



CHAPTER I INTRODUCTION

1.1 Introduction

This section is the introduction of labor force prediction analysis using particle swarm optimization and bat algorithm in Malaysia. This chapter provide an overview of the analysis and discuss the project background, problem statement, objectives of the project, significance of the project, scopes of the project, along with the assumptions and limitations.

1.2 Project Background

The rapid development of science, economy, and technology today makes us more open to accepting the changes that occur as a result of these advances and developments. No matter how perfect the technological and economic aspects are, without the human resource aspect, the organization's activities and objectives cannot be achieved. Human resources are living resources, which have thoughts and common sense and have attitudes and ways of thinking as well.

Nowadays, employment problems are still one of the problems that cannot be solved. This is due to the increase in the population and the number of generations who have not got a job but do not with sufficient employment opportunities. Table 1.1 that is a data set for the workforce in Malaysia organised by state and gathered from 1982 to 2021, shows it. The following data collection was created using information that Jabatan Perangkaan Malaysia supplied via data.gov.my.

Tabel 1.1 Data Set Labour Force In Malaysia

Year	Country/ state	Strata	Labour force (‘000)	Employed (‘000)	Unemployed (‘000)	Outside labour force (‘000)	Labour force participa tion rate (%)	Unem ployme nt rate (%)	Work ing less than 30 hours (‘000)
1982	JOHOR	Rural	413.7	398.9	14.8	214.0	65.9	3.6	n.a.
1983	JOHOR	Rural	395.3	381.1	14.2	213.5	64.9	3.6	n.a.
1984	JOHOR	Rural	443.3	423.4	19.9	237.6	65.1	4.5	n.a.
1985	JOHOR	Rural	460.6	436.1	24.5	223.3	67.4	5.3	n.a.
1986	JOHOR	Rural	480.6	451.1	29.5	231.3	67.5	6.1	n.a.
1987	JOHOR	Rural	519.3	487.7	31.6	244.8	68.0	6.1	n.a.
1988	JOHOR	Rural	575.1	545.0	30.1	265.2	68.4	5.2	n.a.



1989	JOHOR	Rural	596.6	570.9	25.7	301.0	66.5	4.3	n.a.
1990	JOHOR	Rural	690.5	665.7	24.7	323.2	68.1	3.6	n.a.
1992	JOHOR	Rural	440.1	430.6	9.5	217.9	66.9	2.2	n.a.
1993	JOHOR	Rural	467.6	451.2	16.4	219.5	68.1	3.5	n.a.
1995	JOHOR	Rural	436.4	425.9	10.6	234.8	65.0	2.4	n.a.
1996	JOHOR	Rural	504.6	493.5	11.1	242.9	67.5	2.2	n.a.
1997	JOHOR	Rural	511.4	502.8	8.6	256.6	66.6	1.7	n.a.
1998	JOHOR	Rural	504.6	497.9	6.7	278.1	64.5	1.3	n.a.
1999	JOHOR	Rural	506.9	490.3	16.6	317.1	61.5	3.3	n.a.
2000	JOHOR	Rural	583.5	570.8	12.7	312.7	65.1	2.2	n.a.
2001	JOHOR	Rural	383.5	367.5	15.9	214.1	64.2	4.2	n.a.
2002	JOHOR	Rural	405.4	391.5	13.9	223.5	64.5	3.4	n.a.
2003	JOHOR	Rural	432.2	414.7	17.5	220.7	66.2	4.0	n.a.
2004	JOHOR	Rural	394.9	379.1	15.8	219.9	64.2	4.0	n.a.
2005	JOHOR	Rural	355.5	343.6	11.9	221.3	61.6	3.3	n.a.
2006	JOHOR	Rural	349.9	342.0	7.9	226.7	60.7	2.3	n.a.
2007	JOHOR	Rural	366.3	358.9	7.4	225.2	61.9	2.0	n.a.
2008	JOHOR	Rural	350.5	343.2	7.2	222.2	61.2	2.1	n.a.
2009	JOHOR	Rural	338.5	328.4	10.1	228.9	59.7	3.0	n.a.
2010	JOHOR	Rural	396.2	387.8	8.4	226.9	63.6	2.1	n.a.
2011	JOHOR	Rural	382.2	373.1	9.1	236.7	61.8	2.4	n.a.
2012	JOHOR	Rural	391.3	379.9	11.4	229.6	63.0	2.9	n.a.
2013	JOHOR	Rural	378.4	369.5	9.0	207.1	64.6	2.4	n.a.
2014	JOHOR	Rural	373.2	363.0	10.2	198.8	65.2	2.7	n.a.
2015	JOHOR	Rural	373.2	361.2	11.9	183.4	67.0	3.2	n.a.
2016	JOHOR	Rural	358.8	344.1	14.7	183.7	66.1	4.1	n.a.
2017	JOHOR	Rural	344.7	333.8	10.9	169.9	67.0	3.2	n.a.
2018	JOHOR	Rural	332.0	323.9	8.2	168.5	66.3	2.5	n.a.
2019	JOHOR	Rural	342.3	332.1	10.2	162.7	67.8	3.0	n.a.
1982	JOHOR	Urban	239.4	231.3	8.1	131.1	64.6	3.4	n.a.
1983	JOHOR	Urban	255.6	242.6	13.0	130.6	66.2	5.1	n.a.
1984	JOHOR	Urban	244.9	233.9	11.0	134.6	64.5	4.5	n.a.
1985	JOHOR	Urban	249.8	236.6	13.1	131.4	65.5	5.3	n.a.
1986	JOHOR	Urban	270.6	249.3	21.3	136.4	66.5	7.9	n.a.
1987	JOHOR	Urban	262.5	245.0	17.5	135.3	66.0	6.7	n.a.
1988	JOHOR	Urban	262.0	247.0	15.0	131.3	66.6	5.7	n.a.
1989	JOHOR	Urban	265.2	251.4	13.8	138.3	65.7	5.2	n.a.
1990	JOHOR	Urban	258.7	248.3	10.3	126.4	67.2	4.0	n.a.
1992	JOHOR	Urban	507.0	495.4	11.6	236.1	68.2	2.3	n.a.
1993	JOHOR	Urban	535.4	523.1	12.3	206.1	72.2	2.3	n.a.
1995	JOHOR	Urban	479.0	465.9	13.1	261.5	64.7	2.7	n.a.
1996	JOHOR	Urban	513.8	503.1	10.6	265.5	65.9	2.1	n.a.
1997	JOHOR	Urban	565.5	555.5	10.0	259.7	68.5	1.8	n.a.
1998	JOHOR	Urban	539.7	529.1	10.6	287.8	65.2	2.0	n.a.
1999	JOHOR	Urban	553.5	538.8	14.8	291.7	65.5	2.7	n.a.
2000	JOHOR	Urban	638.9	624.6	14.3	291.4	68.7	2.2	n.a.
2001	JOHOR	Urban	895.5	868.3	27.2	452.2	66.4	3.0	n.a.
2002	JOHOR	Urban	853.6	830.8	22.8	404.9	67.8	2.7	n.a.
2003	JOHOR	Urban	883.1	854.4	28.7	410.5	68.3	3.3	n.a.
2004	JOHOR	Urban	883.9	853.5	30.4	430.4	67.3	3.4	n.a.
2005	JOHOR	Urban	924.5	893.5	31.0	472.5	66.2	3.4	n.a.
2006	JOHOR	Urban	935.9	916.2	19.7	500.1	65.2	2.1	n.a.
2007	JOHOR	Urban	947.3	927.8	19.5	520.5	64.5	2.1	n.a.
2008	JOHOR	Urban	962.6	940.6	22.1	568.1	62.9	2.3	n.a.
2009	JOHOR	Urban	1011.5	977.9	33.6	563.0	64.2	3.3	n.a.
2010	JOHOR	Urban	1057.3	1031.0	26.3	592.0	64.1	2.5	n.a.
2011	JOHOR	Urban	1117.7	1088.8	28.9	579.6	65.8	2.6	n.a.
2012	JOHOR	Urban	1138.1	1101.6	36.5	592.3	65.8	3.2	n.a.
2013	JOHOR	Urban	1220.4	1184.0	36.5	564.2	68.4	3.0	n.a.
2014	JOHOR	Urban	1248.0	1216.8	31.2	580.0	68.3	2.5	n.a.
2015	JOHOR	Urban	1260.0	1221.4	38.6	616.5	67.1	3.1	n.a.
2016	JOHOR	Urban	1280.3	1236.5	43.8	637.1	66.8	3.4	n.a.
2017	JOHOR	Urban	1329.2	1283.0	46.2	654.5	67.0	3.5	n.a.
2018	JOHOR	Urban	1413.1	1369.4	43.7	619.7	69.5	3.1	n.a.
2019	JOHOR	Urban	1463.4	1424.1	39.4	598.8	71.0	2.7	n.a.
1982	KEDAH	Rural	350.2	337.7	12.4	221.7	61.2	3.6	n.a.
1983	KEDAH	Rural	333.4	320.6	12.8	192.0	63.5	3.8	n.a.
1984	KEDAH	Rural	386.7	365.1	21.6	237.3	62.0	5.6	n.a.
1985	KEDAH	Rural	381.6	354.1	27.5	233.6	62.0	7.2	n.a.
1986	KEDAH	Rural	390.8	358.7	32.1	252.2	60.8	8.2	n.a.
1987	KEDAH	Rural	388.6	357.0	31.6	250.4	60.8	8.1	n.a.
1988	KEDAH	Rural	430.9	397.8	33.1	257.1	62.6	7.7	n.a.
1989	KEDAH	Rural	409.7	386.8	22.9	250.8	62.0	5.6	n.a.
1990	KEDAH	Rural	432.4	413.0	19.4	266.9	61.8	4.5	n.a.
1992	KEDAH	Rural	329.0	314.4	14.5	204.0	61.7	4.4	n.a.



1993	KEDAH	Rural	318.6	305.7	12.9	196.1	61.9	4.0	n.a.
1995	KEDAH	Rural	338.0	332.0	5.9	209.4	61.7	1.8	n.a.
1996	KEDAH	Rural	366.3	356.5	9.8	231.3	61.3	2.7	n.a.
1997	KEDAH	Rural	414.7	403.7	11.0	256.7	61.8	2.7	n.a.
1998	KEDAH	Rural	378.0	365.6	12.3	249.1	60.3	3.3	n.a.
1999	KEDAH	Rural	470.9	454.8	16.2	279.7	62.7	3.4	n.a.
2000	KEDAH	Rural	409.4	397.4	11.9	246.0	62.5	2.9	n.a.
2001	KEDAH	Rural	405.0	388.0	17.1	262.0	60.7	4.2	n.a.
2002	KEDAH	Rural	398.6	386.5	12.1	249.2	61.5	3.0	n.a.
2003	KEDAH	Rural	397.1	382.8	14.2	243.1	62.0	3.6	n.a.
2004	KEDAH	Rural	397.9	382.1	15.8	237.4	62.6	4.0	n.a.
2005	KEDAH	Rural	383.8	368.3	15.5	257.3	59.9	4.0	n.a.
2006	KEDAH	Rural	389.0	375.0	14.0	261.1	59.8	3.6	n.a.
2007	KEDAH	Rural	398.2	383.9	14.4	263.3	60.2	3.6	n.a.
2008	KEDAH	Rural	396.7	380.5	16.2	276.3	58.9	4.1	n.a.
2009	KEDAH	Rural	405.3	387.9	17.4	281.2	59.0	4.3	n.a.
2010	KEDAH	Rural	408.9	398.5	10.4	287.0	58.8	2.5	n.a.
2011	KEDAH	Rural	428.6	412.1	16.5	282.9	60.2	3.9	n.a.
2012	KEDAH	Rural	433.2	418.3	14.9	271.1	61.5	3.4	n.a.
2013	KEDAH	Rural	454.7	443.3	11.4	254.0	64.2	2.5	n.a.
2014	KEDAH	Rural	279.1	271.8	7.3	143.4	66.1	2.6	n.a.
2015	KEDAH	Rural	277.1	268.4	8.7	144.4	65.7	3.1	n.a.
2016	KEDAH	Rural	257.2	249.5	7.8	140.5	64.7	3.0	n.a.
2017	KEDAH	Rural	257.9	249.3	8.6	129.9	66.5	3.3	n.a.
2018	KEDAH	Rural	258.9	251.4	7.5	142.6	64.5	2.9	n.a.
2019	KEDAH	Rural	244.4	237.2	7.2	135.3	64.4	2.9	n.a.
1982	KEDAH	Urban	53.8	51.2	2.5	37.5	58.9	4.7	n.a.
1983	KEDAH	Urban	54.8	53.0	1.8	34.6	61.3	3.3	n.a.
1984	KEDAH	Urban	55.9	52.5	3.3	39.0	58.9	6.0	n.a.
1985	KEDAH	Urban	63.8	59.8	4.0	42.4	60.1	6.3	n.a.
1986	KEDAH	Urban	64.2	59.3	4.9	44.0	59.3	7.6	n.a.
1987	KEDAH	Urban	67.9	63.1	4.8	40.8	62.5	7.1	n.a.
1988	KEDAH	Urban	65.2	61.5	3.8	38.7	62.8	5.8	n.a.
1989	KEDAH	Urban	60.3	56.5	3.8	38.0	61.4	6.3	n.a.
1990	KEDAH	Urban	56.9	54.7	2.2	34.1	62.5	3.8	n.a.
1992	KEDAH	Urban	185.0	180.6	4.4	101.6	64.6	2.4	n.a.
1993	KEDAH	Urban	174.2	169.4	4.9	98.8	63.8	2.8	n.a.
1995	KEDAH	Urban	193.7	189.1	4.6	126.0	60.6	2.4	n.a.
1996	KEDAH	Urban	183.5	179.5	4.0	130.3	58.5	2.2	n.a.
1997	KEDAH	Urban	201.9	197.6	4.3	122.0	62.3	2.1	n.a.
1998	KEDAH	Urban	209.2	201.7	7.5	122.9	63.0	3.6	n.a.
1999	KEDAH	Urban	230.5	223.9	6.6	142.7	61.8	2.8	n.a.
2000	KEDAH	Urban	235.8	229.1	6.7	145.3	61.9	2.9	n.a.
2001	KEDAH	Urban	322.4	313.1	9.3	198.3	61.9	2.9	n.a.
2002	KEDAH	Urban	267.9	258.6	9.3	176.6	60.3	3.5	n.a.
2003	KEDAH	Urban	283.1	274.9	8.2	164.9	63.2	2.9	n.a.
2004	KEDAH	Urban	282.5	272.4	10.1	177.9	61.4	3.6	n.a.
2005	KEDAH	Urban	294.1	284.5	9.6	188.3	61.0	3.2	n.a.
2006	KEDAH	Urban	293.4	281.8	11.6	206.1	58.7	4.0	n.a.
2007	KEDAH	Urban	294.8	286.5	8.3	218.3	57.5	2.8	n.a.
2008	KEDAH	Urban	306.3	295.5	10.7	221.3	58.1	3.5	n.a.
2009	KEDAH	Urban	327.3	313.7	13.7	214.8	60.4	4.2	n.a.
2010	KEDAH	Urban	338.0	327.2	10.8	222.0	60.4	3.2	n.a.
2011	KEDAH	Urban	341.4	331.3	10.1	229.1	59.8	3.0	n.a.
2012	KEDAH	Urban	377.1	368.6	8.5	230.9	62.0	2.3	n.a.
2013	KEDAH	Urban	408.0	399.0	9.1	235.9	63.4	2.2	n.a.
2014	KEDAH	Urban	605.0	588.0	17.0	350.0	63.3	2.8	n.a.
2015	KEDAH	Urban	628.3	613.2	15.1	352.1	64.1	2.4	n.a.
2016	KEDAH	Urban	653.7	634.9	18.8	367.9	64.0	2.9	n.a.
2017	KEDAH	Urban	674.9	657.0	17.9	378.4	64.1	2.7	n.a.
2018	KEDAH	Urban	677.7	657.8	19.9	396.3	63.1	2.9	n.a.
2019	KEDAH	Urban	705.6	686.4	19.2	416.0	62.9	2.7	n.a.
1982	KELANTAN	Rural	232.4	222.5	9.9	128.9	64.3	4.3	n.a.
1983	KELANTAN	Rural	218.0	205.4	12.6	154.2	58.6	5.8	n.a.
1984	KELANTAN	Rural	248.0	234.3	13.7	150.0	62.3	5.5	n.a.
1985	KELANTAN	Rural	255.5	240.0	15.5	152.2	62.7	6.1	n.a.
1986	KELANTAN	Rural	268.5	250.0	18.5	155.3	63.3	6.9	n.a.
1987	KELANTAN	Rural	274.5	258.8	15.8	151.1	64.5	5.7	n.a.
1988	KELANTAN	Rural	283.6	261.4	22.2	126.4	69.2	7.8	n.a.
1989	KELANTAN	Rural	282.8	266.1	16.7	159.1	64.0	5.9	n.a.
1990	KELANTAN	Rural	285.8	277.3	8.5	153.4	65.1	3.0	n.a.
1992	KELANTAN	Rural	263.9	248.5	15.4	150.5	63.7	5.8	n.a.



