

## 1. Introduction

This report relates to statistics compiled from the Annual Survey of Manufacturing Industries conducted in 2010 for reference year 2009. The key data in the manufacturing sector for 2009 are presented in this report. A total of 30,607 active manufacturing establishments responded to this survey.

## 2. Overall performance

As shown in Table 1, the key indicators in the manufacturing sector posted a negative growth in 2009. The value of gross output in 2009 declined by RM87.7 billion which resulting a negative growth of 10.7 per cent from RM817.7 billion in 2008. In the same period, intermediate input also decreased 10.4 per cent to RM591.6 billion in 2009 from RM660.5 billion in 2008. Value added and employment also followed the same trend, with a decreased of RM18.6 billion and 78,177 persons, while the value of assets dropped by 2.8 per cent. The share of manufacturing industries to Gross Domestic Product (GDP)<sup>1</sup> in 2009 was 25.5 per cent.

**Table 1 : Gross output, intermediate input, value added, employment and value of assets, 2008 & 2009**

	2008	2009	Annual growth (%)
Gross output (RM billion)	817.7	730.0	-10.7
Intermediate input (RM billion)	660.5	591.6	-10.4
Value added (RM billion)	157.1	138.5	-11.8
Employment (persons)	1,771,331	1,693,154	-4.4
Value of assets (RM billion)	201.5	195.9	-2.8

The number of persons engaged in manufacturing industries in 2009 was 1,693,154 persons. The paid full-time employees accounted for 1,658,278 persons or 98.0 per cent of total employment. Meanwhile the paid part-time employees and others which includes unpaid family workers, working proprietors and active business partners were 34,876 persons or 2.0 per cent of total employment as shown in Table 2. Paid full-time employees by gender shows that male workers employed was higher as compared to female workers which was 63.6 per cent and 36.4 per cent respectively.

**Table 2 : Employment by category and gender, 2009**

Category	Total	%	Male	%	Female	%
Paid full-time employees	1,658,278	98.0	1,054,258	63.6	604,020	36.4
Paid part-time employees	14,102	0.8	8,134	57.7	5,968	42.3
Others	20,774	1.2	13,479	64.9	7,295	35.1
<b>Total</b>	<b>1,693,154</b>	<b>100.0</b>	<b>1,075,871</b>	<b>63.5</b>	<b>617,283</b>	<b>36.5</b>

<sup>1</sup> National Accounts Gross Domestic Product (GDP), First Quarter 2010, Department of Statistics, Malaysia.

### 3. Performance of manufacturing industries at MSIC group level

As indicated in Table 3, the major contributors of the manufacturing groups to the gross output in 2009 were Manufacture of refined petroleum products; Manufacture of vegetable and animal oils and fats; and Manufacture of electronic components and boards. Collectively, these three groups accounted for more than one-third or RM253.4 billion of the gross output.

**Table 3 : Contribution to gross output at MSIC group level, 2009**

<b>MSIC Code</b>	<b>Description</b>	<b>Gross output (RM billion)</b>	<b>% Share</b>
192	Manufacture of refined petroleum products	91.9	12.6
104	Manufacture of vegetable and animal oils and fats	86.3	11.8
261	Manufacture of electronic components and boards	75.2	10.3
201	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics and synthetic rubber in primary forms	51.5	7.1
262	Manufacture of computers and peripheral equipment	38.4	5.3
264	Manufacture of consumer electronics	31.2	4.3
241	Manufacture of basic iron and steel	30.1	4.1
221	Manufacture of rubber products	24.3	3.3
222	Manufacture of plastic products	21.8	3.0
291	Manufacture of motor vehicles	20.0	2.7
	Others	259.3	35.5
<b>Total</b>		<b>730.0</b>	<b>100.0</b>

The Manufacture of refined petroleum products group contributed the largest share to the gross output which was 12.6 per cent (RM91.9 billion) in 2009. This was followed by Manufacture of vegetable and animal oils and fats group which recorded a share of 11.8 per cent (RM86.3 billion).

