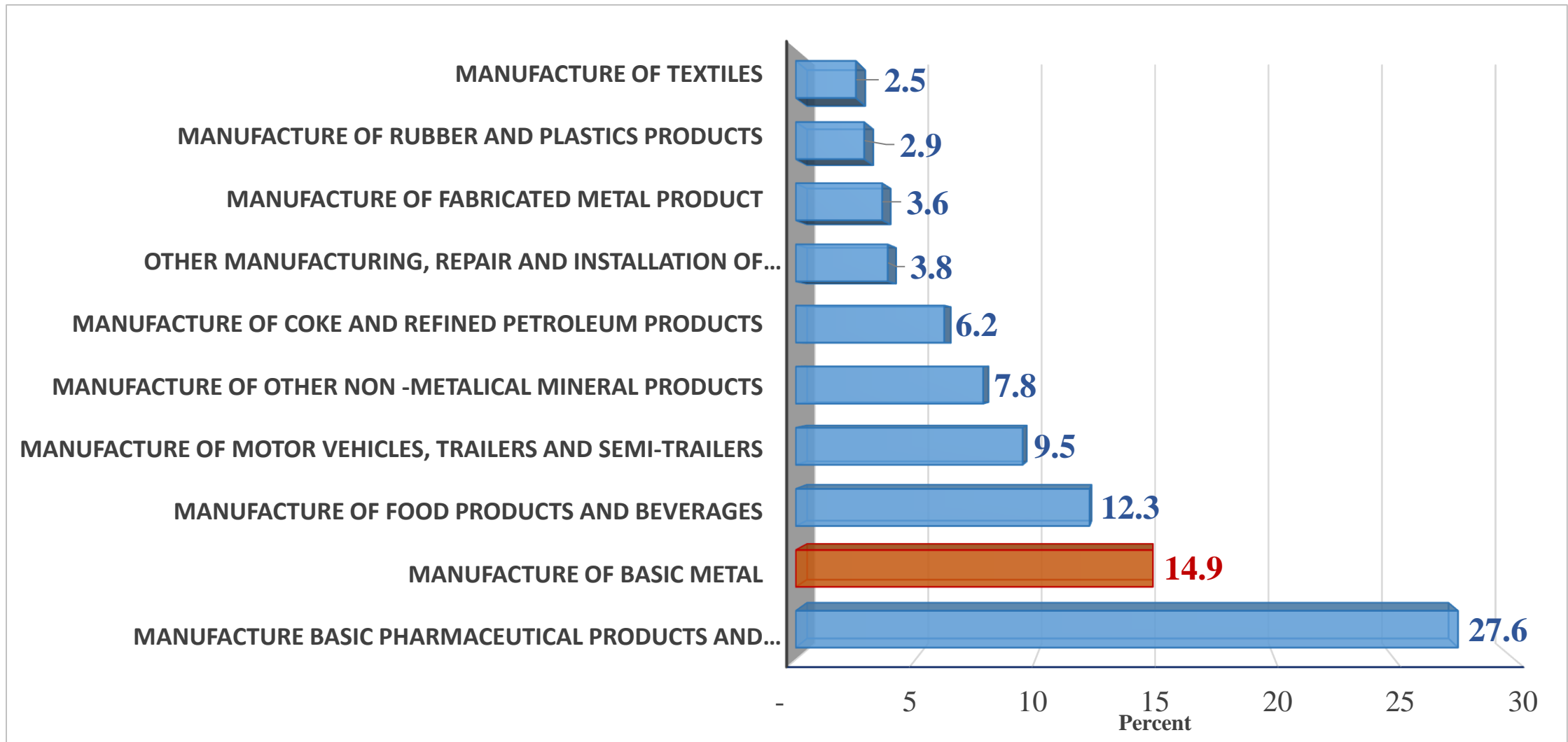


بنام یگانہ صانع هستی

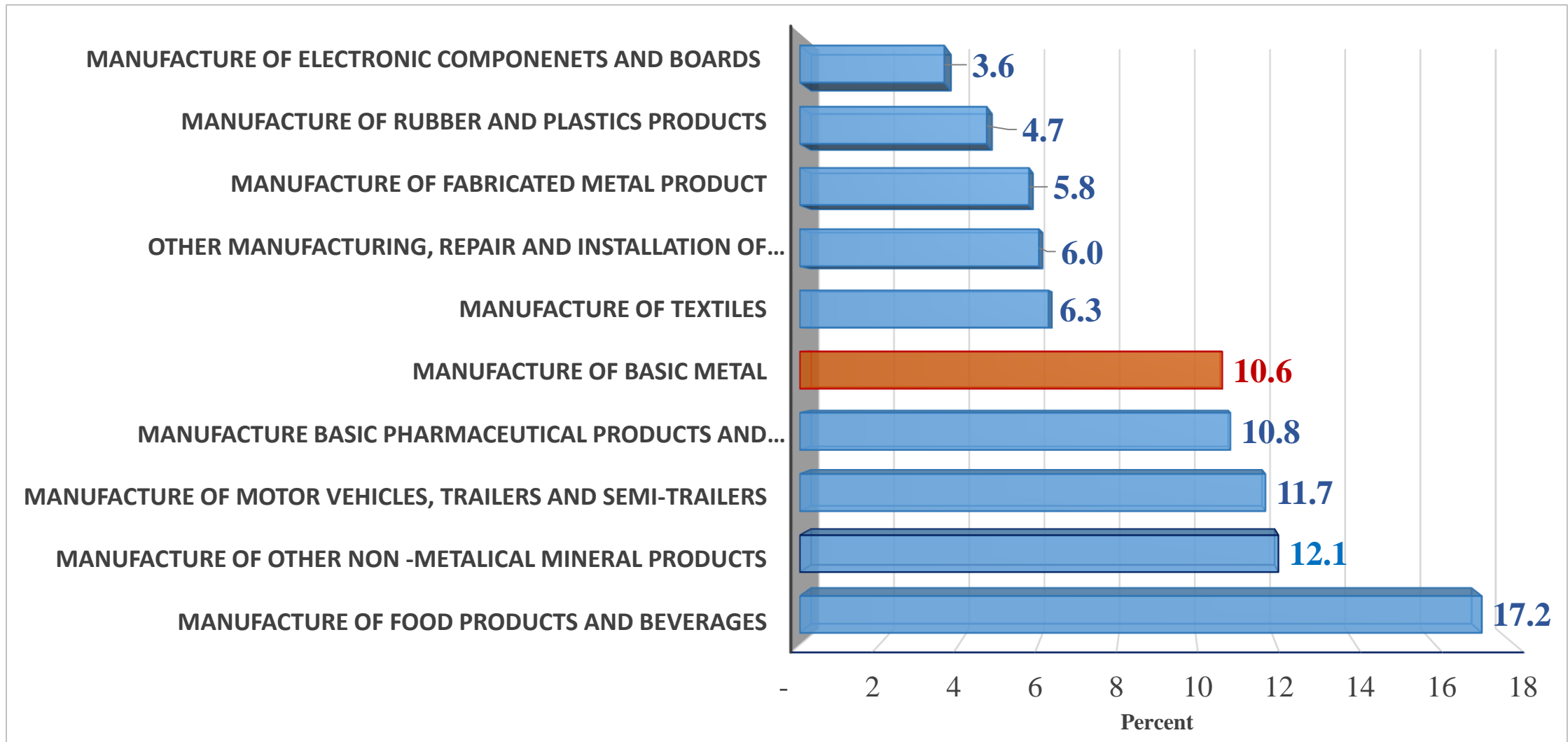
همایش و نمایشگاه  
چشم انداز صنایع غیر آهنی ایران و فناوری های وابسته  
با نگاهی به بازار

**Iran Non-Ferrous  
Industries Market  
& Related Technologies  
Conference & Expo**

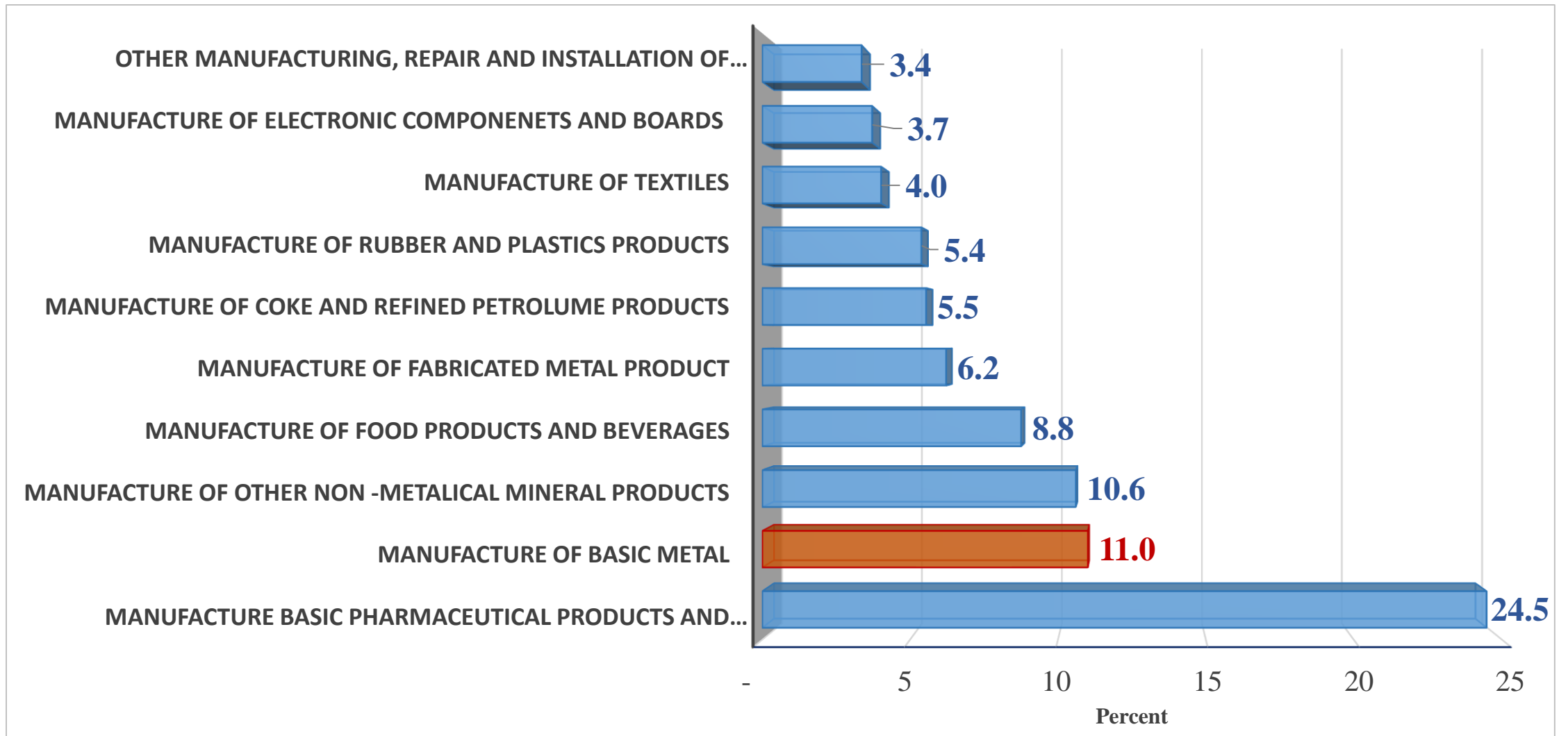
## The Share of Value Added in the Top Ten Industrial Activities of Iran



