

# ‘Beyond Carpets and Dried Fruits’:

The Development of Iran’s Non-Oil Exports, 1990–2011

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## Abstract

In 1999, a report published by the United Nations Industrial Development Organization (UNIDO) noted that Iran's non-oil exports were languishing at \$1.3 billion per year and were mostly limited to carpets and dried fruits. By the end of 2011, the country was exporting \$24 billion in non-oil goods per year, amounting to a 1,725% increase over the 22 years, and a 515% increase between 2000 and 2012. This paper divides this period into two date ranges: January 1990 to December 1999 and January 2000 to December 2011. It utilises data collated from numerous databases to present the changes that occurred in Iranian export revenue, and 'export product' and 'export market' composition, and then analyses the drivers of change behind these trends. This paper finds that the main factors contributing to the increase in Iranian non-oil exports can be categorised into three groups: 'top-down' government policy, external developments, and 'bottom-up' company- and industry-level behaviour. The first and second of these factors were necessary developments for export diversification, while the third provided the necessary catalysing force in the 2000s. Finally, this paper details the implications of these findings for readjusting the understanding of Iran's modern economy: the key role that Iran's non-oil sector development in the pre-sanctions era has played in the economy's survival during periods of extreme sanctions since the 2000s; the growth and shift towards Iran's regional and eastern trade markets, and large potential for further growth; Iran's impressive industrial development in a period of little foreign direct investment (FDI); and the higher-than-assumed degree of effective cooperation between state programming and company- and industry-level behaviour.

## Key findings

The seven main findings of this paper redress common misunderstandings about Iranian economic development in the period from 1990 through 2011 and have clear implications for economic policymaking.

1. **'Big push' economic policy:** Iran's successful utilisation of 'big push' theory to drive industrial development with large amounts of government spending, accompanied by (a degree of) privatisation and liberalisation, can act as a model for other regional resource-rich economies looking to diversify away from oil. Iran's achievements in this regard were held back by several factors: limitations in government liberalisation policy; exchange rate concerns, which at times led to measures that were not conducive to exporters; and a hostile relationship with countries with huge export market potential. Countries without these issues would thus benefit even more than Iran from a 'big push' approach.
2. **'Bottom-up' economic development:** Government policy laid the groundwork for non-oil export growth, but limitations and implementation flaws meant that it cannot be considered the primary driver. Instead, actions at company- and industry-

level drove the rate of growth experienced in the second half of the period. This somewhat counters criticisms about excessive state involvement in Iran's economy, which is viewed by some as debilitating.

3. ***New products, new markets:*** Iran's non-oil export growth consisted overwhelmingly of new manufactured products in new markets. Traditional, low-complexity exports waned and never recovered. Future potential lies in continuing to develop the capabilities to produce high-grade industrial products, which endow Iran with comparative advantage in regional markets.
4. ***Markets trend towards regionalism:*** Iran's greatest market-development successes throughout the period were with its regional neighbours and other countries in Asia, especially China. This was driven by better overall diplomatic relations with these countries, lower transportation costs and a higher degree of synchronisation between export offerings and market needs. Continual exclusion from WTO membership also helped drive this trend.
5. ***Bilateralism over multilateralism:*** Comparative advantage and geographic proximity alone did not suffice to drive exports, but progress in tariff reduction and transportation route development was also needed. For this reason, Iran experienced greater success on a bilateral basis, rather than through multilateral endeavours. The Iranian government would achieve further non-oil export gains by applying the successful blueprints of relations with countries, such as Afghanistan and Iraq, to develop other regional bilateral trade relations.
6. ***China's emergence:*** The rise of China as an importing giant offered a big export opportunity to Iran, one on which it duly capitalised. Furthermore, China has historically assisted Iran's industrial, non-oil development more through its role as importer than through its supply of any significant levels of FDI, although the latter would likely have resulted in further development. This bears on contemporary Sino-Iranian relations, as the Iranian government would benefit from focusing on pre-existing areas of successful cooperation with China, as well as those areas with room to grow. The recently signed 25-Year Agreement provides an opportunity for Iran both to secure Chinese investment targeted at its non-oil sectors, and to encourage further Chinese imports of Iranian goods.
7. ***Sanctions pressure:*** Sanctions imposed from 2008 onwards, which aimed to restrict Iran's financial resources and access to assets, may have slowed down the growth rate of its non-oil exports, but only temporarily. Non-oil exports were far more resilient than those of the oil and gas sector, demonstrating the importance of industrial diversification. Continued diversification is vital both in the gradual quest to replace non-renewable energy dependency and in mitigating oil-targeted sanctions programmes. The Iranian economy, to a considerable extent, owes its survival in the 2018-2021 period of 'maximum pressure' sanctions to the industrial development carried out in the preceding two decades.



# Overview

The successive shocks of the 1979 Iranian Revolution and the Iran-Iraq War (1980-1988), and the subsequent hostile international environment, caused economic turmoil for the fledgling Islamic Republic of Iran.<sup>1</sup> To repair this damage, the government instituted a series of Five-Year Socioeconomic and Cultural Development Plans (FYPs) aimed at steering the economy towards prosperity, which continue to this day.

*Table 1: The Islamic Republic of Iran's Five-Year Plans, 1989–2021<sup>2</sup>*

First Five-Year Plan (FYP1)	March 1989 to March 1994
Second Five-Year Plan (FYP2)	March 1995 to March 2000
Third Five-Year Plan (FYP3)	March 2000 to March 2005
Fourth Five-Year Plan (FYP4)	March 2004 to March 2009
Fifth Five-Year Plan (FYP5)	March 2011 to March 2016
Sixth Five-Year Plan (FYP6)	March 2016 to March 2021

The drive for greater economic liberalisation were directed by this top-down, state-directed mechanism. FYP1 introduced an overall strategy of import substitution.<sup>3</sup> Recent crises had demonstrated that Iran's economy was highly exposed to external forces, and this plan was an effort to achieve greater economic self-reliance. FYP2 transitioned to a governmental policy of export value-creation that promoted outward-looking industrial development.<sup>4</sup> Importantly, the plans identified the need to diversify away from a reliance on oil exports, a sector highly affected by global shocks and especially precarious for Iran as a nation alienated from influential members of the international community. Therefore, non-oil industrial development was central to the government's grand economic plan.

1. All translations from Persian are by the author, unless otherwise stated.

2. The FYPs begin and end in March, the first month of the Iranian calendar year. The FYPs are not always implemented consistently, as seen with the year-long gap between FYP1 and FYP2, the crossover year in FYP3 and FYP4, and the two-year-long gap between FYP4 and FYP5.

3. *First Economic, Social and Cultural Development Plan of the Islamic Republic of Iran (Qānoon-e barnāme-ye aval-e tose'e-ye eqtesādi ejtemā'i va farhangi-ye jomhoori-ye eslāmi-ye Iran)*, the Majles Research Centre, <https://rc.majlis.ir/fa/law/show/91755>.

4. *Second Economic, Social and Cultural Development Plan of the Islamic Republic of Iran (Qānoon-e barnāme-ye dovom-e tose'e-ye eqtesādi ejtemā'i va farhangi-ye jomhoori-ye eslāmi-ye Iran)*, the International Labour Organization, <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/91667/106434/F-714578079/IRN91667.pdf>.

It was at the end of FYP2 that the United Nations Industrial Development Organization (UNIDO) published its report surveying the economic progress of Iran's non-oil manufactured exports.<sup>5</sup> Throughout the 1990s, Iran benefited from the technical assistance of international bodies such as UNIDO, especially after the 1997 election of outward-facing president, Mohammad Khatami. The UNIDO report contributed to these efforts to support Iran's integration into the global community by inspecting the country's non-oil industries and offering recommendations. The focus was on sectors with the best growth potential, including petrochemicals, food processing, and plastic and metal manufactured goods. The report's overall message was that Iran's non-oil industries had made unmistakable progress over the past decade, but still faced significant technological, structural and institutional obstacles to further diversification and development.

On the other hand, the following 12 years, from 2000 until the end of 2011, were something of a golden age for Iran's diversified export development. This came to an end when western countries, including the U.S. and the EU, imposed harsh economic sanctions on Iran, which temporarily setback the development of non-oil exports. This paper includes the first two years of the Fifth Five-Year Plan, so as to cover the entirety of this 12-year breakthrough period for non-oil exports. From January 2000 to December 2011, the value of non-oil exports rose from \$3 billion to \$24 billion, while their share in total exports grew from 10% to 17%.<sup>6</sup>

The central question to this study is, "What changed between these two periods to cause such a rapid growth?" There were three main drivers of change in this process: 'top-down' government policy, 'bottom-up' company-level behaviour, and external regional and global forces. Shifts in government policy via the period's four FYPs constructed a suitable institutional framework and domestic environment for export diversification. However, a lack of serious policy redirection between FYPs 1 and 2 on one hand, and FYPs 3<sup>7</sup> and 4<sup>8</sup> on the other, meant that company-level behaviour and positive external developments were needed to generate genuine non-oil export growth in the 2000s.