The contribution to total employment in Table 4 shows the different pattern where the Manufacture of electronic components and boards recorded the highest number of workers totaling 183,579 persons (10.8 per cent) in 2009. Whereby, the other five groups namely Manufacture of plastic products (114,914 persons); Manufacture of rubber products (83,392 persons); Manufacture of furniture (83,085 persons); Manufacture of products of wood, cork, straw and plaiting materials (77,627 persons) and Manufacture of other fabricated metal products; metal working service activities (73,725 persons). These six groups accounted for 36.4 per cent or one-third of total employment in 2009.

**Table 4 : Contribution to total employment by group, 2009**

Group Code	Description	Total employment	% Share
261	Manufacture of electronic components and boards	183,579	10.8
222	Manufacture of plastic products	114,914	6.8
221	Manufacture of rubber products	83,392	4.9
310	Manufacture of furniture	83,085	4.9
162	Manufacture of products of wood, cork, straw and plaiting materials	77,627	4.6
259	Manufacture of other fabricated metal products; metal working service activities	73,725	4.4
107	Manufacture of other food products	71,160	4.2
239	Manufacture of non-metallic mineral products n.e.c.	65,705	3.9
262	Manufacture of computers and peripheral equipment	58,106	3.4
141	Manufacture of wearing apparel, except fur apparel	57,623	3.4
	Others	824,238	48.7
<b>Total</b>		<b>1,693,154</b>	<b>100.0</b>

## 4. Employment

### 4.1 Employment size group

There were a total of 24,992 establishments that employed 50 employees and below, which accounted for 81.6 per cent, whereas their contribution to gross output and total employment was only 6.1 per cent and 15.4 per cent respectively as shown in Table 5. On the contrary, only 2,169 large establishments with 151 workers and above employed 66.9 per cent of total employment and contributed 77.4 per cent to gross output.

**Table 5 : Number of establishments, gross output and total employment by employment size group, 2009**

Employment size group	No. of establishments		Gross output		Total employment	
	Number	% Share	RM billion	% Share	Number	% Share
<b>Total</b>	<b>30,607</b>	<b>100.0</b>	<b>730.0</b>	<b>100.0</b>	<b>1,693,154</b>	<b>100.0</b>
50 and below	24,992	81.6	44.7	6.1	259,959	15.4
51 - 150	3,446	11.3	120.3	16.5	300,502	17.7
151 and above	2,169	7.1	565.0	77.4	1,132,693	66.9

#### 4.2 Qualification of employees

Table 6 shows the number of workers in the manufacturing sector by qualification. Workers with SPM / SPMV or equivalent and below was the highest with 1,383,334 persons or 81.7 per cent of total persons engaged in 2009. Workers with Diploma / STPM or equivalent, 198,065 persons (11.7 per cent) and University degree and above, 111,755 persons (6.6 per cent).

**Table 6 : Number of persons engaged by qualification, 2009**

<b>Qualification</b>	<b>Total</b>	<b>%</b>
University degree and above	111,755	6.6
Diploma / STPM or equivalent	198,065	11.7
SPM / SPMV or equivalent and below	1,383,334	81.7
<b>Total</b>	<b>1,693,154</b>	<b>100.0</b>

The number of persons engaged by gender shows that male employees represent 63.5 per cent of total employment. Table 7 depicts the significant existence of gaps between male and female workers at every level of qualification. It shows that male employees who possess Diploma / STPM or equivalent accounted for 66.7 per cent as compared with 33.3 per cent for female employees. This was followed by University degree and above where male employees recorded 65.6 per cent as compared to female employees (34.4 per cent). The male and female employees with SPM / SPMV or equivalent and below was 62.9 per cent and 37.1 per cent respectively.

**Table 7 : Number of persons engaged by gender and qualification, 2009**

<b>Qualification</b>	<b>Number of persons engaged by gender</b>				
	<b>Total</b>	<b>Male</b>	<b>%</b>	<b>Female</b>	<b>%</b>
University degree and above	111,755	73,289	65.6	38,466	34.4
Diploma / STPM or equivalent	198,065	132,155	66.7	65,910	33.3
SPM / SPMV or equivalent and below	1,383,334	870,428	62.9	512,906	37.1
<b>Total</b>	<b>1,693,154</b>	<b>1,075,872</b>	<b>63.5</b>	<b>617,282</b>	<b>36.5</b>

### 4.3 Salaries & wages

Table 8 shows the distribution of salaries & wages of paid full-time employees by category of workers. There were 1,144,515 persons (69.0 per cent) employed as Plant and machine operators and assemblers<sup>2</sup> who received salaries & wages amounted to RM17.0 billion (43.4 per cent). On the other hand, the managers, professionals and executives who received salaries & wages of RM11.9 billion (30.3 per cent) even though there were only 144,535 persons (8.7 per cent) of total paid full-time employees.

