

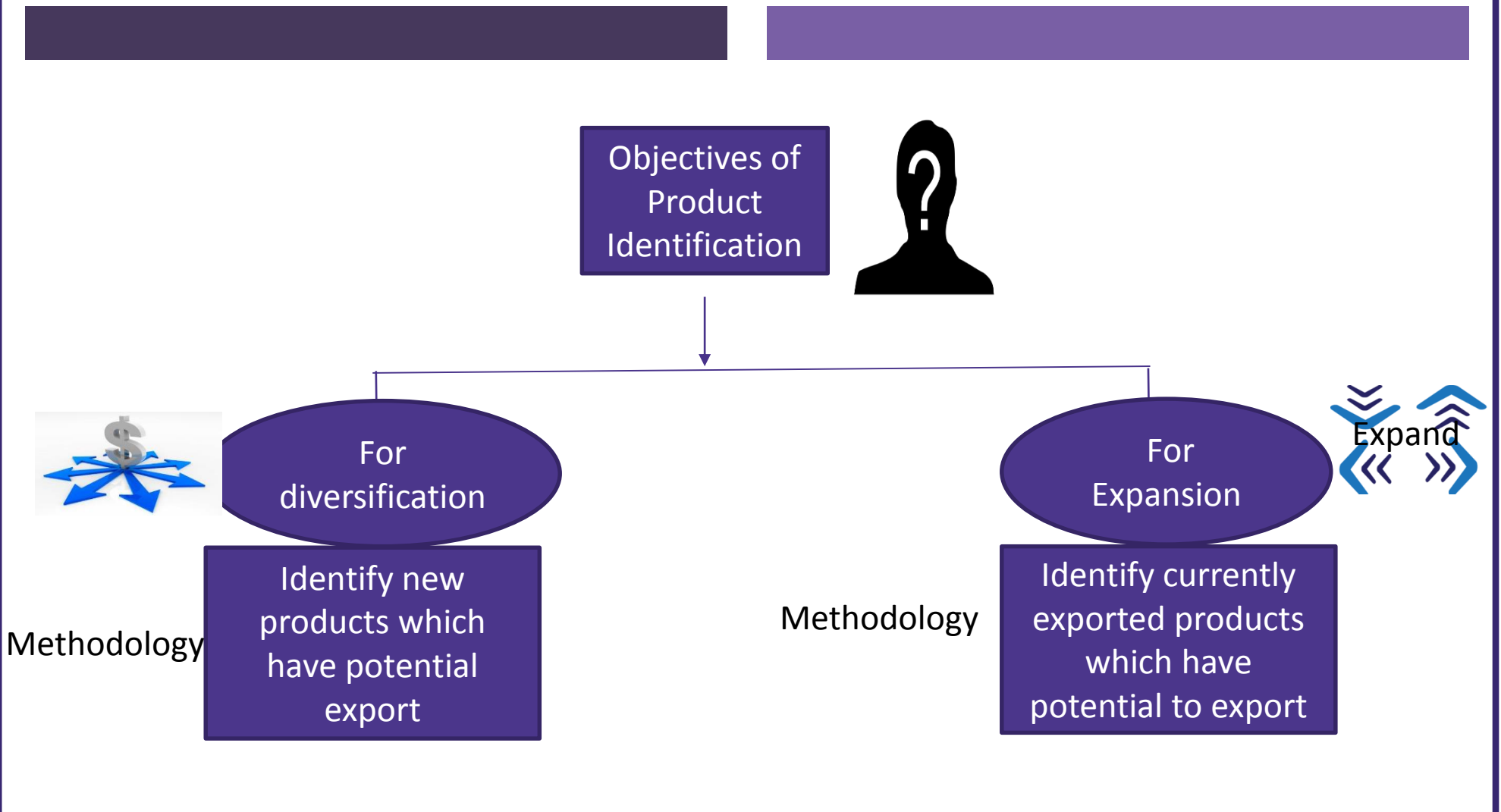
Potential Products & Markets Identification

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Report 1/Q42017

Methodology

Objectives & methodology of Product Identification



Criteria for identification



Diversification Criteria

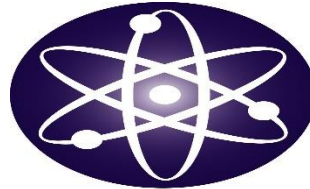
- Demand taking into account UAE's market access conditions.
- Supply measured by the proximity of UAE to diversify into the product: it is based on the overlap of UAE's current export basket and other countries' export baskets.
- Qualitative validation



Expansion Criteria

- Export performance, ease for UAE to access this market, based on current trade in this market
- Projected demand in the market in 2020
- Tariffs in the market and distance to the market
- Qualitative validation

Scientific basis



Science

Export potential of existing products

The export potential value follows directly from the combination of supply, demand and easiness to trade factors, $EP_{ijk} = Supply_{ik} \times Easiness_{ij} \times Demand_{ijk}$

$$V_{ijk} = \tilde{ik} \cdot \tilde{ij} \cdot v_{jk}$$

first term corresponds to exporter i 's world market share in product k . The second term is a measure of bilateral trade relative to what trade would be if the exporter had the same share in world markets as it has in market J The third term simply reflects total imports.

