

### Introduction

**S**urvey of mines-related activities and continuous dissemination of its results began by the then Ministry of Industry, Mine and Trade in the year 1333. Related statistics were published annually in the attachment of the publication "Statistics on Manufacturing Activities" until the year 1339, but they have appeared in a separate publication ever since under the title of "Statistics on Mineral Activities of Iran". The first census of mines of the country was carried out in the month of Azar in the year 1342 by the Ministry of Economy. Statistical Bureau of the Ministry of Economy collected and published statistics on mines-related activities annually from the year 1342 to the year 1353, using statistics from nationwide mines registers and records. The second census of mines of the country was conducted by the cooperation of the SCI and the Ministry of Industry, Mine and Trade in the year 1353. The SCI used to conduct a survey of a selected number of mines annually from the year 1353 to the year 1357. This part of the economic activities suffered from the lack of statistics during the year 1357 to the year 1363, because in the interim, neither were statistical surveys implemented nor were comprehensive registers made available. The SCI conducted a survey of mines, run by the public sector in the years 1364 and 1365, and also carried out the third census of mines of the country in the year 1366. The survey of mines has been conducted every year from the year 1367 to the year 1397 except for the years 1370 and 1384.

The data presented in this chapter are from the aforementioned censuses and surveys as well as data from the mineral cooperatives companies reported by the Ministry of Cooperatives, Labor and Social Welfare.

**On the statistics presented, it should be noted that:**

- (1) In the survey of the operating mines of the country, statistics on oil and gas, radioactive materials, and clay were not collected. However, due to the special importance of oil and gas statistics, the related information is separately presented in chapter 7 (Oil and gas).
- (2) In the survey of operating mines, sand and gravel mines are enumerated by sample survey and other mines by the census.
- (3) The ISIC Rev.4 is followed with appropriate modifications for the classification of mine sector activities in this chapter.

### Definitions and concepts

**Mine:** refers to an area which contains mineral deposit.

**Ore dressing:** refers to all physical, chemical, or physicochemical operations for separating some of the waste materials from ores or separating ores from one another.

**Operating mine:** Every mine in which some operations are done for extraction, dressing activities and production of marketable ores.

**Private management:** management exercised by individuals or private institutions.

**Public management:** management exercised by the ministries, government organizations, Islamic Revolution Foundations, banks, municipalities, and other public institutions.

**Workers:** all the individuals working full-time or part-time in mine-related activities inside or outside of the mine. The employed persons are divided into two groups: production line workers (skilled and unskilled) and other workers (administrative, financial and service) according to their duties.

**Production line skilled workers:** employed persons capable of performing a part of technical

activities related to the production line due to their know-how and experience. Engineers, technicians, craftsmen, foremen, skilled laborers, fitters, and drivers are some examples.

**Production line unskilled workers:** refer to persons, working in production line, whose jobs do not require any specific training or experience; such as laborers and porters.

**Other workers (administrative, financial and service):** Employed persons engaged in clerical, administrative, financial and services activities in mines or their central offices but not engaged directly in the extraction and production activities. In the presentation of statistics on employed persons, it is noteworthy that the method of "average number of employed persons" has been employed in the calculation.

**Compensation of employees:** refers to wage, salary and other payments (money, goods, etc.) to wage and salary earners.

**Mineral production:** all minerals obtained from a series of extraction activities that make them marketable. It should be mentioned that in some mining activities, minerals are supplied to the market without undergoing dressing process, whereas, in others, minerals are supplied to the market after a series of physical and/or chemical treatments for separating some of the waste from ores, separating ores from one another, or increasing fineness of raw material. In addition, in one mining activities, several minerals may be produced. For example, copper ore mining activity includes minerals of copper ore and copper and molybdenum concentrates production.

**Value of mine products:** is the total value of saleable mine products including raw and processed minerals by the sale prices at the mine site.

**Investment (changes in the value of non-financial assets):** the sum of the purchase or acquisition value and the cost of substantial repairs of non-financial assets minus the sale or transfer value of non-financial assets) over a period of time are called investments.

**Value added:** is the surplus value created during production.

**Value of receipts (outputs):** The value received by the mine is the value received for production services and non-production services.

**Value of payments (inputs):** The value paid for the services.

**Cooperative:** is a company consisting of at least 7 members, natural or legal ones, to fulfill the common needs and improve socio-economic conditions of members via self-aid and their mutual support according to the law of the cooperative sector which has been formed and registered for carrying out economic activities.

**Mines cooperative:** is a cooperative that engages in the extraction, exploitation, and sales of minerals, extracted from operating mines.

### **Selected information**

According to the results of national operating mines survey in the year 1397, there were a number of 4916 operating mines. The results show that a total of 99734 workers were working in these mines and the number of workers increased by 4.1 percent compared to the year 1396.

In the year 1397, the value of mines products amounted to 394525067 million rials. Iron ore, copper ore and lime stone with 228225946, 96863480 and 12366884 million rials accounted for the highest annual production value, respectively.

In the year 1397, the value added of the nation's operating mines activity amounted to 307987601 million rials. Iron ore, copper ore, and lime stone mines with 167006247, 86535375 and 8956734 million rials had the highest value added, respectively. The total value-added of these mines accounted for about 85% of the sector's total value added.

Moreover, Kerman, Yazd and East Azarbayegan Ostans (provinces), with 150651459, 58233434 and 43174161 million rials had the highest value added of the nation's operating mines among the provinces.

In the year 1397, an amount of 19476266 million rials of new investment was made, of which 78% is related to machinery, durable tools and office equipment, 13% is for the construction and installations (without land), 3% is related to vehicles, and 2% for the development and exploration.

### 6.1. NUMBER OF MINES, WORKERS, COMPENSATION OF EMPLOYEES AND VALUE OF PRODUCTION IN OPERATING MINES BY OSTAN (mln rials)