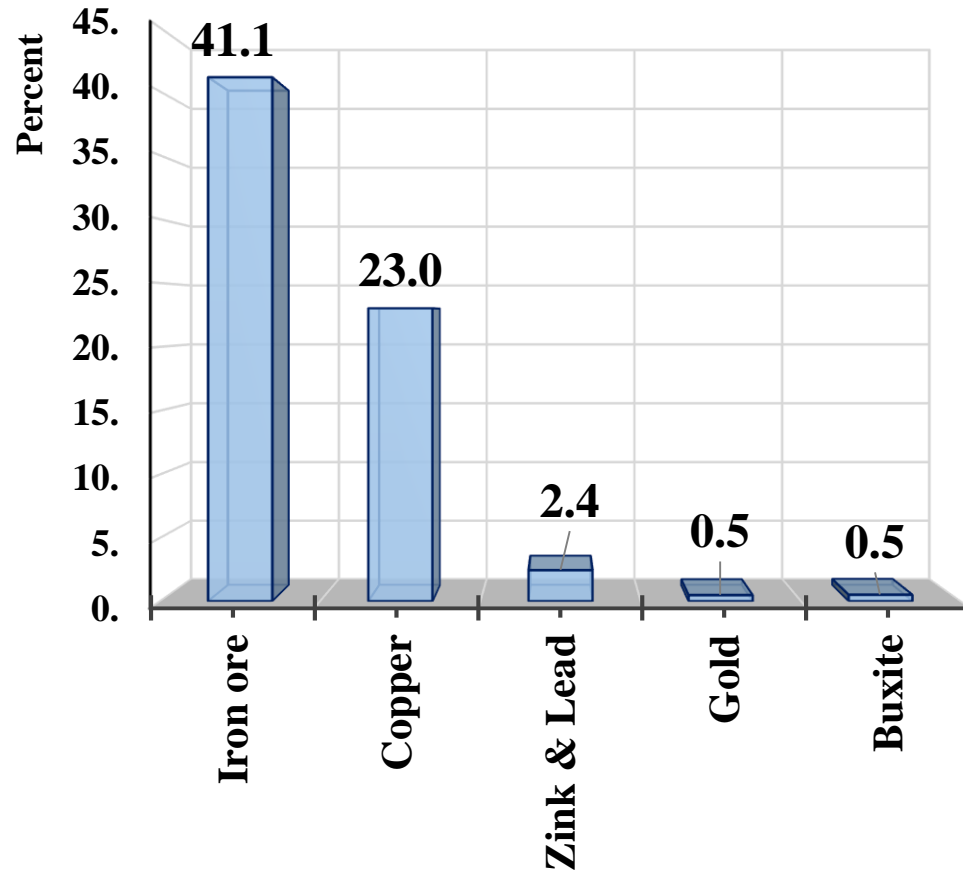
## The Share of Employment in the Top Ten Industrial Activities of Iran



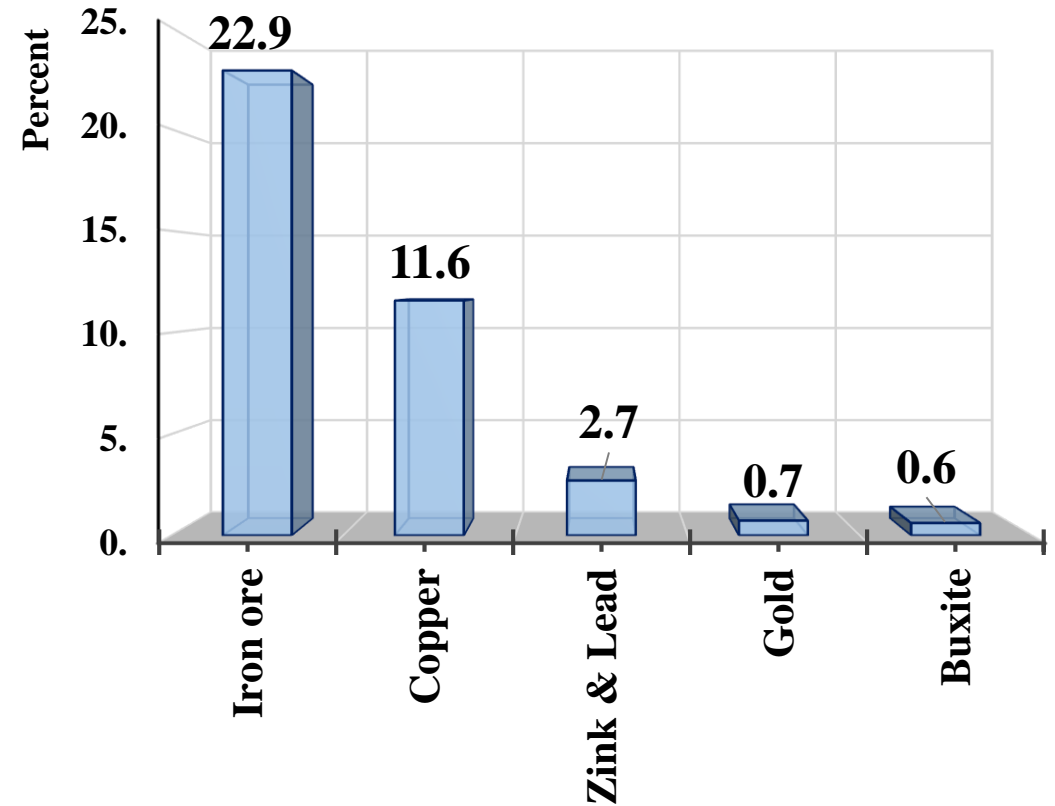
## The Share of Investment in the Top Ten Industrial Activities of Iran