Diversification for new products

. This concept measures the relatedness of products (their "proximity") based on the observation that similar products are more likely to be produced by the same country than dissimilar products

Executive Summary

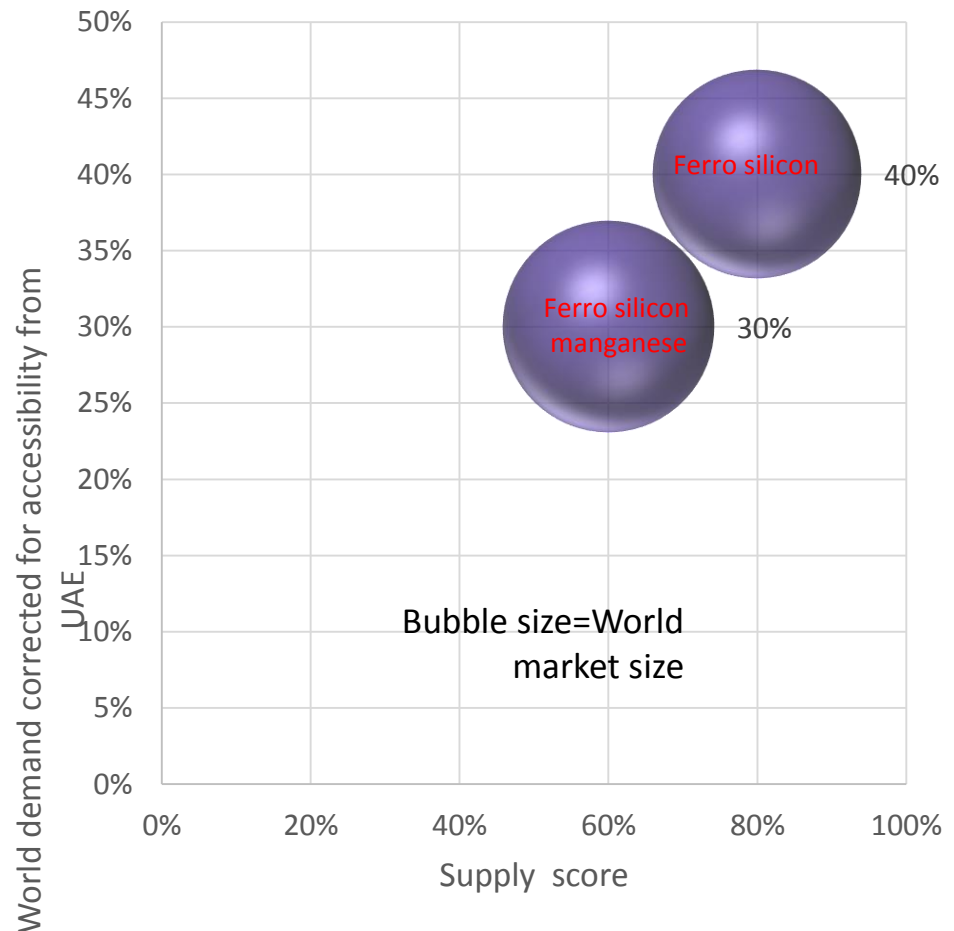
- This report aims to identify new products for diversification of the export basket as opposed to identification of existing products with new potential i.e. for purpose of expansion of current exports to new markets.
- In the series of identification reports we will cover both objectives, diversification into new products and expansion of potential of an existing product
- *In this report Ferrosilicon => 55% has been identified as a new product with good potential taking all 3 factors together i.e. supply, demand, and world imports and qualitative validation*
- Markets have been identified based on the measured export potential and market access conditions (Reference ITC export potential map)
- The markets with good potential for UAE exports of Ferro silicon=>55%
Are **Iran,India,Japan,KSA, and Thailand**
FeSi is an alloy of iron and silicon, based on quartz (SiO₂), iron ore (Fe₂O₃), coal and coke (C). It is used in the metal industry

Product Identification

Opportunities for export of new products are identified by assessing supply based on UAE export basket overlap and other countries' export baskets and the demand represented by projected world import for each product taking into account UAE's market access conditions. The size of the bubble represents the world imports, another indicator of demand. Further the identified product is qualitatively validated.

