# ECONOMIA ITALIANA

Fondata da Mario Arcelli

## Transizione energetica: maneggiare con cura

2023/3



CASMEF Centro Arcelli per gli Studi Monetari e Finanziari UNIVERSITÀ CATTOLICA del Sacro Cuore



### Economia Italiana

Fondata da Mario Arcelli

### COMITATO SCIENTIFICO (Editorial board)

**CO-EDITORS** 

FRANCESCO NUCCI - Sapienza, Università di Roma PAOLA PROFETA - Università Bocconi PIETRO REICHLIN - Luiss Guido Carli

#### MEMBRI DEL COMITATO (Associate Editors)

Carlotta Berti Ceroni Università di Bologna Massimo Bordignon

Università Cattolica del Sacro Cuore

LORENZO CODOGNO London School of Economics and Political Science

> GIUSEPPE DE ARCANGELIS Sapienza, Università di Roma

STEFANO FANTACONE Centro Europa Ricerche

EMMA GALLI Sapienza, Università di Roma

> PAOLO GIORDANI LUISS Guido Carli

GIORGIA GIOVANNETTI Università di Firenze

ENRICO GIOVANNINI Università di Roma "Tor Vergata"

> Andrea Montanino Cassa Depositi e Prestiti

SALVATORE NISTICÒ Sapienza, Università di Roma

ALESSANDRO PANDIMIGLIO Università degli Studi "Gabriele d'Annunzio" Chieti - Pescara

> Alberto Petrucci Luiss Guido Carli

BENIAMINO QUINTIERI Università di Roma "Tor Vergata"

> FABIANO SCHIVARDI LUISS Guido Carli

MARCO SPALLONE Università degli Studi "Gabriele d'Annunzio" Chieti - Pescara

FRANCESCO TIMPANO Università Cattolica del Sacro Cuore

> MARIO TIRELLI Università Roma Tre

GIOVANNA VALLANTI LUISS Guido Carli

DIRETTORE RESPONSABILE (Editor in Chief): GIOVANNI PARRILLO

### ADVISORY BOARD

PRESIDENTE (President) PAOLO GUERRIERI - Sapienza, Università di Roma e PSIA, SciencesPo

#### **CONSIGLIO** (Members)

FEDERICO ARCELLI, Center for International Governance Innovation RICCARDO BARBIERI, Tesoro MARIANO BELLA. Confcommercio PIERO CIPOLLONE, Banca Centrale Europea FABIO DE PETRIS, British American Tobacco Italia GIORGIO DI GIORGIO, Editrice Minerva Bancaria DARIO FOCARELLI, Ania RICCARDO GABRIELLI. Deloitte MAURO MICILLO, Intesa Sanpaolo STEFANO MICOSSI, Assonime FRANCESCO MINOTTI, Mediocredito Centrale **ROBERTO MONDUCCI, ISTAT** MARCO VALERIO MORELLI, Mercer ALESSANDRO TERZULLI, SACE CLAUDIO TORCELLAN, Oliver Wyman ALBERTO TOSTI, Sara Assicurazioni MARCO VULPIANI, Deloitte

# Economia italiana

Fondata da Mario Arcelli

numero 3/2023 Pubblicazione quadrimestrale Roma

### ECONOMIA ITALIANA

Rivista quadrimestrale fondata nel 1979 da Mario Arcelli

DIRETTORE RESPONSABILE Giovanni Parrillo, Editrice Minerva Bancaria COMITATO DI REDAZIONE Simona D'Amico (coordinamento editoriale) Francesco Baldi Nicola Borri Giuseppina Gianfreda Rita Mascolo Guido Traficante

#### (Pubblicità inferiore al 70%)

Autorizzazione Tribunale di Roma n. 43/1991

ISSN: 0392-775X

Gli articoli firmati o siglati rispecchiano soltanto il pensiero dell'Autore e non impegnano la Direzione della Rivista.

I *saggi* della parte monografica sono a invito o pervengono a seguito di call for papers e sono valutati dall'editor del numero.

I *contributi* vengono valutati anonimamente da due referee individuati dagli editor o dalla direzione e redazione con il supporto dei membri del Comitato Scientifico.

Le *rubriche* sono sottoposte al vaglio della direzione/redazione.

Finito di stampare nel mese di aprile 2024

#### www.economiaitaliana.org

#### Editrice Minerva Bancaria srl

DIREZIONE E REDAZIONE	Largo Luigi Antonelli, 27 – 00145 Roma redazione@economiaitaliana.org
AMMINISTRAZIONE	EDITRICE MINERVA BANCARIA S.r.l. presso Ptsclas, Viale di Villa Massimo, 29 00161 - Roma amministrazione@editriceminervabancaria.it

Segui Editrice Minerva Bancaria su: in

## Sommario

### Transizione energetica: maneggiare con cura

#### EDITORIALE

5 Transizione energetica: maneggiare con cura Stefano Fantacone, Alfredo Macchiati

#### SAGGI

- 13 I prezzi dell'energia e i recenti andamenti dell'inflazione in Italia, Francia e Germania: shock da domanda o da offerta? Massimiliano Parco, Giovanni Primativo, Lucia Truzzu
- 45 Assessing the pass-through of energy prices to inflation in the euro area Francesco Corsello, Alex Tagliabracci
- 73 La nuova dimensione geopolitica della transizione energetica europea
   Stefano Fantacone
- Salvare il pianeta è nelle nostre mani ma quanto costa?
  La dimensione macroeconomica della transizione climatica Stefania Tomasini
- 143 Il consenso degli elettori: un ostacolo per la transizione energetica? Alfredo Macchiati
- 171 La nuova Politica industriale europea di fronte alla sfida energetica Franco Mosconi