| Year and Ostan              | Number of mines |                    |            | Number of workers    |                 |              |                                                       |
|-----------------------------|-----------------|--------------------|------------|----------------------|-----------------|--------------|-------------------------------------------------------|
|                             | Total           | Type of management |            | Total                | Production line |              | Other<br>(administrative<br>financial and<br>service) |
|                             |                 | Private            | Public     |                      | Skilled         | Unskilled    |                                                       |
| 1380.....                   | 2892            | 2548               | 344        | 55560 <sup>(1)</sup> | 28013           | 14939        | 12608                                                 |
| 1385.....                   | 3582            | 3301               | 281        | 60062 <sup>(1)</sup> | 31107           | 16146        | 12810                                                 |
| 1390.....                   | 5246            | 5036               | 209        | 84528                | 45159           | 21280        | 18089                                                 |
| 1393.....                   | 5355            | 5199               | 156        | 91869                | 51499           | 21372        | 18998                                                 |
| 1394.....                   | 5214            | 5056               | 158        | 91211                | 52975           | 19878        | 18358                                                 |
| 1395 <sup>(2)</sup> .....   | 4913            | 4744               | 169        | 93486                | 54826           | 20337        | 18323                                                 |
| 1396.....                   | 5353            | 5158               | 195        | 95831                | 55165           | 21134        | 19532                                                 |
| <b>1397.....</b>            | <b>4916</b>     | <b>4749</b>        | <b>167</b> | <b>99734</b>         | <b>60370</b>    | <b>19456</b> | <b>19908</b>                                          |
| East Azarbayejan.....       | 197             | 194                | 3          | 5178                 | 2822            | 1563         | 793                                                   |
| West Azarbayejan .....      | 266             | 261                | 5          | 2514                 | 1722            | 175          | 618                                                   |
| Ardebil .....               | 70              | 70                 | 0          | 405                  | 227             | 70           | 108                                                   |
| Esfahan .....               | 329             | 320                | 8          | 5338                 | 3406            | 712          | 1220                                                  |
| Alborz .....                | 27              | 26                 | 1          | 444                  | 224             | 93           | 127                                                   |
| Ilam .....                  | 32              | 30                 | 2          | 286                  | 153             | 43           | 90                                                    |
| Bushehr .....               | 188             | 188                | 0          | 1241                 | 827             | 119          | 295                                                   |
| Tehran. ....                | 122             | 119                | 3          | 2043                 | 1083            | 560          | 400                                                   |
| Chaharmahal&Bakhtiari ..... | 110             | 105                | 5          | 425                  | 206             | 59           | 160                                                   |
| South Khorasan .....        | 215             | 205                | 10         | 7442                 | 5160            | 1521         | 761                                                   |
| Khorasan-e-Razavi.....      | 392             | 382                | 10         | 4733                 | 2608            | 913          | 1212                                                  |
| North Khorasan .....        | 82              | 65                 | 17         | 900                  | 682             | 63           | 154                                                   |
| Khuzestan .....             | 103             | 103                | 0          | 1076                 | 604             | 179          | 293                                                   |
| Zanjan .....                | 146             | 143                | 3          | 1861                 | 1208            | 237          | 414                                                   |
| Semnan.....                 | 262             | 254                | 8          | 3443                 | 2090            | 639          | 714                                                   |
| Sistan&Baluchestan .....    | 84              | 83                 | 1          | 1467                 | 805             | 430          | 232                                                   |
| Fars .....                  | 222             | 216                | 6          | 5161                 | 2989            | 1218         | 955                                                   |
| Qazvin .....                | 152             | 140                | 12         | 813                  | 437             | 117          | 259                                                   |
| Qom .....                   | 66              | 65                 | 1          | 559                  | 245             | 192          | 122                                                   |
| Kordestan .....             | 147             | 143                | 4          | 1613                 | 1036            | 231          | 347                                                   |
| Kerman .....                | 572             | 555                | 17         | 27407                | 16471           | 4960         | 5977                                                  |
| Kermanshah .....            | 61              | 60                 | 1          | 664                  | 312             | 108          | 244                                                   |
| Kohgiluyeh&Boyerahmad ..... | 69              | 58                 | 11         | 483                  | 299             | 93           | 92                                                    |
| Golestan .....              | 99              | 98                 | 1          | 1843                 | 1080            | 317          | 446                                                   |
| Gilan .....                 | 62              | 56                 | 5          | 574                  | 310             | 155          | 109                                                   |
| Lorestan.....               | 90              | 82                 | 7          | 1542                 | 730             | 280          | 533                                                   |
| Mazandaran.....             | 113             | 105                | 8          | 2783                 | 1750            | 588          | 445                                                   |
| Markazi .....               | 245             | 239                | 6          | 2257                 | 1326            | 393          | 538                                                   |
| Hormozgan .....             | 131             | 131                | 0          | 1510                 | 794             | 505          | 211                                                   |
| Hamedan .....               | 131             | 129                | 2          | 1132                 | 585             | 294          | 253                                                   |
| Yazd .....                  | 131             | 122                | 9          | 12594                | 8181            | 2629         | 1784                                                  |

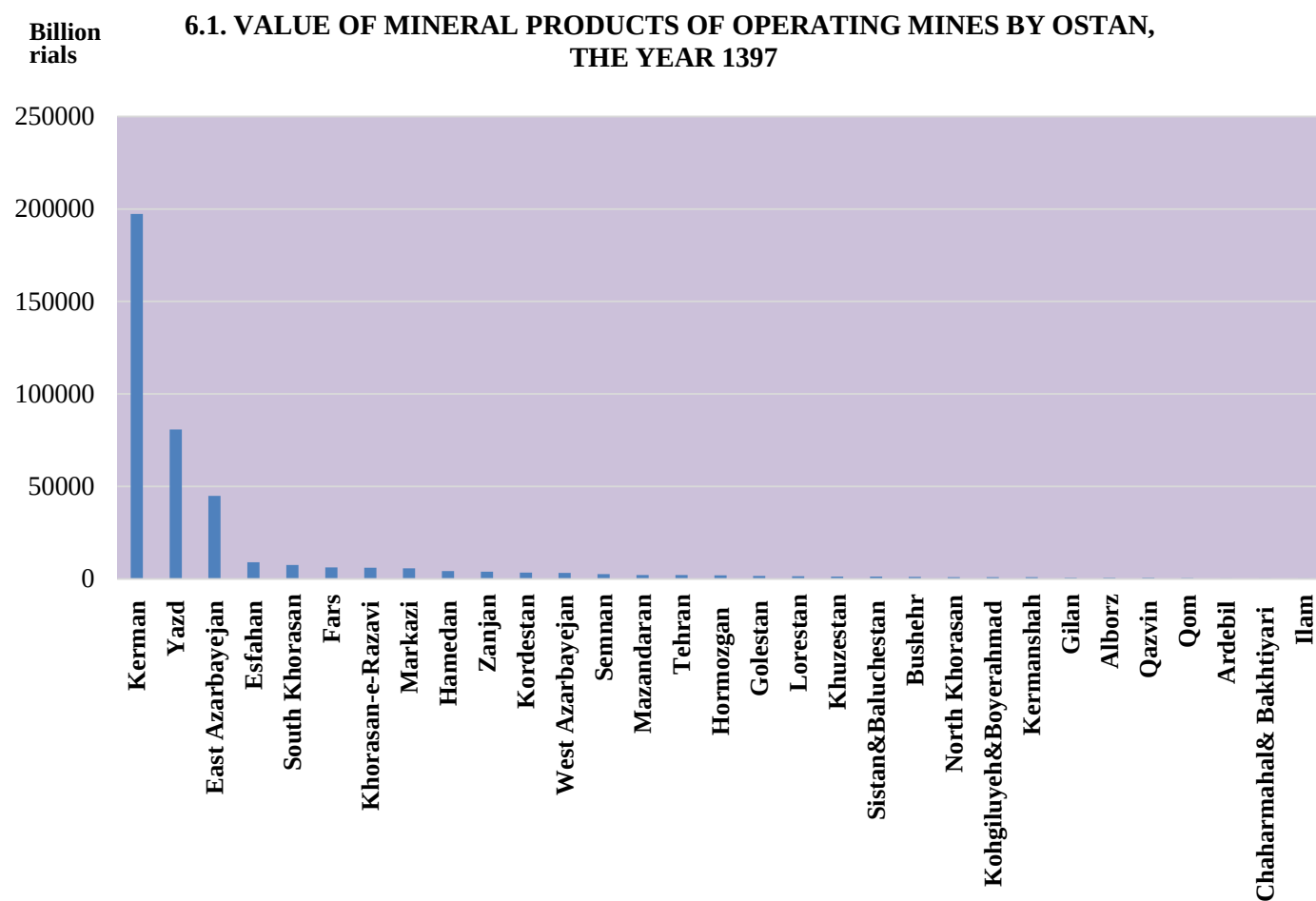
### 6.1. NUMBER OF MINES, WORKERS, COMPENSATION OF EMPLOYEES AND VALUE OF PRODUCTION IN OPERATING MINES BY OSTAN (continued) (mln rials)