## Metal Mines Value Added Share in all of the Iran's Mines



## Metal Mines Employment Share in all of the Iran's Mines

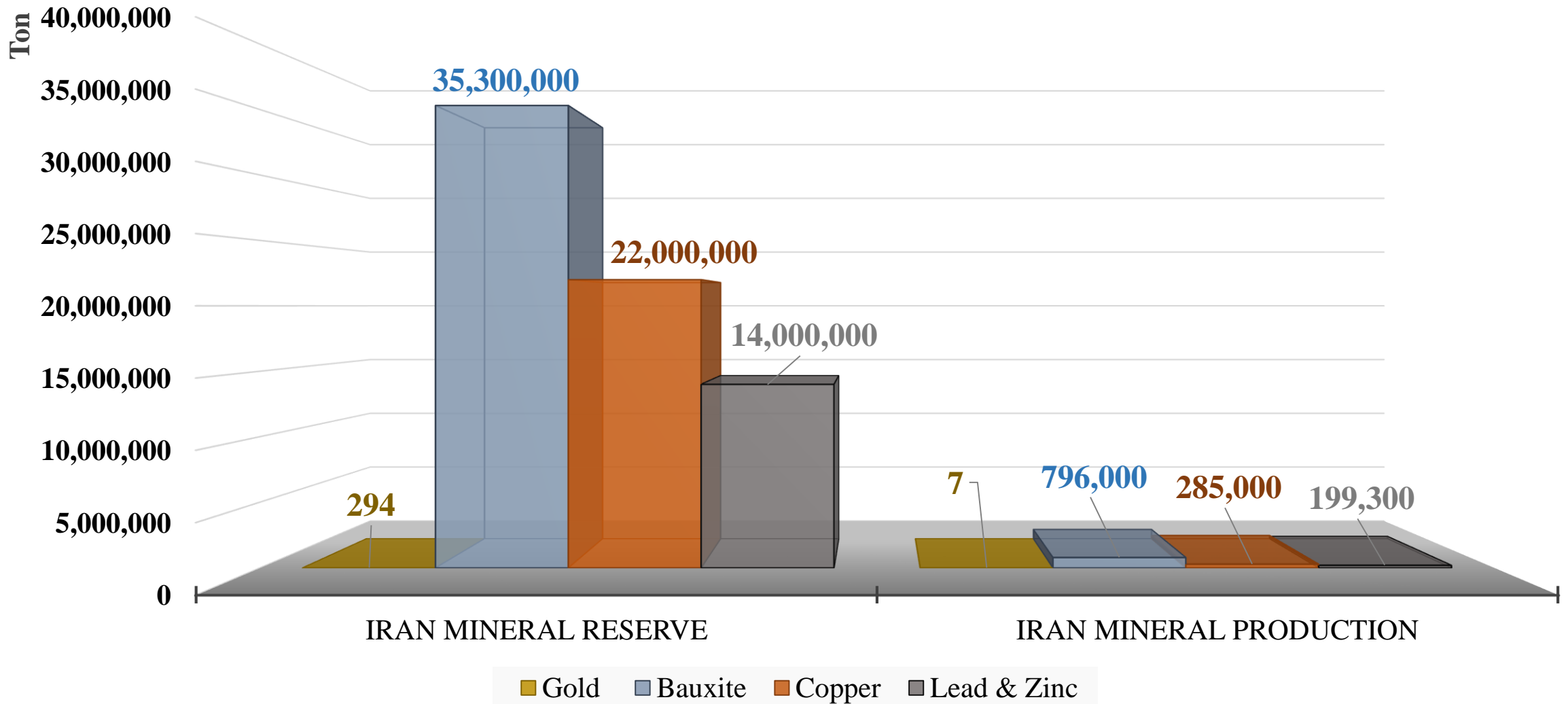




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## Reserves & production

## Iran's Mine Reserves & Mine Production, 2017

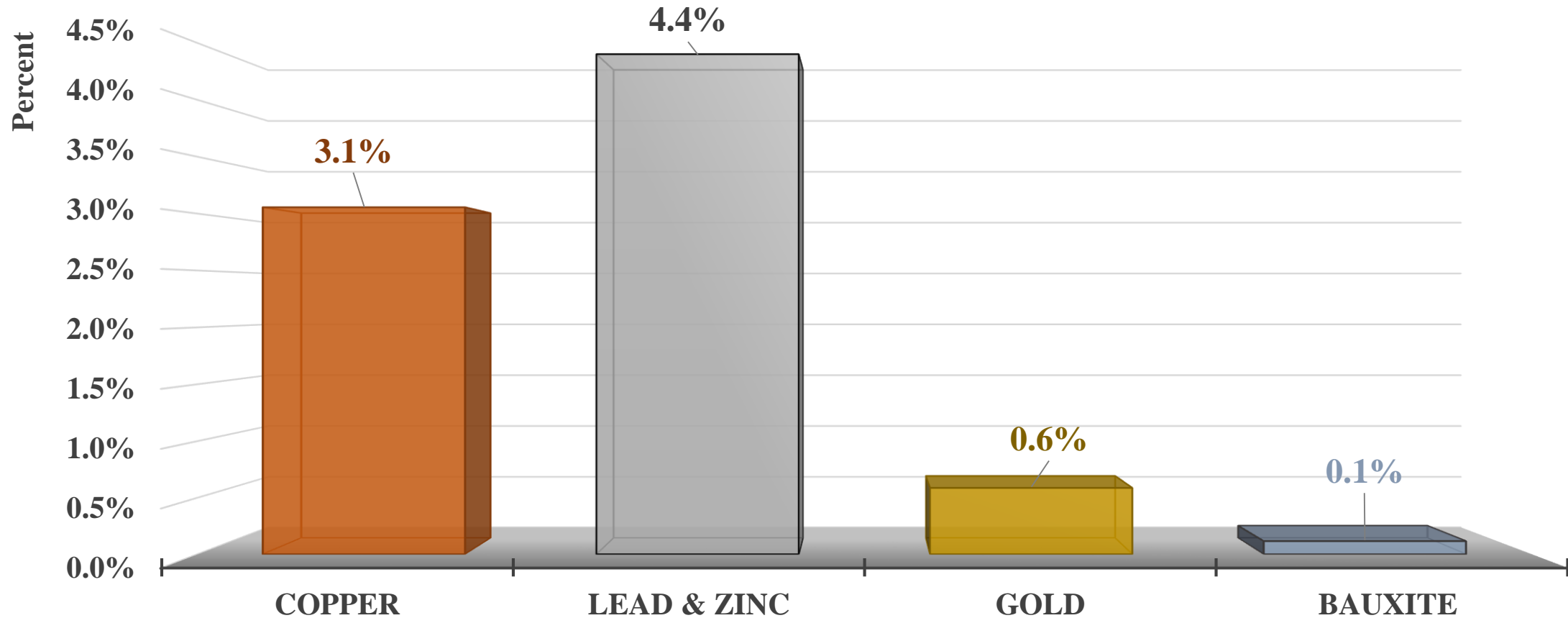




## World's Non Ferrous Metals Reserves

Non Ferrous Metals	Million Tons
Bauxite Ore	30,000
Copper (Content)	790
Zinc (Content)	230
Lead (Content)	88
Gold (Content)	0.05

## Iran's Share and Rank in Global Reserves



Ranking	8th	12th	NA	NA
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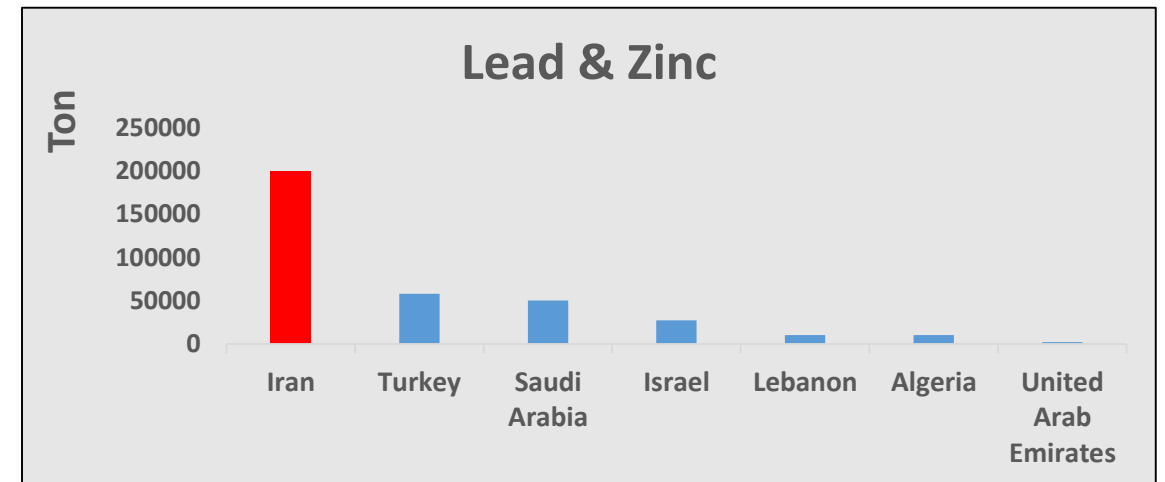
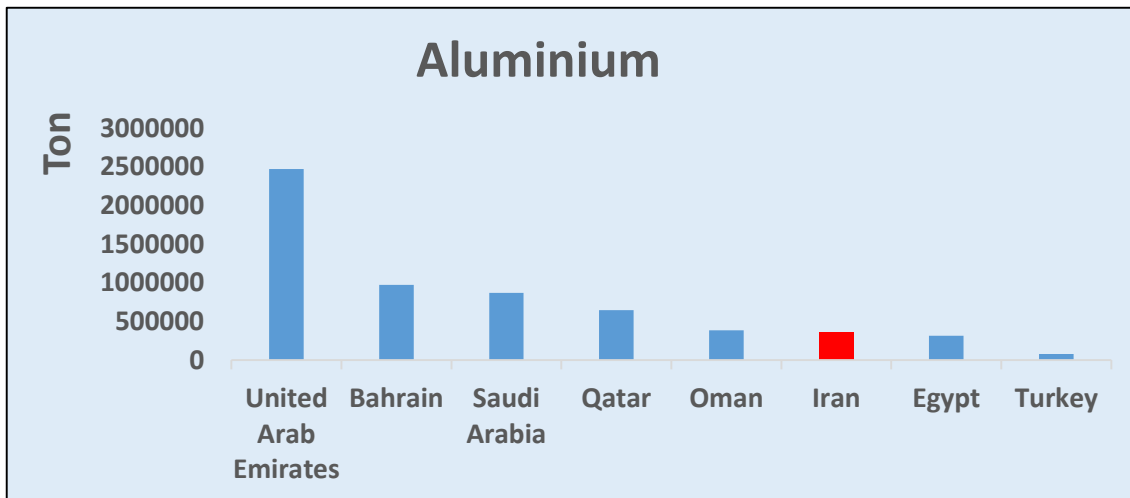
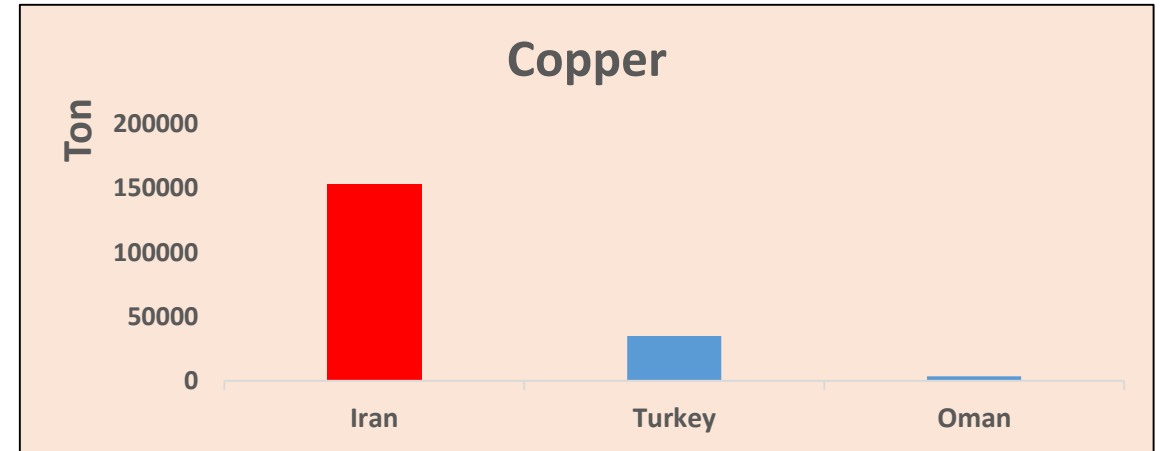
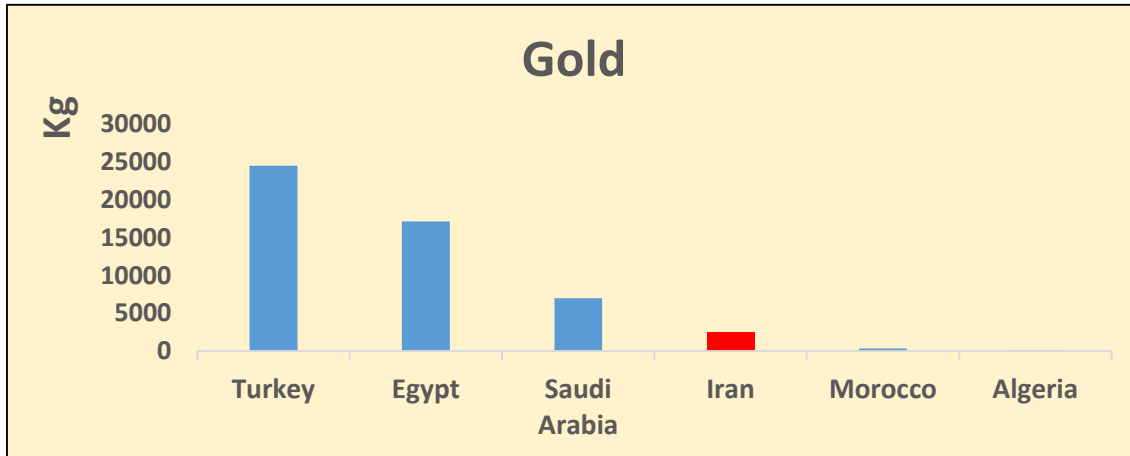
# Exploration

The implementation of the exploration project in 21 prime mines with an area of 250,000 square kilometers has been started by Iranian Mines & Mining Industries Development and Renovation Organization (IMIDRO) and other organizations such as the Geological Survey of Iran since 2014 and is still ongoing.