In short, this paper's hypothesis is that top-down, bottom-up and external factors all played important roles in driving the industrial and macro developments behind the growth in Iran's non-oil exports. However, after the turn of the millennium, it was a combination of company- and industry-level actions that successfully boosted production of manufactured goods, and the emergence of Chinese and regional markets, which continued to catalyse this rapid growth of non-oil exports.

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5. United Nations Industrial Development Organization (1999), *Islamic Republic of Iran Industrial Sector Survey on the Potential for Non-Oil Manufactured Exports*. Henceforth referred to as the 'UNIDO report'.

6. United Nations Comtrade Database, <https://comtrade.un.org/>. Henceforth referred to as 'Comtrade'. In almost all cases, the data presented in this paper is the result of the author's own investigation and condensation of vast databases, such as Comtrade (see *Methodology* for more on this).

7. *Third Economic, Social and Cultural Development Plan of the Islamic Republic of Iran (Qānoon-e barnāme-ye sevom-e tose'e-ye eqtesādi ejtemā'i va farhangi-ye jomhoori-ye eslāmi-ye Iran)*, the International Labour Organization, <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/91673/106443/F-916794206/IRN91673.pdf>.

8. *Fourth Economic, Social and Cultural Development Plan of the Islamic Republic of Iran (Qānoon-e barnāme-ye chahārom-e tose'e-ye eqtesādi ejtemā'i va farhangi-ye jomhoori-ye eslāmi-ye Iran)*, the International Labour Organization, <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/91673/106443/F-916794206/IRN91673.pdf>.



# Methodology

The 22-year period covered in this study tracks both the origins of the Islamic Republic's economic planning, and the emergence of non-oil exports as a concerted policy aim. This paper will use the UNIDO report as a boundary stone between the periods from January 1990 to December 1999, and January 2000 to December 2011, to analyse the growth in Iran's non-oil exports across these two decades. The beginning of the year 2012 serves as the limit of this study, as further sanctions were imposed on Iran that year, which ushered in a new phase of inward-looking economic policy, often referred to as the 'resistance economy' (eqtesad-e moqāvemati).

Iranian trade flow data throughout this period is of mixed quality. The most reliable databases, and those used in this paper, are UN Comtrade, the World Bank, and the Central Bank of Iran's annual reports, but the quality and completeness of the datasets improved significantly in the mid-2000s, although there continued to be discrepancies in trade values between datasets. As such, the quantitative analysis in this paper is intended to identify significant and illustrative trends related to the rise of Iranian non-oil exports—readers should assume a margin of error around individual figures.



The imposition of sanctions on Iran after the 1979 hostage crisis in Tehran initiated a process of forced economic diversification away from oil revenues. As of 2021, Iran is one of the largest oil-producing countries with the lowest oil revenues in the world. Iran’s non-oil exports aspire to fill this gap. This diversification proved crucial as Iran faced intense waves of economic sanctions from 2008 to 2015, and again from 2018 until now. The expectation that Iran’s economy would buckle under the Trump administration’s ‘maximum pressure’ campaign was commonplace among both senior Trump administration officials and Middle East commentators from across the political spectrum. Former U.S. Secretary of State Mike Pompeo accompanied his announcement of the instigation of the ‘maximum pressure’ campaign in November 2018 with a threat that Iran should improve its behaviour or else “see its economy crumble”.<sup>9</sup> Meanwhile, awareness of Iran’s economic diversity and durability was largely absent in mainstream media—articles detailing the importance of Iran’s non-oil economic sectors were published only after Iran’s economy bucked expectations of collapse.<sup>10</sup> The development of Iran’s non-oil sector and exports since 1990 thus plays a crucial role in its present economic endurance.

The story of Iran’s non-oil export growth between 1990 and 2011 is a tale of two halves. The period from January 1990 to December 1999 experienced only modest progress, followed by rapid growth after the turn of the millennium. This shift is clearly portrayed by three data trends: total non-oil export revenue, export composition and export destination.

*Table 2: The growth of non-oil exports across the beginning, middle and end of the study period, and as a % of total exports<sup>11</sup>*

	1990	1999	2011
<b>Total Non-Oil Export Value</b>	\$1.3bn	\$3.9bn	\$24bn
<b>Non-Oil Export % of Total Exports</b>	7%	19%	18%
<b>% Growth of Non-Oil Exports between years</b>	/	200%	515%

9. US Secretary of State Mike Pompeo (2018), Press conference speech at the Foreign Press Centre, video from CNBC, <https://www.cnbc.com/2018/11/05/trump-administration-details-sanctions-on-iranian-energy-banking.html>.

10. For example, Eqbali, Aresu and Engel Rasmussen, Sune (2020), *Battered by U.S. Sanctions, Iran Finds a Lifeline in Domestic Economy*, <https://www.wsj.com/articles/battered-by-u-s-sanctions-iranfinds-a-lifeline-in-domestic-economy-11608818402>.

11. 1990 data from the UNIDO report; 1999 data from Central Bank of the Islamic Republic of Iran, *Annual Review 2000/2001*, [https://www.cbi.ir/simplelist/AnnualReview\\_en.aspx](https://www.cbi.ir/simplelist/AnnualReview_en.aspx); 2011 data from UN Comtrade.

As Table 2 demonstrates, Iran's non-oil exports grew modestly from 1990 to 1999. In 1990, non-oil exports amounted to \$1.3 billion and this increased three-fold to \$3.9 billion by the end of the decade.<sup>12</sup> The rate of growth picked up significantly between 2000 and 2011, and so the final year of the study saw almost \$24 billion in non-oil exports. This rate of acceleration was especially marked between 2006 (\$12.1bn) and 2011, which saw non-oil export revenue double. As well as this, Table 2 shows how non-oil export revenues grew as a percentage of total export revenues across the period, from 7% in 1990 to 18% in 2011.

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12. UN Comtrade data.

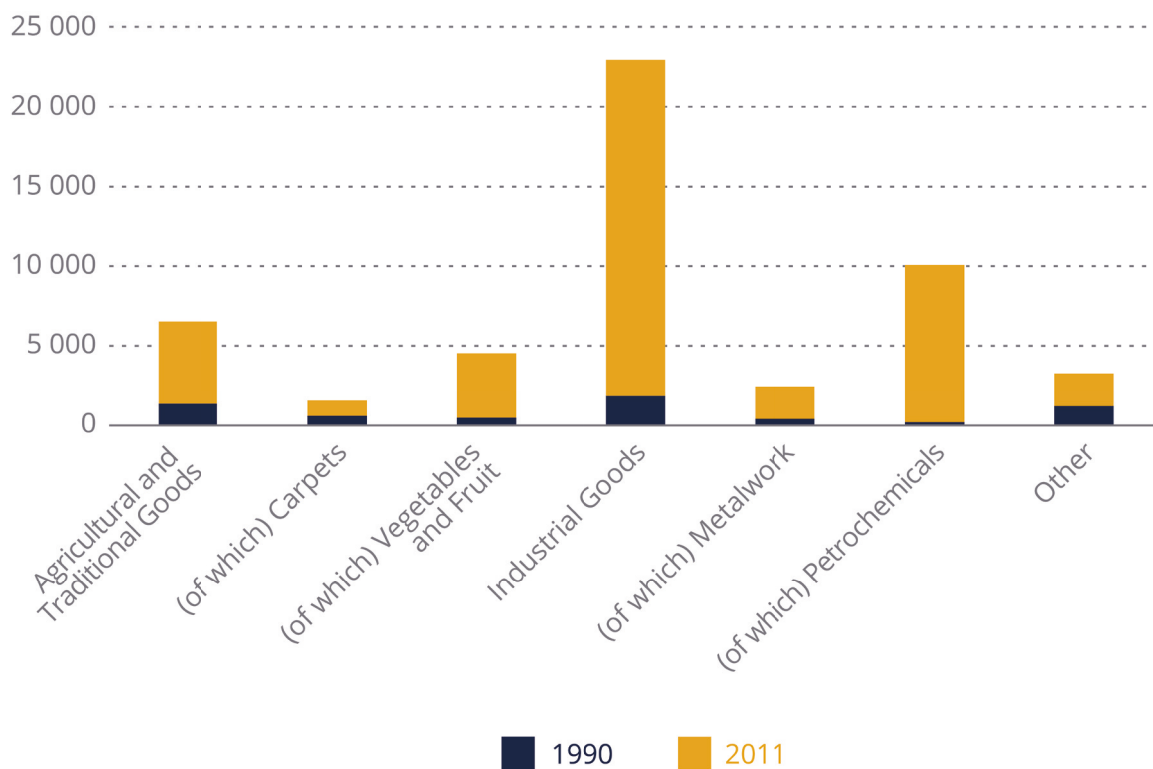


# Non-oil export composition



In 1999, the UNIDO report stated that Iranian non-oil exporters' "exposure to foreign markets is largely limited to the export of carpets and dried fruits".<sup>13</sup> This assessment seems fair when Iran's export industries and products at the time are laid out (Figure 1).