| Year and Ostan               | Compensation of employees | Value of production |
|------------------------------|---------------------------|---------------------|
| 1380.....                    | 899382                    | 5675787             |
| 1385.....                    | 2307840                   | 22642408            |
| 1390.....                    | 7316839                   | 65442497            |
| 1393.....                    | 15797219                  | 139206408           |
| 1394.....                    | 20722775                  | 118291069           |
| 1395 <sup>(2)</sup> .....    | 23912398                  | 165734101           |
| 1396.....                    | 29857148                  | 250485343           |
| <b>1397.....</b>             | <b>41146964</b>           | <b>394525067</b>    |
| East Azarbayejan.....        | 2797456                   | 44832348            |
| West Azarbayejan .....       | 641176                    | 3239612             |
| Ardebil .....                | 55609                     | 390563              |
| Esfahan .....                | 1631973                   | 9107416             |
| Alborz .....                 | 83032                     | 648286              |
| Ilam .....                   | 60957                     | 271661              |
| Bushehr .....                | 212238                    | 1076201             |
| Tehran. ....                 | 484935                    | 2119397             |
| Chaharmahal& Bakhtiari ..... | 79634                     | 382489              |
| South Khorasan .....         | 1307116                   | 7569292             |
| Khorasan-e-Razavi.....       | 1067130                   | 6143826             |
| North Khorasan.....          | 278163                    | 1032307             |
| Khuzestan .....              | 236357                    | 1235452             |
| Zanjan .....                 | 430500                    | 3869601             |
| Semnan.....                  | 578069                    | 2677373             |
| Sistan&Baluchestan .....     | 393540                    | 1231081             |
| Fars .....                   | 1280462                   | 6169296             |
| Qazvin .....                 | 180803                    | 624305              |
| Qom .....                    | 131846                    | 526370              |
| Kordestan .....              | 424354                    | 3385092             |
| Kerman .....                 | 16136718                  | 197341549           |
| Kermanshah .....             | 104684                    | 896271              |
| Kohgiluyeh&Boyerahmad .....  | 134973                    | 1009600             |
| Golestan .....               | 381831                    | 1666316             |
| Gilan.....                   | 128223                    | 666089              |
| Lorestan.....                | 290702                    | 1422759             |
| Mazandaran.....              | 746100                    | 2181647             |
| Markazi .....                | 594568                    | 5825589             |
| Hormozgan .....              | 287518                    | 1941610             |
| Hamedan .....                | 261076                    | 4273151             |
| Yazd .....                   | 9725220                   | 80768520            |

1. Excluding the workers of mines in which part of the extraction activities was outsourced according to a contract in the year 1387 and before that.

2. Statistics for sand and gravel mines obtained from sampling survey were generalized to the whole country which has caused differences between the total and sum of parts in some cases.

Source: Statistical Centre of Iran.



For data see Table 6.1.

**6.2. NUMBER OF MINES, WORKERS, COMPENSATION OF WAGE AND SALARY EARNERS  
AND VALUE OF PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY, THE  
YEAR 1397 (mln rials)**

| Activity                                          | Number of mines |             |            | Number of workers |                 |              |                                               | Compensation of wage and salary earners | Value of production |
|---------------------------------------------------|-----------------|-------------|------------|-------------------|-----------------|--------------|-----------------------------------------------|-----------------------------------------|---------------------|
|                                                   | Total           | Type of     |            | Total             | Production line |              | Other (administrative, financial and service) |                                         |                     |
|                                                   |                 | Private     | Public     |                   | Skilled         | Unskilled    |                                               |                                         |                     |
| <b>Total .....</b>                                | <b>4916</b>     | <b>4749</b> | <b>167</b> | <b>99734</b>      | <b>60370</b>    | <b>19456</b> | <b>19908</b>                                  | <b>41146964</b>                         | <b>394525067</b>    |
| Mining of hard coal.....                          | 87              | 78          | 9          | 12606             | 8698            | 2633         | 1275                                          | 2571156                                 | 8964071             |
| Mining of iron ore.....                           | 131             | 119         | 12         | 25115             | 15691           | 4446         | 4978                                          | 18774820                                | 228225946           |
| Mining of lead and zinc                           | 45              | 41          | 4          | 3343              | 2119            | 687          | 536                                           | 1342496                                 | 10868149            |
| Mining of gold ore .....                          | 14              | 11          | 3          | 1603              | 1208            | 208          | 187                                           | 561677                                  | 4754447             |
| Mining of copper ore.....                         | 63              | 59          | 4          | 12612             | 7136            | 2608         | 2868                                          | 8598414                                 | 96863480            |
| Mining of chromite .....                          | 58              | 58          | 0          | 2220              | 1192            | 743          | 285                                           | 728514                                  | 1755407             |
| Mining of manganese....                           | 26              | 26          | 0          | 544               | 233             | 232          | 79                                            | 112881                                  | 379799              |
| Mining of bauxite .....                           | 17              | 10          | 7          | 508               | 394             | 60           | 54                                            | 173306                                  | 831441              |
| Mining of nickel, antimony and titanium ..        | 4               | 3           | 1          | 63                | 43              | 9            | 11                                            | 10632                                   | 102524              |
| Mining of gravel and sand .....                   | 1170            | 1114        | 56         | 8259              | 4586            | 1532         | 2142                                          | 1332348                                 | 6362678             |
| Mining of decorative stones .....                 | 670             | 666         | 4          | 10261             | 6034            | 2051         | 2177                                          | 2412975                                 | 12157055            |
| Mining of rubble stone..                          | 652             | 639         | 13         | 3604              | 1948            | 685          | 970                                           | 564587                                  | 2257773             |
| Mining of ballast stone..                         | 5               | 4           | 1          | 54                | 32              | 10           | 12                                            | 13493                                   | 60181               |
| Mining of lime stone .....                        | 969             | 932         | 37         | 10860             | 6593            | 1819         | 2448                                          | 2463321                                 | 12366884            |
| Mining of gypsum.....                             | 224             | 221         | 3          | 1693              | 1013            | 310          | 371                                           | 291084                                  | 1641193             |
| Mining of kaolin, fireclay and .....              | 195             | 193         | 2          | 1587              | 844             | 395          | 347                                           | 363805                                  | 1633938             |
| Mining of dolomite .....                          | 29              | 29          | 0          | 199               | 120             | 27           | 52                                            | 27108                                   | 109238              |
| Mining of bentonite's and fuller's earth .....    | 57              | 57          | 0          | 254               | 141             | 42           | 71                                            | 31158                                   | 171271              |
| Mining of barite .....                            | 57              | 57          | 0          | 360               | 175             | 96           | 88                                            | 74751                                   | 353331              |
| Mining of strontium sulphate & boron.....         | 11              | 11          | 0          | 111               | 68              | 18           | 26                                            | 22633                                   | 162593              |
| Mining of sodium sulphate .....                   | 10              | 6           | 4          | 111               | 72              | 26           | 13                                            | 13105                                   | 84070               |
| Mining of limonite and                            | 3               | 3           | 0          | 29                | 20              | 5            | 4                                             | 1964                                    | 7850                |
| Mining of fluorine.....                           | 18              | 18          | 0          | 329               | 202             | 68           | 59                                            | 63562                                   | 528306              |
| Mining of phosphate, potash & iodine .....        | 5               | 3           | 2          | 338               | 191             | 50           | 97                                            | 67036                                   | 1402364             |
| Mining of salt.....                               | 66              | 65          | 1          | 568               | 271             | 156          | 141                                           | 95546                                   | 464585              |
| Mining of bitumen .....                           | 8               | 8           | 0          | 92                | 41              | 16           | 35                                            | 12063                                   | 83944               |
| Mining of silica .....                            | 122             | 119         | 3          | 877               | 483             | 154          | 240                                           | 149436                                  | 854656              |
| Mining of ores slag .....                         | 73              | 72          | 1          | 461               | 270             | 73           | 118                                           | 62488                                   | 240983              |
| Mining of feldspar.....                           | 82              | 82          | 0          | 495               | 283             | 69           | 143                                           | 78930                                   | 364791              |
| Mining of talcum.....                             | 7               | 7           | 0          | 54                | 35              | 8            | 11                                            | 10680                                   | 32265               |
| Mining of shell & mica..                          | 11              | 11          | 0          | 91                | 52              | 21           | 18                                            | 15912                                   | 37895               |
| Mining of magnesite and whiting .....             | 22              | 22          | 0          | 262               | 125             | 97           | 40                                            | 64090                                   | 270362              |
| Mining of precious and semi-precious stones ..... | 5               | 5           | 0          | 173               | 57              | 103          | 13                                            | 40989                                   | 131597              |

