An Empirical Analysis of Population and Employment Projections for Nairobi Metropolitan Region in 2030

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Abstract:

Nairobi Metropolitan Region (NMR) includes four spatial units namely Core Nairobi, Northern Metro, Southern Metro, Eastern Metro. The major objective of the spatial development plan is integrated growth of NMR. Thus, spatial development plan for the NMR comes along with an integrated development plan that ensures employment for the majority. Different spatial unit has its own population growth. This confirms parallel development scenario suitable for each and every pocket. The development scenario of the region depends upon employment growth, occupational structure, land use pattern etc. in NMR. Here we have attempted to project the employment growth on the basis of population growth rate, occupational structure and land use pattern in bigger NMR up to 2030.

Key words: work participation rate, occupational structure, land use

JEL Classification: J21, R58

1.0   Introduction

Nairobi Metropolitan Region (NMR) consists of Nairobi and fourteen other local authorities. Metro Vision 2030 has further

divided NMR into four sub regions such as *Core Nairobi, Northern Metro, Eastern Metro and Southern Metro*. As per the record of Kenya National Bureau of Statistics, the total population of NMR was 6,658,000 in 2009. The distribution of population in each spatial unit is presented Table 1.

Table 1: Population Distribution in different Spatial Units of NMR

Sl. No.	Spatial Units	County	Local Authorities	Population			
				1979	1989	1999	2009
1	Core Nairobi	Nairobi	Nairobi City	827,775 (37.82%)	1,324,570 (41.16%)	2,143,254 (44.64%)	3,138,369 (47.14%)
2	Northern Metro	Kiambu	Thika Municipal	52,691	70,206	106,707	139,853
			Thika County	212,051	282,538	429,432	485,798
			Ruiru Municipal	54,107	72,092	109,574	238,858
			Kiambu Municipal	29,931	39,880	60,605	88,869
			Kiambu County	191,359	254,966	387,473	365,232
			Karuri Town	35,299	47,032	71,475	129,934
			Kikuyu Town	77,108	102,738	156,131	234,053
			Limuru Municipal	33,744	44,960	68,326	104,282
			Total	**686,290 (31.36%)**	**914,412 (28.41%)**	**1,389,723 (28.94%)**	**1,786,879 (26.84%)**
3	Southern Metro	Kajiado	Ole Kejuado County	145,131	252,813	396,889	669,031
			Kajiado Town	3,874	5,846	9,165	18,281
			Sub Total	*149,005 (6.81%)*	*258,659 (8.04%)*	*406,054 (8.46%)*	*687,312 (10.32%)*
4	Eastern Metro	Machakos	Tala/Kangundo Town	109,660	150,358	179,952	218,557
			Mavoko Municipal	16,556	22,700	27,168	139,380
			Machakos Municipal	84,320	116,293	143,274	150,041
			Masaku County	315,028	431,261	512,054	537,462
			Sub Total	*525,564 (24.01%)*	*720,612 (22.39%)*	*862,448 (17.96%)*	*1,045,440 (15.7%)*
NMR			**Total**	**2,188,634 (100%)**	**3,218,253 (100%)**	**4,801,479 (100%)**	**6,658,000 (100%)**

Source: Kenya National Bureau of Statistics 2009.

As per the data presented in Table 1, Core Nairobi is the most dominant unit in NMR amongst the four spatial units,. The percentage share of Nairobi has increased from 38% in 1979 to

47% in 2009. Northern Metro follows Core Nairobi, which accounts for 26% of the total population. The percentage share of the Southern Metro has also increased over the decades. However, the percentage share of Northern Metro and Eastern Metro has been decreasing. Fig. 1 depicts the change in the percentage share in the above-mentioned spatial units.
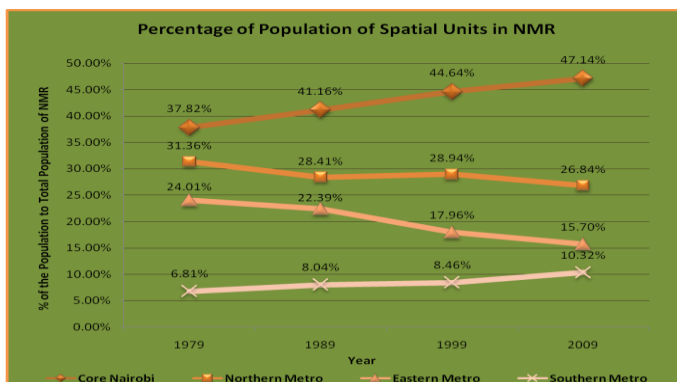

Fig. 1: Change in Population in NMR

Among the four spatial units, Southern Metro / Kajiado County witnessed the highest population growth in all the decades. However, among the local authorities Mavoko Municipal Council has highest population growth with 17.76% during the time period 1999-2009. Kiambu County is the only local authority which has witnessed negative growth rate in 1999-2009. The growth of the population in the local authorities is presented in Table 2.

Table 2: Population Growth in the Spatial Units of NMR

Sl. No	Spatial Units	County	Local Authorities	Growth Rate		
				1979-89	*1989-99*	*1999-2009*
1	Core Nairobi	Nairobi	Nairobi City	4.81	4.93	3.89
2	Northern Metro	Kiambu	Thika Municipal	2.91	4.28	2.74
			Thika County	2.91	4.28	1.24
			Ruiru Municipal	2.91	4.28	8.10
			Kiambu Municipal	2.91	4.27	3.90
			Kiambu County	2.91	4.27	-0.59
			Karuri Town	2.91	4.27	6.16
			Kikuyu Town	2.91	4.27	4.13

Sl. No	Spatial Units	County	Local Authorities	Growth Rate		
				1979-89	1989-99	1999-2009
			Limuru Municipal	2.91	4.27	4.32
			Sub Total	2.91	4.27	2.55
3	Southern Metro	Kajiado	Ole Kejuado County	5.71	4.61	5.36
			Kajiado Town	4.20	4.60	7.15
			Sub Total	5.67	4.61	5.40
4	Eastern Metro	Machakos	Tala/Kangundo Town	3.21	1.81	1.96
			Mavoko Municipal	3.21	1.81	17.76
			Machakos Municipal	3.27	2.11	0.46
			Masaku County	3.19	1.73	0.49
			Sub Total	3.21	1.81	1.94
NMR			Total	3.93	4.08	3.32

Source: Kenya National Bureau of Statistics

Population Density: The density of NMR is 207 persons per sq. km, Nairobi has the highest density of 4,509 persons per sq. km (2009). It has increased from 1,189.3 persons per sq. km. in 1979. The density is lowest in Kajiado County of 31 persons per sq. km. After Nairobi, Karuri Town Council has the highest density of 2,825 persons per sq. km. Among the urban local authorities, Kajiado Town Council has the lowest density of 63.48 persons per sq. km. There is wide gap in the density of Nairobi and Other NMR (ONMR). Population density of spatial units is presented in Table 3.

