourt	31	30	8	3	-	72
Maiduguri	20	13	15	-	2	50
Jos	37	31	9	1	-	78
TOTAL	287	249	145	39	17	737

Source: field work

The above tables can be interpreted thus: For potential travellers on express passenger trains

i low income earners - 54.01%

ii middle " " - 39.93%

iii high " " - 10.06%

For actual express passenger train users

i low income earners - 72.72%

ii middle " " @ 24.98%

iii high " " - 2.30%

Comparison of respondents in the various express passenger trains by income level and those at some selected Railway towns for actual users of express passenger trains shows a positive deviation of about 14.34% in the low income earners, a negative deviation of 12.61% and 1.73% for middle and high income earners respectively.

These indicates that there is a decline in patronage from the middle and high income earners in the use of express passenger trains and an increase in patronage of the low income earners of express passenger trains. This development has a negative impact to the survival of the Railways and also an indicator to the economic situation of the nation.

On the same vein, a comparison of the respondents in the express passenger trains by income level and the repondents in the selected Railway towns of potential express passenger train users, shows a positive deviation of 33.05% for the low income earners and a negative deviation of 23.56% and 9.49% for middle and high income earners respectively.

This implied that Nigerian Railway Corporation has not been able to reach 23.56% and 9.49% of the middle and high income earners respectively with their express passenger train services. While her services are provided to the low income earners in excess of 33.05% a situation not healthy for the growth of the Corporation.

These results is a manifestation of the classes of coaches being used to run the express passenger trains by the Corporation. As stated before, it is only Lagos - Kano - Lagos express passenger train that has provision for these three classes of passenger, the other trains has only second class coaches, thereby, emphasising more on the movement of low income earners and a few loyal high and middle income earners.

A more rational judgement will be that of finding the percentage of the first and second class passengers of express passenger train of Lagos - Kano - Lagos being the only route with such classes. In that vise the result will be.

i	1st class sleeper	-	1.7%
ii	1st class seater	-	22.6%
iii	2nd class	-	75.7%

Percentage by income level is shown below:-

i	High Income earners	-	0.50%
ii	Middle " "	-	21.10%
iii	Low income earners	-	78.40%

The comparison of the percentages of the classes with that of the income level do not exhibit much deviation. The differences either postive or negative are very small. This means that because the three classes of coaches are prvded all levels of the society is accommodated in the express, passenger train of Lagos - Kano - Lagos.

2.1.2 THE LOCAL PASSENGER TRAINS (MASS TRANSIT TRAINS-MTT)

Trains that serve the rural areas falls under this category. There are some villages and suburbs that are yet to have access roads, they still depend on the rail services (where railway is provided) to reach the urban areas. This type of Railway services are aimed at bringing the rural dwellers as well as their agricultural products to the urban areas.

Before the economic crunch in the Nigerian Railway Corporation, there are over 12 local passenger trains all over the system, viz:

i Enugu - Port harcourt - Enugu
ii Enugu - Makurdi - Enugu
iii Makurdi - Kafanchan - Makurdi
iv Kafanchan - Kaduna - Kafanchan
v Kafanchan - Jos - Kafanchan
vi Zaria - Nguru - Zaria
vii Zaria - Kaura Namoda - Zaria
viii Zaria - Baro - Zaria
ix Bauchi - Maiduguri - Bauchi
x Bauchi - Kafanchan - Bauchi
xi Ibadan - Minna - Ibadan
xii Ibadan - Iddo - Ibadan
xiii Apapa - Idogo - Apppa

At present few of these trains still operate, these are:-

i Minna - Kaduna - Minna
ii Enugu - Port harcourt - Enugu
iii Iddo - Iju - Iddo

Although the code names given to these trains in the past have changed from sub urban trains to mass transit trains (MTT), the purpose remain the same.

The difference between the local passenger trains and express passenger trains is that local trains terminates within a shorter distance and it stops at every station along the rail line, whereas, the express passenger trains goes a long way, that is from one terminus to the other and they

stop only at the depot stations (stations found in urban and semi-urban areas) or station's designated for the stoppage of the express passenger trains where the distance between two urban stations is enormous.

To determine the composition of this segment of railway travellers, the researcher carried out a survey of some Railway station along which these local passenger trains ply as well as inside these local trains now refered to as Mass Transit Trains (MTT). The table below are the respondents by profession and income level.

TABLE VIII RESPONDENTS AT RAILWAY LOCAL STATION BY PROFESSION

S/No.	Local Stations	Civil servant	Tra-ders	Self Emplo-yed	Students	Total
1	Iddo	28	39	14	19	100
2	Oshodi	37	32	13	18	100
3	Iju	33	36	11	20	100
4	Mbawsi	8	50	16	26	100
5	Uzuakoli	9	46	13	32	100
6	Afikpo Road	14	53	11	22	100
7	Gwada	11	52	7	30	100
8	Sarkin Pawa	20	48	10	22	100
9	Gwargwada	16	44	8	32	100
	TOTAL	176	400	103	221	900

Source; field work 1995

The breakdown of table VIII shows the following consequences:-

i Civil Servants - 19.56%

ii Traders - 44.44%

iii Self Empolyed - 11.44%

iv Students - 24.56%

Looking at the above result the traders and students will be the target of this segment, but that could not be the case if the analysis will group the stations for each local train seperately, that is:-

Iddo - Iju MTT (Apapa, Oshodi & Iju)

i Civil servant - 32.67%

ii Traders - 35.67%

iii Self employed - 12.66%

iv Students - 19.00%

Enugu-Portharcourt MTT (Mbawsi, Uzuakoli & Afikpo Rd)

i Civil servants - 10.33%

ii Traders - 49.67%

iii Self employed - 13.33%

iv Students - 26.67%

Minna - Kaduna MTT (Gwada, Sarkin Pawa & Gwargwada)

i Civil servants - 15.67%

ii Traders - 48.00%

iii Self employed - 8.33%

iv students - 28.00%

Above data shows that in Lagos areas the target should be on civil servants and traders, whereas, at Kaduna - Minna and Enugu - PH areas, the emphasis remained the same traders and students. To avoid absurdity in the above analysis, the travellers in the local trains were also interviewed. Below is the table of the respondents.

TABLE IX RESPONDENTS IN THE MTTS ACROSS THE COUNTRY BY PROFESSION

S/No.	Local Trains (MTT)	Civil servant	Tra-ders	Self emplo-yed	Stu dents	Total
1	Minna-Kaduna	31	84	22	63	200
2	Enugu-P/H-Enugu	42	86	15	57	200
3	Iddo-Iju-Iddo	72	66	18	44	200
	TOTAL	145	236	55	164	600

Source: field work 1995

The percentage composition of this segment by profession is shown below:-

i Civil servnats - 24.17%
ii Traders - 39.33%
iii Self employed - 9.17%
iv Students - 27.33%

Comparison of the data obtained from local station and in the MTT trains reveals a positive deviation on the part of Civil servants and Students, while a negative deviation is recorded for traders and self employed. The percentage of the passengers moved on individual MTTs are shown below:-

Iddo - Iju MTT			Stations (Local)
i	Civil servants	36%	32.67%
ii	Traders	33%	35.67%
iii	Self employed	9%	12.66%
iv	Students	27%	19.00%
Enugu - PH MTT			
i	Civil servant	21%	10.33%
ii	Traders	43%	49.67%
iii	Self employed	7.5%	13.33%
iv	Students	28.5%	26.67%
Minna - Kaduna MTT			
i	Civil servants	15.5%	15.67%
ii	Traders	42.0%	48%
iii	Self employed	11.0%	8.33%
iv	Students	31.5%	28.00%

Comparing both data of local stations and MTT in the Lagos area, the deviations are not much the students and traders are the targets of this segment in the area. At Enugu - PH, MTT there are quite some deviations, so also is Minna - Kaduna MTT. However, the students and the traders are still the target of this segment on the three mass transit trains.

The analysis of the respondents both at the local stations and on the MTTs on income level are shown hereunder:

TABLE X RESPONDENTS AT RAILWAY LOCAL STATIONS BY INCOME LEVEL

S/No.	Local Rly Stn	1000-30000 N	31000-60000 N	60000 & Abowe N	Ttotal
1	Iddo	44	45	11	100
2	Oshodi	49	42	9	100
3	Iju	53	39	8	100
4	Mbawsi	87	13	-	100
5	Uzuakoli	78	21	1	100
6	Afikpo Road	78	22	-	100
7	Gwada	76	23	1	100
8	Sarkin Pawa	80	18	2	100
9	Gwargwada	89	11	-	100
	TOTAL	634	234	32	900

Source; field work 1995

TABLE XI RESPONDENTS IN THE VARIOUS MTTS BY INCOME LEVEL

S/No.	Rly L/Trains (MTT)	1000-30000	31000-60000	61000 & Above	Total
1	Minna-Kaduna Minna	114	82	4	200
2	Enugu-PH-Enugu	94	98	8	200
3	Iddo-Iju-Iddo	86	99	15	200
	Total	294	279	27	600

Source: field work 1995

The above information is analysed below:-

			MTT	Local Stations
i	High Income earners	-	4.5%	3.56%
ii	Middle " "	-	46.5%	26.0%
iii	Low " "	-	49.0%	70.44%

The above data indicates a positive deviation on the part of middle and high income earners and a negative deviation on the part of low income earners; in the use of MTT.

