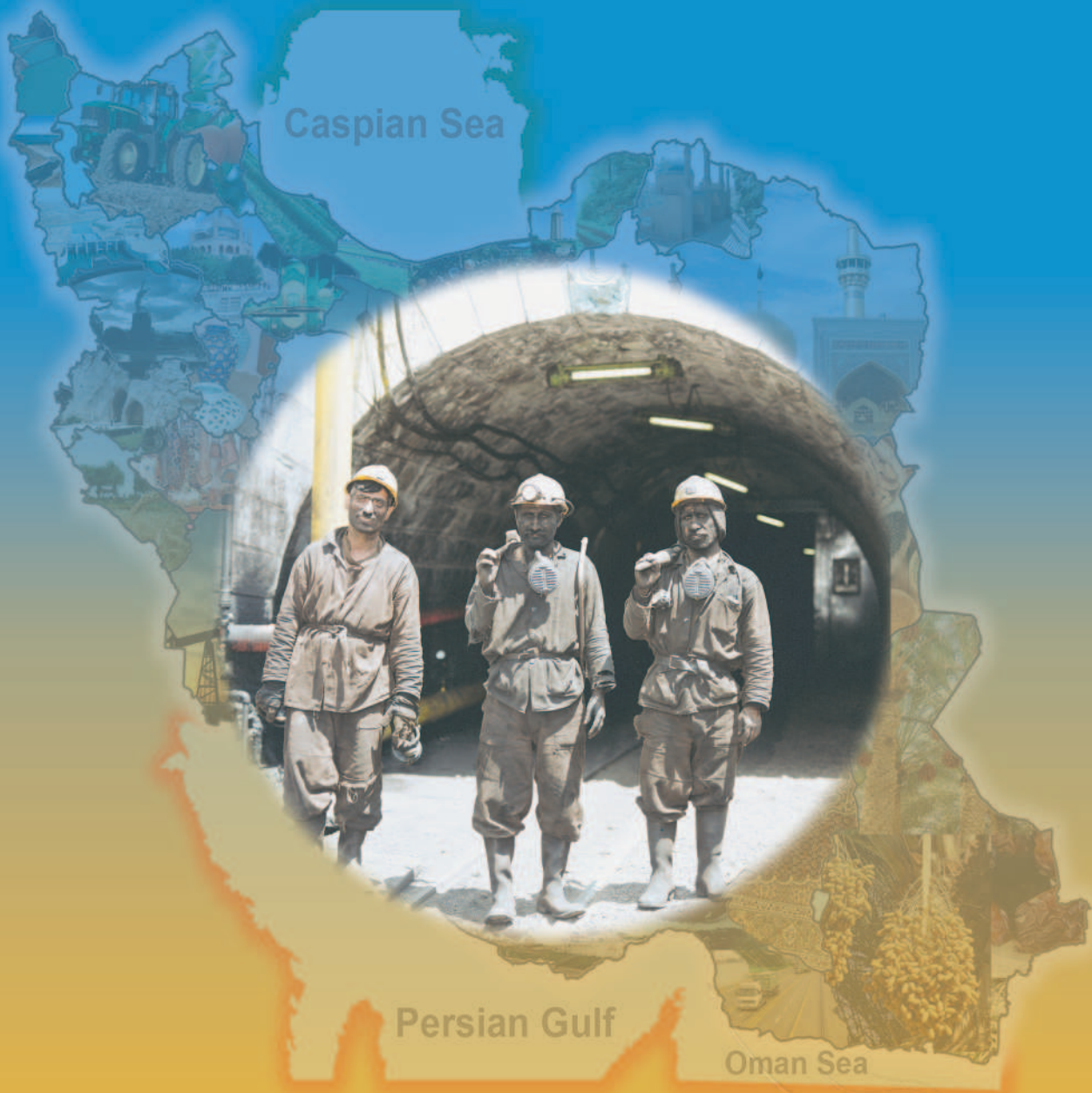


# Mining and Quarrying

5





**S**urvey of mines-related activities and continuous dissemination of its results began by the then Ministry of Industries and Mines in 1333. Related statistics were published annually in the attachment of the publication "Statistics on Manufacturing Activities" until 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 Azar 1342 by the Ministry of Economy. Statistical Bureau of the Ministry of Economy gathered and published statistics on mines-related activities annually from 1342 to 1353, using statistics from nationwide mines registers and records. The second census of authorized mines of the country was conducted by the cooperation of the SCI and the Ministry of Industries and Mines in 1353. The SCI conducted a survey of a selected number of mines annually from 1353 to 1357. This economic sector suffered from a lack of statistics during the years 1357 to 1363, because in the interim no statistical surveys were implemented nor comprehensive registers were available. The SCI conducted a survey of mines covered by the public sector in 1364 and 1365, and also carried out the third census of mines of the country in 1366. Survey of mines has been conducted every year from 1367 to 1385 except for 1370 and 1384.

The data presented in this chapter are from the aforementioned censuses and surveys as well as data from the mines sector cooperatives reported by the Ministry of Cooperatives.

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 6.

(2) in the survey of operating mines, sand and gravel mines are enumerated by a sample survey, and other mines by a census. (3) the ISIC Rev.3 is followed with appropriate modifications for the classification of activities in this sector.

#### *Definitions and concepts*

**Mine:** collection of (cost-effective) mineral deposits, machinery, and facilities established for exploration, equipment, exploitation, and dressing of minerals. Dressing refers to all physical and chemical operations for separating some of waste materials from ores or separating ores from one another.

**Operating mine:** any mine with exploitation license from the Ministry of Industries and Mines (for mines other than sand and gravel) or from municipalities and governors offices (for sand and gravel) that has been under extraction (in some cases with dressing activities) for at least 30 successive or non successive days to produce marketable ores during the year of the enumeration.

**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 production line due to their know-how and experience. Engineers, technicians, craftsmen, foremen, skilled

labourers, fitters, and drivers, are some examples.

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

**Other workers (administrative, financial and service):** employed persons engaged in clerical, administrative, financial and service activities in mines or their central offices but not engaged directly in extraction and production activities.

In 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:** see Chapter 4, Definitions and concepts.