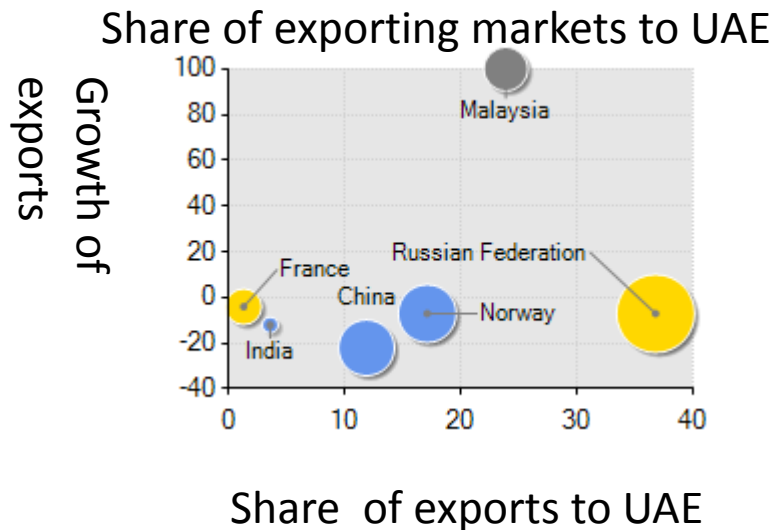
Ferrosilicon => 55% is identified as the product with a good potential taking all 3 factors together i.e. supply, demand, and world imports and qualitative validation

All products in the top right quadrant are having export potential



Validation

- Availability of silica in UAE or GCC
- UAE imports currently 55 million AED worth of Ferro silicon in 2016 equivalent to 15000 tons
- Growth in imports by UAE registered 6% p.a. for 2012-2016
- Economic production 100,000 tons p.a. which is not large
- This only a preliminary assessment; for an investment decision feasibility study will be required



What is Ferro silicon?

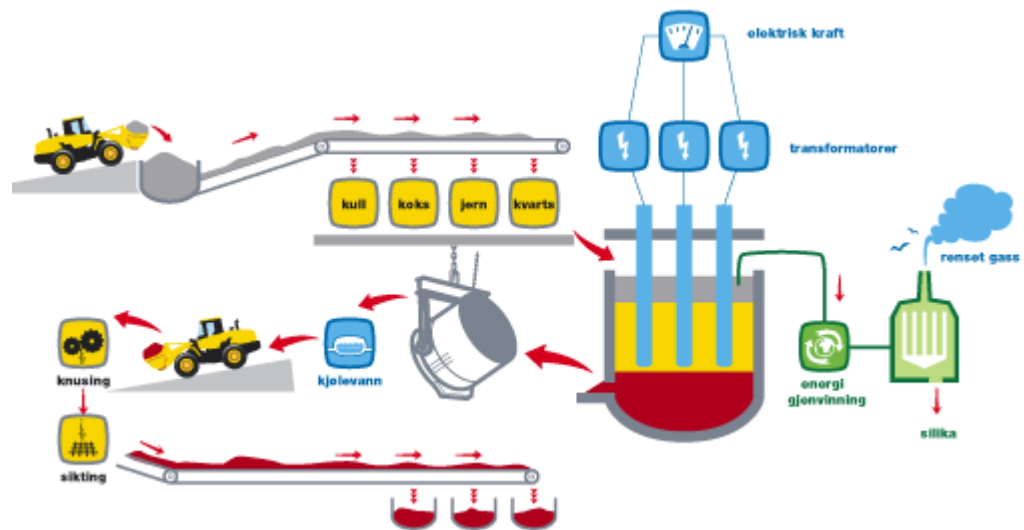
FeSi is an alloy of iron and silicon, based on quartz (SiO_2), iron ore (Fe_2O_3), coal and coke (C). The carbon in the coal and coke is needed for extracting oxygen so that pure silicon and iron can be formed. The FeSi alloy is used to give steel and cast iron the desired qualities, such as strength, hardness, temperateness and corrosion resistance. One metric ton of steel contains approximately 3-4 kilograms of FeSi, whereas one metric ton of stainless steel contains approximately 20 kilograms of FeSi. Hence, we are always surrounded by products containing ferrosilicon.

