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THE E.U. TEXTILE AND CLOTHING TRADE AND ITS IMPACT ON SILK WORM REARING DEVELOPMENT

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Abstract

The paper aimed to analyze the major trade flows in the E.U. textile and clothing industry in close connection with the future development of sericiculture using the data provided by EU Market Access Data Base for the period 2007-2011.The world market of textile and clothing is divided into two parts: raw material providers mainly situated in Asia, but also in South America and large processors situated in the E.U. such as Italy, France, United Kingdom and Spain, whose contribution to the EU production is 75 %. The main E.U. supplier of raw material for textile and clothing industry is China, followed by India, Bangladesh, Turkey and Brazil. About 33 % of the E.U. production of textile and garments is successfully exported as long as demand/offer ratio is unbalanced at world level. Import and export price have substantially increased. At present, the EU is the 2nd silk products exporter in the world. The new E.U. policy strategy regarding sericiculture is focused on the stimulation of silk worm rearing for producing cocoons mainly in Bulgaria, Greece, Italy, Spain, France and Romania where climate conditions are favorable, it is a long tradition in the field and rural population needs jobs. At the same time, the E.U. is focused on technology improvement and silk product design in order to create more value added and increase export and sales.

Key words**:** *clothing, E.U., silk worm rearing, textile, trade*

INTRODUCTION

The textile and clothing industry is an important sector of the E.U. manufacturing industry. In 2009, the 188,449 enterprises operating in the field generated Euro 142.4 billion turnover.

The continuous increased demand for textiles and garments, but also for carpets, home and technical textiles has obliged producers to diversify production using high processing technologies, invest in innovations and design, but also using a large variety of raw materials.

During the last decades, more exactly since 1995, it is a strong competition between various textile fibres such as: cotton, wool, silk, flax and jute and „man-made" fibres such as viscose, acetate, polyeter, nylon, polyamide, acrylic, polipropylen etc.

More and more synthetic fibres with a natural appearance and less costing used in the textile and clothing industry and less natural fibres, which are difficult to produce. Among the natural fibres, cotton comes to the 1st position with 90 % of total production of natural fibres, while silk accounts just for 0.18 %.

Silk as a raw material has remained a „luxury" textile and clothing as long as its fineness, brightness, elegance, pleasant touch and high protection for human body can not be replaced by any other fibre. Also its utility for medical purposes, in aeronautics etc. still keep it as an important raw material [8].

Silk is the „queen" of textiles and it is a highly priced agricultural commodity, accounting for about 0.2 % of the total world production of textile fibres [11].

In this context, the paper aimed to analyze the trade flows of the EU textile and clothing industry in close connection with the future development of silk worm growing in order to establish the main trends of the textile and garments market as well as what challenge the sericiculturists have to face in order to maintain this traditional sector of agriculture.

MATERIALS AND METHODS

In order to set up this paper, the following indicators were used: textile and clothing

exports, imports and balance in the EU, import value and quantity of silk products by category, share of silk products in their import value, the main EU suppliers of silk products, import price for silk product and also the EU suppliers and beneficiaries of textile and clothing.

The data were collected from EuroStat data base and EU Market Access database/Comext for the period 2007-2011[16].

RESULTS AND DISCUSSIONS

The EU textile and clothing producing countries are Italy, France, United Kingdom, Germany and Spain, whose contribution to the EU-27 production of textile and garments is about 75 %.

The EU producers of textile and clothing could be divided into two groups taking into account their specialization by sector of activity: textile or garments.

The countries located in the Southern Europe such as Italy, Greece, Portugal, Romania, Poland, Spain and France are more oriented to clothing production, while the Northern European countries, including United Kingdom, Germany, Belgium, the Netherlands, Austria and Sweden are mainly focused on textile production[2,15].