**Mineral production:** all minerals obtained from a series of extraction activities which 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 industry, several minerals may be produced. For example, copper ore mining activity includes minerals of copper ore and copper and molybdenum concentrates production.

**Value of products:** value of extracted ores and value of saleable mineral waste products at producer's prices; that is, the price of sale to customers at the mine.

**Capital formation (changes in the value of capital goods):** see Chapter 4, Definitions and concepts.

**Value added:** value of receipts (outputs) less the value of payments (inputs).

**Value of receipts (outputs):** value of mineral products, value of saleable mineral waste

products, manufacture and major repairs of capital goods by mine workers and other receipts of the mine including receipts from contracts, minor repairs of buildings and office equipment, minor repairs of machinery, laboratory, etc.

**Value of payments (inputs):** value of purchased materials and non-durable tools and instruments, fuel consumed, water and electricity, and other payments including payments on contracts, minor repairs of building and office equipment, minor repairs of machinery, laboratory, etc.

**Cooperative:** see Chapter 4, Definitions and concepts.

**Mines cooperative:** a cooperative company engaged in excavation, exploitation, and sales of minerals obtained from operating mines

#### **Selected information**

On the basis of the results of the survey of operating mines of the country in 1388, there were 4426 operating mines. The results show that a total of 76854 persons were working in these mines and the number of workers increased by 1.9 percent in contrast to the year 1387.

In the same year, the value of mines products amounted to 35586 billion rials. Iron ore, copper ore and decorative stones with 11125, 9168 and 4170 bln rials had the highest annual production value respectively.

In 1388, the value added of the nation's operating mine amounted to 26663 bln rials. Copper ore, Iron ore and decorative stones with 7858, 6700 and 3586 bln rials had the highest value added, respectively. These three accounted for about 68% of the sector's total value added.

Moreover, Kerman, Yazd and Fars with 9406, 5137 and 1460 bln rials had the highest value added among the provinces of the country.

In the year 1388, out of the total 3302 bln rials of fresh investments, over 77% relates to machinery, durable tools and administrative equipment and 6.4% goes to the development and discovery.

### 5. 1. NUMBER OF MINES, WORKERS, COMPENSATION OF EMPLOYEES AND VALUE OF PRODUCTION IN OPERATING MINES<sup>(1)</sup> BY OSTAN (mln rials)

Year and Ostan	Number of mines			Number of workers				Compensation of employees	Value of production <sup>(3)</sup>
	Total	Type of management		Total <sup>(2)</sup>	Production line		Other (administrative, financial and service)		
		Private	Public		Skilled	Unskilled			
1370 .....	1920	1393	527	50322	30170	13047	7106	99682	424870
1375 .....	2704	2137	567	53046	23259	16372	13415	480155	1941600
1380.....	2892	2548	344	55560	28013	14939	12608	899382	5675787
1384.....	3324	2996	327	54854	27117	16825	10912	1752762	16770253
1385.....	3582	3301	281	60062	31107	16146	12810	2307840	22642408
1386.....	3799	3550	247	66250	35375	18010	12867	3325650	30647053
1387.....	4116	3870	246	75458	40031	21146	14281	4348255	35567776
<b>1388.....</b>	<b>4426</b>	<b>4181</b>	<b>245</b>	<b>76854</b>	<b>41229</b>	<b>19297</b>	<b>16328</b>	<b>5518477</b>	<b>35586170</b>
East Azarbayejan....	203	190	13	2482	1368	413	701	119366	1621459
West Azarbayejan ..	314	287	27	2719	1431	574	714	103739	656134
Ardebil .....	86	86	0	575	294	69	212	22100	101104
Esfahan .....	340	323	17	6517	3784	1047	1686	455457	1985110
Ilam.....	45	37	8	493	247	118	128	31205	113710
Bushehr.....	175	163	12	1770	842	468	460	84803	277162
Tehran.....	204	202	2	4372	2281	1062	1029	252799	1080118
Chaharmahal & Bakhtiyari .....	75	67	8	448	277	52	119	21521	173414
South Khorasan .....	141	138	3	1878	967	660	251	100000	465526
Khorasan-e-Razavi..	354	339	15	3685	1890	895	900	175130	902404
North Khorasan.....	78	67	11	777	387	264	126	33976	213207
Khuzestan .....	115	111	4	1476	713	406	357	82615	507136
Zanjan .....	103	101	2	1101	710	196	195	61559	454441
Semnan.....	248	238	10	4000	2024	1424	552	204916	677547
Sistan & Baluchestan .....	67	65	2	1133	573	369	191	54047	410484
Fars .....	232	221	11	4420	2759	877	784	194581	1610797
Qazvin .....	147	145	2	957	536	272	149	32836	136357
Qom .....	72	71	1	920	587	143	190	38517	198382
Kordestan .....	127	123	4	710	457	76	177	35497	183284
Kerman .....	150	136	14	10739	5893	2154	2692	1369275	12484279
Kermanshah .....	98	95	3	824	409	275	140	48574	182116
Kohgiluyeh & Boyerahmad .....	76	60	16	563	321	130	112	37154	304885
Golestan .....	86	75	11	2181	1235	694	252	130903	325432
Gilan .....	46	38	8	1409	487	677	245	122908	219489
Lorestan.....	128	124	4	1356	584	362	410	67199	401793
Mazandaran.....	83	75	8	2580	1373	740	467	141285	380714
Markazi .....	195	184	11	2448	1502	431	515	128644	1106494
Hormozgan .....	79	77	2	1666	794	635	237	83866	378868
Hamedan .....	145	142	3	997	442	267	288	37808	247966
Yazd .....	215	202	13	11658	6060	3547	2051	1246198	7786359

1. Statistics for sand and gravel mines obtained from sample surveys were generalized to the total country and caused some differences between the total and sum of parts in some cases.

2. Excluding the employed of mines whose extraction activities were entrusted to others under a contract.

3. Including the value of mineral and other products as of 1375.

Source: Statistical Centre of Iran.