1993	KELANTAN	Rural	274.9	260.8	14.1	169.5	61.9	5.1	n.a.
1995	KELANTAN	Rural	284.0	274.3	9.7	164.7	63.3	3.4	n.a.
1996	KELANTAN	Rural	306.0	296.2	9.8	174.8	63.6	3.2	n.a.
1997	KELANTAN	Rural	282.6	271.1	11.5	184.7	60.5	4.1	n.a.
1998	KELANTAN	Rural	304.5	293.0	11.6	190.3	61.5	3.8	n.a.
1999	KELANTAN	Rural	301.2	292.0	9.2	192.1	61.1	3.1	n.a.
2000	KELANTAN	Rural	291.5	284.2	7.3	187.9	60.8	2.5	n.a.
2001	KELANTAN	Rural	295.4	285.7	9.7	216.1	57.8	3.3	n.a.
2002	KELANTAN	Rural	295.6	283.6	12.0	207.5	58.8	4.1	n.a.
2003	KELANTAN	Rural	320.8	310.6	10.3	211.2	60.3	3.2	n.a.
2004	KELANTAN	Rural	292.3	280.0	12.2	231.1	55.8	4.2	n.a.
2005	KELANTAN	Rural	291.1	281.3	9.8	250.2	53.8	3.4	n.a.
2006	KELANTAN	Rural	300.3	293.4	6.9	254.4	54.1	2.3	n.a.
2007	KELANTAN	Rural	315.0	306.5	8.5	263.6	54.4	2.7	n.a.
2008	KELANTAN	Rural	318.4	309.3	9.2	267.1	54.4	2.9	n.a.
2009	KELANTAN	Rural	329.6	322.0	7.6	275.8	54.4	2.3	n.a.
2010	KELANTAN	Rural	354.9	346.5	8.4	270.2	56.8	2.4	n.a.
2011	KELANTAN	Rural	359.0	352.4	6.6	281.4	56.1	1.8	n.a.
2012	KELANTAN	Rural	380.9	372.2	8.6	275.6	58.0	2.3	n.a.
2013	KELANTAN	Rural	401.8	390.4	11.4	275.7	59.3	2.8	n.a.
2014	KELANTAN	Rural	341.6	331.4	10.2	218.0	61.0	3.0	n.a.
2015	KELANTAN	Rural	350.7	338.8	12.0	202.5	63.4	3.4	n.a.
2016	KELANTAN	Rural	329.7	317.1	12.6	226.8	59.2	3.8	n.a.
2017	KELANTAN	Rural	339.9	328.6	11.3	205.3	62.3	3.3	n.a.
2018	KELANTAN	Rural	350.5	338.6	11.9	221.5	61.3	3.4	n.a.
2019	KELANTAN	Rural	331.5	320.5	11.0	238.6	58.1	3.3	n.a.
1982	KELANTAN	Urban	87.0	81.7	5.3	60.0	59.2	6.1	n.a.
1983	KELANTAN	Urban	83.3	77.1	6.2	62.2	57.2	7.4	n.a.
1984	KELANTAN	Urban	93.0	88.0	4.9	63.1	59.6	5.3	n.a.
1985	KELANTAN	Urban	88.8	83.6	5.2	60.7	59.4	5.8	n.a.
1986	KELANTAN	Urban	96.7	90.3	6.4	65.9	59.5	6.6	n.a.
1987	KELANTAN	Urban	100.4	91.7	8.7	66.7	60.1	8.7	n.a.
1988	KELANTAN	Urban	110.4	102.0	8.4	64.8	63.0	7.6	n.a.
1989	KELANTAN	Urban	105.6	97.7	7.9	64.5	62.1	7.4	n.a.
1990	KELANTAN	Urban	104.9	100.4	4.5	66.7	61.1	4.3	n.a.
1992	KELANTAN	Urban	140.2	134.0	6.2	77.7	64.3	4.4	n.a.
1993	KELANTAN	Urban	138.8	133.6	5.2	86.6	61.6	3.7	n.a.
1995	KELANTAN	Urban	143.6	138.3	5.3	85.9	62.6	3.7	n.a.
1996	KELANTAN	Urban	154.8	149.3	5.5	91.1	63.0	3.6	n.a.
1997	KELANTAN	Urban	146.7	142.6	4.2	91.5	61.6	2.8	n.a.
1998	KELANTAN	Urban	144.5	137.7	6.8	91.1	61.3	4.7	n.a.
1999	KELANTAN	Urban	149.9	144.8	5.1	102.1	59.5	3.4	n.a.
2000	KELANTAN	Urban	145.7	141.5	4.2	101.1	59.0	2.9	n.a.
2001	KELANTAN	Urban	152.5	148.5	4.0	107.2	58.7	2.6	n.a.
2002	KELANTAN	Urban	144.1	139.1	5.0	97.6	59.6	3.5	n.a.
2003	KELANTAN	Urban	170.7	165.1	5.6	109.0	61.0	3.3	n.a.
2004	KELANTAN	Urban	162.9	156.6	6.3	124.4	56.7	3.9	n.a.
2005	KELANTAN	Urban	163.1	157.5	5.6	134.1	54.9	3.4	n.a.
2006	KELANTAN	Urban	169.5	164.9	4.5	142.2	54.4	2.7	n.a.
2007	KELANTAN	Urban	171.2	166.5	4.6	146.7	53.8	2.7	n.a.
2008	KELANTAN	Urban	182.5	177.2	5.3	151.5	54.6	2.9	n.a.
2009	KELANTAN	Urban	188.3	183.2	5.0	156.9	54.5	2.7	n.a.
2010	KELANTAN	Urban	192.4	187.7	4.7	141.9	57.5	2.4	n.a.
2011	KELANTAN	Urban	196.4	192.2	4.2	150.3	56.6	2.1	n.a.
2012	KELANTAN	Urban	211.4	206.5	4.9	149.3	58.6	2.3	n.a.
2013	KELANTAN	Urban	218.0	212.3	5.7	149.1	59.4	2.6	n.a.
2014	KELANTAN	Urban	304.6	293.8	10.8	207.2	59.5	3.6	n.a.
2015	KELANTAN	Urban	325.4	313.3	12.1	212.8	60.5	3.7	n.a.



2016	KELANTAN	Urban	328.1	315.8	12.3	228.0	59.0	3.7	n.a.
2017	KELANTAN	Urban	361.1	347.4	13.7	240.9	60.0	3.8	n.a.
2018	KELANTAN	Urban	361.5	344.7	16.7	244.2	59.7	4.6	n.a.
2019	KELANTAN	Urban	379.0	361.9	17.1	256.8	59.6	4.5	n.a.
1982	MALAYSIA	Rural	3398.3	3280.9	117.4	1851.3	64.7	3.5	323.8
1983	MALAYSIA	Rural	3608.4	3466.9	141.5	1928.6	65.2	3.9	421.0
1984	MALAYSIA	Rural	3731.6	3537.8	193.8	1948.9	65.7	5.2	527.8
1985	MALAYSIA	Rural	3810.8	3590.3	220.4	1963.1	66.0	5.8	558.5
1986	MALAYSIA	Rural	4064.6	3763.7	300.9	2039.6	66.6	7.4	610.2
1987	MALAYSIA	Rural	4264.5	3953.6	310.9	2089.4	67.1	7.3	619.7
1988	MALAYSIA	Rural	4394.0	4068.4	325.6	2122.5	67.4	7.4	690.4
1989	MALAYSIA	Rural	4482.3	4218.9	263.4	2244.3	66.6	5.9	562.2
1990	MALAYSIA	Rural	4674.8	4459.3	215.5	2327.5	66.8	4.6	503.0
1992	MALAYSIA	Rural	3245.4	3105.0	140.4	1681.8	65.9	4.3	366.2
1993	MALAYSIA	Rural	3471.4	3314.5	156.9	1776.8	66.1	4.5	443.5
1995	MALAYSIA	Rural	3527.9	3402.8	125.1	1933.2	64.6	3.5	336.9
1996	MALAYSIA	Rural	4005.6	3892.5	113.1	2003.7	66.7	2.8	401.3
1997	MALAYSIA	Rural	4019.7	3903.9	115.7	2163.6	65.0	2.9	355.8
1998	MALAYSIA	Rural	4108.3	3975.7	132.7	2284.4	64.3	3.2	331.5
1999	MALAYSIA	Rural	4154.0	4010.5	143.6	2334.9	64.0	3.5	314.1
2000	MALAYSIA	Rural	4381.5	4241.4	140.1	2344.9	65.1	3.2	336.3
2001	MALAYSIA	Rural	3321.2	3184.1	137.0	1877.2	63.9	4.1	321.2
2002	MALAYSIA	Rural	3369.4	3241.8	127.6	1915.6	63.8	3.8	332.3
2003	MALAYSIA	Rural	3541.7	3403.8	137.9	1929.9	64.7	3.9	338.0
2004	MALAYSIA	Rural	3517.4	3375.4	142.0	2052.7	63.1	4.0	347.4
2005	MALAYSIA	Rural	3405.9	3273.7	132.3	2130.0	61.5	3.9	285.7
2006	MALAYSIA	Rural	3497.9	3374.4	123.4	2168.8	61.7	3.5	293.1
2007	MALAYSIA	Rural	3559.1	3436.1	123.0	2165.3	62.2	3.5	326.1
2008	MALAYSIA	Rural	3526.0	3394.5	131.5	2255.4	61.0	3.7	281.3
2009	MALAYSIA	Rural	3625.2	3485.9	139.2	2249.2	61.7	3.8	296.5
2010	MALAYSIA	Rural	3838.3	3707.0	131.3	2329.9	62.2	3.4	300.6
2011	MALAYSIA	Rural	3911.4	3775.1	136.3	2366.2	62.3	3.5	296.1
2012	MALAYSIA	Rural	3982.8	3852.4	130.4	2242.9	64.0	3.3	370.3
2013	MALAYSIA	Rural	4079.9	3951.3	128.6	2144.6	65.5	3.2	359.5
2014	MALAYSIA	Rural	3538.0	3428.7	109.2	1705.7	67.5	3.1	271.2
2015	MALAYSIA	Rural	3482.0	3374.0	108.1	1661.5	67.7	3.1	247.6
2016	MALAYSIA	Rural	3411.2	3300.3	110.9	1655.1	67.3	3.3	195.5
2017	MALAYSIA	Rural	3354.3	3253.5	100.9	1615.1	67.5	3.0	168.3
2018	MALAYSIA	Rural	3243.1	3136.4	106.7	1593.8	67.0	3.3	171.7
2019	MALAYSIA	Rural	3166.4	3066.2	100.2	1612.5	66.3	3.2	124.9
1982	MALAYSIA	Urban	2033.1	1968.1	65.1	1093.3	65.0	3.2	78.1
1983	MALAYSIA	Urban	2063.5	1990.1	73.4	1040.8	66.5	3.6	99.9
1984	MALAYSIA	Urban	2130.9	2028.9	102.1	1170.7	64.5	4.8	133.8
1985	MALAYSIA	Urban	2179.4	2063.0	116.3	1161.8	65.2	5.3	138.0
1986	MALAYSIA	Urban	2157.5	1996.5	161.0	1148.7	65.3	7.5	179.2
1987	MALAYSIA	Urban	2192.3	2030.4	162.0	1156.8	65.5	7.4	130.9
1988	MALAYSIA	Urban	2243.1	2088.8	154.3	1179.1	65.5	6.9	170.2
1989	MALAYSIA	Urban	2297.1	2172.0	125.1	1219.2	65.3	5.4	103.4
1990	MALAYSIA	Urban	2325.4	2225.7	99.7	1192.3	66.1	4.3	96.1
1992	MALAYSIA	Urban	4073.6	3942.8	130.8	2101.8	66.0	3.2	148.8
1993	MALAYSIA	Urban	4228.7	4068.8	159.9	2098.2	66.8	3.8	209.8
1995	MALAYSIA	Urban	4365.2	4242.2	123.0	2364.5	64.9	2.8	145.5
1996	MALAYSIA	Urban	4610.4	4506.7	103.7	2375.3	66.0	2.2	155.6
1997	MALAYSIA	Urban	4764.3	4665.2	99.1	2441.5	66.1	2.1	154.0
1998	MALAYSIA	Urban	4775.3	4624.0	151.3	2649.6	64.3	3.2	155.4
1999	MALAYSIA	Urban	4997.4	4827.3	170.1	2763.6	64.4	3.4	150.6
2000	MALAYSIA	Urban	5174.6	5027.8	146.8	2720.2	65.5	2.8	155.1
2001	MALAYSIA	Urban	6378.3	6172.9	205.3	3362.7	65.5	3.2	203.8



2002	MALAYSIA	Urban	6516.8	6300.8	215.9	3558.2	64.7	3.3	184.4
2003	MALAYSIA	Urban	6697.9	6466.0	231.9	3528.7	65.5	3.5	191.1
2004	MALAYSIA	Urban	6828.8	6604.1	224.7	3677.9	65.0	3.3	251.9
2005	MALAYSIA	Urban	7007.5	6771.7	235.8	3918.2	64.1	3.4	198.7
2006	MALAYSIA	Urban	7131.1	6900.9	230.1	4036.3	63.9	3.2	178.8
2007	MALAYSIA	Urban	7330.4	7102.0	228.4	4164.8	63.8	3.1	185.1
2008	MALAYSIA	Urban	7502.1	7265.1	237.0	4320.3	63.5	3.2	189.3
2009	MALAYSIA	Urban	7690.1	7411.4	278.7	4416.5	63.5	3.6	182.2
2010	MALAYSIA	Urban	8465.6	8192.5	273.1	4693.1	64.3	3.2	202.4
2011	MALAYSIA	Urban	8829.2	8576.4	252.9	4657.2	65.5	2.9	224.5
2012	MALAYSIA	Urban	9238.9	8968.1	270.8	4684.6	66.4	2.9	219.1
2013	MALAYSIA	Urban	9900.6	9594.1	306.5	4636.6	68.1	3.1	286.3
2014	MALAYSIA	Urban	10725.7	10423.9	301.8	5115.3	67.7	2.8	263.6
2015	MALAYSIA	Urban	11035.9	10693.7	342.2	5208.4	67.9	3.1	332.7
2016	MALAYSIA	Urban	11256.6	10863.3	393.2	5332.5	67.9	3.5	307.4
2017	MALAYSIA	Urban	11625.8	11223.3	402.4	5450.0	68.1	3.5	245.2
2018	MALAYSIA	Urban	12037.2	11639.6	397.6	5500.7	68.6	3.3	265.8
2019	MALAYSIA	Urban	12415.2	12007.3	407.9	5491.1	69.3	3.3	212.7
1982	MELAKA	Rural	130.3	124.9	5.3	82.5	61.2	4.1	n.a.
1983	MELAKA	Rural	131.9	128.0	3.9	74.9	63.8	3.0	n.a.
1984	MELAKA	Rural	134.4	126.8	7.6	88.0	60.4	5.7	n.a.
1985	MELAKA	Rural	140.1	132.6	7.5	84.8	62.3	5.4	n.a.
1986	MELAKA	Rural	150.2	135.3	14.9	90.1	62.5	9.9	n.a.
1987	MELAKA	Rural	152.3	139.9	12.3	93.0	62.1	8.1	n.a.
1988	MELAKA	Rural	152.3	139.9	12.4	93.1	62.1	8.1	n.a.
1989	MELAKA	Rural	155.1	145.6	9.5	89.2	63.5	6.1	n.a.
1990	MELAKA	Rural	145.3	139.6	5.6	85.2	63.0	3.9	n.a.
1992	MELAKA	Rural	124.5	120.2	4.3	68.9	64.4	3.5	n.a.
1993	MELAKA	Rural	132.3	128.2	4.1	68.8	65.8	3.1	n.a.
1995	MELAKA	Rural	120.9	118.2	2.7	80.9	59.9	2.2	n.a.
1996	MELAKA	Rural	131.8	129.3	2.4	75.7	63.5	1.8	n.a.
1997	MELAKA	Rural	138.6	136.2	2.3	80.6	63.2	1.7	n.a.
1998	MELAKA	Rural	132.6	129.0	3.5	85.8	60.7	2.7	n.a.
1999	MELAKA	Rural	136.0	133.5	2.5	84.7	61.6	1.9	n.a.
2000	MELAKA	Rural	146.0	144.2	1.8	89.4	62.0	1.3	n.a.
2001	MELAKA	Rural	71.3	69.7	1.6	47.7	59.9	2.3	n.a.
2002	MELAKA	Rural	77.2	75.0	2.2	47.9	61.7	2.9	n.a.
2003	MELAKA	Rural	85.2	82.7	2.5	49.7	63.2	3.0	n.a.
2004	MELAKA	Rural	78.1	77.0	1.1	45.1	63.4	1.4	n.a.
2005	MELAKA	Rural	71.6	70.6	1.0	46.3	60.7	1.4	n.a.
2006	MELAKA	Rural	73.9	72.8	1.1	49.1	60.1	1.5	n.a.
2007	MELAKA	Rural	67.4	65.9	1.5	39.3	63.2	2.3	n.a.
2008	MELAKA	Rural	59.5	58.9	0.7	38.2	60.9	1.1	n.a.
2009	MELAKA	Rural	60.8	59.3	1.5	38.6	61.2	2.5	n.a.
2010	MELAKA	Rural	68.7	67.8	0.9	45.5	60.2	1.3	n.a.
2011	MELAKA	Rural	67.9	67.2	0.6	44.4	60.5	0.9	n.a.
2012	MELAKA	Rural	61.2	60.7	0.4	38.6	61.3	0.7	n.a.
2013	MELAKA	Rural	58.9	58.4	0.5	33.7	63.6	0.9	n.a.
2014	MELAKA	Rural	32.2	31.8	0.4	16.7	65.8	1.1	n.a.
2015	MELAKA	Rural	28.2	28.0	0.3	15.7	64.2	0.9	n.a.
2016	MELAKA	Rural	25.7	25.7	0.1	11.7	68.8	0.2	n.a.
2017	MELAKA	Rural	23.2	23.0	0.2	14.2	62.0	0.9	n.a.
2018	MELAKA	Rural	21.4	21.1	0.3	12.2	63.6	1.5	n.a.
2019	MELAKA	Rural	18.9	18.7	0.2	11.6	62.0	1.3	n.a.
1982	MELAKA	Urban	43.8	42.2	1.6	26.1	62.6	3.6	n.a.
1983	MELAKA	Urban	38.4	37.5	0.9	27.4	58.3	2.3	n.a.
1984	MELAKA	Urban	37.4	35.8	1.6	21.8	63.1	4.3	n.a.
1985	MELAKA	Urban	39.9	37.5	2.4	21.1	65.4	6.0	n.a.
1986	MELAKA	Urban	37.4	34.5	2.9	23.1	61.9	7.8	n.a.
1987	MELAKA	Urban	39.9	36.8	3.1	24.0	62.4	7.7	n.a.