Also, within each production sector there is a specialization by product. For example, regarding textiles, wool yarns are produced mainly in France, Italy and U. Kingdom, man-made fibres and yarns are achieved by Austria, Germany, Italy and Eastern European countries, cotton fabrics are mainly created in Italy and France, wool fabrics are produced in United Kingdom, all silk yarns are imported and processed mainly by Italy and France, technical textiles are achieved in Germany, France, Italy and Belgium, carpets in Belgium, Germany and Italy, woven garments are produced in Romania and Bulgaria, knitted garments in Portugal, Italy and Germany, households textiles are mainly carried out in Italy, Portugal, Germany and France.

Therefore, textile as well as clothing production have been positively influenced by the EU enlargement in 2004 and 2007, bringing new producers in the community. About 65 % of the production achieved by the 12 countries which adhered to the EU is carried out in Poland, Romania, the Czech Republic and Hungary [2].

Changes in the international textile and clothing market

The continuous increasing demand for textile and clothing has stimulated the import suppliers to develop raw material sector but also processing industry. As a result, the main producing countries of raw materials for textile and clothing industry are situated on the Asian continent, while the main processors are in the EU countries.

With its high labour and raw material cost, in a word, high production cost and severe regulations, the EU could not compete with China, India, Bangladesh and Brazil.

At the beginning, for protecting the local producers, import quotas played a benefic role, but after 2009, when quota and license have become free, and textile and clothing have been treated according to the other commodities in the international trade, the EU policy has been changed.

In this context, under the pressure of the economic crisis, of the high production at low cost in the Asian countries, the EU has decided to increase its imports of textile and clothing, to involve research and development in textile and clothing industry in order to create more value added in the final products and diversify its offer, to intensify exports of textile and clothing mainly on the emerging third countries markets where demand was expected to go up. As a consequence, 33 % of textile and garments produced in the EU are sold on the external markets. The textile and clothing products carried out in Portugal, Greece, Lithuania, Poland, Slovakia, Romania, Bulgaria and the Czech Republic represent about 10 % of the total EU exports of manufactured products.

The textiles trade value has registered a different situation in the EU. *The export value of textiles* has recorded a continuous decrease since 2007 to the year 2009, but then it started increasing so that in the year 2011 it reached Euro 19,282 million being by 3.10 % lower than in 2007.

The top export markets for the EU textiles in 2011 have been: the USA 9.4 %, Turkey 8.4 %, China 7.8 %, Tunisia 7 %, Switzerland 6.9 %, Morocco 6.3 %, Russia 5.4 %, Hong Kong 3.4 %, Ukraine 2.9 %, Japan 2.7 %, the percentages represent the share of each beneficiary in the total export value.

The textile import value has increased by 11.09 % from Euro 22,318 million in 2007 to Euro 24,794 million in the year 201. As a result, the textile trade balance has registered a higher and higher deficit from a year to another. This deficit was 2.27 times higher in 2011 compared to the one recorded in the year 2007 (Table 1).

Table 1. The evolution of Exports and Imports Value in the EU Textile Industry, 2007-2011 (Euro Million)

	2007	2008	2009	2010	2011	2011/2007 %
Exports	19,898	18,913	16,015	17,772	19,282	96.90
Imports	22,318	21,063	17,678	21,833	24,794	111.09
Balance	-2.420	-2,150	-1,663	-4,061	-5,512	227.76

Source: EuroStat, 2012 [16], Own calculations.

In 2011, the EU had 10 main extra-EU textile suppliers, whose contribution to the textile import value have bean the following one: China 28.2 %, Turkey 17.2 %, India 11.2 %, Pakistan 7.4 %, the USA 4.6 %, South Korea 4.5 %, Switzerland 3.4 %, Japan 2.9 %, Egypt 2.1 % and Indonesia 2 % (Eurostat).

The Export and Import Value of Clothing

The export value has registered variations from a year to another, but its general trend was an increasing one, so that in 2011, it accounted for Euro 18,126 million, being by 9.03 % higher than in the year 2007.

The top 10 EU export markets for the EU clothing in 2011 have been: Switzerland 18 %, Russia 14.8 %, the USA 9.9 %, Hong Kong 6.3 %, Japan 6 %, Turkey 4.2 %, Norway 3.7 %, China 3.1 %, Ukraine 2.6 %, U.A. Emirate 2.4 %.