Table 3: Population Density of Spatial Units of NMR during 1979-2009

Sl No	Spatial Units	County	Local Authorities	Density (Persons per sq. km)			
				1979	1989	1999	2009
1	Core Nairobi	Nairobi	Nairobi City	1189.3	1903.1	3079.39	4509.15
2	Northern Metro	Kiambu	Thika Municipal	560.5	746.9	1135.2	1487.8
			Thika County	134.6	179.3	272.5	308.2
			Ruiru Municipal	185.9	247.7	376.5	820.8
			Kiambu Municipal	305.4	406.9	618.4	906.8
			Kiambu County	215.7	287.4	436.8	411.8
			Karuri Town	767.4	1022.4	1553.8	2824.7
			Kikuyu Town	562.8	749.9	1139.6	1708.4
			Limuru Municipal	216.3	288.2	438.0	668.5
			Sub Total	518.3	690.6	1049.6	1349.6
3	Southern Metro	Kajiado	Ole Kejuado County	6.7	11.7	18.4	31.0

Sl N o	Spatial Units	County	Local Authorities	Density (Persons per sq. km)			
				1979	1989	1999	2009
			Kajiado Town	13.5	20.3	31.8	63.5
			Sub Total	*6.8*	*11.8*	*18.5*	*31.4*
4	Eastern Metro	Machako s	Tala/Kangundo Town	616.1	844.7	1011.0	1227.8
			Mavoko Municipal	17.3	23.7	28.4	145.6
			Machakos Municipal	241.6	333.2	410.5	429.9
			Masaku County	65.7	89.9	106.7	112.0
			Sub Total	*83.7*	*114.7*	*137.3*	*166.4*
NMR			**Total**	**68.0**	**100.1**	**149.3**	**207.0**

Source: Kenya National Bureau of Statistics

1.2   Employment in 2009: In NMR the population in the age group of 15-64 is considered as the labour force, which is about 66% of the population. However the actual number of gainfully employed is much less. The work participation rate (WPR) is a ratio between total employed workers to total population. The WPR in NMR in 2009 has been derived to be 29.74% based on a number of economic and statistical reports. The WPRs of Urban NMR is 31.84% and that of Rural NMR is 23.94%. The WPR in Nairobi city is derived to be 34.99%. The future working population was estimated by applying a participation ratio of work available to the potential work population. The work population was estimated on the basis of Central Bureau of Statistics (CBS) population projection data by age group. As CBS's population forecast by age group was made up to 2010 for districts, the same rate was applied for estimation of working population up to 2010. The work participation rate was assumed to increase in NMR. The employment scenario in NMR based on KNBS and NURTRANS report up to 2010 is presented in Table 4.

Table 4: Employment in Nairobi Metropolitan Region (1999-2010)

Years	1999	2002	2003	2004	2010
Nairobi Metropolitan Region					
Population	3229624	3694963	3864524	4041868	4904900
Labor force based population (15-64) years	2068346	2323911	2431234	2547951	3039576
Employment	1473945	1854201	1999203	2167210	2887600
WPR (%)	45.6	50.2	51.7	53.6	58.9
Nairobi					
Population	2143254	2470850	2563297	2656997	3078500
Labor force based population (15-64) years	1461003	1640699	1701133	1762401	2037522
Employment at work place	1321651	1659467	1781971	1928376	2541100
Wage Employment	420787	425632	433635	436098	587057
Agriculture	7318	9104	9275	9843	10000
Manufacturing	116645	116124	118151	118548	154376
Service	296824	300404	306209	308647	422681
Informal Sector	896000	1228700	1343100	1486136	1948543
Self-employed and unpaid family workers	4864	5135	5236	5333	5500
WPR (%)	61.6	67.1	69.5	72.6	82.5
Concentration rate to Nairobi city (%)	89.7	89.5	89.1	89.0	88.0
Employment (Residents in Nairobi)	876353	1096782	1176111	1258802	1475600
Others (Kiambu, Thika, Machakos and Kajiado)					
Population	1086370	1224113	1301227	1384871	1657700
Labor force based population (15-64) years	607343	683212	730101	785550	1002055
Employment at work place	152294	194734	217232	238834	346500
Kiambu					
Population	443606	482658	506526	531902	574800
Labor force based population (15-64) years	259005	279499	296693	315096	363461
Employment at work place	55366	70524	77666	84838	115800
Wage Employment	10399	10444	10459	10474	10998
Informal Sector	43961	59077	66173	73297	76962
Self-employed and unpaid family workers	1007	1003	1035	1068	1100
Thika					
Population	266173	313067	337412	363994	483900
Labor force based population (15-64) years	153417	181258	197598	215590	305942
Employment at work place	56210	68323	74598	80829	120400
Wage Employment	20229	29353	29829	29981	31480
Informal Sector	26377	38319	44080	50118	52624
Self-employed and unpaid family workers	604	651	689	731	750
Machakos					
Population	239905	258143	270366	283599	377000
Labor force based population (15-64) years	123157	138866	142506	150712	210140
Employment at work place	26862	34695	40166	44458	70700

Years	1999	2002	2003	2004	2010
Wage Employment	2543	2562	4293	4893	5138
Informal Sector	23774	31597	35321	38995	40945
Self-employed and unpaid family workers	544	536	552	569	580
Kajiado					
Population	136386	170245	186923	205376	222000
Labor force based population (15-64) years	71764	83591	93304	104152	122511
Employment at work place	13856	21192	24802	28708	39600
Wage Employment					
Informal Sector	13545	20838	24420	28296	29711
Self-employed and unpaid family workers	310	354	382	412	430

Source: Calculation based on KNBS and NUTRANS Report.

1.2   Objective:

The objective of the study is to develop employment projections up to 2030 on the basis of population growth rate, occupational structure and land use pattern in Nairobi Metropolitan Region.

2.0   Literature Review

Demography of NMR: The demographic analysis of the NMR is divided into 2 units – Core Nairobi (includes Nairobi City Council) and Other Nairobi Metropolitan Region (ONMR includes other local authorities expect Nairobi City Council).

Population Growth: The total population of the NMR was 2.2 million in 1979 which increased to 6.7 million in 1989 registering a growth ratio of 3.78%. The decadal growth rate shows a fluctuation. The percentage share of the population of the NMR out of that of the country has steadily increased from 14% 1979 to 17% in 2009. The population growth in NMR is given in Table 5. Out of the total population of the NMR, the population of core Nairobi is 3.1 million which accounts for 64% of the total population of the NMR. The remaining urban area in ONMR consists of 36% of the total urban population of the NMR.