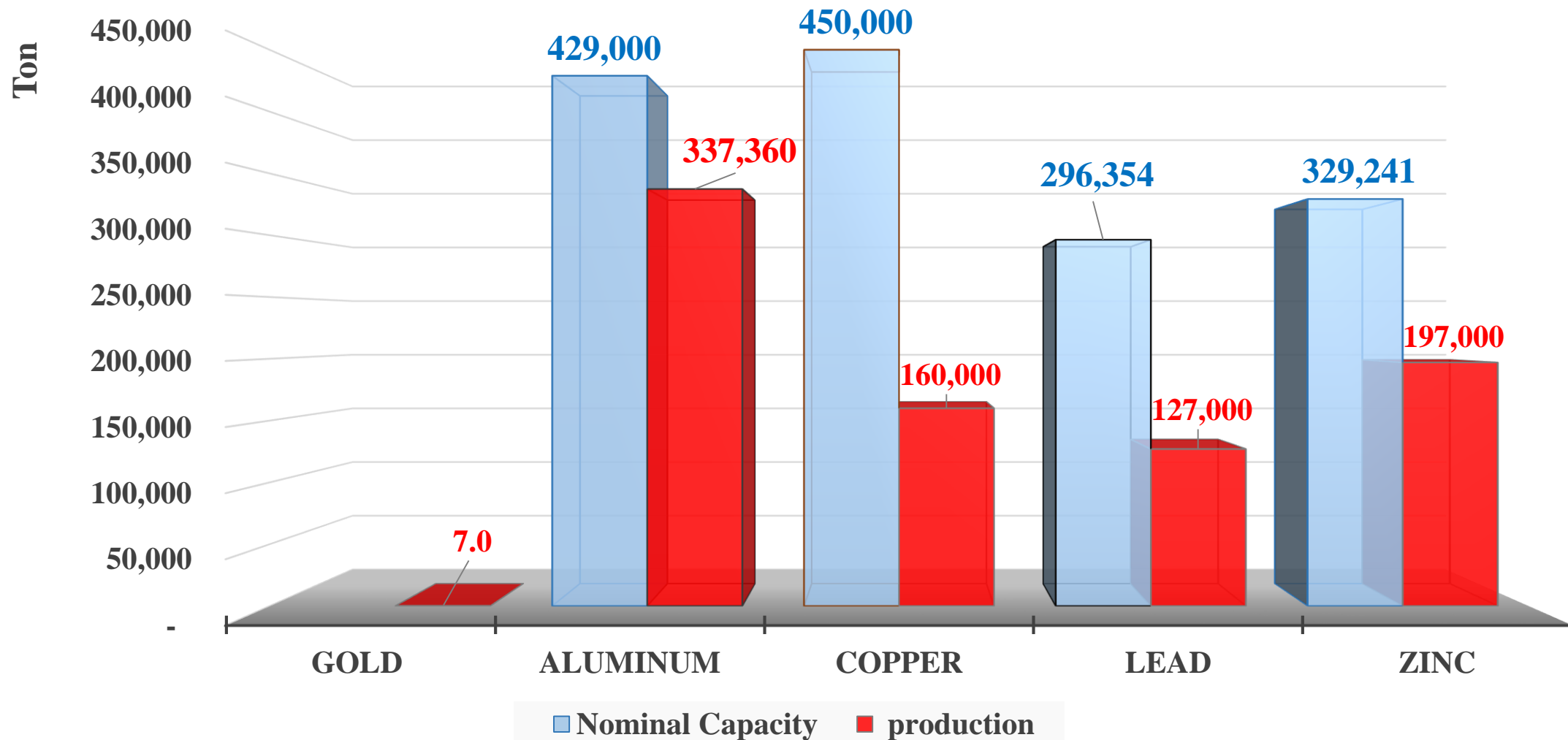
During the identification and tracking phases of operations, about 400 new promising areas have been identified in the country.

Mineral Ore	Reserves (before discoveries)	Current Reserves	Increase Percentage
Gold(t)	252	294	16.67%
Bauxite(Mt)	14	35	200%
Copper(Mt)	17	22	29.41%
Lead & Zinc (Mt)	-	14	-






## IRAN Non-Ferrous Production Status in MENA Region (2016)



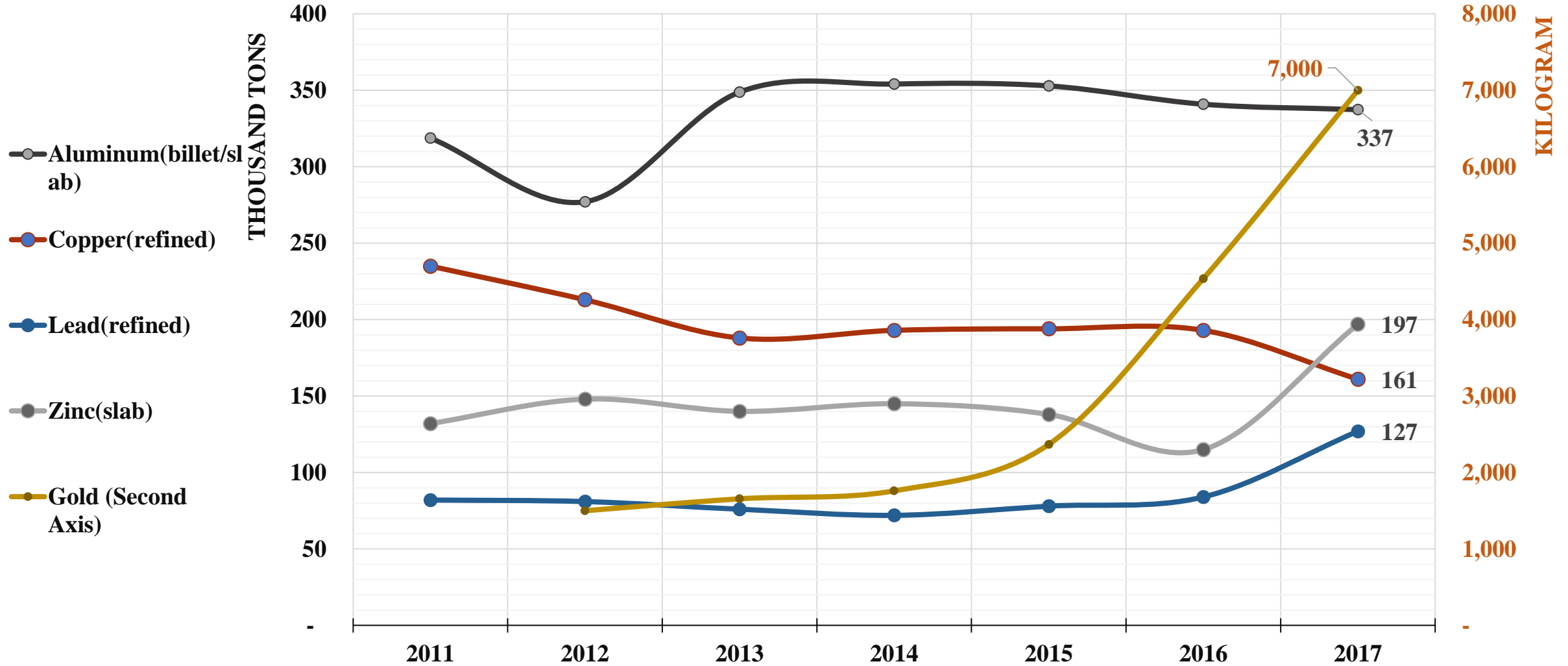
## Iran's Non Ferrous Metals Capacity & Production, 2017



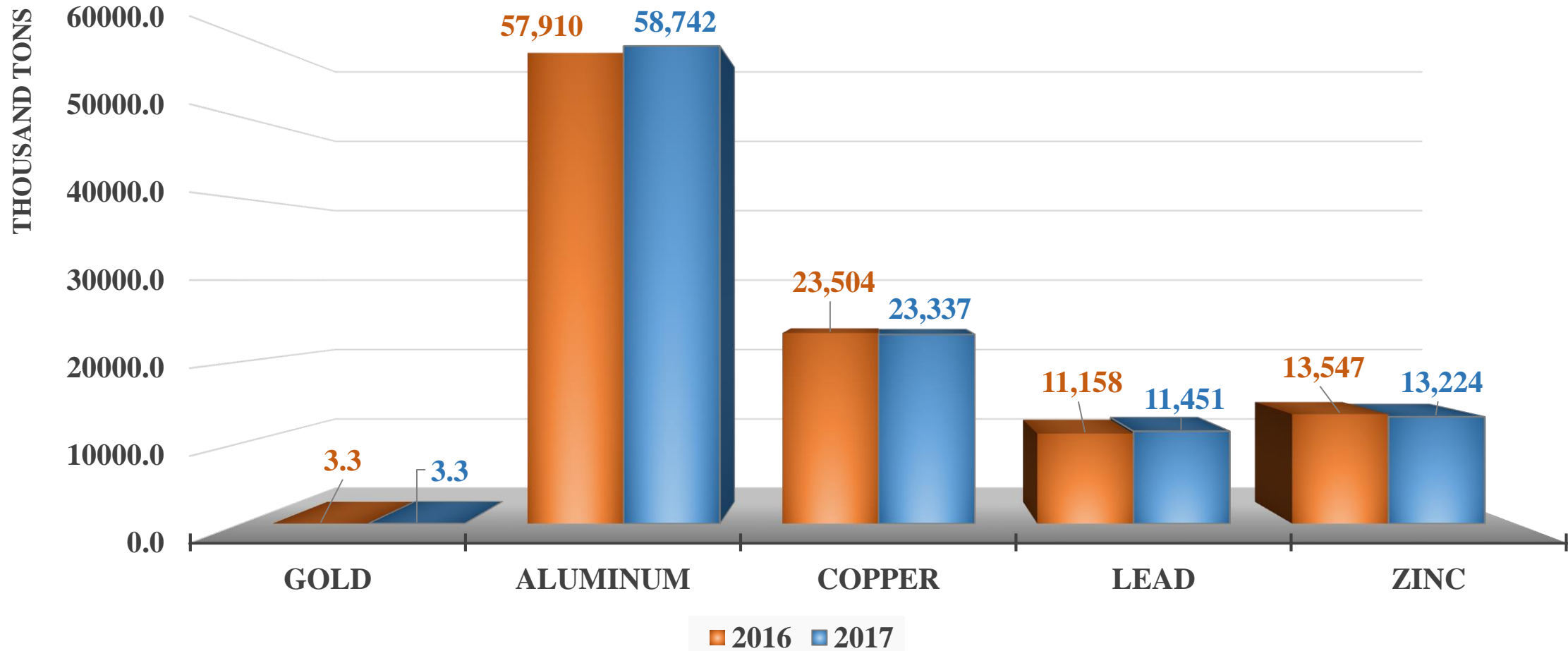
## Vision of Iran's Non Ferrous Metals for 1404 (2025)

Product	2017 (Nominal capacity)		2025 (Nominal capacity)
Gold	7 (Ton) (Production)		12 (Ton) (Production)
Aluminum	429 (Thousand tons)		1,500 (Thousand tons)
Copper	450 (Thousand tons)		450 (Thousand tons)
Zinc	329 (Thousand tons)		-
Lead	296 (Thousand tons)		-