**Table 8 : Salaries & wages of paid full-time employees by category of workers, 2009**

Category of workers	Paid full-time employees		Salaries & wages		Average salaries & wages received per annum (RM)
	Number	%	RM billion	%	
Managers, professionals and executives	144,535	8.7	11.9	30.3	82,435
Technicians and associate professionals	188,219	11.4	6.7	16.9	35,387
Clerical and related occupations	112,551	6.8	2.6	6.5	22,720
Elementary workers	68,458	4.1	1.1	2.9	16,390
Plant & machine operators and assemblers	1,144,515	69.0	17.0	43.4	14,893
<b>Total</b>	<b>1,658,278</b>	<b>100.0</b>	<b>39.3</b>	<b>100.0</b>	<b>23,699</b>

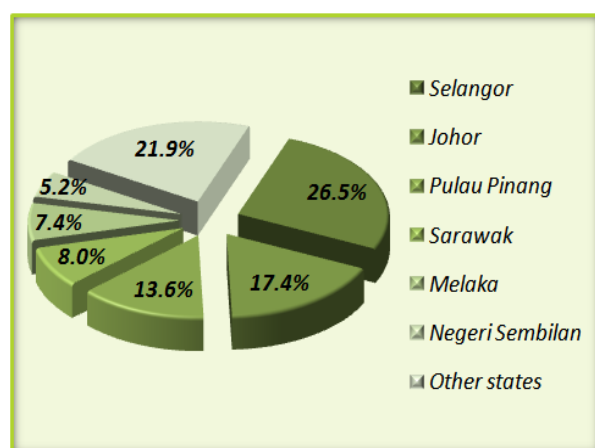
The average salaries and wages earned per annum for Managers, professionals and executives was RM82,435. This was followed by Technicians and associate professionals (RM35,387); Clerical and related occupations (RM22,720); Elementary workers (RM16,390) and Plant & machine operators and assemblers (RM14,893).

## 5. Performance by states

### 5.1 Gross output and employment

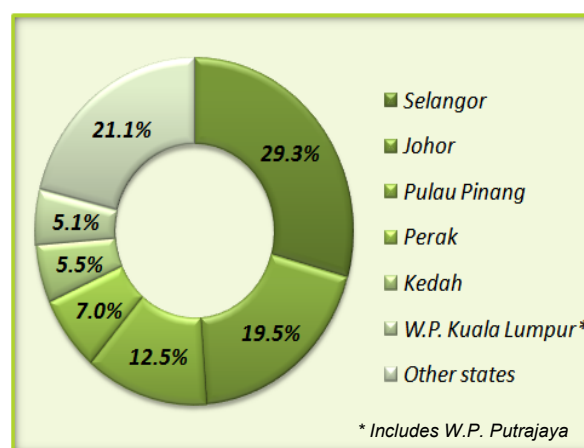
Selangor was the top contributor to gross output and total employment in the manufacturing sector in 2009 with 26.5 per cent and 29.3 per cent respectively. These were followed by Johor and Pulau Pinang with a contribution to gross output was 17.4 per cent and 13.6 per cent respectively as shown in Chart 1. Besides that, these three states contributed more than half of total employment in manufacturing sector as shown in Chart 2.

**Chart 1 : Gross output by state, 2009**



Value of gross output RM730.0 billion

**Chart 2 : Employment by state, 2009**



\* Includes W.P. Putrajaya

Total number of persons engaged 1,693,154 persons

<sup>2</sup> Directly employed and employed through labour contractors

## 5.2 Distribution of manufacturing sub-sectors with the highest gross output by states

Table 9 depicts the distribution of manufacturing sub-sectors with the highest contribution to gross output within the state. In 2009 Manufacture of computer, electronic and optical products was the highest in Johor (26.5 per cent) followed by Kedah (27.8 per cent); Kelantan (25.8 per cent); Pulau Pinang (54.4 per cent) and Selangor (21.8 per cent) to their respective state gross output.