Table 5: Population in NMR, 1979-2009

Year	Population	CAGR	% Share of NMR Population to Kenya
1979	2,188,634		14.28%
1989	3,218,253	3.93	15.01%
1999	4,801,479	4.08	16.74%
2009	6,658,000	3.32	17.24%

Source: Kenya National Bureau of Statistics, 2009

Urban Population: There are 19 urban centres in the NMR. 11 urban centres have their local authorities. There are 8 other towns which are part of 4 county councils in the region. The total urban population of the region in 1979 was 1.3 million. This has increased to 4.9 million in 2009 which is about 73% of the total population of NMR and 39% of the total urban population of Kenya. The rate of growth of population during this period has been 4.4%. The urban population of the NMR to total urban population of Kenya is 39% in 2009 (31.6% in 1999). Nairobi is the major urban centre not only in the NMR but also in Kenya. It comprises 64% of the total urban population of NMR. The remaining urban area in ONMR comprises 36% of the total population. The urban population in NMR is presented in Table 6.

Table 6: Urban Population in NMR

Year	Urban Population	CAGR
1979	1,325,065	-
1989	2,022,738	4.32
1999	3,158,317	4.56
2009	4,882,813	4.45

Source: Kenya National Bureau of Statistics, 2009

Age-Sex-Structure:
The age-sex structure of NMR is wide in the middle, broad base and narrow top. Highest concentration is in 3 categories of age group: 0-4, 20-24
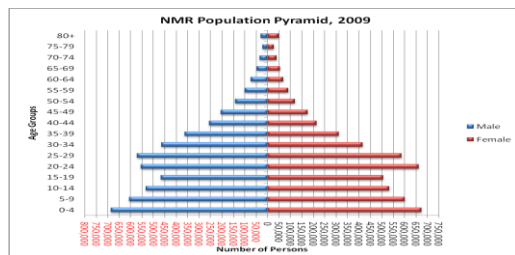
FIG. 2: Age-Sex Structure of NMR, 2009

and 25-29 years. About 45% of the population is below 20 years in NMR while 40% of the population is below 20 years in Kenya. Only 4.3% of the population is in the age group of above 60 years (7.5% of the population in the age-sex structure of Kenya).

In the age-sex structure 50% of the population are in the working age-group of 20 to 59 years while in the age-sex composition of Kenya 74% are in this age group. (Refer fig. 2). Since there is high concentration of the population in the age-group of 20-29, issues related to creation of employment opportunities are to be addressed in Spatial Planning for NMR.

Urban Population: Nairobi had the highest population in NMR and in the country which registered a growth rate of 3.87% in 1999-2009. Juja has the highest growth rate of 21.01%. The uban centres have increased at a very fast rate. Mavoko, Ngong, Kitengela and Juja have increased at a rate of more than 15%. These are the urban centres which became dominant in the previous decade and have experienced an abnormal growth pattern. Among the urban centres which were important earlier, Ruiru showed the highest growth rate. Machakos registered lowest growth rate of 0.46% in 1999-2009. This is presented in Table7.

Table 7: Distribution of Population in Urban Centres within NMR, 1979-2009

Sl. No.	Urban Centers	County	Population				CAGR (1999-2009)
			1979	1989	1999	2009	
1.	Nairobi	Nairobi	827,775	1,324,570	2,143,254	3,133,518	3.87
2.	Urban Local Authorities in NMR						
a	Ruiru	Kiambu	54,107	72,092	109,574	238,858	8.10
b	Thika	Kiambu	52,691	70,206	106,707	139,853	2.74
c	Limuru	Kiambu	33,744	44,960	68,326	104,282	4.32
d	Kikuyu	Kiambu	77,108	102,738	156,131	234,053	4.13
e	Kiambu	Kiambu	29,931	39,880	60,605	88,869	3.90
f	Karuri	Kiambu	35,299	47,032	71,475	129,934	6.16
g	Mavoko	Machakos	16,556	22,700	27,168	139,380	17.76
h	Machakos	Machakos	84,320	116,293	143,274	150,041	0.46
i	Kangundo/Tala	Machakos	109,660	150,358	179,152	218,557	2.01

Sl. No.	Urban Centers	County	Population				CAGR (1999-2009)
			1979	1989	1999	2009	
j.	Kajiado	Kajiado	3,874	5,846	9,165	18,281	7.15
Total			497,290	672,105	931,577	1,462,108	
3.	Other Towns in NMR						
a	Ngong	Kajiado		8,775	20,701	107,188	17.87
b	Kitengela	Kajiado			9,327	58,167	20.09
c	Juja	Kiambu			6,009	40,446	21.01
d	Ongata Rongai	Kajiado		17,288	35,874	40,178	1.14
e	Kiserian	Kajiado				18,096	
f	Namanga	Kajiado			6,205	9,066	3.86
g	Isinya	Kajiado				8,670	
h	Bissil	Kajiado				5,376	
i.	Githunguri	Kiambu			5370		
Total				26,063	83,486	287,187	
	NMR Urban		1,822,354	2,694,842	4,089,894	6,344,921	4.45

Source: Kenya National Bureau of Statistics, 2009

Population Projection: Demographic analysis allow measuring the dimensions and dynamics of populations, helps to identify the directions of growth in future and enables to make infrastructure provisions. As provision of the infrastructure has a spatial dimension, the demographic analysis will indicate the level and scale of the provision of infrastructure required and the space required. Population is rapidly growing in Kenya with rapid urbanisation over the decades. By 2030, urban population of Kenya may be as high as 61.5% (Nairobi Metro 2030). If the process continues, NMR especially Nairobi will have majority of the urban population. The population projection is divided into two parts – appreciation of the previous projections carried under various studies and projection by the authors under various development scenarios.

Review of Studies Carried on the Population Projection of Kenya, NMR and Nairobi: Efforts have been made to project the population of Kenya, NMR and Nairobi *in* number of previous studies. An appreciation of the population projections in these studies is presented below:

World Population Prospects: (The 2008 Revision Population Database, United Nations, 2009). As per the UN projections, by 2030 Kenya will have 63 to 71 million populations which will be about 0.92% to 1.5 % of the total world's population. The urban population of Kenya is projected to be 20.7 million which is 33% of the total population of Kenya.

Table 8: Kenya Population Projection for All Variants (in '000s)

Year	Medium Variant	High Variant	Low Variant	Constant Fertility Variant
2010	40 863	40 863	40 863	40 863
2015	46 433	46 835	46 030	46 997
2020	52 034	53 163	50 904	54 051
2025	57 573	59 736	55 410	62 104
2030	63 199	66 584	59 824	71 459

Source: Nairobi - Metropolitan Growth Strategy (NMGS)

The Nairobi Metropolitan Growth Strategy Plan (1973), envisaged Nairobi growth to 2.9 million by 2000.

Table 9: NMGS Population Projection (In '000s)

Year	1971	2000	Change
Kenya Total	11,671	31,209	+ 19,538
Rural	10,371	23,209	+ 12,838
Natural Increase			+ 16,565
Migration			- 3,727
Urban	1,300	8,000	+ 6,700
Natural Increase			+ 2,973
Migration			+3,727
Nairobi	585	2,880	+ 2,295
Natural Increase			+ 1,179
Migration			+ 1,116
Other Urban Centers	715	5,120	+ 4,405
Natural Increase			+ 1,794
Migration			+2,611

Source: Nairobi Metropolitan Growth Strategy, Volume I, Main Report, Nairobi Urban Study Group (1973).