**5. 2. NUMBER OF MINES, WORKERS, COMPENSATION OF EMPLOYEES AND VALUE OF PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY, 1388 ( mln rials )**

Activity	Number of mines			Number of workers			Compensation of employees	Value of production	
	Total	Type of management		Total	Production line				
		Private	Public		Skilled	Unskilled			
<b>Total .....</b>	<b>4426</b>	<b>4181</b>	<b>245</b>	<b>76854</b>	<b>41229</b>	<b>19297</b>	<b>16328</b>	<b>5518477</b>	<b>35586170</b>
Mining of coal .....	110	96	14	12452	5750	4389	2313	844213	1649041
Mining of iron ore .....	64	56	8	9322	5094	2495	1733	1173346	11125450
Mining of lead and zinc .....	18	16	2	1416	886	233	297	139992	735735
Mining of gold ore .....	6	4	2	391	233	106	52	25202	219709
Mining of copper ore.....	16	14	2	4341	2593	563	1185	840156	9167938
Mining of chromite .....	29	28	1	1483	934	291	258	126285	395224
Mining of manganese....	12	12	0	515	376	40	99	25092	122647
Mining of bauxite.....	9	7	2	316	210	69	37	12567	107891
Mining of cobalt.....	2	0	2	98	54	35	9	1440	6184
Mining of gravel and sand ..	1392	1263	129	15089	7745	3492	3852	730305	2783149
Mining of decorative stones .....	758	752	6	11932	6773	2708	2451	649385	4169838
Mining of rubble stone..	582	566	16	4202	2187	1070	945	157718	954698
Mining of ballast .....	7	4	3	121	62	39	20	6847	65214
Mining of lime stone ....	527	486	41	7171	4375	1439	1357	413853	2305669
Mining of gypsum .....	243	240	3	2032	1100	503	429	83362	412816
Mining of kaolin and fireclay .....	173	172	1	1590	698	584	308	77917	288648
Mining of dolomite .....	25	25	0	225	96	63	66	10029	65697
Mining of bentonite's and fuller's earth .....	35	35	0	196	91	62	43	8279	45474
Mining of magnesite and whiting .....	12	12	0	189	84	83	22	10102	52238
Mining of sodium sulphate ..	15	14	1	145	55	72	18	6425	62821
Mining of barite .....	63	62	1	493	249	134	110	19751	86653
Mining of fluorine.....	18	18	0	265	130	105	30	14796	94959
Mining of strontium sulphate & boron.....	2	2	0	16	7	6	3	551	1937
Mining of orpiment phosphate & iodine .....	4	2	2	281	124	93	64	23736	78127
Mining of salt .....	76	72	4	847	443	228	176	35737	212121
Mining of silica .....	87	85	2	765	399	186	180	41103	216142
Mining of ores slag .....	64	63	1	385	217	39	129	15870	69320
Mining of feldspar.....	55	55	0	339	175	79	85	13449	50997
Mining of talcum.....	9	9	0	49	31	9	9	2190	7349
Mining of shell & mica .	7	6	1	67	27	24	16	2365	18220
Other precious and semi-precious stones.....	4	4	0	119	32	58	29	6414	14264

Source: Statistical Centre of Iran.

**5. 3. QUANTITY OF MINERALS PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY**
**(1000 tons)**

Activity	1370	1375	1380	1384	1385	1386	1387	1388
Total.....	48710	66961	92649	116810	138334	160920	178905	203328
	<sup>(1)</sup> 47091	<sup>(1)</sup> 55428	<sup>(1)</sup> 47775	<sup>(1)</sup> 57333	<sup>(1)</sup> 77394	<sup>(1)</sup> 70260	<sup>(1)</sup> 70708	<sup>(1)</sup> 73691
Mining of coal .....	896	1211	1380	1899	2413	2565	2636	2181
Mining of iron ore .....	3888	5236	11441	20145	20648	24738	28474	27617
Mining of lead and zinc	110	322	579	991	1072	677	571	626
Mining of gold ore .....	<sup>(2)</sup> 000	152	352	571	742	803	668	1256
Mining of copper ore.....	<sup>(2)</sup> 307	370	453	553	790	852	1115	1031
Mining of chromite .....	136	322	174	234	269	139	269	275
Mining of manganese .....	57	83	140	115	94	103	116	126
Mining of bauxite .....	37	230	65	1341	1395	1257	715	522
Mining of cobalt.....	0	0	0	0	0	0	<sup>(3)</sup> 4	<sup>(3)</sup> 4
Mining of antimony .....	×	×	0	0	0	1	⊙	⊙
Mining of titanium.....	×	×	×	×	4	4	⊙	⊙
Mining of gravel and sand <sup>(1)</sup> .	46647	53869	46147	56484	76102	68488	68708	71321
Mining of decorative stones	4630	6120	10325	9396	9908	11143	13104	13839
	<sup>(3)</sup> 2545							
Mining of rubble stone .....		7683	9359	11688	16441	21373	16265	20456
	<sup>(1,3)</sup> 162							
Mining of ballast <sup>(1)</sup> .....	<sup>(4)</sup> 000	959	802	73	394	788	686	626
Mining of lime stone .....	24166	31961	43498	50160	62959	72768	89926	107373
Mining of gypsum .....	8839	7696	8347	11145	11878	13379	12566	13616
Mining of kaolin and fireclay	593	1437	1660	1842	2716	2655	4685	4326
Mining of dolomite .....	142	219	281	403	514	698	696	1132
Mining of bentonite and fullers's earth .....	63	85	175	261	186	254	376	387
Mining of magnesite and whiting .....	24	111	115	95	189	112	116	131
Mining of sodium sulphate ...	143	464	369	728	280	633	738	679
Mining of barite ... ..	71	159	238	231	226	245	<sup>(5)</sup> 227	365
Mining of Limonite and ferrous oxide .....	5	28	76	3	//	2	⊙	⊙
Mining of fluorine .....	83	19	34	68	63	73	66	71