## Iran's Non Ferrous Metals Production

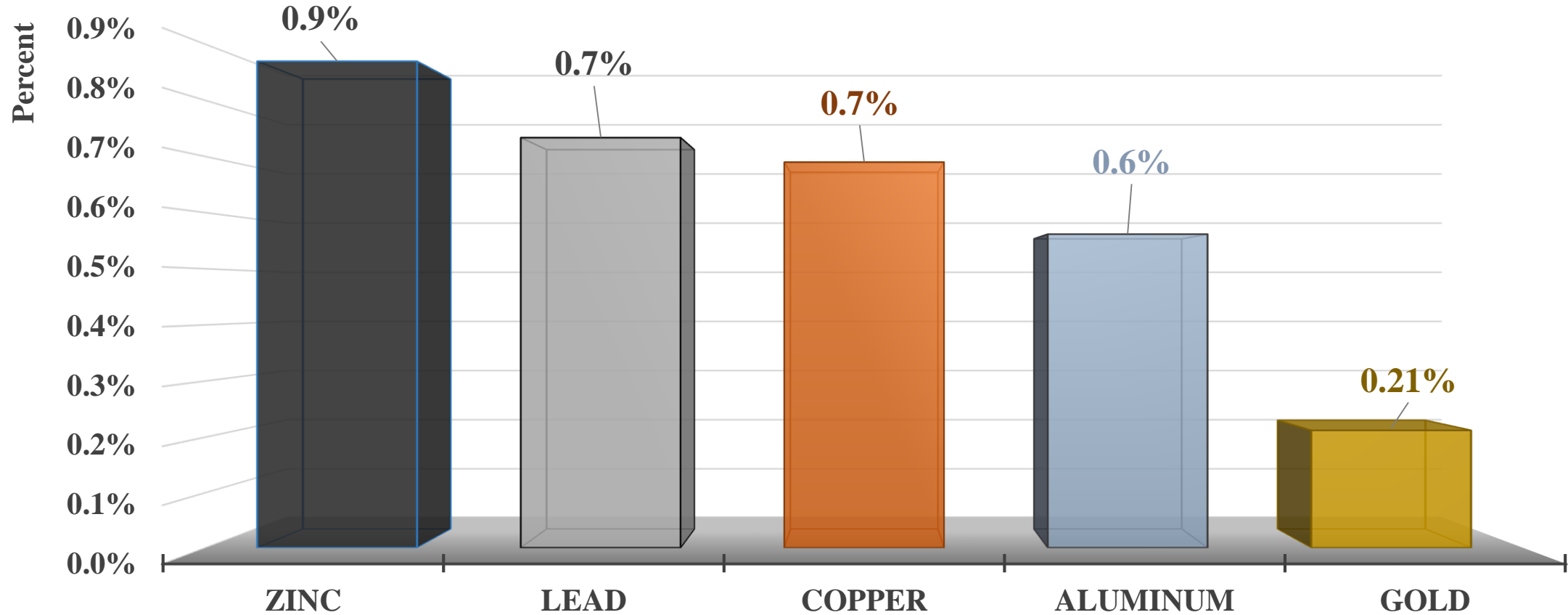


## World's Non Ferrous Metals Production





## Iran's Share and Rank in Non Ferrous Metals Global Production, 2016



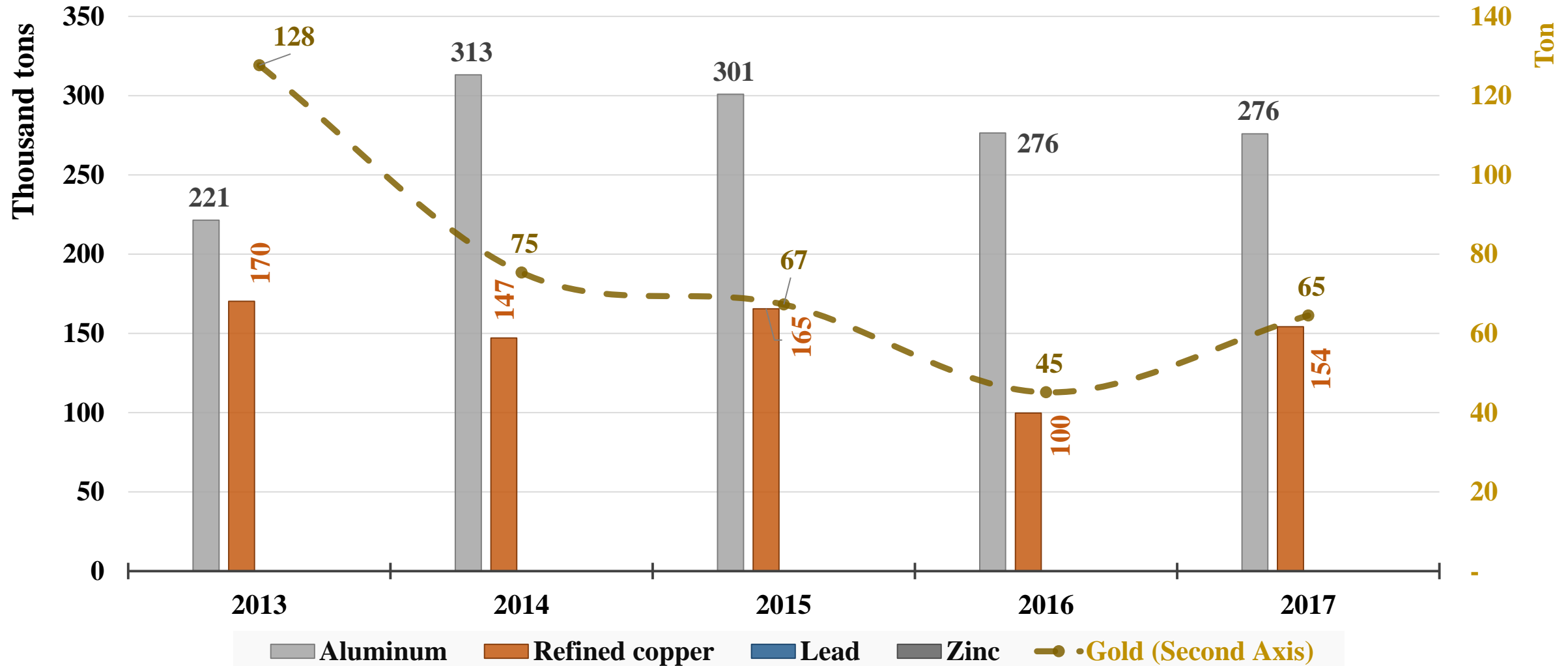
Ranking	22th	21th	23th	21th	53th
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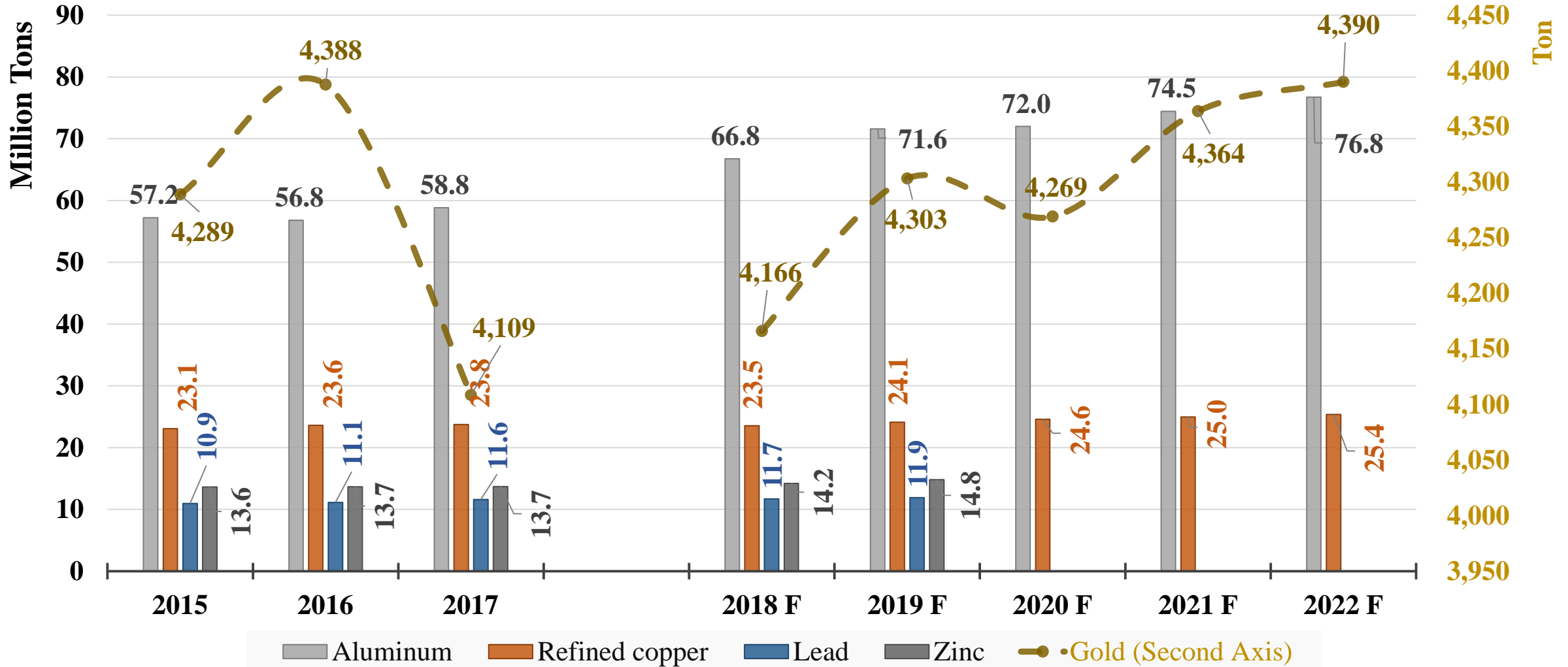
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**consumption**