Source: Statistical Centre of Iran.

**6.3. MINERALS PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY, THE YEAR****1397****(1000 tons)**

| Activity                                         | Production    |
|--------------------------------------------------|---------------|
| <b>Total.....</b>                                | <b>361368</b> |
| Mining of hard coal.....                         | 3932          |
| Mining of iron ore.....                          | 78597         |
| Mining of lead and zinc .....                    | 2063          |
| Mining of gold ore .....                         | 4174          |
| Mining of copper ore.....                        | 3624          |
| Mining of chromite .....                         | 260           |
| Mining of manganese.....                         | 129           |
| Mining of bauxite.....                           | 805           |
| Mining of nickel, antimony and titanium.....     | 6             |
| Mining of gravel and sand.....                   | 60881         |
| Mining of decorative stones .....                | 11845         |
| Mining of rubble stone.....                      | 18783         |
| Mining of ballast stone.....                     | 271           |
| Mining of lime stone .....                       | 141923        |
| Mining of gypsum.....                            | 13852         |
| Mining of kaolin and fireclay.....               | 7597          |
| Mining of dolomite .....                         | 771           |
| Mining of bentonite's and fuller's earth.....    | 742           |
| Mining of barite .....                           | 252           |
| Mining of strontium sulphate & boron.....        | 95            |
| Mining of sodium sulphate .....                  | 628           |
| Mining of limonite and ferrous oxide .....       | 22            |
| Mining of fluorine.....                          | 89            |
| Mining of phosphate, potash & iodine.....        | 178           |
| Mining of salt .....                             | 2769          |
| Mining of bitumen .....                          | 40            |
| Mining of silica .....                           | 3150          |
| Mining of ores slag .....                        | 1543          |
| Mining of feldspar.....                          | 2039          |
| Mining of talcum.....                            | 59            |
| Mining of shell & mica .....                     | 79            |
| Mining of magnesite & whiting .....              | 171           |
| Mining of precious and semi-precious stones..... | 0.457         |

Source: Statistical Centre of Iran.

**6.4. VALUE OF MINERALS PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY,  
THE YEAR: 1397** (mln rials)

| Activity                                         | Value of production |
|--------------------------------------------------|---------------------|
| <b>Total.....</b>                                | <b>394525067</b>    |
| Mining of hard coal.....                         | 8964071             |
| Mining of iron ore.....                          | 228225946           |
| Mining of lead and zinc.....                     | 10868149            |
| Mining of gold ore.....                          | 4754447             |
| Mining of copper ore.....                        | 96863480            |
| Mining of chromite.....                          | 1755407             |
| Mining of manganese.....                         | 379799              |
| Mining of bauxite.....                           | 831441              |
| Mining of nickel, antimony and titanium.....     | 102524              |
| Mining of gravel and sand.....                   | 6362678             |
| Mining of decorative stones.....                 | 12157055            |
| Mining of rubble stone.....                      | 2257773             |
| Mining of ballast stone.....                     | 60181               |
| Mining of lime stone.....                        | 12366884            |
| Mining of gypsum.....                            | 1641193             |
| Mining of kaolin and fireclay.....               | 1633938             |
| Mining of dolomite.....                          | 109238              |
| Mining of bentonite's and fuller's earth.....    | 171271              |
| Mining of barite.....                            | 353331              |
| Mining of strontium sulphate & boron.....        | 162593              |
| Mining of sodium sulphate.....                   | 84070               |
| Mining of limonite and ferrous oxide.....        | 7850                |
| Mining of fluorine.....                          | 528306              |
| Mining of phosphate, potash & iodine.....        | 1402364             |
| Mining of salt.....                              | 464585              |
| Mining of bitumen.....                           | 83944               |
| Mining of silica.....                            | 854656              |
| Mining of ores slag.....                         | 240983              |
| Mining of feldspar.....                          | 364791              |
| Mining of talcum.....                            | 32265               |
| Mining of shell & mica.....                      | 37895               |
| Mining of magnesite & whiting.....               | 270362              |
| Mining of precious and semi-precious stones..... | 131597              |

Source: Statistical Centre of Iran.