The Study of Master Plan for Urban Transport in the Nairobi Metropolitan Area in the Republic of Kenya (JICA): The Nairobi Urban Transport Master Plan was prepared in 2006 (JICA). The study has forcasted the population of Nairobi Metropolitan Area to be 7 million in 2025 with population in Nairobi to be 4.2

million and the remaining areas will have population of 2.8 million. The details is presented in Table 10 below.

Table 10: Population of Nairobi and Nairobi Metropolitan Area (2004-2025)

Country/ Region	1989	1999	2004	2010	2015	2025
Kenya	21,443,636	28,686,607	32,808,000	36,500,000	39,700,000	46,300,000
Urban	3,877,222	9,904,044	12,535,800	15,560,300	18,387,200	24,855,900
NMR	2,062,014	3,229,624	4,041,868	4,736,200	5,423,800	6,960,000
Urban	1,488,965	2,995,103	3,849,035	4,573,450	5,305,905	6,960,000
Nairobi	1,324,570	2,143,254	2,656,997	3,078,500	3,389,900	4,176,400
Others	737,444	1,086,370	1,384,871	1,657,700	2,033,900	2,784,300

Source: The Study on Master Plan for Urban Transport in the Nairobi Metropolitan Area in the Republic of Kenya.

Nairobi Metro 2030: Nairobi Metro 2030 has forecasted population of NMR under 3 different scenarios as under. The detail is presented in Table 11.

Business as Usual (BAU): Business as usual is characterised by the 1999 census population. The growth rates has been derived from statistical abstracts, published growth rate projections for urban centres by the Government of Kenya (Ministry of Housing Reports) and 2002-2008 district development plans covering areas in the entire region. The projected population for 2030 as per this scenario will be 14.1 million.

High variant (Pessimistic): Assumes a scenario where population growth rate increases above BAU. The effect of an increase of 1 % above BAU was stimulated. It anticipates rise in both immigration and natural increase rate. The projected population for 2030 as per this scenario will be 18.3 million.

Preferred (Low variant): In anticipating a growth rate lower than the normal trend observed, this simulation lowered expected growth rate by 0.5% below BAU. It anticipates a decline in both immigration and natural increase rate. The

projected population for 2030 as per this scenario will be12.4 million.

Table 11: Nairobi Metropolitan Region Growth Scenarios

YEAR	Projected Population (Density)		
	Scenario I	Scenario II	Scenario III
	Business as Usual based on 1999 Census	High Variant +1% of 1999 Census Rate	Low Variant -0.5% off 1999 Census Data
2007	6,328,521 (197)	6,600,830 (206)	6,199,142 (193)
2012	7,583,345 (236)	8,286,566 (258)	7,256,275 (226)
2030	14,144,607 (441)	18,314,285 (571)	12,426,338 (387)

Source: Nairobi Metro 2030, A World Class African Metropolis, p. 31.

Water and Sanitation Services Improvement Project Report, Athi Water Services Board: The World Bank through International Development Association (IDA) has been partnering with the Government of Kenya (GoK), through the Ministry of Water and Irrigation in the financing of programmes towards the improvement of water and sanitation services in the areas under the jurisdiction of Athi Water Services Board (AWSB), Coast Water Services Board (CWSB) and Lake Victoria North Water Services Board (LVNWSB). As part of the study, Seureca/CAS JV conducted population projections in Nairobi Network Modelling Final Report (August 2007) for Nairobi and the Kiambu region. Table 12 presents the forecasts made for projecting water demand in the region.

Table 12 Population Projection for Nairobi and Kiambu Region

Region	2005	2010	2015	2020	2025	2030
Nairobi	2,775,087	3,441,748	4,147,304	4,997,498	5,793,470	6,716,220
Kiambu	732,338	893,115	1,089,814	1,330,587	1,625,470	1,986,814

Source: Water and Sanitation Services Improvement Project Report, Athi Water Services Board

NMR – Mass Rapid Transport System (MRTS) Study: The Ministry of Transport, GoK, have instituted a feasibility study on Mass Rapid Transit System for Nairobi and the region. The identification of MRTS corridor and selection of technologies, on approval by the GoK, would form a critical base for conceptualising and detailing the Spatial Development Plan.

The population projection for the high (HPG) and low (LPG) growth scenario and for the Nairobi Centric as well as the Multi-Centric distribution is shown in Table 10. By 2030, the population in NMR is likely to range between 11.1 and 15.8 million which by 2050 is expected to increase to 15.4 to 34.1 million. Without development controls in Nairobi, it is likely that upto 60% of NMR population could end up living in Nairobi City (NC). On the other hand, with strategic development controls in Nairobi, nearly 55% of the future population could be accommodated in the Other Metropolitan Region (OMR).

Table 13:   Projected Population based on Population Growth Scenarios

Sub-region	Factor	2030				2050			
		Nairobi-Centric		Multi-Centric		Nairobi-Centric		Multi-Centric	
		LPG	HPG	LPG	HPG	LPG	HPG	LPG	HPG
NC	Pop. ('000)	5,810	7,012	5,810	7,012	8,356	15,065	8,356	15,065
	% of NMR	52%	55%	40%	44%	54%	61%	31%	44%
OMR	Pop. ('000)	5,315	5,826	8,841	8,841	7,087	9,642	18,995	18,995
	% of NMR	48%	45%	60%	56%	46%	39%	69%	56%
NMR	Pop. ('000)	11,125	12,838	14,651	15,853	15,443	24,707	27,351	34,060

Source: *Mass Rapid Transport System (MRTS) Study on NMR.*

3.0 Analysis

Employment Forecast: In line with Kenya Vision 2030 and Nairobi Metro Vision 2030, the economy of NMR is estimated to grow at a rate of 15%. This would mean a more than doubling of the per-capita income of the people of NMR, by 2030. With such a growth and improvement in provision of and access to extensive social facilities (education, health, etc.), full enrolment in schools has been assumed. Observing the past trend it is assumed that the WPR by 2030 will be as under:

Table 14: Work Participation Rate in 2030

Spatial Units	Overall	Urban	Rural
NMR	36.00	35.00	40.00
Nairobi	35.00	35.00	-
Other NMR	36.00	35.00	40.00
Northern Metro	36.00	35.00	40.00
Eastern Metro	36.00	35.00	40.00
Southern Metro	37.00	35.00	40.00

The projected population of NMR for 2030 is presented in Table 11. The employment size, by number, in NMR in 2030, is estimated to increase by nearly 3 times over that in 2009. The employment size, by numbers, in the spatial units, by 2030, is calculated as under:

Table 15: Employment in 2030

Sl. No.	Spatial Unit	Employment Size (in millions)		
		Total	Urban	Rural
1.	NMR	5.40	4.55	0.85
2.	Nairobi	1.82	1.82	-
3.	Other NMR	3.58	2.73	0.85
4.	Northern Metro	1.79	1.46	0.32
5.	Eastern Metro	1.07	0.83	0.24
6.	Southern Metro	0.72	0.43	0.29

Formal, Informal Employment Ratio: The employment forecast of NMR depends upon the growth rate of formal and informal employment. The formal employments (wage employment) are generally generated by registered industries, business and commercial establishments. The information on formal employment is documented in Statistical Abstract and Economic Survey of Kenya Bureau of National Statistics. The informal employment is the employment generated by persons employed in households, shops, self-employed persons, skilled and unskilled labour, hotels, restaurants etc. The statistics of informal employment are generally not available for all the urban and rural centres in NMR. Therefore a ratio is established between formal and informal employment based upon the fact how much informal activity are generated for every formal activity in NMR. It appeared that for every one formal activity in Nairobi city four informal activities are

generated. But for other spatial units this ratio is varies. The economy of Nairobi and NMR is highly informal. The formal to informal employment ratios are 1:3.96 and 1:3.98 for NMR and Nairobi respectively.