Manufacture of food products contributed the most for Pahang (34.6 per cent), Perak (33.7 per cent), Perlis (44.3 per cent), Sabah (80.1 per cent) and W.P. Kuala Lumpur (26.5 per cent). Meanwhile, Manufacture of coke and refined petroleum products was the main contributor for Melaka (51.9 per cent), Negeri Sembilan (37.1 per cent) and Sarawak (65.4 per cent). Manufacture of chemicals and chemical products recorded the highest gross output of 47.6 per cent for Terengganu. The same trend was shown in W.P. Labuan whereby Manufacture of basic metals sub-sector contributed 50.4 per cent.

**Table 9 : Distribution of manufacturing sub-sectors with the highest gross output by states, 2009**

State	Sub-sector code	Sub-sector based on highest gross output	Gross Output (RM million)	Per cent (%)
<b>Johor</b>		<b>Total gross output</b>	<b>127,050.8</b>	<b>100.0</b>
	26	Manufacture of computer, electronic and optical products	33,695.9	26.5
	10	Manufacture of food products	27,458.5	21.6
	20	Manufacture of chemicals and chemical products	12,605.8	9.9
<b>Kedah</b>		<b>Total gross output</b>	<b>22,809.7</b>	<b>100.0</b>
	26	Manufacture of computer, electronic and optical products	6,335.2	27.8
	22	Manufacture of rubber and plastic products	4,213.3	18.5
	10	Manufacture of food products	2,796.2	12.3
<b>Kelantan</b>		<b>Total gross output</b>	<b>3,203.2</b>	<b>100.0</b>
	26	Manufacture of computer, electronic and optical products	825.9	25.8
	10	Manufacture of food products	823.7	25.7
<b>Melaka</b>		<b>Total gross output</b>	<b>54,186.0</b>	<b>100.0</b>
	19	Manufacture of coke and refined petroleum products	28,111.6	51.9
<b>Negeri Sembilan</b>		<b>Total gross output</b>	<b>38,105.4</b>	<b>100.0</b>
	19	Manufacture of coke and refined petroleum products	14,150.4	37.1
	26	Manufacture of computer, electronic and optical products	8,686.1	22.8
<b>Pahang</b>		<b>Total gross output</b>	<b>25,042.5</b>	<b>100.0</b>
	10	Manufacture of food products	8,660.2	34.6
	20	Manufacture of chemicals and chemical products	7,787.4	31.1

Table 9 : Distribution of manufacturing sub-sectors with the highest gross output by states, 2009 (cont'd)

State	Sub-sector code	Sub-sector based on highest gross output	Gross output (RM million)	Per cent (%)
Pulau Pinang		<b>Total gross output</b>	<b>99,059.6</b>	<b>100.0</b>
	26	Manufacture of computer, electronic and optical products	53,934.6	54.4
Perak		<b>Total gross output</b>	<b>27,395.4</b>	<b>100.0</b>
	10	Manufacture of food products	9,236.6	33.7
	22	Manufacture of rubber and plastic products	4,755.8	17.4
Perlis		<b>Total gross output</b>	<b>1,085.0</b>	<b>100.0</b>
	10	Manufacture of food products	480.2	44.3
	23	Manufacture of other non-metallic mineral products	312.4	28.8
Selangor		<b>Total gross output</b>	<b>193,354.6</b>	<b>100.0</b>
	26	Manufacture of computer, electronic and optical products	42,096.2	21.8
	10	Manufacture of food products	25,339.1	13.1
	29	Manufacture of motor vehicles, trailers and semi-trailers	20,608.3	10.7
	24	Manufacture of basic metals	19,712.2	10.2
Terengganu		<b>Total gross output</b>	<b>26,661.4</b>	<b>100.0</b>
	20	Manufacture of chemicals and chemical products	12,684.3	47.6
	19	Manufacture of coke and refined petroleum products	10,475.5	39.3
Sabah		<b>Total gross output</b>	<b>29,490.1</b>	<b>100.0</b>
	10	Manufacture of food products	23,627.3	80.1
Sarawak		<b>Total gross output</b>	<b>58,705.8</b>	<b>100.0</b>
	19	Manufacture of coke and refined petroleum products	38,384.7	65.4
W.P. Kuala Lumpur*		<b>Total gross output</b>	<b>21,868.4</b>	<b>100.0</b>
	10	Manufacture of food products	5,796.9	26.5
	20	Manufacture of chemicals and chemical products	4,511.1	20.6
	22	Manufacture of rubber and plastic products	2,281.5	10.4
W.P. Labuan		<b>Total gross output</b>	<b>2,024.6</b>	<b>100.0</b>
	24	Manufacture of basic metals	1,021.1	50.4