Figure 1: Iranian Non-Oil Export Composition change from 1990 to 2011<sup>14</sup>



As shown in Figure 1, from 1990 to 1999, Iran's non-oil exports were characterised by a dominance of raw goods and traditional manufactured goods. These mostly comprised hand-woven carpets (\$691m), dried fruits (\$517m) and pistachios (\$315m). Industrial goods composed a similarly sized share; however there existed no dominant industry, but rather an amalgam of goods, including petrochemicals, clothes, utensils, plastic products, cement, leather goods, electronic appliances, metals and casting. None of these were the result of recent industrial expansion. Rather, they were inherited from the Pahlavi era (1925-1979), particularly in the case of traditional Iranian carpets, pistachios, and dried fruits. This

13. UNIDO report, pxiii.

14. 1990 data from the UNIDO report; 2011 data from the Central Bank of the Islamic Republic of Iran, *Annual Review 2011/2012*, [https://www.cbi.ir/simplelist/AnnualReview\\_en.aspx](https://www.cbi.ir/simplelist/AnnualReview_en.aspx).

stemmed from Iran's inability to focus its attention on economic development during the tumultuous 1980s, in the midst of the Iran-Iraq War.<sup>15</sup>

On the other hand, Iran's non-oil exports increased by 515% between 2000 and 2011, reaching around \$24 billion. The government's commitment to export diversification, and the increasing complexity and sophistication of Iran's industrial products, started to pay off. Figure 1 demonstrates how, in 1999, industrial products seized much of the export share previously enjoyed by agricultural and traditional goods, then accounting for 81% of total non-oil exports.<sup>16</sup> By the end of 2011, Iran's main export products were petrochemicals (\$9.5bn), fruits and nuts (\$2bn), machinery and appliances (\$1.04bn), unmanufactured iron and steel (\$844m), carpets (\$857m), precious stones and metals (\$610m), metal artefacts (\$600m), vegetables (\$582m) and cars (\$374m).

Not all Iranian exports developed this way, however. Carpets – the largest non-oil export of the preceding decade – stagnated due to increasingly problematic overseas market dynamics, as competition from eastern countries (especially China and India) eroded Iran's market share. The textiles industry, meanwhile, dropped from owning a 34% share of Iran's total non-oil exports in 2000 to just 9% by 2011.

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15. As explored in studies such as Alnasrawi, Abbas (1986), *Economic Consequences of the Iraq-Iran War*, *Third World Quarterly* vol. 8, no. 3, pp. 869-895.

16. *Ibid.*

# Export destination



Iran's export markets also underwent significant changes over the decade. As shown below in Table 3, in 1990, Iran's main export destination was the industrialised western world (71%), mainly Europe (41%). By 1996, industrialised countries' market share had fallen to 55%, and the EU to 24%, while Asia had grown its share from 10% in 1990 to 22%.<sup>17</sup> Intricate trade data for this decade is unavailable and a sizeable discrepancy exists between databases, making precision difficult to attain. Nevertheless, as Table 3 shows, there was a clear eastward shift in Iranian exports, which continued at a steady pace across the decade.

*Table 3: Iran's exports shift eastwards throughout the 1990s<sup>18</sup>*

Area/Country	Year	% market share of total Iranian exports (including oil) <sup>19</sup>
Advanced Economies	1990	75%
	1999	66%
EU	1990	35%
	1999	20%
Emerging and Developing Asia	1990	5%
	1999	8%
Middle East & Central Asia	1990	2%
	1999	19%
Middle East	1990	1%
	1999	7.50%
China	1990	>1%
	1999	3.70%

As Iran's non-oil exports grew substantially between 2000 and 2012, this east-bound and regional trajectory continued. A 2008 World Bank report on MENA non-oil trade from 1998 to 2008 stated that the region had made "a major shift towards the fast-growing markets of Asia". In 1998, "14% of MENA's non-oil merchandise exports went to Asia, but

17. UNIDO report, p10.

18. Data from IMF *Direction of Trade Statistics*, <https://data.imf.org/regular.aspx?key=61013712>. NB could not use Comtrade, as no 1990 data available for Iranian exports.

19. Extracting non-oil exports from total exports in this period is even more difficult and unreliable. Total export data still demonstrates the broad shifts in Iranian export markets.

by 2008 this share nearly doubled and reached 25%".<sup>20</sup> Table 4 clearly illustrates Iran's part in this regional trend.

*Table 4: Iran's east- and region-bound export tilt, 2000–2012<sup>21</sup>*

Export Total by Country/Region	2000	2005	2008	2009	2010	2011	% change
Europe	6,944.98	13,123.77	21,977.35	12,050.05	17,583.12	21,913.73	316
Japan	5,053.12	9,714.91	17,213.17	8,780.56	10,529.79	12,128.95	240
Korea, Rep. of	2,257.32	3,334.77	7,757.60	5,420.52	6,547.39	10,691.49	474
China	1,672.70	6,411.24	18,472.91	12,474.25	17,203.53	28,551.70	1,707
India	444.55	593.77 e	13,210.70	9,975.48	10,482.02	10,863.78	2,444
Turkey	769.56	3,273.31	7,735.56	3,213.19	7,212.27	11,756.16	1,528
Middle East & Central Asia	1,833.36	3,528.53	4,848.57	3,503.41	4,846.96	3,827.09	209
United Arab Emirates	297.08	581.88	991.97	785.51	1,058.98	1,239.68	417

As Table 4 demonstrates, Iran's degree of regional trade success was realised on a country-by-country bilateral basis, rather than across an entire bloc. For example, Turkey-bound trade vastly outperformed the Middle East as a whole. This demonstrates that Iran's bilateral trade strategy had greater efficacy than its multilateral relations, which is consistent with a country battling international ostracisation and financial sanctions.

In summary, Iranian non-oil exports began to develop slowly in the 1990s. The 12 years from 2000 through 2011 were their most fruitful development phase. Non-oil exports accounted for 4% of Iran's GDP at the end of 2011, up from 3% in 1999, an impressive feat given the accompanying sharp rise in oil prices and Iranian oil output in the 2000s. Iran's loss of market share in developed countries was undoubtedly disappointing – and points to a lack of success in maintaining the necessary product quality to compete – as well as the repercussions of international isolation which denied full participation in global trade and financial institutions. However, industrial development, and the replacement of former markets with those in which Iran could secure comparative advantage, ensured that even the impact of 2008 sanctions could not reverse the trend of progress. The quick growth of the petrochemical industry was also a tremendous boon. The following section presents an analysis of the developments between these two periods in order to understand the forces that drove them.

20. Ianchovichina, Elena (2011), *MENA's Non-Oil Export Performance in the Last Decade*, The World Bank's *MENA Knowledge and Learning Quick Note Series*, <https://openknowledge.worldbank.org/bitstream/handle/10986/10891/622410BRI0Non00Box0361475B00PUBLIC0.pdf?sequence=1&isAllowed=y>.

21. World Bank export data.



The three data trends across the two periods outlined above were driven by three factors: government policy, industry- and company-level actions, and external forces. Each factor played a distinct role in the growth of non-oil exports, as did the interaction itself between them. This section examines each of these three factors.

## I – Government policy

Government policy across the years from 1990 through 2011 is best approached by dividing the period in two: the first from 1990 to 1999 comprising FYP1 and FYP2; and the second from 2000 to 2012 comprising FYP3 and FYP4. FYP5's policies will not be included as the plan was not approved by parliament until November 2010, and so was only in effect in the final year of this study. In any case, it did not introduce any major alternations to the plan set forth in FYP4.