1988	MELAKA	Urban	38.6	35.5	3.2	22.3	63.4	8.2	n.a.
1989	MELAKA	Urban	42.7	40.3	2.4	23.8	64.2	5.7	n.a.
1990	MELAKA	Urban	42.6	40.4	2.2	21.5	66.5	5.1	n.a.
1992	MELAKA	Urban	89.9	87.2	2.7	47.1	65.6	3.0	n.a.
1993	MELAKA	Urban	93.3	90.2	3.0	42.6	68.6	3.3	n.a.
1995	MELAKA	Urban	107.0	104.5	2.4	61.3	63.6	2.3	n.a.
1996	MELAKA	Urban	108.9	107.6	1.2	53.0	67.3	1.1	n.a.
1997	MELAKA	Urban	123.0	120.9	2.1	52.8	70.0	1.7	n.a.
1998	MELAKA	Urban	116.0	113.4	2.7	66.9	63.4	2.3	n.a.
1999	MELAKA	Urban	111.9	109.7	2.2	64.7	63.4	2.0	n.a.
2000	MELAKA	Urban	110.9	109.4	1.5	56.5	66.2	1.4	n.a.
2001	MELAKA	Urban	201.3	198.0	3.2	118.8	62.9	1.6	n.a.
2002	MELAKA	Urban	159.0	154.3	4.6	104.4	60.3	2.9	n.a.
2003	MELAKA	Urban	195.3	190.0	5.3	116.8	62.6	2.7	n.a.
2004	MELAKA	Urban	191.4	188.0	3.3	117.0	62.1	1.7	n.a.
2005	MELAKA	Urban	202.9	200.5	2.4	121.8	62.5	1.2	n.a.
2006	MELAKA	Urban	202.7	200.3	2.4	124.6	61.9	1.2	n.a.
2007	MELAKA	Urban	223.0	218.4	4.6	130.4	63.1	2.1	n.a.
2008	MELAKA	Urban	230.4	227.9	2.6	141.1	62.0	1.1	n.a.
2009	MELAKA	Urban	230.1	224.7	5.4	147.7	60.9	2.4	n.a.
2010	MELAKA	Urban	269.9	267.2	2.7	170.7	61.3	1.0	n.a.
2011	MELAKA	Urban	275.4	273.6	1.8	178.4	60.7	0.7	n.a.
2012	MELAKA	Urban	297.7	296.3	1.4	179.9	62.3	0.5	n.a.
2013	MELAKA	Urban	319.3	317.1	2.2	174.5	64.7	0.7	n.a.
2014	MELAKA	Urban	366.2	363.1	3.1	180.5	67.0	0.8	n.a.
2015	MELAKA	Urban	374.2	370.4	3.8	185.9	66.8	1.0	n.a.
2016	MELAKA	Urban	375.1	371.6	3.5	200.3	65.2	0.9	n.a.
2017	MELAKA	Urban	387.1	383.3	3.8	201.2	65.8	1.0	n.a.
2018	MELAKA	Urban	399.8	395.7	4.1	199.0	66.8	1.0	n.a.
2019	MELAKA	Urban	414.0	409.6	4.4	196.0	67.9	1.1	n.a.
1982	N.SEMBILAN	Rural	152.4	147.6	4.8	87.5	63.5	3.1	n.a.
1983	N.SEMBILAN	Rural	145.0	138.4	6.6	93.2	60.9	4.6	n.a.
1984	N.SEMBILAN	Rural	148.1	140.3	7.7	84.9	63.5	5.2	n.a.
1985	N.SEMBILAN	Rural	137.8	131.2	6.6	80.3	63.2	4.8	n.a.
1986	N.SEMBILAN	Rural	149.0	139.2	9.8	85.5	63.5	6.6	n.a.
1987	N.SEMBILAN	Rural	166.8	153.8	12.9	97.4	63.1	7.7	n.a.
1988	N.SEMBILAN	Rural	163.0	154.1	8.9	84.0	66.0	5.5	n.a.
1989	N.SEMBILAN	Rural	158.0	149.2	8.8	81.3	66.0	5.6	n.a.
1990	N.SEMBILAN	Rural	152.2	146.2	6.0	86.2	63.8	4.0	n.a.
1992	N.SEMBILAN	Rural	142.3	138.1	4.2	79.4	64.2	3.0	n.a.
1993	N.SEMBILAN	Rural	153.7	149.3	4.4	80.6	65.6	2.8	n.a.
1995	N.SEMBILAN	Rural	165.4	160.0	5.4	98.3	62.7	3.3	n.a.
1996	N.SEMBILAN	Rural	169.6	164.9	4.8	84.8	66.7	2.8	n.a.
1997	N.SEMBILAN	Rural	157.9	152.2	5.7	85.2	65.0	3.6	n.a.
1998	N.SEMBILAN	Rural	164.7	158.4	6.3	90.0	64.7	3.8	n.a.
1999	N.SEMBILAN	Rural	143.3	136.9	6.3	100.9	58.7	4.4	n.a.
2000	N.SEMBILAN	Rural	194.2	188.1	6.2	112.9	63.2	3.2	n.a.
2001	N.SEMBILAN	Rural	152.9	147.7	5.2	93.0	62.2	3.4	n.a.
2002	N.SEMBILAN	Rural	159.8	153.5	6.3	89.2	64.2	3.9	n.a.
2003	N.SEMBILAN	Rural	151.7	145.6	6.1	81.3	65.1	4.0	n.a.
2004	N.SEMBILAN	Rural	159.0	153.4	5.6	90.6	63.7	3.5	n.a.
2005	N.SEMBILAN	Rural	149.2	142.8	6.4	91.9	61.9	4.3	n.a.
2006	N.SEMBILAN	Rural	156.1	148.5	7.6	92.8	62.7	4.9	n.a.
2007	N.SEMBILAN	Rural	155.2	149.6	5.6	99.3	61.0	3.6	n.a.
2008	N.SEMBILAN	Rural	156.8	152.0	4.8	99.1	61.3	3.0	n.a.
2009	N.SEMBILAN	Rural	153.3	146.9	6.4	106.9	58.9	4.2	n.a.
2010	N.SEMBILAN	Rural	155.9	150.2	5.6	106.5	59.4	3.6	n.a.
2011	N.SEMBILAN	Rural	172.5	167.9	4.6	108.5	61.4	2.6	n.a.
2012	N.SEMBILAN	Rural	160.8	155.4	5.3	102.7	61.0	3.3	n.a.
2013	N.SEMBILAN	Rural	170.9	165.4	5.5	93.2	64.7	3.2	n.a.



2014	N.SEMBILAN	Rural	135.4	129.8	5.6	77.2	63.7	4.1	n.a.
2015	N.SEMBILAN	Rural	136.7	132.4	4.3	72.5	65.3	3.1	n.a.
2016	N.SEMBILAN	Rural	135.9	132.3	3.5	72.6	65.2	2.6	n.a.
2017	N.SEMBILAN	Rural	128.2	124.4	3.8	66.4	65.9	2.9	n.a.
2018	N.SEMBILAN	Rural	122.0	118.9	3.1	61.6	66.5	2.5	n.a.
2019	N.SEMBILAN	Rural	116.0	112.6	3.4	61.3	65.4	2.9	n.a.
1982	N.SEMBILAN	Urban	70.3	68.6	1.7	43.0	62.1	2.4	n.a.
1983	N.SEMBILAN	Urban	78.5	76.6	1.8	41.8	65.2	2.3	n.a.
1984	N.SEMBILAN	Urban	86.8	83.0	3.8	53.2	62.0	4.4	n.a.
1985	N.SEMBILAN	Urban	83.3	79.6	3.7	55.0	60.2	4.5	n.a.
1986	N.SEMBILAN	Urban	80.5	74.3	6.2	48.4	62.4	7.7	n.a.
1987	N.SEMBILAN	Urban	73.3	67.9	5.4	44.8	62.1	7.3	n.a.
1988	N.SEMBILAN	Urban	79.5	73.9	5.6	42.3	65.3	7.0	n.a.
1989	N.SEMBILAN	Urban	83.0	80.0	3.0	43.7	65.5	3.6	n.a.
1990	N.SEMBILAN	Urban	72.2	69.8	2.4	38.3	65.3	3.4	n.a.
1992	N.SEMBILAN	Urban	117.5	113.3	4.2	66.6	63.8	3.6	n.a.
1993	N.SEMBILAN	Urban	138.9	135.0	3.9	63.3	68.7	2.8	n.a.
1995	N.SEMBILAN	Urban	140.2	136.2	4.0	74.4	65.3	2.9	n.a.
1996	N.SEMBILAN	Urban	157.9	154.4	3.5	77.2	67.2	2.2	n.a.
1997	N.SEMBILAN	Urban	157.8	155.4	2.4	85.1	65.0	1.5	n.a.
1998	N.SEMBILAN	Urban	151.0	146.0	5.1	81.4	65.0	3.4	n.a.
1999	N.SEMBILAN	Urban	142.6	137.9	4.6	91.7	60.9	3.3	n.a.
2000	N.SEMBILAN	Urban	165.4	159.4	6.0	94.5	63.6	3.6	n.a.
2001	N.SEMBILAN	Urban	209.9	203.6	6.3	108.5	65.9	3.0	n.a.
2002	N.SEMBILAN	Urban	177.3	171.2	6.1	98.2	64.4	3.4	n.a.
2003	N.SEMBILAN	Urban	200.6	194.4	6.2	103.5	66.0	3.1	n.a.
2004	N.SEMBILAN	Urban	214.6	206.9	7.6	128.0	62.6	3.6	n.a.
2005	N.SEMBILAN	Urban	237.5	230.0	7.5	127.6	65.1	3.1	n.a.
2006	N.SEMBILAN	Urban	238.4	230.3	8.1	131.8	64.4	3.4	n.a.
2007	N.SEMBILAN	Urban	240.6	232.0	8.6	136.5	63.8	3.6	n.a.
2008	N.SEMBILAN	Urban	242.5	235.1	7.5	145.3	62.5	3.1	n.a.
2009	N.SEMBILAN	Urban	248.9	239.5	9.3	147.1	62.8	3.8	n.a.
2010	N.SEMBILAN	Urban	262.4	255.2	7.3	168.4	60.9	2.8	n.a.
2011	N.SEMBILAN	Urban	256.7	248.2	8.5	172.4	59.8	3.3	n.a.
2012	N.SEMBILAN	Urban	294.9	286.7	8.2	161.8	64.6	2.8	n.a.
2013	N.SEMBILAN	Urban	308.0	298.8	9.2	161.9	65.5	3.0	n.a.
2014	N.SEMBILAN	Urban	345.5	336.7	8.8	182.1	65.5	2.6	n.a.
2015	N.SEMBILAN	Urban	346.9	336.3	10.6	189.5	64.7	3.1	n.a.
2016	N.SEMBILAN	Urban	343.9	334.6	9.3	189.5	64.5	2.7	n.a.
2017	N.SEMBILAN	Urban	363.0	352.9	10.1	200.5	64.4	2.8	n.a.
2018	N.SEMBILAN	Urban	381.6	369.7	11.8	200.3	65.6	3.1	n.a.
2019	N.SEMBILAN	Urban	381.8	369.9	11.9	210.9	64.4	3.1	n.a.
1982	P.PINANG	Rural	199.8	193.1	6.7	115.2	63.4	3.4	n.a.
1983	P.PINANG	Rural	217.3	207.8	9.5	127.1	63.1	4.4	n.a.
1984	P.PINANG	Rural	213.3	206.2	7.1	136.6	61.0	3.3	n.a.
1985	P.PINANG	Rural	225.1	213.0	12.1	148.3	60.3	5.4	n.a.
1986	P.PINANG	Rural	249.2	228.0	21.1	150.9	62.3	8.5	n.a.
1987	P.PINANG	Rural	252.7	235.9	16.7	161.6	61.0	6.6	n.a.
1988	P.PINANG	Rural	241.0	224.2	16.8	148.9	61.8	7.0	n.a.
1989	P.PINANG	Rural	255.0	245.3	9.6	139.2	64.7	3.8	n.a.
1990	P.PINANG	Rural	268.9	261.0	7.9	135.9	66.4	2.9	n.a.
1992	P.PINANG	Rural	112.9	110.3	2.6	73.3	60.6	2.3	n.a.
1993	P.PINANG	Rural	117.8	113.2	4.6	62.5	65.3	3.9	n.a.
1995	P.PINANG	Rural	115.9	114.2	1.7	73.8	61.1	1.5	n.a.
1996	P.PINANG	Rural	116.2	115.1	1.0	75.9	60.5	0.9	n.a.
1997	P.PINANG	Rural	130.9	129.5	1.4	64.5	67.0	1.1	n.a.
1998	P.PINANG	Rural	145.5	141.5	4.0	70.9	67.2	2.7	n.a.
1999	P.PINANG	Rural	149.4	145.9	3.5	75.4	66.5	2.3	n.a.
2000	P.PINANG	Rural	183.7	180.0	3.7	76.8	70.5	2.0	n.a.



