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Examination of Two Decades in Used Clothing Trade: The Case of the United States and Selected Developed Economies

Youngji Lee
Iowa State University

Ling Zhang
Iowa State University, lzhang1@iastate.edu

Elena E. Karpova
Iowa State University, karpova@iastate.edu

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Keywords

second-hand clothing, used clothing trade, worn apparel

Disciplines

Asian American Studies | Fashion Business | Fashion Design | Fiber, Textile, and Weaving Arts | International Business | Other Languages, Societies, and Cultures

Comments

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[Original Article]

Examination of Two Decades in Used Clothing Trade: The Case of the United States and Selected Developed Economies

Youngji Lee[†], Ling Zhang, and Elena Karpova

Dept. of Apparel, Events, and Hospitality Management, Iowa State University, USA

Abstract

This research examined two decades of the U.S. used clothing exports to the world. All countries (209) were classified into four groups based on the level of economic development. Between 1996 and 2012, U.S. used clothing exports shifted away from low-income economies to high-income economies. For the first time, our research demonstrated that the majority of used clothing discarded by American consumers is exported to high-income economies instead of poorest nations of the world. Next, used clothing exports and imports by volume and value in seven high-income countries were analyzed. The high-income countries not only exported but also imported significant amount of used clothing, which indicates a growing demand for worn apparel in developed nations. The demand might be at least partially attributed to the popular vintage clothing trend and increasing consumer environmentalism. Implications regarding development and implementation of a new classification system of worn clothing and recommendations for future research are presented.

Keywords: second-hand clothing, used clothing trade, worn apparel

I. Introduction

With fast changing fashion trends, consumers have been buying and disposing more clothing every year (Allwood, Laursen, Rodriguez, & Bocken, 2006), throwing away more than 13 million tons of textiles per annum (U.S. Environmental Protection Agency, n.d.). Few consumers are changing their consumption practices to more sustainable, for example, by buying used clothing even when they can afford to buy new (Hustvedt & Dickson, 2009). Used clothing is apparel “that has been previously purchased and used” (Mhango & Niehm, 2005, p. 342). Many consumers donate no longer wanted clothing to charities such as Goodwill or Salvation Army (Ha & Hodges, 2008).

The United States (US) is the world’s top exporter of used clothing (Rivoli, 2009). It is a well-known fact that the country exports used clothing to low-income nations. Interestingly, the US has also been exporting used clothing to many developed economies

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[†]Corresponding author
(youngjilee2@gmail.com)

ORCID
Youngji Lee
<http://orcid.org/0000-0001-5953-8575>
Ling Zhang
<http://orcid.org/0000-0003-2871-8383>
Elena Karpova
<http://orcid.org/0000-0002-1612-5989>

(Office of Textiles and Apparel[OTEXA], 2013). In fact, Canada, Germany, Japan, Italy, South Korea, and United Kingdom (UK) are among major importers of U.S. used clothing (OTEXA, 2013).

Very little research exists on used clothing trade. Several extant studies focused on used clothing trade in low-income countries (Brooks, 2013; Hansen, 2004; Mhango & Niehm, 2005). To our knowledge, no research has examined used clothing trade between developed economies. The purpose of this study was to analyze trends in the U.S. used clothing exports to countries at different levels of economic development. A special examination was conducted on used clothing trade between developed countries.

II. Literature Review

1. The U.S. Used Clothing Industry

In the 1990-2000s, used merchandise industry grew rapidly in the United States, with many newly opened stores selling second-hand clothing (HighBeam Business, n. d.). Between 1997 and 2007, used merchandise sales grew by 55%, and the industry employment increased by 13% (U.S. Census Bureau, 2007). In 2010, the industry consisted of 17,866 stores and employed 144,113 workers (U.S. Census Bureau, 2010). America's Research Group (as cited in HighBeam Business, n. d.) reports that 12-15% of U.S. consumers visit resale and consignment stores in any given year. It is a fairly high number in comparison with 11.4% consumers who visit factory outlet malls, 19.6% visiting specialty apparel stores, and 21.3%—major department stores.