Uses of Ferro silicon



Ferrosilicon is also **used** for manufacture of **silicon**, corrosion-resistant and high-temperature-resistant ferrou**silicon** alloys, and **silicon** steel for electromotors and transformer cores. In the manufacture of cast iron

Ferro silicon production



Market Identification

Market is identified based on the measured export potential as defined in slide 5 and market access conditions

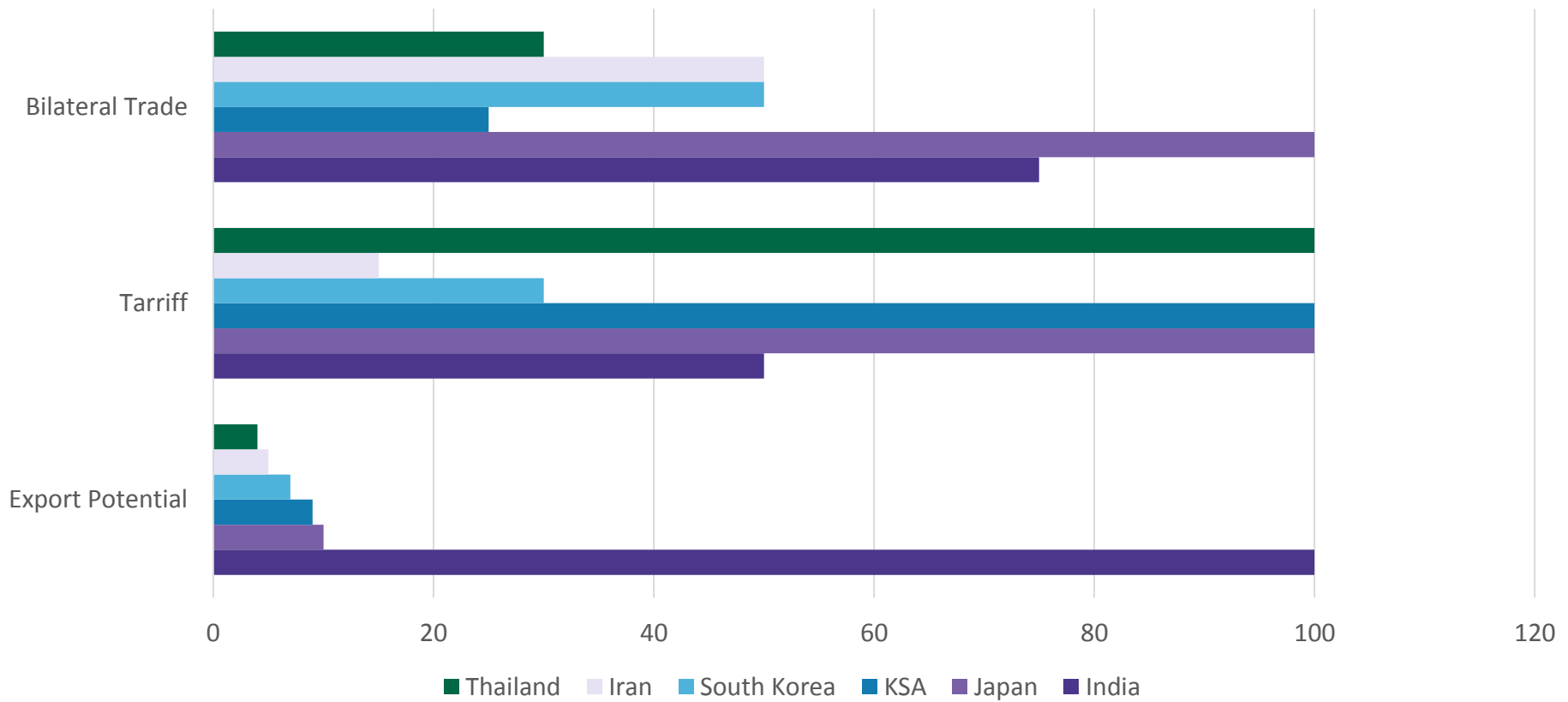
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	Export potential Mn. US\$	Tariff	Size of all trade with UAE Bn US\$
India	41.5	5%	26.4
Japan	3	0%	32.5
KSA	2.7	0%	8
South Korea	1.8	2%	15.3
Iran	1.1	25%	15.3
Thailand	1.0	0%	11.7

The markets show differences particularly in scores of tariffs and size of bilateral trade with UAE



Market Scores out of 100



Ferro silicon potential markets lie in Asia



All the potential markets for the Ferrosilicon lie in the Asia as shown in the following slide , while markets for Castor oil in report #2 all lie in the West

Ferrosilicon Potential markets for exporting from Dubai