\* Includes W.P. Putrajaya



## 6. Exports by manufacturing sub-sectors

The Manufacture of coke and refined petroleum products dominated exports with the largest percentage of establishments (28.6 per cent). This was followed by Manufacture of computer, electronic and optical products (28.3 per cent); Manufacture of rubber and plastic products (21.3 per cent); Manufacture of chemicals and chemical products (18.4 per cent) and Manufacture of leather and related products (17.8 per cent). In terms of export value, manufacture of computer, electronic and optical products was the major contributor with RM85,467.4 million. These were followed by Manufacture of coke and refined petroleum products (RM52,311.3 million) and Manufacture of chemicals and chemical products (RM15,281.6 million) as shown in Table 10.

Table 10 : Percentage of establishments involved in Exports, 2009

Sub-sector code	Sub-sector	Establishments involved in exports (%)	Export value (RM million)
19	Manufacture of coke and refined petroleum products	28.6	52,311.3
26	Manufacture of computer, electronic and optical products	28.3	85,467.4
22	Manufacture of rubber and plastic products	21.3	13,289.0
20	Manufacture of chemicals and chemical products	18.4	15,281.6
15	Manufacture of leather and related products	17.8	180.5
27	Manufacture of electrical equipment	17.5	4,455.4
16	Manufacture of wood and products of wood and cork, except furniture; of articles of straw and plaiting materials	11.5	6,505.2
28	Manufacture of machinery and equipment n.e.c	10.4	4,023.7
31	Manufacture of furniture	10.3	2,894.0
29	Manufacture of motor vehicles, trailers and semi-trailers	10.0	2,386.3



## 7. Research and development expenditure by sub-sectors

Expenditure in Research and Development (R&D) recorded a value of RM1.8 billion as shown in Table 11. The four sub-sectors which registered the highest expenditure were Manufacture of computer, electronic and optical products (RM1,243.8 million); Manufacture of machinery and equipment n.e.c. (RM120.0 million); Manufacture of electrical equipment (RM76.1 million) and Manufacture of food products (RM66.9 million). The total expenditure by these four sub-sectors was RM1.5 billion (81.6 per cent), while the remaining sub-sectors amounted to RM340.0 million (18.4 per cent).

There were 1,879 establishments (6.1 per cent) out of 30,607 which actively involved in R&D. Manufacture of food products has the highest numbers involved in R&D which was 319 establishments (17.0 per cent). This was followed by Manufacture of rubber and plastic products, 228 establishments (12.1 per cent); Manufacture of chemicals and chemical products, 173 establishments (9.2 per cent) and Manufacture of computer, electronic and optical products with 134 establishments (7.1 per cent). In addition the total percentage of R&D per output by sub-sectors was 5.1 per cent. The Manufacture of computer, electronic and optical products has the highest percentage of 0.8 per cent, followed by Manufacture of machinery and equipment n.e.c. which recorded 0.7 per cent; Manufacture of electrical equipment (0.4 per cent); and Manufacture of wearing apparel (0.4 per cent). The remaining six sub-sectors amounted to 0.9 per cent.