2001	P.PINANG	Rural	134.6	129.6	5.1	64.9	67.5	3.8	n.a.
2002	P.PINANG	Rural	95.0	92.5	2.4	50.0	65.5	2.6	n.a.
2003	P.PINANG	Rural	121.6	118.7	2.8	66.8	64.5	2.3	n.a.
2004	P.PINANG	Rural	120.0	117.7	2.4	64.9	64.9	2.0	n.a.
2005	P.PINANG	Rural	117.9	114.8	3.1	71.3	62.3	2.6	n.a.
2006	P.PINANG	Rural	125.4	122.5	2.9	75.6	62.4	2.3	n.a.
2007	P.PINANG	Rural	117.0	114.7	2.4	69.8	62.6	2.0	n.a.
2008	P.PINANG	Rural	117.4	114.9	2.5	68.7	63.1	2.1	n.a.
2009	P.PINANG	Rural	119.8	115.9	4.0	68.6	63.6	3.3	n.a.
2010	P.PINANG	Rural	127.4	123.5	3.9	68.7	65.0	3.0	n.a.
2011	P.PINANG	Rural	129.6	126.9	2.7	73.7	63.8	2.1	n.a.
2012	P.PINANG	Rural	139.2	135.5	3.7	70.7	66.3	2.6	n.a.
2013	P.PINANG	Rural	126.7	123.7	3.0	59.5	68.0	2.3	n.a.
2014	P.PINANG	Rural	51.2	49.9	1.2	23.7	68.3	2.4	n.a.
2015	P.PINANG	Rural	45.4	44.3	1.1	23.3	66.1	2.3	n.a.
2016	P.PINANG	Rural	44.5	43.3	1.2	23.6	65.3	2.8	n.a.
2017	P.PINANG	Rural	37.8	36.5	1.3	22.2	63.0	3.5	n.a.
2018	P.PINANG	Rural	37.0	35.9	1.1	17.2	68.3	3.1	n.a.
2019	P.PINANG	Rural	29.6	28.9	0.7	20.1	59.5	2.4	n.a.
1982	P.PINANG	Urban	196.1	189.2	6.9	107.3	64.6	3.5	n.a.
1983	P.PINANG	Urban	203.6	197.0	6.6	106.6	65.6	3.3	n.a.
1984	P.PINANG	Urban	184.5	177.5	7.0	109.2	62.8	3.8	n.a.
1985	P.PINANG	Urban	183.4	175.1	8.3	110.1	62.5	4.6	n.a.
1986	P.PINANG	Urban	178.1	163.4	14.6	104.4	63.0	8.2	n.a.
1987	P.PINANG	Urban	180.2	168.9	11.3	106.6	62.8	6.3	n.a.
1988	P.PINANG	Urban	186.8	174.7	12.0	111.7	62.6	6.5	n.a.
1989	P.PINANG	Urban	198.9	190.9	8.0	113.1	63.7	4.0	n.a.
1990	P.PINANG	Urban	201.4	196.2	5.2	104.0	65.9	2.6	n.a.
1992	P.PINANG	Urban	408.6	402.4	6.2	220.3	65.0	1.5	n.a.
1993	P.PINANG	Urban	425.4	417.8	7.6	230.1	64.9	1.8	n.a.
1995	P.PINANG	Urban	376.8	371.6	5.2	214.1	63.8	1.4	n.a.
1996	P.PINANG	Urban	336.3	334.3	2.0	218.4	60.6	0.6	n.a.
1997	P.PINANG	Urban	427.0	422.4	4.6	195.3	68.6	1.1	n.a.
1998	P.PINANG	Urban	453.8	443.7	10.1	207.8	68.6	2.2	n.a.
1999	P.PINANG	Urban	468.1	457.0	11.0	198.6	70.2	2.4	n.a.
2000	P.PINANG	Urban	498.6	489.2	9.3	204.1	71.0	1.9	n.a.
2001	P.PINANG	Urban	598.7	585.4	13.3	230.6	72.2	2.2	n.a.
2002	P.PINANG	Urban	562.3	550.6	11.7	253.0	69.0	2.1	n.a.
2003	P.PINANG	Urban	564.8	555.6	9.1	275.5	67.2	1.6	n.a.
2004	P.PINANG	Urban	516.7	507.3	9.4	262.0	66.4	1.8	n.a.
2005	P.PINANG	Urban	517.1	506.7	10.4	273.9	65.4	2.0	n.a.
2006	P.PINANG	Urban	533.5	525.2	8.3	263.8	66.9	1.6	n.a.
2007	P.PINANG	Urban	550.5	538.8	11.7	278.8	66.4	2.1	n.a.
2008	P.PINANG	Urban	571.0	560.0	10.9	274.5	67.5	1.9	n.a.
2009	P.PINANG	Urban	587.3	573.9	13.4	275.7	68.1	2.3	n.a.
2010	P.PINANG	Urban	631.6	618.8	12.8	283.6	69.0	2.0	n.a.
2011	P.PINANG	Urban	657.9	645.9	12.0	275.1	70.5	1.8	n.a.
2012	P.PINANG	Urban	656.7	644.3	12.4	288.1	69.5	1.9	n.a.
2013	P.PINANG	Urban	699.4	688.3	11.2	304.3	69.7	1.6	n.a.
2014	P.PINANG	Urban	801.4	789.3	12.1	324.6	71.2	1.5	n.a.
2015	P.PINANG	Urban	802.8	789.9	12.9	342.5	70.1	1.6	n.a.
2016	P.PINANG	Urban	801.0	784.1	16.9	356.2	69.2	2.1	n.a.
2017	P.PINANG	Urban	803.3	787.3	16.0	381.9	67.8	2.0	n.a.
2018	P.PINANG	Urban	812.4	794.9	17.5	387.9	67.7	2.2	n.a.
2019	P.PINANG	Urban	822.7	806.7	16.0	394.0	67.6	1.9	n.a.
1982	PAHANG	Rural	194.9	189.2	5.7	96.1	67.0	2.9	n.a.
1983	PAHANG	Rural	258.6	252.5	6.2	127.6	67.0	2.4	n.a.
1984	PAHANG	Rural	228.8	218.8	10.0	114.9	66.6	4.4	n.a.
1985	PAHANG	Rural	247.1	237.5	9.6	118.1	67.7	3.9	n.a.
1986	PAHANG	Rural	244.0	233.4	10.6	117.3	67.5	4.3	n.a.
1987	PAHANG	Rural	258.5	247.5	11.0	122.8	67.8	4.3	n.a.
1988	PAHANG	Rural	276.7	259.3	17.4	130.4	68.0	6.3	n.a.



1989	PAHANG	Rural	291.2	280.8	10.4	157.1	65.0	3.6	n.a.
1990	PAHANG	Rural	328.5	318.7	9.7	185.0	64.0	3.0	n.a.
1992	PAHANG	Rural	282.9	275.8	7.1	160.4	63.8	2.5	n.a.
1993	PAHANG	Rural	265.3	258.7	6.6	157.2	62.8	2.5	n.a.
1995	PAHANG	Rural	246.2	237.3	9.0	165.5	59.8	3.6	n.a.
1996	PAHANG	Rural	278.7	270.9	7.8	174.8	61.5	2.8	n.a.
1997	PAHANG	Rural	268.9	260.4	8.5	177.2	60.3	3.2	n.a.
1998	PAHANG	Rural	238.7	233.0	5.7	194.3	55.1	2.4	n.a.
1999	PAHANG	Rural	268.9	260.7	8.1	188.0	58.9	3.0	n.a.
2000	PAHANG	Rural	303.9	295.3	8.6	186.2	62.0	2.8	n.a.
2001	PAHANG	Rural	237.9	230.6	7.3	147.0	61.8	3.1	n.a.
2002	PAHANG	Rural	245.1	237.6	7.5	152.9	61.6	3.1	n.a.
2003	PAHANG	Rural	264.5	254.9	9.6	160.1	62.3	3.6	n.a.
2004	PAHANG	Rural	292.3	282.4	9.8	199.5	59.4	3.4	n.a.
2005	PAHANG	Rural	279.9	270.3	9.5	198.0	58.6	3.4	n.a.
2006	PAHANG	Rural	296.8	289.6	7.2	205.0	59.1	2.4	n.a.
2007	PAHANG	Rural	296.9	285.3	11.5	202.8	59.4	3.9	n.a.
2008	PAHANG	Rural	308.6	299.7	9.0	205.7	60.0	2.9	n.a.
2009	PAHANG	Rural	313.2	302.4	10.8	200.5	61.0	3.4	n.a.
2010	PAHANG	Rural	294.5	285.8	8.7	194.1	60.3	3.0	n.a.
2011	PAHANG	Rural	302.2	294.2	8.0	196.0	60.7	2.6	n.a.
2012	PAHANG	Rural	317.4	308.4	9.0	184.5	63.2	2.8	n.a.
2013	PAHANG	Rural	318.2	308.2	10.0	175.3	64.5	3.1	n.a.
2014	PAHANG	Rural	307.8	298.9	8.8	149.5	67.3	2.9	n.a.
2015	PAHANG	Rural	305.8	296.8	9.0	148.0	67.4	2.9	n.a.
2016	PAHANG	Rural	303.8	295.9	7.9	145.7	67.6	2.6	n.a.
2017	PAHANG	Rural	281.7	273.8	7.9	151.4	65.0	2.8	n.a.
2018	PAHANG	Rural	288.8	282.3	6.6	139.6	67.4	2.3	n.a.
2019	PAHANG	Rural	285.1	277.0	8.1	139.6	67.1	2.8	n.a.
1982	PAHANG	Urban	84.8	81.0	3.7	42.6	66.6	4.4	n.a.
1983	PAHANG	Urban	84.0	81.0	2.9	38.7	68.4	3.5	n.a.
1984	PAHANG	Urban	92.9	88.1	4.8	48.1	65.9	5.2	n.a.
1985	PAHANG	Urban	95.6	90.4	5.2	48.4	66.4	5.5	n.a.
1986	PAHANG	Urban	87.6	82.0	5.6	48.0	64.6	6.4	n.a.
1987	PAHANG	Urban	95.5	88.3	7.2	50.0	65.7	7.5	n.a.
1988	PAHANG	Urban	98.1	92.2	5.9	55.5	63.9	6.0	n.a.
1989	PAHANG	Urban	102.7	98.3	4.3	53.5	65.8	4.2	n.a.
1990	PAHANG	Urban	114.1	110.1	4.0	60.3	65.4	3.5	n.a.
1992	PAHANG	Urban	146.0	141.2	4.8	75.1	66.0	3.3	n.a.
1993	PAHANG	Urban	127.9	120.0	8.0	74.2	63.3	6.2	n.a.
1995	PAHANG	Urban	138.8	134.1	4.7	81.4	63.0	3.4	n.a.
1996	PAHANG	Urban	138.3	135.3	3.0	84.5	62.1	2.2	n.a.
1997	PAHANG	Urban	138.7	135.0	3.7	86.6	61.6	2.6	n.a.
1998	PAHANG	Urban	136.1	131.9	4.2	93.0	59.4	3.1	n.a.
1999	PAHANG	Urban	127.3	123.7	3.6	92.7	57.9	2.8	n.a.
2000	PAHANG	Urban	155.2	151.5	3.7	93.3	62.5	2.4	n.a.
2001	PAHANG	Urban	213.7	207.1	6.6	119.1	64.2	3.1	n.a.
2002	PAHANG	Urban	173.9	169.4	4.5	104.8	62.4	2.6	n.a.
2003	PAHANG	Urban	212.6	205.1	7.5	120.2	63.9	3.5	n.a.
2004	PAHANG	Urban	251.7	243.7	7.9	149.8	62.7	3.2	n.a.
2005	PAHANG	Urban	262.9	254.4	8.5	169.8	60.8	3.2	n.a.
2006	PAHANG	Urban	274.5	267.8	6.7	158.3	63.4	2.5	n.a.
2007	PAHANG	Urban	283.3	276.6	6.7	174.0	61.9	2.4	n.a.
2008	PAHANG	Urban	297.0	290.2	6.9	168.6	63.8	2.3	n.a.
2009	PAHANG	Urban	309.0	301.2	7.8	177.3	63.5	2.5	n.a.
2010	PAHANG	Urban	314.0	305.2	8.7	174.5	64.3	2.8	n.a.
2011	PAHANG	Urban	322.4	314.1	8.2	181.7	64.0	2.6	n.a.
2012	PAHANG	Urban	333.5	324.7	8.9	187.0	64.1	2.7	n.a.
2013	PAHANG	Urban	360.7	351.5	9.2	186.4	65.9	2.5	n.a.
2014	PAHANG	Urban	394.3	384.2	10.0	204.0	65.9	2.5	n.a.
2015	PAHANG	Urban	412.4	400.7	11.7	201.4	67.2	2.8	n.a.
2016	PAHANG	Urban	406.7	396.4	10.3	220.8	64.8	2.5	n.a.
2017	PAHANG	Urban	429.2	416.4	12.9	226.1	65.5	3.0	n.a.
2018	PAHANG	Urban	446.8	434.3	12.4	229.4	66.1	2.8	n.a.
2019	PAHANG	Urban	455.9	442.5	13.4	235.4	66.0	2.9	n.a.
1982	PERAK	Rural	416.1	392.0	24.1	234.8	63.9	5.8	n.a.
1983	PERAK	Rural	446.0	421.9	24.1	233.9	65.6	5.4	n.a.
1984	PERAK	Rural	449.7	424.9	24.8	237.3	65.5	5.5	n.a.
1985	PERAK	Rural	453.5	427.2	26.3	254.8	64.0	5.8	n.a.
1986	PERAK	Rural	484.2	442.6	41.6	261.9	64.9	8.6	n.a.
1987	PERAK	Rural	471.6	434.7	36.9	250.2	65.3	7.8	n.a.
1988	PERAK	Rural	462.4	424.5	37.9	262.4	63.8	8.2	n.a.
1989	PERAK	Rural	479.9	454.0	25.9	282.9	62.9	5.4	n.a.
1990	PERAK	Rural	476.0	455.6	20.4	273.6	63.5	4.3	n.a.
1992	PERAK	Rural	308.0	295.1	12.9	177.4	63.5	4.2	n.a.



1993	PERAK	Rural	315.4	300.2	15.2	186.6	62.8	4.8	n.a.
1995	PERAK	Rural	292.8	280.2	12.6	206.8	58.6	4.3	n.a.
1996	PERAK	Rural	312.5	300.5	12.1	191.5	62.0	3.9	n.a.
1997	PERAK	Rural	338.1	329.7	8.5	216.1	61.0	2.5	n.a.
1998	PERAK	Rural	321.1	308.6	12.5	207.0	60.8	3.9	n.a.
1999	PERAK	Rural	317.9	304.2	13.7	210.4	60.2	4.3	n.a.
2000	PERAK	Rural	339.1	325.7	13.4	216.8	61.0	3.9	n.a.
2001	PERAK	Rural	276.6	263.1	13.5	196.3	58.5	4.9	n.a.
2002	PERAK	Rural	289.9	278.6	11.2	205.9	58.5	3.9	n.a.
2003	PERAK	Rural	286.9	270.1	16.7	200.3	58.9	5.8	n.a.
2004	PERAK	Rural	308.2	295.6	12.5	213.1	59.1	4.1	n.a.
2005	PERAK	Rural	297.3	284.9	12.3	222.7	57.2	4.2	n.a.
2006	PERAK	Rural	319.9	305.8	14.1	210.3	60.3	4.4	n.a.
2007	PERAK	Rural	305.3	296.4	8.9	210.5	59.2	2.9	n.a.
2008	PERAK	Rural	328.9	316.4	12.5	220.4	59.9	3.8	n.a.
2009	PERAK	Rural	333.8	323.1	10.7	217.4	60.6	3.2	n.a.
2010	PERAK	Rural	337.9	327.9	10.0	246.1	57.9	3.0	n.a.
2011	PERAK	Rural	350.3	339.9	10.4	237.8	59.6	3.0	n.a.
2012	PERAK	Rural	345.8	335.8	10.0	232.3	59.8	2.9	n.a.
2013	PERAK	Rural	332.4	322.6	9.8	225.5	59.6	2.9	n.a.
2014	PERAK	Rural	251.3	243.8	7.5	164.1	60.5	3.0	n.a.
2015	PERAK	Rural	238.3	232.5	5.8	153.5	60.8	2.4	n.a.
2016	PERAK	Rural	227.4	221.1	6.3	138.5	62.1	2.8	n.a.
2017	PERAK	Rural	236.4	229.0	7.4	126.4	65.2	3.1	n.a.
2018	PERAK	Rural	215.8	208.2	7.6	119.3	64.4	3.5	n.a.
2019	PERAK	Rural	216.1	208.3	7.8	120.8	64.2	3.6	n.a.
1982	PERAK	Urban	222.5	212.0	10.5	125.3	64.0	4.7	n.a.
1983	PERAK	Urban	258.9	247.3	11.6	125.9	67.3	4.5	n.a.
1984	PERAK	Urban	247.6	234.7	12.9	139.8	63.9	5.2	n.a.
1985	PERAK	Urban	259.6	242.4	17.2	136.1	65.6	6.6	n.a.
1986	PERAK	Urban	250.0	227.3	22.6	128.9	66.0	9.1	n.a.
1987	PERAK	Urban	257.2	235.8	21.4	132.8	66.0	8.3	n.a.
1988	PERAK	Urban	252.6	232.3	20.3	136.8	64.9	8.0	n.a.
1989	PERAK	Urban	246.6	232.8	13.9	142.2	63.4	5.6	n.a.
1990	PERAK	Urban	230.8	222.6	8.2	130.0	64.0	3.6	n.a.
1992	PERAK	Urban	411.6	397.8	13.8	262.2	61.1	3.4	n.a.
1993	PERAK	Urban	384.1	369.6	14.6	246.3	60.9	3.8	n.a.
1995	PERAK	Urban	367.2	354.1	13.1	267.3	57.9	3.6	n.a.
1996	PERAK	Urban	434.3	422.6	11.8	251.9	63.3	2.7	n.a.
1997	PERAK	Urban	422.4	414.5	7.9	274.7	60.6	1.9	n.a.
1998	PERAK	Urban	391.6	376.3	15.3	256.0	60.5	3.9	n.a.
1999	PERAK	Urban	397.4	380.3	17.1	271.0	59.5	4.3	n.a.
2000	PERAK	Urban	432.2	418.3	13.8	265.1	62.0	3.2	n.a.
2001	PERAK	Urban	484.7	467.5	17.1	317.2	60.4	3.5	n.a.
2002	PERAK	Urban	530.7	509.7	21.1	371.2	58.8	4.0	n.a.
2003	PERAK	Urban	484.5	464.5	20.0	324.5	59.9	4.1	n.a.
2004	PERAK	Urban	510.2	495.4	14.8	340.9	59.9	2.9	n.a.
2005	PERAK	Urban	531.5	516.3	15.2	351.2	60.2	2.9	n.a.
2006	PERAK	Urban	525.6	510.0	15.5	372.9	58.5	3.0	n.a.
2007	PERAK	Urban	572.5	555.8	16.7	368.5	60.8	2.9	n.a.
2008	PERAK	Urban	563.7	542.5	21.1	368.5	60.5	3.7	n.a.
2009	PERAK	Urban	589.9	568.4	21.5	366.0	61.7	3.6	n.a.
2010	PERAK	Urban	568.1	550.8	17.3	396.1	58.9	3.0	n.a.
2011	PERAK	Urban	594.3	579.8	14.5	393.4	60.2	2.4	n.a.
2012	PERAK	Urban	609.6	591.3	18.3	414.9	59.5	3.0	n.a.
2013	PERAK	Urban	652.8	625.3	27.5	417.2	61.0	4.2	n.a.
2014	PERAK	Urban	735.9	710.3	25.6	489.2	60.1	3.5	n.a.
2015	PERAK	Urban	776.0	749.3	26.7	483.3	61.6	3.4	n.a.
2016	PERAK	Urban	795.7	767.2	28.5	496.9	61.6	3.6	n.a.
2017	PERAK	Urban	816.0	784.3	31.7	490.7	62.4	3.9	n.a.
2018	PERAK	Urban	854.0	826.6	27.3	501.8	63.0	3.2	n.a.
2019	PERAK	Urban	864.2	835.4	28.9	497.6	63.5	3.3	n.a.
1982	PERLIS	Rural	51.6	49.6	2.0	34.5	59.9	3.8	n.a.
1983	PERLIS	Rural	52.3	50.8	1.5	37.5	58.2	2.9	n.a.
1984	PERLIS	Rural	59.9	57.1	2.7	36.8	62.0	4.5	n.a.
1985	PERLIS	Rural	58.7	54.0	4.8	30.8	65.6	8.1	n.a.
1986	PERLIS	Rural	57.2	52.4	4.7	34.0	62.7	8.3	n.a.
1987	PERLIS	Rural	58.4	54.5	3.9	37.4	60.9	6.7	n.a.
1988	PERLIS	Rural	63.7	58.5	5.2	46.2	58.0	8.1	n.a.
1989	PERLIS	Rural	64.8	60.6	4.2	42.8	60.2	6.5	n.a.
1990	PERLIS	Rural	54.6	52.2	2.4	40.1	57.6	4.4	n.a.
1992	PERLIS	Rural	49.4	47.7	1.7	32.8	60.1	3.4	n.a.
1993	PERLIS	Rural	53.8	52.8	1.0	35.5	60.2	1.9	n.a.
1995	PERLIS	Rural	53.6	52.7	0.9	37.3	59.0	1.6	n.a.
1996	PERLIS	Rural	53.4	52.3	1.1	34.7	60.6	2.0	n.a.