This means that more high and middle income earners travels with the MTT than was expected from the respondent at the local Railway stations. On the contrary less low income earners travels with the MTT as against what was expected from the respondents at the Railway local stations.

Further analysis of this data on individual sections of the MTT reveals thus:

S/No.	MTT Section	Income Class	MTT	Local Rly Stations	Difference
1	Minna-Kaduna	High Middle Low	2% 41% 57%	1% 17.33% 81.67%	+1% +23.67% -24.67%
2	Enugu-PH	High Middle Low	4% 49% 47%	0.33% 18.67% 81.%	+3.67% +30.33% -34%
3	Iddo-Iju	High Middle Low	7.5% 49.5% 43%	9.33% 42% 48.67%	-1.83% +7.5% -5.67%

The middle and high income earners have a positive deviation on comparison of the travellers on the Enugu & Minna MTTs and those at the local stations, while the low income earners has a negative deviation. In essence it goes the same way as the analysis of overall result of table XI. That of Lagos MTT and the local stations shows a positive deviation on middle income earner and a negative deviation on the part of the high and low income earners.

The Lagos MTT respondents deviation from the local station are very mininal when compared with that of Enugu-PH and Minna - Kaduna. This suggests little or no improvement is required for the Lagos area MTT, it is ~~an~~ almost stable. A lot need to be done in respect of the Minna - Kaduna and

Enugu - PH MTTs were the deviations are enomous.

2.2 THE FREIGHT TRAINS

It is obious that the function of the Corporation runs into two folds. One is to move people from one destination to the other. Two to move goods from one point to another. Sometimes these functions are interwoving, hence passenger trains have provinsions for luggages and loads. However, goods moved by the Corporation are classes could be regarded as market segments and are discussed below:-

2.2.1 GENERAL CARGO TRAINS

The movement of such goods are bags of rice, bags of cement, tons of wheat, tubers of yams, household utencils, furnitures, electronics, logs of timber, iron and steel products, palm produces, form the bulk of this segment. The goods train could originate from any station (both local and depot), provided the station in question generates enough loads that demands the running of such train from that station to it's destination point or the nearest station to the destination point, if it is outside any of the Railway station.

Such manufacturing concerns as the Ashaka Cement Company, Nkalagu Cement Company, flour mills, fertilizer Coy, PZ industries, lever brothers, cadbury as well as processing companies such as Taraku vegetable oils Ltd and Dantata oil and mineral company demands the services or general cargo trains. Individuals that demand at periodic intervals such services are considered also as elements of the segmentation.

Below are the tables of data collected from some companies that move their goods by rail

TABLE XII LIST OF SOME COMPANIES AND THEIR DEMANDED TRIP PER MONTH

S/No.	Manuf.& Process.Co.	Eastern Dis-trict	Wester Dis-trict	Nor-thern Dis-trict	N/E Dist.	Total
1	PZ Industries PLC	8	9	-	-	19
2	National Fertilizer	12	8	2	-	22
3	Dantata oil & Mineral Comp. Kano	-	6	4	-	10
4	Maiduguri flour mils	2	6	-	2	10
5	Ashaka Cement PLC	-	2	-	13	15
6	Ewekoro Cement Plc	-	11	-	5	16
	Total	22	39	6	20	90

Source: NRC Headquarters Lagos Now Abuja

TABLE XIII THE NUMBER OF TIMES THE DEMANDED TRIPS OF THESE COMPANIES WERE MET IN A MONTH

S/No.	Manuf.& Proces. Co.	E/Dist.	W/Dist.	N/Dist.	N/E/ Dist.	Total
1	PZ Industries Plc	2	2	-	-	4
2	Nat.Fertilizer Compl	5	3	1	-	9
3	Dantata oil & M/Co	-	1	19	-	20
4	Maiduguri F/Mills Plc	-	2	-	1	3
5	Ashaka Cement Plc	1	1	-	6	8
6	Ewekoro Cement Plc	-	6	-	3	9
	Total	8	15	20	10	35

Source: NRC Headquarters Lagos Now Abuja

The demand for moving raw materials and finished products from these sampled companies indicates that out of 90 trips expected to be generated in a month, only 35 or 38.88% are being met. This means, that the corporation is yet to satisfy the balance of 61.12%.

The result of individual companies are shown below.

		% of demands met	% of demand not met
i	PZ Industries Plc	- 23.5%	76.5%
ii	National fertilizer	- 40/9%	59.1%
iii	Dantata oil Ltd	- 20%	80%
iv	Maiduguri flour mils	30%	70%
v	Ashaka Cement Plc	- 53.3%	46.7%
vi	Ewekoro cement plc	- 56.5%	43.5%

The analysis of individual companies makes a modest and immense contribution to the study of the segmentation of the Nigerian Railway Corporations markets. Apart from the cement companies which have about 50% of their demanded trips satisfied, others are below this mark. Dantata is the worst hit with 20% followed by PZ industries and Maiduguri flour mils Plc.

This result proves that Nigerian Railway Corporation are yet to make an impact in goods transportation,. It also affords the Corporation the opportunity to know of what degree each company will be reached with it's marketing programme.

2.2.2 THE CONTAINER TRAINS

This is a classified goods train in that it carries only goods in containers. These containers are for imported spare parts for cars, industrial machines and electronic equipments as well as raw materials for manufacturing industries all over Nigeria.

It originates from the Port Harcourt or Lagos wharfs and terminates either at the container terminals at some major station as Kaduna and Kano or the Companies of Industries concerned.

It is worthy to note that this segment is made of copanies that use the materials directly as well as cargo companies whose duty is to move these containers on behalf of the

consuming company. Therefore, companies that import materials in container, but do not handle the movement themselve automatically is not in this market segment of the Nigerian Railway Corporation, instead the cargo companies that are entrusted with carrying their container becomes a member of this segment.

The two major companies that makes up this segment are the peugeot assembly Nig. Ltd; (PAN) and the Inland container Nigerian Ltd (ICNL). However, their activities are within western and northern Districts of the Corporation. The trips originate from Lagos whart and terminate at Kaduna or Kano.

In the year 1994 PAN and ICNL demanded 42 trips from Lagos wharfs to Kaduna and Kano. Out of this number only 20 trips were ran by the Corporation as shown below:-

TABLE XIV NUMBER OF TRIPS DEMANDED BY PAN AND ICNL AND NUMBER RAN BY THE CORPORATION IN 1994

S/No.	Name of Company	Trips demand in 1994	Trips ran by the Copp in 1994	% of trip met	% of trip yet to be met
1	ICNL	24	11	45.83%	54.17%
2	PAN	18	9	50%	50%
Total		42	20	47.62%	52.38%

Source: PAN, ICNL and NRC

The services of this segment has only been satisfied by 47.62% and 52.38% are yet to be satisfied. By this result the corporation still has a lot to do to keep the segment alive considering the fact that there are only two companies that make up the segment.

2.2.3 THE LIVESTOCK TRAINS

The movement of livestock forms segment of these rail services. The movement is from the North to Southern Nigerian. The cattle trains run between Nguru, Kaura Namoda and Maiduguri to Umuahia, Enugu, Ibadan and Agege.

This segment of rail users is not easy to reach. The cattle rearers are in the bush all the time, there is no permanent place of abode for them as they keep moving from place to place. This factor makes it more difficult to reach them with the rail services at will.

The segment operates with a sort of middle men. It is the duty of these middle men to reach the cattle rearers and convince them of the availability and advantages of moving their cattle south-wards by rail. That is, they are convassers to Nigerian Railway Corporation.

The members of this segment are mostly from Northern Nigeria where cattle are being reared on a large scale. Studies were undertaken in both North and North Eastern District of the Corporation to acertain the existance and the stability of the segment.

However, we still consider these middlemen as members of this segment although they are not registered under specific trade names. Their duty is to organise the Fulanis' to move their cattle through rail and to arrange with the Corporation on how this will be done effectively.

There are about six loading points currently under use in both the Northern and the North Eastern Districts.

In the Northern District NRC has

i Kaura Namoda Station

ii Gusau Station

iii Nguru station

In North Eastern District NRC has

i Gombe station

ii Buni station

iii Maiduguri station

Below is the data collected from these stations by the researcher.