**Table 11 : Research and development (R&D) expenditure by sub-sectors, 2009**

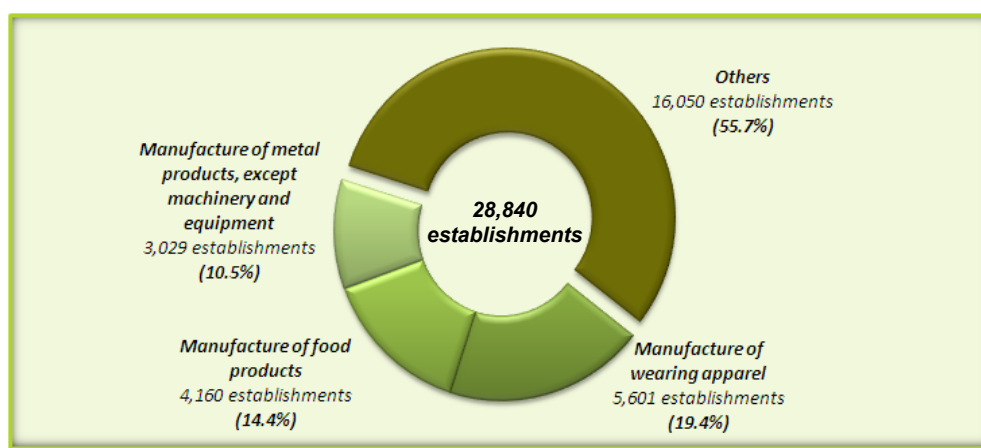
Sub-sector code	Sub-sector	Expenditure on research & development (R&D)		Total establishments	Establishment involved in R&D		R&D per Output (%)
		RM million	%		Numbers	%	
26	Manufacture of computer, electronic and optical products	1,243.8	67.3	648	134	7.1	0.8
28	Manufacture of machinery and equipment n.e.c.	120.0	6.5	1,213	102	5.4	0.7
27	Manufacture of electrical equipment	76.1	4.1	580	95	5.1	0.4
10	Manufacture of food products	66.9	3.6	4,352	319	17.0	0.1
22	Manufacture of rubber and plastic products	58.8	3.2	1,990	228	12.1	0.1
20	Manufacture of chemicals and chemical products	48.6	2.6	998	173	9.2	0.1
30	Manufacture of other transport equipment	47.6	2.6	215	26	1.4	0.3
29	Manufacture of motor vehicles, trailers and semi- trailers	47.3	2.6	384	62	3.3	0.2
25	Manufacture of fabricated metal products, except machinery and equipment	18.9	1.0	3,157	98	5.2	0.1
14	Manufacture of wearing apparel	16.0	0.9	5,641	34	1.8	0.4
	Others	103.3	5.6	11,429	608	32.4	1.9
<b>Total</b>		<b>1,847.3</b>	<b>100.0</b>	<b>30,607</b>	<b>1,879</b>	<b>100.0</b>	<b>5.1</b>

## 8. Profile of SME's in manufacturing sector

### 8.1 Number of SME's

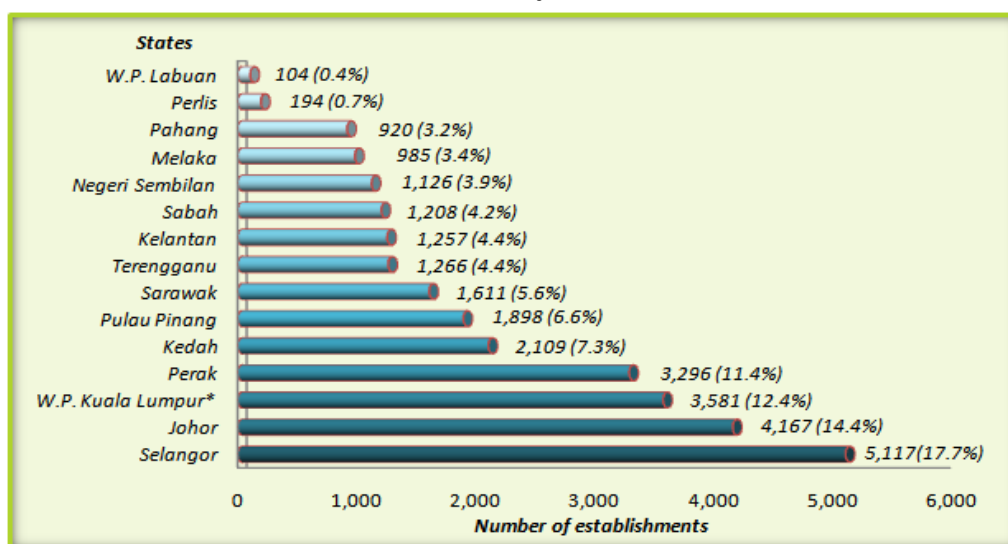
Chart 3 shows the total number of SME's establishments in the manufacturing sector. In 2009, there were 28,840 SME's which represented 94.2 per cent of the total establishments in the manufacturing sector, while the remaining were large establishments with total of 1,767 establishments. Manufacture of wearing apparel sub-sector recorded the highest in terms of number of establishments (19.4 per cent), followed by Manufacture of food products (14.4 per cent) and Manufacture of metal products, except machinery and equipment (10.5 per cent).