This process of state economic planning started with FYP1, which was the Islamic Republic's first concerted attempt at industrial advancement after the 1979 Revolution and the Iran-Iraq War in the 1980s. It contained specific measures relevant to trade, instituting a government-driven programme of economic development and subscribing to the principles of self-reliance in import substitution. After five foundation-building years, the next FYP transitioned towards policies of export promotion, while maintaining some protective measures. FYP3 and FYP4 built on these foundations, introducing measures in pre-existing fields, rather than any significant policy redress. Three main areas of government policy affected non-oil exports: economic planning, foreign exchange policy, and investment.

### Economic planning

The Iranian government utilised target quotas in order to measure the success of non-oil export growth. Targets, of course, only work if the policies themselves are implemented effectively. FYP1 and FYP2 set ambitious targets for non-oil exports that reflected the latent attention of the government in this area. Table 5 compares the targets set by FYP1 and FYP2 with actual outcomes, which is one way of assessing the success of government policy towards non-oil export development throughout this decade.

*Table 5: Non-oil export targets and outcomes in FYP1 and FYP2<sup>22</sup>*

Year	Target (\$million)	Outcome (\$million)	Deviation (%)
1990 (FYP1)	2,383.5	1,312.2	-45
1991 (FYP1)	3,149.6	2,648.7	-16
1992 (FYP1)	4,247.9	2,989.7	-30
1993 (FYP1)	6,115.5	3,746.8	-39
1994 (FYP1)	4,119.9	4,824.5	+17
1995 (FYP2)	4,446/0	3,257.0	-27
1996 (FYP2)	4,4841.1	3,120.0	-36
1997 (FYP2)	5,247.8	3,050.0	-42
1998 (FYP2)	5,688.6	3,013.4	-48
1999 (FYP2)	6,165.3	3,942.0	-36

Two aspects of these targets are striking: (1) the drastic negative deviation between target quota and outcome in all but the year 1994; and (2) the stark decline of exports in 1995. For the first, it should be noted that governments frequently set ambitious goals for state-led projects in order to create an optimistic environment and signal intent. A distinction must also be made between a target and its implementation, for a government can make the first without doing the second. This logic would indicate that the Iranian government either did not set in place effective measures to meet its targets, or it did not implement effective measures properly, or both.

From 1990 to 1999, it was a combination of the two. The UNIDO report notes how the Iranian government displayed a tendency in the 1990s to “neglect the promotion of non-oil exports” during periods when oil prices were high. Whereas, when oil prices dropped, there was “an intensification of the drive toward non-oil export promotion via the granting of incentives to exporters”.<sup>23</sup> This was because the state still viewed non-oil exports largely as an inferior generator of foreign exchange relative to oil. This meant that, in periods of readily-available foreign currency arising from healthy oil profits, the government’s focus on boosting non-oil exports diminished.

Furthermore, even when implemented fully and correctly, the government’s policies themselves were not always conducive to establishing an environment in which exports could flourish. Throughout this decade, the state created a bureaucratic leviathan of overarching boards, governing institutions, and regulatory bodies to oversee and promote non-oil exports. Although these initiatives did create an institutional framework that sought

22. UNIDO Report, p18. Such a comparison between targets and outcomes has not been investigated yet for the FYPs after the turn of the millennium, and so offers an opportunity for further research to provide valuable Iranian FYP analysis.

23. Ibid., p19.

to realise the value of non-oil exports, they also often frustrated one another and made it harder for companies to do business overseas, acting as what the UNIDO report calls “policy-induced bottlenecks”.<sup>24</sup> For example, by 1996, newly-established quangos relating to exports oversight included the Export Promotion Centre of Iran, the Export Guarantee Fund of Iran, the Iran Chamber of Commerce, and several independent overseas commercial bureaus. All of these were tasked with the broad goal of “developing non-oil exports and resolving the problems faced by exporters”.<sup>25</sup> Yet, they often trod on each other’s toes, creating frustration with the entire process.

By way of example, the UNIDO report commented that agricultural exports were “complicated by the fact that the responsibility for agro-industries has been parcelled out amongst several government organisations with varying and sometimes contradictory objectives”, and that future success required the establishment of “a single coordinating body”.<sup>26</sup> The same is said for many other export industries, and the report called for further easing of regulations in the next FYP (FYP3).

Clearly, Iran’s strategy for non-oil export development in FYP1 and FYP2 was flawed, which is why it failed to hit any of its targets throughout the decade. Nonetheless, it achieved a degree of success in boosting these exports over the 10 years. This was all the more impressive given the country’s surrounding economic issues, such as slowing economic growth and a rising current account deficit, despite pursuing a policy of import substitution. Imperfect policy implementation may have kept targets and outcomes disparate, but the importance of prioritising non-oil export expansion in the early stages of state economic programme must not be understated. In the decade beginning in 1990, the government did succeed in creating an environment and a framework in which non-oil industries could, in time, flourish and begin increasing exports.

Furthermore, the successive FYP3 and FYP4 kept the government’s export policy relatively stable. Other than reinforcing existing broad aims – such as budget reform and private sector engagement – FYP3’s only new policy section was on tackling unemployment.<sup>27</sup> The lack of significant reform between the FYPs is traceable through assessments made by Iranian economists over the years. In 1995, political analyst Hooshang Amirahmadi lamented how FYP1 contained “unstable policies”, underlining the imperative need to bring consistency to Iranian state economic planning.<sup>28</sup> In 2001, economist Abbas Valadkhani came to a synonymous verdict on FYP3, claiming that its “practical inconsistencies and structural problems... like its predecessors... stifle the long-run economic development”.<sup>29</sup>

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24. UNIDO report, p xii.

25. Ibid., p33.

26. Ibid., p46.

27. FYP3, Act 36, p9.

28. Amirahmadi, Hooshang (1995), *An Evaluation of Iran's First Development Plan*, Middle East Executive Reports, p17, <http://amirahmadi.com/en/wp-content/uploads/2015/10/Irans-First-Development-Plan-An-Evaluation.pdf>.

29. Valadkhani, Abbas (2001), *An Analysis of Iran's Third Five-Year Development Plan In the Post-Revolution Era (2000-2005)*, Journal of Iranian Research and Analysis, 17(2), 2001, p1.

Despite these constraints, President Khatami did implement a more effective strategy for liberating and supporting the private sector relative to previous attempts. In 2004, for example, articles 43 and 44 of the Constitution of the Islamic Republic of Iran were amended in order to authorise further privatisation, particularly in previously-state-protected sectors like banking, oil and gas.<sup>30</sup> Consequently, 16 special economic zones (SEZs) and six free-trade zones (FTZs) were established. Meanwhile, FYP4 once again made few contributions to the field of non-oil exports other than target setting: 10.7% yearly non-oil export growth and an increase in share of high-tech non-oil products from 2% to 6% by 2009.<sup>31</sup> Both of these goals were met.

In the dearth of any significant strategic or policy shifts across the two decades in question, governmental economic planning cannot be considered as the primary driver of change for the growth of non-oil exports experienced from 2000 onwards. It did, however, create a framework and domestic environment in which growth could be driven by other active factors, particularly export market development and company-level behaviour.

## Foreign exchange policy

The government's foreign exchange policy from 1990 to 2011 was driven by holistic economic considerations and was not purely a policy tool to promote the growth of non-oil exports. Nevertheless, the exchange rate always affects exports and, at times, export performance considerations did lead the government to adjust its foreign exchange policy. The main instances when foreign exchange policy had a significant impact on non-oil exports are outlined below. These policies were often unsuccessful, and even when they were, their positive effects were not sustained.

- **1990-1991**

From 1990 to 1991, the government implemented a new set of foreign exchange policies specifically to foster the growth of non-oil exports. One major example of this was the unification of the official rate with the free market rate. This reduced the number of exchange rates for the rial to three: the official rate, the competitive rate and the free-market rate. Gradually, many products that had hitherto been imported at the official exchange rate were now imported at the free-market rate. For exporters, the increasing usage of the weaker free market rate led to greater competitiveness in international markets. Alongside this, many restrictions on non-oil exports were lifted, which further liberalised trade.

- **1995**

In 1995, however, wider economic issues interrupted the government's effort to let export policy determine foreign exchange policy. A new regulation was introduced to combat falling foreign exchange reserves, which forced exporters to sell all foreign currency income at the official, fixed exchange rate. As this rate was below the previous

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30. *The Constitution of the Islamic Republic of Iran (Qanoon-e asāsi-ye jomhoori-ye eslāmi-ye Iran)* (amended 1989), the World Intellectual Property Organisation, p13, <https://www.wipo.int/edocs/lexdocs/laws/en/ir/ir001en.pdf>.