However, with the growth of economy, education and opportunity the economy of NMR would move towards a formal one although the rate of progress will be different in the different spatial units. For purpose of estimating formal built space area requirements, under different activities (uses), in the different spatial units, the following formal to informal employment ratios have been proposed as described in Table 16:

Table 16: Formal and Informal Ratio in 2030

Sl. No.	Spatial Unit	Ratio of Formal to Informal Employment		
		Overall	Urban	Rural
1.	NMR	1:2	1:2	1:2
2.	Nairobi	1:1	1:1	-
3.	Other NMR	1:2	1:2	1:2
4.	Northern Metro	1:2	1:2	1:2.5
5.	Eastern Metro	1:2	1:2	1:2.5
6.	Southern Metro	1:2	1:2	1:2.5

The details of employment, by spatial units, including the urban centres are presented in Table 22.

Occupational Structure in 2009: The occupational structure of Nairobi shows 1.75% of employed populations are in agriculture sector, 18.03% in Manufacturing, 7.7% in transportation, 8.9% in construction, and 63.62% in service sector. The occupational distribution of NMR and other NMR is given in Table below:

Table 17: Occupational Structure in NMR in 2009

Occupational distribution	Rural	Urban	Total
Agriculture	53.57%	9.33%	18.80%
Manufacturing	5.01%	15.95%	13.61%
Transportation	4.51%	7.59%	6.93%
Construction	6.70%	12.70%	11.42%
Service	30.21%	54.43%	49.24%

Table 18: Occupational Structure in Other NMR in 2009

Occupational distribution	Rural	Urban	Total
Agriculture	51.17%	7.55%	28.52%
Manufacturing	3.99%	11.14%	7.70%
Transportation	3.08%	6.09%	4.64%
Construction	3.50%	7.33%	5.49%
Service	38.26%	67.89%	53.65%

Occupational Structure in 2030: The occupational distribution in 2030 is based upon the functional characteristics of each spatial unit. The occupational structure of Nairobi, NMR and Other NMR in 2030 is derived on the basis of the above assumption and is presented in the *Table* below. The occupational distribution of each spatial unit in 2030 is shown in Table 22.

Table 19: Occupational Distribution of Nairobi in 2030

Occupational Distribution	Urban	Total
Agriculture	1.5 %	1.5 %
Manufacturing	15.0%	10.0%
Transportation	15.0%	12.0%
Construction	12.5%	12.5%
Service	56.0%	64.0%

Table 20: Occupational Distribution of NMR in 2030

Occupational Distribution	Rural	Urban	Total
Agriculture	49%	9 %	13%
Manufacturing	10%	24%	23%
Transportation	7%	10%	10%
Construction	10%	15%	14%
Service	24%	42%	40%

Table 21: Occupational Distribution of Other NMR in 2030

Occupational Distribution	Rural	Urban	Total
Agriculture	45%	8 %	14%
Manufacturing	8%	19%	17%
Transportation	6%	14%	13%
Construction	4%	11%	10%
Service	37%	48%	46%

Table 22: Population, Employment, Occupation & Land use in NMR

Nairobi Metropolitan Region	
Population • 2009 - 6,658,000 • 2030 - 17,708,654 *Employment* WPR • 2009 – 29.74% • 2030 – 35.71% Formal: Informal • 2009 – 1:3.96 • 2030 – 1:2.00	*Function* • National and International hub for trade and commerce • The most important tourist destination • Industrial activities *Sectoral Distribution* 2009 Agriculture - 18.80% Manufacturing - 13.61% Transportation - 6.93% Construction - 11.42% Service - 49.24% 2030 Agriculture - 13.00% Manufacturing - 22.00% Transportation - 9.00% Construction - 15.00% Service - 41.00%
Nairobi City	
Population • 2009 - 3,138,369 • 2030 - 5,705,759 *Employment* WPR • 2009 - 34.00% • 2030 – 35.00% Formal: Informal • 2009 – 1:3.98 • 2030 – 1:1.00 *Land Use Pattern* Residential- 40% Commercial- 4% PSP - 8% Industrial - 10% Transport - 18% Open Space- 20%	*Function* • Administrative headquarter of the country • Metro city with functions of highest order and specialised facilities *Sectoral Distribution* 2009 Agriculture - 1.75% Manufacturing - 18.03% Transportation - 7.70% Construction - 8.90% Service - 63.62% 2030 Agriculture - 1.50% Manufacturing - 10.00% Transportation - 12.00% Construction - 12.50% Service - 64.00%
Other NMR (ONMR)	
Population • 2009 - 3,519,631 • 2030 - 12,002,895 *Employment* WPR • 2009 - 21.30% • 2030 – 36.08%	*Function* • Agro-industrial areas • Trading centres • IT hubs • Service centres • Specialised new towns *Sectoral Distribution* 2009

Formal: Informal
• 2009 – 1:3.98
• 2030 – 1:2.00
	Agriculture - 18.8%
	Manufacturing - 13.61%
	Transportation - 6.93%
	Construction - 11.42%
	Service - 49.24%
	
	2030
	   Agriculture - 13.00%
	   Manufacturing - 23.00%
	   Transportation - 9.00%
	   Construction - 14.00%
	   Service - 41.00%

Northern Metro/ Kiambu County

Population
• 2009 – 1,786,879
• 2030 – 3,898,641
 	
Employment
 	
WPR
• 2009 - 31.36%
• 2030 – 35.82%
 	
Formal: Informal
• 2009 – 1:4.54
• 2030 – 1:2.00
	Function
	• Agro-industrial, Aerotropolis, industrial, trading and service centres
	
	Sectoral Distribution
	
	2009
	   Agriculture - 28.61%
	   Manufacturing - 5.70%
	   Transportation - 5.62%
	   Construction - 6.16%
	   Service - 53.91%
	2030
	   Agriculture - 15.00%
	   Manufacturing - 11.00%
	   Transportation - 12.00%
	   Construction - 12.00%
	   Service - 50.00%