**Chart 3 : Number of SME's in the manufacturing sector, 2009**



As for the SME's in the manufacturing sector, the highest concentration of establishments were recorded in Selangor 5,117 establishments (17.7 per cent). This was followed by Johor (14.4 per cent) and W.P. Kuala Lumpur (12.4 per cent). These three states cumulatively accounted for 44.6 per cent to the number of establishments of SME's in manufacturing sector as depicted in Chart 4.

**Chart 4 : SME's by state, 2009**

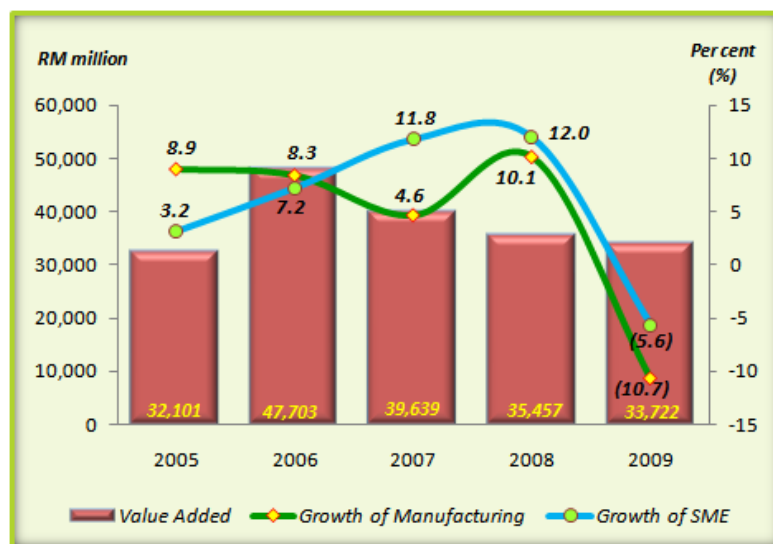


\* Includes W.P. Putrajaya

## 8.2 SME's output and value added

In 2009, gross output of SME's registered a negative growth of 5.6 per cent which was in line with the performance of the manufacturing sector which recorded a negative growth of 10.7 per cent. The SME's value added also showed a decrease of RM1,735 million from RM35,457 million in 2008 as shown in Chart 5.

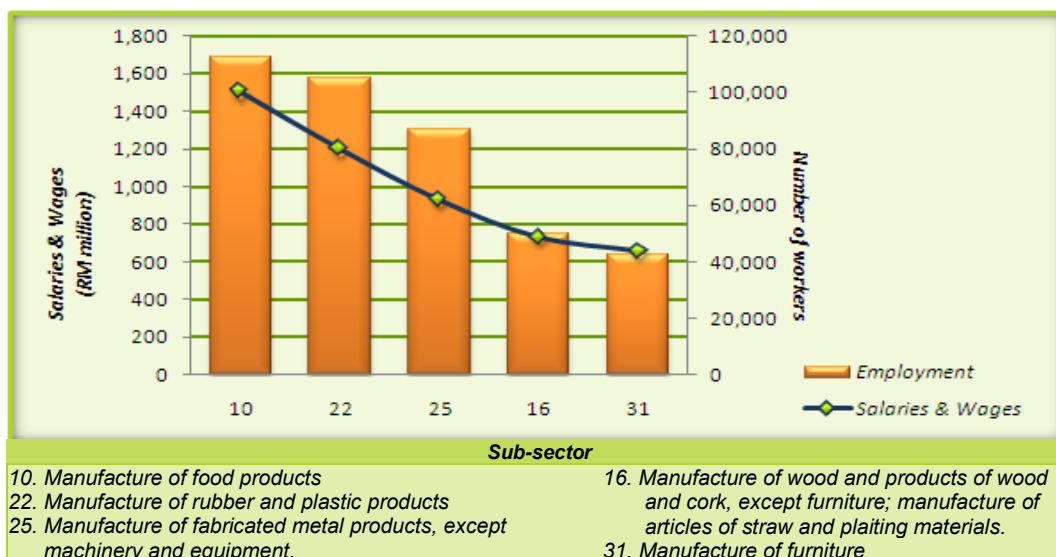
Chart 5 : Contribution of SME's output and value added to the manufacturing sector, 2005 - 2009