The import value of clothing has increased by 15.68 % from Euro 58,098 million to Euro 67,213 million. As a import value was higher than export value, the clothing trade balance has registered a higher and higher deficit whose level was by 18.3 % higher in 2011 compared to 2007 (Table 2).

Table 2. The evolution of Exports and Imports Value in the EU Clothing Industry, 2007-2011 (Euro Million)

	2007	2008	2009	2010	2011	2011/2007 %
Exports	16,624	17,3.56	14,506	15,148	18,126	109.3
Imports	58,098	59,514	57,541	62,103	67,123	115.68
Balance	-41,474	-42,158	-43,035	-46,955	-49,087	118.35

Source: EuroStat, 2012[16], Own calculations.

In the same year ***the Top extra EU*** clothing suppliers and their contribution to the clothing import value have been: China 43.8 %, Turkey 12.2 %, Bangladesh 11.2 %, India 6.8 %, Tunisia 3.6 %, Morocco 3.2 %, Vietnam 2.5 %, Pakistan 1.9, Sri Lanka 1.8 %, Indonesia 1.8 % (Eurostat).

The Import Value of Silk products has a low share ranging between 1.40 % in 2009 (the lowest level) and 1.89 % in the year 2008 (the highest level) in the period 2007-2011. However, in 2011, imported silk products represented 1.61 % of imported textiles.

This was a consequence of the increasing value of silk product import by 1.11 % from Euro 395 million in 2007 to Euro 399.4 million in the year 2011(Table 3).

The silk products imported by the EU have been represented by silk worm cocoons, raw silk not thrown, silk waste, silk yarn, yarn spun from silk waste, silk yarn spun from silk waste, woven fabrics, whose imported value is presented in Table 4.

In 2010, the share of the import value by silk product was the following one: woven fabrics 67 %, raw silk not thrown 11.80 %, silk yarn 11.42 %, silk waste 4.89 %, yarn spun from silk waste 4.11 %, silk yarn and yarn spun from silk waste 0.40 % and silk cocoons 0,007 % (Table 5).

Table 3. Import Value of Silk Products in the EU-27, 2007-2011(Euro Million)

	2007	2008	2009	2010	2011	2011/2007 %
Imports of Silk Products	395.0	397.9	248.4	319.9	399.4	101.11
Textile Imports	22,318	21,063	17,678	21,833	24,974	111.09
Share of Silk products in Textile import (%)	1.76	1.89	1.40	1.46	1.61	-

Source: EuroStat, EU[16], Market Access Data Base, 2012, Own calculations.

Table 4. Import Value of Silk Products by category in the EU-27, 2007-2011(Euro thousand)

Silk product	2007	2008	2009	2010	2011	2011/2007 %
Silk worm cocoons (5001)	31.9	12.6	27.3	24.3	8.4	26.33
Raw silk not thrown (5002)	49,581.7	54,761.0	21,873.5	37,758.4	58,019.0	117.01
Silk waste (5003)	21,044.0	16,651.9	9,825.3	15,651.8	19,069.7	90.61
Silk yarn (5004)	48,754.0	52,210.9	26,189.2	36,524.8	52,414.5	107.50
Yarn spun from silk waste (5005)	21,976.4	20,208.1	10,686.9	13,156.5	19,073.9	86.79
Silk yarn and yarn spun from silk waste (5006)	1,622.4	1,222.0	922.1	1,289.6	1,411.4	86.99
Woven fabrics (5007)	252,33.0	252,838.5	178,846.8	215,460.5	249,365.8	98.94
Total EU-27	395,046.4	397,905.0	248,371.1	319,865.9	399,362.7	101.09

Source: Eurostat, EU[16], Market Access Data Base/Comext. Last updated 23.07. 2012, [17]

Table 5. Structure of Import Value by Silk Product in the EU-27, 2007-2011 (%)

Silk product	2007	2008	2009	2010	2011
Total import value	100.00	100.00	100.00	100.00	100.00
Total import value of silk product, of which:					
Silk worn cocoons	0.008	0.03	0.010	0.007	0.002
Raw silk not thrown	12.55	13.76	8.80	11.80	14.52
Silk waste	5.32	4.18	3.95	4.89	4.77
Silk yarn	12.34	13.12	10.54	11.42	13.12
Yarn spun from silk waste	5.56	5.07	4.30	4.11	4.77
Silk yarn and yarn spun from silk waste	0.41	0.31	0.37	0.40	0.35
Woven fabrics	63.812	63.530	72.030	67.310	62.468

Source: Own calculations.