Used clothing businesses sort donated apparel into three groups: “for sale as clothing, wiping rags, and fiber” (Rivoli, 2009, p. 220). During the sorting process, some clothing is hand-picked for its special value such as famous brands or vintage clothing. The latter has become a popular trend, with steadily growing demand, and has had a positive impact on the growth of used clothing industry (Cervellon, Carey, & Harms, 2012).

2. Used Clothing Trade

The global used clothing trade is a multimillion dollar business (Mhango & Niehm, 2005) that creates thousands of jobs around the world (Hansen, 2004). For decades, the US has been the world's leader in exporting used clothing (Rivoli, 2009). In 2012, \$770 million worth of used clothing traveled from the US to practically every country in the world: 209 nations imported apparel disposed by U.S. consumers (OTEXA, 2013). Extant research on used clothing trade has focused on some of the poorest countries in the world such as Malawi, Tanzania, and Zambia (Hansen, 2000, 2004; Mhango & Niehm, 2005; Rivoli, 2009).

While a lot of U.S. used clothing is destined to low-income nations in Africa, a significant portion of it is exported to developed countries such as Canada, Germany, Japan, and Italy (OTEXA, 2013). However, no research has investigated U.S. used clothing exports to countries at different levels of economic development and how these export trends have evolved over time. Such investigation is important because it allows for a better understanding of supply and demand dynamics in the relatively young but fast growing used clothing industry and trade.

III. Method

To examine trends in the U.S. used clothing exports, secondary data were collected and analyzed. Based on the Harmonized Tariff Schedule (HTS) classification, trade data categorized as “worn clothing and other worn articles”

(HTS 630900) were collected from government and trade statistic databases: OTEXA (2013) and United Nations (UN) Comtrade (2013). HTS 630900 is the only existing category that accounts for used clothing trade and no further subdivision by type of product, fiber content, or any other characteristic is currently available. Total U.S. exports of used clothing in volume (kg) were collected from OTEXA for the 1996-2012 period.

To examine patterns in the U.S. used clothing exports to countries at different levels of economic development, all 209 countries that imported used clothing from the US between 1996 and 2012 were classified into four groups by gross national income (GNI) per capita (World Bank, 2012). According to the World Bank, in 2012, all 214 world's countries were divided into four groups as: (a) low-income economies with GNI per capita of \$1,025 and less; (b) lower-middle-income economies with GNI per capita between \$1,026 and \$4,035; (c) upper-middle-income economies with GNI per capita between \$4,036 and \$12,475; and (d) high-income economies with GNI per capita of \$12,476 and more. To compare U.S. used clothing exports to countries at different levels of economic development, all 209 countries that imported U.S. used clothing during the 1996-2012 period were classified into one of the four income groups.

For a more detailed examination of used clothing trade in high-income nations, in addition to the US, six other developed economies were selected: Canada, Germany, Japan, Italy, South Korea, and UK. These countries were selected because: (a) they are among the top ten high-income economies that import the U.S. used clothing; and (b) they are considered fully developed economies with sophisticated consumer markets and mature domestic apparel industries. For these seven high-income countries, used clothing import and export data were collected in both volume and value (UN Comtrade, 2013). The data were collected for the 1990-2011 period based on the availability of the data for the selected countries.

The goals of the analysis were: (a) to investigate 1996-2012 trends in the U.S. used clothing exports to the four groups of countries at different levels of economic development; and (b) to examine patterns in used clothing trade (export and import) in the seven high-income countries that are main importers of the U.S. used clothing.

IV. Results

1. Trends in the U.S. Used Clothing Exports, 1996-2012

Figure 1 and Table 1 display aggregated U.S. exports to all 209 countries grouped by the level of economic development. During the seventeen-year period, total U.S. export of used clothing increased 3.5 times: from 219 million kg in 1996 to 770 million kg in 2012. The exports remained relatively stable in the 1990s, whereas the 2000s saw sharp increases. With the exception of short-term declines (in 2001, 2003, and 2007), the overall 2000-2012 trend showed a strong growth. A significant increase in used clothing exports between 2007 and 2008 might be attributed to the global financial crisis that started in 2007 and resulted in demand for a less expensive substitute of new apparel.