- 209 Le politiche europee per la decarbonizzazione: una prima analisi di alcuni strumenti Fernanda Scianna, Simone Sorgente, Rebecca Vitelli
- 239 Britain's Loyalty to Nuclear Power William I Nuttall

#### CONTRIBUTI

257 The Italian Economy and the End of the Multifiber Arrangement Giuseppe De Arcangelis, Rama Dasi Mariani

#### RUBRICHE

- 279 Come orientamento e formazione ci aiuteranno ad affrontare l'inverno demografico Francesco Rolleri
- 285 Evitiamo di imparare dalle crisi la lezione sbagliata Mariano Bella, Pierpaolo Masciocchi, Luciano Mauro
- 295 Settori produttivi, nuove tecnologie digitali ed eco-sostenibilità energetica

Fabrizio Carapellotti, Claudia Ricci

#### RECENSIONI

- 309 P. Pilati, Le Serenissime. Storia e futuro delle imprese del Nordest Giovanni Parrillo
- 313 Elenco dei Referees che hanno valutato i Saggi e i Contributi (anno 2023)
- 315 Indice dell'annata (anno 2023)

## The Italian Economy and the End of the Multifiber Arrangement

Giuseppe De Arcangelis\* Rama Dasi Mariani\*\*

#### Abstract

We analyze the effect of the removal of the quota system in the textile and clothing (T&C) sector – the Mutifiber Arrangement followed by the Agreement on Textile and Clothing. The formal end occurred initially in the first half of 2005, but was fully completed as of January 1^st 2009, and was characterized by a disruptive increase in Chinese low-quality imports. We use INPS data on the universe of private non-agricultural labor contracts to conduct the analysis at the firm level. The results highlight the disciplining effect on the firms operating in the T&C sector. In order to move towards a more high-quality segment of the market, T&C employment became more high-skilled. This is occurred via the restructuring of the existing firms and the

<sup>\*</sup> Sapienza, Università di Roma, Dipartimento Scienze Sociali ed Economiche. Corresponding author: giuseppe.dearcangelis@uniroma1.it

<sup>\*\*</sup> Dipartimento di Giurisprudenza, Università degli Studi di Roma TRE - ramadasi.mariani@uniroma3.it We would like to thank two referees for their useful comments and suggestions, as well as Luca Citino and participants to the 6^th Conference on the VisitINPS Program (23 November 2023), where this work has been presented. Mr. Michele Tronconi has given a valuable overview of the situation of the textile and clothing sector in the period 2005-2010 and Mr. Riccardo Pareschi participated to the initial data collection. All errors remain ours.

exit of firms with low high-skill ratios. The current evidence is prima facie and validates the interest in further investigation.

## Sintesi - Le conseguenze per l'economia italiana della fine dell'Accordo Multifibre

Analizziamo l'effetto dell'abolizione del sistema delle quote nel settore tessile e abbigliamento (T&A) – l'Accordo Multifibre seguito dall'Accordo sul Tessile e Abbigliamento. La fine formale era annunciata per il 1° gennaio 2005, ma l'inizio del 2005 è stato caratterizzato da un aumento dirompente delle importazioni dalla Cina di bassa qualità che ha spinto Europa e USA a concordare nei fatti un prolungamento del regime di quote fino al 1° gennaio 2009. Utilizziamo i dati INPS sull'universo dei contratti di lavoro non agricoli nel settore privato per condurre un'analisi a livello di singola impresa. I risultati evidenziano l'effetto "disciplina" sulle imprese operanti nel settore T&A: per procedere verso un segmento di mercato di più alta qualità, l'occupazione nel settore T&A è diventata più altamente qualificata. Ciò è avvenuto attraverso la ristrutturazione delle imprese esistenti e l'uscita delle imprese con valori bassi nel rapporto tra lavoratori qualificati e non qualificati. I risultati riportati rappresentano un'evidenza prima facie e sono da stimolo per un'analisi più approfondita.

#### JEL Classification: F12; F13; F16.

Parole chiave: Politiche commerciali; Eterogeneità delle imprese; Accordo Multifibre. Keywords: International trade policies; Firm heterogeneity; Multifiber Arrangement.

#### 1. Introduction

The Textile and Clothing (T&C) industry has been one of the most protected sectors in history, especially after World War II when the developed part of the world economy recovered and international trade was characterized by lower tariff and non-tariff barriers. Indeed, the labor-intensive technology of the T&C sector could be the cause of a very harsh competition with the developing countries with detrimental consequences on the domestic industries, some of them with a long tradition.

In the early 1970s the Multifiber Arrangement could provide a solution as a temporary violation of the GATT objectives: a quota system was restricting exports from developing countries to developed economies, but the developing world could retain the rents generated by the quotas in the spirit of a voluntary export restraint.

In 1995, the newly established World Trade Organization (WTO) transformed the Multifiber Agreement into a temporary Agreement on Textile and Clothing that allowed countries a time span of ten years to restructure their domestic T&C sectors since a full liberalization of the industry was taking place in January 2005.

Notwithstanding the common knowledge of the transition period, January 1<sup>st</sup>, 2005 and the few months after marked impressive trade shocks in Europe and in the US. T&C imports from China increased and domestic producers immediately asked for government intervention. In June 2005 both the European Union and the US signed separately an agreement with China to extend the quota system at least until 2008.

In this paper we study the effect of the end of the Multifiber Arrangement and the transition during the period of the Agreement on T&C in Italy. We take advantage of the availability of data on the universe of the labor market during the whole period to study how Italian firms reacted to the shock, before and after the well-known end of the quota system in 2005. Our main question regards the dynamics of the restructuring, i.e. whether the change in technology towards more high-skilled techniques in the industry was done mainly via the entry of more competitive firms, the exit of low-skill-labor-intensive firms, or the restructuring of the stayer firms.