**6.5. VALUE ADDED, INPUTS AND OUTPUTS VALUE OF OPERATING MINES BY OSTAN****(mln rials)**

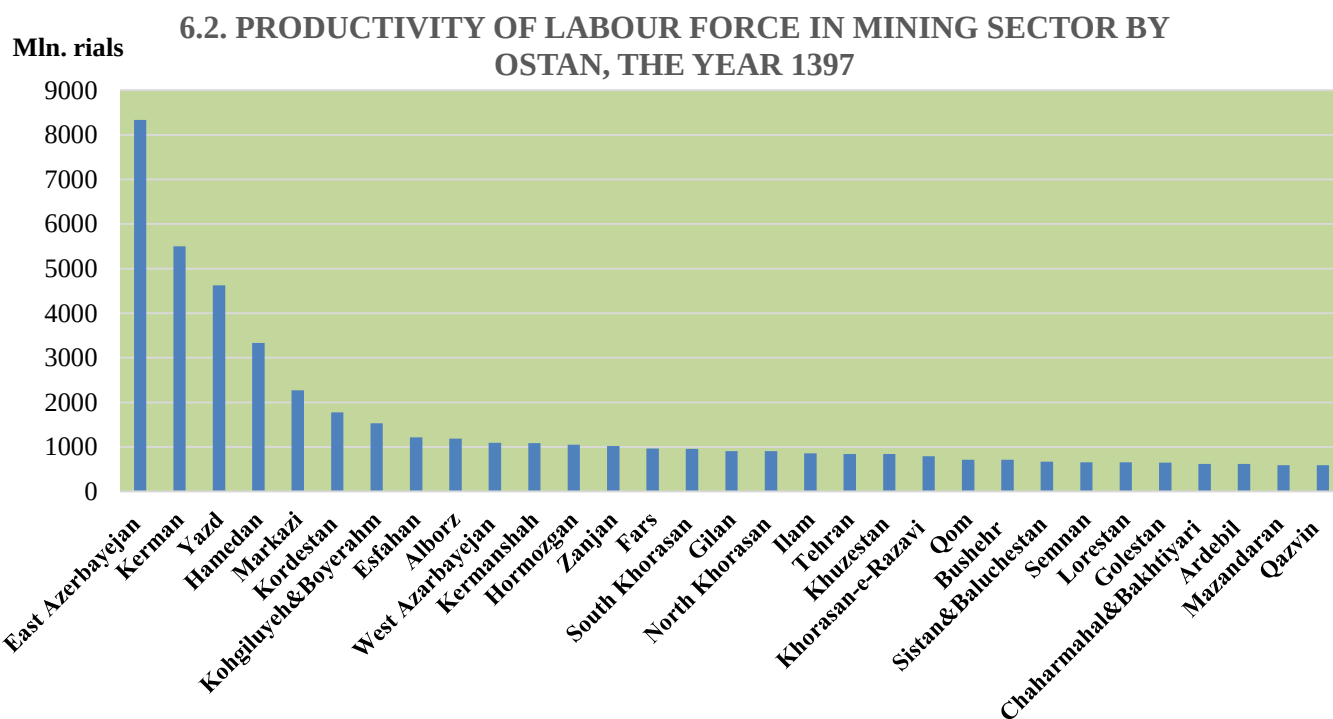
| Year and Ostan                     | Value added      | Payments (inputs) | Receipts (outputs) |
|------------------------------------|------------------|-------------------|--------------------|
| 1380.....                          | 4618050          | 1254792           | 5872841            |
| 1385.....                          | 16666060         | 6345035           | 23011095           |
| 1390.....                          | 50421673         | 16506152          | 66927825           |
| 1393.....                          | 97590386         | 45031120          | 142621506          |
| 1394.....                          | 84071447         | 36328753          | 120400200          |
| 1395.....                          | 123275908        | 45348911          | 168624819          |
| 1396.....                          | 195114614        | 59179148          | 254293762          |
| <b>1397.....</b>                   | <b>307987601</b> | <b>90059902</b>   | <b>398047503</b>   |
| East Azarbayejan Azerbayejan ..... | 43174161         | 1874172           | 45048333           |
| West Azarbayejan .....             | 2748609          | 539339            | 3287948            |
| Ardebil .....                      | 250121           | 151391            | 401512             |
| Esfahan .....                      | 6493681          | 2830104           | 9323785            |
| Alborz .....                       | 526471           | 147770            | 674241             |
| Ilam .....                         | 245092           | 37963             | 283055             |
| Bushehr .....                      | 883049           | 248958            | 1132007            |
| Tehran .....                       | 1717876          | 425374            | 2143250            |
| Chaharmahal&Bakhtiari .....        | 264257           | 135100            | 399357             |
| South Khorasan .....               | 7138658          | 642770            | 7781428            |
| Khorasan-e-Razavi .....            | 3761313          | 2463367           | 6224680            |
| North Khorasan .....               | 814428           | 264174            | 1078602            |
| Khuzestan .....                    | 904056           | 402033            | 1306089            |
| Zanjan .....                       | 1901016          | 2066828           | 3967844            |
| Semnan.....                        | 2255311          | 514880            | 2770192            |
| Sistan&Baluchestan .....           | 979891           | 522551            | 1502442            |
| Fars.....                          | 4975284          | 1511716           | 6487000            |
| Qazvin .....                       | 478893           | 208824            | 687717             |
| Qom.....                           | 400524           | 144395            | 544919             |
| Kordestan .....                    | 2869383          | 632326            | 3501709            |
| Kerman.....                        | 150651459        | 47151216          | 197802675          |
| Kermanshah .....                   | 721885           | 192407            | 914292             |
| Kohgiluyeh&Boyerahmad .....        | 739667           | 299280            | 1038947            |
| Golestan .....                     | 1192066          | 519512            | 1711578            |
| Gilan .....                        | 522543           | 147677            | 670220             |
| Lorestan.....                      | 1007687          | 440559            | 1448246            |
| Mazandaran.....                    | 1652660          | 680831            | 2333491            |
| Markazi .....                      | 5122792          | 812752            | 5935544            |
| Hormozgan.....                     | 1589606          | 399461            | 1989067            |
| Hamedan .....                      | 3771726          | 599702            | 4371427            |
| Yazd .....                         | 58233434         | 23052472          | 81285906           |

Source: Statistical Centre of Iran.

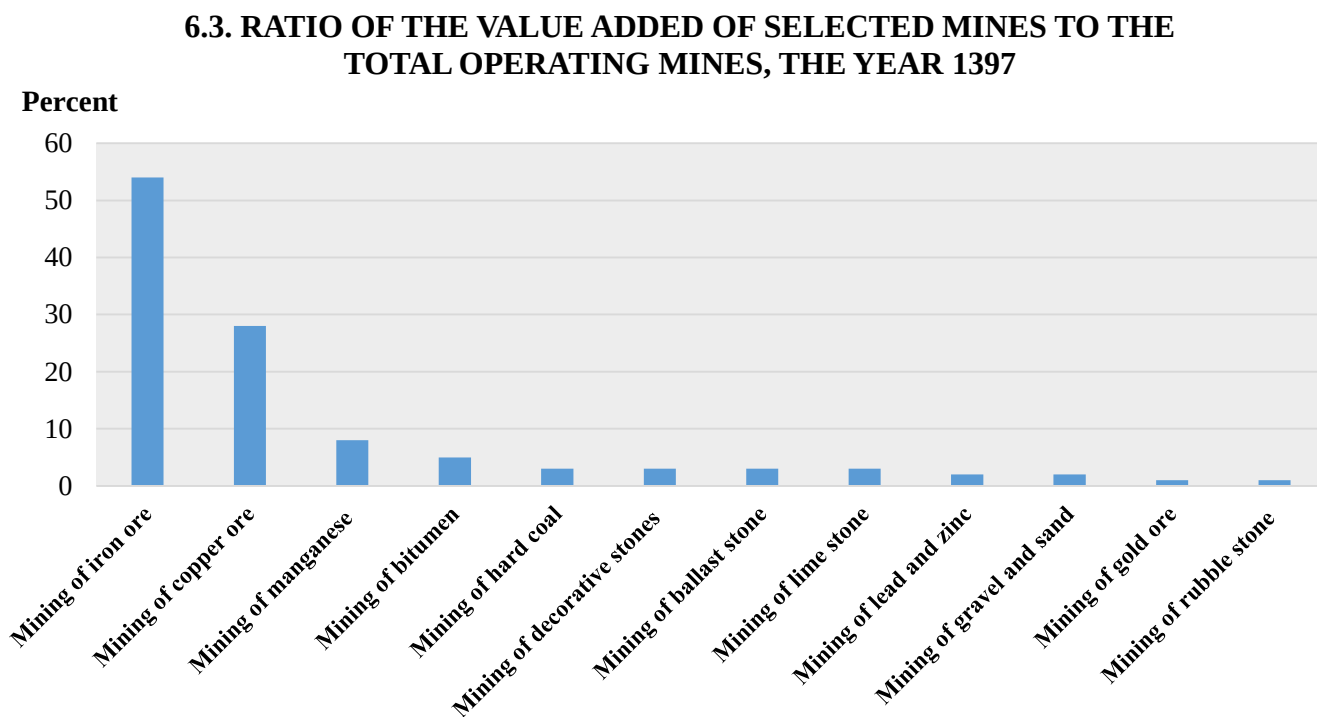
### 6.6. VALUE ADDED, INPUTS AND OUTPUTS VALUE OF OPERATING MINES BY TYPE OF ACTIVITY, THE YEAR 1397 (mln rials)