1997	PERLIS	Rural	51.1	49.7	1.4	36.3	58.4	2.7	n.a.
1998	PERLIS	Rural	51.8	49.9	1.9	38.5	57.3	3.7	n.a.
1999	PERLIS	Rural	58.2	56.4	1.9	39.9	59.3	3.2	n.a.
2000	PERLIS	Rural	55.5	54.2	1.3	36.6	60.2	2.4	n.a.
2001	PERLIS	Rural	59.4	57.2	2.2	41.9	58.7	3.7	n.a.
2002	PERLIS	Rural	38.1	36.8	1.2	29.4	56.4	3.3	n.a.
2003	PERLIS	Rural	52.2	49.7	2.4	36.6	58.8	4.7	n.a.
2004	PERLIS	Rural	47.0	45.4	1.6	36.3	56.4	3.4	n.a.
2005	PERLIS	Rural	46.8	45.3	1.5	37.8	55.3	3.2	n.a.
2006	PERLIS	Rural	48.7	47.0	1.7	38.6	55.7	3.5	n.a.
2007	PERLIS	Rural	51.6	49.9	1.7	36.9	58.3	3.3	n.a.
2008	PERLIS	Rural	51.1	49.6	1.5	38.4	57.1	2.9	n.a.
2009	PERLIS	Rural	51.0	49.3	1.8	38.4	57.1	3.5	n.a.
2010	PERLIS	Rural	51.3	49.6	1.8	44.9	53.3	3.5	n.a.
2011	PERLIS	Rural	52.9	50.6	2.3	44.5	54.3	4.3	n.a.
2012	PERLIS	Rural	54.9	52.7	2.2	41.3	57.1	4.0	n.a.
2013	PERLIS	Rural	58.0	55.8	2.2	38.1	60.3	3.8	n.a.
2014	PERLIS	Rural	41.9	40.8	1.1	27.1	60.8	2.7	n.a.
2015	PERLIS	Rural	40.7	39.7	1.0	26.3	60.7	2.4	n.a.
2016	PERLIS	Rural	41.1	40.0	1.1	23.9	63.2	2.7	n.a.
2017	PERLIS	Rural	36.2	35.2	1.0	23.9	60.2	2.9	n.a.
2018	PERLIS	Rural	39.9	38.6	1.3	22.1	64.3	3.2	n.a.
2019	PERLIS	Rural	38.0	36.8	1.2	19.5	66.1	3.1	n.a.
1982	PERLIS	Urban	6.5	6.1	0.4	3.3	66.4	6.5	n.a.
1983	PERLIS	Urban	13.7	13.0	0.6	8.2	62.5	4.6	n.a.
1984	PERLIS	Urban	4.9	4.7	0.2	3.3	59.9	5.0	n.a.
1985	PERLIS	Urban	6.7	6.6	0.2	3.0	69.3	2.7	n.a.
1986	PERLIS	Urban	5.4	5.1	0.3	3.3	61.9	5.4	n.a.
1987	PERLIS	Urban	6.5	6.1	0.4	3.8	63.1	6.0	n.a.
1988	PERLIS	Urban	7.2	7.0	0.2	3.7	65.9	2.8	n.a.
1989	PERLIS	Urban	6.1	5.8	0.3	3.3	65.0	5.1	n.a.
1990	PERLIS	Urban	5.1	4.9	0.1	2.1	70.5	2.6	n.a.
1992	PERLIS	Urban	19.4	19.2	0.2	10.7	64.4	0.9	n.a.
1993	PERLIS	Urban	17.9	17.9		14.7	55.0		n.a.
1995	PERLIS	Urban	18.2	18.1	0.1	12.9	58.6	0.8	n.a.
1996	PERLIS	Urban	18.1	17.8	0.4	12.7	58.8	2.0	n.a.
1997	PERLIS	Urban	20.7	20.4	0.3	12.1	63.1	1.4	n.a.
1998	PERLIS	Urban	22.4	21.1	1.3	15.2	59.6	5.7	n.a.
1999	PERLIS	Urban	23.0	22.1	0.9	14.6	61.2	3.8	n.a.
2000	PERLIS	Urban	21.5	20.6	0.9	13.0	62.4	4.2	n.a.
2001	PERLIS	Urban	26.5	25.6	0.8	18.3	59.2	3.1	n.a.
2002	PERLIS	Urban	20.7	20.1	0.6	13.2	61.0	2.8	n.a.
2003	PERLIS	Urban	27.9	26.8	1.1	19.3	59.1	3.8	n.a.
2004	PERLIS	Urban	29.3	28.4	0.9	20.5	58.8	3.2	n.a.
2005	PERLIS	Urban	29.5	28.8	0.7	21.8	57.5	2.4	n.a.
2006	PERLIS	Urban	28.3	27.5	0.7	23.3	54.8	2.6	n.a.
2007	PERLIS	Urban	30.9	30.1	0.8	22.5	57.9	2.6	n.a.
2008	PERLIS	Urban	32.9	31.9	1.0	22.4	59.5	3.0	n.a.
2009	PERLIS	Urban	33.3	32.2	1.0	24.6	57.5	3.1	n.a.
2010	PERLIS	Urban	32.3	31.3	1.0	27.7	53.9	3.0	n.a.
2011	PERLIS	Urban	33.9	32.7	1.2	27.2	55.5	3.5	n.a.
2012	PERLIS	Urban	35.7	34.4	1.3	28.1	55.9	3.7	n.a.
2013	PERLIS	Urban	39.9	38.5	1.4	26.0	60.6	3.4	n.a.
2014	PERLIS	Urban	56.5	54.4	2.2	38.5	59.5	3.8	n.a.
2015	PERLIS	Urban	60.4	58.4	2.0	38.4	61.2	3.3	n.a.
2016	PERLIS	Urban	62.1	60.2	1.9	40.5	60.5	3.1	n.a.
2017	PERLIS	Urban	65.7	63.2	2.5	44.2	59.8	3.8	n.a.
2018	PERLIS	Urban	67.8	65.4	2.4	42.0	61.8	3.5	n.a.
2019	PERLIS	Urban	74.2	71.7	2.5	41.7	64.0	3.4	n.a.
1982	SABAH	Rural	261.2	253.2	8.0	177.9	59.5	3.1	n.a.
1983	SABAH	Rural	304.1	291.2	12.9	173.8	63.6	4.2	n.a.
1984	SABAH	Rural	332.1	314.0	18.1	142.7	69.9	5.5	n.a.
1985	SABAH	Rural	334.8	315.2	19.7	148.0	69.4	5.9	n.a.
1986	SABAH	Rural	349.5	323.1	26.5	163.0	68.2	7.6	n.a.
1987	SABAH	Rural	379.9	346.7	33.2	166.2	69.6	8.7	n.a.
1988	SABAH	Rural	382.5	351.9	30.6	195.8	66.1	8.0	n.a.
1989	SABAH	Rural	382.6	355.7	26.9	194.8	66.3	7.0	n.a.
1990	SABAH	Rural	377.9	345.9	32.0	210.2	64.3	8.5	n.a.
1992	SABAH	Rural	353.8	335.1	18.7	173.9	67.0	5.3	n.a.
1993	SABAH	Rural	484.8	453.8	31.0	251.7	65.8	6.4	n.a.
1995	SABAH	Rural	519.0	490.1	28.9	255.1	67.0	5.6	n.a.
1996	SABAH	Rural	727.6	703.3	24.3	298.7	70.9	3.3	n.a.
1997	SABAH	Rural	723.7	691.7	32.0	365.2	66.5	4.4	n.a.
1998	SABAH	Rural	783.1	750.3	32.7	380.4	67.3	4.2	n.a.
1999	SABAH	Rural	800.7	760.8	39.8	407.2	66.3	5.0	n.a.



2000	SABAH	Rural	687.6	649.4	38.2	362.7	65.5	5.6	n.a.
2001	SABAH	Rural	557.5	523.7	33.8	262.6	68.0	6.1	n.a.
2002	SABAH	Rural	564.5	536.1	28.5	267.7	67.8	5.0	n.a.
2003	SABAH	Rural	575.0	549.7	25.3	249.1	69.8	4.4	n.a.
2004	SABAH	Rural	584.5	552.1	32.4	283.2	67.4	5.5	n.a.
2005	SABAH	Rural	585.9	557.7	28.2	280.9	67.6	4.8	n.a.
2006	SABAH	Rural	601.2	572.1	29.1	288.6	67.6	4.8	n.a.
2007	SABAH	Rural	619.7	590.2	29.4	288.6	68.2	4.7	n.a.
2008	SABAH	Rural	616.8	589.0	27.8	323.5	65.6	4.5	n.a.
2009	SABAH	Rural	635.4	603.8	31.6	313.1	67.0	5.0	n.a.
2010	SABAH	Rural	728.2	694.4	33.8	359.7	66.9	4.6	n.a.
2011	SABAH	Rural	723.9	683.8	40.1	362.8	66.6	5.5	n.a.
2012	SABAH	Rural	726.5	692.8	33.7	323.3	69.2	4.6	n.a.
2013	SABAH	Rural	775.4	740.5	35.0	321.4	70.7	4.5	n.a.
2014	SABAH	Rural	792.2	760.0	32.2	309.4	71.9	4.1	n.a.
2015	SABAH	Rural	806.0	777.4	28.6	289.2	73.6	3.5	n.a.
2016	SABAH	Rural	814.4	780.4	34.0	285.0	74.1	4.2	n.a.
2017	SABAH	Rural	830.1	802.4	27.7	315.2	72.5	3.3	n.a.
2018	SABAH	Rural	746.3	711.4	34.9	293.9	71.7	4.7	n.a.
2019	SABAH	Rural	717.7	689.3	28.4	305.7	70.1	4.0	n.a.
1982	SABAH	Urban	93.0	90.3	2.7	59.5	61.0	2.9	n.a.
1983	SABAH	Urban	89.7	86.5	3.3	50.8	63.9	3.6	n.a.
1984	SABAH	Urban	93.9	86.4	7.5	51.7	64.5	8.0	n.a.
1985	SABAH	Urban	96.2	88.2	8.0	51.5	65.1	8.3	n.a.
1986	SABAH	Urban	92.0	82.4	9.6	51.4	64.2	10.4	n.a.
1987	SABAH	Urban	86.6	77.6	9.0	48.8	64.0	10.4	n.a.
1988	SABAH	Urban	80.1	72.7	7.3	46.0	63.5	9.2	n.a.
1989	SABAH	Urban	94.9	86.6	8.3	54.7	63.4	8.7	n.a.
1990	SABAH	Urban	102.0	91.0	11.0	60.5	62.8	10.8	n.a.
1992	SABAH	Urban	170.5	156.4	14.1	107.1	61.4	8.3	n.a.
1993	SABAH	Urban	240.5	220.2	20.3	137.3	63.7	8.4	n.a.
1995	SABAH	Urban	245.7	232.6	13.1	139.8	63.7	5.3	n.a.
1996	SABAH	Urban	304.7	289.2	15.5	168.2	64.4	5.1	n.a.
1997	SABAH	Urban	324.9	308.4	16.5	180.6	64.3	5.1	n.a.
1998	SABAH	Urban	340.6	317.9	22.7	200.0	63.0	6.7	n.a.
1999	SABAH	Urban	366.5	340.9	25.5	213.3	63.2	7.0	n.a.
2000	SABAH	Urban	304.0	284.4	19.5	182.4	62.5	6.4	n.a.
2001	SABAH	Urban	490.5	455.3	35.2	284.1	63.3	7.2	n.a.
2002	SABAH	Urban	528.6	492.7	35.9	289.2	64.6	6.8	n.a.
2003	SABAH	Urban	559.5	523.4	36.2	321.9	63.5	6.5	n.a.
2004	SABAH	Urban	572.4	529.6	42.8	322.7	63.9	7.5	n.a.
2005	SABAH	Urban	595.9	549.1	46.9	359.8	62.4	7.9	n.a.
2006	SABAH	Urban	629.2	588.0	41.2	363.2	63.4	6.5	n.a.
2007	SABAH	Urban	648.1	608.3	39.7	385.7	62.7	6.1	n.a.
2008	SABAH	Urban	677.4	641.4	36.0	387.8	63.6	5.3	n.a.
2009	SABAH	Urban	709.9	666.9	43.0	408.8	63.5	6.1	n.a.
2010	SABAH	Urban	752.5	704.2	48.3	405.7	65.0	6.4	n.a.
2011	SABAH	Urban	838.5	790.6	48.0	402.1	67.6	5.7	n.a.
2012	SABAH	Urban	901.4	844.6	56.8	457.1	66.4	6.3	n.a.
2013	SABAH	Urban	1026.3	965.5	60.7	446.0	69.7	5.9	n.a.
2014	SABAH	Urban	1039.3	980.9	58.4	485.7	68.2	5.6	n.a.
2015	SABAH	Urban	1057.5	993.7	63.8	526.8	66.7	6.0	n.a.
2016	SABAH	Urban	1112.7	1043.3	69.3	508.5	68.6	6.2	n.a.
2017	SABAH	Urban	1073.7	993.9	79.8	562.9	65.6	7.4	n.a.
2018	SABAH	Urban	1191.3	1114.0	77.3	607.6	66.2	6.5	n.a.
2019	SABAH	Urban	1308.0	1219.3	88.8	562.6	69.9	6.8	n.a.
1982	SARAWAK	Rural	438.7	428.6	10.1	162.8	72.9	2.3	n.a.
1983	SARAWAK	Rural	459.9	437.4	22.5	165.4	73.6	4.9	n.a.
1984	SARAWAK	Rural	508.7	476.4	32.3	158.6	76.2	6.4	n.a.
1985	SARAWAK	Rural	517.2	484.5	32.7	157.4	76.7	6.3	n.a.
1986	SARAWAK	Rural	548.3	502.6	45.8	150.6	78.4	8.3	n.a.
1987	SARAWAK	Rural	590.6	536.3	54.2	143.9	80.4	9.2	n.a.
1988	SARAWAK	Rural	588.0	529.4	58.6	141.7	80.6	10.0	n.a.
1989	SARAWAK	Rural	634.9	578.5	56.4	157.2	80.2	8.9	n.a.
1990	SARAWAK	Rural	640.2	583.6	56.6	159.6	80.0	8.8	n.a.
1992	SARAWAK	Rural	463.6	427.4	36.2	137.8	77.1	7.8	n.a.
1993	SARAWAK	Rural	478.0	450.1	27.9	125.8	79.2	5.8	n.a.
1995	SARAWAK	Rural	478.9	458.4	20.5	143.4	77.0	4.3	n.a.
1996	SARAWAK	Rural	513.1	494.2	18.9	160.5	76.2	3.7	n.a.
1997	SARAWAK	Rural	495.4	479.5	15.9	162.9	75.2	3.2	n.a.
1998	SARAWAK	Rural	504.1	480.3	23.9	183.4	73.1	4.7	n.a.



