

Vol. 12 No. 15

May 2008

### SURVEY OF OCCUPATIONAL EMPLOYMENT PATTERNS IN MINING AND QUARRYING (Second of a Series)



*This LABSTAT Updates is the second in the series on industry occupational employment patterns based on the results of the 2006 BLES Integrated Survey (BITS) - a nationwide sample survey covering 7,630 non-agricultural establishments with at least 20 workers. This issue features the occupational employment patterns in the mining and quarrying industry focusing specifically on employment by major occupation group; vital and hard-to-fill occupations; problems encountered on recruitment; and the views of the respondents on how to address the labor shortage problem.*

#### Number and Total Employment of Establishments

The mining and quarrying industry represents only a small fraction of the country's economic sector. Its contribution to the nation's economy in 2006 was estimated at just 1.34% of Gross Domestic Product (GDP).

Results of the 2006 BITS placed the number of mining and quarrying establishments with at least 20 workers at 80 of which the majority (58.8%) were engaged in non-metallic mining and quarrying activities and the rest (41.3%) in metallic ore mining. Their total workforce as of June 30, 2006 was estimated at 14,400.

On the overall, the mining and quarrying industry accounted for just 0.3% of the total establishments covered by the 2006 BITS and 0.5% of the total employment.

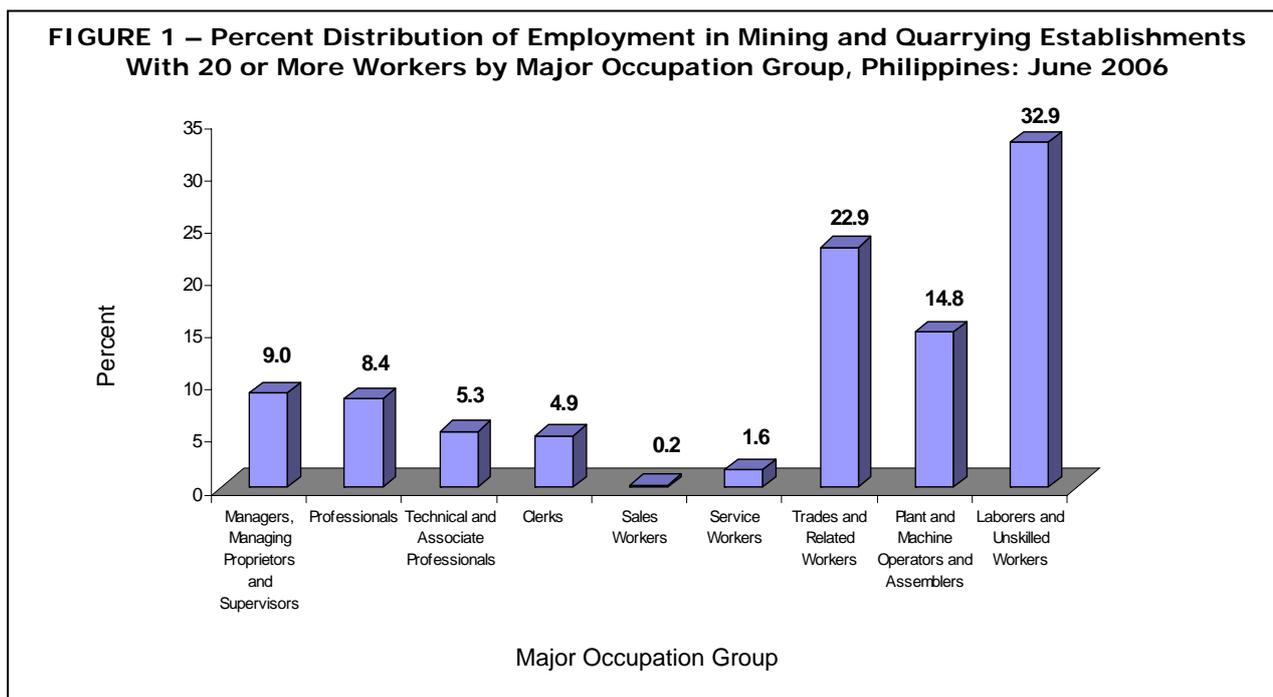
**TABLE 1 - Number and Total Employment of Mining and Quarrying Establishments with 20 or More Workers, Philippines: June 2006**

Indicator	All Industries	Mining and Quarrying		
		Total	Metallic	Non-Metallic
Establishment				
- Number	25,349	80	33	47
- Percent (%)	100.0	0.32	0.13	0.19
Employment				
- Number	2,887,510	14,372	11,654	2,718
- Percent (%)	100.0	0.50	0.40	0.09

Source of data: BLES, 2006 BITS.