## Iran's Non-Ferrous Metals Consumption



## World's Non-Ferrous Metals Consumption

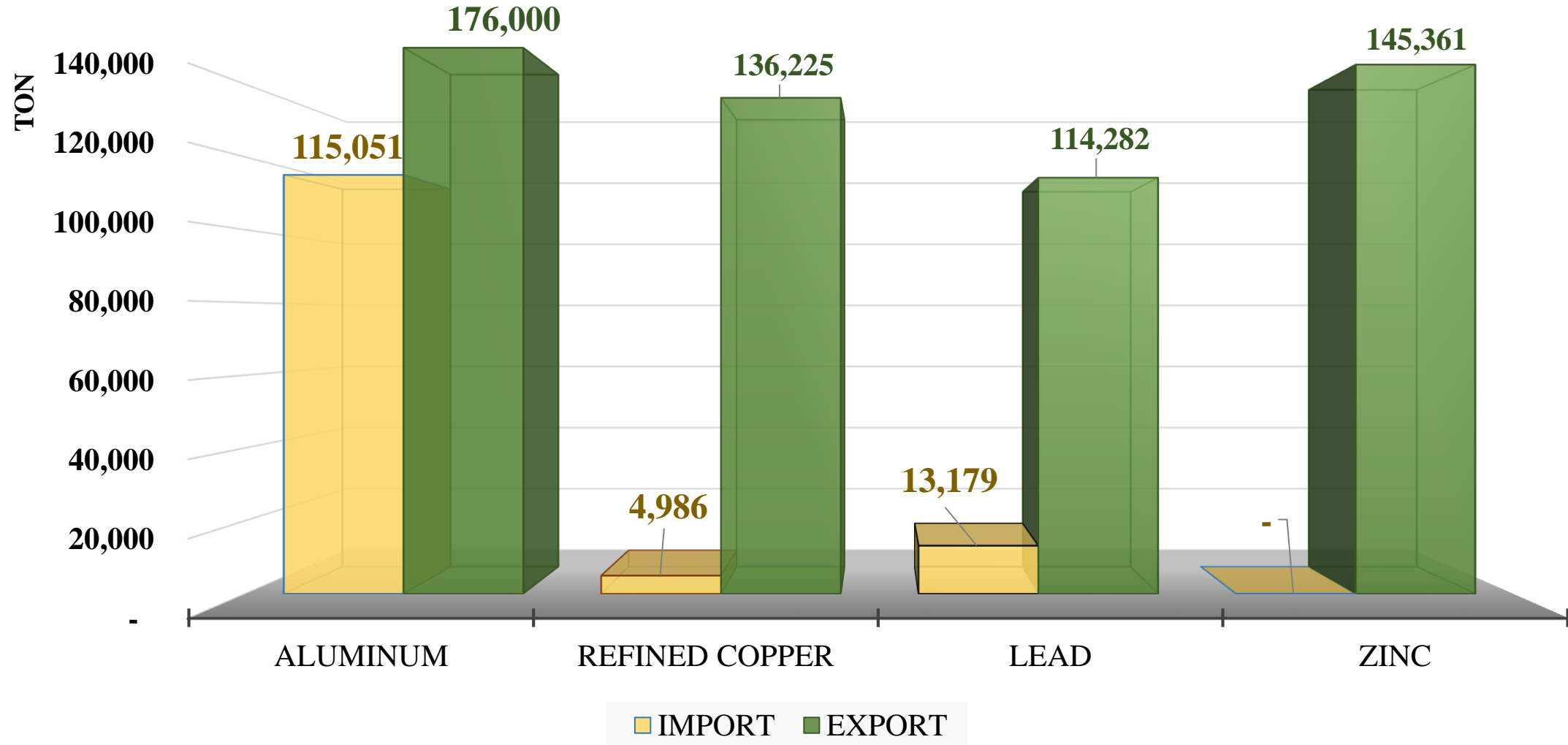




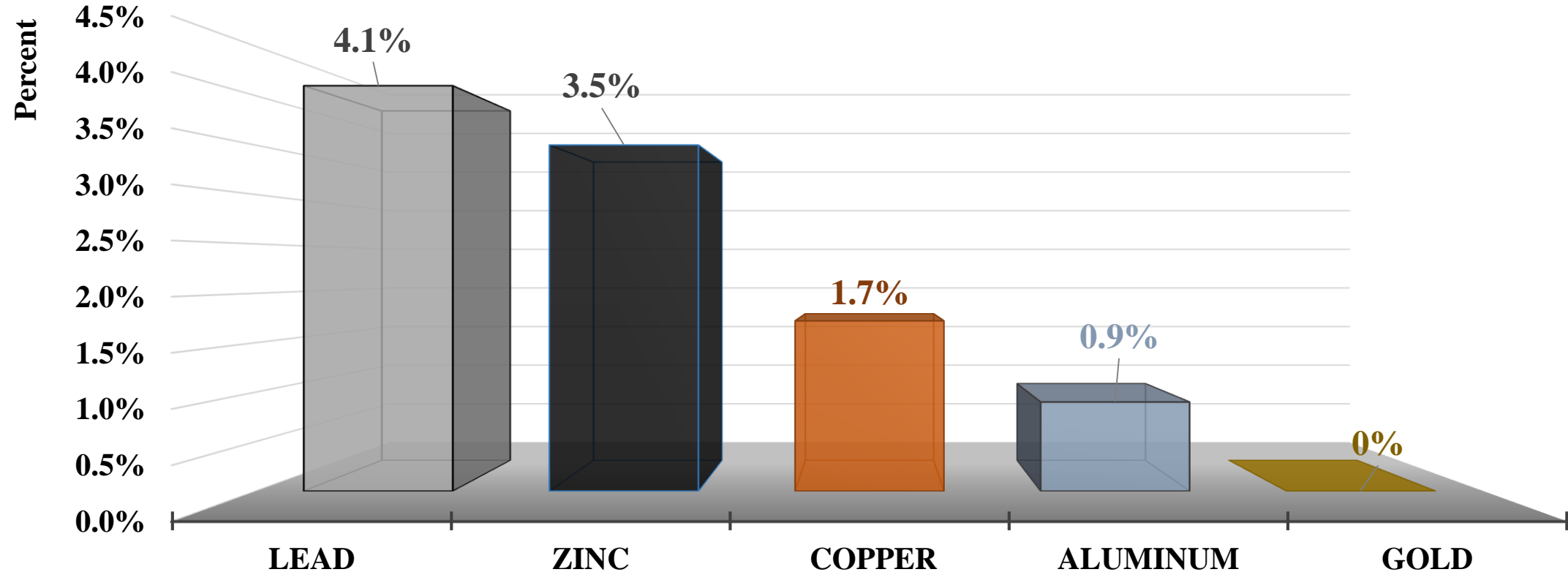
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**TRADE**

## Iran's Non-Ferrous Metals Trade in 2017



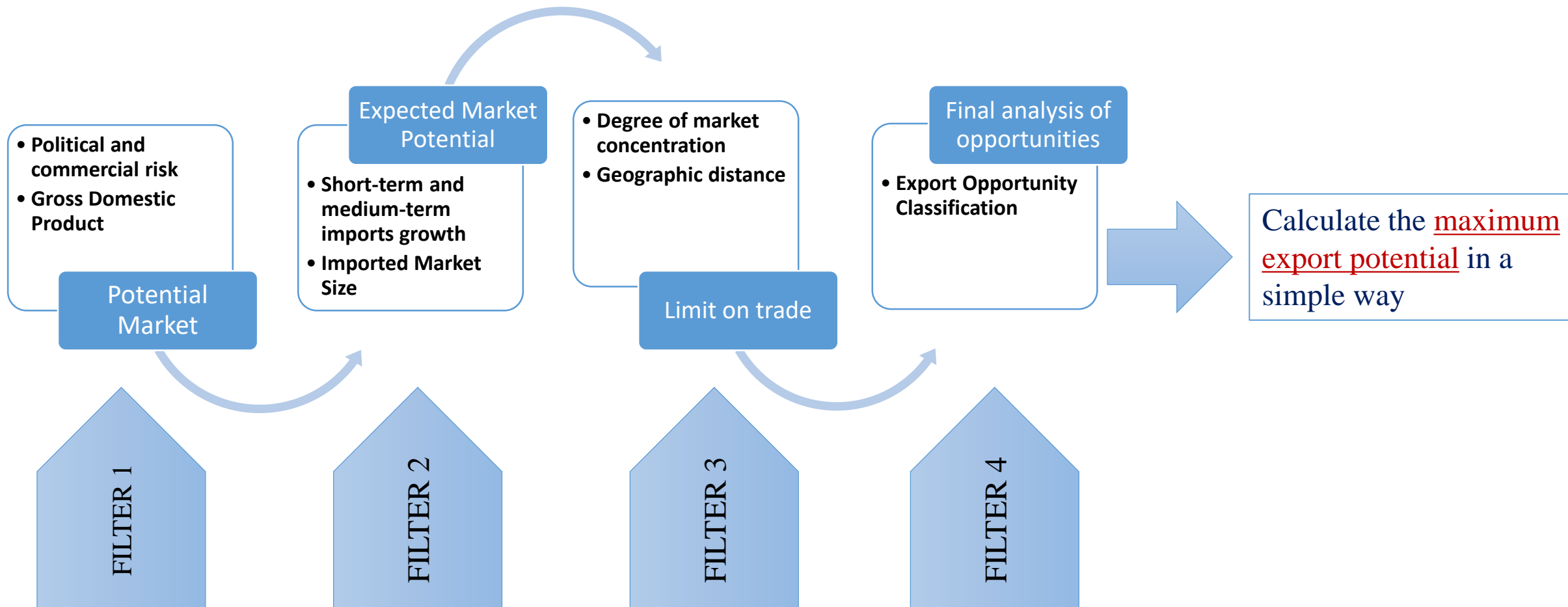
## Iran's Share and Rank in Non Ferrous Metals Global Trade , 2016



Ranking	8th	13th	18th	19th	NA
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## Iran's Non Ferrous Metals Export Capacity, (DSM Method)

### Decision Support System (DSM)





## Iran's Export Potential Markets (Calculated by DSM Method)

### Lead 17)

Germany	Canada
Switzerland	Switzerland
Canada	Spain
India	Czech
United States	Thailand
France	Romania
Turkey	Thailand
Finland	Qatar
Oman	

### Zinc (20)

Belgium	Germany
India	Italy
France	Turkey
Algeria	United States
Australia	Argentina
Egypt	Canada
Qatar	Thailand
Norway	Switzerland
Ukraine	Indonesia
Austria	Malaysia

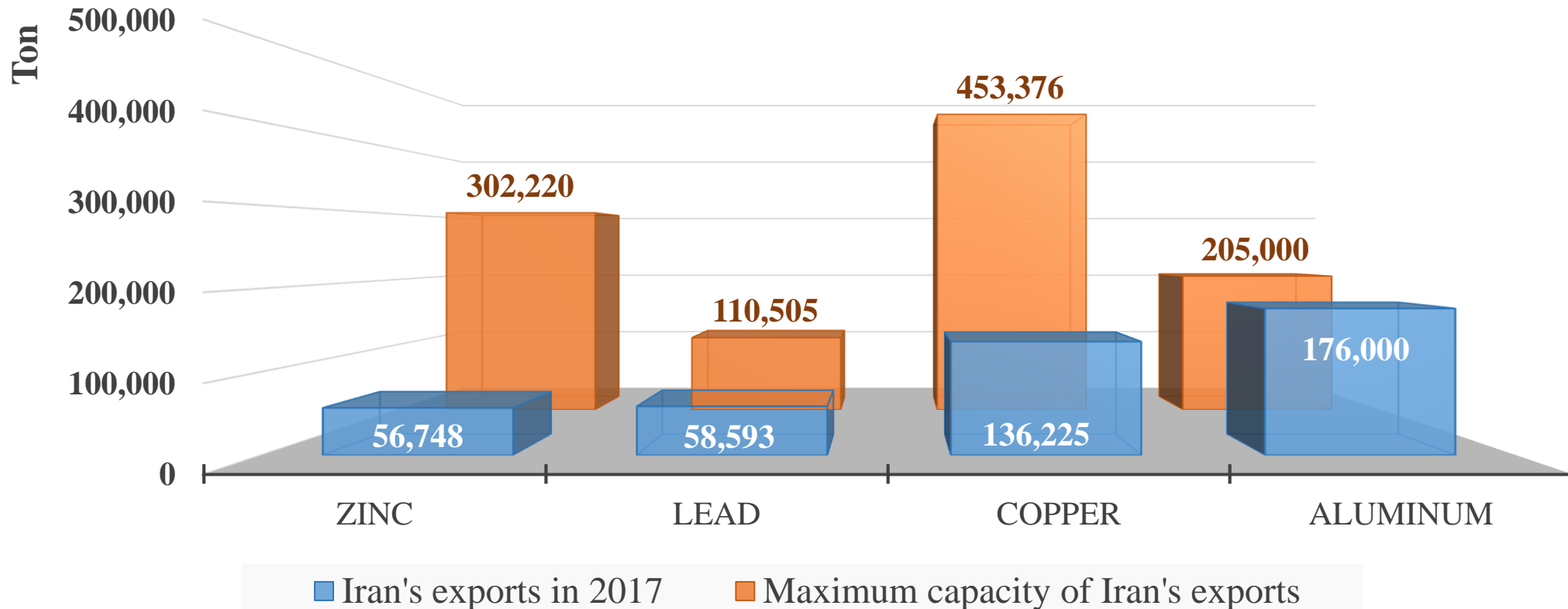
### Copper (20)