1999	SARAWAK	Rural	410.2	398.1	12.1	121.3	77.2	3.0	n.a.
2000	SARAWAK	Rural	544.1	524.6	19.6	175.1	75.7	3.6	n.a.
2001	SARAWAK	Rural	461.9	444.3	17.6	153.9	75.0	3.8	n.a.
2002	SARAWAK	Rural	493.2	473.9	19.3	196.5	71.5	3.9	n.a.
2003	SARAWAK	Rural	466.5	449.3	17.1	178.8	72.3	3.7	n.a.
2004	SARAWAK	Rural	471.2	452.4	18.8	201.9	70.0	4.0	n.a.
2005	SARAWAK	Rural	472.5	453.3	19.2	217.8	68.5	4.1	n.a.
2006	SARAWAK	Rural	477.9	459.7	18.2	229.5	67.6	3.8	n.a.
2007	SARAWAK	Rural	500.3	481.0	19.3	208.3	70.6	3.8	n.a.
2008	SARAWAK	Rural	464.2	437.3	27.0	246.2	65.3	5.8	n.a.
2009	SARAWAK	Rural	506.8	484.4	22.4	225.3	69.2	4.4	n.a.
2010	SARAWAK	Rural	518.7	494.7	24.0	224.9	69.8	4.6	n.a.
2011	SARAWAK	Rural	533.8	511.5	22.4	246.1	68.4	4.2	n.a.
2012	SARAWAK	Rural	566.8	548.2	18.6	217.1	72.3	3.3	n.a.
2013	SARAWAK	Rural	581.6	563.2	18.4	219.0	72.6	3.2	n.a.
2014	SARAWAK	Rural	576.8	563.8	12.9	189.3	75.3	2.2	n.a.
2015	SARAWAK	Rural	534.8	520.3	14.5	205.0	72.3	2.7	n.a.
2016	SARAWAK	Rural	537.0	526.0	11.1	206.5	72.2	2.1	n.a.
2017	SARAWAK	Rural	515.1	503.3	11.8	211.3	70.9	2.3	n.a.
2018	SARAWAK	Rural	507.8	495.7	12.1	215.2	70.2	2.4	n.a.
2019	SARAWAK	Rural	505.6	493.7	11.9	219.0	69.8	2.4	n.a.
1982	SARAWAK	Urban	101.0	96.1	4.9	67.8	59.8	4.8	n.a.
1983	SARAWAK	Urban	109.5	102.7	6.9	64.4	63.0	6.3	n.a.
1984	SARAWAK	Urban	108.0	98.9	9.1	58.3	64.9	8.4	n.a.
1985	SARAWAK	Urban	115.5	103.0	12.5	56.7	67.1	10.8	n.a.
1986	SARAWAK	Urban	126.4	111.8	14.7	55.1	69.7	11.6	n.a.
1987	SARAWAK	Urban	121.6	105.7	15.9	55.1	68.8	13.1	n.a.
1988	SARAWAK	Urban	122.4	107.8	14.6	59.7	67.2	11.9	n.a.
1989	SARAWAK	Urban	125.1	108.6	16.5	59.7	67.7	13.2	n.a.
1990	SARAWAK	Urban	135.2	115.2	19.9	67.4	66.7	14.8	n.a.
1992	SARAWAK	Urban	307.5	283.9	23.7	152.6	66.8	7.7	n.a.
1993	SARAWAK	Urban	332.2	303.7	28.5	147.1	69.3	8.6	n.a.
1995	SARAWAK	Urban	349.8	330.7	19.0	170.2	67.3	5.4	n.a.
1996	SARAWAK	Urban	356.4	337.4	19.0	152.4	70.1	5.3	n.a.
1997	SARAWAK	Urban	369.5	352.0	17.5	183.3	66.8	4.7	n.a.
1998	SARAWAK	Urban	364.0	344.1	19.9	189.9	65.7	5.5	n.a.
1999	SARAWAK	Urban	496.7	466.9	29.8	257.3	65.9	6.0	n.a.
2000	SARAWAK	Urban	371.6	351.7	19.9	181.4	67.2	5.4	n.a.
2001	SARAWAK	Urban	456.1	433.1	23.0	231.7	66.3	5.0	n.a.
2002	SARAWAK	Urban	462.6	443.8	18.8	246.8	65.2	4.1	n.a.
2003	SARAWAK	Urban	479.9	460.6	19.3	240.6	66.6	4.0	n.a.
2004	SARAWAK	Urban	484.0	466.2	17.8	240.9	66.8	3.7	n.a.
2005	SARAWAK	Urban	477.8	457.6	20.2	262.4	64.6	4.2	n.a.
2006	SARAWAK	Urban	480.1	458.6	21.5	272.7	63.8	4.5	n.a.
2007	SARAWAK	Urban	497.2	473.1	24.1	286.0	63.5	4.8	n.a.
2008	SARAWAK	Urban	508.8	484.4	24.4	304.6	62.6	4.8	n.a.
2009	SARAWAK	Urban	517.4	493.0	24.4	304.6	62.9	4.7	n.a.
2010	SARAWAK	Urban	575.0	550.9	24.1	309.9	65.0	4.2	n.a.
2011	SARAWAK	Urban	569.6	546.7	22.9	320.0	64.0	4.0	n.a.
2012	SARAWAK	Urban	618.2	595.7	22.5	305.9	66.9	3.6	n.a.
2013	SARAWAK	Urban	652.6	625.3	27.3	323.5	66.9	4.2	n.a.
2014	SARAWAK	Urban	694.6	668.4	26.2	348.6	66.6	3.8	n.a.
2015	SARAWAK	Urban	723.5	694.4	29.0	376.4	65.8	4.0	n.a.
2016	SARAWAK	Urban	723.1	692.3	30.8	396.0	64.6	4.3	n.a.
2017	SARAWAK	Urban	777.5	750.4	27.2	401.6	65.9	3.5	n.a.
2018	SARAWAK	Urban	808.9	778.7	30.2	406.7	66.5	3.7	n.a.
2019	SARAWAK	Urban	841.2	811.0	30.2	404.1	67.6	3.6	n.a.
1982	SELANGOR	Rural	422.4	411.9	10.5	232.7	64.5	2.5	n.a.
1983	SELANGOR	Rural	487.1	475.9	11.2	249.9	66.1	2.3	n.a.
1984	SELANGOR	Rural	443.7	424.1	19.6	246.4	64.3	4.4	n.a.
1985	SELANGOR	Rural	458.4	433.9	24.5	256.3	64.1	5.3	n.a.



1986	SELANGOR	Rural	538.7	506.6	32.1	273.8	66.3	6.0	n.a.
1987	SELANGOR	Rural	602.8	566.9	35.9	304.1	66.5	6.0	n.a.
1988	SELANGOR	Rural	619.6	580.4	39.2	307.6	66.8	6.3	n.a.
1989	SELANGOR	Rural	603.6	576.9	26.7	316.5	65.6	4.4	n.a.
1990	SELANGOR	Rural	675.0	661.7	13.3	341.8	66.4	2.0	n.a.
1992	SELANGOR	Rural	220.3	214.8	5.5	127.2	63.4	2.5	n.a.
1993	SELANGOR	Rural	229.8	222.1	7.7	126.1	64.6	3.4	n.a.
1995	SELANGOR	Rural	304.3	296.9	7.4	161.7	65.3	2.4	n.a.
1996	SELANGOR	Rural	333.4	330.1	3.4	157.3	67.9	1.0	n.a.
1997	SELANGOR	Rural	328.0	324.9	3.1	174.3	65.3	1.0	n.a.
1998	SELANGOR	Rural	386.8	381.5	5.3	204.4	65.4	1.4	n.a.
1999	SELANGOR	Rural	393.1	386.0	7.1	212.7	64.9	1.8	n.a.
2000	SELANGOR	Rural	460.2	450.0	10.2	232.1	66.5	2.2	n.a.
2001	SELANGOR	Rural	131.5	128.2	3.4	79.9	62.2	2.5	n.a.
2002	SELANGOR	Rural	146.5	141.0	5.5	91.1	61.7	3.7	n.a.
2003	SELANGOR	Rural	203.0	194.5	8.4	117.9	63.3	4.2	n.a.
2004	SELANGOR	Rural	191.0	182.6	8.3	113.5	62.7	4.4	n.a.
2005	SELANGOR	Rural	176.6	168.9	7.7	112.4	61.1	4.4	n.a.
2006	SELANGOR	Rural	178.5	172.3	6.2	111.0	61.7	3.5	n.a.
2007	SELANGOR	Rural	180.3	173.0	7.3	117.6	60.5	4.1	n.a.
2008	SELANGOR	Rural	168.2	161.5	6.7	111.7	60.1	4.0	n.a.
2009	SELANGOR	Rural	176.0	169.1	6.8	113.2	60.9	3.9	n.a.
2010	SELANGOR	Rural	200.5	191.5	8.9	124.8	61.6	4.5	n.a.
2011	SELANGOR	Rural	207.7	200.5	7.2	123.2	62.8	3.5	n.a.
2012	SELANGOR	Rural	209.4	202.7	6.6	119.5	63.7	3.2	n.a.
2013	SELANGOR	Rural	218.5	212.9	5.6	104.3	67.7	2.6	n.a.
2014	SELANGOR	Rural	193.6	189.1	4.5	84.9	69.5	2.3	n.a.
2015	SELANGOR	Rural	186.2	181.9	4.3	90.5	67.3	2.3	n.a.
2016	SELANGOR	Rural	177.4	172.8	4.6	93.2	65.6	2.6	n.a.
2017	SELANGOR	Rural	171.1	166.2	4.9	81.5	67.7	2.8	n.a.
2018	SELANGOR	Rural	162.2	157.4	4.7	83.3	66.1	2.9	n.a.
2019	SELANGOR	Rural	161.1	156.4	4.7	78.3	67.3	2.9	n.a.
1982	SELANGOR	Urban	269.6	265.0	4.5	124.4	68.4	1.7	n.a.
1983	SELANGOR	Urban	270.0	264.0	6.0	113.5	70.4	2.2	n.a.
1984	SELANGOR	Urban	275.1	266.2	8.9	134.5	67.2	3.2	n.a.
1985	SELANGOR	Urban	282.2	272.2	10.0	136.8	67.3	3.5	n.a.
1986	SELANGOR	Urban	285.0	270.5	14.6	137.5	67.5	5.1	n.a.
1987	SELANGOR	Urban	313.8	298.1	15.7	150.3	67.6	5.0	n.a.
1988	SELANGOR	Urban	329.4	312.6	16.7	167.3	66.3	5.1	n.a.
1989	SELANGOR	Urban	333.2	323.3	9.8	161.5	67.4	2.9	n.a.
1990	SELANGOR	Urban	385.0	377.7	7.3	173.1	69.0	1.9	n.a.
1992	SELANGOR	Urban	872.5	854.8	17.6	397.1	68.7	2.0	n.a.
1993	SELANGOR	Urban	880.3	858.1	22.2	412.9	68.1	2.5	n.a.
1995	SELANGOR	Urban	1061.7	1042.0	19.7	479.0	68.9	1.9	n.a.
1996	SELANGOR	Urban	1037.6	1029.0	8.7	462.2	69.2	0.8	n.a.
1997	SELANGOR	Urban	1015.0	1004.9	10.1	483.0	67.8	1.0	n.a.
1998	SELANGOR	Urban	1070.1	1048.8	21.3	576.9	65.0	2.0	n.a.
1999	SELANGOR	Urban	1062.0	1041.2	20.8	557.1	65.6	2.0	n.a.
2000	SELANGOR	Urban	1255.1	1231.4	23.6	626.9	66.7	1.9	n.a.
2001	SELANGOR	Urban	1421.0	1386.5	34.5	684.1	67.5	2.4	n.a.
2002	SELANGOR	Urban	1656.7	1608.8	47.9	880.7	65.3	2.9	n.a.
2003	SELANGOR	Urban	1692.3	1639.7	52.6	812.6	67.6	3.1	n.a.
2004	SELANGOR	Urban	1837.1	1790.7	46.4	903.8	67.0	2.5	n.a.
2005	SELANGOR	Urban	1872.2	1817.0	55.2	951.2	66.3	2.9	n.a.
2006	SELANGOR	Urban	1905.9	1845.3	60.6	980.6	66.0	3.2	n.a.
2007	SELANGOR	Urban	1947.7	1891.3	56.4	998.4	66.1	2.9	n.a.
2008	SELANGOR	Urban	1991.6	1930.5	61.1	1049.2	65.5	3.1	n.a.
2009	SELANGOR	Urban	1997.3	1926.1	71.2	1100.5	64.5	3.6	n.a.
2010	SELANGOR	Urban	2433.9	2359.6	74.3	1224.9	66.5	3.1	n.a.
2011	SELANGOR	Urban	2503.0	2444.8	58.3	1171.8	68.1	2.3	n.a.
2012	SELANGOR	Urban	2633.3	2573.3	59.9	1106.6	70.4	2.3	n.a.