#### Occupational Employment Patterns

Classified by major occupation group, employment in this industry was dominated by three major groups, namely: laborers and unskilled workers (32.9%), trades and related workers (22.9%) and plant and machine operators and assemblers (14.8%). Their dominance reflects the nature of activities in mining and quarrying which rely heavily on laborers and skill-intensive workers.



Source of data: BLES, 2006 BITS.

The rest of the workforce were classified as managers, managing proprietors and supervisors (9.0%), professionals (8.4%), technical and associate professionals (5.3%) and clerks (4.9%). The smallest occupation groups were attributed to service workers (1.6%) and sales workers (0.2%).

**Vital Occupations**

A total of 43 specific occupations were identified by the survey respondents as vital to the success of their business operations.

As shown in Table 2, managers, managing proprietors and supervisors (37.1%) and professionals (18.8%) were on the top of the vital occupation list. Ranking next in importance were plant and machine operators and assemblers (14.3%) and trades and related workers (10.7%).

At the bottom of the vital occupation list were clerks (6.8%), unskilled workers (2.2%) and sales workers (0.7%).

**TABLE 2 - Frequency Distribution of Occupations Perceived as Vital in Mining and Quarrying Industry by Major Occupation Group, Philippines: June 2006**

Major Occupation Group	Number of Occupations	Frequency	Percent (%)
<b>All Occupations</b>	<b>43</b>	<b>226</b>	<b>100.0</b>
Managers, Managing Proprietors & Supervisors	11	84	37.1
Professionals	10	43	18.8
Technical & Associate Professionals	7	21	9.3
Clerks	3	15	6.8
Sales Workers	1	2	0.7
Service Workers	0	0	0.0
Trades & Related Workers	6	24	10.7
Plant & Machine Operators & Assemblers	4	32	14.3
Laborers & Unskilled Workers	1	5	2.2

Source of data: BLES, 2006 BITS.

By specific occupation title (4-digit PSOC), the 15 selected occupations perceived as vital by employers were the following:

1. Production supervisors and general foremen
2. Mineral-ore-and stone-processing-plant operators
3. Accountants and auditors
4. Mining plant operators
5. Marine craft mechanics
6. Geodetic and related professionals
7. Safety, health and quality inspectors
8. Geologists and geophysicists
9. Mining and metallurgical engineering technicians
10. Systems analysts and designers
11. Personnel and human development professionals
12. Welders and flamecutters
13. Chemists
14. Chemical engineers
15. Earth-moving and related plant operators

### Hard-to-Fill Occupations

Two out of every five mining and quarrying establishments (40.0% or 32) had experienced some difficulties in recruiting qualified applicants to fill up job openings in their establishments for the past three years.

They listed a total of 17 specific occupations considered as hard-to-fill. These were occupations for which the respondents encountered problems in recruitment over the last three years.

1. Geologists and geophysicists
2. Geodetic and related professionals
3. Accountants and auditors
4. Safety, health and quality inspectors
5. Buyers
6. Miners and quarry workers
7. Mining plant operators

8. Other computer professionals
9. Mechanical engineers
10. Chemical engineers
11. Mechanical engineering technicians
12. Bookkeepers
13. Accounting and bookkeeping clerks
14. Marine craft mechanics
15. Production supervisors and general foremen
16. Motor vehicle mechanics
17. Earth-moving and related plant operators

Note that there are nine (9) occupations in the list that also appeared in the vital occupation list which makes them even more critical in terms of supply considerations. These occupations are:

1. Geologist and geophysicists
2. Geodetic and related professionals
3. Accountants and auditors
4. Safety, health and quality inspectors
5. Mining plant operators
6. Chemical engineers
7. Marine craft mechanics
8. Production supervisors and general foremen
9. Earth-moving and related plant operators

### Length of Time or Duration Hard-to-Fill Occupations Remained Unfilled

The median and mean months it took employers to fill up a vacancy considered as "hard-to-fill" were computed at six (6) months and eight (8) months, respectively. (*Table 3*)

The difference between the two figures can be explained by the fact that while the survey indicates that half of the vacancies were filled up within the six-month period (the value of the median), there were

notable numbers of extreme values or *outliers* in the data distribution.

The *outliers* include responses with waiting time of seven months to one year to recruit the qualified applicants (28.3%) and those who waited for more than one year (4.3%).

There were two (2) occupations that logged the longest "waiting" period or months that the job remained unfilled. These are geologists and geophysicists (11 months) and geodetic and related professionals (6 months).

Months	Frequency	Percent
<b>Total Responses</b>	<b><u>46</u></b>	<b><u>100.0</u></b>
1 – 3 months	11	23.9
4 - 6 months	17	37.0
7 – 12 months	13	28.3
More than 12 months	2	4.3
Not Specified	3	6.5
Mean = 8.29		
Median = 6.0		

Source of data: BLES, 2006 BITS.

### Reasons Why Hard-to-Fill Occupations Exist

Hard-to-fill occupations exist because of several reasons. The most frequently cited reason (67.4%) was shortage of qualified applicants who meet the competency requirements of a job or those that require professional license. The next reason mentioned was high or unreasonable asking salary of applicants (13.0%).

Other responses (6.5% each) were stiff competition among local firms for few available talents, the perception that most of the qualified

applicants preferred overseas over local employment and "location" problem or work schedule.

Reason	Frequency	Percent (%)
<b>Total Responses</b>	<b><u>46</u></b>	<b><u>100.0</u></b>
Absence/lack of qualified applicants	31	67.4
High asking salary	6	13.0
Shortage of applicants due to local competitions	3	6.5
Shortage of applicants due to overseas employment	3	6.5
"Location" problem/ work schedule	3	6.5

Source of data: BLES, 2006 BITS.

### Measures to Address Shortage of Talents

Of those respondents who encountered recruitment problems, majority (40.0% or 32) have a notion that this problem will persist in the future.

When asked further what forms of intervention or measure they believed can resolve the labor shortage problem in the mining and quarrying industry, majority (36.5%) of the respondents cited curriculum revision/enhancement of quality education as the most important reform that can address the shortage problem. Other suggestions were skills training (10.2%), good macro-economic management (7.8%) and regulation of deployment of professional workers abroad (5.2%).

A notable proportion of the respondents (40.3%) made no specific recommendation or response to this question.

**TABLE 5 – Proposed Policy and Programs to Address Labor Shortage in Mining and Quarrying Industry, Philippines: June 2006**

Recommendation	Number	Percent
<b><u>Total Responses</u></b>	<b><u>32</u></b>	<b><u>100.0</u></b>
Curriculum revision/ improve quality of education	12	36.5
Skills training	3	10.2
Good macroeconomic governance	3	7.8
Regulate overseas employment	2	5.2
No Recommendation	11	35.3
No Response	2	5.0

*Note: Details may not add up to total due to rounding of figures.*

*Source of data: BLES, 2006 BITS.*

---

**FOR INQUIRIES:**

Regarding this report contact **EMPLOYMENT AND MANPOWER STATISTICS DIVISION** at 527-3000 loc. 312/313

Regarding other statistics and technical services contact **BLES DATABANK** at 527-3000 loc. 317

Or Write to BLES c/o **Databank, 3/F DOLE Bldg. Gen. Luna St., Intramuros, Manila, 1002**

FAX **527-93-24** E mail: [bles\\_dole@yahoo.com](mailto:bles_dole@yahoo.com) or [blesemsd@yahoo.com](mailto:blesemsd@yahoo.com)

Or visit our website at <http://www.bles.dole.gov.ph>

---