### 5.3. QUANTITY OF MINERALS PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVIT (continued) (1000 tons)

Activity	1370	1375	1380	1384	1385	1386	1387	1388
Mining of strontium sulphate	45	8	0	0	17	0	<sup>(6)</sup> 22	<sup>(6)</sup> 16
Mining of boron .....	1	3	3	2	2	2	⊙	⊙
Mining of orpiment .....	//	//	//	0	//	0	<sup>(7)</sup> 62	<sup>(7)</sup> 61
Mining of alum.....	×	×	1	0	0	0	×	×
Mining of phosphate. ....	×	10	33	324	67	53	⊙	⊙
Mining of salt.....	1066	1411	1538	2032	2618	2755	2301	2816
Mining of silica .....	715	1244	1687	2103	2252	2909	2508	3643
Mining of ores slag <sup>(1)</sup> .....	282	600	826	775	898	983	1314	1743
Mining of feldspar.....	51	122	157	291	418	524	505	637
Mining of talcum.....	15	27	66	71	69	91	90	67
Mining of asbestos .....	3	2	4	1	0	0	×	×
Mining of shell.....	79	219	96	118	99	110	<sup>(8)</sup> 83	<sup>(8)</sup> 70
Mining of mica.....	1	5	5	1	2	2	⊙	⊙
Mining of turquoise.....	//	//	//	//	//	0	⊙	⊙
Mining of opal.....	×	×	×	//	//	0	⊙	⊙
Other precious and semi- precious stones .....	×	×	×	×	×	1	<sup>(9)</sup> 2	<sup>(9)</sup> 4

1. In thousand cubic metres.

2. Data for production of gold ore in 1370 are included with copper ore.

3. Including antimony and titanium production value.

4. Value of production of ballast for 1370 is included with rubble stone.

5. Including production value of limonite and ferrous oxide.

6. Including production value of boron.

7. Including production value of phosphate and iodine.

8. Including production value of mica.

9. Including production value of opal and turquoise.

Source: Statistical Centre of Iran.



**5. 4. VALUE OF MINERALS PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY**  
**(mln rials)**

Activity	1370	1375	1380	1384	1385	1386	1387	1388
<b>Total .....</b>	<b>424870</b>	<b>1941600</b>	<b>5675787</b>	<b>16770254</b>	<b>22642408</b>	<b>30647053</b>	<b>35567776</b>	<b>35586170</b>
Mining of coal .....	78243	357943	570566	797109	1077642	1427715	1937905	1649041
Mining of iron ore .....	19237	231205	947000	4769516	5483754	9576836	12942090	11125450
Mining of lead and zinc .....	17866	92546	195458	518345	1855364	1784373	629212	735735
Mining of gold ore .....	<sup>(1)</sup> 000	3042	9415	107975	113156	195740	167949	219709
Mining of copper ore .....	<sup>(1)</sup> 73698	269038	1145592	5373778	7500248	8449079	8639421	9167938
Mining of chromite .....	8460	80024	70388	159703	297223	244018	407529	395224
Mining of manganese .....	1047	9344	31023	41837	51383	84811	129941	122647
Mining of bauxite .....	754	13194	4253	129978	153928	127506	137812	107891
Mining of cobalt .....	0	0	0	0	0	0	<sup>(2)</sup> 6309	<sup>(2)</sup> 6184
Mining of antimony .....	×	×	0	0	0	5250	⊙	⊙
Mining of titanium .....	×	×	×	×	4800	4960	⊙	⊙
Mining of gravel and sand .....	78693	277148	543928	1185339	1548204	2147538	2393425	2783149
Mining of decorative stones .....	76266	238796	1013763	1519369	1916393	3050306	3847756	4169838
Mining of rubble stone .....	<sup>(3)</sup> 5258	57910	309179	411118	487803	737096	634662	954698
Mining of ballast .....	<sup>(3)</sup> 000	8457	17147	1698	19448	45283	46507	65214
Mining of lime stone .....	28229	124664	363066	919513	1079502	1516897	2023836	2305669
Mining of gypsum .....	11543	37036	87085	221087	236511	277459	336973	412816
Mining of kaolin and fireclay .....	10022	36169	98729	111128	236033	201866	395615	288648
Mining of dolomite .....	772	6493	14337	25178	29395	52929	43748	65697
Mining of bentonite and fuller's earth .....	243	1490	7123	14451	12382	19321	31837	45474
Mining of magnesite and whiting .....	400	10716	21069	20731	46722	32098	38143	52238
Mining of sodium sulphate .....	438	7729	7622	18570	14306	46499	67828	62821
Mining of barite .....	1497	8351	24215	49623	39997	66128	<sup>(4)</sup> 69023	<sup>(4)</sup> 86653
Mining of limonite and ferrous oxide .....	836	2317	6181	477	41	500	⊙	⊙
Mining of fluorine .....	919	4448	11118	25305	53959	58485	56526	94959
Mining of strontium sulphate .....	1724	380	0	0	1932	0	<sup>(5)</sup> 7552	<sup>(5)</sup> 1937
Mining of boron .....	38	2235	2312	2841	3328	3180	⊙	⊙
Mining of orpiment .....	313	144	879	0	180	560	<sup>(6)</sup> 116851	<sup>(6)</sup> 78127

#### 5. 4. VALUE OF MINERALS PRODUCTION IN OPERATING MINES BY TYPE OF ACTIVITY (mln rials)

Activity	1370	1375	1380	1384	1385	1386	1387	1388
Mining of alum .....	×	×	144	0	0	0	×	×
Mining of phosphate .....	×	600	39484	114766	31018	25153	⊙	⊙
Mining of salt .....	3220	26390	38076	69571	109273	159849	134040	212121
Mining of silica .....	2059	18314	49152	87355	148891	189067	177793	216142
Mining of ores slag .....	970	3672	10147	22468	24926	37928	70668	69320
Mining of feldspar .....	393	3158	9474	19248	32814	35761	36936	50997
Mining of talcum .....	222	1635	11491	5304	6959	8671	6639	7349
Mining of asbestos .....	685	1978	3450	2990	0	0	×	×
Mining of shell .....	654	3415	7674	17340	12786	18570	<sup>(7)</sup> 21049	<sup>(7)</sup> 18220
Mining of mica .....	89	1294	4293	1752	4405	5152	⊙	⊙
Mining of turquoise .....	80	325	954	4756	7625	10000	⊙	⊙
Mining of opal .....	×	×	×	32	78	0	⊙	⊙
Other precious and semi-precious stones.....	×	×	×	×	×	470	<sup>(8)</sup> 12200	<sup>(8)</sup> 14264