Between 1996 and 2004, total U.S. used clothing exports more than doubled (130% overall increase), with the early 2000s accounting for the majority of the growth. Between 2004 and 2012, the growth trend continued and constituted another 53%. A total of 139 countries imported U.S. used clothing in 1996. In 2012, the number of countries that imported U.S. used clothing has increased to 159. Interestingly, the major growth in the number of countries was from the upper-middle- and high-income countries.

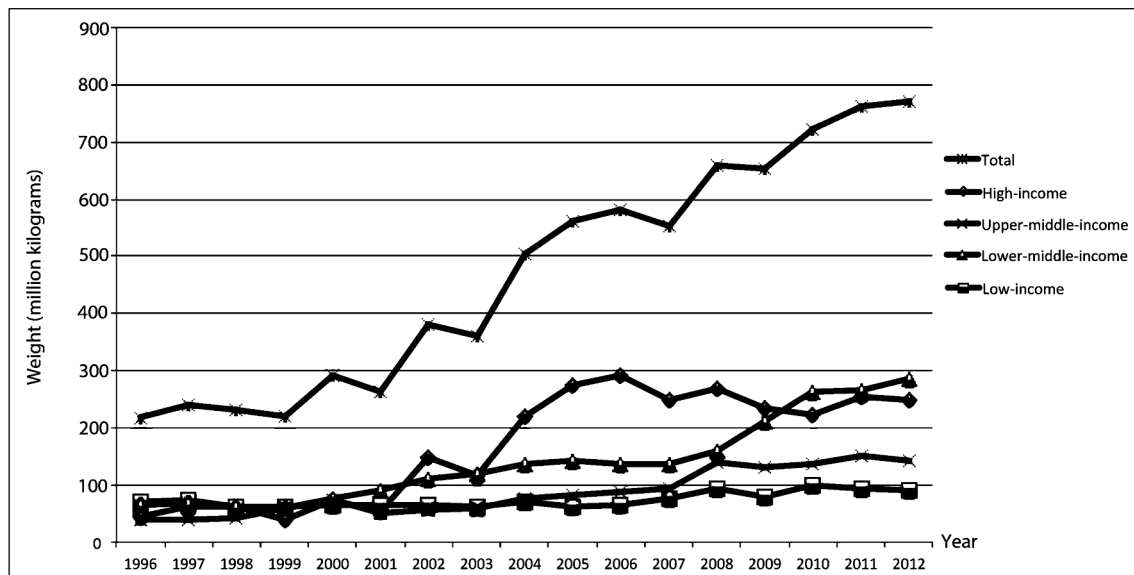


Figure 1. U.S. used clothing exports to countries at different levels of economic development

Table 1. U.S. used clothing exports to countries based on economic development level

Countries	U.S. used clothing export, kg			Percent change, 1996-2004	Percent change, 2004-2012	Top importers, 2012
	1996	2004	2012			
Low-income (n=34)	69,806,550	70,415,537	91,002,373	0.87%	29.24%	Tanzania Kenya Congo Liberia Mozambique
Lower-middle-income (n=48)	65,502,893	136,924,373	287,004,420	109.04%	109.61%	India Guatemala Philippines Pakistan Honduras
Upper-middle-income (n=54)	38,428,312	75,283,837	143,834,243	95.91%	91.06%	Chile Dominican Rep. Angola Tunisia Malaysia
High-income (n=73)	44,757,002	220,824,109	247,723,213	393.38%	12.18%	Canada Germany Japan Italy Korea UK
Total (n=209)	218,494,757	503,447,856	769,564,249	130.42%	52.86%	

Note. n = total number of countries that imported used clothing from the US during 1996-2012.

1.1. US exports to low-income countries

The U.S. used clothing exports to low-income countries remained flat (Figure 1). In 1996, the country exported almost 70 million kg to 28 low-income nations. In 2004, the exports remained almost the same, 70.4 million kg, even though in the same period the total U.S. exports increased by 130%. Over the eight-year period, the share of the total U.S. used clothing exports to the poorest economies dropped by more than half: from 32% in 1996 to only 14% in 2004. In 2012, 27 low-income countries imported 91 million kg of used clothing, which was only 12% of the total U.S. used clothing exports.