From an academic perspective, it is important to compare the T&C liberalization shock in 2005 with other well-known trade shocks. On the one hand, we could consider the effect of the end of the T&C quota system similar to the China shock that many authors, as Autor et al. (2013) for the US, have studied. On the other hand, the shock may have had a more partial-equilibrium effect and resembles other situations, like the effect of the quartz technology in the Swiss clock industry in the 1970s, as investigated in Twinam (2022).

As an anticipation of the results, we find that the disciplining effect in Italy started well before 2005 because of the WTO entrance of China and the harsh competition coming from products imported from China even before 2001. Coming to the nature of restructuring, the largest change in the industry intensity of high-skilled labor (as technological improvement) occurs mainly with the firms that remained in the industry for the whole period 1995-2010. The net contribution of entry and exit is marginal, but the gross contribution of both exiters (i.e. firms quitting) and entrants (i.e. starting firms) was also substantial.

The remaining of the paper is structured as follows. In the next Section 2 we detailed the history of the Multifiber Arrangement and the Agreement on T&C. In Section 3 we present the data of our analysis and Section 4 details

our results. Section 5 draws some conclusions. Two Appendices report respectively the decomposition technique to analyse firm dynamics and the detailed list of products that were under quota and under the successive 2005-2008 bilateral agreement.

#### 2. Background: The end of the Multifiber Arrangement

The Textile and Clothing (T&C) sector has been the objective of trade limitations among countries since the 1970s representing an exception to the GATT rules on quotas.<sup>1</sup> In December 1973, 42 countries signed an agreement – the *Multifiber Arrangement* (MFA) – that allowed countries to regulate quantity limitations either bilaterally or unilaterally on exports coming from developing countries. The MFA was renewed three times (1977, 1981 and 1986) and ended in 1994 with the conclusion of the Uruguay round.

However, the quota system was not abolished altogether and the MFA was replaced by the *Agreement on Textile and Clothing* (ATC) that ruled a gradual liberalization in ten years starting in 1995 and foreseeing the elimination of all quotas on January , 2005.

Phases	(A) Cumulated % of liberalized products	(B) Quota limits (in percentage)
01/01/1995 - 31/12/1997	16%	pre-1995 growth rate 1.16
01/01/1998 - 31/12/2001	33%	Phase-1 growth rate 1.25
01/01/2002 - 31/12/2004	51%	Phase-2 growth rate 1.27

#### Table 1 The ATC Phase-out Plan

1 See Spinanger (1999) and Francois and Wörz (2006) for the way to the MFA.

As shown in Table 1, the ATC prescribed that for each phase: (i) a percentage of products to be fully liberalized with respect to the volumes of 1990 (column A) and (ii) for the products still under quota the limit was established in terms of maximum growth rate in imports (column B).<sup>2</sup> However, the phase-out plan left importing countries decide the products to liberalize in each stage with the consequence that less sensible products not subject to harsh competition were liberalized first, whereas the last final phase on January , 2005 covered the liberalization of T&C items that were more likely to suffer from price competition. As also anticipated in some documents, this choice was likely to cause a huge effect on imports in 2005 – e.g. Martin (2007) calls it the *cliff* effect. Indeed, on December 31, 2004 in the US 89% of all quotas active in 1994 were still in place and would be abolished in one day; similarly in the European Union 70% of the 1994 quotas had to be liberalized in one days.<sup>3</sup>

Notwithstanding the transition to a full liberalization of the T&C sector, it must be recalled the the ATC included also transitional safeguard mechanisms allowing importing countries to activate quantity limitations in case of huge increases that could damage significantly the domestic market (*market disruption*). The Textile Monitoring Body was in charge to monitor the correct application of this safeguard clause.

During the ATC phase out China entered the WTO in 2001 after fifteen years of consultation and posed an important challenge to the sector given the relevance of China in the international T&C market. China has been historically specialized in T&C with its T&C exports weighing for about half of Chinese exports in the 1980s. Notwithstanding the protection, Chinese exports in T&C increased at double the world sectoral growth rate. In textile

<sup>2</sup> See Brambilla et al. (2010) for further details and an anlysis on the US economy.

<sup>3</sup> See WTO G/L/683 30 July 2004 page 197-199 (WTO website)

the share of Chinese exports was 4.6% in 1980 and reached 9.1% in 1995; the share in clothing was 4% in 1980 and 15.2% in 1995. Hence, the challenge to the world T&C market was expected when China entered the WTO in 2001 and so the accession protocol included safeguard clauses specific to the T&C trade. In particular, besides the Transitional Specific-Product Safeguard Mechanism (art. 16 of the Accession Protocol), a T&C Specific Safeguard Clause could be applied specifically to market disruption in the T&C case, although limited on December 31, 2008. Indeed, becoming a WTO member, at the beginning of 2002 China entered immediately Phase 3 of the ATC with the level playing field of all the WTO members in place of the previous bilateral agreements and immediately affected the T&C market. In the US, Chinese textile imports increased in value by 64% between 2001 and 2005, whereas textile imports from the rest of the world rose by 14%. The share of clothing imports in the US coming from China climbed to 24% in 2004 from 11% in 2001 (Brambilla et al., 2010). A similar dynamics occurred in the EU where the share of T&C imports from China stepped up from 16.9% in 2000 to 23.5% in 2004 in value, but volumes increased close to threefold. But the *cliff effect* happened in the first months of 2005.