China	United Kingdom
Belgium	Romania
Turkey	Saudi Arabia
France	Germany
Finland	Spain
Qatar	Austria
Korea	Ukraine
Indonesia	Thailand
Algeria	Netherlands
Pakistan	Singapore

### Aluminum (11)

Italy	United States
Korea	Spain
Netherlands	Australia
Thailand	Brazil
Denmark	Norway
Pakistan	Turkey

## Iran's Export Potential Capacity

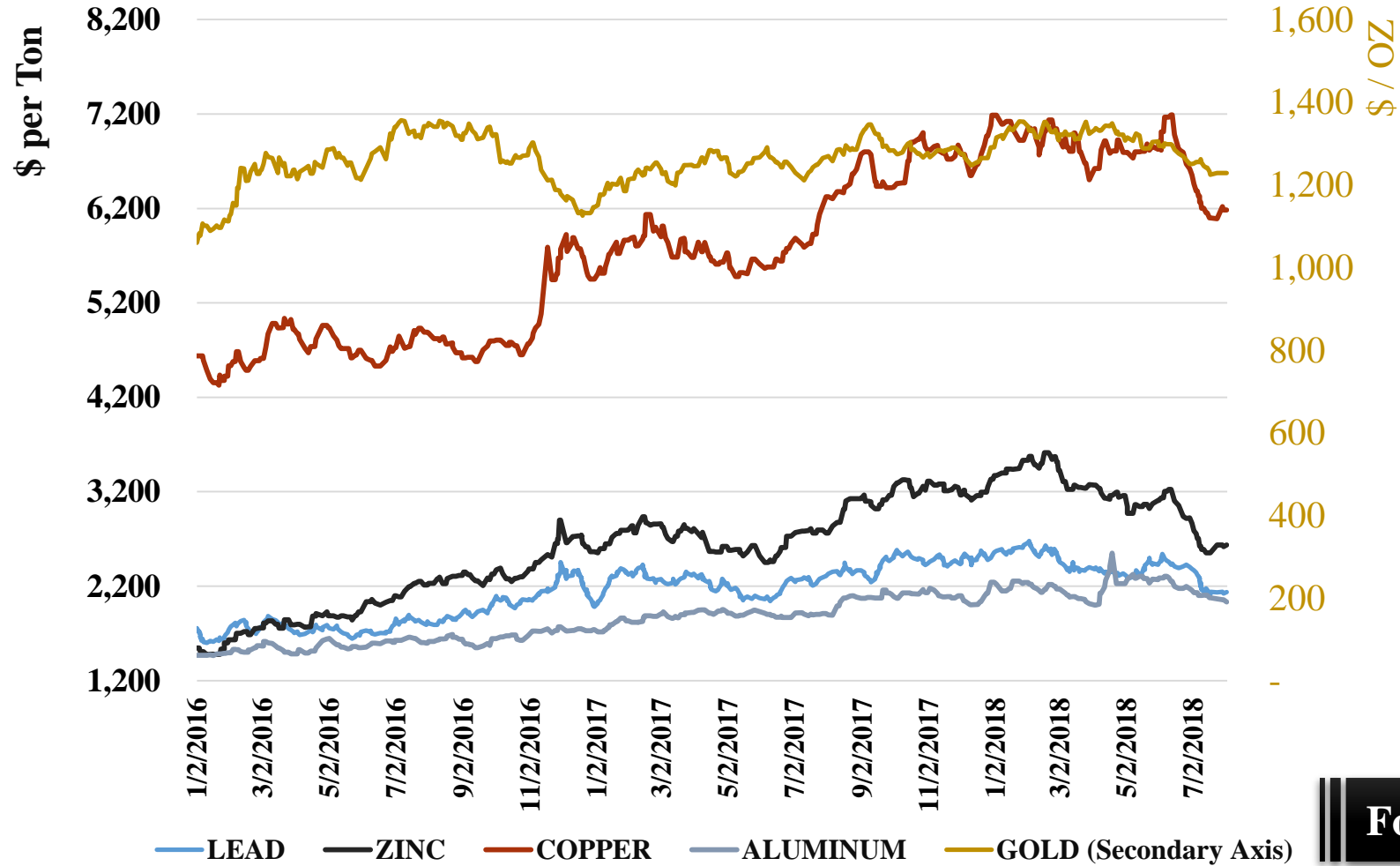




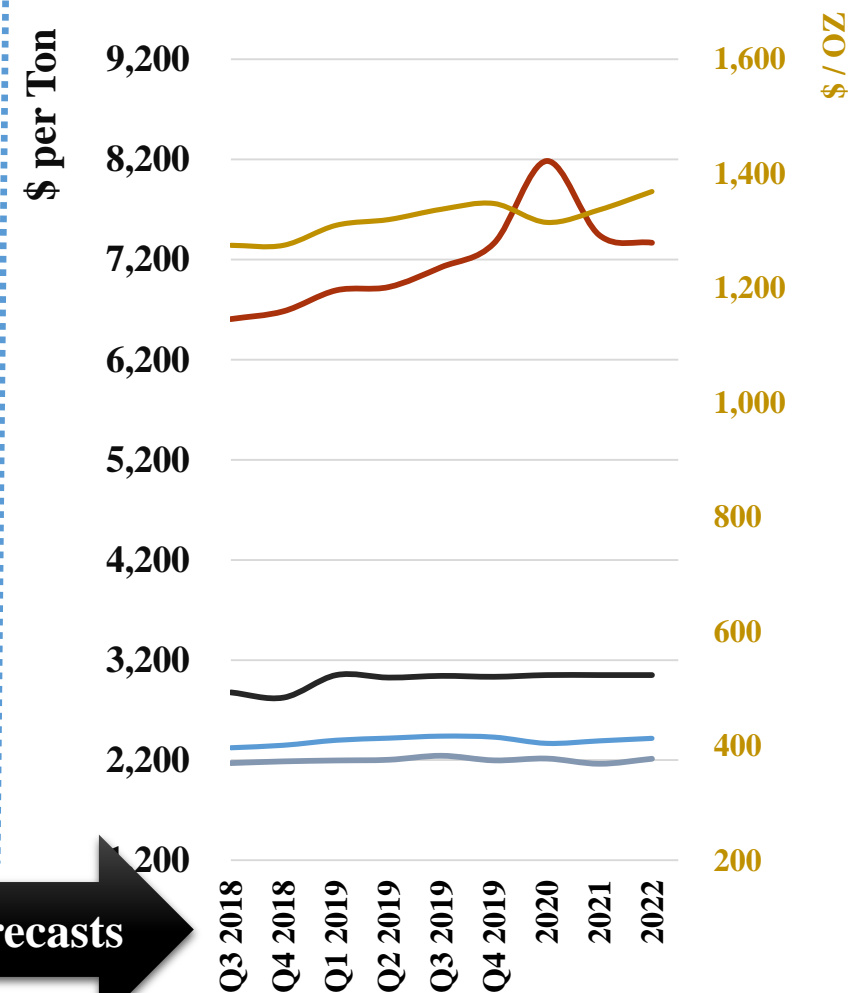
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**PRICE**

## World's Price of Non Ferrous Metals



## World's Price Forecast

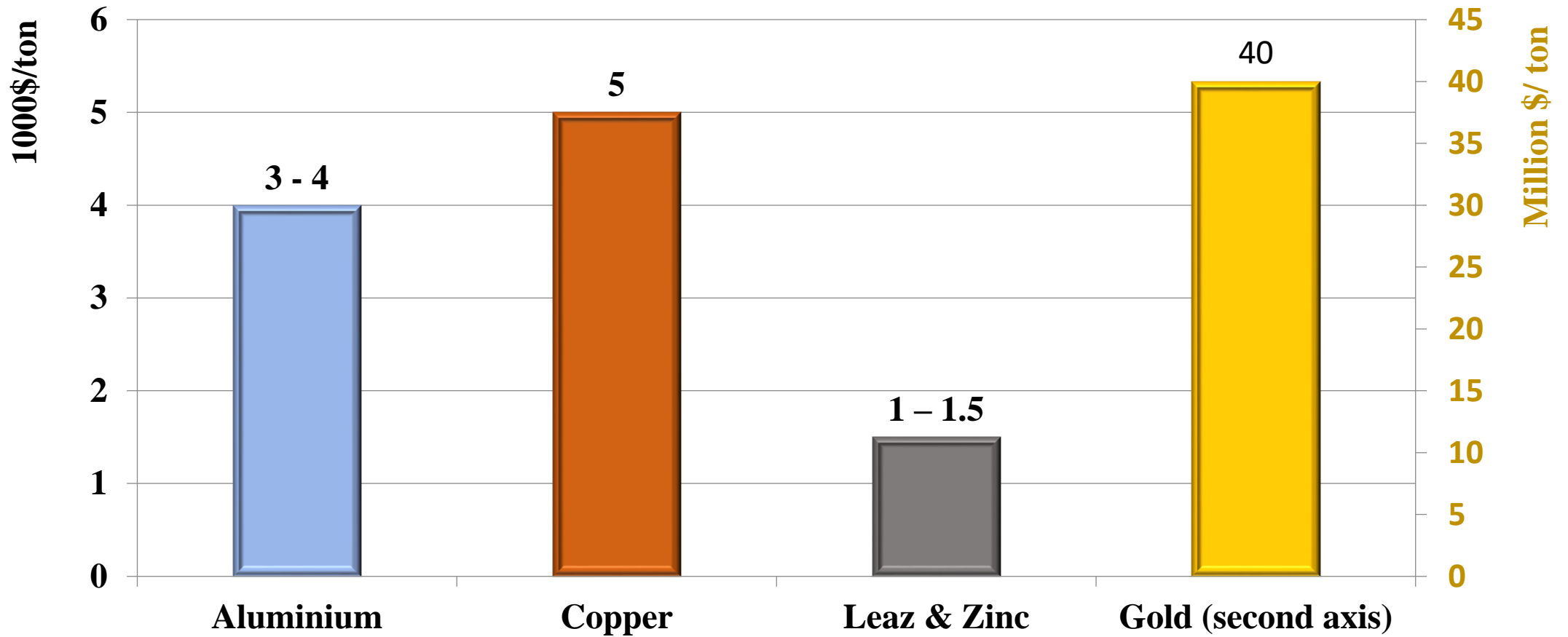




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# INVESTMENT

## The Amount of Production Investment

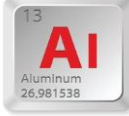








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**ENERGY**

## Average of Water and Energy Consumption

Metal	Process	Water (m <sup>3</sup> /Ton)	Natural Gas (MJ/Ton)	Electricity (KWh/Ton)
 <b>Aluminum</b>	<b>Hall-Hérout</b>	<b>5.3~7.5</b>	<b>~20000</b>	<b>13500</b>
 <b>Copper</b>	<b>Hydrometallurgy</b>	<b>72</b>	<b>~600</b>	<b>6880</b>
	<b>Pyrometallurgy</b>	<b>91</b>	<b>~4000</b>	<b>5250</b>
 <b>Gold</b>	<b>Cyanidation</b>	<b>246000</b>	<b>~350</b>	<b>114~140</b>
 <b>Lead</b>	<b>Caldo Furnace</b>	<b>14</b>	<b>~16000</b>	<b>1540</b>
 <b>Zinc</b>	<b>Sintering</b>	<b>14</b>	<b>9100~10400</b>	<b>3890</b>
	<b>Leaching</b>	<b>13</b>	<b>2700~3900</b>	<b>4015</b>