1. Value of production of gold ore for 1370 is included with copper ore.

2. Including antimony and titanium production value.

3. Value of production of ballast for 1370 is included with rubble stone.

4. Including production value of limonite and ferrous oxide.

5. Including production value of boron.

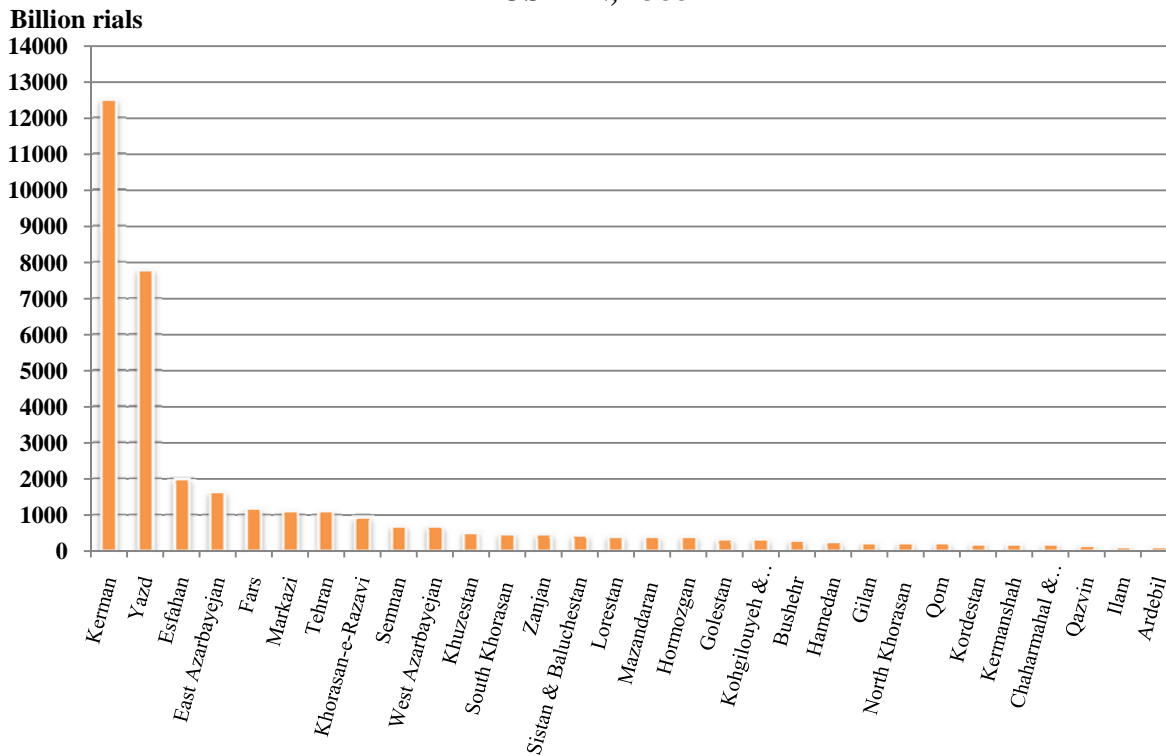
6. Including production value of phosphate and iodine.

7. Including production value of mica.

8. Including production value of opal and turquoise.

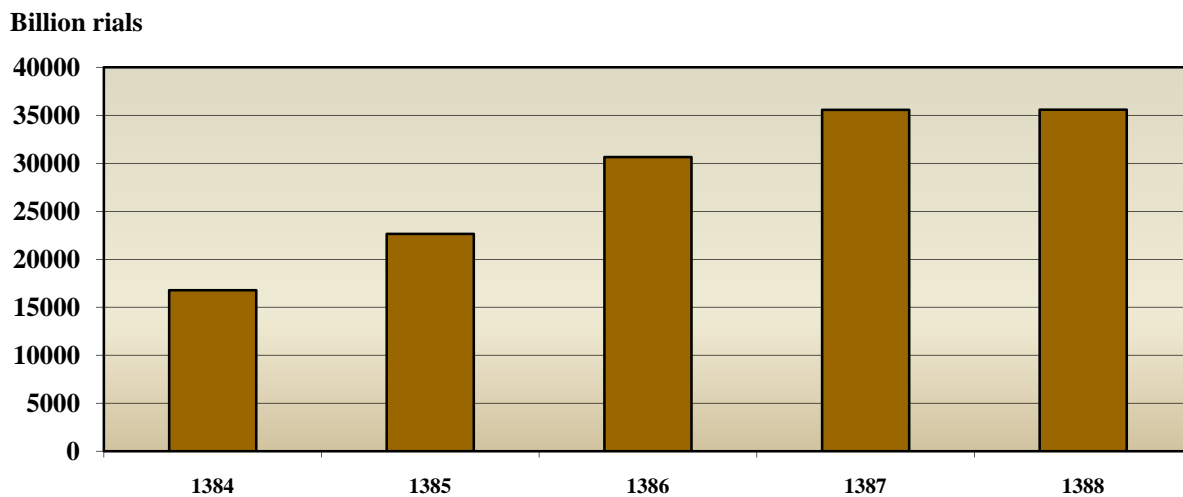
Source: Statistical Centre of Iran.

### 5. 1. VALUE OF MINERAL PRODUCTS OF OPERATING MINES BY OSTAN, 1388



For data see Table 5. 1.