In the first months of 2005 Chinese products flooded the US and the EU markets. As a consequence, both the US and the EU agreed with China to limit T&C imports till the end of 2008. After initially using the safeguard clauses for the accession of China into the WTO in 2001, the EU trade commissioner Peter Mandelson<sup>4</sup> signed a Memorandum of Understanding (MoU) with the Chinese representative Bo Xilai on June 11<sup>st</sup>, 2005 and the US Trade Representative Robert Portman signed a similar MoU on November , 2005.<sup>5</sup>

<sup>4</sup> assisted by Euratex technical consultation

<sup>5</sup> The EU MoU reference can be found in the EU Commission website and the US MoU at the US Trade Representative website.

The EU MoU prescribed limited growth rates of imports for 10 out of the 35 product categories that were liberalized on January 1, 2005. The growth rates were between 8% and 12.5% for the three years 2005-2007, therefore higher than the 7.5% of the *T&C Specific Safeguard Clause* that instead would apply for 2008 (see Table 4 in Appendix A). Similar growth rates were negotiated between the US and China. In the EU a first problem was raised by the accumulation of stocked products at custom after the initial unilateral restriction in April 2005. A new agreement was signed and allowed the shipped products to enter the European market, but as an anticipation of the 2006 quotas.

The main effect of the liberalized trade was on volumes that increased in 2000-2005 by 164% and 268% respectively in textile and clothing. China's EU import share increased from 7% to 19% in textile and from 20% to 43% in clothing in 2000-2005. Import values did not increase by the same percentage signaling a big drop in average import values as a proxy of the large decrease in prices. Import values on textiles coming from China in 2005 where 34.8% lower than in 2000, whereas only 10% lower for products coming from the rest of the world. The drop was even larger for clothing: 40.4% versus 17.1%. Thorough analyses in the US products (e.g. Harrigan and Barrows, 2009) have shown that the Chinese competition affected relatively more low-quality product and induced a *quality downgrading*.

Among the European countries Italy was among the most important players in T&C trade (Iapadre et al., 2016). In 2004 Italy was the major importer of textile products, both in value (22.5%) and in volumes (17.3%), and of clothing in volumes (16.5%), whereas Germany was the first importer in value (20.5%).<sup>6</sup>

<sup>6</sup> For a preliminary analysis of the effect of the end of the MFA in Italy see Pareschi (2022). A thorough analysis of the effects on the Danish labor market i offered by Utar (2014) and Utar (2018).

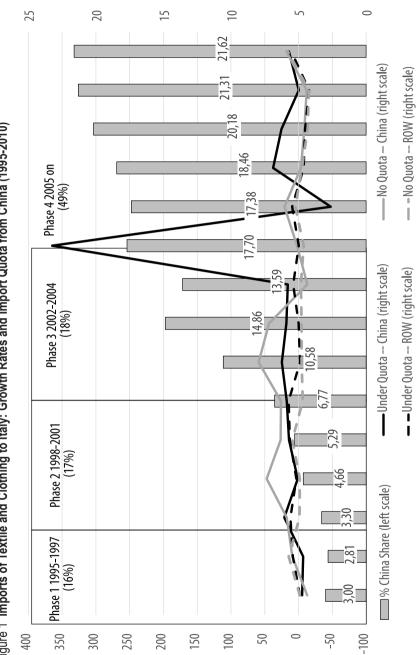


Figure 1 Imports of Textile and Clothing to Italy: Growth Rates and Import Quota from China (1995-2010)

CONTRIBUTI 265

Figure 1 reports the 1995-2010 year-on-year growth rates of T&C imports in Italy by distinguishing between products subject and not subject to the ATC quotas coming from China and from the rest of the world (ROW). The Chinese shares are represented by the histograms measured on the right-hand-side axis. The growth of Chinese imports has been high over the whole period thanks to the products not subject to the quotas. For instance, in Phase 2 growth in the liberalized products was always in double digits and the share of Chinese imports more than doubles from 3.3% to 6.8%. However, as expected, the quick jump is observed after the accession to the WTO and in only two years the Chinese share reaches almost 15%, i.e. five times as much as in 1996. The year 2005 is the outlier for the growth rate in the under-quota products, but it is also interesting as this is anticipated by a drop in 2004 of the already-liberalized products. The dynamics is remarkable during the whole period especially when compared with the ROW dynamics, although a clear diverging growth is observed after 2002, i.e. the WTO accession.

#### 3. Data

To study the dynamics of T&C restructuring, we rely on administrative data provided by the "Istituto Nazionale di Previdenza Sociale" (INPS), i.e. the Italian Social Security Institute, that records the contracts of the whole population of employees in the private non-agricultural sector.<sup>7</sup>

The main dataset that we use is the one of private employees, thus excluding the public employees and the self-employed workers. The time span of the dataset is between 1995 and 2020, but we truncate the analysis in 2010,

<sup>7</sup> The administrative data from the INPS archives are provided within the VisitInps Scholars Program.

the year when the financial crisis extended to Italy and to the EU. The dataset contains also a firm identifier that allows us to compute different employment indexes at the firm level and, therefore, to conduct the analysis at the firm level. The dataset fits particularly well our analysis as it covers the *universe* of contracts in the manufacturing sector. This allows us to impute a firm entrance in (or exit from) the market by the entrance in (or exit from) the dataset.<sup>8</sup>

The main variable we exploit is the type of contract, i.e. *dirigente*, *quadro*, *dipendente* and *operaio*. We merge the first two categories in the *high-skill level* and the latter two in the *low-skill level*. Then, we exclude firms that have zero high-skilled workers or zero low-skilled workers and we compute the high-skill ratio (HSR), i.e. the ratio of high-skill workers over low-skilled workers within firms, on all the remaining firms.<sup>9</sup>

Firms' sector of activity is recorded according to the 2007 NACE Rev.2 classification at the 4-digit level. Therefore, we can distinguish firms operating in T&C sector, and its subsectors, and those operating in the rest of manufacturing. Some summary statistics are presented in Table 2.