| Activity                                        | Value added      | Payments (inputs) | Receipts (outputs) |
|-------------------------------------------------|------------------|-------------------|--------------------|
| <b>Total.....</b>                               | <b>307987601</b> | <b>90059902</b>   | <b>398047503</b>   |
| Mining of hard coal.....                        | 8216908          | 911161            | 9128069            |
| Mining of iron ore.....                         | 167006247        | 62052354          | 229058601          |
| Mining of lead and zinc .....                   | 7195253          | 3849746           | 11044998           |
| Mining of gold ore .....                        | 4121204          | 670045            | 4791249            |
| Mining of copper ore.....                       | 86535375         | 10886419          | 97421794           |
| Mining of chromite .....                        | 1412043          | 385064            | 1797107            |
| Mining of manganese .....                       | 310240           | 89882             | 400122             |
| Mining of bauxite .....                         | 728782           | 117871            | 846653             |
| Mining of nickel, antimony and titanium.....    | 93094            | 10484             | 103578             |
| Mining of gravel and sand.....                  | 4690747          | 1983447           | 6674194            |
| Mining of decorative stones .....               | 10095197         | 2568717           | 12663914           |
| Mining of rubble stone .....                    | 1678928          | 687031            | 2365959            |
| Mining of ballast stone.....                    | 43638            | 19499             | 63137              |
| Mining of lime stone .....                      | 8956734          | 3891211           | 12847945           |
| Mining of gypsum.....                           | 1291348          | 389924            | 1681271            |
| Mining of kaolin, fireclay and .....            | 1268571          | 424427            | 1692998            |
| Mining of dolomite .....                        | 76158            | 38334             | 114493             |
| Mining of bentonite's and fuller's earth.....   | 123975           | 52103             | 176078             |
| Mining of barite .....                          | 282695           | 78053             | 360748             |
| Mining of strontium sulphate & boron.....       | 136951           | 28716             | 165667             |
| Mining of sodium sulphate .....                 | 64382            | 25994             | 90377              |
| Mining of limonite and ferrous oxide .....      | 4774             | 3809              | 8582               |
| Mining of fluorine.....                         | 501855           | 38116             | 539971             |
| Mining of phosphate, potash & iodine.....       | 1206033          | 218903            | 1424936            |
| Mining of salt .....                            | 358602           | 134510            | 493112             |
| Mining of bitumen .....                         | 59448            | 26624             | 86071              |
| Mining of silica .....                          | 686728           | 195908            | 882635             |
| Mining of ores slag .....                       | 178010           | 82686             | 260696             |
| Mining of feldspar.....                         | 265376           | 111264            | 376640             |
| Mining of talcum.....                           | 19242            | 15957             | 35199              |
| Mining of shell & mica. ....                    | 28754            | 10353             | 39107              |
| Mining of magnesite and whiting .....           | 225069           | 54861             | 279930             |
| Mining of precious and semi-precious stones.... | 125242           | 6430              | 131672             |

Source: Statistical Centre of Iran.



For data see Tables 6.1. & 6.5.



For data see Table 6.6.

**6.7. INVESTMENT (CHANGES IN THE VALUE OF NON-FINANCIAL ASSETS) IN  
OPERATING MINES BY TYPE OF CAPITAL PROPERTIES AND OSTAN (mln rials)**

| Year and Ostan               | Total investment | Machinery, durable tools and office equipment | Vehicles      | Building and installations (without land) | Private road  | Exploration and development | Computer software | Other         |
|------------------------------|------------------|-----------------------------------------------|---------------|-------------------------------------------|---------------|-----------------------------|-------------------|---------------|
| 1380.....                    | 667897           | 537418                                        | 40533         | 47788                                     | 26187         | 10327                       | 1204              | 4439          |
| 1385.....                    | 1737226          | 1328153                                       | 87357         | 99032                                     | 42720         | 174966                      | -620              | 5618          |
| 1390.....                    | 6149346          | 2957585                                       | 251308        | 411553                                    | 124038        | 246425                      | 3112              | 2155326       |
| 1393.....                    | 19872751         | 10241005                                      | 345517        | 1092013                                   | 213925        | 760531                      | 7477              | 7212285       |
| 1394.....                    | 29420549         | 16661997                                      | 1194231       | 2659318                                   | 439458        | 8357900                     | 4242              | 103403        |
| 1395.....                    | 20368200         | 14421854                                      | 330705        | 2680180                                   | 462252        | 430180                      | 9890              | 2033139       |
| 1396.....                    | 21694354         | 14752123                                      | 712361        | 1666213                                   | 306039        | 367186                      | 13041             | 3877391       |
| <b>1397.....</b>             | <b>19476266</b>  | <b>15106366</b>                               | <b>642904</b> | <b>2536207</b>                            | <b>237845</b> | <b>407219</b>               | <b>17268</b>      | <b>528457</b> |
| East Azarbayejan.....        | 1753424          | 1323176                                       | -482          | 421406                                    | 2476          | 9117                        | 1356              | -3626         |
| West Azarbayejan .....       | 479509           | 344488                                        | 9086          | 12946                                     | 10584         | 102337                      | 68                | 0             |
| Ardebil .....                | 19764            | 17605                                         | 491           | 741                                       | 928           | 0                           | 0                 | 0             |
| Esfahan.....                 | 788346           | 585138                                        | 61011         | 123230                                    | 17722         | 889                         | 354               | 0             |
| Alborz .....                 | 115605           | 84063                                         | 4020          | 22792                                     | 0             | 4730                        | 0                 | 0             |
| Ilam .....                   | 23120            | 16897                                         | 6223          | 0                                         | 0             | 0                           | 0                 | 0             |
| Bushehr .....                | 56730            | 45352                                         | 2545          | 550                                       | 7508          | 674                         | 101               | 0             |
| Tehran .....                 | 188448           | 153446                                        | 19754         | 10237                                     | 800           | 0                           | 1503              | 2708          |
| Chaharmahal&Bakhtiari        | 101872           | 90193                                         | 4113          | 395                                       | 5608          | 1557                        | 5                 | 0             |
| South Khorasan.....          | 293939           | 200260                                        | 30529         | 23730                                     | 12997         | 25101                       | 1219              | 102           |
| Khorasan-e-Razavi.....       | 426784           | 308760                                        | 62458         | 22953                                     | 7325          | 23150                       | 1100              | 1038          |
| North Khorasan.....          | 122804           | 110529                                        | 4525          | 4532                                      | 336           | 2881                        | 0                 | 0             |
| Khuzestan .....              | 696022           | 415700                                        | 30039         | 247918                                    | 2365          | 0                           | 0                 | 0             |
| Zanjan .....                 | 195146           | 103385                                        | 5623          | 39974                                     | 7090          | 6092                        | 56                | 32927         |
| Semnan .....                 | 276980           | 164129                                        | 46503         | 20212                                     | 25484         | 20465                       | 186               | 0             |
| Sistan&Baluchestan ....      | 208931           | 191846                                        | 14699         | 1187                                      | 1125          | 0                           | 73                | 0             |
| Fars .....                   | 1335595          | 1024709                                       | 85736         | 169440                                    | 47669         | 6093                        | 1948              | 0             |
| Qazvin .....                 | 176404           | 123695                                        | 6984          | 16393                                     | 24202         | 4985                        | 145               | 0             |
| Qom .....                    | 52162            | 19379                                         | 4946          | 15687                                     | 114           | 11919                       | 118               | 0             |
| Kordestan .....              | 484581           | 410271                                        | 13976         | 23778                                     | 13811         | 20100                       | 2445              | 200           |
| Kerman .....                 | 5429003          | 5254123                                       | 40697         | 124237                                    | 1215          | 4191                        | 4541              | 0             |
| Kermanshah .....             | 104223           | 93670                                         | 475           | 2085                                      | 7957          | 0                           | 37                | 0             |
| Kohgiluyeh& Boyerahmad ..... | 23732            | 17950                                         | 3481          | 2203                                      | 99            | 0                           | 0                 | 0             |
| Golestan .....               | 213152           | 141182                                        | 16314         | 14335                                     | 2275          | 38687                       | 0                 | 358           |
| Gilan .....                  | 30001            | 26434                                         | -40           | 2607                                      | 0             | 1000                        | 0                 | 0             |
| Lorestan .....               | 108166           | 104550                                        | 1738          | 1344                                      | 33            | 501                         | 0                 | 0             |
| Mazandaran .....             | 286549           | 208599                                        | 37348         | 8342                                      | 9528          | 22826                       | 0                 | -95           |
| Markazi .....                | 423396           | 289385                                        | 15598         | 44602                                     | 5223          | 67775                       | 514               | 298           |
| Hormozgan .....              | 134829           | 105370                                        | 10697         | 7794                                      | 5780          | 4867                        | 322               | 0             |
| Hamedan .....                | 196026           | 127950                                        | 1927          | 6289                                      | 4096          | 10                          | 0                 | 55755         |
| Yazd .....                   | 4731025          | 3004134                                       | 101889        | 1144266                                   | 13496         | 27271                       | 1177              | 438792        |