The imported amounts of silk products has registered a decline compared to the import value. The reduction accounted for 40.71 % in case of silk yarn and yarn spun from silk waste, about 35 % for silk yarn, yarn spun from silk waste and raw silk not thrown, about 38 % for silk waste, 25 % for woven fabrics and 93 % for silk worn cocoons. Therefore, the EU is more oriented to silk products involving a processing grade and deeply reduced its imports of silk worm cocoons (Table 6).

The imports of silk products has been determined by the fact that the EU countries can not compete with the Asian countries which are able to produce cocoons, silk and silk products at lower cost as long as labour and raw material are very cheep.

The main EU suppliers for silk worm cocoons. If in 2007, the main suppliers of silk worm cocoons was India with a share of 59.59 % in the import value of silk cocoons, followed by the USA with 27.69 % and Philippines with 9.63 % in the year 2008, the EU imported 27.64 % from China, 24.38 %

from Philippines 23.82 from Kenya and 13.89 % from Malaysia. In 2009, the main suppliers of silk cocoons were Turkey 46.42 %, China 36.76 % and India 16.80 %.

Table 6. Imported Quantities of silk Products in the EU-27, 2007-2011 (Tones)

Silk product	2007	2008	2009	2010	2011	2011/2007 %
Silk worm cocoons	1,400	1,000	3,100	4,000	0.500	0.07
Raw silk not thrown	2,129,100	2,387,600	904,900	1,158,600	1,387,500	65.16
Silk waste	1,880,500	1,486,000	919,700	1,131,100	1,165,400	61.97
Silk yarn	1,894,400	2,144,600	1,051,000	1,124,100	1,249,100	65.93
Yarn spun from silk waste	880,100	770,900	432,200	477,900	579,200	65.81
Silk yarn and yarn spun from silk waste	51,300	27,100	15,500	26,600	25,800	50.29
Woven fabrics	5,047,400	5,395,700	3,895,900	4,116,900	3,836,400	76.00
Total EU-27	1,884,200	12,212,900	7,222,300	8,039,100	8,243,400.5	69.36

Source: EU Market Access Data Base,/Comext; Last updated 23.07. 2012, [17]

In 2010, the silk cocoons were imported from Pakistan 60.57 % and China 11.89 %. In 2011, about 70.78 % of cocoons were imported from China and 27.31 % from India. Therefore, just in 5 years, China passed from the 3rd to the 1st position and is the main supplier of silk cocoons, being followed by India, Pakistan and Turkey.

The main EU suppliers for raw silk not thrown are China, Brazil, Vietnam and India. China accounts for about 89 % of the import value of raw silk not thrown, Brazil for about 9 %, Vietnam and India with the smallest percentages in all the analyzed period.

The main EU suppliers for Silk Waste are China (91 %), India (8 %), Japan (1 %) in all the analyzed years.

The main EU suppliers for Silk yarn are China (71 %), Vietnam (15 %), Brazil (5.5 %) and Tunisia (5 %) in all the analyzed periods.

The main EU suppliers for yarn spun from Silk waste are China (81%), India (8.5 %), Switzerland (7.4 %) and also Thailand and Japan in all the analyzed years..

The main EU suppliers for Silk Yarn and Yarn Spun from Silk Waste are Japan (28 %), China (24 %), Tunisia (23 %) and Switzerland **(**9 %) in all the years, only in 2007 India and Turkey claimed of 4th and 5th position.