1 MJ/Ton  $\approx$  0.027 Nm<sup>3</sup>/Ton



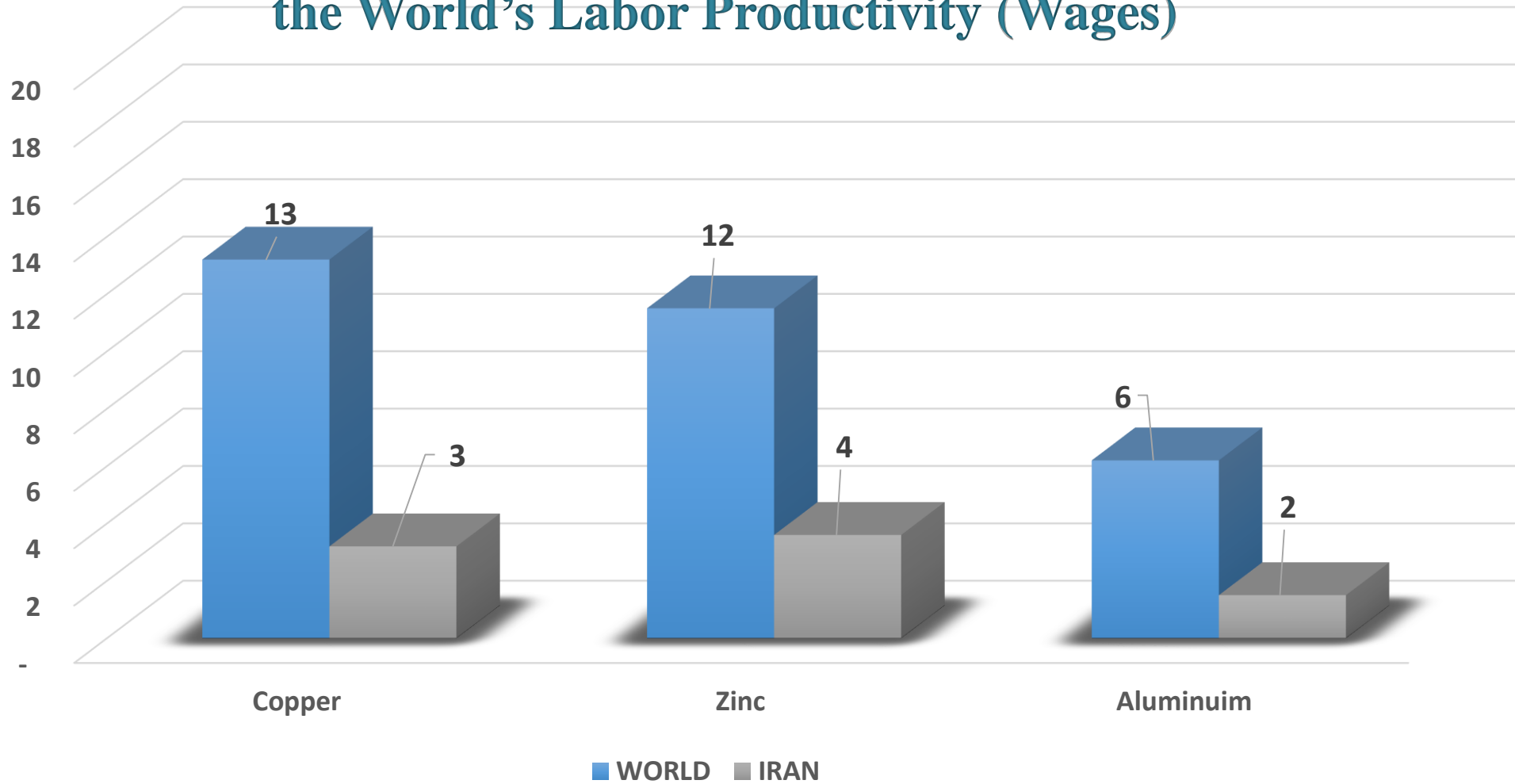


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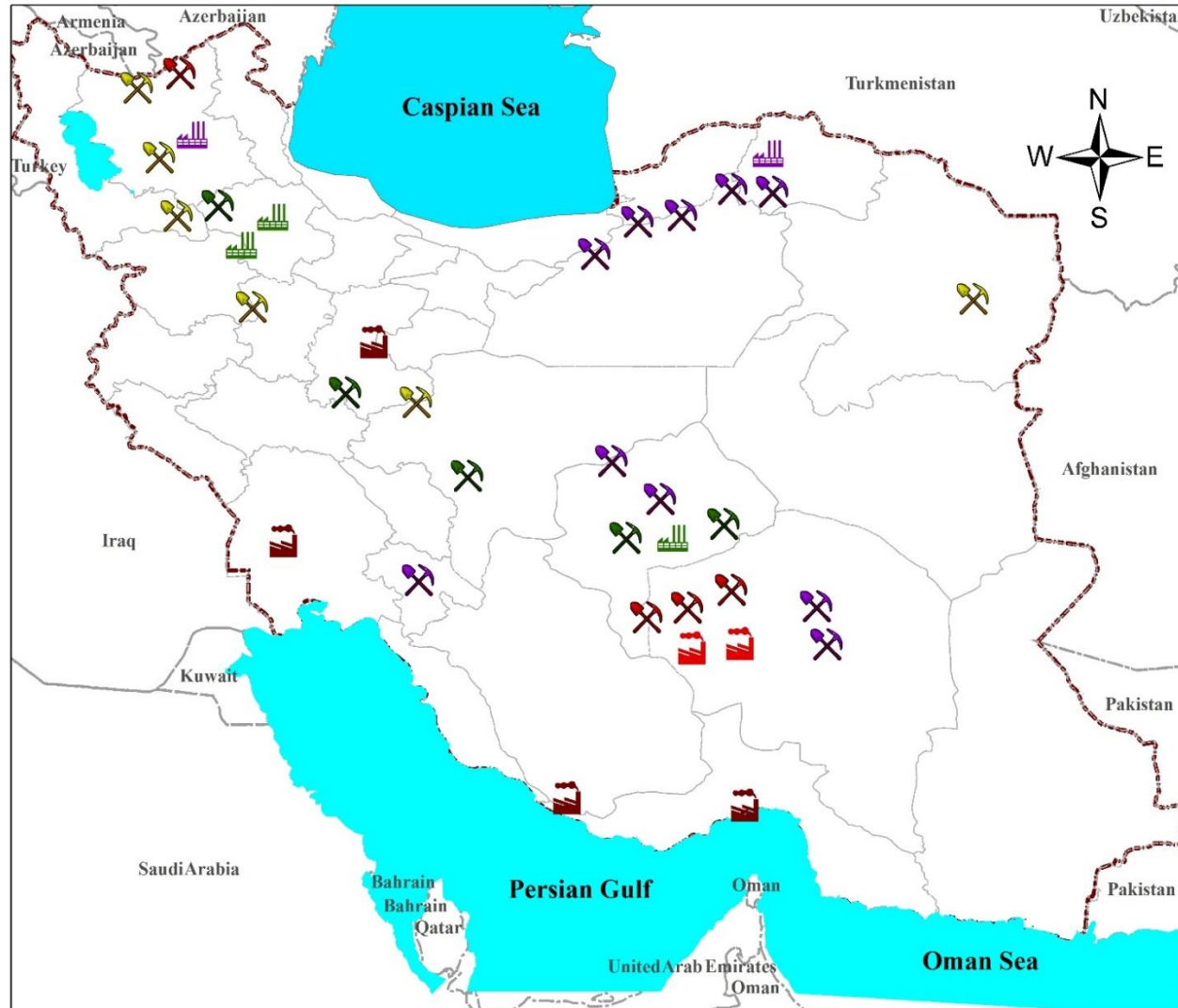
# PRODUCTIVITY

## Comparison of Iran's Labor Productivity with the World's Labor Productivity (Wages)

Value added/wage



# Iran's Non-Ferrous Metals Factory and Mines Map



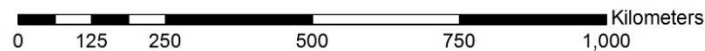
**Map Title:**  
Location of Factory & Mines  
(Non-Ferrous Metals)

**Legend**

- Boundary City
- Boundary Country
- Lakes & Seas
- Bauxite mine
- Alumina refinery
- Alumina smelter
- Zinc Refinery
- Zinc Mine
- Cooper smelter
- Cooper mine
- Gold Mine

**Provider:**

FIE Co.



## چالشهای توسعه فلزات غیر آهنی

- نبود استراتژی مشخص در هر شاخه علیرغم نقش موثر در ایجاد ارزش افزوده.
- ساختار نا همگن در بخش دولتی و خصوصی و ضعف حضور بخش خصوصی.
- عدم دسترسی به اطلاعات صحیح بویژه در واحدهای بخش خصوصی.
- نبود اطلاعات شفاف، در دسترس و قابل اعتماد از وضعیت بازار.
- بازدهی نا مطلوب نسبت به مقیاس.
- به روز نبودن برخی فناوریهای موجود.
- تراکم نیروی انسانی و بهره وری پایین.
- کمبود منابع مالی برای توسعه و نوسازی.
- مشکلات زیر ساختها، آب، برق، حمل و نقل

## سخن پایانی

- نظر به برگزاری اولین همایش فلزات غیر آهنی به منظور تدوین چشم انداز ، استراتژی و برنامه عملیاتی ملی علیرغم مطالعاتی مطلوبی که در واحد ها انجام پذیرفته است.
- **نیازمند مطالعات جامع و میدانی در زمینه :**
- ذخائر و نتایج اکتشافات
- بازار های داخلی ، بین المللی
- انتخاب بازار های هدف صادراتی
- بررسی زیر ساختها
- فن آوری های نو
- شیوه های تامین منابع مالی و جذب سرمایه
- تولید محصول با ارزش افزوده بالاتر بویژه در صنعت مس

## سپاس

مدیران و کارشناسانی که در تهیه این گزارش ما را یاری نمودند بویژه :

سازمان ایمیدرو

خانه معدن ایران

شرکت ملی صنایع مس

شرکت کالسیمین

انجمن های تخصصی فلزات غیر آهنی

رسانه دنیای اقتصاد