31. FYP4, Act 37, p22.



free market value, exporters began selling their products in the domestic market, and the immediate result was a 33% drop in non-oil exports income. This was catastrophic for non-oil exports and severely disrupted their growth. Significantly, the country's largest non-oil export product that decade – Iranian carpets, and their exporters – suffered most. The policy was eventually reversed, but the damage had been done. By 1999, even the transition from import substitution to export value growth in FYP2 failed to bring non-oil export figures back to 1994 levels. As UNIDO stated, by 1999, “Iran’s non-oil exports have not recovered from this setback,” as illustrated above in Table 5, the foreign exchange policy was acting as a “constraint to exports”.<sup>32</sup>

- **2000**

From 2000 onwards, the government learned the lesson of intruding too heavily in the exchange rate market and, instead, its focus was on bolstering Iran’s external position and controlling foreign exchange fluctuations. The value of the rial continued to decline steadily against the dollar, with the occasional uptick caused by oil market dynamics rather than government intervention. Overall, the Central Bank kept the fixed rate as close as possible to the free market rate, which stabilised throughout the years of rapid non-oil export growth, as shown in Figure 2.

*Figure 2: The rial's falling free market exchange rate v 1SD, 1990-2011<sup>33</sup>*



In summary, the Iranian government’s foreign exchange policy was not solely driven by exports. Other considerations, such as foreign currency reserves, often took priority. However, the value of the rial weakened consistently from 1990 to 2011, as shown in Figure 2. As a result of this, the currency tended to be a supportive factor for export growth, rather than a hinderance, by making exporters’ prices more competitive in international markets. In instances when the government attempted currency manipulation, the impact on non-

32. UNIDI report, p11.

33. Data drawn from Bahmani-Oskooee’s article. From January 1947 to June 1989, the data comes from different issues of *World Currency Yearbook* (formerly known as *Pick’s Currency Yearbook*). From July 1989 to December 2003, it is provided by the Central Bank of the Islamic Republic of Iran, and thereafter by CEIC, <https://www.ceicdata.com/en/indicator/iran/exchange-rate-against-usd>.

oil exports was detrimental. Nevertheless, these effects were only ever temporary, and as Mohsen Bahmani-Oskooee concludes in his study of the history of Iran's foreign exchange rate, "direct [government] controls have only short-run effect on the official rate. In the long run, [the] official rate is adjusted toward the black market (free market) rate".<sup>34</sup>

## State investment policy

The government's investment policy affected non-oil exports in two ways: state investment and FDI policy. Given that the non-oil export growth in question was driven predominantly by manufactured and complex goods, industrial and technological development were essential. To this end, the government's approach utilised many of the theoretical aspects of 'big push' theory economics in order to vitalise its industrial sector. 'Big push' theory dictates that the government of an industrially under-developed country must inject high levels of investment at a fast rate in order to kick-start the development process.<sup>35</sup> In contrast, the same quantity of funding invested at a gradual pace cannot provide the stimulation necessary, and so meaningful development will not occur. Iran, with its vast oil and gas reserves, had the ideal source of funds for such an approach, and the government successfully identified this potential with its policy choices.

As part of its programme for economic development, the government invested money and attention in technological advancement to foster an industrial sector capable of producing increasingly sophisticated products, both for domestic needs and export. The UNIDO report found that already by 1999, 70% of Iranian firms were providing training programmes for their workers, something that the government was encouraging as early as FYP1. The 'Vision 2025' programme, launched in 2005 to outline the country's industrial and technological goals for the coming 20 years, earmarked a large percentage of its \$3.7 trillion investment budget for supporting investment in Research and Development.<sup>36</sup> However, as demonstrated, government commitment to the transition to higher-grade manufactured goods had already begun well before 2005. Furthermore, a law that was passed in 2010 formed the Innovation and Prosperity Fund, which had allocated around \$171.4 million of investment into 100 knowledge-based companies by 2014.<sup>37</sup>

Alongside this, the government invested substantially in the specific industries that produced the manufactured goods underpinning the rise of non-oil exports, such as petrochemicals, automobiles and metal goods. Without this state investment, export growth would not have been possible. According to the UNIDO report, Iran's state industrial investment increased at an average rate of 19.8% between 1989 and 1997.<sup>38</sup>

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34. Bahmani-Oskooee, Mohsen (2005), *History of the Rial and Foreign Exchange Policy in Iran*, Iranian Economic Review, University of Tehran, vol. 10(2), p20.

35. Rosenstein-Rodan, *Notes on the Theory of the 'Big Push'*, (Cambridge, Mass.: MIT Center for International Studies, 1957).

36. Madarshahi, Monir Sadat (2012), *Iran's "Twenty-Year Vision Document": An Outlook on Science and Technology*, *Iranian Studies* 45, no. 5, p631.

37. United Nations Educational, Scientific and Cultural Organisation (2015), *UNESCO science report: towards 2030*, <https://unesdoc.unesco.org/ark:/48223/pf0000235406>, p390.

38. UNIDO report, p22.

The most significant industrial progress occurred in the petrochemical industry, which had acquired a 40% share of total non-oil exports by 2012. This was a tremendous success story, whereby the Iranian government sought to diversify away from its oil-reliance by harnessing its vast fuel reserves to develop downstream, value-added products. So much so that the petrochemical industry became crucial for the Iranian economy throughout this period. Mansoor Maitah's economic modelling assessment of 1990-2010, for example, concludes that "any increase in the export of petrochemical products can lead to growth of the economy, while any decrease in the export of petrochemical products will decline economic growth".<sup>39</sup> As such, the petrochemical industry was the flagship of Iran's non-oil sector by the end of 2011.

In addition, the Iranian petrochemical industry was only targeted by the government from 1989 with the introduction of FYP1. This means that the success of the industry after 2000 was built on the rapid investment process implemented in the preceding decade, which set a \$24 billion target goal for industry investment. As with all of Iran's economic planning, outcomes fell short of targets, but the rapid growth in the 2000s is a testament to the overall success of the state's petrochemical development plans.

Interestingly, the government permitted more privatisation of the petrochemical industry than any other industry, which was an implicit nod towards the mechanisms of the free market espoused by UNIDO. Nevertheless, failure to secure investments from home or abroad to fund planned projects meant that targets were not met. Iran was less successful in obtaining Foreign Direct Investment than its industrialising regional rivals, such as Turkey and Malaysia.<sup>40</sup> While Iran funded much of the industry's early-stage development with credit facilities secured predominantly from European banks, this came to a swift end after sanctions were imposed in 2008.<sup>41</sup> Furthermore, western export markets all but disappeared for Iran.<sup>42</sup> The fact that the petrochemical sector continued to flourish after this setback reflects the sturdy foundations of the programme introduced by the government in the 1990s, and the dexterity needed to switch to targeting Asian export markets after 2008.

## Foreign direct investment

As Iran embarked on a vast industrial expansion and modernisation programme with FYP1, FDI was an important source of funding for a government emerging from a decade of war and economic instability. The UNIDO report highlights this as an important target, as did all the subsequent FYPs. Nevertheless, Iran struggled to attract significant sums of FDI from 1990 to 2011 for several reasons: foreign investors feared investing in Iranian industries

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39. Maitah, Mansoor (2015), *The Economic Role of Petrochemical Industry in Iran*, Canadian Centre of Science and Education, [https://www.researchgate.net/publication/283475192\\_The\\_Economic\\_Role\\_of\\_Petrochemical\\_Industry\\_in\\_Iran](https://www.researchgate.net/publication/283475192_The_Economic_Role_of_Petrochemical_Industry_in_Iran), p107.

40. Bagheri, Gholamreza and Ahangari Nanehkaran, Yaser (2013), *Survey Of Foreign Direct Investment In Iran*, International Journal of Scientific & Technology Research, vol. 2(5). According to World Bank data, Iranian FDI as a percentage of GDP remained static around 1-2% from 1990 to 2012, in contrast with a Turkish average of around 4%, and Malaysia, which fluctuated around 5%, reaching as high as 9% in 1992.