2013	SELANGOR	Urban	2787.7	2720.4	67.3	1122.0	71.3	2.4	n.a.
2014	SELANGOR	Urban	2902.4	2844.5	58.0	1136.2	71.9	2.0	n.a.
2015	SELANGOR	Urban	3026.7	2953.1	73.6	1093.0	73.5	2.4	n.a.
2016	SELANGOR	Urban	3147.5	3044.8	102.7	1063.0	74.8	3.3	n.a.
2017	SELANGOR	Urban	3286.4	3193.2	93.2	1028.2	76.2	2.8	n.a.
2018	SELANGOR	Urban	3384.1	3289.2	94.9	1018.7	76.9	2.8	n.a.
2019	SELANGOR	Urban	3431.7	3333.1	98.7	1058.5	76.4	2.9	n.a.
1982	TERENGGANU	Rural	134.6	131.6	3.0	62.6	68.3	2.2	n.a.
1983	TERENGGANU	Rural	159.3	155.8	3.5	85.5	65.1	2.2	n.a.
1984	TERENGGANU	Rural	126.7	119.1	7.6	73.2	63.4	6.0	n.a.
1985	TERENGGANU	Rural	132.4	124.0	8.4	70.7	65.2	6.3	n.a.
1986	TERENGGANU	Rural	146.7	134.1	12.6	69.2	67.9	8.6	n.a.
1987	TERENGGANU	Rural	142.1	128.0	14.0	62.2	69.5	9.9	n.a.
1988	TERENGGANU	Rural	148.0	135.7	12.3	59.3	71.4	8.3	n.a.
1989	TERENGGANU	Rural	160.7	141.7	19.0	67.3	70.5	11.8	n.a.
1990	TERENGGANU	Rural	140.5	132.5	8.1	61.0	69.7	5.8	n.a.
1992	TERENGGANU	Rural	147.5	140.0	7.6	73.2	66.8	5.1	n.a.
1993	TERENGGANU	Rural	167.8	157.4	10.4	87.5	65.7	6.2	n.a.
1995	TERENGGANU	Rural	151.9	143.1	8.9	89.5	62.9	5.8	n.a.
1996	TERENGGANU	Rural	172.7	167.0	5.7	89.0	66.0	3.3	n.a.
1997	TERENGGANU	Rural	159.0	154.0	5.1	92.3	63.3	3.2	n.a.
1998	TERENGGANU	Rural	174.7	168.8	5.9	100.8	63.4	3.4	n.a.
1999	TERENGGANU	Rural	177.5	171.3	6.2	93.0	65.6	3.5	n.a.
2000	TERENGGANU	Rural	170.3	166.0	4.3	101.7	62.6	2.5	n.a.
2001	TERENGGANU	Rural	147.2	142.9	4.3	94.0	61.0	2.9	n.a.
2002	TERENGGANU	Rural	150.4	145.4	4.9	99.1	60.3	3.3	n.a.
2003	TERENGGANU	Rural	177.1	172.6	4.5	108.9	61.9	2.5	n.a.
2004	TERENGGANU	Rural	173.1	167.9	5.2	110.8	61.0	3.0	n.a.
2005	TERENGGANU	Rural	170.4	164.6	5.7	117.2	59.2	3.4	n.a.
2006	TERENGGANU	Rural	172.8	166.7	6.1	120.8	58.9	3.5	n.a.
2007	TERENGGANU	Rural	177.1	172.4	4.6	134.3	56.9	2.6	n.a.
2008	TERENGGANU	Rural	181.1	174.8	6.2	132.7	57.7	3.4	n.a.
2009	TERENGGANU	Rural	192.2	184.6	7.6	136.4	58.5	4.0	n.a.
2010	TERENGGANU	Rural	184.9	179.0	5.9	125.0	59.7	3.2	n.a.
2011	TERENGGANU	Rural	190.6	185.3	5.3	122.4	60.9	2.8	n.a.
2012	TERENGGANU	Rural	185.6	180.0	5.6	130.8	58.7	3.0	n.a.
2013	TERENGGANU	Rural	194.2	187.9	6.3	132.3	59.5	3.2	n.a.
2014	TERENGGANU	Rural	156.4	149.3	7.0	100.5	60.9	4.5	n.a.
2015	TERENGGANU	Rural	153.6	147.1	6.5	103.9	59.6	4.2	n.a.
2016	TERENGGANU	Rural	153.0	147.6	5.5	100.7	60.3	3.6	n.a.
2017	TERENGGANU	Rural	147.2	143.4	3.8	94.5	60.9	2.6	n.a.
2018	TERENGGANU	Rural	155.0	148.1	6.9	93.5	62.4	4.4	n.a.
2019	TERENGGANU	Rural	155.1	150.2	4.9	96.6	61.6	3.2	n.a.
1982	TERENGGANU	Urban	92.6	89.5	3.1	59.3	61.0	3.4	n.a.
1983	TERENGGANU	Urban	83.8	81.1	2.7	53.2	61.2	3.3	n.a.
1984	TERENGGANU	Urban	92.6	85.3	7.3	56.5	62.1	7.9	n.a.
1985	TERENGGANU	Urban	96.5	88.4	8.1	57.3	62.7	8.4	n.a.
1986	TERENGGANU	Urban	94.7	84.3	10.4	55.4	63.1	11.0	n.a.
1987	TERENGGANU	Urban	94.4	80.9	13.5	54.8	63.3	14.3	n.a.
1988	TERENGGANU	Urban	105.6	94.1	11.5	53.2	66.5	10.9	n.a.
1989	TERENGGANU	Urban	101.4	88.2	13.2	55.8	64.5	13.0	n.a.
1990	TERENGGANU	Urban	104.0	95.2	8.9	56.5	64.8	8.5	n.a.
1992	TERENGGANU	Urban	120.2	113.0	7.2	70.1	63.2	6.0	n.a.
1993	TERENGGANU	Urban	134.3	123.4	10.8	77.7	63.3	8.1	n.a.
1995	TERENGGANU	Urban	133.0	124.9	8.1	82.8	61.6	6.1	n.a.
1996	TERENGGANU	Urban	135.5	131.0	4.5	75.7	64.1	3.3	n.a.
1997	TERENGGANU	Urban	133.8	128.3	5.5	86.3	60.8	4.1	n.a.
1998	TERENGGANU	Urban	130.9	124.7	6.2	80.4	62.0	4.8	n.a.



1999	TERENGGANU	Urban	134.7	128.8	6.0	89.4	60.1	4.4	n.a.
2000	TERENGGANU	Urban	145.1	140.0	5.1	89.1	61.9	3.5	n.a.
2001	TERENGGANU	Urban	159.9	155.7	4.2	101.1	61.3	2.6	n.a.
2002	TERENGGANU	Urban	138.5	134.2	4.3	88.0	61.2	3.1	n.a.
2003	TERENGGANU	Urban	178.0	172.3	5.7	116.1	60.5	3.2	n.a.
2004	TERENGGANU	Urban	174.8	169.0	5.8	123.5	58.6	3.3	n.a.
2005	TERENGGANU	Urban	182.7	177.3	5.4	133.3	57.8	2.9	n.a.
2006	TERENGGANU	Urban	191.8	184.8	7.0	140.9	57.6	3.6	n.a.
2007	TERENGGANU	Urban	195.7	190.6	5.1	139.8	58.3	2.6	n.a.
2008	TERENGGANU	Urban	207.7	200.7	7.0	147.7	58.4	3.4	n.a.
2009	TERENGGANU	Urban	213.4	205.7	7.7	148.3	59.0	3.6	n.a.
2010	TERENGGANU	Urban	195.7	187.6	8.1	147.1	57.1	4.1	n.a.
2011	TERENGGANU	Urban	212.6	205.0	7.6	146.8	59.1	3.6	n.a.
2012	TERENGGANU	Urban	216.2	209.6	6.6	154.1	58.4	3.1	n.a.
2013	TERENGGANU	Urban	227.1	219.0	8.0	148.1	60.5	3.5	n.a.
2014	TERENGGANU	Urban	276.5	265.5	10.9	182.5	60.2	4.0	n.a.
2015	TERENGGANU	Urban	284.4	273.4	11.0	189.5	60.0	3.9	n.a.
2016	TERENGGANU	Urban	294.1	281.0	13.2	196.9	59.9	4.5	n.a.
2017	TERENGGANU	Urban	311.6	294.9	16.7	209.4	59.8	5.4	n.a.
2018	TERENGGANU	Urban	315.4	299.8	15.6	217.7	59.2	5.0	n.a.
2019	TERENGGANU	Urban	333.1	320.8	12.3	213.8	60.9	3.7	n.a.
1982	W.P.KUALA LUMPUR	Urban	472.6	463.6	9.0	206.1	69.6	1.9	n.a.
1983	W.P.KUALA LUMPUR	Urban	439.6	430.7	8.9	182.9	70.6	2.0	n.a.
1984	W.P.KUALA LUMPUR	Urban	504.5	485.4	19.2	253.7	66.5	3.8	n.a.
1985	W.P.KUALA LUMPUR	Urban	509.7	491.7	18.0	247.3	67.3	3.5	n.a.
1986	W.P.KUALA LUMPUR	Urban	481.3	455.0	26.3	243.5	66.4	5.5	n.a.
1987	W.P.KUALA LUMPUR	Urban	485.5	457.9	27.6	239.6	67.0	5.7	n.a.
1988	W.P.KUALA LUMPUR	Urban	498.7	469.6	29.2	242.2	67.3	5.8	n.a.
1989	W.P.KUALA LUMPUR	Urban	524.3	504.7	19.6	263.1	66.6	3.7	n.a.
1990	W.P.KUALA LUMPUR	Urban	503.9	490.7	13.2	247.2	67.1	2.6	n.a.
1992	W.P.KUALA LUMPUR	Urban	569.6	555.8	13.7	273.3	67.6	2.4	n.a.
1993	W.P.KUALA LUMPUR	Urban	598.6	580.5	18.1	256.3	70.0	3.0	n.a.
1995	W.P.KUALA LUMPUR	Urban	598.4	588.4	10.1	301.2	66.5	1.7	n.a.
1996	W.P.KUALA LUMPUR	Urban	710.8	697.8	13.0	323.2	68.7	1.8	n.a.
1997	W.P.KUALA LUMPUR	Urban	700.7	691.0	9.7	321.0	68.6	1.4	n.a.
1998	W.P.KUALA LUMPUR	Urban	685.6	668.3	17.2	371.9	64.8	2.5	n.a.
1999	W.P.KUALA LUMPUR	Urban	710.4	689.7	20.7	363.6	66.1	2.9	n.a.
2000	W.P.KUALA LUMPUR	Urban	680.4	662.8	17.6	368.3	64.9	2.6	n.a.
2001	W.P.KUALA LUMPUR	Urban	723.2	703.7	19.5	378.5	65.6	2.7	n.a.
2002	W.P.KUALA LUMPUR	Urban	816.9	794.1	22.7	417.4	66.2	2.8	n.a.
2003	W.P.KUALA LUMPUR	Urban	740.3	715.1	25.2	383.9	65.9	3.4	n.a.
2004	W.P.KUALA LUMPUR	Urban	691.6	671.7	19.9	325.1	68.0	2.9	n.a.
2005	W.P.KUALA LUMPUR	Urban	691.4	675.2	16.1	336.8	67.2	2.3	n.a.
2006	W.P.KUALA LUMPUR	Urban	696.1	676.6	19.5	342.6	67.0	2.8	n.a.
2007	W.P.KUALA LUMPUR	Urban	702.4	682.1	20.3	344.8	67.1	2.9	n.a.
2008	W.P.KUALA	Urban	701.0	682.2	18.8	354.0	66.4	2.7	n.a.



	LUMPUR								
2009	W.P.KUALA LUMPUR	Urban	698.3	678.1	20.2	366.6	65.6	2.9	n.a.
2010	W.P.KUALA LUMPUR	Urban	812.9	788.0	24.9	414.3	66.2	3.1	n.a.
2011	W.P.KUALA LUMPUR	Urban	837.6	812.5	25.1	405.4	67.4	3.0	n.a.
2012	W.P.KUALA LUMPUR	Urban	842.9	820.4	22.5	404.2	67.6	2.7	n.a.
2013	W.P.KUALA LUMPUR	Urban	907.3	877.8	29.5	353.2	72.0	3.3	n.a.
2014	W.P.KUALA LUMPUR	Urban	877.0	852.0	25.0	379.3	69.8	2.9	n.a.
2015	W.P.KUALA LUMPUR	Urban	882.6	853.4	29.1	369.6	70.5	3.3	n.a.
2016	W.P.KUALA LUMPUR	Urban	855.4	827.2	28.2	400.7	68.1	3.3	n.a.
2017	W.P.KUALA LUMPUR	Urban	871.4	844.3	27.1	396.9	68.7	3.1	n.a.
2018	W.P.KUALA LUMPUR	Urban	844.9	824.4	20.5	396.6	68.1	2.4	n.a.
2019	W.P.KUALA LUMPUR	Urban	863.4	841.0	22.4	369.6	70.0	2.6	n.a.
1984	W.P.LABUAN	Rural	8.2	7.3	0.9	4.8	63.2	11.3	n.a.
1985	W.P.LABUAN	Rural	7.9	7.1	0.9	4.7	62.8	11.0	n.a.
1986	W.P.LABUAN	Rural	7.7	6.7	1.0	4.4	63.6	13.5	n.a.
1987	W.P.LABUAN	Rural	6.6	5.8	0.7	4.1	61.4	11.3	n.a.
1988	W.P.LABUAN	Rural	7.2	6.3	0.9	4.4	62.1	12.5	n.a.
1989	W.P.LABUAN	Rural	7.5	6.7	0.8	5.1	59.7	10.2	n.a.
1990	W.P.LABUAN	Rural	7.0	6.4	0.6	5.4	56.7	9.0	n.a.
1992	W.P.LABUAN	Rural	7.2	7.0	0.3	5.2	58.2	3.6	n.a.
1993	W.P.LABUAN	Rural	11.5	11.0	0.6	9.5	54.9	4.9	n.a.
1995	W.P.LABUAN	Rural	20.6	19.5	1.1	12.1	63.0	5.5	n.a.
1996	W.P.LABUAN	Rural	19.8	18.8	1.0	11.8	62.6	5.1	n.a.
1997	W.P.LABUAN	Rural	19.3	18.5	0.8	10.8	64.1	4.0	n.a.
1998	W.P.LABUAN	Rural	18.2	17.8	0.5	11.2	61.9	2.5	n.a.
1999	W.P.LABUAN	Rural	19.9	19.7	0.2	12.5	61.4	1.0	n.a.
2000	W.P.LABUAN	Rural	12.5	11.6	0.9	8.0	61.1	7.3	n.a.
2001	W.P.LABUAN	Rural	6.3	5.8	0.5	3.9	61.8	7.5	n.a.
2002	W.P.LABUAN	Rural	10.1	9.6	0.5	5.6	64.3	5.0	n.a.
2003	W.P.LABUAN	Rural	8.1	7.7	0.4	5.3	60.3	4.5	n.a.
2004	W.P.LABUAN	Rural	7.9	7.6	0.3	5.3	60.0	4.1	n.a.
2005	W.P.LABUAN	Rural	7.6	7.2	0.4	4.8	61.3	5.9	n.a.
2006	W.P.LABUAN	Rural	7.5	7.1	0.5	5.3	58.9	6.0	n.a.
2007	W.P.LABUAN	Rural	8.9	8.4	0.5	5.6	61.3	5.2	n.a.
2008	W.P.LABUAN	Rural	7.8	7.5	0.3	5.3	59.6	4.0	n.a.
2009	W.P.LABUAN	Rural	9.3	8.8	0.6	5.0	65.1	6.1	n.a.
2010	W.P.LABUAN	Rural	10.4	9.8	0.6	5.5	65.3	5.7	n.a.
2011	W.P.LABUAN	Rural	10.2	9.8	0.5	5.8	63.6	4.7	n.a.
2012	W.P.LABUAN	Rural	10.0	9.5	0.5	5.7	63.6	5.0	n.a.
2013	W.P.LABUAN	Rural	10.1	9.6	0.5	5.5	64.7	5.2	n.a.
2014	W.P.LABUAN	Rural	5.4	5.1	0.2	3.0	64.4	4.4	n.a.
2015	W.P.LABUAN	Rural	5.4	5.1	0.3	3.0	64.2	5.4	n.a.
2016	W.P.LABUAN	Rural	5.2	4.8	0.4	2.8	64.7	7.4	n.a.
2017	W.P.LABUAN	Rural	5.0	4.5	0.5	3.0	62.5	9.2	n.a.
2018	W.P.LABUAN	Rural	5.4	4.9	0.5	3.2	62.7	8.8	n.a.
2019	W.P.LABUAN	Rural	4.9	4.5	0.5	3.4	59.3	9.3	n.a.
1984	W.P.LABUAN	Urban	9.0	8.6	0.4	3.9	69.8	4.3	n.a.
1985	W.P.LABUAN	Urban	8.3	8.0	0.4	3.9	68.1	4.5	n.a.
1986	W.P.LABUAN	Urban	7.6	6.9	0.6	3.4	69.0	8.3	n.a.
1987	W.P.LABUAN	Urban	7.1	6.5	0.6	3.3	68.3	8.3	n.a.
1988	W.P.LABUAN	Urban	6.6	6.0	0.6	3.5	65.4	9.1	n.a.
1989	W.P.LABUAN	Urban	7.2	6.7	0.5	4.0	64.0	6.8	n.a.