## 8.3 Employment in SME's

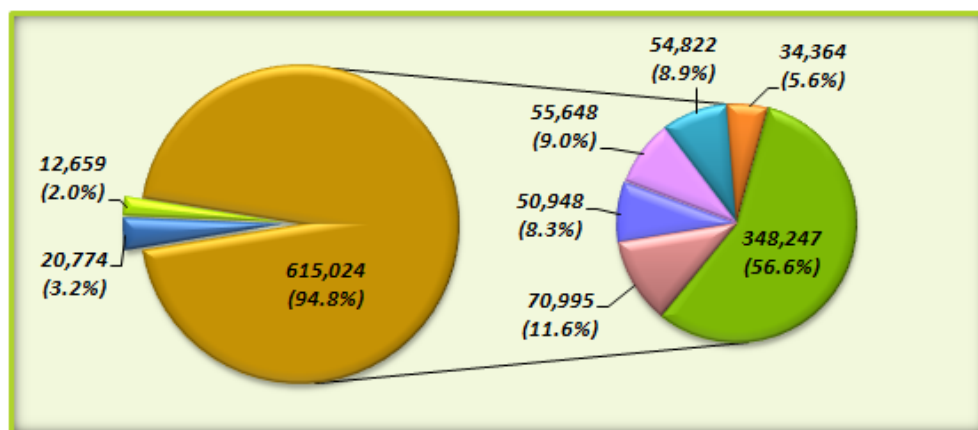
The total number of employees engaged by SME's establishments were 648,458 workers or 38.3 per cent of total employment in manufacturing sector (1,693,154 workers). The Manufacture of food products sub-sector recorded the highest number of employees engaged in SME's which was 100,309 workers or 15.5 per cent. This was followed by Manufacture of rubber and plastic products, 80,143 persons or 12.4 per cent, and Manufacture of furniture n.e.c, 62,006 persons or 9.6 per cent. In terms of salaries and wages paid, the sub sector which received the highest salaries & wages was Manufacture of food products, RM1.7 billion, followed by Manufacture of rubber and plastic products, RM1.6 billion and Manufacture of fabricated metal products, except machinery and equipment, RM1.3 billion as shown in Chart 6.

Chart 6 : Employment and salaries & wages of SME's, 2009



Employment in SME's comprised of self-employed (working proprietors, active business partners and unpaid family workers) as well as paid full-time employees and paid part-time employees. Contribution of paid full-time employees to the total SME's employment was the largest which recorded 94.8 per cent (615,024 persons). Working proprietors, active business partners and unpaid family workers represented 3.2 per cent (20,774 persons), while paid part-time employees was 2.0 per cent (12,659 persons) as shown in Chart 7. Of the total number of paid full-time employees in SME's, production / operative workers directly employed were the largest group with 56.6 per cent (348,247 persons).

**Chart 7 : Employment in SME's by category of workers, 2009**



**Total employment of SME's : 648,458 persons**

- Working proprietors active business partners & unpaid family workers
- Paid part-time employees
- Paid full-time employees

**Paid full-time employees of SME's : 615,024 persons**

- Managerial & professional
- Technical & supervisory
- Clerical & related occupation
- General workers
- Production / operative workers directly employed
- Production / operative workers directly employed through labour contractors

#### 8.4 Legal status of SME's

In the manufacturing sector, legal status of SME's were mainly Private limited company, Individual proprietorship and Partnership. Private limited company represented 44.7 per cent of total SME's while Individual proprietorship and Partnership represented 44.5 per cent and 10.3 per cent respectively as shown in Chart 8.

**Chart 8 : Legal status of SME's in manufacturing sector, 2009**