41. Ilias, Shayerah (2010), *Iran's Economic Conditions: U.S. Policy Issues*, Congressional Research Service, p7.

42. Due partly to the effective implementation of sanctions after 2008, but also the pre-existing, gradually declining ability of Iranian exporters to compete in western markets (discussed later on).

closely tied to, and controlled, by the state; sanctions from 2008 onwards resulted in a sharp drop in investment from Europe; and the government, at times, imposed restrictions on needed capital flows.<sup>43</sup>

Despite a 700% rise in FDI after parliament passed the law on incentive and protection of foreign investment in 2002, FDI as a percentage of GDP never rose above 6% from 1979 to 2012.<sup>44</sup> The struggle to attract significant FDI, therefore, acted as a limiting factor in the development of non-oil industries and exports, and one that the government could have improved through more concerted efforts in fostering an environment attractive to international investors. It is also, however, a testament to the successful state investment programme that Iran was able to develop industries capable of leaps in exports, primarily with its own investment.

## II- External environment

The second driver of change in Iran's non-oil exports related to the external environment. Developments occurring beyond Iran's borders impacted both government policy and non-oil exports. Iran may have received institutional support from Western, pro-free-market economic institutions in the 1990s, but its non-oil product trade routes moved definitively eastward. Two inverse trends explain this development: (1) early period multiplying barriers to entry into (Western) developed markets and financial sanctions; and (2) emerging opportunities and trade routes eastwards with regional partners and China.

### Declining trade with the West

Goods headed for developed countries must be of higher quality, fulfil more regulatory requirements, and, often, be more technologically advanced, in order to compete for market share. The UNIDO report notes that the goals for FYP1 and FYP2 for non-oil-sector technological advancement were consistently unmet due to ineffective investment.<sup>45</sup> Although industrial investment increased at an average rate of 19.8% annually, industrial domestic added value only amounted to 8%, a poor rate of return.<sup>46</sup> As a result of this technological lethargy, Iran was "cut off from international markets, particularly those of industrial markets", and only clung on to a 0.2% share of those countries' total imports over the decade.<sup>47</sup> Industrialising rivals, above all China and other East Asian exporters, were able to replace Iranian goods, thereby stealing Iran's market share in the developed West. The UNIDO report highlights this as a crucial issue to redress in the coming years. Furthermore, the US barred Iran from joining the World Trade Organization (WTO) in 1995, and Iran has not joined the organisation in the 26 years since. Without enjoying the benefits of membership, such as tariff-reduction

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43. World Bank data.

44. World Bank data.

45. UNIDO report, p20.

46. UNIDO report, p24.

47. UN Comtrade data.

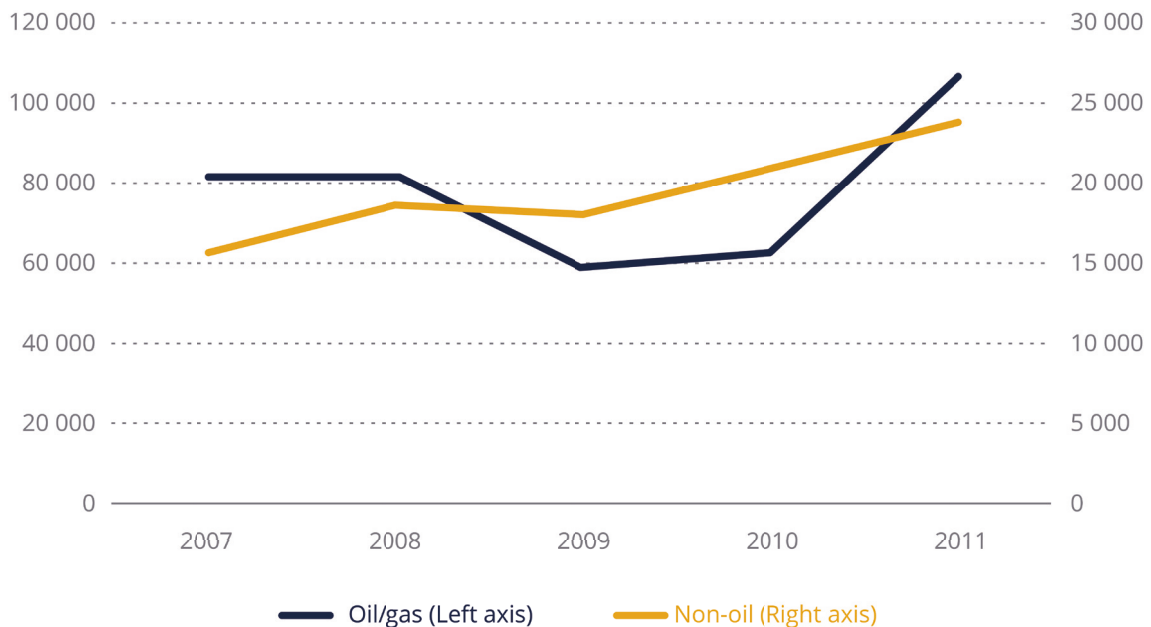
and quality standardisation, it was somewhat inevitable that Iran would be squeezed out of markets included in these multilateral bodies.

Between 2000 and 2011, however, Iran’s alienation from the West increased, almost entirely barring its non-oil products from these markets. Iran had been subjected to some form of western sanctions since the 1979 hostage crisis at the US embassy in Tehrān, but the economic implications intensified in 2008 when the UNSC imposed a new wave of sanctions designed to restrict Iran’s economic engagement with the global community. Trade and investment were restricted and Iran’s economy suffered accordingly, with GDP growth falling from 8.2% in 2007 to less than 1% in 2008.<sup>48</sup>

Despite this setback, however, it is striking how resilient Iranian non-oil exports were. Nearly all products and export markets remained at the pre-2008 trade levels or returned to them within a few years. Indeed, non-oil export revenues totalled \$15.6 billion in 2007, \$18.7 billion in 2008, and \$18.2 billion in 2009, and about the same in 2010.<sup>49</sup> This is a testament to the degree of resilience developed by Iran’s non-oil industries since 1990, as well as its adaptability in terms of its export networks, which will be covered in the ‘Growth in trade with the East’.

As Figure 3 demonstrates, while non-oil export revenue under sanctions remained stable, oil and gas revenues dropped from \$81.8bn in 2007, to \$59.2bn in 2009. This is important insight into the relative ineffectiveness of financial sanctions in the early 2000s for damaging non-oil exports, either by targeting the industry itself, or deterring other countries from trading with Iran.

**Figure 3: Iran’s non-oil exports vs oil exports performance during the ramp-up of international sanctions (\$million)<sup>50</sup>**



48. World Bank data.

49. Shayerah, *Iran’s Economic Conditions*, p20.

50. Data from IMF, *Islamic Republic of Iran: 2008 Article IV Consultation* (2008); IMF Country Report No. 08/284. IMF, *Islamic Republic of Iran: 2006 Article IV Consultation* (2007); IMF Country Report No. 07/100.

## Growth in trade with the East

Iran's resistance to economic sanctions is explained by the other half of the trade flow story; as westbound exports faltered, regional and eastbound trade rose. In addition to the (albeit slow) upturn in Middle Eastern trade, trade with developing countries in Asia experienced strong growth. The World Bank's 2011 MENA report explains the tilt eastwards in Iranian exports as the "expansion of existing products to new markets, and new products to existing markets, [rather] than an increase of exports of existing products to existing markets", which it calls "growth at the extensive margin."<sup>51</sup> This, the report claimed, was especially true for the developing oil exporters in the region (of which Iran is one), for their extensive margin accounted for 82% of non-oil export growth between 1998 and 2008.<sup>52</sup> The UNIDO report also identifies this potentiality in the 1990s, specifically discussing the Economic Cooperation Organisation (ECO), and the "immeasurable" trade potential of this bloc for Iran.<sup>53</sup> In 1997, the İzmir Declaration instituted a plethora of measures to facilitate intra-regional trade, whose effects were not fully realised for Iran until the following decade.<sup>54</sup> Nevertheless, the report highlights the rapid growth in former Soviet nations' import demands as a cause for optimism.

*Table 6: Iranian export growth among ECO members, 2000-2012<sup>55</sup>*

Country	2000	2005	2011	% growth
Afghanistan	35,794,570	468,910,164	1,676,667,282	4684
Azerbaijan	214,279,261	305,175,458	420,181,746	196
Kazakhstan	33,106,671	51,255,736	N/A	c170
Kyrgyzstan	20,432,387	30,645,340	39,934,267	195
Pakistan	51,708,343	246,484,827	464,291,791	898
Tajikistan	29,211,119	99,124,240	179,054,536	613
Turkey	153,831,909	364,613,596	1,298,448,442	844
Turkmenistan	91,655,837	125,862,232	445,489,791	486
Uzbekistan	72,679,740	66,731,040	72,120,209	-1

51. Ianchovichina, Elena (2011), *MENA's Non-Oil Export Performance in the Last Decade*, The World Bank's *MENA Knowledge and Learning Quick Note Series*, p4.