TABLE XV NUMBER OF POTENTIAL CATTLE TRAINS FROM EACH LOADING POINT AND THE ACTUAL TRAINS MOVED IN A MONTH

S/No.	Station	No.of trains demanded	No.of trains moved	Percentage	Difference
1	K/Namoda	3	-	0%	100%
2	Gusau	2	-	0%	100%
3	Nguru	5	-	0%	100%
4	Gombe	3	1	33.33%	66.67%
5	Buni	4	1	25%	75%
6	Maiduguri	6	2	33.33%	66.67%
	Total	23	4	17.40%	82.60%

Source: from the stations mentioned above;

The information received from the stations shows that about 23 cattle trains are on demand monthly by these middle men and only 4 could be met of these demands. This is about 17.40% leaving 82.60% of their demand yet to be met. If each District is considered seperately, Northern District is yet to make any impact as no fraction of the whole demand is met.

In the North Eastern District, about 30.77% of the cattle train demand had been met leaving a balance of 69.23% Although this District were able to run cattle trains much still needed to be done to increase the number of cattle trains. The data indicates that there are more demand in the North Eastern District, that is 56.52% more than Northern District which has 43.48%. Out of this demand of 56.52% in the North Eastern District 17.40% has been satisfied leaving a balance of 39.12% which is twice the percentage that was satisfied. Where as, nothing has been satisfied out of the 43.48% of the cattle train demands in the Northern District.

2.24 THE PETROLEUM PRODUCT TRAINS

This involves the movement of petroleum products from Port harcourt and Kaduna refineries to companies, or oil depots around the country. The movement could be from the Northern part of the country to the south or vice versa. Oil marketers forms the bulk of this segment as well as the Nigeria National Petroleum Corporation (NNPC).

For the purpose of this study, a sample of the oil marketers will be interviewed at Kaduna refinery. It is not needful to visit port harcourt refinery as the same marketers operate at Kaduna refinery. NNPC and Nigerian Railway Corporation will supply supplemtary information on the movement of petroleum by rail.

However, it is important to note, apart from the public oil companies that operate in both Kaduna and Port Harcourt refineries there are private oil companies that operate locally within one of the refineries depending on it's location.

The study will assume that whatever is applicable to such companies in their locality is applicable to similar companies in another locality. The study involves 7 public oil companies and 3 private oil companies operating from Kaduna refinery.

TABLE XVI NUMBER OF PETROLEUM TRAINS DEMANDED BY SELECTED OIL COMPANIES AND NUMBER RAN BY RAILWAYS IN A MONTH

S/No.	Name of Companies	No.of trains demanded	No.moved by railways	Percentage	Difference
1	African Petroleum	5	1	20%	80%
2	National Oil	4	2	50%	50%
3	Texaco	4	1	25%	75%
4	Unipetrol	6	1	16.67%	83.33%
5	Mobil	3	-	0%	100%
6	Elf oil	2	-	0%	100%
7	Agip	3	1	33.33%	66.67%
8	Himma	3	2	66.67%	33.33%
9	Mubeco	4	1	25%	75%
10	Major oil	6	3	50%	50%
	Total	40	12	30%	70%

Source: NRC NNPC and the oil Companies.

The data above revealed that in a month 12 trains out of 40 trains demanded by the oil companies are met by only 30% by Nigerian Railway Corporation. This means that about 70% of the trips demanded are yet to be met by the Corporation.

Considering the percentage of trips to be satisfied, that is 70%. It is obvious that the Corporation has a lot to do to ensure the existence of this segment. The segment has not been explioted, the services are not adequate at all.

SUMMARY

The existing market segments of the Nigeriam Railway Corporation exhibits a complex structure. This is because a segment may comprise of the end users as well as the cargo companies. A person may be a member of two or more segments at different capacities. Though the marketing segmentation of the Nigerian Railway Corporation suggests that they fall in line with what is being transported.

The study of the existing segments of the Nigerian Railway Corporation shows that the services of the Corporation are yet to reach the expected level to achieving the desired goals.

CHAPTER THREE

3.0 MARKETING SEGMENTATION OBJECTIVES OF THE NIGERIAN RAILWAY CORPORATION

The purpose of a public transport corporation is for mass transportation hence a substantial number of people and goods are moved at the same time. This is to facilitate exchange of goods and services which entails the movement of goods and services.

Therefore, the Nigerian Railways perform this role and for it's survival, it must have a market volume, which requires marketing strategies to obtain the desired goal. For this reason, there is the need for the corporation to segment it's market for easy designing of marketing programmes to reach all the seperate segments.

3.1 AIMS AND OBJECTIVES OF MARKET SEGMENTATION OF NIGERIAN RAILWAYS

Right from time the emphasis has been for the Nigerian Railway Corporation to break even. The Federal Government only carried out the capital projects and subsidized the payment of salaries when the NRC ran at a deficit. Then the issue of marketing was not taken seriously as when the emphasis is now on running at a profit. For this reason, the Railway management has to develop the attitude of carrying out market researches to determine the need of it's customers and the marketing activities of their competitors. Therefore the aims and objectives of segmenting the services of the Nigerian Railway Corporation are:-

3.1.1 TO IDENTITY THE CATEGORIES OF RAILWAY USERS AND THEIR NEEDS

It is the duty of the Corporation to identify her customers, categories them into classes. The classes will be arrived at by studing each customer's characteristics. This will enable the corporation to determine what type of coaches or wagons ~~wx~~ that are required for each category of customers.

Stratification of the society and the classification of the companies is the key element to be considered in determining the needs of the customers. The businesses of the companies that patronise Railway automatically suggest the type of wagons to be used in bringing the raw materials and the type ~~to~~ be used in distributing the finished products. In some cases the same wagons are used for both the raw materials and distributing the finished products.

It is worthy to note that Peugeot Assembly Nigeria Plc (PAN) brings the parts through rail by containers and distribute their assembled cars by using car flat wagons to some major towns in the country. In the case of flour mills, the raw materials which is wheat has a special container wagon for carrying them and the flour produced are carried with covered wagons.

Apart from the above, Nigerian Railway Corporation have other wagons, such as:-

i Low sided bogies: This is used to carry ballast (that is rock or stones, iron bare and sand), materials for the manufacturing of cement etc.

ii Flat wagon for carrying containers used for the importation of car parts and other electronic products.

iii High sided wagons or bogie- This is used to transport coal from the coal mines to the sea ports for export to other countries.

iv Cow wagon: This is a special wagon for the movement of cow. It is closed wagon with wooden qauzed side for ventilation.

v Covered wagon This type is for the movement of goods such as bags of cement, flour, maize beans and other solid material as well as timbers.

The market segmentation of the Nigerian Railway Corporation also aims at knowing the stratum of the society. This will enable the corporation to study what classes of the populace made up it's potential customers/travellers, in Nigeria in general and in each railway station towns in particular. What is the percentage of the low income earners amongst the potentials rail travellers in railway station towns, that of the middle and high income earners are also considered. The occupation of every potential travellers are also to be put into consideration.

This analysis of the characteristics of the potential rail travellers is an indicator to what should be done to satisfy the needs of potential rail users. What coaches are to be used for a particular express or local passenger train can now be determined.

3.1.2 TO ASSESS THE COMPETITOR'S MARKETING ACTIVITIES

Segmenting of Railway services do aim at assessing the competitor's marketing activities. Segmenting railway markets undoubtedly indicates who are their competitors. In that wise, knowing the occupation and the travel characteristics of the populace is a pointer to other transport modes that offer similar services. For instance, a passenger who is going to Kano from Lagos could either undertake the journey by rail, road or air.

Therefore, the corporation's duty is to examine the other potential modes for it's travellers and analyse the speed, standard of services and fares, to be able to decide on how best to improve it's standard of service so as to attract the passengers. It should monitor the activities of such modes of transport that offer similar services so as to compare and determine where improvements are needed.

Obviously the road transportation has the greatest competitors for the railway. Be it in the area of passengers of movement of goods. The motor companies that move passengers need to be studied.

How many passengers do they move in to various parts of the country in a month at the average and what are the number of vehicles doing the job. When do they depart the originating station and when do they arrive the destination station - Time saving.

The above information will be employed by Nigerian Railway Corporation to compare it's performance on these areas. This will help the Corporation to adjust to changes witnessed and to capitalize on the weakness of these motor companies. In the same vein, the study of heavy duty motor companies that haul bulky loads should be undertaken. When Railway segment it's customers in this category it aims at knowing how many motor companies are involved and their specialities.

3.1.3 TO EXAMINE THE CHARACTERISTICS OF PUBLIC TRANSPORT USERS AND THE ENVIRONMENTAL TREND

Passengers are members of the public, and the existence of such organisations as the Nigerian Railway Corporation depends solely on public and public enterprises.