In 1996, the top importers in the low-income group included Niger, Haiti, Benin, Tanzania, and Congo—all African countries with the exception of Haiti. In 2012, Tanzania and Congo remained among the top importers, with an addition of three other African countries: Kenya, Liberia, and Mozambique. Even though used clothing exports from the US to low-income countries increased by 30% between 1996 and 2012, the proportion in the total U.S. used clothing exports has dropped from one-third in 1996 (32%) to slightly more than one-tenth in 2012 (12%).

1.2. US exports to lower-middle-income countries

U.S. used clothing exports to lower-middle-income countries increased four times over the seventeen-year period, or a 338% overall growth: from 65.5 million kg in 1996 to 287 million kg in 2012 (Figure 1). The sharpest increase was in 2009-2010, which might be explained by the global economic crisis and a declined spending for new apparel. The share of the total U.S. exports to this group of countries increased during the period from 30% in 1996 to 37% in 2012. The total number of countries in this group remained relatively stable: 32 nations in 1996 and 37 nations in 2012. The countries in the lower-middle-income group were primarily from the Asian region, with several countries from Africa and South/Central America. By 2012, four of the top five importing nations remained the same as in 1996, with an addition of Honduras: India, Guatemala, Philippines, and Pakistan (Table 1).

1.3. US exports to upper-middle-income countries

U.S. used clothing exports to upper-middle-income countries recorded a gradual increase (Figure 1). In 1996, 35 countries imported 38 million kg, or almost 18% of the total U.S. used clothing exports. The top five importers were Mexico, Chile, Angola, Tunisia, and Jordan. In 2004, 39 countries imported almost doubled the amount: 75.3 million kg, or 15% of the total U.S. used clothing exports. The top five importers in 2004 were Chile, Dominican Republic, Angola, Malaysia, and Turkey. In 2012, the U.S. exports to this group of countries showed another double increase (144 million kg) and constituted 19% of the total U.S. exports. Chile, Dominican Republic, Angola, and Malaysia remained among the top five importers, with a return of Tunisia. Overall, between 1996 and 2012, U.S. exports to the upper-middle-income countries had a 274% growth, yet the increase was lower than in the lower-middle-income countries (338%). At the same time, the share of the upper-middle-income countries in the total U.S. used clothing exports remained stable: 18% in 1996 and 19% in 2012.

1.4. US exports to high-income countries

U.S. used clothing exports to high-income countries had the most dynamic change in comparison to the other three groups (Figure 1). In 1996, 44 high-income countries imported 45 million kg, or 21% of the total U.S. used clothing exports (Table 1). The top five importers were Canada, Netherlands, Singapore, Japan, and Germany. In 2004, the exports jumped more than four times to 220.8 million kg. The number of countries importing U.S. used clothing

increased to 50. The top five importers were Canada, United Arab Emirates, Japan, Poland, and Trinidad and Tobago. After 2006, the trend has flattened. In 2012, the exports to the high-income countries were 248 million kg, which was almost one-third (32%) of the total used clothing exported by the US. The top five importing countries were Canada, United Arab Emirates, Oman, Slovak Republic, and Germany.

Overall, U.S. exports to high-income countries increased from 45 million kg in 1996 to 248 million kg in 2012, a 453% growth. This was the highest growth among the four groups of countries by the level of economic development. Between 2001 and 2012, the high-income countries imported substantially more used clothing from the US than the low-income countries. In addition, this group imported more used clothing than any of the four groups between 2004 and 2008. The overall trend in the U.S. total exports repeats the export trend of the high-income countries, especially between 1996 and 2009 (Figure 1).

2. Used Clothing Trade in High-Income Countries, 1990-2011

2.1. Used clothing import values

To better understand used clothing trade in developed economies, trends in total used clothing imports and exports in both value (USD) and volume (kg) for seven high-income countries were examined between 1990 and 2011. The countries included Canada, Germany, Italy, Japan, South Korea, UK, and US. All countries, with the exception of the US and Japan, showed a continuing increase in used clothing import values during the past two decades (Figure 2).