52. Ibid, p4.

53. UNIDO report, p29.

54. UNIDO report, p28.

55. UN Comtrade data.

As shown in Table 6, by 2012, trade with each member state expanded, (except Uzbekistan), some at a rapid rate. However, there were significant discrepancies from one to the next, which undermined the efficacy of the economic trading bloc as a whole. The inadequacies of ECO trade have been explained in greater depth elsewhere, and Khadim Hussain and Jianhong Xue's work is particularly of note.<sup>56</sup> They apply a gravitational model to ECO trade data which concludes that, without exception, poor infrastructure, high tariffs and bad exchange rates between member states held back intra-regional trade growth during the 1990s and 2000s.<sup>57</sup> For Iran, bilateral case-by-case trade relations within the bloc – particularly Afghanistan and Turkey – were the main driver of export growth, rather than the success of the multilateral bloc as a whole.

## The Rise of China

The emergence of China as a voracious global importer was a tremendous boon for Iranian non-oil exports, which requires independent consideration. Much attention has been given to China's propping up of Iran's petroleum trade after the imposition of sanctions, but the Asian giant was just as important in the field of non-oil exports in the sanctions era. Just as the West began imposing harsh sanctions on Iran, China's share of non-oil exports skyrocketed to around 30%, focusing overwhelmingly on petrochemicals, metalwork, stone and stone artefacts, and cement. Iran's efforts to produce higher quality manufactured goods since the 1990s, as well as its strong desire to sell them in foreign markets, meant it was well-positioned to capitalise on China's insatiable appetite for the construction and manufacturing ingredients necessary for its own industrial expansion. Consequently, China's share of Iranian non-oil exports ballooned from below 3% in 2000 to 30% by the end of 2011.<sup>58</sup>

Throughout the 1990s and 2000s, international trends were at play that supported Iran's policy of non-oil export expansion. A full understanding of these trends shows that Iran's non-oil exports had never been reliant on the West, especially during the era of rapid growth. It should, therefore, come as little surprise that these regional and eastward-facing industries were resilient to western sanctions.

## III – Company-level behaviour

The final factor in Iran's non-oil export growth was company- and business-level behaviour. This 'bottom up' element was critical because, no matter how conducive the surrounding governmental and global environments, export growth would not occur without effective capitalisation by the exporters themselves. The term 'company- and business-level' is used instead of the more common 'private sector' in recognition of the fact that the line between

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56. Hussain, Khadim and Jianhong, Xue (2013), *What causes low intra-regional trade in eco? a panel data gravity model analysis*, Metalurgia International.

57. Ibid.

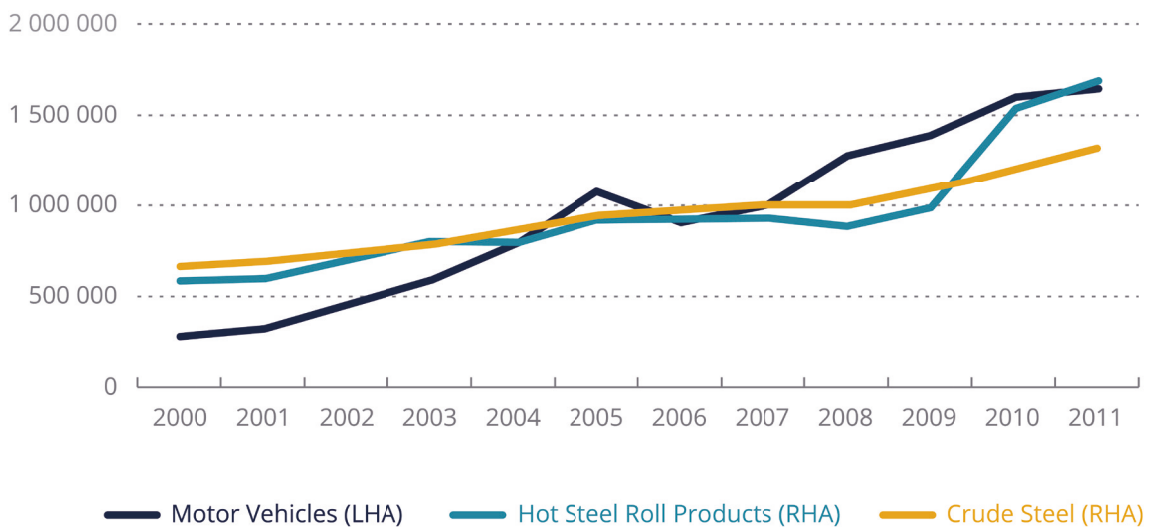
58. UN Comtrade data.

the public and private sectors in Iran is not always clear. The better distinction, therefore, is between state and company action.

Returning to ‘big push’ theory, this dictates that, after the initial momentum has been created by the state, bottom-up forces can then achieve self-generating and cumulative growth. Iran’s main export industries by 2011 – petrochemical, cars, metals and machinery – were (and still are) complicated amalgamations of large state-owned corporations, smaller quasi-state-owned and private companies, and foreign companies (to the extent that foreign investment is permitted by the government, or that which it is able to attract).

Each of these industries successfully advanced in aligning with the demands for entry into the appropriate expanding regional and eastern markets. The way that this was accomplished differed from sector to sector, suggesting that an element of individual calibration took place. The automobile industry, for example, encouraged foreign investment and cooperation to a higher degree than Iran’s steel and petrochemical industries. This industry-level know-how ensured that productivity continued to increase in the face of questionable and poorly implemented government policy and inauspicious changes in the external climate. Selected products from Iran’s biggest non-oil export industries, shown in Figure 4, demonstrate the resilient nature of the industry’s productivity, even when sanctions were imposed. Moreover, Figure 5 displays the impressive rate of value-added growth of all of Iran’s industries, further evidence of its increasing production of high-complexity manufactured products.<sup>59</sup>

*Figure 4: Production levels of key selected industrial products (\$billion), 2000-2011<sup>60</sup>*

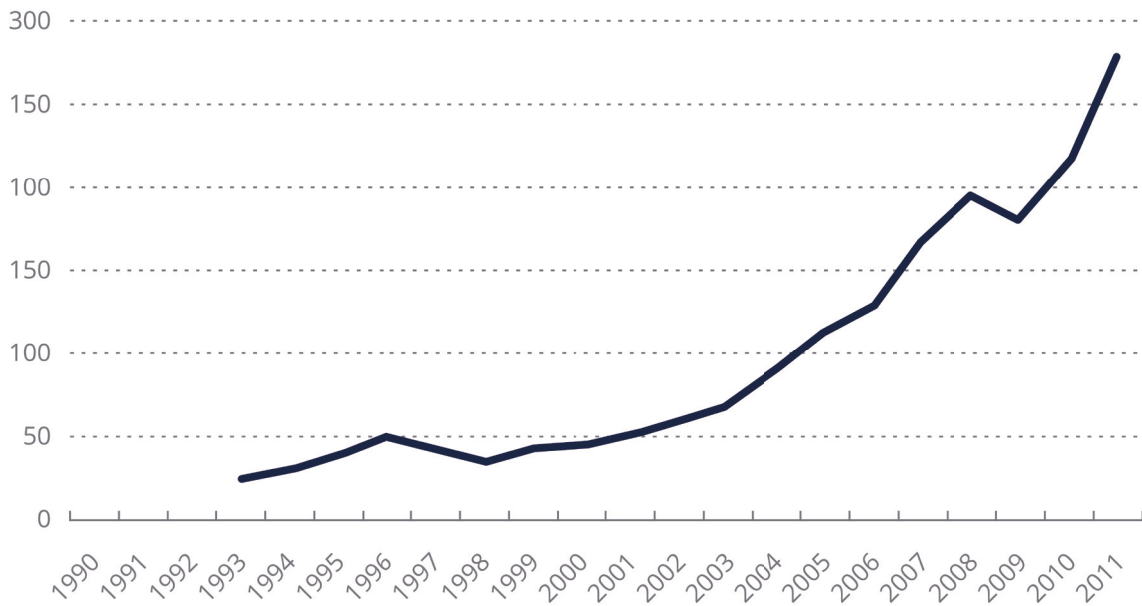


59. International Organisation of Motor Vehicle Manufacturers, <https://www.oica.net/category/production-statistics/2011-statistics/>.