Eastern Metro / Machakos County

Population
• 2009 – 1,045,440
• 2030 – 3,219,409
 	
Employment
 	
WPR
• 2009 – 19.80%
• 2030 – 36.00%
 	
Formal: Informal
• 2009 – 1:4.38
• 2030 – 1:2.00
	Function
	• IT hubs, industial, service and trading
	Sectoral Distribution
	
	2009
	   Agriculture - 26.67%
	   Manufacturing - 5.92%
	   Transportation - 5.77%
	   Construction - 6.48%
	   Service - 55.16%
	2030
	   Agriculture - 13.00%
	   Manufacturing - 13.00%
	   Transportation - 11.00%
	   Construction - 11.00%
	   Service - 52.00%

Southern Metro/ Kajiado County
Population • 2009 – 687,312 • 2030 – 4,884,845 *Employment*	*Function* • Service centres, tourism and industrial area *Sectoral Distribution* 2009

WPR		Agriculture	- 36.10%
• 2009 – 16.64%		Manufacturing	- 3.80%
• 2030 – 36.88%		Transportation	- 3.14%
		Construction	- 5.78%
Formal: Informal		Service	- 51.19%
• 2009 – 1:3.43	2030		
• 2030 – 1:2.00		Agriculture	- 10.00%
		Manufacturing	- 11.00%
		Transportation	- 10.00%
		Construction	- 13.00%
		Service	- 56.00%

Northern Metro: Urban Centre - Ruiru

Population	*Function*
• 2009 – 238,858 • 2030 – 640,332	• Trading Centre
Employment	*Sectoral Distribution*

WPR		2009	
• 2009 – 31.69%		Agriculture	- 26.67%
• 2030 – 35.00%		Manufacturing	- 5.92%
		Transportation	- 5.77%
Formal: Informal		Construction	- 6.48%
• 2009 – 1:5.17		Service	- 55.16%
• 2030 – 1:2.50		2030	
		Agriculture	- 13.00%
Land Use Pattern		Manufacturing	- 13.00%
		Transportation	- 11.00%
Residential- 45%		Construction	- 11.00%
Commercial- 5%		Service	- 52.00%
PSP- 10%			
Industrial - 10%			
Transport - 15%			
Open Space- 15%			

Northern Metro: Urban Centre - Thika

Population	*Function*
• 2009 – 139,853 • 2030 – 231,007	• Industrial town
Employment	*Sectoral Distribution*

WPR		2009	
• 2009 – 30.90%		Agriculture	- 10.62%
• 2030 – 35.00%		Manufacturing	- 5.03%
		Transportation	- 4.02%
Formal: Informal		Construction	- 16.08%
• 2009 – 1:1.70		Service	- 64.25%
• 2030 – 1:2.50		2030	
		Agriculture	- 5.00%
Land Use Pattern		Manufacturing	- 15.00%
		Transportation	- 8.00%
Residential- 45%		Construction	- 12.00%
Commercial- 5%		Service	-60.00%

PSP-	8%	
Industrial -	12%	
Transport -	15%	
Open Space-	15%	

Northern Metro: Urban Centre - Limuru	
Population • 2009 – 104,282 • 2030 – 132,244 *Employment* WPR • 2009 – 30.94% • 2030 – 35.00% Formal: Informal • 2009 – 1:5.46 • 2030 – 1:2.50 *Land Use Pattern* Residential- 45% Commercial- 5% PSP - 8% Industrial - 12% Transport - 12% Open Space- 18%	*Function* • Agro-industrial town *Sectoral Distribution* 2009 Agriculture - 59.58% Manufacturing - 2.77% Transportation - 3.96% Construction - 4.25% Service - 29.45% 2030 Agriculture - 30.00% Manufacturing - 9.00% Transportation - 10.00% Construction - 8.00% Service - 43.00%

Northern Metro: Urban Centre - Kiambu	
Population • 2009 – 88,869 • 2030 – 103,613 *Employment* WPR • 2009 – 32.61% • 2030 – 35.00% Formal: Informal • 2009 – 1:5.79 • 2030 – 1:2.50 *Land Use Pattern* Residential- 45% Commercial- 3% PSP- 10% Industrial - 10% Transport - 15% Open Space - 17%	*Function* • Administrative • Agro-industrial town *Sectoral Distribution* 2009 Agriculture - 59.58% Manufacturing - 2.77% Transportation - 3.96% Construction - 4.25% Service - 29.45% 2030 Agriculture - 30.00% Manufacturing - 9.00% Transportation - 10.00% Construction - 9.00% Service - 44.00%

Northern Metro: Urban Centre - Juja	
Population • 2009 – 40,446 • 2030 – 1,157,143	*Function* • Service town

Employment
 	
 WPR
 • 2009 – 5.94%
 • 2030 – 35.00%
 	
 Formal: Informal
 • 2009 – 1:5.45
 • 2030 – 1:2.50
 	
 Land Use Pattern
 	
 Residential-   50%
 Commercial-   5%
 PSP-   8%
 Industrial   -   8%
 Transport   -   12%
 Open Space   -   17%
	Sectoral Distribution
	 2009
	   Agriculture - 12.00%
	   Manufacturing - 9.00%
	   Transportation - 8.00%
	   Construction - 6.00%
	   Service - 65.00%
	
	 2030
	   Agriculture - 12.00%
	   Manufacturing - 9.00%
	   Transportation - 8.00%
	   Construction - 6.00%
	   Service - 65.00%

Northern Metro: Urban Centre - Kikuyu	
Population • 2009 – 234,053 • 2030 – 285,828	*Function* • Agro-industrial town

Employment
 	
 WPR
 • 2009 – 32.15%
 • 2030 – 35.00%
 	
 Formal: Informal
 • 2009 – 1:4.54
 • 2030 – 1:2.50
 	
 Land Use Pattern
 	
 Residential-   50%
 Commercial-   3%
 PSP   -   8%
 Industrial -   10%
 Transport -   12%
 Open Space-   17%
	Sectoral Distribution
	
	 2009
	   Agriculture - 36.85%
	   Manufacturing - 5.91%
	   Transportation - 3.42%
	   Construction - 3.47%
	   Service - 50.35%
	 2030
	   Agriculture - 15.00%
	   Manufacturing - 12.00%
	   Transportation - 7.00%
	   Construction - 8.00%
	   Service - 58.00%

Northern Metro: Urban Centre - Karuri	
Population • 2009 – 129,934 • 2030 – 237,889 *Employment*	*Function* • Agro-industrial town *Sectoral Distribution*

WPR
• 2009 – 28.89%
• 2030 – 35.00%
 	
Formal: Informal
• 2009 – 1:6.33
• 2030 – 1:2.50
 	
Land Use Pattern
 	
Residential-   45%
Commercial-   5%
PSP   -   8%
Industrial -   10%
Transport -   12%
Open Space-   20%
	2009
	  Agriculture - 33.99%
	  Manufacturing - 3.89%
	  Transportation - 2.35%
	  Construction - 2.55%
	  Service - 57.22%
	2030
	  Agriculture - 23.00%
	  Manufacturing - 14.00%
	  Transportation - 7.00%
	  Construction - 5.00%
	  Service - 51.00%