<sup>8</sup> We have also information on firm's starting and ending date of activity that we use to confirm and refine the sample in order to avoid measurement errors.

<sup>9</sup> The classification of workers according to the type of contract, as more explicitly acknowledged in the conclusions, divides workers into blue- vs. white-collar workers, rather than low- vs. high-skilled workers

		Yea	r = 199	5			
Ateco07	7 Code	F	actor Ir	tensity	/	Relative Wage	Observations
Name(Italian)	3dgt Code	50%	1%	5%	10%		
Textile		0,25	0,05	0,06	0,08	1,23	6.554
FibreTessili	131	0,23	0,04	0,06	0,07	1,24	1.242
Tessitura	132	0,25	0,05	0,07	0,09	1,28	954
Finissaggio	133	0,20	0,04	0,06	0,07	1,30	1.092
AltroTessile	139	0,25	0,05	0,07	0,09	1,18	3.266
Clothing		0,23	0,04	0,05	0,06	1,17	6.716
Abbigliamento	141	0,23	0,04	0,05	0,06	1,17	5.890
Pelliccia	142	0,33	0,05	0,07	0,10	1,15	288
Maglieria	143	0,17	0,04	0,06	0,07	1,18	538
Other Manufacturing		0,29	0,05	0,08	0,10	1,10	104.594
		Yea	r = 201	0			
Ateco07	7 Code	F	actor Ir	ntensity	/	Relative Wage	Observations
Name( <i>Italian</i> )	3dgt Code	50%	1%	5%	10%		
Textile		0,33	0,05	0,08	0,11	1,29	4.805
FibreTessili	131	0,33	0,05	0,07	0,10	1,39	757
Tessitura	132	0,33	0,05	0,09	0,12	1,33	748
Finissaggio	133	0,29	0,05	0,07	0,09	1,34	801
Altro Tessile	139	0,33	0,06	0,09	0,11	1,24	2.499
Clothing		0,33	0,04	0,06	0,08	1,27	5.128
Abbigliamento	141	0,33	0,04	0,06	0,08	1,27	4.566
Pelliccia	142	0,35	0,05	0,08	0,13	1,19	134
Maglieria	143	0,31	0,05	0,08	0,10	1,26	428
Other Manufacturing		0,33	0,06	0,09	0,13	1,12	119.697

#### Table 2 Summary Statistics (Begin Year and End Year)

Notes: Authors' elaboration with INPS dataset. The number of firms is the universe of active firms in 1995 with at least one blue-collar and one white-collar employee in the manufacturing sector.

#### 4. Results

The bottom line of the descriptive analysis in Section 2 is that the end of the MFA and the introduction of the gradual liberalization via the ATC had a disciplining effect in Italy that started already in Phase 3 because of the WTO entrance of China. However, we cannot exclude that some changes were already starting due to the harsh competition coming from products imported from China even before 2001.

Our analysis starts with the intuition that low-quality products are lowskilled intensive, and our focus then is on the high-skill ratio (HSR) for both affected sectors of Textile and Clothing. The Textile sector is more capital intensive than the Clothing sector, but there is no strict dominance in terms of high-skill ratio (HSR). Given this similarity, we decided to compare the full T&C sector with the rest of manufacturing (Mfct).

As *prima facie* evidence, Figure 2 shows how the median T&C HSR slowly converges to Mfct's, while the mean is not significantly different starting in 2004. In our opinion this is the first indication of the restructuring process in the T&C sector.

Our aim is to investigate how this restructuring occurred in terms of firms dynamics, i.e. has the restructuring happened via the entrance of new firms with higher HSR and/or the exit of firms with lower HSR (a sort of extensive margin), or mainly via a change in the existing firms (intensive margin)? Although the trade data show that international competition started already in 1995, we reckon that the beginning of Phase 3 in 2002 marked a relevant break when China entered the WTO affecting the ATC steps to end all trade barriers in 2005 (see Section 2 above).

	(1)	(2)	(3)
VARIABLES	All	New	Exit
T&C	-0.034***	-0.005	-0.036***
	(0.002)	(0.005)	(0.003)
post-2002	0.052***	0.026***	0.050***
	(0.001)	(0.002)	(0.002)
T&C post-2002	0.040***	0.037***	0.054***
	(0.003)	(0.006)	(0.005)
Observations	2,056,612	673,128	707,667
R-squared	0.002	0.001	0.002
Mean	.503	.548	.501

#### Table 3 The Change in the High-Skill Ratio Before and After 2002 for Different Firms

Robust standard errors are reported in parenthesis;

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

By taking 2002 as a breaking point, we run a regression on all firms in our sample, i.e. the *universe* of Italian manufacturing firms, between 1995 and 2010 where the change in the HSR is related to two dummy variables identifying the T&C sector and the post-2002 period. Table 3 shows in column (1) that on average over the whole period 1995-2010 the T&C sector has an HSR lower than Mfct by 3.4%, but confirms a significant acceleration of T&C's HSR, which increases by 4% more than the 5.2% average growth of the post-2002 period. Column (2) and (3) focus on the characteristics of entrant and exit firms.<sup>10</sup> For the coefficient of the T&C dummy, differently from the exit firms, entrant firms do not have a significantly lower HSR and the post-2002 increase by 3.7% – in line with the average ratio reported in Column (1) – is significantly higher than the average post-2002 HSR of all

<sup>10</sup> Recall that our definition of exit firms refer to firms that are not present in 2010, the last year of observation.

entrant firms (2.6%). Instead, as reported in Column (3), T&C exiters show a significantly lower HSR. The positive coefficient of the post-2002 dummy in Column (3) shows that firms exiting the market after 2002 have an HSR higher than the firms that leave before the breaking point.