Overall, the values of U.S. used clothing imports remained relatively flat during the 20+ years and ranged between \$3 and \$9 million. The import values of used clothing in Japan increased sharply in the early 1990s from \$9 million in 1990 to almost \$120 million in 1995 almost a 1,230% increase, and then dipped in 1998 to slightly more than \$40 million, which was likely due to the Asian economic crisis (Nanto, 1998). In 1995, Japan imported 1.6 times more

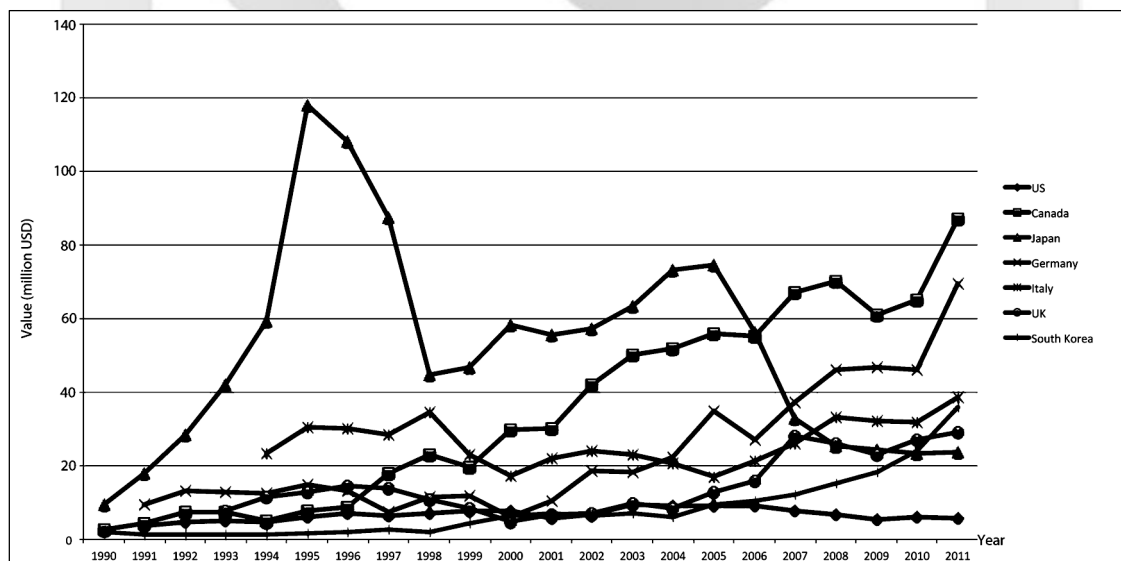


Figure 2. Used clothing imports in value (USD) for seven high-income countries, 1990-2011

used clothing, in value, than all other six high-income countries combined. Japan remained the top used clothing importer until 2005, when Canada became the leader. In 2011, Canada imported \$87 million of used clothing from the world, followed by Germany (\$69 million), Italy (\$37 million), South Korea (\$36 million), and UK (\$29 million). In the 1990s, South Korea had the lowest used clothing imports among the seven countries (less than \$2 million). However, it had a sharp increase, \$36 million by 2011 (around 1,800% overall increase from 1990, surpassing UK, Japan, and the US).

2.2. Used clothing export values

Between 1990 and 2011, used clothing export values continually increased for all seven countries (Figure 3). The US was the top exporter during the entire period, whereas it had the lowest import numbers (Figure 2). In 2011, the country exported 100 times more of used clothing (\$605 million) than it imported (\$6 million).

In 2011, UK (\$499 million) and Germany's (\$425 million) exports closely followed the US exports. The two countries also exported substantially more used clothing than they imported (6 to 20 times more). South Korea had a fast growth after 2006: its used clothing exports reached \$310 million in 2011, 215% increase in comparison with 2006. Used clothing export values for Canada, Italy, and Japan remained relatively flat and did not exceed \$100 million until the late 2000s. In 2011, the three countries exports of used clothing were just below \$200 million.

Interestingly, Japanese import values were higher than its export values between 1993 and 2006. For example, in 1995, it imported almost three times more of used clothing (\$118 million) than it exported (\$44 million). Japan was the only high-income country examined in the study where used clothing import values were higher than export values, indicating a strong demand for used clothing in the market.