The main EU suppliers for woven fabrics are China 74 %, India 20 %, Switzerland 14 %, Republic of Korea 1.1 % and Thailand 0.8 %. During the analyzed period, China and India kept their 1st and 2nd positions, but the other countries changed their positions among them. Therefore, China is the main supplier for silk worm cocoons, raw silk not thrown, silk waste, silk yarn, yarn spun from silk waste and woven fabrics and also is situated on the 2nd position, after Japan for silk yarn and yarn spun from silk waste.

The average import price has decreased by about 26 % from Euro 22.75 /kg in 2007 to Euro 16.84/kg in 2011, while the import price for other silk textiles has continuously increased. In 2011, the price for raw silk not thrown reached Euro 41.81/kg, being by 79.59 % higher than in 2007. Silk waste import price accounted for Euro 16.36/kg, by 46.20 % more then in 2007. Silk yarn import price increased by 63.08 % from Euro 25.73/kg in 2007 to Euro 41.96/kg in 2011. The import price for yarn spun from silk waste increased by 31.87 %, reaching Euro 32.93/kg in 2011. Silk yarn and yarn spun from silk waste price accounted for Euro 54.70/kg in 2011, being by 72.99 % higher than in 2007.

Woven fabrics import price is the highest one among the other silk textiles, in 2011 reaching Euro 64.99/kg, by 30 % more than in 2007, when it was Euro 49.93/kg (Table 7).

The import price reflects the demand/offer ratio. The increased demand for more processed silk products including more value added has led to a higher price.

Table 7. Average Import Price, EU-27, 2007-2011 (Euro/kg)

Silk product	2007	2008	2009	2010	2011	2011/2007 %
Silk worm cocoons	22.75	12.59	8.80	6.07	16.84	74.02
Raw silk not thrown	23.28	22.93	24.17	32.58	41.81	179.59
Silk waste	11.19	11.20	10.68	13.83	16.36	146.20
Silk yarn	25.73	24.34	24.91	32.49	41.96	163.07
Yarn spun from silk waste	24.97	26.21	24.72	27.52	32.93	131.87
Silk yarn and yarn spun from silk waste	31.62	45.09	59.49	48.48	54.70	172.99
Woven fabrics	49.93	46.86	45.90	52.33	64.99	130.16

Source: Own calculation, 2012

The decline of raw silk cocoon import price was determined by the fact that this raw material is less required at import as long as it could be produced in the EU countries with a long tradition in the field.

The impact of textile trade on silk worm growing development. In general, on the EU market it is a lack of silk textile offer, which has determined a new orientation for increasing imports which has affected the local producers.

Also, other additional commodities (garments, internal house decorations, surgery threat etc) are subject for import.

The trade liberalization between the developing countries and the developed ones based on GATT regulations and China's adhesion to WTO in 2001 have stimulated China's exports to the EU. In this context, a new strategy was issued by the EU in order to strengthen the textile industry. In this respect, the foundation of high level Textile Group involved in the textile sector modernization has changed the global textile and garment trade.

The EU has been focused more on new production technologies able to develop new products of high value added and in this way the EU has become the 2nd world textile exporter.

Because the internal production and textile industry are deeply affected by the large imports of textiles coming from the third country markets, the EU has decided to stimulate sericiculture development in the countries such as Bulgaria, Greece, Italy, Spain, France, Romania, which have a long tradition in silk worm rearing and silk processing. In this respect a subsidy of 132 Euro was provided per silkworm egg box and also mulberry tree plantations are encouraged to be established in order to produce leaf for silkworm feeding.

The development of sericiculture within the EU in an alternative to put into practice durable development of the rural areas by offering to the rural population a chance to get additional income and new jobs and also a challenge for the development of the local communities.

The EU subsidy payment is a financial support for obliging silk worm breeders to produce high quality silkworm cocoons and silk filament [10].

Romania has a high potential for producing silk worm cocoons, but it can not process them as the textile industry failed. However, silk cocoons could be used for producing egg boxes which could be delivered to other breeders encouraging sericiculture development and cocoon processing either at local level in various handicrafts or being used in decorative art [9,10]

In Bulgaria, about 70 % of cocoon production is used for egg production and the remaining of 30 % is dried and processed into raw silk and silk commodities [3].