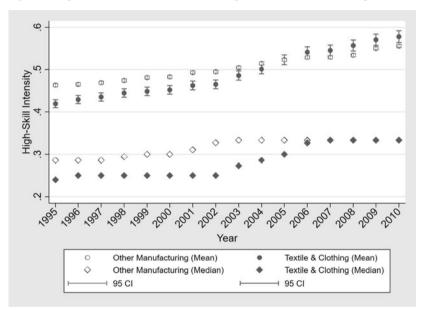


Figure 2 High Skill Ratio in Textile& Clothing vs. Other Manufacturing 1995-2010

Source: Authors' elaboration on INPS data

Figure 3 confirms graphically the results of the regression reported in Table 3. Exit firms in T&C are stochastically dominated by the other exit firms in the remaining manufacturing sector in terms of HSR values for the period 2002-2006 (Figure 3a), whereas this is not confirmed with the entrants. Hence, our first conclusion is that the restructuring has mainly occurred with the exit of low-HSR firms.

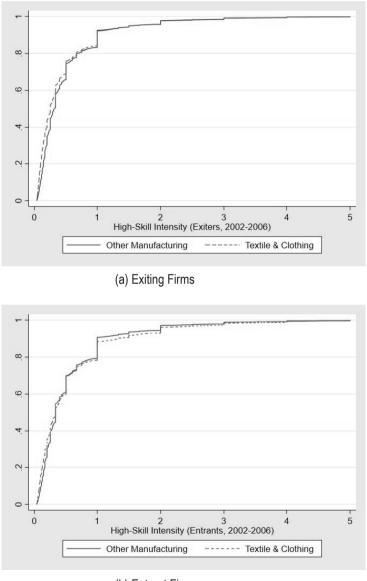
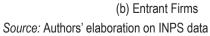


Figure 3 Cumulative Distribution of Firms by High-Skill-Ratio – Textile& Clothing vs. Other Manufacturing 2002-2006



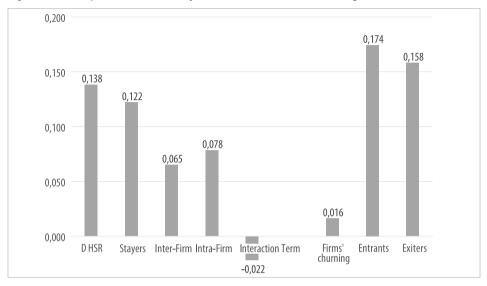
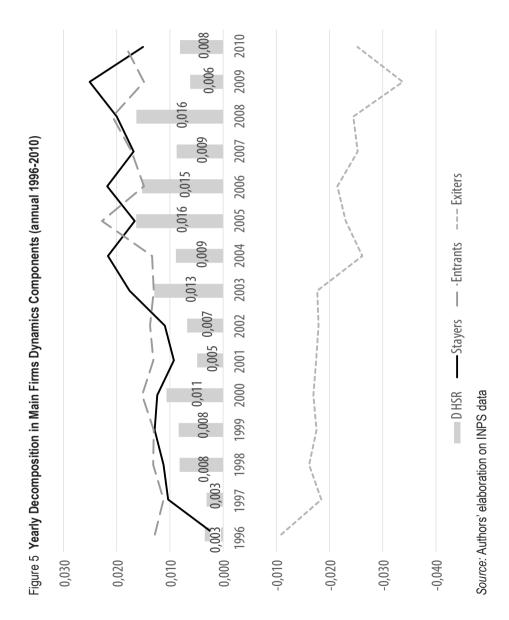


Figure 4 Decomposition in Firms Dynamics of the Textile& Clothing 1995 vs. 2010

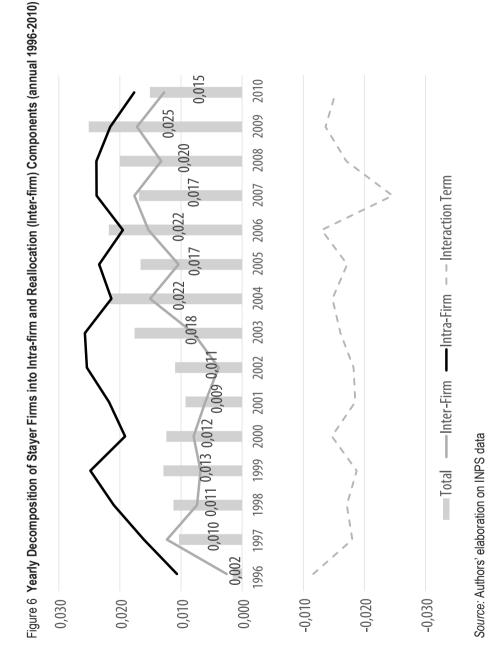
Source: Authors' elaboration on INPS data

Next, Figure 4 reports the results of the decomposition exercise that is able to determine the relative weights of permanent firms with respect to the dynamics of entrants and exiter firms.<sup>11</sup> By applying a long-run view, the Figure considers the T&C firms *(i)* present both in 1995 and in 2010 (stayers), *(ii)* present in 2010 and not in 1995 (entrants), and *(iii)* present in 1995 and not present in 2010 (exiters). The hystograms on the left highlight that over 88% of the 15-year change in HSR is due to the stayers and only less than 12% by firms' churning (the difference between the contribution of the entrants and the exiters). Although the net contribution of firms' churning is low, the gross contribution of entrants and exiters is higher than that of the stayers. This is also confirmed by the short-run (annual) analysis in Figure 5. The prevalence of intra-firm restructuring versus a selection of firms with higher HSR among the stayers is also confirmed in Figure 6, although the yearly analysis is much noisier with a large weight in the interaction term.