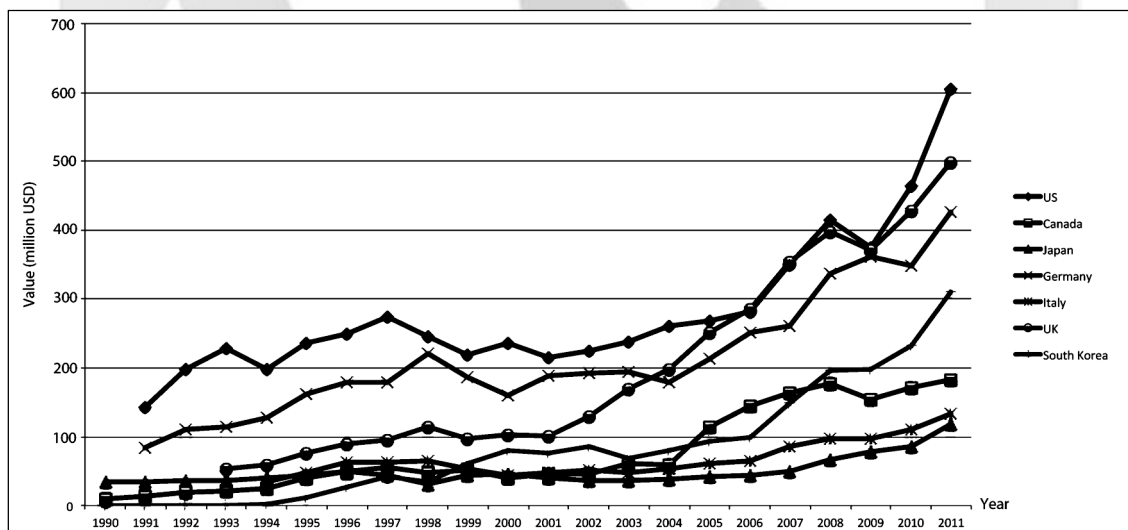


Figure 3. Used clothing exports in value (USD) for seven high-income countries, 1990-2011.

2.3. Used clothing import volume

In comparison with import values, there were quite different patterns in used clothing import volume (Figure 4). Between 2001 and 2006, Canada had a very sharp increase in import volume (648%), securing the top position in the group. In both 2005 and 2006, the country imported almost 260 million kg, which was roughly a double of the amount imported by all other six countries combined.

Japanese import volumes (between 1 and 8 million kg) and U.S. imports (between 5 and 15 million kg) had a relatively flat trend and were the lowest in the group. In contrast, Japanese used clothing import values were one of the highest (Figure 2), indicating high value of imported used clothing per kg. Between the late 1990s and throughout the 2000s, Italy also recorded quite stable but much higher imports of roughly 50 million kg a year. South Korea, Germany, and UK demonstrated steadily increasing imports during the 2000s. In 2011, they imported 57, 53, and 26 million kg of used clothing, respectively.