Therefore, what the characteristics of the populace are is of vital to Nigerian Railway Corporation. The characteristics when carefully studied will provide such information as:-

i The dominant mode of travel by the populace
ii the travel pattern of the populace
iii the economic level of most travellers
iv the motive for travelling of the populace

The characteristics of the public transport users to be examine include:-

i The income level of the public
ii Their choice of mode of travel
iii The purpose of travel
iv Their economic activities
v The factor that determines the choice of mode.

The above analysis is applicable to the private and public enterprises. The analysis will supply the information as to what service they demand and to what extent.

The discuss involves the analysis of the environmental trends, such as long or short distance journeys, nature of the routes or channels, time taken for the journey, safety of the mode and nature of the vehicles as well as the make up of the passengers.

3.1.4 TO ANALYSE THE CORPORATION'S STRENGHT AND WEAKNESSES IN CARRYING OUT IT'S SERVICES

Segmentation undoubtedly aims at analysing the strength and weaknesses of the corporation. These two opposing factors affects the performance of the Corporation.

Segmenting the potential travellers of the populace automatically tells us the composition of each segment which in turn indicates the train capacity required to meet with their service demand. These segments therefore, becomes a guide to capacity utilization of the corporation. The segments are matched to the corporations ability to satisfy the demand. Where this ability is absent, it's invariably considered as a weakness.

Considering the segments vis-a-vis the strength reveals the following:

i What is the workforce required to serve the individual segments

ii How many engines, wagons, coaches as well as the types that are needed for these services.

iii What are the nature of the track at every location.

iv What are the distance involved in each segment.

v What are the fuel requirement per train per segment

vi How many trains are required per segment per week

By the time strengths are noted the weaknesses will emerge. This analysis having revealed the strength and weaknesses of the corporation to meet its obligation to the identified segment, it provides the bases to areas requiring improvement or attention.

The above activities lead us to the market opportunity analysis of the Nigerian Railway Corporation, and to determine whether and how the opportunities can be exploited. When the customers are analysed, it becomes possible to identify the range of opportunities available and the job of segmentation is made possible.

When competitors are analysed is able to see how the market could be served. Areas, that are under-served are discovered and attempt is therefore made to exploit the opportunity.

3.2 CRITERIA FOR SEGMENTATION

Market segmentation is the process by which market can be conceptually divided for further analysis of opportunities and strategy development are assessed. It means the speration of the market into meaningful sections. What these

sections are, depends upon the product or services, corporation and other endogenous and exogenous factors. Regardless of the particular variable by which a market is divided, the object is then to develop effective strategies for appealing to one or more of these sub-markets.

To describe market segment does not seem difficult, but to put the description into practice is not easy. This is because there is no one segment that has mutually exclusive criterion for it's segmentation. A segment may be influenced by two or more variables which also influence another segment. Therefore the factors for segmentation at one hand could be at variant with each other and one the other hand not at variant with each other.

However, the criteria for market segmentation in the Nigerian Railway Corporation are discussed below;

3.2.1 USAGE:- This is the most prominent factor in segmenting the Railway services. The use to which the customers intend to make of the trains determine the existence of such service segment. Thus we have:-

i Passenger: Those potential and actual rail travellers. These travellers could travel by express or local passenger trains. Their purpose could be on business or recreational.

ii Livestock trains: Movement of livestocks such as cows, pigs etc constitutes a segment of its own.

iii Petroleum Product train: Petroleum product such as bitumen, kerosine, petrol and diesel moved by rail forms a segment.

iv Container trains: All container moved by private or corporate body are regarded as one segment.

v General Goods: Movement of items such as funitue, bags of cements, bags of fertilizers, building materials, bags of rice, maize, beans and electronic equipments form this segment.

However, a train can be made up of few wagons of general goods, petroleum product, container of livestock wagons, in which case it cuts a cross different usages of the train as demanded by the public.

3.2.2 LOCATION: Location of the customers do pay a role in determining the segments. The location of individuals or corporate bodies in remote villages that has little or no access by road, air or sea is an indication of a criteria for segmentation.

This means in essence geographically, how are the customers distributed spatially. How many classes of rail passengers reside in the local and urban stations? What services are demanded by different class of passenger in different location but with similar characteristics.

For this reason the Nigerian Railway Corporation have local passenger trains as well as express passenger trains. The local trains are from the rural areas to the urban areas, while the express passenger trains are between towns, they do not stop at the local stations.

3.2.3 ITEMS MOVED: The kind of passengers or goods moved has a lot to do in segmenting or subsegmenting the rail services. In case of passengers. The social strata of the populance in the society are considered in segmenting the passenger trains. In the local trains the passengers moved by Nigerian Railway Corporation are considered low and few middle income earners and the use of first class passengers coaches are out of consideration, since majority of them could not afford to pay for the ride on such coaches.

However, in the express passenger trains, coaches are provided for all stratum of the society. The low income earners is provided with the second class coaches, the middle income earners are provided also with the first class seater coaches while the higher income earners has the first class sleeper coaches for their use. This is so as studies in sociology indicates that the society is made up of these main classes of people.

In running goods train the corporation did segment the trains in line with the type of goods moved. Those good in bags such as cement beans, maize, fertilizers, rice etc; the funiture items, building materials, household utencils,

textiles, timbers of wood, drums of palm oil etc are classified as general goods and thus forms a segment.

The petroleum product such as kerosine, Bitumen, petrol, diesel, engine oil, etc; moved by rail forms another segment and all items moved inside conterners for spare parts of machines or cars or containers for wheat or other cereal, becomes a segment of its own, they are referred to as container trains.

The movement of cattle, sheep or ram, pigs and goats are regarded as a segment, the livestock train.

3.2.4 BULKINESS: The Nigerian Railway Corporation do also classified goods as heavy duty and light duty loads, as well as full train load or half train load. Items such as cement, ballast trains (iron or stone) are among the category of heavy duty trains while loads like funiture items, textile materials and household utencils are regarded as light duty trains.

In the area of petroleum product and container trains, they are regarded as heavy duty trains, whereas, apart from cattle trains all other livestock train is regarded as light duty train.

A goods train having about 15 wagons loaded is regarded as full train load and when it is less than 15 wagons it is referred to as half train load.

This does not apply to passenger trains both local and express.

3.2.5 SOCIO ECONOMIC CHARACTERISTICS: Here the variables that aught to be considered are age, sex, family size, income, occupation, education, religion, social class and family life cycle of the rail users. Also the corporate image, size, financial standing etc. of the companies that demand rail services are considered too.

The corporation do consider income, education and social class only, in segmenting the rail services. Other factors enumerated abovea are not considered. The factors on companies are considered in segmenting the services required by such companies, more especially the financials standing as that will determine the ability to pay for the services rendered.

3.3 SUMMARY

The factors considered in segmenting the Nigerian Railway Corporation services has been discussed exhuastively in this chapter. It is obvious that a lot of train users are in one segment or the other depending on the criteria used. Therefore, a train user can appear in two or more segments as the criteria for segmenting keep changing.

In this wise a more rational subdivision of the rail services will involve taking into consideration the factors numerated above for a more defined market segments.

CHAPTER FOUR

4.0 THE IMPORTANCE OF MARKET SEGMENTATION IN THE RAILWAYS

The significant of market segmentation in the Nigerian Railway Corporation is arrived at by identifying the needs of individual rail users both for personal trips and for conveyance of their goods, with a view of satisfying such needs at a break even point. In a sense, market segementation is the first phase of strategic market planning. Much as the entire country can be regarded as a market, the Railway marketing executives, need to know exactly who are their customers and how they intend to meet their needs.

The importance of market segmentation of the Railway Services need not be overemphasized, as Nigerian Railway Corporation strives to satisfy the heterogeneous market demand by subdividing it into a homogeneous subsection with similar needs or tastes. It then means that the corporation hopes to achieve the following through market segmentation.

4.1 PRECISE DEFINITION OF RAILWAY SERVICE MARKET

Segmenting the rail services do clearly define who and who to be reached with its marketing programmes or services. It helps to limit the scope of marketing activities which could be aimed at only the potential customers that represent the segments. The trains will therefore run according to the segments defined for a meaningful operation of the Railways.

Before, segmentation, the study of the customers are carried out to determine their demand characteristic, need and their socioeconomic characteristics. This will indicate precisely who forms the bulk of rail users, and the railway

management therefore, will have an easy task of reaching these identified segments, with it's services.

In defining the service market of the Nigerian Railway Corporation, the Corporation arrived at having two category of rail users. The first actual passengers who travel themselves and second the movement of goods either by the owners or their agents.

Further studies by the researcher showed that the passengers could be defined as long and short distance travellers, as well as travellers from rural to urban areas and urban areas to another urban areas. The long distance travellers are made up largely civil servants and self employed persons.