Source: Statistical Centre of Iran.

**6.8. INVESTMENT (CHANGES IN THE VALUE OF NON-FINANCIAL ASSETS) IN OPERATING MINES BY TYPE OF NON-FINANCIAL ASSETS AND TYPE OF ACTIVITY, THE YEAR 1397**  
(mln rials)

| Activity                                          | Total investment | Machinery, durable tools and office equipment | Vehicles      | Building and installations (without land) |
|---------------------------------------------------|------------------|-----------------------------------------------|---------------|-------------------------------------------|
| <b>Total mines .....</b>                          | <b>19476266</b>  | <b>15106366</b>                               | <b>642904</b> | <b>2536207</b>                            |
| Mining of hard coal .....                         | 290580           | 145652                                        | 38018         | 19334                                     |
| Mining of iron ore .....                          | 7529041          | 5579955                                       | 129566        | 1283345                                   |
| Mining of lead and zinc .....                     | 1072511          | 663161                                        | 58665         | 289844                                    |
| Mining of gold ore .....                          | 388496           | 192125                                        | -407          | 29173                                     |
| Mining of copper ore.....                         | 4626280          | 4132206                                       | 23555         | 451987                                    |
| Mining of chromite .....                          | 84551            | 65805                                         | 6084          | 5846                                      |
| Mining of manganese .....                         | 66114            | 29477                                         | 7368          | 15662                                     |
| Mining of bauxite .....                           | 70294            | 62164                                         | 2396          | 2960                                      |
| Mining of nickel, antimony and titanium.....      | 902              | 497                                           | 49            | 166                                       |
| Mining of gravel and sand .....                   | 776063           | 619711                                        | 78878         | 53602                                     |
| Mining of decorative stones....                   | 1366664          | 1215921                                       | 65289         | 32871                                     |
| Mining of rubble stone .....                      | 337024           | 264719                                        | 23520         | 15489                                     |
| Mining of ballast stone.....                      | 8641             | 7067                                          | 524           | 0                                         |
| Mining of lime stone .....                        | 2028282          | 1550903                                       | 108372        | 295246                                    |
| Mining of gypsum.....                             | 149006           | 124259                                        | 12600         | 5043                                      |
| Mining of kaolin, fireclay, and                   | 148754           | 95515                                         | 6404          | 12756                                     |
| Mining of dolomite .....                          | 61243            | 16133                                         | 42231         | 0                                         |
| Mining of bentonite's and fuller's earth .....    | 26420            | 21313                                         | 1125          | 2396                                      |
| Mining of barite .....                            | 39499            | 29875                                         | 1076          | 1528                                      |
| Mining of strontium sulphate...                   | 15538            | 7909                                          | 1757          | 1601                                      |
| Mining of sodium sulphate.....                    | 10986            | 6686                                          | 3832          | 150                                       |
| Mining of limonite and ferrous oxide.....         | 5134             | 4562                                          | 10            | 562                                       |
| Mining of fluorine .....                          | 17228            | 6708                                          | 4729          | 198                                       |
| Mining of phosphate, potash & iodine.....         | 89745            | 49822                                         | 1372          | 7558                                      |
| Mining of salt .....                              | 41617            | 17918                                         | 13764         | 6431                                      |
| Mining of bitumen .....                           | 32483            | 32120                                         | 115           | 146                                       |
| Mining of silica .....                            | 82645            | 63141                                         | 6236          | 3647                                      |
| Mining of ores slag .....                         | 44556            | 39768                                         | 1666          | 568                                       |
| Mining of feldspar.....                           | 48464            | 41312                                         | 6765          | -1939                                     |
| Mining of talcum.....                             | 4715             | 4655                                          | 30            | 0                                         |
| Mining of shell & mica .....                      | 3023             | 2338                                          | 635           | 0                                         |
| Mining of magnesite and whiting .....             | 6157             | 9359                                          | -3318         | 37                                        |
| Mining of precious and semi-precious stones ..... | 3611             | 3611                                          | 0             | 0                                         |

**6.8. INVESTMENT (CHANGES IN THE VALUE OF NON-FINANCIAL ASSETS) IN OPERATING MINES BY TYPE OF NON-FINANCIAL ASSETS AND TYPE OF ACTIVITY, THE YEAR 1397**  
**(continued)** **(mln rials)**