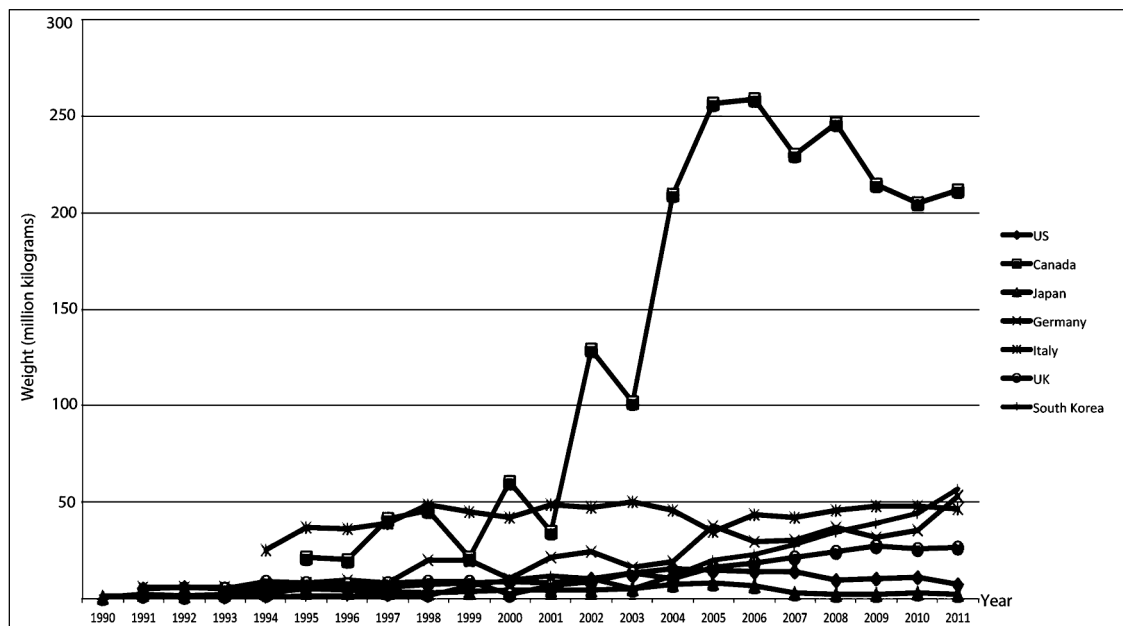


Figure 4. Used clothing imports in volume (kg) for seven high-income countries, 1990-2011

2.4. Used clothing export volume

In terms of used clothing export volume (kg), the US again was the undisputed leader with 762 million kg in 2011 (Figure 5). Between 1991 and 2011, the country recorded a 430% increase in used clothing export by weight. In 2011, the US was followed by Germany (453 million kg), UK and South Korea (both around 320 million kg). Japan, Canada, and Italy's used clothing exports remained relatively flat and were under 100 million kg until 2004, and less than 200 million between 2005 and 2011. It should be noted that between 2002 and 2011, Canada imported more used clothing by weight than it exported. For example, in 2002 the country imported 2.8 times more of used clothing, 129 million kg, than it exported, 48 million kg (Figures 4 and 5). It was the only country in the group where used clothing import volume was higher than export volume.

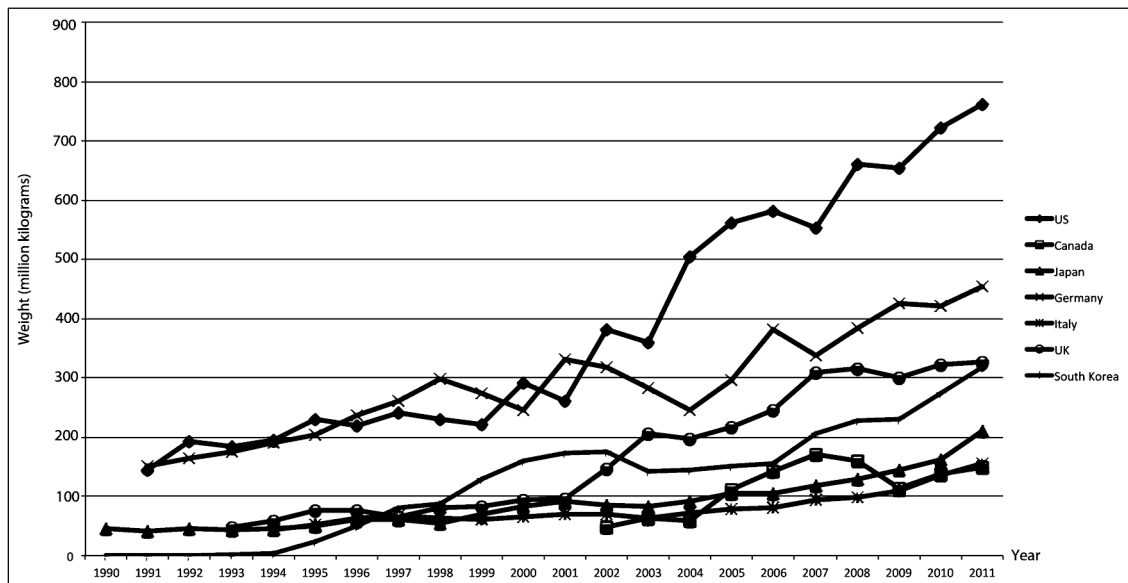


Figure 5. Used clothing exports in volume (kg) for seven high-income countries, 1990-2011

V. Conclusions and Implications

This study examined trends in the U.S. used clothing exports to countries at different levels of economic development. In 2011, the US exported 762 million kg of used clothing worth of \$605 million. The belief has always been that clothing disposed by U.S. consumers was primarily destined to low-income countries. Our study showed that in 2012 only 12% of the total US used clothing was exported to low-income countries, whereas 30% was exported to high-income countries, such as Canada, Germany, Japan, Italy, South Korea, and others.