### 5. 2. VALUE OF MINERAL PRODUCTION IN OPERATING MINES



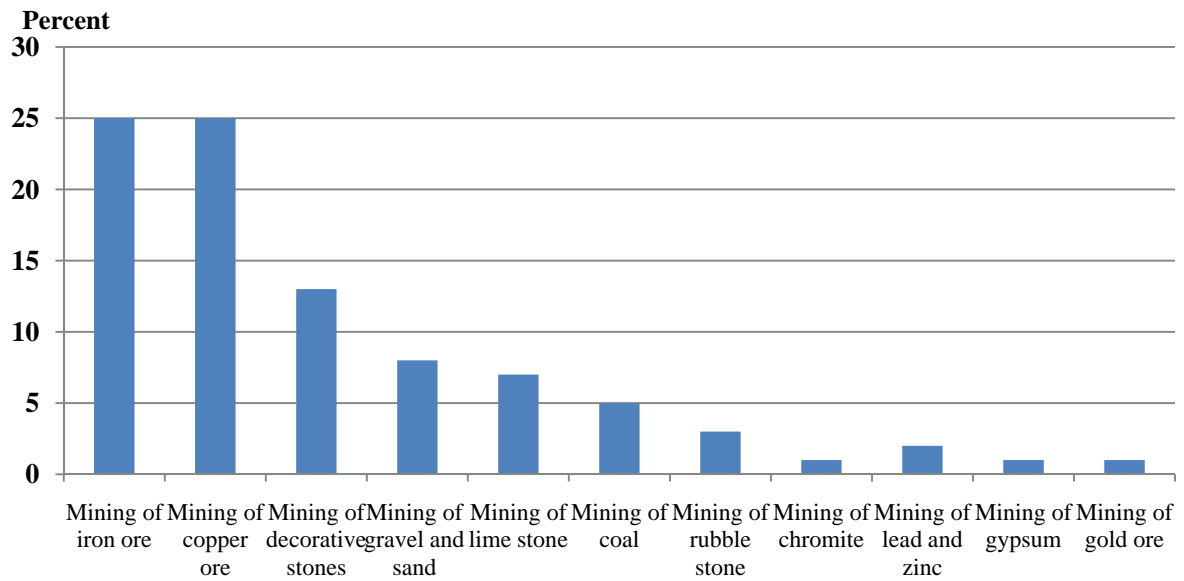
For data see Table 5. 4.

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

Year and Ostan	Value added	Payments (inputs)	Receipts (outputs)
1370 .....	364632	85024	449656
1375.....	1421533	621369	2042902
1380.....	4618050	1254791	5872841
1384.....	13502602	3615807	17145407
1385.....	16666060	6345035	23011095
1386.....	23732721	7597911	31330632
1387.....	27754400	8632025	36386424
<b>1388.....</b>	<b>26662764</b>	<b>9926427</b>	<b>36589191</b>
East Azerbayejan.....	1317709	311128	1628837
West Azarbayejan .....	609767	63868	673636
Ardebil .....	83104	24166	107270
Esfahan .....	1436031	643084	2079114
Ilam.....	89384	31679	121064
Bushehr .....	264878	71095	335972
Tehran.....	717507	480307	1197814
Chaharmahal & Bakhtiyari .....	147437	29322	176759
South Khorasan .....	328351	154167	482518
Khorasan-e-Razavi .....	632726	310182	942907
North Khorasan .....	118298	96282	214581
Khuzestan .....	413382	101999	515381
Zanjan .....	298033	162394	460427
Semnan.....	546919	179858	726777
Sistan & Baluchestan .....	333296	90968	424263
Fars.....	1459623	207684	1667307
Qazvin ....	108860	32477	141337
Qom.....	149904	51206	201110
Kordestan.....	162778	54827	217605
Kerman.....	9406152	3143004	12549156
Kermanshah.....	140709	55702	196411
Kohgiluyeh & Boyerahmad .....	251909	67822	319731
Golestan.....	246756	97259	344016
Gilan .....	150521	90654	241175
Lorestan.....	383886	37007	420893
Mazandaran.....	285862	124849	410711
Markazi.....	955750	215222	1170973
Hormozgan.....	319337	131385	450721
Hamedan .....	166975	86676	253651
Yazd .....	5136920	2780154	7917074

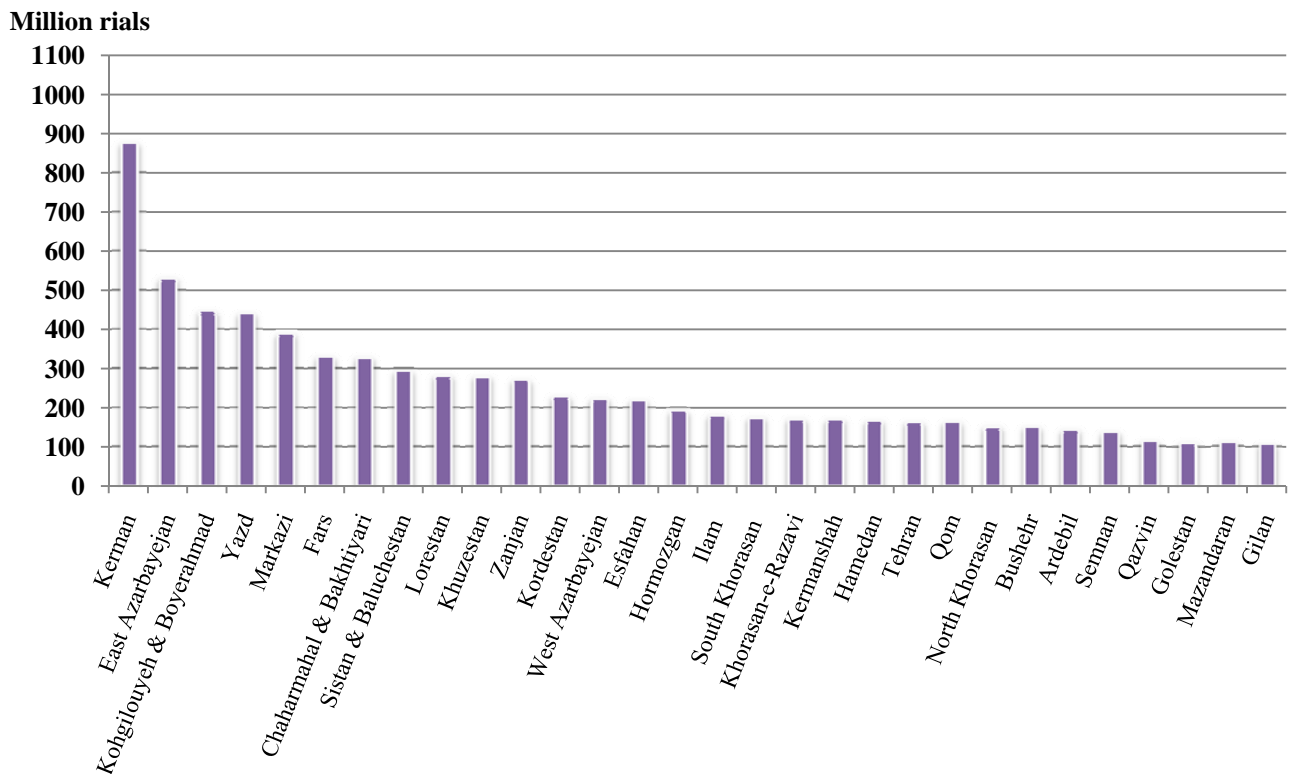
Source: Statistical Centre of Iran.