Eastern Metro: Urban Centre - Machakos	

Population
 	
• 2009 – 150,041
• 2030 – 687,135
 	
Employment
 	
WPR
• 2009 – 19.03%
• 2030 – 35.00%
 	
Formal: Informal
• 2009 – 1:4.70
• 2030 – 1:2.50
 	
Land Use Pattern
 	
Residential -   50%
Commercial -   3%
PSP   -   8%
Industrial -   10%
Transport -   12%
Open Space -   17%
	Function
	
	• Administrative
	• IT industrial
	
	Sectoral Distribution
	
	2009
	  Agriculture - 15.69%
	  Manufacturing - 6.12%
	  Transportation - 4.08%
	  Construction - 3.99%
	  Service - 70.12%
	
	2030
	  Agriculture - 5.00%
	  Manufacturing - 16.00%
	  Transportation - 10.00%
	  Construction - 10.00%
	  Service - 59.00%

Eastern Metro: Urban Centre - Mavoko	

Population
 	
• 2009 – 139,380
• 2030 – 638,311
 	
Employment
 	
WPR
• 2009 – 31.96%
• 2030 – 35.00%
 	
Formal: Informal
• 2009 – 1:4.38
	Function
	
	• Industrial
	
	Sectoral Distribution
	
	2009
	  Agriculture - 2.33%
	  Manufacturing - 11.96%
	  Transportation - 5.94%
	  Construction - 3.24%
	  Service - 76.53%

• 2030 – 1:2.50		2030	
		Agriculture	- 5.00%
Land Use Pattern		Manufacturing	- 30.00%
		Transportation	- 15.00%
Residential-	40%	Construction	- 8.00%
Commercial-	5%	Service	- 42.00%
PSP -	10%		
Industrial-	15%		
Transport-	15%		
Open Space-	15%		

Eastern Metro: Urban Centre – Kangudo / Tala			
Population		*Function*	
• 2009 – 218,557		• Trading town	
• 2030 – 1,000,913			
		Sectoral Distribution	
Employment			
		2009	
WPR		Agriculture	- 25.69%
• 2009 – 20.75%		Manufacturing	- 2.96%
• 2030 – 35.00%		Transportation	- 2.75%
		Construction	- 3.65%
Formal: Informal		Service	- 64.95%
• 2009 – 1:5.45			
• 2030 – 1:2.50		2030	
		Agriculture	- 13.00%
Land Use Pattern		Manufacturing	- 7.00%
		Transportation	- 7.00%
Residential-	45%	Construction	- 13.00%
Commercial-	5%	Service	- 60.00%
PSP -	10%		
Industrial-	5%		
Transport-	15%		
Open Space-	20%		

Southern Metro: Urban Centre – Ngong			
Population		*Function*	
• 2009 – 58,167		• Industrial town	
• 2030 – 1,771,827			
		Sectoral Distribution	
Employment			
		2009	
WPR		Agriculture	- 25.32%
• 2009 – 16.73%		Manufacturing	- 9.54%
• 2030 – 35.00%		Transportation	- 6.59%
		Construction	- 5.05%
Formal: Informal		Service	- 53.50%
• 2009 – 1:3.98			
• 2030 – 1:2.50		2030	
		Agriculture	- 13.00%
Land Use Pattern		Manufacturing	- 19.00%
		Transportation	- 13.00%
Residential-	50%	Construction	- 13.00%

Commercial-	5%	Service	- 42.00%
PSP -	7%		
Industrial-	8%		
Transport-	12%		
Open Space-	18%		

Southern Metro: Urban Centre – Kitengela	

Population

- 2009 – 107,188
- 2030 – 1,420,985

Employment

WPR
- 2009 – 8.65%
- 2030 – 35.00%

Formal: Informal
- 2009 – 1:5.03
- 2030 – 1:2.50

Land Use Pattern

Residential- 55%
Commercial- 2%
PSP - 8%
Industrial- 5%
Transport- 12%
Open Space- 18%

Function

- Dormitory town

Sectoral Distribution

2009
Agriculture - 25.32%
Manufacturing - 8.58%
Transportation - 3.31%
Construction - 3.45%
Service - 59.34%

2030
Agriculture - 13.00%
Manufacturing - 17.00%
Transportation - 6.00%
Construction - 9.00%
Service - 55.00%

Southern Metro: Urban Centre – Ongata Rongai	

Population

- 2009 – 40,178
- 2030 – 305,267

Employment

WPR
- 2009 – 23.58%
- 2030 – 35.00%

Formal: Informal
- 2009 – 1:6.56
- 2030 – 1:2.50

Land Use Pattern

Residential- 55%
Commercial- 5%
PSP - 5%
Industrial- 8%
Transport- 12%
Open Space- 15%

Function

- Service town

Sectoral Distribution

2009
Agriculture - 35.31%
Manufacturing - 4.99%
Transportation - 3.01%
Construction - 2.89%
Service - 53.80%
2030
Agriculture - 10.00%
Manufacturing - 10.00%
Transportation - 6.00%
Construction - 6.00%
Service - 68.00%

Southern Metro: Urban Centre – Kiserian	

Population
 	
 • 2009 – 18, 096
 • 2030 – 137, 491
 	
 Employment
 	
 WPR
 • 2009 – 21.43%
 • 2030 – 35.00%
 	
 Formal: Informal
 • 2009 – 1:6.56
 • 2030 – 1:2.50
 	
 Land Use Pattern
 	
 Residential-   55%
 Commercial-   3%
 PSP   -   7%
 Industrial-   8%
 Transport-   12%
 Open Space-   15%
	Function
	
	 • Service town
	
	 Sectoral Distribution
	
	 2009
	    Agriculture - 35.79%
	    Manufacturing - 3.89%
	    Transportation - 2.79%
	    Construction - 1.99%
	    Service - 55.54%
	
	 2030
	    Agriculture - 18.00%
	    Manufacturing - 10.00%
	    Transportation - 8.00%
	    Construction - 5.00%
	    Service - 59.00%

Southern Metro: Urban Centre – Namnga	

Population
 	
 • 2009 – 9, 066
 • 2030 – 65,874
 	
 Employment
 	
 WPR
 • 2009 – 14.31%
 • 2030 – 35.00%
 	
 Formal: Informal
 • 2009 – 1:7.69
 • 2030 – 1:2.50
 	
 Land Use Pattern
 	
 Residential-   50%
 Commercial-   5%
 PSP   -   7%
 Industrial-   8%
 Transport-   12%
 Open Space-   18%
	Function
	
	 • Trade town
	
	 Sectoral Distribution
	
	 2009
	    Agriculture - 39.89%
	    Manufacturing - 1.56%
	    Transportation - 3.29%
	    Construction - 2.5%
	    Service - 52.76%
	