Between 1996 and 2012, the amount of U.S. used clothing exports increased 3.5 times. Structural shifts in the distribution of the total exports to countries at different levels of economic development were discovered. At the turn of the 21st century, the U.S. used clothing exports shifted away from less developed economies to more developed countries. The share of the U.S. total used clothing exports destined to the low-income countries went down from 32% in 1996 to 12% in 2012. In contrast, the share of the U.S. total used clothing exports to high-income countries increased from 21% in 1996 to 32% in 2012.

This study examined used clothing trade in seven high-income countries: Canada, Germany Italy, Japan, South Korea, UK, and US. Between 1990 and 2011, all seven countries not only exported but also imported significant volumes and values of used clothing, which implies a growing demand for secondhand apparel in developed nations. Canada had consistently imported more clothing by volume than it exported. Japan had imported more worn clothing by value than it exported. This finding poses an important question—why developed nations import a lot of used clothing, given that all of them have huge excesses of disposed clothing that they export to the world? It is plausible to assume that U.S. used clothing exported to other developed nations must be different from the used clothing these countries themselves export in large volumes. Otherwise, exporting *and* at the same time importing large amounts of

used clothing would not make any economic sense. There is no trade data available that might have helped to distinguish between used clothing imports and exports in high-income countries, but it is reasonable to assume that at least some of used clothing that is traded between high-income countries should be for resell as apparel rather than for extracting fibers to use as raw materials.

It is not likely that the seven high-income countries in this study would be importing the same type of used clothing, which they already have excess in domestic markets. Used clothing imported by high-income countries must have some unique value and characteristics to meet domestic consumer demand. Given that, we attribute the increase of used clothing trade between high-income countries, at least partially, to the growing popularity of vintage clothing. Cervellon *et al.* (2012) found that high education level and high income are the most salient characteristics of consumers who buy vintage clothing. Both characteristics are very much applicable to consumers in the seven high-income countries examined in the current study. Many young consumers in developed economies cannot afford, or choose not to invest in high-end clothing (Wetherille, 2011). Yet, consumers look for unique ways to express themselves through appearance (Cervellon *et al.*, 2012). Vintage clothing offers the uniqueness, character, charm, and individuality, so it is in demand in these mature markets that are overcrowded with low-quality, cookie-cutter apparel from mass retailers. In addition, vintage clothing is a sustainable choice of apparel consumption and might be appealing to some environmentally conscious consumers. Thus, the eco movement and vintage trend might contribute to increases in U.S. used clothing exports to high-income countries and growing worn clothing imports in these countries.

It is unknown whether used clothing exports to high-income countries are of the same type and quality as exports to low-income countries. Currently, all used clothing trade is classified under HTS 630900 *Worn clothing and other worn articles* (United State International Trade Commission, 2013). There are no subdivisions available that would allow some type of classification for this bi-product of the contemporary consumer market. It is not possible to obtain any data on what type of used clothing is traded in the world and more specifically, between developed economies. This calls for the US and world trade organization policy makers to develop a new classification system of worn clothing for trade purposes so real value of used clothing exports and imports can be assessed and documented. Specifically, used clothing classification system by value, fiber content, type of clothing, merchandise condition, etc. needs to be developed and implemented. The new classification system can facilitate a more effective and efficient trade as well as re-use and recycling and divert more textiles from landfills.

Used clothing industry and trade continues to remain in the shade of the global economy, with little knowledge of how the industry operates. Similarly, little is known about used clothing demand and supply patterns. Several studies have examined used clothing distribution and resell in African countries (Hansen, 2000/2004; Mhango & Niehm, 2005; Rivoli, 2009), but scarce information is available on the topic of retailing imported used or vintage clothing in mature markets. Future research on used clothing industry and trade, particularly in high-income countries, might increase understanding and fill the gap in the literature on used clothing business.

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