60. Data from The Global Economy, [https://www.theglobaleconomy.com/Iran/industry\\_value\\_added/](https://www.theglobaleconomy.com/Iran/industry_value_added/).

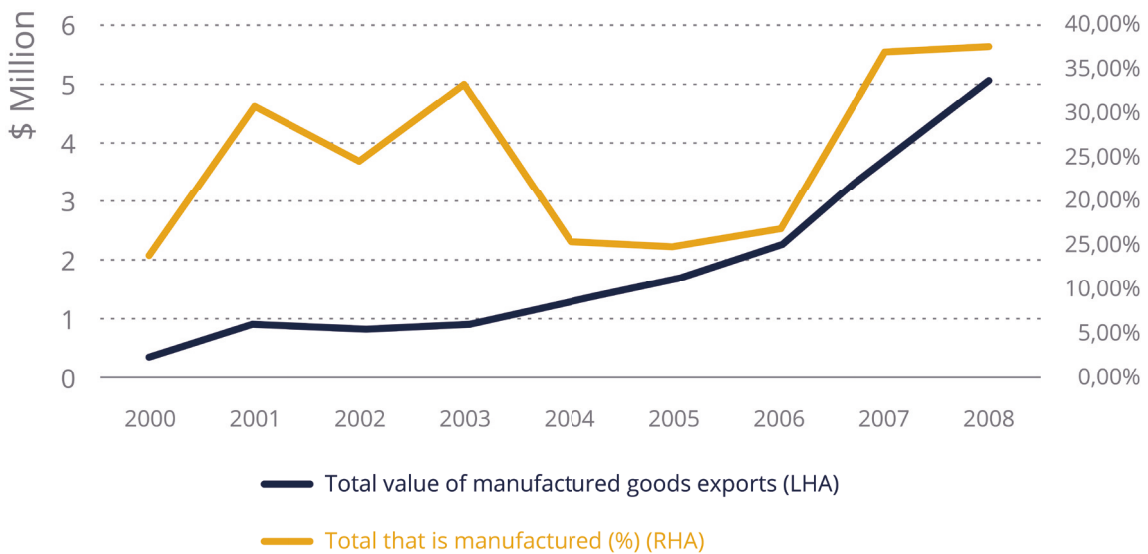


Figure 5: Iranian industrial products' value added (\$billion), 1990-2011<sup>61</sup>



Furthermore, as the discussion about export markets above shows, 'extensive margin growth' (defined above) was needed to produce new products and expand into new markets, which reflects the increasing economic complexity developed in Iran's non-oil industries. In other words, both the quantity and quality of Iran's manufactured offerings increased. This is demonstrated in Figure 6 by the Iranian iron and steel industry, where the share of manufactured products, versus unmanufactured products in overall iron and steel exports rose from 15% to almost 40%.

Figure 6: The growth in value and share of Iranian manufactured metal products, 2000-2011<sup>62</sup>



61. Ibid.

62. UN Comtrade data.

The dip in percentage experienced in 2004 was caused by a 600% increase in unmanufactured exports, rather than poor performance of manufactured exports, as the total value continued to rise that year. This trend was not confined to the metals industry, but was experienced broadly across all non-oil industries.

*Figure 7: The % growth of Iran's medium- and high-tech exports, 1990-2011<sup>63</sup>*

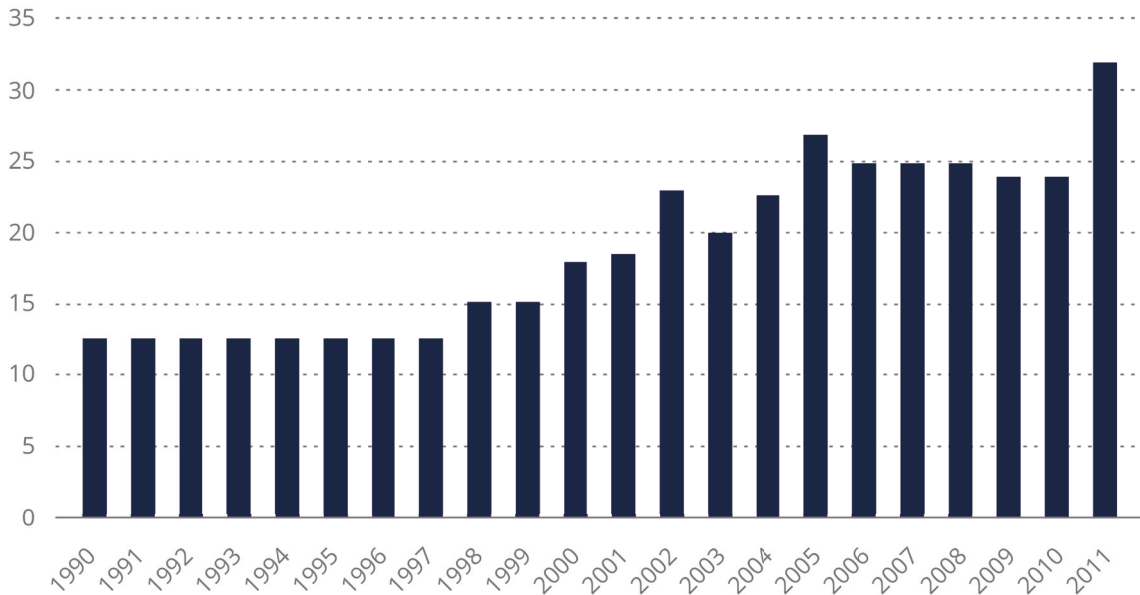


Figure 7 illustrates the emergence of a golden age of industrial export development at the turn of the millennium after a decade of stagnant product sophistication. This was the moment at which exporters began to capitalise assuredly on a decade of conducive government policy and favourable shifts in market opportunities. Even the imposition of significant economic sanctions did not upset the upward trajectory, showing that Iran's industries had, by this point, entered a phase of robust growth. As demonstrated above, in the dearth of major government export policy adjustments in the 2000s, this non-oil export growth seems to have been driven from the bottom up.

63. World Bank data, CEIC, <https://www.ceicdata.com/en>.



Today, Iran faces its third year of sweeping economic sanctions that were imposed by the Trump administration's 'maximum pressure' campaign (2018-2021). To the bewilderment of many in the West, the economy has survived, and indeed begun to exhibit signs of mild recovery. Iran's non-oil sector has played a central role in this, both by rising to meet domestic needs and also by going some way to plugging the export revenue gap left by oil.

As a mirror image of the response to Iran's endurance of Western economic sanctions between 2008 and 2015, surprise at Iran's current economic endurance belies an insufficient understanding of the country's robust economy, particularly with regard to the extent of its self-driven industrial development and its focus on non-oil sector growth since 1990.

As the findings of this paper illustrate, this economic resilience is not the product of an overnight process, but instead resulted from decades of concerted government, industry and company-level effort. The shift away from western markets to regional and Eastern ones preceded the imposition of a sweeping economic sanctions programme against Iran, as did the transition to the production of higher-grade industrial goods attractive to these new markets. As the arrival of still-further-punitive sanctions in 2012 did, the 2018-2021 'maximum pressure' campaign both tested the extent of this robustness to the extreme and arrested further growth.

The findings of this paper provide important insight into the process and environment that allowed Iran's economy to endure conditions as it has. Further research should extrapolate the key factors identified in this paper as driving Iran's non-oil export growth and economic endurance in the 2000s, and build on this understanding of the Iranian economy by assessing their role in weathering the current sanctions environment. As ongoing Joint Comprehensive Plan of Action (JCPOA) discussions hint at the prospect of imminent sanctions removal, future analysis may further this paper's findings to identify methods of assisting the Iranian economy, particularly its non-oil industries, as it recovers from the damage caused by the Trump administration's sanctions.

The International Trade Centre's (ITC) new National Export Strategy for Iran, launched last year, is a prominent example of the ongoing efforts to develop Iran's export capacity in the late-to-post-sanctions era.<sup>64</sup> The ITC coordinated with more than 400 Iranian entities – including ministries, industry leaders and even farmers – to formulate a standalone five-year plan (2021-2025) aimed at increasing Iran's export competitiveness and diversification. In line with this paper's findings, the strategy flags non-oil export product diversification, a focus on markets that are relatively immune to US sanctions pressure, and streamlining government export-promotion initiatives as crucial steps towards economic development. It also stresses the demographic opportunity currently presented by Iran's young population, which combines with the potentially impending easing of sanctions to create a window of opportunity for Iranian exports.

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64. *National Export Strategy for Iran*, International Trade Centre, 2020.



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