| Activity                                          | Private road  | Exploration and development | Computer software | Other         |
|---------------------------------------------------|---------------|-----------------------------|-------------------|---------------|
| <b>Total mines .....</b>                          | <b>237845</b> | <b>407219</b>               | <b>17268</b>      | <b>528457</b> |
| Mining of hard coal .....                         | 25370         | 61066                       | 1141              | 0             |
| Mining of iron ore .....                          | 21148         | 21478                       | 6198              | 487351        |
| Mining of lead and zinc .....                     | 9581          | 11345                       | 914               | 39000         |
| Mining of gold ore .....                          | 288           | 165441                      | 1856              | 20            |
| Mining of copper ore .....                        | 2173          | 15632                       | 428               | 298           |
| Mining of chromite .....                          | 1171          | 5568                        | 38                | 39            |
| Mining of manganese .....                         | 405           | 13069                       | 133               | 0             |
| Mining of bauxite .....                           | 1208          | 1390                        | 120               | 56            |
| Mining of nickel, antimony .....                  | 120           | 0                           | 70                | 0             |
| Mining of gravel and sand .....                   | 17417         | 2115                        | 1571              | 2770          |
| Mining of decorative stones .....                 | 32391         | 19830                       | 285               | 77            |
| Mining of rubble stone .....                      | 23711         | 8182                        | 828               | 575           |
| Mining of ballast stone .....                     | 1050          | 0                           | 0                 | 0             |
| Mining of lime stone .....                        | 57105         | 16503                       | 3027              | -2876         |
| Mining of gypsum .....                            | 3582          | 3375                        | 127               | 20            |
| Mining of kaolin, fireclay, and .....             | 16013         | 16908                       | 259               | 900           |
| Mining of dolomite .....                          | 2062          | 800                         | 18                | 0             |
| Mining of bentonite's and fuller's earth .....    | 1443          | 116                         | 0                 | 26            |
| Mining of barite .....                            | 4821          | 2200                        | 0                 | 0             |
| Mining of strontium .....                         | 2309          | 1950                        | 12                | 0             |
| Mining of sodium sulphate .....                   | 148           | 0                           | 170               | 0             |
| Mining of limonite and ferrous oxide .....        | 0             | 0                           | 0                 | 0             |
| Mining of fluorine .....                          | 434           | 5160                        | 0                 | 0             |
| Mining of phosphate, potash & iodine .....        | 550           | 30439                       | 3                 | 0             |
| Mining of salt .....                              | 3267          | 235                         | 3                 | 0             |
| Mining of bitumen .....                           | 102           | 0                           | 0                 | 0             |
| Mining of silica .....                            | 7549          | 1869                        | 4                 | 200           |
| Mining of ores slag .....                         | 554           | 2000                        | 0                 | 0             |
| Mining of feldspar .....                          | 1807          | 514                         | 5                 | 0             |
| Mining of talcum .....                            | 30            | 0                           | 0                 | 0             |
| Mining of shell & mica .....                      | 0             | 0                           | 50                | 0             |
| Mining of magnesite and whiting .....             | 38            | 33                          | 10                | 0             |
| Mining of precious and semi-precious stones ..... | 0             | 0                           | 0                 | 0             |

Source: Statistical Centre of Iran.

### 6.9. GENERAL CHARACTERISTICS OF MINES COOPERATIVES AT THE END OF THE YEAR BY OSTAN

| Description                                         | Number             | Members             | Workers             | Capital<br>(mln rials) |
|-----------------------------------------------------|--------------------|---------------------|---------------------|------------------------|
| <b><i>Registered cooperatives<sup>(1)</sup></i></b> |                    |                     |                     |                        |
| The year 1380.....                                  | 1691               | 21373               | 12146               | 106325                 |
| The year 1385.....                                  | 2303               | 32970               | 19000               | 206103                 |
| The year 1390 .....                                 | 2413               | 35997               | 21180               | 185112                 |
| The year 1394.....                                  | 2750               | 80001               | 26543               | 1543797                |
| The year 1395.....                                  | 2807               | 74112               | 26838               | 710217                 |
| The year 1396.....                                  | 2840               | 75944               | 26880               | 762086                 |
| The year 1397.....                                  | 2872               | 77957               | 32394               | 1133238                |
| <b><i>The year 1398 .....</i></b>                   | <b><i>2900</i></b> | <b><i>78178</i></b> | <b><i>26810</i></b> | <b><i>1166914</i></b>  |
| <b><i>Cooperatives under establishment</i></b>      |                    |                     |                     |                        |
| The year 1380.....                                  | 56                 | 972                 | 342                 | 3502                   |
| The year 1385.....                                  | 137                | 2277                | 1251                | 20253                  |
| The year 1390 .....                                 | 252                | 5359                | 3514                | 9087                   |
| The year 1394.....                                  | 263                | 2793                | 4928                | 72092                  |
| The year 1395.....                                  | 270                | 2870                | 4868                | 82033                  |
| The year 1396.....                                  | 270                | 3273                | 4521                | 61548                  |
| The year 1397.....                                  | 280                | 4119                | 9579                | 70253                  |
| <b><i>The year 1398 .....</i></b>                   | <b><i>292</i></b>  | <b><i>4220</i></b>  | <b><i>3789</i></b>  | <b><i>80599</i></b>    |
| <b><i>Cooperatives in operation</i></b>             |                    |                     |                     |                        |
| The year 1380.....                                  | 841                | 12029               | 7555                | 77835                  |
| The year 1385.....                                  | 966                | 16074               | 9045                | 112456                 |
| The year 1390 .....                                 | 896                | 46355               | 8961                | 118580                 |
| The year 1394.....                                  | 956                | 57566               | 10894               | 1395813                |
| The year 1395.....                                  | 950                | 51133               | 10507               | 555342                 |
| The year 1396.....                                  | 916                | 50447               | 10318               | 595533                 |
| The year 1397.....                                  | 924                | 51954               | 10484               | 957068                 |
| <b><i>The year 1398 .....</i></b>                   | <b><i>938</i></b>  | <b><i>51619</i></b> | <b><i>10598</i></b> | <b><i>979346</i></b>   |

### 6.9. GENERAL CHARACTERISTICS OF MINES COOPERATIVES AT THE END OF THE YEAR BY OSTAN (continued)

| Description                   | Number | Members | Workers | Capital<br>(mln rials) |
|-------------------------------|--------|---------|---------|------------------------|
| East Azarbayejan .....        | 36     | 372     | 403     | 3387                   |
| West Azarbayejan .....        | 11     | 111     | 123     | 8083                   |
| Ardebil .....                 | 10     | 97      | 91      | 1189                   |
| Esfahan .....                 | 55     | 478     | 451     | 35352                  |
| Alborz .....                  | 3      | 626     | 17      | 715                    |
| Ilam .....                    | 2      | 14      | 8       | 1901                   |
| Bushehr .....                 | 35     | 258     | 354     | 13529                  |
| Tehran .....                  | 66     | 1259    | 1012    | 57050                  |
| Chaharmahal & Bakhtiari ..... | 5      | 35      | 36      | 123                    |
| South Khorasan .....          | 20     | 703     | 378     | 2463                   |
| Khorasan-e-Razavi .....       | 189    | 4017    | 1952    | 178318                 |
| North Khorasan .....          | 8      | 210     | 81      | 69                     |
| Khuzestan .....               | 10     | 84      | 87      | 2128                   |
| Zanjan .....                  | 12     | 350     | 239     | 141565                 |
| Semnan .....                  | 36     | 392     | 504     | 63407                  |
| Sistan & Bluchestan .....     | 5      | 36      | 32      | 88                     |
| Fars .....                    | 36     | 36633   | 718     | 330739                 |
| Qazvin .....                  | 12     | 101     | 147     | 45974                  |
| Qom .....                     | 28     | 241     | 247     | 6769                   |
| Kordestan .....               | 15     | 1405    | 423     | 1542                   |
| Kerman .....                  | 62     | 556     | 649     | 6157                   |
| Kermanshah .....              | 20     | 142     | 167     | 185                    |
| Kohgiluyeh & Boyerahmad ..... | 6      | 49      | 50      | 8555                   |
| Golestan .....                | 9      | 78      | 69      | 455                    |
| Gilan .....                   | 11     | 86      | 112     | 2885                   |
| Lorestan .....                | 95     | 914     | 773     | 6472                   |
| Mazandaran .....              | 49     | 1610    | 621     | 50336                  |
| Markazi .....                 | 41     | 352     | 426     | 5834                   |
| Hormozgan .....               | 24     | 183     | 234     | 1053                   |
| Hamedan .....                 | 6      | 43      | 53      | 83                     |
| Yazd .....                    | 21     | 184     | 141     | 2940                   |

1. Including cooperatives in operation, out of operation and under establishment.

Source: Ministry of Cooperatives, Labor and Social Welfare.