In Greece, sericiculture is well developed having a long tradition in producing cocoons and processing them in silk fibre and various textiles [4].

In the countries from the Black and Caspian Seas and Central Asia it is a long experience in sericiculture, there are mulberry tree resources, favorable climate conditions for silk worm rearing, governmental support and

also an increasing demand for natural and biological products in the EU silk market. The main problems the countries situated in these areas are facing are: the low raw silk quality, the technologies applied which are still traditional, management system is not market oriented, the low raw silk price for the East European countries in the international market, the unsufficient amount of silkworm eggs which does not meet the local needs. As a result, regional cooperation could be a solution for solving these problems and develop and revival the EU silk market [13,14].

Sericiculture in the Black and Caspian Seas can not compete because of the low subsidies provided by state to the local producers, the „dumping" price of China textile imports, the extended use of synthetic fibres in the textile and clothing industry, the lack of modern technologies and endowment for producing textile and clothing which restrain the Eastern countries to compete with Italy and France is silk fabrics and commodity printing and design.

All these countries are advantaged because they have high silkworm genetic resources (breeds and hybrids), the EU subsidy payment Euro 132 per egg box under the condition as sericiculture to be practiced in associative forms of organization, special EU measures refer to young farmers who are encouraged and financially supported to establish new modern sericicultural farms and also production has to be oriented to find products involving a high value added [13,14].

China is the largest silk producer and exporter in the world contributing by 70 % to the world silk production and by 80 % to world exports.

As long as the global silk market and consumption are relatively stable, the solution is to develop new silk products and improve technologies [1].

Japan accounts for 20 % of the world silk consumption and it is a major silk consumer but also a raw silk and silk products importer [7].

Brazil contributes by 95 % of the silk yarn production processed in silk industry and by 87 % of silk yarn exports mainly to Japan, South Korea, India, USA, Turkey and EU [6].

India has a great opportunity to strenghten sericiculture in order to support its position at global level as producer and exporter [12].

CONCLUSIONS

The largest textile and clothing producers are Italy, France, United Kingdom, Germany and Spain contributing by 75 % to the EU production.

The EU enlargement has had a benefic effect on textile and clothing production. About 75 % of the CEEC's countries is carried out in Poland, Romania, the Czech Republic and Hungary.

As long as raw material market is continuously developing in Asia and South America, the main EU suppliers are China, India, Bangladesh and Brazil.

The increased demand for textile and garments in the international market is an incentive for the EU to be more focused on research involvement to design new models and create more value added and intensify its export. About 33 % of the EU production is sold on external markets. About 10 % of the EU export of manufactured products is carried out by Portugal, Greece, Lithuania, Poland, Slovakia, Romania, Bulgaria and the Czech Republic.

The EU import value has increased by 1.11 % in the period 2007-2011 being represented mainly by woven fabrics (67 %), raw silk not thrown (11.80 %), silk yarn (11.42 %), silk waste (4.89 %), yarn spun from silk waste (4.11 %) and very few silk cocoons, in the year 2011 and the textile import value increased by 11 % in the same period of time.

China is the main supplier of silk worm cocoons, raw silk not thrown, silk waste, silk yarn, yarn spun and woven fabrics and Japan for silk yarn and yarn spun.

The import price as well as export price for textile and garments has deeply increased in the last years.

The EU has become the 2nd textile exporter in the world.

As the huge import of silk textile has deeply affected internal producers, the EU new policy strategy stimulates sericiculture

development allotting Euro 132 subsidy per silk worm egg box.

Countries like Bulgaria, Greece, Italy, Spain, France an Romania with a long experience in silk worm rearing and favorable climate conditions for mulbery tree growing are mainly interested to develop durable sericiculture in cooperation.

As long as the global silk market and consumption is relatively stable, new silk products design and improved technologies are the major solutions to support textile industry in the EU.

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