4.2 PROPER DIRECTION OF MARKETING PROGRAMME

Once management understands the customers' needs, it is in a much better position to direct marketing programmes that will satisfy these needs. Knowing the needs of the customers and segmenting the market according to these needs enables the Railway management to design specific marketing programmes to reach individual segments.

These segments represent the market targets of the Nigerian Railway Corporation and how to reach the targets with the appropriate marketing activities of the corporation could easily be achieved.

The introduction of a sort of local train referred to as Mass Transit Trains (MTT) in Lagos is a designed to meet the need of the workers in terms of transporting themselves to work, hence the populace "nicknamed" the MTT, workers train.

On the same vein the Minna to Kaduna MTT was introduced to meet the yearning of the traders and the farmers along this section of the Railways. The same for Enugu to Port Harcourt MTT.

Having known the potential customers and their needs, and having design train service to meet their needs, the corporation directs these programme to the appropriate quarters. For the rural populace, a little bit of publicity, for the workers train a television advert or radio announcement will do the magic.

4.3 EFFICIENT ALLOCATION OF MARKETING RESOURCES

When the needs of the customers are determined and the market is segmented according to these needs and the programmes are designed, the resources are then allocated more efficiently to carry out the implementation of the marketing programmes.

Resources like product and services can be more easily coordinated. The Nigerian Railway Corporation allocate marketing resources to advertising, personal selling and publicity to reach each targeted segment with the necessary marketing activities.

Segments such as the passenger trains both local and express demands an advertisement both in the print media and electronic media to reach these segments, whereas, the goods' train or the freight trains require personal selling efforts to interplay. The marketing executives do visit such complanies that have bulky and full-train loads for their patronage. Such companies as the oil marketers, Peugout Assembly Plant in Kaduna, Inland Containers Nig. Ltd; Dantata Nig. Ltd; National Fertilizer Co. in Kaduna and Port harcourt and Cement Manufacturing Companies.

However, both passenger and freight market segments could also be reached through publicity. Although little or no resouce is allocated to publicity, advertisement, personal selling attract quite some funds in carrying it out seriously.

4.4 ASSESSMENT OF COMPETITIVE STRENGTHS

Railway mode of public transport is not the only transport mode available to travellers and freight. There are the road, air and sea. So it becomes important for the railway management to find out who it's competitors are with regards to each of it's market segments. Having known whom the corporation is competiting with, the corporation also has the task of examining the competition to be able to assess it's strength and weaknesses for the exploitation of the opportunities that exist.

In assessing it's competitors, the Railway Management most of the time dwells on the comparison of the fares without examining the quality and the quantity of services rendered by the competitors too. The issue is that no

marketing executive ever took the pains of studying for instance, the alternative transport mode for travellers or for freight, what are their numbers and how many trips do they make in a day or week, how long does it take for a round trip and the capacity of each vehicle.

Without much ado, it is clear that the Railway management does little or nothing in assessing the competitive strengths of the alternative modes of public transport.

4.5 MEETING FUTURE DEMAND

Subdividing the Nigerian Railway Corporation's market into segments are based on certain characteristics which are peculiar to individual segments. These characteristics when projected into the future, shows the expected composition of the segment in the future. Based on this projection, meeting the future needs or demands of this segment are anticipated.

With continuity in market segmentation, the Corporation develops the capabilities that are necessary to meet changing market demand.

4.6 SUMMARY

This chapter has been examining the advantages from segmenting the services of the Nigerian Railway Corporation. Segmentation has resulted in concentrating efforts much on good trains that offer the most profitable opportunity. The choice of advertising and personal selling and the determination of their budgets were made possible through segmentation. The limitation of the market to a manageable size, drawing up a realistic budget for the scarce resource to the selected segments for the maximization of the returns on investment. Is a pointer to the importance of market segmentation of the Railway services.

CHAPTER FIVE

5.0 PROBLEM OF MARKET SEGMENTATION IN THE RAILWAYS

The problems of segmenting the corporation market cannot be discussed in isolation from the operating problems faced by the organisation. It is not enough for the marketing executives to design strategies to market Railway services without making sure the corporation can deliver to meet the need and wants of the customers.

In a nutshell the quantitative and qualitative make up of the services will be matched to the needs and wants of the customers. A more significant market segmenting activity is that of estimating the qualitative dimensions of the passenger and freight segments.

However data required for such an analysis is hard to come by and where available is inadequate. Even when it is possible to carry out such analysis the ability and capability to render the proper service demanded for, is lacking. Below are some distinct problems that either affect the market segmentation of the Nigerian Railway Corporation services directly or indirectly.

5.1 LACK OF DATA ON THE COMPETITION

One of the problems of market segmentation of the Nigerian Railway Corporation is little or no information about the competitors. Identifying and analysing the present competitors as well as new entrants is a difficult task to the railways.

The data on the road transporters both for freight and passenger are not available to the corporation's marketing executives. The actual number of the road tranporters (being the Chief competitor) that are serving approximately the same customer groups and perform the same customer - functions is not known.

The above assertion is based on the fact that the researcher could not obtain any information on the public and private tranpsport companies both for passengers or freight from Nigerian Railway Corporation. The number of trailers or lorries that are involved in the movement of cements from cement factories at Ashaka, Ewekoro and Nkalagu are not known to the Corporation, the same with other processing and manufacturing industries, located within the reach of Railways.

The number of state owned buses and taxis, as well as the number of private commercial buses and taxi that transport passengers from towns with Railway station is not known also. The routes of these buses, destination point and how many passengers, buses can conveniently move, is an illusion to the Railway.

On the same note, their current strategies to market their services are not readily available to the Corporation. What is their level of services. How do they operate. The fares of undertaken journeys and time taken to accomplish it by road.

Undoubtedly this analysis will reveal the strength and weaknesses of the competitors as well as exposing areas that is advantageous to the corporation. But since the management of the corporation failed to carry out such analysis, it still has problem of knowing the quality and quantity of services of it's competitors, so as to know how to meet competition.

5.2 INADEQUATE DATA ON CUSTOMERS

Segmentation is dependant on the available information about the customer characteristics. The quantity and quality of this information influences the viability or otherwise of segments. When these data is absent or inadequate it creates a problem in strategic planning of the organisation.

Information about the customers as shown below are not available to the corporation.

i Economic: Throughout the study of the organisation, there is hardly any information of the potential and actual passengers. What class of passengers demand train services, low, medium or high income earners. What percentage of these categories travel by rail and by what class of rail services.

ii Social: Evidence abound in the corporation that the social characteristics of the passenger were never taken into consideration when planning. It is no gair saying that the social standing of individual travellers is an indication of what type of services that individuals will demand.

Worst still the issue of using train services for recreational purposes by the adult is yet to be recognise by the corporation. Apart from a skeletal train services for children recreation, much is still to be done in this area. In the area of tourism, the management of the corporation, has not considered train services as a means of boosting tourism in the country.

iii Education: The corporation fails to consider the educational characteristics of the passengers. What percentage of literate and illiterate passengers, as well as the degree of literate or illiterate. What services are associated with illiterate and literate passengers.

On the same note, information on processing, fabricating and manufacturing companies that demand the services of the Corporation are not availabbe to the corporation. In the case of cement manufacturing, the corporation has no record of the production capacity of the cement companies, such as Ashaka, Nkalagu, Ewekoro etc. What percentage of this production are required to be distributed by rail.

This problem is seen in other areas such as flour mills, fertilizer companies and petroleum production and marketing. It is important to note that these insufficient data of potential and actual rail services customers affects proper segmentation of the Nigerian Railway Corporation services.

5.3 IMPROPER ANALYSIS OF THE STRENGTH AND WEAKNESSES OF THE CORPORATION

There is no gainsaying it's deficiency on the analysis of it's strength and weaknesses. The record on the number of wagons for goods movement is an illusion, the coaches for passenger the same, so also for the engines. The number of staff needed in each Department could not be accurately estimated.

Accurate record of these helps in analysing the internal strength and weaknesses of the corporation so as to determine how to meet competition as well as the needs and wants of the customers. Therefore, since accurate data on the wagons, coaches, engines etc; are lacking, improper analysis of the strength and weaknesses result and this leads to difficulty in satisfying the identified segments.

Weaknesses such as running behind schedule, low speed, delays, poor communication etc; are not adequately analysed.

The strength and weaknesses of the corporation are discussed in details hereunder:

5.3.1 Wagons: The Nigerian Railway Corporation has about 1500 freight wagons (Edward Enebeli, Railway News Magazine): September, 1996 pg. 17). This number is meant for cattle, general cargo, petroleum products and container trains. This is far less than, 3,885 freight wagons the corporation had in 1945. The important thing to note is that these 1500 freight wagons are meant to serve estimated population of 88.5 million people as against 3,885 wagons for estimated population of of 21 million people in 1945.[1]

Therefore, it is obvious that the wagons are inadequate to meet the demands of the customers. This inadequacy undoubtedly becomes weakness on the part of the Corporation. Efforts therefore, are required to address this weakness for an improved performance.