	 2030
	    Agriculture - 11.00%
	    Manufacturing - 3.00%
	    Transportation - 7.00%
	    Construction - 6.00%
	    Service - 73.00%

Southern Metro: Urban Centre – Isinya	
Population • 2009 – 8, 670	*Function* • Service town

•   2030 – 68,882
 	
Employment
 	
WPR
•   2009 – 16.98%
•   2030 – 35.00%
 	
Formal: Informal
•   2009 – 1:6.49
•   2030 – 1:2.50
 	
Land Use Pattern
 	
Residential-   50%
Commercial-   5%
PSP   -   8%
Industrial-   8%
Transport-   12%
Open Space-   17%
	Sectoral Distribution
	
	2009
	    Agriculture - 31.39%
	    Manufacturing - 2.99%
	    Transportation - 3.29%
	    Construction - 3.98%
	    Service - 58.35%
	
	2030
	    Agriculture - 16.00%
	    Manufacturing - 7.00%
	    Transportation - 6.00%
	    Construction - 10.00%
	    Service - 61.00%

Southern Metro: Urban Centre – Bissil	

Population
 	
•   2009 – 18,281
•   2030 – 40, 846
 	
Employment
 	
WPR
•   2009 – 16.24%
•   2030 – 35.00%
 	
Formal: Informal
•   2009 – 1:7.65
•   2030 – 1:2.50
 	
Land Use Pattern
 	
Residential-   55%
Commercial-   2%
PSP   -   8%
Industrial-   8%
Transport-   12%
Open Space-   15%
	Function
	
	• Service town
	
	Sectoral Distribution
	
	2009
	
	    Agriculture - 29.45%
	    Manufacturing - 1.75%
	    Transportation - 2.59%
	    Construction - 2.57%
	    Service - 63.64%
	
	2030
	    Agriculture - 12.00%
	    Manufacturing - 4.00%
	    Transportation - 6.00%
	    Construction - 6.00%
	    Service - 72.00%

Southern Metro: Urban Centre – Kajiado	
Population • 2009 – 5, 376 • 2030 – 40, 764 *Employment* WPR	*Function* • Administrative • Service town *Sectoral Distribution* 2009

- 2009 – 23.08%
- 2030 – 35.00%

Formal: Informal
- 2009 – 1:5.98
- 2030 – 1:2.50

Land Use Pattern

Residential-	45%
Commercial-	5%
PSP -	10%
Industrial-	8%
Transport-	15%
Open Space-	17%

Agriculture	- 19.78%
Manufacturing	- 5.79%
Transportation	- 9.99%
Construction	- 5.96%
Service	- 58.48%

2030
Agriculture	- 10.00%
Manufacturing	- 11.00%
Transportation	- 20.00%
Construction	- 15.00%
Service	- 44.00%

Northern Metro – New Town

Population	*Function*
• 2030 – 100, 000	• New Town 1 – Aerotropolis

Employment

WPR
- 2030 – 35.00%

Formal: Informal

- 2030 – 1:2.50

Land Use Pattern

Residential-	35%
Commercial-	5%
PSP -	5%
Industrial-	10%
Transport-	30%
Open Space-	15%

Sectoral Distribution

2030
Agriculture	- 1.00%
Manufacturing	- 1.00%
Transportation	- 35.00%
Construction	- 20.00%
Service	- 43.00%

Northern Metro – New Town

Population	*Function*
• 2030 – 100, 000	• New Town 2 – Capitol Complex

Employment

WPR
- 2030 – 35.00%

Formal: Informal

- 2030 – 1:2.50

Land Use Pattern

Sectoral Distribution

2030
Agriculture	- 0.00%
Manufacturing	- 0.00%
Transportation	- 15.00%
Construction	- 5.00%
Service	- 80.00%

Residential- 40% Commercial- 5% PSP - 20% Industrial- 2% Transport- 15% Open Space- 18%	

Northern Metro – Kimende New Town	

Population
 	
• 2030 – 100, 000
 	
Employment
 	
WPR
• 2030 – 35.00%
 	
Formal: Informal
 	
• 2030 – 1:2.50
 	
Land Use Pattern
 	
Residential- 35%
Commercial- 3%
PSP - 25%
Industrial- 5%
Transport- 12%
Open Space- 20%
	Function
	
	• New Town 3 – Agricultural research
	
	Sectoral Distribution
	
	2030
	    Agriculture - 39.00%
	    Manufacturing - 5.00%
	    Transportation - 10.00%
	    Construction - 1.00%
	    Service - 45.00%

Eastern Metro – Konzo New Town	

Population
 	
• 2030 – 150, 000
 	
Employment
 	
WPR
• 2030 – 35.00%
 	
Formal: Informal
 	
• 2030 – 1:2.50
 	
Land Use Pattern
 	
Residential- 35%
Commercial- 5%
PSP - 10%
Industrial- 20%
Transport- 12%
Open Space- 18%
	Function
	
	• Information technology city
	
	Sectoral Distribution
	
	2030
	
	    Agriculture - 1.00%
	    Manufacturing - 5.00%
	    Transportation - 5.00%
	    Construction - 5.00%
	    Service - 84.00%

Eastern Metro – Yatta New Town	
Population	*Function*

• 2030 – 150, 000 *Employment* WPR • 2030 – 35.00% Formal: Informal • 2030 – 1:2.50 *Land Use Pattern* Residential- 35% Commercial- 5% PSP - 10% Industrial- 5% Transport- 15% Open Space- 30%	• Sports city *Sectoral Distribution* 2030 Agriculture - 1.00% Manufacturing - 5.00% Transportation - 5.00% Construction - 5.00% Service - 84.00%

Southern Metro – Ambosilli New Town	
Population • 2030 – 210,000 (including Magadi with population of 10,000) with 2 new towns *Employment* WPR • 2030 – 35.00% Formal: Informal • 2030 – 1:2.50 *Land Use Pattern* Residential- 35% Commercial- 10% PSP - 10% Industrial- 5% Transport- 18% Open Space- 22%	*Function* • Tourist city *Sectoral Distribution* 2030 Agriculture - 1.00% Manufacturing - 0.00% Transportation - 10.00% Construction - 0.00% Service - 84.00%

Southern Metro – Kajiado Transport hub	
Population • 2030 – 100,000 *Employment* WPR • 2030 – 35.00%	*Function* • Transport hub cum SEZ *Sectoral Distribution* 2030

Formal: Informal		Agriculture	- 1.00%
• 2030 – 1:2.50		Manufacturing	- 5.00%
		Transportation	- 70.00%
Land Use Pattern		Construction	- 4.00%
		Service	- 20.00%
Residential-	35%		
Commercial-	5%		
PSP -	5%		
Industrial-	20%		
Transport-	20%		
Open Space-	15%		

Conclusion: The work participation rate in NMR has been assumed to be 35% with 15% growth of economy by 2030. Further all the modern functional facilities will be ensured in NMR.

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