**5. 3. RATIO OF VALUE ADDED OF SELECTED MINES TO THE TOTAL OPERATING MINES, 1388**



For data see Table 5. 6.

**5. 4. PRODUCTIVITY OF LABOUR FORCE IN MINING SECTOR BY OSTAN, 1388**



For data see Tables 5. 1. and 5. 5.

### 5. 6.VALUE ADDED, INPUTS AND OUTPUTS OF OPERATING MINES BY TYPE OF ACTIVITY, 1388 (mln rials)

Activity	Value added	Payments (inputs)	Receipts (outputs)
<b>Total</b> .....	<b>26662764</b>	<b>9926427</b>	<b>36589191</b>
Mining of coal .....	1288659	505928	1794587
Mining of iron ore .....	6699610	4503459	11203069
Mining of lead and zinc .....	423491	319753	743244
Mining of gold ore .....	202433	24960	227394
Mining of copper ore .....	7857581	1318782	9176362
Mining of chromite .....	336546	64136	400683
Mining of manganese .....	95582	28675	124257
Mining of bauxite .....	32751	75322	108073
Mining of cobalt, antimony and titanium.....	4922	1397	6319
Mining of gravel and sand .....	2105778	1003157	3108935
Mining of decorative stones .....	3585791	773872	4359663
Mining of rubble stone .....	794098	212494	1006592
Mining of ballast .....	51145	15370	66515
Mining of lime stone .....	1750877	663401	2414278
Mining of gypsum .....	309184	121465	430648
Mining of kaolin and fireclay .....	233989	66028	300017
Mining of dolomite .....	49648	19190	68838
Mining of bentonite and fuller's earth .....	37554	11366	48919
Mining of magnesite and whiting ..	39499	13788	53287
Mining of sodium sulphate .....	58176	6202	64378
Mining of barite, limonite and ferrous oxide	68915	20077	88992
Mining of fluorine .....	77480	18641	96121
Mining of strontium sulphate and boron.....	1587	448	2035
Mining of orpiment , phosphate & iodine ....	67134	13981	81114
Mining of salt .....	187041	28311	215352
Mining of silica .....	175299	54901	230201
Mining of ores slag .....	53193	20800	73992
Mining of feldspar .....	37910	16275	54185
Mining of talcum .....	6329	1378	7707
Mining of shell & mica .....	17490	1016	18506
Other precious and semi-precious stones.....	13072	1853	14926

Source: Statistical Centre of Iran.

**5. 7. CAPITAL FORMATION (CHANGES IN THE VALUE OF CAPITAL GOODS) IN OPERATING MINES BY TYPE OF FIXED ASSETS AND OSTAN** (mln rials)

Year and Ostan	Total capital formation	Machinery and stable equipments and administrative facilities	Vehicles	Building and land	Access road	Exploration and development	Computer software	Other
1370 .....	106442	66988	17750	6917	5972	8814	-	0
1375.....	294962	190265	17435	35261	9849	5755	-	36397
1380.....	667897	537418	40533	47788	26187	10327	1204	4439
1384.....	2551260	1140822	92947	96980	43953	292132	1873	882553
1385.....	1737226	1328153	87357	<sup>(1)</sup> 99032	42720	174966	-620	5618
1386.....	2582948	2093378	172795	<sup>(1)</sup> 144132	56106	104101	2372	10064
1387.....	3302300	2297218	274103	<sup>(1)</sup> 393270	71629	250577	4177	11326
<b>1388.....</b>	<b>3631020</b>	<b>2807301</b>	<b>171402</b>	<b><sup>(1)</sup>238032</b>	<b>136137</b>	<b>233012</b>	<b>3136</b>	<b>42000</b>
East Azarbayejan.....	67392	29252	1784	4999	2484	2304	7	26562
West Azarbayejan .....	70721	53480	7312	2850	6686	370	24	0
Ardebil .....	33033	24017	6949	851	1179	21	9	6
Esfahan .....	404809	348682	12984	21476	12719	4006	404	4538
Ilam .....	24629	21606	1352	1464	146	0	1	60
Bushehr .....	57825	39357	8103	2306	7138	50	275	595
Tehran ...	190388	169912	4241	13139	276	15	724	2081
Chaharmahal & Bakhtiyari .....	10162	8391	680	0	814	0	0	277
South Khorasan .....	103199	92413	2478	2213	899	5179	16	0
Khorasan-e-Razavi.....	99865	59818	15164	7752	1682	13335	29	2084
North Khorasan .....	-7192	-11617	922	2088	1388	25	2	0
Khuzestan .....	31862	19978	6837	2943	1737	184	78	104
Zanjan .....	33777	26977	467	4803	1333	0	17	180
Semnan .....	111827	80923	5067	21039	2547	2139	102	10
Sistan & Baluchestan ...	100417	82559	15217	1668	644	325	5	0
Fars .....	103964	99006	3077	1163	345	300	0	73
Qazvin .....	31615	21679	1339	1997	1612	4977	10	0
Qom .....	11234	7363	285	991	770	29	6	1790
Kordestan .....	45428	40957	646	1416	2202	152	55	0
Kerman .....	958365	825738	23259	66418	667	39737	206	2340
Kermanshah ...	45911	38961	1807	2919	2167	0	57	0
Kohgiluyeh & Boyerahmad .....	17405	12611	4763	0	30	0	0	0
Golestan .....	37479	25023	6599	2919	268	2560	111	0
Gilan .....	47939	35219	4738	3551	2446	1067	150	769
Lorestan .....	57286	55280	1766	241	0	0	0	0
Mazandaran .....	63811	53040	6188	1481	1508	1581	14	0
Markazi .....	182293	163763	5620	7369	2904	2291	335	10
Hormozgan .....	105386	103122	246	1734	150	0	133	0
Hamedan .....	37298	32702	1975	1037	997	541	47	0
Yazd .....	552890	247088	19535	55205	78399	151823	319	521

1. Relating to the building without land.

Source: Statistical Centre of Iran.