5.3.2 Locomotives: This is one of the important tools needed by the corporation for effective and efficient performance of its functions. As reported by Edward Enebeli (Rail News magazine ibid), the corporation had more locomotive engines in 1945 than now that it needed more that it had then. 257 locomotive engines were available for use in 1945 and by 1996 this number had drastically reduced to 70 locomotive engines.

Worst still, these 70 locomotive engines is expected to serve the 88.5 million. This shows a decline of 72.77% in locomotives and an increase of 321% in population, invariably there is pressure on locomotive demands these locomotives are meant to move about 150 passenger vehicles. In 1945 the ratio of locomotives to wagons and passenger vehicles is 1.16 and now the ratio of 1.23, this explains the pressure.[2]

With 4224 freight wagons and 339 passenger vehicles and 257 locomotives 264 trips are usually undertaken at the ratio of 1:16, while now with 1650 freight and passenger vehicles and 70 locomotives 72 trips at 1:23 ration is expected to be taken. Considering the age of the locomotives and the nature of tracks, wagons and coaches, the ratio is too high, the ratio of 1:15 are mostly applied now thereby causing under-utilization of the wagons and passenger vehicles.

5.3.3 PASSENGER COACHES

In 1945 the corporation had 339 passenger vehicles to serve the 21 million people and in 1996 the coaches has reduced to 150 with the population of the country increased to 88.5 million people. This data shows a reduction of 55.75% of passenger vehicle and an increment of 321% of the population.

Definitely, the passenger vehicles is really inadequate to meet the demand of the population. This is also a weakness of the corporation.

It is important to note that these tools that could be regarded as strength due to the inadequancy had become weaknesses.

The actual weaknesses are discussed hereunder:-

5.3.4 RUNNING BEHIND SCHEDULE

Of all the trains that have moved from Lagos to Kano, Port harcourt to Kano, Port harcourt to Maiduguri, none had ever arrived its destination on schedule, even when it departed on time. The goods trains or freight trains is the worst, these trains do not have schedule and when they do, nobody is compelled to keep to it.

It is a common practice for the trains to depart behind schedule. The Lagos-Kano express train is supposed to depart Lagos every 12.00 noon, but since the last 6 months (6/5-5/11/95), only twice had it left on schedule and within this period it never arrived destination on schedule.

5.3.5 LOW SPEED

The speed restrictions imposed by the Engineering Department of the Corporation shows that for the past three years the highest speed a train can move is 45 kilometres per hour and this is within a defined distance of not more than 5 kilometres at a trot. At times the speed specification comes as low as 10 kilometres per hour. On the average the speed of various trains could be said to be 25 kilometres per hour.

A lot of factors accounts for this low speed. The age of the locomotives, lack of spare parts and the nature of the track were contributors to this weakness. Most of the locomotive engines were not less than 20 years old. Coupled to this, is the fact that, there are not enough spare parts to carry out maintenance on the locomotives. These on their own merit could cause low speed of trains.

However, with the little maintenance of the track and speed restrictions by the engineering, the speed of the trains were greatly minimized to avoid accidents.

5.3.6 DELAYS

Delay is a characteristics of Railway services. Most times the delays were not necessary. Investigations reveal that the staff both the station staff and the drivers were the culprits. The station masters could stop a train that was not designated to stop at his station as long as he wishes to hold the train. The drivers could even stop to visit friends at a station.

Nevertheless, there are other delays that are not man made. These are, waiting for a crossing, that is a train waiting at a station for the one coming from the oposite direction to cross before continuing its movement, inability to communicate with the next station, the train has to wait until communication is established with that station to enable them be aware that a train is on course.

Delays could also be as a result of mechanical fault discovered either in the locomotives or the rolling stock or breakdown of locomotives or rolling stock. Derailments as well as signal faults, track demages or wash out of the ballasts are also possible causes of delays.

5.3.7 POOR COMMUNICATION

Most of the signal and communication equipments are obsolete and difficult to maintain, some had broken down without repairs or replacement, which means they are out of use. Communications between stations are characterised by manual powering of the instrument to remit information and to release a token to be given to the driver as a sign that he had crossed that station with the knowledge of the preceding station.

Signaling equipment demands the physical strength of the operator. Where the signal staff is unable to operate the instrument,delay results. Due to the age of these equipments it could take hours to get them working.

The causes of delays on trains and running behind schedule, though if determined, correct action are hard to be taken. Therefore, to collect data on the elements of strength and weaknesses in the Railways and properly analyse them for the satisfaction of it's market segment are yet easy to come by.

5.4 OVER CONCENTRATION ON A PARTICULAR SEGMENT

Nigerian Railway Corporation has developed the culture of concentrating it's marketing activities on one segment to the detriment of the others at a particular point in time. Most times they do not see the running of the passenger train as viable. This thinking influences the cancellation of passenger trains in preference to goods train which they believe yields quite some money.

This concentration on one segment at a point in time causes loss of interest on Railway services by the time attention is retunred to that segment. The idea of one segment having more attention than the others on the premise that it generates more revenue is a wrong notion more especially when the time used in running that single trip could be used in running double of the less viable segment which then generates more that the single trip of the preferred segment.

The suspension of running some segments or total withdrawal from running them for sometime is by implication inability to meet the demand of these segments and invariably a loss of patronage.

5.5 HYPOTHESIS TESTING

The essence of testing the hypothesis is to validate or invalidate the hypotheses based on the results of data analysis.

HYPOTHESIS I

HO: That the low speed, delays, running behind schedules and infrequency of the rail services determine the degree of rail services patronage by the segments.

HI: That the low speed, delays, running behind schedules and infrequency of rail services do not determine the degree of rail services patronage by the segments.

The hypothesis is examined by using chi square (χ^2) test.

TABLE I DISTRIBUTION OF RESPONDENTS BY SEGMENTS

OBSERVED FREQUENCY

Variables	Passenger Segments		freight Segments				total
	Express	Local	General Cargo	Petroleum Product	Livestock	Container	
Low speed	146	88	3	104	5	72	418
Delays	204	162	6	141	3	25	541
Behind Schedule	187	113	7	65	4	44	420
Infrequency	95	71	6	177	2	36	387
Total	632	37	22	487	14	177	1766

Source:

F R E L D W O R K

EXPENCTED FREQUENCY

Low speed	150	103	5	115	3	42	418
Delays	194	133	7	149	4	54	541
Behind schedule	150	103	5	117	3	42	320
Infrequency	138	95	5	106	4	39	387
Total	632	434	22	487	14	177	1766

* For calculations of expected frequency see appendices

X^2 CALCULATIONS

Variables	Segment	Observed (O)	Expected (E)	O-E	$O-E^2$	$O-E^2/E$
Low Speed	Express	146	150	-4	16	0.10
	Local	88	103	-15	225	2.18
	General Gargo	3	5	-2	4	0.80
	Petroleum Products	104	115	-11	121	1.05
	Licestock	5	3	2	4	1.33
	Container	72	42	30	900	21.43
Delays	Express	204	194	10	100	0.52
	Local	162	133	29	841	6.32
	General Cargoes	6	7	-1	1	0.14
	Petroleum Products	141	149	-8	64	0.45
	Livestock	3	4	-1	1	0.25
	Container	25	54	-29	841	15.57

Running Behind Schedule	Express	187	150	47	1369	9.13
	Local	113	103	10	100	0.97
	General Cargoes	7	5	2	4	0.60
	Petroleum Products	65	117	-52	1704	23.11
	Livestocks	4	3	1	1	0.33
	Container	44	42	2	4	0.10
Infrequency	Express	95	138	43	1849	13.39
	Local	71	95	-24	576	6.06
	General Cargoes	6	5	1	1	0.20
	Petroleum Products	177	106	-71	5041	47.57
	Livestock	2	4	-2	4	1.00
	Container	36	39	-3	9	0.23

$X^2 = 152.81$

Tabulated value at 0.05 confidence level of 3 degree freedom = 7.81

Calculated X^2 =152.81

As the calculated value is greater than the tabulated we accept the null hypothesis, that the low speed, delays, running behind schedules and infrequency of rail services determine the degree of fail services patronage by the segments.

This ascertion is true as these are factors that influence the reliability and desirability of the rail services.

HYPOTHESIS II

HO: That the pattern of rail services are influenced by the segments.

HI: That the pattern of rail services are not influenced by the segment.

Chi square (X^2) statistic is used to test this hypothesis.