<sup>11</sup> Technical details on the decomposition are available from the authors upon request.



274 ECONOMIA ITALIANA 2023/3



CONTRIBUTI 275

#### 5. Conclusions

The end of the MFA and the transition period represented by the ATC did not save the T&C sector from the tremendous import shock in 2005. The effects of the sudden liberalization of many products was widespread all over Europe and in the US. Italy was one of the most affected economies. The disciplining effect of increased competition brought about a restructuring of the T&C industry that showed an acceleration in the catching up of the high-skill ratio with respect to the rest of the manufacturing industry. A combination of restructuring in the stayer firms and entrants of more dynamic firms, while HSR-low firms were exiting, characterized the whole period spanning the early 2000 till 2010.

This initial evidence points in favor of the dynamism of the Italian industry, but further analysis is needed in order to uncover the role of other changes occurring in the same period, like the 1999-2002 changeover of the Euro, the 2004 Enlargement (giving more opportunities to transfer low-skill-intensive phases of production to the East) and the massive migration (that was amnestied in 2003, but was already present in Italy since the end of the 1990s).

Given the richness of the dataset, further work is needed on different directions. The classification we used is more similar to a blue- vs. white-collar dichotomy, rather than a low- vs. high-skilled taxonomy, but we could improve the skill knowledge by using wages. Second, the granularity of the dataset allows us to undertake a more refined evaluation of the impact of the end of the MFA. In particular, it is possible to study the geography of the effect, similarly to what Autor et al. (2013) did in their seminal paper on the China trade shock in the US. Finally, we plan to follow the dismissed workers in their subsequent outcome after the shock occurred. This latter dimension might help drawing more policy-relevant conclusions about the winners and losers of the trade shock.

#### References

- Autor, D. H., D. Dorn, and G. H. Hanson (2013, October). The China Syndrome: Local Labor Market Effects of Import Competition in the United States. *American Economic Review 103*(6), 2121–2168.
- [2] Brambilla, I., A. Khandelwal, and P. Schott (2010). China's experience under the multi-fiber arrangement (mfa) and the agreement on textiles and clothing (atc). In *China's Growing Role in World Trade*, pp. 345–387. National Bureau of Economic Research, Inc.
- [3] Francois, J. and J. Wörz (2006, February). Rags in the High Rent District: The Evolution of Quota Rents in Textiles and Clothing. CEPR Discussion Papers 5477, C.E.P.R. Discussion Papers.
- [4] Harrigan, J. and G. Barrows (2009, May). Testing the Theory of Trade Policy: Evidence from the Abrupt End of the Multifiber Arrangement. *The Review of Economics and Statistics 91*(2), 282–294.
- [5] Iapadre, L., F. Onida, and M. Saladini (2016). *L'Italia nell'economia internazionale*. Technical report, ICE-Agenzia.
- [6] Martin, M. (2007). U.S. clothing and textile trade with china and the world: Trends since the end of quotas. CRS report for congress, Congressional Research Service.
- [7] Pareschi, R. (2022). Gli effetti della fine dell'accordo sul tessile e abbigliamento in italia. *Menabò di Etica ed Economia 173/2022*.
- [8] Spinanger, D. (1999, June). Textiles Beyond the MFA Phase-Out. The World Economy 22 (4), 455–476.
- [9] Twinam, T. (2022). Trade competition and migration: Evidence from the quartz crisis. *Journal of International Economics 138*, 103653.

- [10] Utar, H. (2014). When the floodgates open: "northern" firms' response to removal of trade quotas on chinese goods. *American Economic Journal: Applied Economics 6*(4), 226–250.
- [11] Utar, H. (2018, October). Workers beneath the Floodgates: Low-Wage Import Competition and Workersâ€TM Adjustment. *The Review of Economics and Statistics 100* (4), 631–647.

#### Appendix

#### Lists of Products Subject and not Subject to EU Quotas

Product category	% Jan-Mar 2004-2005	Agreed growth rate 2005	Agreed growth rate 2006	Agreed growth rate 2007
2 - cotton fabrics	60%	12.50%	12.50%	12.50%
4 - T-shirts	164%	10%	10%	10%
5 - pullovers	534%	8%	10%	10%
6 - men's trousers	413%	8%	10%	10%
7 - blouses	186%	8%	10%	10%
20 - bed linen	164%	12.50%	12.50%	12.50%
26 - dresses	139%	10%	10%	10%
31 - brassières	63%	10%	10%	10%
39 - table & kitchen linen	61%	12.50%	12.50%	12.50%
115 - flax or ramie yarn	51%	10%	10%	10%

Table 4 Product Categories Covered by the EU MoU on June 10, 2005

Source: https://ec.europa.eu/commission/presscorner/detail/en/MEMO\_05\_201

## PARTNER ISTITUZIONALI









CASMEF Centro Arcelli per gli Studi Monetari e Finanziari



## **BUSINESS PARTNER**









MEDIOCREDITO CENTRALE

## SOSTENITORI

Allianz Bank F.A. Arca Fordi SGR Assonime Banca d'Italia Banca Popolare del Cassinate Banca Profilo Banco Posta SGR Confindustria Piacenza CONSOB ENEL Gentili & Partners ISTAT Kuwait Petroleum Italia Leonardo Oliver Wyman SACE Sisal TIM Unicredit Ver Capital