**5. 8. CAPITAL FORMATION (CHANGES IN THE VALUE OF CAPITAL GOODS) IN OPERATING MINES BY TYPE OF FIXED ASSETS AND TYPE OF ACTIVITY, 1388**  
(mln rials)

Activity	Total capital formation	Machinery and stable equipments and administrative facilities	Vehicles	Building without land	Access road	Exploration and development	Computer softwares	Other
<b>Total .....</b>	<b>3631020</b>	<b>2807301</b>	<b>171402</b>	<b>238032</b>	<b>136137</b>	<b>233012</b>	<b>3136</b>	<b>42000</b>
Mining of coal .....	234416	54663	5124	30634	78763	62756	158	2319
Mining of iron ore .....	459439	241319	17662	55591	1257	143387	223	0
Mining of lead and zinc .....	22077	17039	1602	1678	66	658	14	1020
Mining of gold ore ... ..	21806	15997	68	1062	4672	0	7	0
Mining of copper ore.....	894614	799531	7524	51494	20	9564	0	26482
Mining of chromite .....	5761	4706	276	487	124	33	135	0
Mining of manganese.....	12475	8927	232	1181	251	15	0	1868
Mining of bauxite .....	-31289	-31489	7	183	10	0	0	0
Mining of cobalt, antimony and titanium.....	35	5	0	20	10	0	0	0
Mining of gravel and sand...	770994	626235	78063	44159	15117	577	1635	5208
Mining of decorative stones	627809	574160	16203	20353	8034	5850	348	2860
Mining of rubble stone .....	139328	119292	5992	6500	5946	577	64	957
Mining of ballast .....	2169	1790	0	0	379	0	0	0
Mining of lime stone .....	257700	205238	25132	10887	11586	3671	226	961
Mining of gypsum .....	58538	45067	3409	5466	3006	1524	65	0
Mining of kaolin and fireclay ..	38367	30186	2701	3516	855	891	91	127
Mining of dolomite .....	14067	10556	385	1140	1062	903	15	5
Mining of bentonite and fuller's earth ..	1377	977	152	129	108	0	12	0
Mining of magnesite and whiting .....	9649	8921	617	59	51	0	0	0
Mining of sodium sulphate..	2241	1730	78	57	206	169	0	0
Mining of barite, limonite and ferrous oxide .....	12611	11284	361	233	190	527	6	10
Mining of fluorine .....	9839	7391	427	658	233	1000	30	100
Mining of strontium sulphate .....	-1924	-1804	-133	6	6	0	0	0
Mining of orpiment phosphate & iodine .....	1866	669	166	981	0	0	50	0
Mining of salt .....	8611	5535	1828	632	610	0	5	0
Mining of silica .....	19222	18037	1544	-1535	1015	132	26	2
Mining of ores slag .....	15119	12314	565	693	1343	110	13	80
Mining of feldspar .....	19362	15628	989	1616	960	160	10	0
Mining of talcum .....	997	605	235	29	127	0	0	0
Mining of shell & mica .....	2829	2617	162	50	0	0	0	0
Other precious and semi-precious stones.....	911	174	28	71	127	506	4	0

Source: Statistical Centre of Iran.



### 5. 9. GENERAL CHARACTERISTICS OF MINES COOPERATIVES AT THE END OF THE YEAR

Description	Number	Members	Workers	Capital (mln rials)
<i>Registered cooperatives<sup>(1)</sup></i>				
1370.....	709	6742	4446	25769
1375.....	1306	14022	8910	71572
1380.....	1691	21373	12146	106325
1385.....	1952	27271	15263	162032
1386.....	2052	28106	16113	184890
1387.....	2146	32538	16859	189486
1388.....	2242	35288	18244	206103
<b>1389.....</b>	<b>2303</b>	<b>32970</b>	<b>19000</b>	<b>185112</b>
<i>Cooperatives under establishment</i>				
1370.....	8	62	24	663
1375.....	20	182	82	2008
1380.....	56	972	342	3502
1385.....	137	2277	1251	20253
1386.....	186	2626	1696	35619
1387.....	251	3604	2182	36782
1388.....	316	5721	3317	50585
<b>1389*.....</b>	<b>219</b>	<b>4098</b>	<b>2292</b>	<b>9087</b>
<i>Cooperatives in operation</i>				
1370.....	312	3544	2568	16453
1375.....	634	8231	5681	52365
1380.....	841	12029	7555	77835
1385.....	966	16074	9045	112456
1386.....	1012	16537	9386	119880
1387.....	1042	19996	9636	123206
1388.....	1073	20630	9887	126010
<b>1389.....</b>	<b>918</b>	<b>14021</b>	<b>8917</b>	<b>118580</b>
East Azarbayejan .....	36	532	364	3845
West Azarbayejan .....	15	138	176	2219
Ardebil .....	8	73	114	743
Esfahan .....	47	405	475	10104
Ilam .....	1	7	3	2
Bushehr .....	33	258	211	15290
Tehran .....	72	1730	621	8488
Chaharmahal & Bakhtiyari .....	9	70	71	1206
South Khorasan .....	13	201	102	3265

### 5. 9. GENERAL CHARACTERISTICS OF MINES COOPERATIVES AT THE END OF THE YEAR

Description	(mln rials)			
	Number	Members	Workers	Capital
Khorasan-e-Razavi .....	100	1350	819	13838
North Khorasan .....	5	155	79	38
Khuzestan .....	9	79	77	196
Zanjan .....	16	384	202	3753
Semnan .....	37	288	383	4949
Sistan & Bluchestan .....	10	82	80	126
Fars .....	47	3593	615	16280
Qazvin .....	11	85	125	287
Qom .....	22	220	179	1993
Kordestan .....	11	158	112	160
Kerman .....	54	483	506	8538
Kermanshah .....	19	133	136	343
Kohgiluyeh & Boyerahmad .....	27	224	220	995
Golestan .....	8	79	37	184
Gilan .....	12	81	87	480
Lorestan .....	122	1186	1210	2959
Mazandaran .....	51	932	639	4325
Markazi .....	44	367	448	2367
Hormozgan .....	34	242	378	5071
Hamedan .....	11	138	142	2544
Yazd .....	34	348	306	3992

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

Source: Ministry of Cooperatives.