TABLE II AVERAGE TRIPS MADE BY THE SEGMENTS IN A MONTH
OBSERVED FREQUENCY

Segments	Northern	Eastern	N/Eastern	Western	Total
Express	8	10	4	8	30
Local	40	24	18	46	128
General Cargoes	5	2	1	6	14
Petroleum Products	8	5	3	12	28
Livestocks	1	2	2	1	6
Container	6	4	1	7	18
Total	68	47	29	80	224

Source: Railway information office

EXPECT FREQUENCY

Express	9	6	4	11	30
Local	38	27	17	45	128
General Cargoes	4	3	2	5	14
Petroleum Products	8	6	4	10	28
Livestock	2	1	1	2	6
Container	6	4	2	6	18
Total	68	47	29	80	224

X^2 Calculations

	Observed (O)	Expected (E)	O-E	$O-E^2$	$O-E^2/E$
E	8	9	1	1	0.11
	10	6	4	16	2.67
Express	4	5	-1	1	0.20
	8	10	-2	4	0.20
	40	39	-1	1	0.03
Local	24	27	-3	9	0.33
	18	17	1	1	0.06
	46	45	1	1	0.02

General Cargoes	5	4	1	1	0.25
	2	3	-1	1	0.33
	1	2	-1	1	0.50
	6	5	1	1	0.20
Petroleum Products	8	9	-1	1	0.11
	5	6	-1	1	0.17
	3	4	-1	1	0.25
	12	9	3	9	1.00
Livestock	1	2	-1	1	0.50
	2	1	1	1	1.00
	2	1	1	1	1.00
	1	2	-1	1	0.50
	6	5	1	1	0.20
	4	5	-1	1	0.20
	1	2	-1	1	0.50
	7	6	1	1	0.17

$X^2 = 10.70$

Calculated value of $X^2 = 10.70$

Tabulated value of X^2 at 0.05 confidence level of 5 degree freedom = 11.07

Since the tabulated value is greater than the computed value the null hypothesis is rejected and the alternative hypothesis accepted, that is, that the pattern of rail services are not influenced by the segments.

This is true as the number of existing market segments and their local has little or nothing to do with the number of trains run by the corporation. Instead, the number of trips per train per segment is determined by the strength of the copporation.

HYPOTHESIS III A

HO: Thtat the number of trains moved at a point in time are proportionate to the schedule of the segments that existed.

TABLE III: SCHEDULE AND ACTUAL NUMBER OF TRAINS PER MONTH

		ND	WD	ED	NED	Total
Express	Schedul	8	8	16	8	40
	Actual runs	4	4	8	4	20
	Difference	4	4	8	4	20
Local	Schedule for trains	60	120	30	30	240
	Actual runs	36	96	14	10	156
	Difference	24	24	16	20	84
General Cargo	Schedule for trains	10	12	5	6	33
	Actual runs	3	5	2	2	12
	Difference	7	7	3	4	21

Petroleum Products	Schedule for trains	6	9	8	3	26
	Actual runs	2	4	2	1	9
	Difference	4	5	6	2	17
Livestock	Schedule for trains	2	1	1	3	7
	Actual runs	-	-	1	1	2
	Difference	2	1	-	2	5
Container	Schedule for trains	4	6	3	2	15
	Actual runs	2	2	1	1	6
	Difference	2	4	2	1	9

Source: Railway information office.

percentage of Trips per segments

i Express = 20/40 x 100/1 = 50%

ii Local = 156/240 x 100/1 = 65%

iii General Cargo = 12/33 x 100/1 = 36.36%

iv Petroleum products = 9/26x100/1=34.62%

v Livestock = 2/7 x 100/1 = 28/60%

vi Container = 6/15 x 100/1 = 40%

vii Overall percentage of the toal trips for all segments = 205/361 x 100/1 = 56%

From the above analysis it is obvious that apart from Express and Local passenger trains that run averagely other trains run at below average. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, that is, that the number of trains moved at a point in time are not proportionate to the schedule of the segments that existed.

HYPOTHESIS IV

HO: That freight is a more viable segment than the passenger trains

HI: That the freight is not a more viable segment than the passenger trains.

TABLE IV THE AMOUNT REALISED PER SEGMENT PER DIVISION IN A MONTH

	SEGMENTS	ND ₦'0000	ED ₦'0000	WD ₦'0000	NED ₦'00000	TOTAL ₦'00000
Passenger	Express	110	80	160	20	370
	Local	60	24	120	6	210
	Total	170	104	280	26	580
Freight	General Cargoes	45	28	92	85	250
	Petroleum Products	78	49	82	8	217
	Livestocks	12	5	7	33	61
	Container	24	66	124	6	220
	Total	159	152	305	132	748

Source Acct Dept NRC Ebute Metta.

The total average income from the segments are:

- Passenger - ₦5,800,000.00
  Freight - ₦7,480,000.00

The expenses incurred in running these trains are:-

- Passenger - ₦1,820,000.00
- Freight - ₦2,430,000.00

It could be seen from the above data that Freight is more viable than the Passenger trains that is,

Passenger	-	₦5,800,000
Less Expenses	-	₦1,820,000
		₦3,980,000
Freight	-	₦7,480,000
Less expenses	-	₦2,430,000
		₦5,050,000

This means that the difference between the passenger and freight revenue monthly is

Freight	-	₦5,050,000
Passenger	-	₦3,980,000
		₦1,070,000

For one year the difference will be ₦12,840,000 which is quite substantial. Therefore, the null hypothesis is accepted, that is, that freight is a more viable segment than the passenger trains.

HYPOTHESIS V

HO: That the infrequency of rail services does not influence the usage of rail services by the individual segments.

HI: That the infrequency of rail services influences the usage of rail services by the individual segments.

Chi square (X^2) statistic was exployed in testing this hypothesis.

TABLE V DEMAND AS WELL AS TRIPS GENERATED IN A MONTH BY EACH SEGMENTS

	Express	Local	General Cargo	Petroleum Products	Livestock	Container	Total
Trips Demanded	40	240	33	26	7	15	361
Trips Generated	20	156	12	9	2	6	205

Source: Information office NRC Lagos.

X^2 calculation

Segments	Observed Frequency (O)	Expected Frequency (E)	Demand	O - E	$O - E^2$	$O-E^2/E$
Express	20	23	40	-3	9	0.39
Local	156	136	240	20	400	2.94
General Carges	12	19	33	-7	49	2.58
Petroleum Products	9	15	26	-6	36	2.40
Livestock	2	4	7	-2	4	1.00
Container	6	8	15	-2	4	0.50
Total	205	205	361		X^2=	9.81

Tabulated value at 0.05 confidence level of 5 degree freedom = 11.07
Calculated value of X^2 = 9.81

Null hypothesis is hereby rejected as the tabulated value is greater than the calculated value and the alternative hypothesis is accepted, that the infrequency of rail services influences the usage of rail services by the individual segments.

This statement is true as the degree of usage depends on the frequency of the train services. The more the demands are met the more the segments may demand the services.

5.6 SUMMARY

It is understandable that market segmentation makes a little impact on the marketing efforts of the corporation. For a more purposeful segmentation the marketing department should in addition to the factors in segmentation consider the strength and weaknesses of the corporation as well as that of the competitors since the ability to deliver depends on it.

References

1. Edward Enebeli, Towards imporoving Railway service' Railway News Magazine, September, 1996, page 17

2. Edward Enebeli Ibid.

CHAPTER SIX

6.1 PROSPECTS

The concept of market segmentation has produced a phenomenal proliferation of articles, studies and papers in the past decades. The concept itself, was first clearly articulated by wendell Smith in 1956 journal of marketing articles, a paper that by now has become a classic.[1]

Market segmentation involves the knowledge of the customers and competitors' characteristics. With this knowledge the Nigerian Railway Corporation attempted to segment it's market, based on the needs and wants of the customers. The criteria for segmentation and the problems associated with it has been largely studied by the research it was discovered that the corporation believes on the exstance of natural market segments.

Although the segmentation procedures could indicate the existence of natural market segments; it could be used to construct artificial market or it could reveal the lack of any market segment for a more strategic decision. ..

Turning to Philip Kotler's criteria for marketing segmentation, measurebility, accessibility and substantiality, it is clear that at least some of these condition s have not been met by the corporation to date.[2]

Perhaps then, the usual mode of segmentation employed by the corporation are not sufficient.

The result from this study on market segmentation of the Nigerian Railway corporation has not been very encouraging. We might speculate on why so much of the research has been negative when the theory seems so logical and sound on a prioric basis. Perhaps the major problem of this process is that in an effort to segment it's market the corporation lost sight of the basic premise of the theory: that different prople have different needs and at different times these needs may change. One final problem with this process centres on the complete lack of integration into the segmentation analysis of information on the marketing mixes of the services under study and the strength and weaknesses of the competition and the corporation itself.