## Per rinnovare o attivare un nuovo abbonamento effettuare un **versamento** su:

c/c bancario n. 10187 **Intesa Sanpaolo** Via Vittorio Veneto 108/b- 00187 ROMA IBAN **IT92 M030 6905 0361 0000 0010 187** 

#### intestato a: Editrice Minerva Bancaria s.r.l.

#### oppure inviare una richiesta a: amministrazione@editriceminervabancaria.it Condizioni di abbonamento ordinario per il 2024

	<b>Rivista Bancaria</b> <b>Minerva Bancaria</b> bimestrale	<b>Economia</b> Italiana quadrimestrale	Rivista Bancaria Minerva Bancaria + Economia Italiana
Canone Annuo Italia	<b>€ 120,00</b> causale: MBI24	<b>€ 90,00</b> causale: Ell24	€ <b>170,00</b> causale: MBEII24
Canone Annuo Estero	<b>€ 175,00</b> causale: MBE24	<b>€ 120,00</b> causale: EIE24	<b>€ 250,00</b> causale: MBEIE24
Abbonamento WEB	<b>€ 70,00</b> causale: MBW24	<b>€ 60,00</b> causale: EIW24	€ <b>100,00</b> causale: MBEIW24

L'abbonamento è per un anno solare e dà diritto a tutti i numeri usciti nell'anno.

L'abbonamento non disdetto con lettera raccomandata entro il 1° dicembre s'intende tacitamente rinnovato. L'Amministrazione non risponde degli eventuali disguidi postali.

I fascicoli non pervenuti dovranno essere richiesti alla pubblicazione del fascicolo successivo.

Decorso tale termine, i fascicoli disponibili saranno inviati contro rimessa del prezzo di copertina.

Prezzo del fascicolo in corso € 40,00 / € 10,00 digitale

Prezzo di un fascicolo arretrato € 60,00 / € 10,00 digitale

### Pubblicità

1 pagina **€ 1.000,00** - 1/2 pagina **€ 600,00** 

#### Editrice Minerva Bancaria COMITATO EDITORIALE STRATEGICO

PRESIDENTE GIORGIO DI GIORGIO, Luiss Guido Carli

#### COMITATO

Claudio Chiacchierini, Università degli Studi di Milano Bicocca Mario Comana, Luiss Guido Carli Adriano De Maio, Università Link Campus Raffaele Lener, Università degli Studi di Roma Tor Vergata Marcello Martinez, Università della Campania Giovanni Parrillo, Editrice Minerva Bancaria Marco Tofanelli, Assoreti

### ECONOMIA ITALIANA 2023/3

#### Transizione energetica: maneggiare con cura

La grande paura di dover razionare l'energia e di pagare bollette stratosferiche sembra fortunatamente svanita. Tuttavia, la grande questione del cambiamento climatico, con gli eventi naturali estremi che sembrano susseguirsi, è ancora tutta lì, con il suo peso minaccioso. E le politiche di mitigazione, la realizzazione della "transizione energetica", continuano a far discutere i policy makers e scuotono l'opinione pubblica.

Questo volume di Economia Italiana - editor Stefano Fantacone e Alfredo Macchiati - offre al lettore una chiave di lettura degli accadimenti più recenti e delle possibili prospettive della transizione energetica.

Si parte da uno sguardo retrospettivo e in particolare dall'impatto dell'invasione dell'Ucraina sul mercato europeo del gas naturale. Il rilievo assunto dal tema dei prezzi delle energie fossili è analizzato in due saggi, dedicati alla trasmissione dello shock energetico sull'inflazione in Europa e in Italia, di Parco, Primativo e Truzzu e di Corsello e Tagliabracci. Il contributo di Fantacone sposta l'attenzione sugli scenari futuri di crescita, dando conto del processo di diversificazione delle forniture realizzato dall'Europa e dall'Italia e analizzando gli obiettivi di aumento delle rinnovabili fissati in sede europea. Il tema dei costi della transizione energetica, esaminati da una prospettiva macroeconomica, è il nucleo centrale del contributo di Tomasini. Il saggio di Macchiati valuta l'atteggiamento dell'opinione pubblica verso la transizione: per far accettare i costi del processo di decarbonizzazione occorre porre al centro politiche redistributive e di comunicazione. La politica industriale è destinata a svolgere un ruolo decisivo nella transizione energetica. Gli articoli di Mosconi e di Scianna, Sorgente e Vitelli esaminano questo nuovo fronte di intervento della Commissione Europea. Il contributo di Nuttal consente infine di arricchire i punti di vista sulla controversa questione del nucleare, testimoniando l'esperienza del Regno Unito. Completano le analisi sull'energia le rubriche di Bella, Masciocchi e Mauro e di Carapellotti e Ricci.

Al di fuori del tema monografico, completano il volume il contributo di **De Arcangelis e Marian**i, *The Italian Economy and the End of the Multifiber Arrangement*, e la rubrica di **Rolleri** su come affrontare le sfide dell'inverno demografico italiano.

ECONOMIA ITALIANA nasce nel 1979 per approfondire e allargare il dibattito sui nodi strutturali e i problemi dell'economia italiana, anche al fine di elaborare adeguate proposte strategiche e di *policy*. L'Editrice Minerva Bancaria è impegnata a portare avanti questa sfida e a fare di Economia Italiana il più vivace e aperto strumento di dialogo e riflessione tra accademici, *policy makers* ed esponenti di rilievo dei diversi settori produttivi del Paese.