1990	W.P.LABUAN	Urban	8.7	8.4	0.3	3.9	68.8	3.0	n.a.
1992	W.P.LABUAN	Urban	8.2	7.9	0.2	4.3	65.7	3.0	n.a.
1993	W.P.LABUAN	Urban	6.9	6.4	0.5	4.2	61.9	7.7	n.a.
1995	W.P.LABUAN	Urban	12.0	11.6	0.4	6.8	63.8	3.4	n.a.
1996	W.P.LABUAN	Urban	19.6	18.6	1.0	9.1	68.3	5.1	n.a.
1997	W.P.LABUAN	Urban	16.7	16.2	0.4	7.7	68.5	2.6	n.a.
1998	W.P.LABUAN	Urban	19.7	19.2	0.5	8.5	69.8	2.5	n.a.
1999	W.P.LABUAN	Urban	23.0	21.6	1.5	12.9	64.2	6.5	n.a.
2000	W.P.LABUAN	Urban	14.1	13.8	0.4	7.8	64.4	2.6	n.a.
2001	W.P.LABUAN	Urban	22.4	21.3	1.1	13.0	63.2	4.8	n.a.
2002	W.P.LABUAN	Urban	23.9	23.3	0.6	12.0	66.6	2.4	n.a.
2003	W.P.LABUAN	Urban	25.2	24.1	1.1	9.5	72.7	4.5	n.a.
2004	W.P.LABUAN	Urban	26.0	24.7	1.4	10.9	70.4	5.3	n.a.
2005	W.P.LABUAN	Urban	24.5	23.3	1.2	13.8	64.0	4.9	n.a.
2006	W.P.LABUAN	Urban	26.2	23.5	2.7	13.4	66.2	10.3	n.a.
2007	W.P.LABUAN	Urban	25.3	24.2	1.1	14.0	64.4	4.3	n.a.
2008	W.P.LABUAN	Urban	26.6	25.0	1.6	15.8	62.7	6.1	n.a.
2009	W.P.LABUAN	Urban	28.3	26.7	1.5	14.5	66.0	5.4	n.a.
2010	W.P.LABUAN	Urban	29.7	27.9	1.8	14.2	67.6	6.1	n.a.
2011	W.P.LABUAN	Urban	30.1	28.8	1.2	14.6	67.3	4.1	n.a.
2012	W.P.LABUAN	Urban	31.3	30.0	1.4	14.8	67.9	4.4	n.a.
2013	W.P.LABUAN	Urban	31.7	30.5	1.2	15.0	67.8	3.7	n.a.
2014	W.P.LABUAN	Urban	37.6	35.7	1.9	17.3	68.5	5.2	n.a.
2015	W.P.LABUAN	Urban	36.1	34.3	1.8	19.9	64.5	5.0	n.a.
2016	W.P.LABUAN	Urban	38.4	35.3	3.0	19.1	66.8	7.9	n.a.
2017	W.P.LABUAN	Urban	37.1	33.9	3.1	21.0	63.9	8.4	n.a.
2018	W.P.LABUAN	Urban	39.2	36.5	2.7	20.7	65.5	6.9	n.a.
2019	W.P.LABUAN	Urban	38.4	35.9	2.5	23.0	62.6	6.6	n.a.
2011	W.P.PUTRAJAYA	Urban	41.9	41.4	0.5	9.2	82.0	1.1	n.a.
2012	W.P.PUTRAJAYA	Urban	40.9	40.3	0.6	9.7	80.8	1.5	n.a.
2013	W.P.PUTRAJAYA	Urban	41.2	40.7	0.5	9.2	81.7	1.2	n.a.
2014	W.P.PUTRAJAYA	Urban	40.8	40.3	0.5	9.5	81.2	1.2	n.a.
2015	W.P.PUTRAJAYA	Urban	38.9	38.5	0.4	10.8	78.2	1.0	n.a.
2016	W.P.PUTRAJAYA	Urban	38.9	38.2	0.7	11.2	77.6	1.7	n.a.
2017	W.P.PUTRAJAYA	Urban	38.6	38.0	0.6	11.9	76.5	1.5	n.a.
2018	W.P.PUTRAJAYA	Urban	38.9	38.4	0.5	12.1	76.2	1.3	n.a.
2019	W.P.PUTRAJAYA	Urban	38.6	38.1	0.4	12.2	75.9	1.2	n.a.
2020	MALAYSIA	Urban	12565.2	11992.7	572.5	5614.0	69.1	4.6	405.9
2020	MALAYSIA	Rural	3102.5	2964.0	138.5	1611.6	65.8	4.5	150.9
2020	JOHOR	Urban	1488.5	1437.1	51.4	608.1	71.0	3.5	n.a.
2020	JOHOR	Rural	352.1	338.5	13.6	164.1	68.2	3.9	n.a.
2020	KEDAH	Urban	712.0	680.6	31.5	418.5	63.0	4.4	n.a.
2020	KEDAH	Rural	242.5	234.1	8.4	141.4	63.2	3.4	n.a.
2020	KELANTAN	Urban	384.5	366.8	17.7	274.6	58.3	4.6	n.a.
2020	KELANTAN	Rural	326.7	313.9	12.7	241.5	57.5	3.9	n.a.
2020	MELAKA	Urban	409.9	400.7	9.2	208.0	66.3	2.2	n.a.
2020	MELAKA	Rural	16.9	16.6	0.3	10.4	62.0	1.6	n.a.
2020	N.SEMBILAN	Urban	389.0	374.5	14.5	214.4	64.5	3.7	n.a.
2020	N.SEMBILAN	Rural	103.8	99.6	4.2	62.0	62.6	4.0	n.a.
2020	PAHANG	Urban	462.4	447.5	14.9	238.7	66.0	3.2	n.a.
2020	PAHANG	Rural	276.7	268.4	8.3	146.2	65.4	3.0	n.a.
2020	P.PINANG	Urban	836.4	807.4	29.0	390.6	68.2	3.5	n.a.
2020	P.PINANG	Rural	27.0	25.4	1.6	16.4	62.3	6.0	n.a.
2020	PERAK	Urban	885.3	844.9	40.4	492.6	64.3	4.6	n.a.
2020	PERAK	Rural	210.5	197.8	12.6	114.9	64.7	6.0	n.a.
2020	PERLIS	Urban	72.9	69.9	3.0	45.0	61.9	4.1	n.a.
2020	PERLIS	Rural	37.4	35.7	1.7	19.8	65.4	4.6	n.a.
2020	SELANGOR	Urban	3460.0	3309.4	150.6	1094.5	76.0	4.4	n.a.
2020	SELANGOR	Rural	142.7	137.0	5.6	78.0	64.7	3.9	n.a.
2020	TERENGGANU	Urban	330.5	315.9	14.6	232.2	58.7	4.4	n.a.
2020	TERENGGANU	Rural	154.4	149.1	5.3	99.3	60.9	3.4	n.a.



2020	SABAH	Urban	1343.8	1227.6	116.2	584.9	69.7	8.6	n.a.
2020	SABAH	Rural	688.8	642.1	46.7	285.3	70.7	6.8	n.a.
2020	SARAWAK	Urban	801.7	761.5	40.1	424.2	65.4	5.0	n.a.
2020	SARAWAK	Rural	517.8	500.8	17.0	229.3	69.3	3.3	n.a.
2020	W.P.KUALA LUMPUR	Urban	910.6	874.6	36.0	351.7	72.1	4	n.a.
2020	W.P.KUALA LUMPUR	Rural	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2020	W.P.LABUAN	Urban	40.9	38.0	2.9	22.1	64.9	7.0	n.a.
2020	W.P.LABUAN	Rural	5.2	4.8	0.5	3.2	62.4	8.9	n.a.
2020	W.P.PUTRAJAYA	Urban	36.7	36.2	0.6	13.9	72.5	1.5	n.a.
2020	W.P.PUTRAJAYA	Rural	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2021	MALAYSIA	Urban	12680.5	12116.4	564.1	5564.2	69.5	4.4	361.3
2021	MALAYSIA	Rural	3116.7	2947.8	168.9	1657.2	65.3	5.4	56.1
2021	JOHOR	Urban	1467.2	1411.5	55.7	628.2	70.0	3.8	n.a.
2021	JOHOR	Rural	367.8	353.2	14.6	158.6	69.9	4.0	n.a.
2021	KEDAH	Urban	748.5	720.5	28.0	421.0	64.0	3.7	n.a.
2021	KEDAH	Rural	224.1	213.7	10.4	147.4	60.3	4.6	n.a.
2021	KELANTAN	Urban	413.5	402.1	11.4	271.5	60.4	2.8	n.a.
2021	KELANTAN	Rural	306.3	287.5	18.8	264.4	53.7	6.1	n.a.
2021	MELAKA	Urban	425.6	417.2	8.4	196.2	68.4	2.0	n.a.
2021	MELAKA	Rural	18.5	17.9	0.6	10.7	63.4	3.2	n.a.
2021	N.SEMBILAN	Urban	387.4	370.9	16.6	219.2	63.9	4.3	n.a.
2021	N.SEMBILAN	Rural	100.4	96.6	3.7	64.0	61.1	3.7	n.a.
2021	PAHANG	Urban	465.0	450.3	14.7	250.4	65.0	3.2	n.a.
2021	PAHANG	Rural	264.3	255.1	9.2	152.0	63.5	3.5	n.a.
2021	P.PINANG	Urban	862.6	831.7	30.9	367.6	70.1	3.6	n.a.
2021	P.PINANG	Rural	26.9	25.5	1.4	18.5	59.3	5.1	n.a.
2021	PERAK	Urban	894.6	847.3	47.3	487.7	64.7	5.3	n.a.
2021	PERAK	Rural	206.0	195.3	10.7	118.8	63.4	5.2	n.a.
2021	PERLIS	Urban	81.3	77.8	3.6	44.3	64.7	4.4	n.a.
2021	PERLIS	Rural	32.0	30.7	1.2	19.9	61.6	3.9	n.a.
2021	SELANGOR	Urban	3513.7	3367.3	146.4	1074.5	76.6	4.2	n.a.
2021	SELANGOR	Rural	163.3	151.2	12.1	64.4	71.7	7.4	n.a.
2021	TERENGGANU	Urban	348.9	336.1	12.8	239.9	59.3	3.7	n.a.
2021	TERENGGANU	Rural	139.6	132.7	6.9	105.0	57.1	4.9	n.a.
2021	SABAH	Urban	1236.2	1130.5	105.6	563.7	68.7	8.5	n.a.
2021	SABAH	Rural	785.9	726.0	59.8	284.4	73.4	7.6	n.a.
2021	SARAWAK	Urban	862.3	820.7	41.6	414.3	67.5	4.8	n.a.
2021	SARAWAK	Rural	476.3	457.4	18.9	245.9	66.0	4.0	n.a.
2021	W.P.KUALA LUMPUR	Urban	893.3	855.6	37.7	352.0	71.7	4.2	n.a.
2021	W.P.KUALA LUMPUR	Rural	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2021	W.P.LABUAN	Urban	42.6	39.6	2.9	21.1	66.9	7.0	n.a.
2021	W.P.LABUAN	Rural	5.4	4.8	0.6	3.2	62.6	10.4	n.a.
2021	W.P.PUTRAJAYA	Urban	37.8	37.2	0.6	12.6	75.0	1.6	n.a.
2021	W.P.PUTRAJAYA	Rural	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Table 1.1 indicates that, the more the population increases, the more labor force there will be, then good human resources and skills become the main capital for the workforce to get decent jobs while people who are not able to compete will be eliminated and become unemployed. The higher the labor force that requires sufficient employment, but in the field of work is not always available. This problem must be solved in order to realize equitable distribution of welfare and development.



Labor (man power) is a product that has been or is working. Or are looking for work, and who are doing other work. Like school, housewife. Practically, the workforce consists of two things, namely the labor force and non-labor force: a) the labor force consists of those who are working and those who are unemployed or looking for work; b) groups that are not in the labor force consist of those who attend school, those who take care of the household, and other groups or receive income from other parties, such as retirees, etc (Dr. Payaman quoted A. Hamzah, 1990).

The labour force, or currently active population, comprises all persons who fulfil the requirements for inclusion among the employed (civilian employment plus the armed forces) or the unemployed. The employed are defined as those who work for pay or profit for at least one hour a week, or who have a job but are temporarily not at work due to illness, leave or industrial action. The armed forces cover personnel from the metropolitan territory drawn from the total available labour force who served in the armed forces during the period under consideration, whether stationed in the metropolitan territory or elsewhere. The unemployed are defined as people without work but actively seeking employment and currently available to start work. This indicator is seasonally adjusted and it is measured in persons.

Generally, the quality of the labour force in a country can be determined by looking at the education level of that country. There are some persons had to accept a job that requires skills lower than educational achievement. This can be portrayed through the indicator of skill related underemployment which measures those tertiary education and working in the category of semi-skilled and low-skilled jobs. Moreover, there is an overwhelming oversupply of skills and a corresponding under-supply of high skilled jobs. The labor force that is not accommodated in the work field will cause unemployment. This problem is caused by the unexpected increase in the labor force.

Consequently, the number of the labor force that is not proportional to the job opportunities will make an increasing number of the labor force that needs to be balanced by the expansion of employment opportunities will bring its burden

to the economy. However, the government hopes that an increase in the labor force can drive economic development. Therefore, workforce prediction is needed to overcome this problem and ensure that detailed planning can be carried out. Therefore, a web-based system will be developed to provide predictions for the future of the labor force in Malaysia. The web-based information system is a web-based application. This application also includes a database to manage data sets into prediction results. This system uses artificial intelligence methods, namely Particle Swarm Optimization (PSO) and Bat Algorithm (BA), which will be used to predict the labor force for the next five years.

Particle Swarm Optimization and Bat Algorithms are among the many AI methods used to solve optimization problems. Particle swarm optimization is a bio-inspired algorithm and is a simple algorithm to find the optimal solution in the solution space. The bat algorithm is an AI that mimics the echolocation behavior of bats to perform global optimization. BA is widely used in various optimization problems because of its excellent performance. The bat algorithm determines global search ability by loudness and frequency parameters. In this system, the data set will be used to develop this web-based system. The data will be implemented in particle swarm optimization and bat algorithms as the objective function.

Therefore, due to the capabilities of PSO and BA, this artificial intelligence method will be used in the system to predict the labor force in Malaysia in the next five years. The data set was obtained from data.gov.my provided by Jabatan Perangkaan Malaysia.

1.3 Problem Statement

The problem identification that can be highlighted throughout this research are:

1. The labor force is part of the workforce that is involved or trying to be involved in production activities, namely the production of goods and services (Mulyadi, 2014). Every year, the labor force is increasing. However, the increasing of the labor force is not proportional to the job opportunities.

Therefore, there is a tremendous oversupply of skills and a shortage of suitable high-skill jobs. The higher the labor force that requires sufficient employment, but in the field of work is not always available.

2. Prediction systematically estimates something that is most likely to happen in the future based on past and present information owned so that the error (the difference between something that happened and the forecast result) can be minimized. Predictions do not have to give definite answer to what will happen but try to find answers as close as possible to what will happen (Herdianto, 2013). Labor force be predicted using system, how to provide a system that can predict the number of labor force in Malaysia.
3. Information is data that is processed to be used as a basis for making the right decisions (George H. Bodnar, 2000). Lack of information about the workforce, so most people do not prepare for what is needed in the future. Due to economic demands, many people take jobs that do not follow their existing skills, which impacts the economy.

1.4 Objectives And Significance

1.4.1 Objectives

The objectives of this project are:

1. To investigate the labour force year after year
2. To implement Artificial Intelligence methods which are Particle Swarm Optimization and Bat Algorithm in order to predict the labor force in Malaysia for the next 5 years in order to reducing the number of unemployability issue.
3. To provide information in the form of estimated algorithms, namely particle swarm optimization and bat algorithms to users via a web base system.

1.4.2 Significance

The advantage to being achieved by the system, it can predict the labor force in Malaysia in the next five years using the particle swarm optimization method and the bat algorithm so that users are expected to be able to optimize



their ability to continue to grow so that they can help reduce unemployment and improve the country's economy.

1.5 Scope

Scope of work is the tasks that must be completed for the project to be within specified limits. The scope is critical to ensure that the project is on track to meet its objectives. This project aims to provide predictions for the future of the labor force in Malaysia.

1.5.1 Admin

1. Admin can monitor the website
2. Admin can update data & maintain of the system

1.5.2 User

1. User can register and log in
2. Users can choose predictions in what year and see the results of the predictions

1.6 Assumptions and Limitations

1.6.1 Assumptions

1. This system of predicting the labor force is beneficial for the future. It can increase economic growth in the future.
2. This Prediction System can be used by many people and is easy to use.
3. Malaysia's labor force prediction system uses 2 artificial intelligence methods, namely PSO & BA, to compare the prediction results of the labor force.

1.6.2 Limitation

1. The data set is obtained from data.gov.my, provided by Jabatan Perangkaan Malaysia.
2. An internet connection is required to access the system; otherwise, the user cannot enter the main page.



3. In this web-based system, the user must have a device to be able to access this system.

1.7 Writing Systematics

This final assignment is broken up into five chapters to make it easier to understand the discussion's topics. The systematic discussion can be summarised as follows:

CHAPTER I INTRODUCTION

In this chapter the author will provide a brief and clear outline of this Final Project regarding the background, problem formulation, problem boundaries, objectives and benefits of writing the final project, research methodology and writing systematics.

CHAPTER II LITERATURE REVIEW

In this chapter the author briefly describes the general and specific theories used in the research. General theory and special theory related to the title and terms used in making the Final Project.

CHAPTER III RESEARCH METHODOLOGY

In this chapter, this chapter describes the research institution, the methods to be used, and data collection techniques and describes the concept of the software to be created.

CHAPTER IV RESULTS AND DISCUSSION

This chapter describes the specifications, software design, and discussion of the system created as well as the results of testing the system that has been made.

CHAPTER V CONCLUSIONS AND RECOMMENDATIONS

This chapter contains conclusions from the problems that have been discussed and analyzed. As a follow-up to the conclusion, at the end of writing suggestions are put forward related to the problems that have been discussed.