The poor performance of the Nigerian Railway Corporation's segmentation criteria tested so far can be attributed to the fact that too often the corporation's management are anxious to find a magic formula that will profitably segment the market in all cases and under all circumstances, where as each case should have been viewed as a unique and potentially different situation.

A well designed segmentation process therefore, does not depend solely on one criterion for grouping customers. It is flexible enough that one can examine the results from two or more alternative bases. These bases are very general, and it is within them that the segments are later developed. Segmentation of this nature covers a very broad area.

At first glance, the tabulation and analysis of the data would seem to be an almost superhuman task. Fortunately, it is possible to extract a few segments within the braod classification by applying multivariate techniques.

Therefore, with a good design criteria and analysis of the factors for segmentation, the corporation are opened to a lot of prospects. Such prospects include among other things meeting the demand of the customers, as well as breaking even in it's operations. So for effective and efficient market segmentation by the corporation the following recommendations should be considered.

6.2 RECOMMENDATION

The significant of market segmentation in the Nigerian Railway Corporation is partly to meet the demand of the customers and to break even in the operation of the corporation. This study then, is to determine the degree to which such goal has been achieved as well as recommending the ways to overcome difficiency in it's operation.

On this note it is recommended that the marketing arm of the Nigerian Railway Corporation will take a comprehensive study of the segmentation procedures. This will involve the collection of data on the customer's and competitor's characteristics, the examination and analysis of these data, as well as the internal strength and weaknesses of the corporation.

It is understood that the operations of the corporation are characterised by delays, running behind schedules and very low speed, efforts should be made to improve the systems as to avoid these problems that make the realisation of the goals of the corporation an illusion.

One thing is to study and segment the Railway market, but quite a different thing is to satisfying the wants and needs of the market. To meet these demands on the Corporation's services, the intergration of some segments that demand similar services will be undertaken such segments as the general cargoes and the container can be merged as one segment for efficient utilization of marketing activities.

However, since segmentation cannot be seperated from marketing planning, segmentation should be seen as an integral part of total marketing strategy. The major objective of segmentation should aim at achieving a sound satisfaction of market demands, the wants and needs of the customers, the improvement of the overall strength and weakness of the corporation and minimization of delays, running behind schedules, and improving on the speed of the trains.

6.3 CONCLUSION

The concept of market segmentation has been one of the major focuses of consumer research since the early sixties (Frank Ronald E. et al 1972). The concept has had a great impact on the thought and practice of marketing of consumer goods.[3] These development has had less impact, however, on services management. Results from this study indicate that marketers of services typically fail to employ market segmentation as a foundation for planning and controlling of marketing programmes. Articulation of the concept of market segmentation may by itself provide a basis for more precise marketing planning and for coordination of services development.

Research into segmentation, therefore, is an essential precondition for intelligent marketing planning. Such research is feasible and can readily be integrated with other marketing research projects. Once the marketing plan is fully developed marketing operations may be controlled on a segment-by-segment basis.

This study indicate that, while the concept of marketing segmentation strategy differentiation is widely accepted among various level or Nigerian Railway Corporation's management, there is little evidence to suggest that Nigerian Railways do follow a conscious segmentation strategy to plan and control their marketing activities.

Although marketing manager's of Nigerian Railways are aware of the concept of segmentation, they appear not to articulate fully the concept of segmentation or to use the variety of possible bases for segmentation.

If segmentation is accepted and articulated as a useful way of looking at the Railway markets, management can address the descripancy revealed in this study between bases of segmentation which are considered appropriate, but too costly to implement, and those which are inexpensive but not always appropriate.

For market segmentation to be truely operational and profitable, it must cover more of the total marketing problem. This means not only obtaining more services, specific measures including usage, location, bulkiness of goods and customers characteristics - but carrying out research to determine the response elasticities of the various segments to the corporation's marketing plans.

Nevertheless, with the understanding of market segmentation and the new approach suggested, it is hoped that the corporation will be able to segment it's market more profitably.

1. Reference

1. Wendell Smith, 'Product Differentiation and Marketing, segmentation as alternative marketing strategies; Journal of Marketing, Vol.XXI.No.I, July 1956, page 15.
2. Philip Kotler, 'Marketing for Non-profit Organisation', New Delhi, 1985 page 82.
3. Frank, Ronald E., 'Market segmentation' Englewood Cliffs, Prentice Hall, New Jersy, 1972, page 66.

APPENDIX I

AHMADU BELLO UNIVERSITY ZARIA

QUESTIONAIRE FOR RAIL SERVICE USERS IN NIGERIA

The essence of this survey is to obtain information which will aid me in my thesis desertation titled: The Market Segmentation of a Public Transport Corporation in a Developing Exonomy (A Case Study of Nigerian Railway Corporation).

Your cooperation is therefore, needed as information given should be treated in confidence and privately too.

1. Where do you reside ----------

---

2. Occupation ----------

---

3. How often do you demand the use of rail services in a month

a. [ ] onee b [ ] twice c [ ] thrice d [ ] four times e [ ] more that four time.

4. Do you get the satisfaction of the demand each time there is the need ----------

---

5. What rail services do you normally demand

a [ ] express passenger train b [ ] local passengeer train c [ ] general cargo train d [ ] petroleum product train e [ ] livestock train f [ ] container train.

6. Train services are characterised by

a [ ] efficiency b [ ] effectiveness c [ ] delays

d [ ] low speed e [ ] behind schedule f [ ] infrequency.

APPENDIX II

ESSENTIAL FORMULAR

CHAPTER FIVE

For the calculation of Chi-square (X^2) statistic.

O: Stands for observed frequency

E: Stands for Expected frequency

The caculation of expected result is obtained by this formular

$e = 0/n \times 0/1$

where 0 = summation of the observed frequency

n = summation of the expected frequency

Therefore, for hypothesis, I, expected trips are calculated hereunder:

For express trains:

632/1766 x 418/1= 150 for low speed

632/1766 x 541/1 = 194 for delays

632/1766 x 420/1 = 150 for behind schedules

632/1766 x 387/1 = 138 for infrequency runs

For local Trains

432/1766 x 418/1 = 100 for low speed

434/1766 x 541/1 = 133 for delays

434/1766 x 420/1 = 103 for behind schedules

434/1766 x 387/1 = 95 for infrequency runs

For General Cargo Trains

22/1766 x 418/1 = 5 for low speed

22/1766 x 541/1 = 7 for delays

22/1766 x 420/1 = 5 for behind schedules

22/1766 x 387/1 = 5 for infrequency

For Petroleum Products Trains

487/1766 x 418/1 = 115 for low speed

487/1766 x 541/1 = 149 for delays

487/1766 x 420/1 = 117 for behind schedules

487/1766 x 387/1 - 106 for infrequency

For Livestock Trains

14/1766 x 418/1 = 3 for low speed

14/1766 x 541/1 = 4 for delays

14/1766 x 420/1 = 3 for behind

14/1766 x 387/1 = 4 for infrequency

For Container Trains

177/1766 x 418/1 = 42 for low speed

177/1766 x 541/1 = 54 for delays

177/1766 x 420/1 = 42 for behind schedule

177/1766 x 387/1 = 39 for infrequency

In Hypothesis II, the expected average rips made in a month is calculated thus:

For Norther Division

68/224 x 30/1 = 9 for Express train

68/224 x 128/1 = 39 for local train

68/224 x 14/1 = 4 for General Cargoes train

68/224 x 28/1 = 8 for Petroleum Product train

68/224 x 6./1 = 2 for livestock trains

68/224 x 18/1 = 6 for container trains

For Eastern Division

47/224 x 30/1 = 6 for express

47/224 x 182/1 = 27 for local

47/224 x 14/1 = 3 for general cargo

47/224 x 28/16 for petroleum products

47/224 x 6/1 = 1 for livestock

47/224 x 18/1 = 4 for container

For Northe Eastern Division

29/224 x 30/1 = 4 for express

29/224 x 128/1 = 17 for local

29/224 x 14/1 = 2 for general cargo

29/224 x 28/1 = 4 for Petroleum Products

29/224 x 6/1 = 1 for Livestock

29/224 x 18/1 = 2 for container

For Wstern Division

80/224 x 30/1 = 11 for express

80/224 x 128/1 = 45 for local

80/224 x 14/1 = 5 for general cargo

80/224 x 28/1 = 10 for Petroleum products

80/224 x 6/1 = 2 for Livestock

80/224 x 81/1 = for container

For Hypothesis V

Calculations for expected frequency is shown below:

205/361 x 40/1 = 23 for express

205/361 x 240/1 = 236 for local

205/361 x 33/1 = 19 for general

205/361/ x 26/1 = 15 for petroleum products

205/361 x 7/1 = 4 for livestock

205/361 x 15/1 - 8 for container

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